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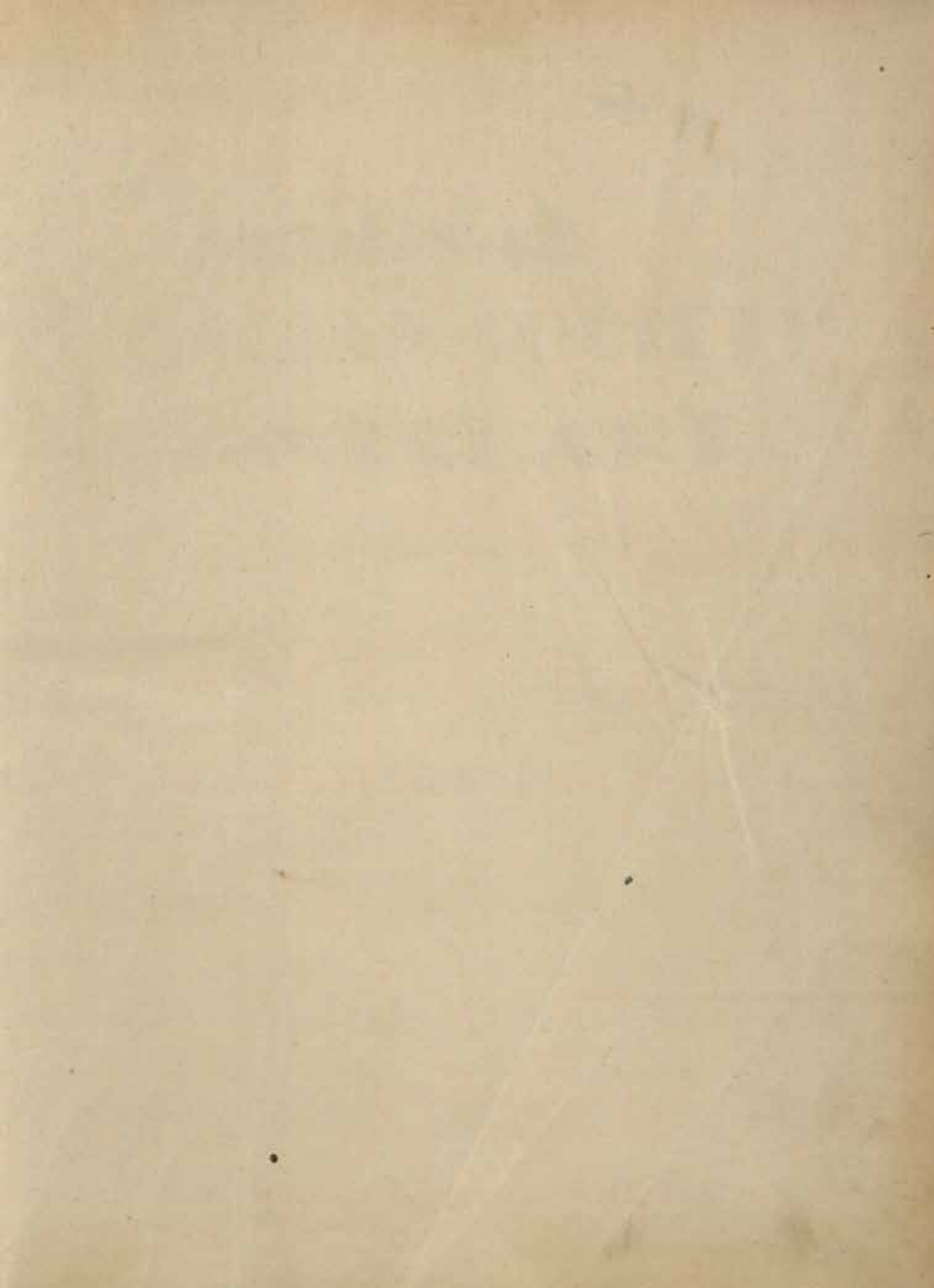
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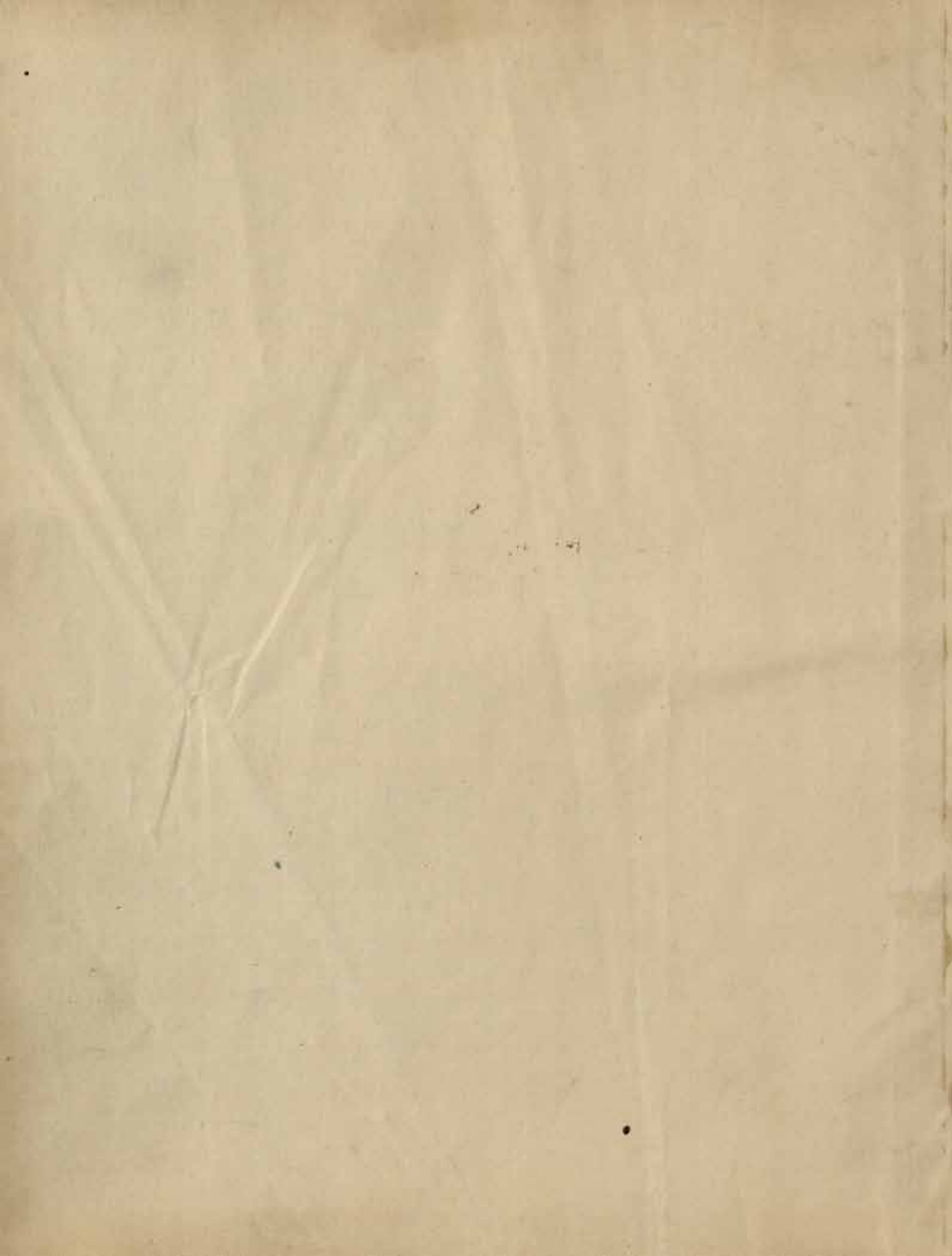
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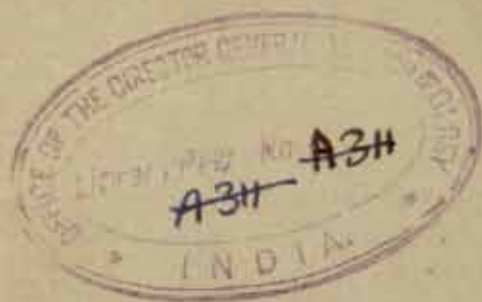




JOURNAL OF THE INDIAN SOCIETY OF ORIENTAL ART

Vol 4, No. 1 and 2, 1936

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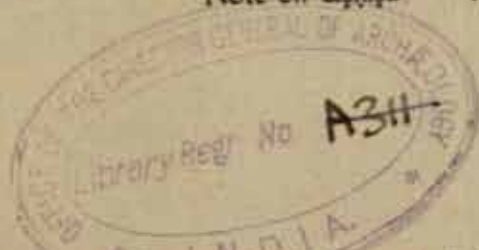
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A LONG ROLL OF BUDDHIST IMAGES

By HELEN B. CHAPIN

Introduction

In the collection of the Palace Museum, Peiping (Peking)¹, is a long roll of Buddhist images, painted, as I shall show later, between the years 1173 and 1176 of our era for the emperor Li Chên² of the Hou Li (Later [Ta] Li) kingdom, and attributed to the artist Chang Shêng-wên. This country, the last of a series of kingdoms semi-independent of their great northern neighbour, China, flourished in what is now Yunnan province, China, from A.D. 1096 to 1253. The scroll in the Palace Museum is not only a good example of Sung³ Buddhist painting, exhibiting certain stylistic

1. The present location and fate of this painting are problematical, since the Museum authorities, at the time Peking was threatened by the Japanese, removed hundreds of paintings to Shanghai, and have since been accused of conniving at the loss of some of them. Mr. Tanaka, of Messrs. Yamanaka and Company, New York City, has expressed to me his determination to purchase this roll.

2. For the Chinese characters for proper names and Buddhist terms throughout this paper, see the Glossary of names and terms at the end.

The writer is indebted to Dr. Peter A. Boodberg, of the University of California, for assistance in the rendering of several passages in the Chinese texts.

3. Chronological table of dynasties and periods in Chinese and Japanese history mentioned in the text.

China		Hung Wu, 1368-1399	
Han	206 B. C.—A. D. 221	Cheng T'ung, 1436-1450	
Division into North and South	A. D. 317-589	Ch'ing	1644-1912
Wei (northern, eastern and western) 386-557		Ch'ien Lung, 1736-1796	
Liang, 502-556		Japan	
Sui	589-618	Suiko	A. D. 592-645
T'ang	618-907	Hakuho	645-709
Five Dynasties	907-960	Nara (Tempyo)	709-793
Posterior Chin, 936-947		Jogan (Heian)	793-900
Sung	960-1280	Fujiwara	900-1190
Ch'ien Tao, 1165-1174		Kamakura	1190-1336
Shun Hsi, 1174-1190		Ashikaga	1336-1584
Chia Hsi, 1237-1241		N. B. The first four names under the heading	
Yuan	1280-1368	Japan are used loosely to cover art styles over periods	
Ming	1368-1644	longer than the actual political eras from which the	
		names derive.	

features peculiar to the south, and a document of some value for the political and religious history of south China, but it is of prime importance as a document for the study of Chinese Buddhist iconography of T'ang and Sung times, before the disintegration of the pantheon which took place during the Ming dynasty.

In this preliminary study, I shall, after a brief statement of the value and interest of researches into T'ang and Sung Buddhist iconography, attempt to place the painting among the other existing documents for this study and to estimate its relative value in this connection. I shall describe the various divinities and assemblages represented in this painting as well as possible from notes taken during the winter of 1931-2 in Peking, and I shall translate three of the inscriptions at the end of the roll. As the text of these inscriptions is not easily available, I am including a copy from my notes (appendix A).

The T'ang dynasty is unquestionably one of the very highest peaks in that alternately ascending and descending line which may be conceived as representing China's culture through the ages. The names of its famous painters, poets, calligraphers, philosopher monks and travellers have gone singing down the corridors of time, and although the names of its sculptors are not known, their work shows that they equalled in their own medium that of their fellow artists in other fields. The T'ang period is known to have inspired Japan to the achievements in architecture, sculpture and painting of the Nara period and to have started currents which influenced the arts of the Heian and Fujiwara periods. Moreover, from the city of Nara, laid out after the T'ang capital, Ch'ang-an, in whose temples are still enshrined bronze images of the 8th century in the true T'ang tradition, we can get a better idea

Abridged chronological table of the kingdoms in
Yunnan from the Nan Chao yeh shih*

Yeh Yu	Circa 2nd century B. C. to 2nd century A. D.
Chien-ning Kuo	Early 7th century
Ta Meng Kuo or Nan Chao	649-902
Hsi-nu-lo, 649-674	
Lo-sheng-yen or Lo-sheng, 674-712	

* For a complete list of the rulers of Yunnan before 1253 and of the hereditary governors under Chinese rule from 1253 to 1382, see Saimon's translation in French of the Nan Chao yeh shih (listed in the Bibliography), pages 271-275.

Feng Yu, 824-859	
Shih Lung, 859-877	
Lung Shun, 877-897	
Shun-hua-chen, 897-902	
Ta Li Kuo	937-1094
Tuan Su-p'ing, 937-944	
Tuan Su-lung, 1022-1026	
Tuan Su-chen, 1026-1041	
Ta Chung Kuo	1094-1096
Hou (Ta) Li Kuo	1096-1253
Tuan Chih-hsing, 1172-1200	
Li Chen, 1173-1176	
Sheng Te**, 1175-?	

**Diacritical marks on the transliterations of Chinese words had to be partly omitted on account of technical difficulties. Ed.

of the Chinese metropolis and centre of culture than from the present Hsi-an Fu, the site of the city itself.

This culture of the T'ang period, though it was open to a number of influences native and foreign, was in the main Buddhist, and most of its great achievements derive directly or indirectly from Buddhist inspiration. Besides the development of temple architecture, of which only vestiges remain, of sculpture and painting, of scholarly translations of hundreds of Buddhist canonical works and of Buddhist philosophical discourses and commentaries on the scripture, we must include the invention of printing, perhaps the most far-reaching human achievement since neolithic times, which was in all probability due to the efforts of Buddhist monks to reproduce images and texts.¹ A beginning has been made toward introducing to the west the literature, especially the poetry; and general books on art, including T'ang art, have been written. But of the iconography of T'ang Buddhist art, which takes its place among the great religious arts of the world, and of the philosophy underlying it, the west knows but little.

The Sung dynasty witnessed a great change in the nature of Chinese Buddhism. The new religion had now been assimilated and absorbed into the consciousness of the people; and the dominant feature of the Chinese Buddhism of Sung times was the development of the Ch'an sect, whose doctrines and ideas represent a fusion of Buddhism with indigenous Taoist ideals. Not only did this sect produce a philosophy and psychology more characteristic of China than of India and a great impressionistic art of its own which was to exert a profound influence on the art of Japan, but its ideals were absorbed by the Neo-Confucianists and find an outlet also in the landscape painting which was the greatest achievement of Sung times and has never been surpassed by the landscape painting of any other people or of any other time. We can not here go further into this subject, but may refer the reader to Suzuki's *Essays in Zen Buddhism*, 1st, 2nd and 3rd series and to the same author's translation of the *Laṅkāvatāra sūtra* and *Studies on the Laṅkāvatāra sūtra*, adding only that Ch'an art still awaits adequate treatment in English.

The forms of Buddhism dominant in China in T'ang times, e. g., those of the Pure Land sect, of the T'ien-t'ai sect, of the Ch'en-yen sect and others, did not wholly die out—were, in fact, active in various parts of the country.² On the other hand

1. see Carter, *The invention of printing in China and its spread westward*, especially chapter VI.

2. In Ming times, they were absorbed into the Ch'an sect, which thus lost its most distinctive characteristic, that of independence of images, texts, etc. Thus, today, we may enter a gate marked Ch'an lin, or "grove of meditation," to find within a profusion of images of Buddhas, Bodhisattvas, Arhats, et al.

no new pantheons or even divinities found their way into China from India for the absorption of Buddhism into Hinduism in India, a process already active in T'ang times, was fast nearing its completion, marked by the end of Buddhism as such¹ in India. These forms of Buddhism in China, then, retained the pantheons of T'ang times and the Sung sculpture and painting which they produced, though exhibiting the stylistic characteristics of Sung, follow almost entirely the iconography of T'ang and can be studied, in so far as their iconography is concerned, as T'ang documents.

Our painting is important as one of the few existing specimens, which I shall presently list, of Chinese work suitable for use in studying T'ang Buddhist iconography. Among these, it is remarkable for its length and for the great number of different divinities represented. It shows us the spread of Tantric² and other forms of Buddhism in the South and their existence side by side with the rising sect of Ch'an. In this paper, we shall not take up the study of Ch'an art, for although the Ch'an patriarchs are included in this long roll, they are done, not in the impressionistic style of Ch'an art, but precisely in the same manner as the Arhats occurring in the earlier part of the same work. When, therefore we speak of Sung iconography in this paper we really mean T'ang Buddhist iconography as used in Sung times.

In order to understand the iconography of T'ang paintings and of Sung paintings based on T'ang iconography, we must bear in mind that, as Mr. Waley points out,³ a "sect" (for example, the Ching-tu or Pure Land sect, the Chên-yen sect, the T'ien-t'ai sect, etc.) meant to the Chinese Buddhists of this time, a branch of learning. Just as in a university, many separate subjects, such as medicine, law, literature, etc., are pursued, so the canonical works of these different sects were studied in the same temple, and very often by the very same students.⁴ If we bear this fact in mind, we shall not be surprised to find, as we do in the long roll which

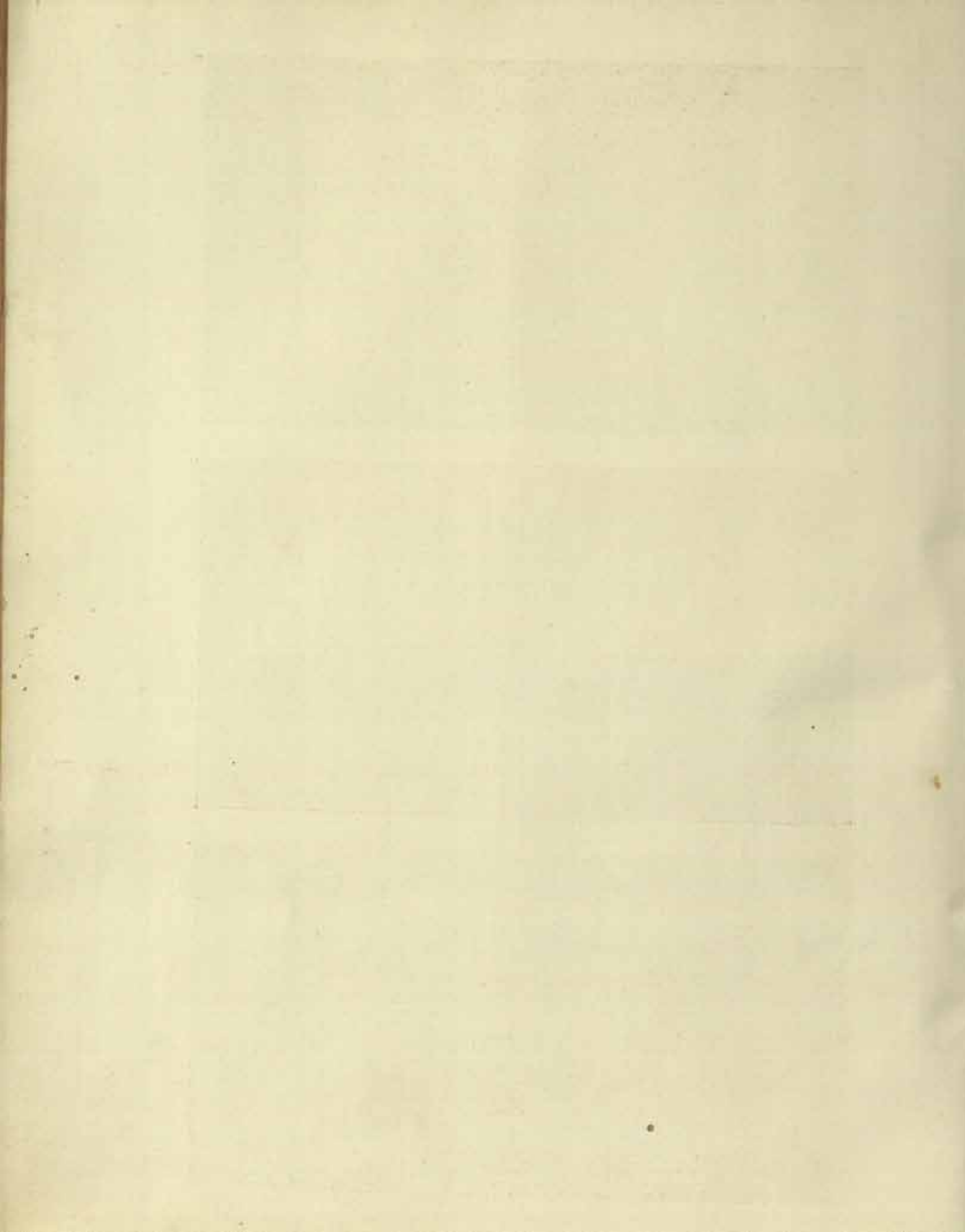
1. Many Buddhist monks and priests went to Nepal, where they propagated their religion, while whole Buddhist communities were absorbed into Hinduism, which they tinged with a dye still noticeable today to a trained eye. See Vasu, *The modern Buddhism and its followers in Orissa*, and *infra*.

2. For discussions of Tantric Buddhism, see Bhattacharyya, *Indian Buddhist iconography and Introduction to Buddhist esotericism*; Waley, *A catalogue of paintings recovered from Tun-huang by Sir Aurel Stein*; and Chapin, *A study in Buddhist iconography*, in *Orientalische Zeitschrift*, Neue Folge VIII, and *Addenda*, Neue Folge XI, and other works listed in the bibliographies therein.

3. *Op. cit.*, introduction, page XVI.

4. It may be noted that the Chinese Buddhist Tripiṭaka (see Nanjio, *A catalogue of the Chinese translation of the Buddhist Tripiṭaka*, 2nd edition, Tokyo, 1929) contains more than 1600 works of all sects, including those expounding contradictory systems of philosophy. Even today, the Ryūkoku University in Kyoto, Japan, a college of the Shin sect, has professors not only in the philosophy of the other Buddhist sects but also in the various western scientific and philosophic as well as religious theories; and in this procedure, it is not alone among Japanese sectarian universities.





is the subject of our present study, the favourite themes of several different sects illustrated side by side in the same work. It may be noted also that Dhyāna or meditation was practised by all the Buddhists of the time and not least by those believing in a paradise, for example, the worshippers of Amitābha Buddha. Images, whether paintings, sculptures, or Yantra, i.e., geometric designs with esoteric meaning, were used as aids to Dhyāna, and concentration on ideal forms was undertaken with the purpose of securing a foretaste of paradise, a spiritual vision of, or union with, the object of meditation. The images in the Palace Museum painting were no doubt, like those from Tun-huang, connected with Dhyāna and with scriptures giving instructions for Dhyāna.¹ Indeed, the real function of images in general is to support certain specified states of consciousness.

Though the Ch'an sect has elements deriving from practices and beliefs current in China before Bodhidharma's coming,² and though many of its greatest exponents lived during the T'ang dynasty, the rising of the sect to a position of widespread influence and the formulation of its body of tradition, may, I believe, be placed without hesitation in Sung times. In the T'ang dynasty, the minds of the people were wide open to new and foreign ideas—it was then a popular attitude to take—and there was great enthusiasm for all the varied forms of Buddhism which were pouring into the country from the west. They were all eagerly received and studied side by side, as has been said, and the demarcations between the different sects were so vague as to be almost non-existent.

Evidence of the prevalence of Tantric Buddhism in the T'ang dynasty long lay hid in the Chinese Buddhist Tripiṭaka, and even though Nanjio's catalogue came out in 1883, few except the Japanese, who were already aware of their presence, took the trouble to count the number of Tantric works listed therein.³ Waley, in the Introduction to his catalogue of the paintings in the Stein Collection, published in 1931, was probably the first westerner to gauge the wide extent of Tantric Buddhism in T'ang China, and the article by the present writer in the *Ostasiatische Zeitschrift* entitled "A study in Buddhist iconography", followed close on its heels.

1. Waley, *op. cit.*, Introduction, pp. xii and xiii.

2. see Hu Shih, *The development of Zen Buddhism in China*, in the *Chinese Social and Political Science Review*, 1931, pages 475—505, where evidence is given for Bodhidharma's presence in China before the previously accepted date, A.D. 520. Hu Shih also shows the growth of legend about the figure of Bodhidharma; and it is probable that many of the stories told of the Ch'an masters of T'ang and earlier times have also an element of myth. See also the same author's *P'u-t'i-ta-mo k'ao* (*A study of Bodhidharma*) in *Hu Shih wen ts'un san chi*, Vol. II, pp. 449—465 (in Chinese).

3. see the long list of works translated by Amoghavajra, pp. 446—8, also nos. 529—541, etc., etc.

It was, of course, the discovery and subsequent study of the Tun-huang paintings which led to the realization ; and now other evidence is accumulating to corroborate the record of the translations.

As early as the eastern Han dynasty, a Mantra¹ for use in protecting one's house, the *Fo shuo an chai* (or *tsè*) *shên chou ching*,² had been translated into Chinese. And by the T'ang dynasty, innumerable Tantric works were available to Chinese Buddhists, translated by Vajrabodhi, Amoghavajra, and other Indian and Chinese monks, whose very names indicate their Tantric affiliations, their connection with the Vajrayāna. Amoghavajra, who belonged to the Tantric school of the *Yogācāra*, received the patronage of three successive emperors, by one of whom (Su Tsung, reigned A. D. 756-63) he was ordered not to leave China (on account of his value to the country). At his death, in A. D. 744, the rank of a minister of state was conferred on him and a posthumous title meaning "great-eloquence-correct-wide-wisdom."

All the Tantric sects were known in China as *Mi tsung*, or esoteric sects ; and among them, the most important was that which regarded Vairocana as the *Ādi-Buddha*, or the primordial source of all being. This sect, like the Pure Land sect, which worshipped *Amitābha*, had, besides numerous other subsidiary works, a trinity of scriptures as its main doctrinal basis, the *Vairocana sūtra* (Nanjio, No. 530), translated by Śubhakarā in 724, the *Susiddhikara*, also translated by Śubhakarā in 726 (Nanjio, No. 533) and the *Vajrasekara* (Nanjio, No. 1020), translated by Amoghavajra about 753.

Waley states that this sect, though flourishing in China proper at the time the Tun-huang paintings were made, exists in the Tun-huang finds in a very rudimentary stage only.³ This statement holds for the works in the Stein Collection, but among the paintings brought by Pelliot from Tun-huang and now in the Musée Guimet, is one dating from the tenth century which shows the five *Dhyāni Buddhas* with their characteristic *Vāhana*, Vairocana in the centre. It is illustrated in *Asiatic mythology*, facing page 244. Hackin does not tell us the colours of all the Buddhas in the painting, but he says that Vairocana is golden-coloured (*op. cit.*, page 243). It is interesting to note that, in spite of Sanskrit *Sādhana*mālā and iconographical instructions in Chinese and Japanese,⁴ which agree in assigning the colour white to Vairocana,

1. see Chapin, *op. cit.*, pp. 34—5.

2. Nanjio, *op. cit.*, No. 478.

3. *op. cit.*, Introduction, pp. xiv—xvii.

4. See Bhattacharyya, *Indian Buddhist Iconography*, page 4; *Mikkyō daijiten*, Vol. II, p. 1523.

this divinity is painted with flesh of a golden hue in the Palace Museum painting as well as in the Musée Guimet picture. He occurs twice in our long roll; and in one case, at least, he is iconographically correct, both as to colour and as to Mudrā. So far as I know, the Vajradhātu and Garbhakośadhātu maṇḍalas are not included in the Tun-huang finds, if we exclude a coarse drawing which may possibly be a rudimentary form of the latter, now in the Stein collection of the British Museum. Besides the two labelled images of Vairocana, each surrounded by an assemblage of divinities, the long roll presents us with an image of Dharmapāramitā, the "mother" of the "lotus section" in both the Vajradhātu and the Garbhakośadhātu maṇḍalas (see *infra*).

Another image in our painting of interest in this connection, is that of the Pañcaguhyā or "five esoteric ones"; the only Chinese example of which I know, it corresponds closely with several Japanese specimens of the Fujiwara and Kamakura periods made for use by the Shingon sect, whose Ādi-Buddha is Vairocana. The Shingon sect calls the central figure of the group Vajrasattva, a divinity worshipped by some of the esoteric sects as Ādi-Buddha,¹ while an inscription on the Palace Museum painting labels the central figure of the entirely analogous group there represented Samantabhadra, who is likewise sometimes regarded as Ādi-Buddha.² Although the Shingon sect considers the other four as embodying four of the passions, made one with the Bodhicitta within the all-encircling wisdom (see *infra*) I shall keep in mind the possibility of a relationship between this group and that of the five Dhyāni Buddhas. It may be noted that the "five esoteric ones" have some correspondence with the Risshue, the seventh assembly in the Vajradhātu, whose central divinity is Vajrasattva. He is surrounded by the same four divinities embodying the passions, together with their Śaktis, making a group of nine.³ In the more exhaustive study which I hope to make, I shall translate three accounts of this group given in Japanese, one in Mochizuki's Bukkyo Daijiten, one in Matsunaga's Mikkyo Daijiten and one in the Risshukyo no kenkyū, by Togano Joun, and shall attempt to fathom its meaning.

Tantric divinities too numerous to detail here are included among the paintings in situ at Tun-huang, as well as among those brought from the same site and now

1. see Bhattacharyya, *Indian Buddhist iconography*, pages 2 and 6.
2. Getty, *The gods of Northern Buddhism*, page 46.
3. *Bukkyo daijiten*, Vol. II, page 1316; *Mikkyo daijiten*, Vol. I, page 668.

in the British Museum and the Musée Guimet.¹ For example, several Maṇḍalas of the thousand-armed Avalokiteśvara, a number of representations each of Cintāmaṇi-cakra and Amoghapāśa Avalokiteśvara, Vaiśravaṇa, Śrī Mahādevī, Vajrayakṣa, Kuṇḍali, Vināyaka (Gaṇeśa), and various forms of Śiva, Viṣṇu and other Tantric divinities occur in these paintings. While Tun-huang was far from Ch'ang-an, the capital and centre of culture, nevertheless, it reflected currents passing into China along one of the main arteries of trade and ideas. At the time when the paintings were made, to be sure, the trade route was deflected, so that one of the principal Buddhist movements in China, the worship of Vairocana Buddha, is seen at Tun-huang in a far less advanced stage than it had reached in China proper at the same time.² Thus, the pre-T'ang sculpture and painting at Tun-huang is at practically the same stage as in China further east, while in the 9th and 10th centuries, Tun-huang represents a backwash of Chinese Buddhist culture.

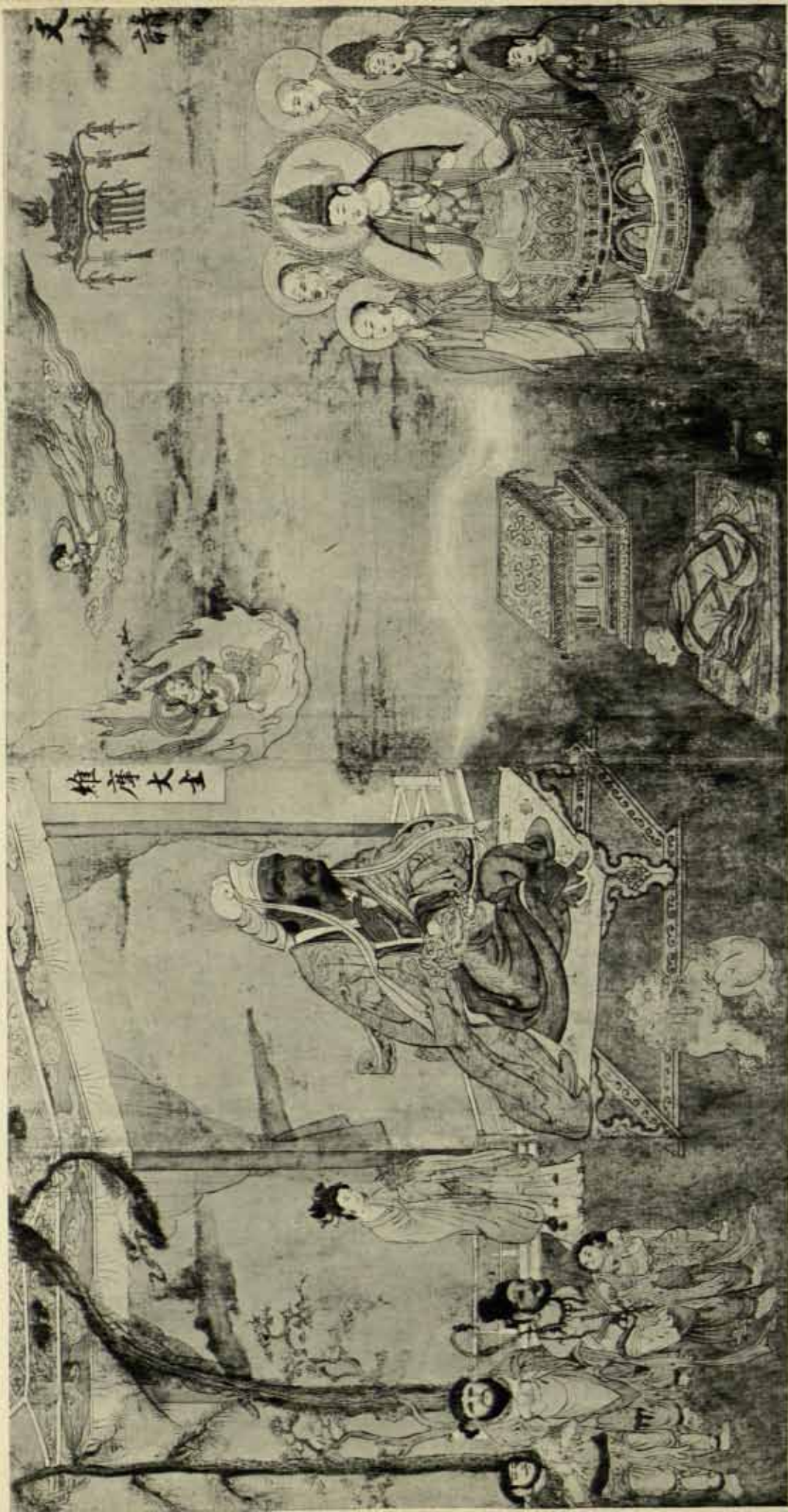
Besides the Tun-huang paintings, there are several examples of T'ang paintings and sculptures of Tantric divinities³ in Japan, and there are the two Maṇḍalas of the Diamond cycle and Womb cycle said to have been brought from China by Kobo Daishi, which, if they are not Chinese, are undoubtedly closely based on a Chinese model. There was recently exhibited in the Mills College (California) art gallery, a T'ang bronze image of Gaṇeśa, the Hindu elephant-headed lord of obstacles, belonging to the de Frey collection in Paris. Gaṇeśa was, together with other Hindu divinities, admitted into the Tantric Buddhist pantheon, where he occurs not only as an obstructive demon trampled on by Buddhist gods, but also as a Deva worthy of worship. He is to be found in the Tun-huang paintings, notably in the Maṇḍalas of the thousand-armed Avalokiteśvara, where he is attendant on Kuṇḍali Vidyarāja.

Although the Tantric form of Buddhism in its various aspects was submerged in Sung times by the rising tide of popularity of the Ch'an sect, nevertheless, not only did it produce great art in the fields of sculpture and painting, most of which, it is true, has been destroyed in the upheavals that have one after another shaken

1. Those in situ have been published without text by Pelliot, *Les grottes de Touen-houang*; those in the British Museum have been identified and catalogued by Waley in the book already mentioned. Those in the Musée Guimet have been described by J. Hackin in his *Guide-catalogue du Musée Guimet. Les collections bouddhiques*.

2. Waley, *op. cit.*, Introduction, pp. xiv-xvii.

3. e. g., the large, fine wooden sculpture of Vairocana at Toshodaiji, which was recently unearthed from its covering of Kamakura lacquer, and a fine Maṇḍala of the thousand-armed Avalokiteśvara which is, I believe, in a private collection.



China, but it passed on its peculiar culture to Japan;¹ and even in China, it has left indelible marks on popular thought. For example, the Ullambana or Allsouls Festival (Yü-lan Hui) of the Yogācāra school which Amoghavajra introduced is still celebrated at the present day.² Again, Tantric practices have even found their way into Taoism. While I was in Shanghai in 1925, I witnessed on three different occasions portions of the Taoist services held continuously for seven days and seven nights at a Taoist temple on Peking Road for the cessation of the Kiangsu and Chekiang provincial war, which was then in action. At one of the night services, the Taoist priest, wearing a five-lobed hat analogous to the Wu chih pao kuan³ of the Tantric Buddhists, offered uncooked rice and water to the hungry ghosts. Other examples could be furnished. Western scholars have only recently begun to realize the importance of this phase of Buddhism in China, though its undoubted popularity in Japan in the Nara and Fujiwara periods⁴ is a clear indicator of what is to be expected in the land which was Nippon's model. A correlated study of Tantric Buddhism in India, China and Japan would throw much light upon the state of mind of the Chinese of the T'ang period and explain many points which are today either incomprehensible or misunderstood in the art, philosophy and literature of one of the greatest of China's golden ages—a period during which she outshone all rivals.

A fact which enhances the value of the documents we have for this study is the change which swept away or transformed beyond recognition a large number of the earlier Tantric divinities,⁵ replacing those which disappeared by gods adopted from Taoism and other indigenous cults, both general and local, and by many hybrid forms. After the Ming dynasty, the Buddhist pantheon presents an array of faces unfamiliar to us who are accustomed to those we meet in the Tun-huang paintings. The strange physiognomies of many of these hybrid gods are described and illustrated

1. The many fine paintings of Tantric divinities still extant in Japan point unmistakably to a high development of this art in China.

2. I saw this festival held on the 15th day of the 7th month in Pei-hai Park in Peiping in 1931; repasts were set out for the souls of the dead and lighted lanterns set in real lotus flowers were floated on the lake (originally intended to guide the souls of the dead back to the world of shades after their brief sojourn—from the 7th to the 15th of the same month—among the living).

3. This is the crown worn by many Tantric divinities, in which are images of the Five Dhyāni Buddhas, representing the Five Wisdoms, worn also by Tantric priests officiating at services for the dead. The hat worn by the Taoist priest had also five figures painted on it; whether they were given Taoist names, retained their Buddhist ones or were simply nameless, I did not find out.

4. and even up to to-day in the Shingon and Tendai sects, especially the former.

5. For instance, the six-armed form of Cintāmaṇi-cakra Avalokiteśvara, who was so popular in T'ang times. I traced a modern painting of this divinity to the atelier of the Yung Ho Kung in Peiping, where the lama artist confessed to having made the image after the illustrations and text of the Bukkyō Daijiten, a Japanese Buddhist dictionary recently compiled by Oda Tokunō.

in the pages of Doré, *Recherches sur les superstitions en Chine*. To cite a specific example, the twenty-eight attendants of the Thousand-armed Avalokiteśvara, represented in wood sculpture of the Ming dynasty at the Ta Tung Ssu, outside the Shun-chih Mên (gate) of Peiping, correspond in not a single instance with the twenty-eight attendants of the same divinity represented in the T'ang Maṇḍalas in the British Museum and the Musée Guimet. Thus, the great number of existing paintings and sculptures of Buddhist divinities made in the Ming and Ch'ing dynasties are of but little help in elucidating the mysteries of T'ang and Sung iconography. We must turn to the Tun-huang paintings and a few other genuine documents from times earlier than Ming, eked out by a judicious study of corresponding Japanese representations of the same divinities.

Before proceeding to describe the long roll of Buddhist images which is the subject of this paper, I wish to list the existing original documents for the study of Chinese Buddhist iconography of T'ang and Sung times, even though I have had to refer to most of them already in dealing with the importance of this study. Of original Chinese paintings dating from these two periods and the short era of strife between them, we have, aside from a few isolated specimens, such as the so-called Hokke mandara in the Boston Museum of Fine Arts,¹ and several pictured and sculptured images preserved in different temples in Japan, only the paintings discovered by Sir Aurel Stein in 1906-8 in the Ch'ien-fo T'ung, or "Thousand-Buddha caves" at Tun-huang, in Kansu province, China. From a walled-up chapel there, the romantic tale of which is related in the pages of *Serindia*, came many rolls of paintings and manuscripts, a large proportion of which are in the British Museum. Others are at Delhi while still others were brought to the Musée Guimet by Professor Paul Pelliot, who visited the site after Sir Aurel Stein. The remains were sent for by the Chinese government, but there were many "losses" on the way from Tun-huang to Peiping, and every now and then one of these specimens turns up in the market. One such painting is now—or was in 1932—in a private collection in Peiping. Many of the Tun-huang manuscripts have found their way to Japan in various ways. Two or three paintings are in America, in the Boston Museum of Fine Arts and the Fogg Museum at Cambridge, but these are comparatively unimportant, from the standpoint of iconography as well as art.²

1. A painting made for use by the T'ien-t'ai sect, and illustrating the *Saddharma puṇḍarīka sūtra*, the principal scripture of this sect. T'ien-t'ai belief, though popular in China during the T'ang dynasty, seems to lack representation among the Tun-huang paintings.

2. One rather crude painting in the Boston Museum deals with Avalokiteśvara as saviour from peril, but better illustrations of this subject are available.

The Fogg Museum has several frescoes, brought from Tun-huang by Mr. Warner, which are of higher quality.¹ There remain in situ many wall-paintings, published by Pelliot in *Les grottes de Touen-houang*, consisting of six volumes without text.² Since Chinese soldiers have lived in these caves and a Russian prisoner was confined for some time in one of them, it is by no means certain that more than a small proportion remain in a condition admitting serious study.

Successive German expeditions under Grünwedel and von Le Coq studied the many paintings on the walls of the caves in Chotscho, Kutscha, Turfan and other places in Central Asia; and von Le Coq brought back frescoes of considerable size³ which are now on permanent exhibition at the Museum für Voelkerkunde, Berlin. Most of these paintings are of but mediocre quality and not all of them are important iconographically. They include, however, several paintings of very good quality, for example, *Hārītū* (Chotscho, Tafel 40),⁴ a number portraying unusual subjects, such as the dramatic scene of the announcement of the death of the Buddha to Ajātaśatru, (Alt-Kutscha, Doppeltafel XLII-XLIII) and more than one striking parallel with the Tun-huang paintings and with our long roll. The base of a colossal Maṇḍala of the Thousand-armed Avalokiteśvara, for example, illustrated on Plate 32 of Chotscho, shows the two dragon kings, Nanda and Upananda, supporting the lotus stalk and Śrī Mahādevī and Vasu R̥ṣi as attendants, with Kuṇḍali Vidyārāja and Vajra Yakṣa to right and left, in practically the same relative positions they hold in the Maṇḍala of the Thousand-armed Avalokiteśvara in the Stein Collection, described on pages 54-9 of Waley's catalogue (No. XXV). We have already pointed out one among several examples of *Hārītū*. An extremely interesting image of the six-armed form of Cintāmaṇi-cakra Avalokiteśvara was found by Grünwedel in Cave 27 Bāzāklık; unfortunately, he illustrates it (*Altbuddhistische Kultstätten in Chinesisch-Turkistan*, Fig. 590) by a drawing instead of a photograph. He calls it Padmapāṇi, a designation which though it can not be said to be wrong, we may abandon for the less-inclusive name Cintāmaṇi-cakra. This image may be compared with the examples cited and illustrated in my article *A study in Buddhist iconography*, and certain correspondences and differences noted. I can

1. Siren, *History of early Chinese painting*, p. 49 and plates 28 and 29.

2. Pelliot has no intention of publishing iconographical studies on these paintings and has signified his willingness to have me take up the work (Boston, 1928, by word of mouth).

3. The frescoes were cut out of the wall in pieces two feet or so square and put together again in the walls of the Museum. The lines of juncture are easily seen. The whole proceeding was, of course, a stupendous piece of work.

4. This picture is not a fresco, but a painting on cloth.

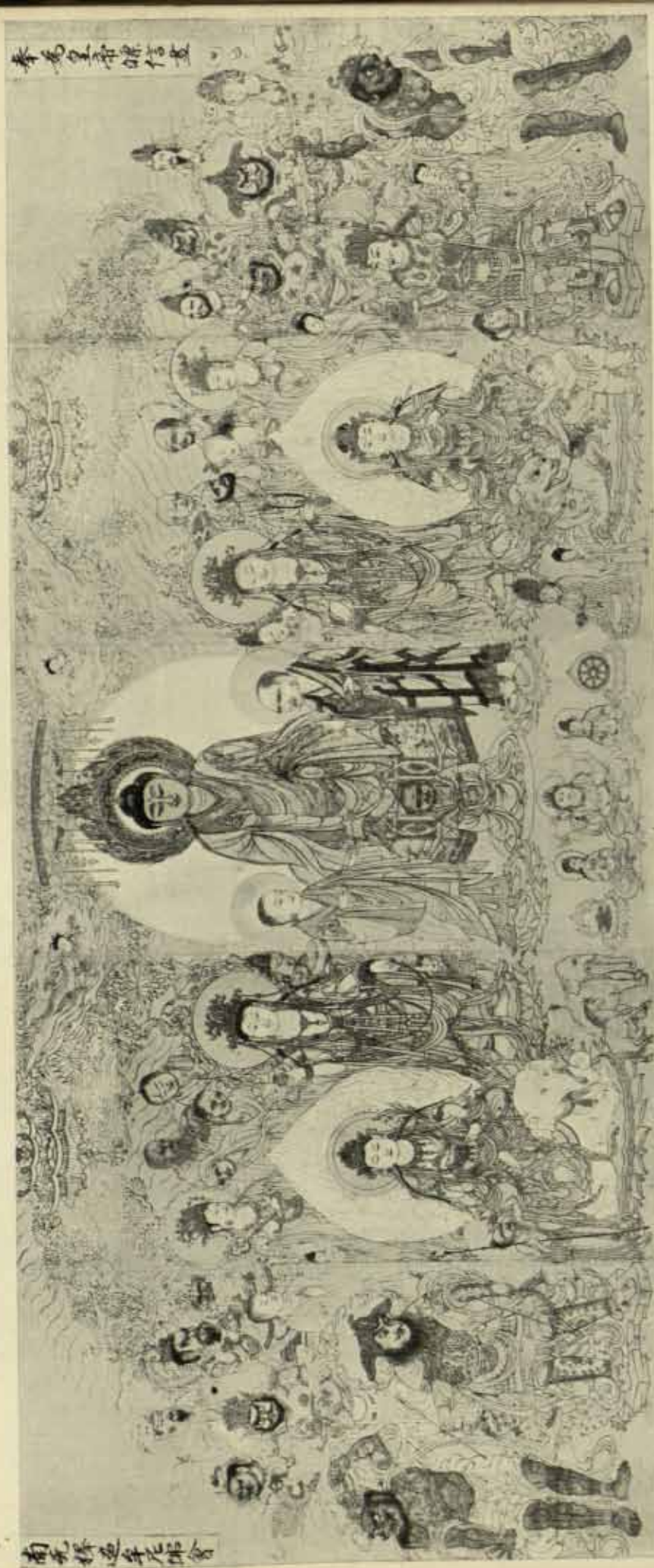
not here go into detail and will add only that Śrī Mahādevī and Vasu Ṛṣi are in the picture and that there are four attendant divinities within haloes on lotuses joined to the main stalk which no doubt correspond to the four divinities attendant on Cintāmaṇi-cakra in the long roll under discussion (see *infra*). These discoveries have been published by Grünwedel in *Alt-Kutscha* and *Altbuddhistische Kultstätten in Chinesisch-Turkistan*, and by von Le Coq in *Chotscho* and *Die Buddhistische Spätantike in Mittelasien*. This last work in seven volumes was finished after von Le Coq's death by Ernst Waldschmidt.

A Japanese expedition financed by Count Otani also acquired a large number of manuscripts and paintings, some of which are in the museum at Port Arthur (Ryojun) while others are in Kyoto. The pictures have been published in a large illustrated work of several volumes which I have seen but which is at present not available.

The Palace Museum roll, painted between the years 1173 and 1176, containing representations of hundreds of different divinities and assemblages of divinities, among them many that are Tantric, including images of Vairocana Buddha, who occurs so rarely in the Tun-huang paintings, furnishes valuable material for this important study of Chinese Buddhist iconography of T'ang and Sung times. Several representations of Śākyamuni Buddha (Pl. III, Śākyamuni preaching to a great assemblage of Bodhisattvas, Arhats, Devas, et al.) occur including one in the centre of a thousand-petalled lotus, as well as portraits of the Sixteen Arhats,¹ an interesting group of the three assemblages of Maitreya Buddha, Bhaiṣajyaguru Buddha with his attendants, together with the text and illustrations of his twelve vows, and numerous other Buddhas, Bodhisattvas,—including twenty different forms of Avalokiteśvara, (Pl. IV, Avalokiteśvara of the Samantamukha section of the Saddharma puṇḍarīka sūtra, who saves from peril those who call upon his name),—and Devas and guardians, among whom are several Ugra or fierce forms, a type of which a few examples occur at Tun-huang. Of special interest is a group which is probably the earliest known representation of the so-called patriarchs of the Ch'an sect.² One of the finest

1. An early group.....the later group includes eighteen. It is not certain when the group of eighteen was first represented, possibly but improbably, as early as T'ang; while the group of sixteen continued to be represented through the Sung up to the Ming period. See Visser, *The Arhats in China and Japan*, pages 100-139.

2. In this case, there are sixteen. Kāśyapa (Pl. I, Fig. 2) and Ānanda are given as the first two, after whom follow the usual six from Bodhidharma (Pl. I, Fig. 1) to Hui-neng, who are so often mentioned in Ch'an and Zen literature. From the *Ching te chuan teng lu* (a biography of Ch'an monks compiled by the monk Tao Yüan of the Sung dynasty, and published—no doubt as a reprint—by the Sūtra-publishing bureau of the T'ien-ning Temple in Chang-chou in 1919), I have found accounts of these eight and of the next two in the list, Shen-hui and Hui-chung, the latter of whom flourished circa A.D. 756-779. Beyond this point, I have so far been unable to go. Some of the names on the list are in



compositions in the roll (Pl. II) is the scene of the visit of Mañjuśrī to the ideal Buddhist layman Vimalakīrti, from the Vimalakīrti Nirdeśa sūtra, (Nanjio, No. 147), a favorite work of Ch'an followers. We find the same scene engraved on a fine stone stela now in the Metropolitan Museum, New York City, and painted on the walls of the Tun-huang caves, as well as on separate works from the same site.

Besides these Chinese paintings, there remain for comparative study an enormous number of Japanese paintings of the Nara, Heian and Fujiwara periods, those of the latter epoch being by far the most numerous of the three. These Japanese representations throw considerable light on the Chinese models from which they derive. In this brief essay, however, I shall deal only with the images of Buddhist divinities in the Palace Museum painting, with cursory references here and there to similar representations in other works.

A background exists for the study of Chinese Buddhist iconography in the work done by scholars in the Indian field. Rao's colossal work on the Elements of Hindu iconography is of great value, as are also the many volumes on Hindu Tantric doctrines from the pen of Sir John Woodroffe (Arthur Avalon).¹ Dr. Benoytosh Bhattacharyya has contributed two exceedingly valuable books, Indian Buddhist iconography and An introduction to Buddhist esoterism, besides editing the Guhyasāmaja Tantra and other Sanskrit texts. Foucher's two essays on Indian Buddhist iconography, Burnouf's Introduction à l'histoire du bouddhisme indien, and Poussin's Bouddhisme, opinions sur l'histoire de la dogmatique, together with a number of essays and articles by Foucher, Waddell, Tucci, and others have contributed toward our knowledge and understanding of the subject. Obermiller's translations of the Uttaratantra and of Bu-ston's history of Buddhism are extremely valuable in this study.

part illegible. When I have the opportunity to do further work on this painting, with the original work or a complete set of photographs before me and numerous books of reference in Japanese as well as in Chinese and the European languages, I shall make an effort to identify these monks. A date before the beginning of the 12th century for the last on the list would corroborate my belief that the Palace Museum painting is the original of 1173-6, whereas a later date would prove me wrong. I have recorded in my notes made in Peiping in view of the painting, that four of these monks seem to have been painted by a less skilled hand and it may be also that some of the names were incorrectly copied by the man who filled the gap. See the account given infra, of the cutting up of the roll. I may add that, although I have not yet been able to identify these names with known T'ang dynasty monks, neither have I found them in the lists of later Ch'an monks (of the Five Dynasties and Sung) which I have examined. It is possible that they were monks of Yünnan.

1. Not only did Tantric Hinduism develop side by side with Tantric Buddhism, with interchanges of divinities as well as of ideas, but also the absorption of whole Buddhist communities into the Hindu fold, as Buddhism died out in India, necessarily tinged certain local forms of Hinduism with Buddhist color. In this connection, see Vasu, The modern Buddhism and its followers in Orissa. The name of this book is misleading, as it deals with Tantric Buddhist principles (mainly, the belief in Mahāśūnyā, or the Great Void) and divinities incorporated in the doctrines and pantheon of those classed as Vaiṣṇavas, that is, worshippers of Viṣṇu. Their theory of the Five Viṣṇus corresponds closely to that of the Five Dhyaṇi Buddhas and, as they constitute remnants of Buddhist communities absorbed into Hinduism, was no doubt adopted and adapted from Buddhism. See especially pages 82-100.

For a list of books on Tantric Hinduism by Sir John Woodroffe, see my article entitled A study in Buddhist iconography, bibliography. Since the basic tenets of Hindu and Buddhist Tantrika are essentially the same, these works are powerful aids to an understanding of Tantric Buddhism. So far as I know, no such general and authoritative books relating to the latter exist, though a beginning has been made by Bhattacharyya, Tucci and others.

In Chinese Buddhist iconography, on the other hand, little has been done. Petrucci's notes in the Appendix to *Serindia* are worse than useless and Miss Getty's book, *The gods of Northern Buddhism*, is far from exhaustive and contains serious errors. Hackin's *Guide-catalogue du Musée Guimet, les collections bouddhiques*, is valuable, as are also the sections on the Mythology of Lamaism and the Buddhist mythology of Central Asia by the same author included in "Asiatic mythology." The *Maison Franco-japonaise* started out ambitiously with the *Hobogirin*, an encyclopaedic dictionary of Buddhism from Chinese and Japanese sources, but, although the project was started in 1929, only two volumes have been issued, covering items from A to Bussoséki. A long interval has elapsed since the issuance of the second volume and I do not know whether or not further volumes are in process of compilation. The *Etudes d' Orientalisme*, published by the Musée Guimet in memory of Raymonde Linossier, also contain some good material. Much information of value may be found in Waley's catalogue of the paintings from Tun-huang in the British Museum and in the Museum of Central Asian Antiquities, Delhi. On particular phases of iconography, the works are all too few, though a beginning has been made. Visser's book, *The Arhats in China and Japan*, is useful, albeit disappointing in some respects.¹ I understand that the same author has published a study of *Ālāṅgarbha* in a Dutch periodical, but I have not seen it. Noël Péri's account of *Hārīti* is excellent;² and we are indebted to the same scholar for a review of Matsumoto's *Miroku Jōdo Ron*, which throws light on the literature connected with the Maitreya cult.³ R. H. van Gulick's 'Hayagrīva, The Mantrayānic aspect of the horse-cult in China and Japan', is excellent. Of especial interest are the texts and translations of Hayagrīva's Mantra and instructions for his worship. There are also two articles by the present writer, one entitled *A study in Buddhist iconography*, the Addenda to which appeared in O. Z. 1935 p. 195 and the other called *The Ch'an Master Pu-tai*. The first is devoted to the six-armed form of *Cintāmaṇi-cakra Avalokiteśvara*; and the second contains a translation of a short biography of Monk Pu-tai, together with an iconographical note explaining the connection of this monk with images of Mi-lo Fo (the Chinese Maitreya). I think that I have mentioned, if not all, at least most of the work which has been done in the west in the field of Chinese Buddhist iconography of T'ang and Sung times.

In this field, the Japanese have far outstripped any other nation, and much material of inestimable value remains shut to western scholars in publications in the Japanese language. The work of Takakusu Shunjiro and Ono Gemmyo, who together are editing the *Taisho shinshū daizo kyo shō*, is important. This iconographical supplement of the *Tripitaka* publishes for the first time many long rolls with paintings of Buddhist divinities, together with explanations of rites, such as the *Homa*, a fire ceremony used by the Shingon and Hosso sects, for example. Togano Joun is responsible for two helpful and interesting works, the *Mandara no kenkyū* (a study of *Maṇḍalas*) and the *Rishukyo no kenkyū* (a study of the *Prajñāpāramitā sūtra*). Mochizuki's new five-volume dictionary, the *Bukkyo Daijiten*, is indispensable, especially since Oda Tokuno's one-volume *Bukkyo-daijiten* is, I believe, out of print. The three-volume *Mikkyo daijiten* by Matsunaga Shodo, a dictionary of esoteric Buddhism, is very helpful for the study of Tantric divinities. Besides these few that I have mentioned, there are a great many other books and articles of high value written by Japanese authors on Chinese and Japanese Buddhist iconography, a number of which are given in character and transliteration in the bibliographies appended to my article *A study in Buddhist iconography* and to its Addenda.

The important work of studying separate divinities, it will be seen, has only just begun. We have the general work of Waley and Hackin, and a few articles on particular divinities like those by Péri, Visser, van Gulick and the present writer, but the soil has only just been scratched. Good translations of the work of Japanese scholars are needed, together with studies of all the important divinities and forms of divinities, illustrated from the original paintings and sculptures which remain to us

1. For example, Chinese characters are given for some, but not for all, of the proper names mentioned in the text, there is no index, etc.

2. *Hārīti*, La mère-de-démons, in the BEFEO, Vol. XVII, Hanoi, 1917.

3. *Op. cit.*, Vol. XI.

from T'ang and Sung times, or from those which were made in Japan on Chinese models. The long rolls, including the Palace Museum painting and those, whether Chinese or Japanese, which are in temple collections in Japan, are to be studied and compared and texts dealing with the divinities represented are to be translated. Further, these studies should be made in correlation with the work done in the Indian field.

Part. I. A general description of the painting and a discussion of its date

After thus outlining the background and placing the painting therein, I will proceed to give a general description of the long roll which is the subject of the present thesis, or preliminary study. It is fifty-one feet long excluding the inscriptions at the end. The images are painted, as the Emperor Ch'ien Lung tells us,¹ on paper made from the mulberry, which is of excellent quality and old; ² though fine in texture, it is durable. The work is well executed in colours and gold, red predominating. Several shades of mauve, wine-colour and maroon, together with yellow, orange, green and blue are also used. The blue has faded much. The drawing, though for the most part iconographically correct according to the canons of the time, is free in its use of flowing line and the colours sing together in harmony. A few parts are in monochrome and were probably left unfinished. One section several feet in length is by an inferior hand and some parts have been retouched, notably the Brahmā and Indra groups and also, slightly, the face of Cintāmaṇi-cakra. The painting is attributed in an inscription written by the monk Miao-kuang in A. D. 1180 to Chang Shēng-wēn, about whom nothing further is known.

The scroll has been considerably mutilated. Each figure, or group of figures, was cut away from its fellows, even the great assemblies being cut up into from three to six sections, and the whole made into an album, as Ch'ien Lung tells us in his inscription, and then remounted as a roll. Many figures are entirely missing, as, for example, two of the Eight Great Dragon Kings and two (the Red Bird and the Black Warrior) of the Ssu shēn, or gods of the four directions. The Green Dragon of the white Tiger, ³ the other two of the four, have been placed with the remaining six dragon kings to make up the number eight. Many parts are misplaced,

1. See the translation of his inscription on the painting, page 21.

2. The Emperor Ch'ien Lung reigned from A.D. 1737 to 1796; he wrote this inscription in 1763.

3. The white Tiger as depicted here strongly resembles a dragon. The same thing is true of the representations of him in the 6th century tomb paintings near Heijo in Korea, on the pedestal of the bronze image of the Buddha Bhaiṣajyaguru (Yakushi) in Yakushiji, Nara Kén, Japan, and elsewhere.

as, for example, the Temptation of the Buddha by Māra and his hosts,¹ which is at the beginning of the roll after the two Vajrapāṇi. Perhaps this group is the only one left of the well-known series of eight scenes from Śākyamuni's life. Though there are thus lines of junction between the various parts of the painting and though other parts are missing and still others misplaced, nevertheless, the painting itself is well preserved, being but slightly worn and faded. Its value as an iconographic document, in spite of its mutilation, is extremely high.

An inscription on the painting itself accompanying the imperial procession which precedes the divinities of the pantheon reads: Li Chên Huang Ti P'iao Hsin hua,² or "The Emperor Li Chên (had this picture) painted." Huang-ti is, of course, the Chinese term for emperor—though the proud sons of Han never used the term for these petty kinglets of the barbarous south³—and P'iao-hsin was the native term for emperor, as we are told by the Nan Chao yeh shih.⁴ Li Chên wears on his clothes the sacred symbols described in the Book of Rites and the Book of History,⁵ which were used to adorn the robes of the Son

1. Although this scene appears isolated here, it may be that all the eight scenes, of which this is the only one remaining, were placed here at the head.

2. Owing to typographical reasons the Chinese characters do not appear in the text. They are given in the appendix, in the table of names and terms.

3. In the case of earlier kingdoms in the same part of the country, for example, that of Nan Chao (A.D. 728-898), which was far more powerful than the Hou Li kingdom, the Chinese emperor conferred on the king a title, now that of Yunnan Wang, "Prince of Yunnan," again that of Nan Chao Wang, "Prince of Nan Chao." But at the time of the Ta Li (937-1094) and Hou Li (1096-1253) kingdoms, the rulers were calling themselves emperors without the sanction of their powerful neighbour in the north, who had her hands full with enemies to her north and west. This information is culled from the Nan Chao yeh shih, for an account of which, see the following note.

4. The Nan Chao yeh shih, or "History and legends relating to Nan Chao," was written in 1550 by Yang Shen, of Hsin-tu, Ssu-ch'uan province; it was revised and edited with notes by Hu Wei of Wu-ling, Honan province, in 1775. The copy in my possession seems to be one of the 1775 edition, but the book is also included in the Yunnan Tsung Shu. A set of the latter, a collection of books about Yunnan, is in the Library of Congress. See also the translation in French of the Nan Chao yeh shih, Publications de L'École des Langues Orientales Vivantes, Ve série, Tome IV, Nan-tchao Ye-che, Histoire particulière de Nan-tchao, traduction d'une histoire de l'ancien Yunnan, par Camille Sainson, Paris, 1904. Hereafter, the Chinese version of this book will be referred to as NCYS-Ch, and the French version, as NCYS-Fr. The references to the Chinese version are to the pages in the edition which I have.

For the term Piao-hsin, see NCYS-Ch, chuan 1, page 2 b, NCYS-Fr, page 14. This term is, of course, a transliteration.

5. These twelve symbols are listed by Giles in his Introduction to the history of Chinese pictorial art, page 2. They are illustrated in the Liu ching t'u, compiled by Cheng Chih-ch'iao in 1743, chuan 4, pages 15 a to 16 b. The title of this book may be rendered in English, "Illustrations to the Six Classics," and the titles and explanations of the symbols are given according to the Shu ching, or Book of History.

of Heaven, Emperor of all the Chinas—to borrow the Russian way of phrasing, which well connotes the glory and power emanating from the Chinese emperor, at least at times when he held sway over Turkestan, Mongolia and other countries, as was the case during a part, at any rate, of the glorious dynasty of T'ang. Even when these jewels were lost to the Emperor, he retained a good deal of glory and splendour.

Li Chên is one of the reign names adopted by Tuan Chih-hsing, who was the fourth ruler of the Hou Li kingdom which lasted from 1096 to 1253,¹ when it was conquered by the Mongols and made a part of the Chinese empire. He was of the same Tuan family who founded the Ta Li kingdom and ruled it from 937 to 1094. After the two years' duration of the Ta Chung Kuo, the Tuan family again came into the hereditary name of ruler, if not the power, and the dynasty was known as Hsu (Ta) Li, or Later (Ta) Li.² The main events of the reign of Tuan Chih-hsing may be found in the *Nan Chao yeh shih*, French edition, pages 104—6, and the previous history of the dynasty in the pages preceding. It will not be necessary here to go into further details; and I may add only that it was not unusual for the Chinese to refer to emperors by their reign names, as Li Chên is referred to in the inscriptions on our painting. For example, Ch'ien Lung is really the reign name of Kao Tsung Shun Huang Ti.

Part II. The inscriptions and their dates

Before dealing with the iconography of the long roll, I will record my translations of three of the inscriptions to be found at the end of the painting, following the pantheon of Buddhist divinities, those by Miao-kuang, by Sung Lien and by Ch'ien Lung. It may be as well first to explain the correct interpretation of the date given by Miao-kuang. This name means "Wonderful Light," and is the name in religion of a Buddhist monk. He gives the date of his own writing as the 5th year, cyclical characters kêng-tzu, of the period Shêng Tê, the 1st month, the 11th day. The Chinese scholar Sung Lien, in his inscription, which follows that of Miao-kuang,

1. See the table of the rulers of Yunnan, NCYS-Fr., page 274. These dates were obtained by Sainson from the Chinese reign dates given in the Chinese text along with their corresponding Yunnanese dates. Without the *Nan chao yeh shih*, it would have been difficult indeed to place the reigns given on the Palace Museum painting and on another from Yunnan formerly owned by Messrs. Yamanaka and Company (New York; main office, Osaka, Japan), and now in a private collection in Japan. The date on this painting, which is a copy of the original, corresponds to A.D. 899. This date and that of the Palace Museum painting, 1173-6, were both first established by the present writer.

2. See the NCYS-Ch., chuan 1, pages 38 b to 42 b; NCYS-Fr., pages 98-106 and also the table of the rulers of Yunnan, pages 273-4.

provisionally refers this date to the 4th year of the period Chia Hsi—which does indeed have the same cyclical characters—in the reign of the Emperor Li Tsung of Sung, or A.D. 1240; and he is followed by the Emperor Ch'ien Lung. He gives no reasons for his choice of this year, as the reader will presently see for himself; and reference to the Nan Chao yeh shih¹ makes it apparent that his guess was just sixty years off. There we are told that the reign of the Emperor Chih-hsing (Li Chên) of the Hou Li kingdom started in the 8th year of the period Ch'ien Tao of the emperor Hsiao Tsung of southern Sung, or A.D. 1172. The next year, he changed the name of the reign to Li Chên—the name given on our painting—and afterwards to Shêng Tê—Miao-kuang's date. Now, since the year bearing the cyclical characters kêng-tzu which falls at this time (each of the sixty cyclical combinations of which this is one recurs every sixty years) is the 7th year of the period Shun Hsi of the emperor Hsiao Tsung, or A.D. 1180, this year of 1180 must correspond to the fifth year of the reign period Shêng Tê referred to in Miao-kuang's inscription. Working backward, then, we see that the period Li Chên began in 1173 and ended in 1175 according to the oriental way of reckoning and in 1176 according to the occidental, less logical in this case. Between 1173 and 1176, then, the long roll of Buddhist images must have been painted.

I believe this painting to be the original² painted at this time and not a copy, because in the first place it is well done, with feeling and energy, and in the second, the iconography is comparable, among Chinese representations, only with the T'ang and Sung paintings from Tun-huang and differs immeasurably from all later Ming and Ch'ing work. Moreover, all the Chinese connoisseurs composing the Committee on Paintings of the Palace Museum agreed in pronouncing it the original Sung painting. And, besides the painting itself, they had the calligraphy of the inscriptions by which to judge. None questioned the authenticity of any of the inscriptions, one of which, as I have already stated, is only a few years later than the painting itself. The second inscription is by Sung Lien, a scholar of the opening years of the Ming dynasty, of whose writing there are a number of specimens in the Palace

1. NCYS-Ch, chuan 1, page 42 a; NCYS-Fr, pages 104-5.

2. All Sung Buddhist paintings which are not definitely Ch'an (i.e., impressionistic brush and ink work) were, I believe, based in general, if not in particular, on T'ang models. Many long rolls depicting Buddhist divinities must have been made in the various centres of Buddhist culture all over China in T'ang time. This Palace Museum painting is all the more important in that it is the only one of its kind, so far as I know, which has escaped the ravages of time and war. That there are many similar one in Japan, many of which have now been published for the first time in the Taisho shinshū daizō kyo zūzo, is certainly very strong evidence in favour of this view. Indeed, it is not unlikely that some of the long rolls of Buddhist images treasured for long years in Japanese temples are Chinese.



Museum, and if it had been a forgery, these connoisseurs would have recognized it as such. Sung Lien was Shih-chiang Hsüeh-shih, or Consulting Scholar to the Emperor Hung Wu, the first ruler of the Ming dynasty, and was famous for his learning and for his good calligraphy. He has indeed been called "The chief literary man of the opening years of the Ming dynasty."¹

There follow translations of the three inscriptions, the Chinese text of which may be consulted by referring to Appendix I. My translations are tentative, and I should be grateful for any suggestions or corrections.

The inscription of Miao-kuang

The artist Chang Shêng-wên, of the Ta Li kingdom, has asked me for a record (of my thoughts) concerning his painting of various divinities, done for the benefit of all beings.

There is the Void; there is the Absolute. There being the Absolute, there must be the Void. From the midst of the Void, from the depths of the Absolute, there spontaneously arises the Ming-hsiang.² From the Ming-hsiang, arises the original power.³ From this power come the manifold phenomena of life. There is the crowd of beings; there are the Buddhas. The crowd of beings is immeasurable; the sea of Buddhas is without a limit. Duality causes forms and hardship. To save from bitterness and to promote knowledge, there are all the images. Truly, they are as if divine.⁴

The artist admired and was influenced by the styles of Chang (Sêng-yu)⁵ and Wu (Tao-tzu)⁶ and approaches the beauty of the works left by Wu.⁷

1. The Tseng kuang shang lu tung pien, chuan 17, page 17 b.

2. The Ming-hsiang is the primordial ether.

3. This term, *i ch'i*, corresponds to the Taoist T'ai-chi, the Great Monad, or primum mobile, from which issue the Yin and the Yang, or the negative and positive principles or forces, which in turn, by their interaction produce the "ten thousand things."

4. I am not sure I have correctly rendered the last three sentences.

5. A famous artist who flourished in Nanking under the Liang dynasty; he was much employed by the emperor Wu (ruled A.D. 502-549). See Siren, *A history of early Chinese painting*, Vol. I, pages 22-4.

6. The name of Wu Tao-tzu is undoubtedly the most celebrated in the annals of Chinese painting. He flourished in the middle of the 8th century and painted, besides much other work, a number of noted frescoes on the walls of Buddhist temples in the capital, Ch'ang-an, none of which have survived. See Siren, *op. cit.*, Vol. I, pages 71-9.

7. This name, although pronounced in the same way as the Wu of Wu Tao-tzu, is written with a different character. In all three cases, the surname only is given; and while it is practically certain that Chang Sêng-yu and Wu Tao-tzu are meant by the first two names, the identity of the third is problematical. It is possible that Wu Ching-tsang, who lived in the T'ang dynasty and was known for his paintings of "gods and demons," is meant. On the other hand, Wu Tung-ch'ing may be intended. He was a man of Ch'ang-sha, who worked under the northern Sung dynasty. He studied the style of Wu Tao-tzu, and was noted for his figure painting.

It is fitting to desire that the crowd of beings should have the Buddha nature at heart. There are only the Buddha and the crowd of beings; the sacred and profane are not different. Wonders spring from the hand of the artist; spiritual power radiates from his heart. When the family reverences (divinity), the country will flourish, and the individual will be at peace and will also be rich.

Written by the monk Miao-kuang in the 5th year, cyclical characters kêng-tzu, of the period Shêng Tê, the first month, the eleventh day.

Sung Lien's inscription

The roll of Buddhist images was painted by the Master Chang Shêng-wên of the Ta Li kingdom. An inscription says that it was painted for the Emperor Li Chên. Afterwards there is the record of Miao-kuang, dated the 5th year, cyclical characters kêng-tzu, the 1st month, the 11th day, of the reign of Shêng Tê. All the images are in colour and gold and all are extremely well painted; the calligraphy, too, can not be called bad.

Ta Li was originally, in the time of the Han dynasty, called Yeh-yü; at the time of T'ang, it was known as Nan Chao. Various Man¹ tribes were in possession of it. In the beginning, its name was Ta Mêng; then the name was changed to Ta Li, which again was changed to the present name, (also read Ta Li). At the time of the Posterior Chin, when the Shih family was ruling (Chin), (this country) was under Tuan Ssu-p'ing. By the close of the Sung dynasty, it had become very weak. The government was in the hands of two brothers, Kao Hsiang and Kao Ho. During the Yuan dynasty, Hsien Tsung destroyed the kingdom and divided it up into prefectures and districts.

The cyclical year Kêng-tzu referred to is probably the 4th year of the period Chia Hsi in the reign of Li Tsung of Sung (A. D. 1240); and Li Chên was one of the descendants of the Tuan family. About this time, the whole country was stolen and overrun by the Man barbarians, who took possession of the imperial insignia and usurped the throne. It is not necessary to discuss (this chaos in detail). Now we have just taken a glimpse of the course of events. Nowadays men take pleasure

He painted stellar divinities and Buddhas and Bodhisattvas and Arhats. There is also Wu Tsung-yüan, who flourished circa 1010 and painted Buddhist subjects in the style of Wu Tao-tzu. The last named only is mentioned by Waley in his *Index of Chinese artists* (page 103), while all three are to be found in Saito's *Shina gwakka jinmei jishi*, a biographical dictionary of famous Chinese painters, written in Japanese, Vol. I, page 54 b. The man referred to was evidently not so famous as Chang Seng-yü or Wu Tao-tzu, and yet he may well have had a considerable and not undeserved reputation.

1. Barbarous tribes of the south.

in the virtue of sincerity. All were originally of a heavenly nature. In the beginning, there was no distinction between Chinese and barbarians; there was no within and without. Indeed!

The Ch'an monk Tê-t'ai of Tung Shan has acquired this roll by purchase—not cheaply—he keeps it, examining it himself and showing it to others. I have written this eulogy and returned it (the painting) to him.

Sung lien, of Chin-hua, scholar of the Han-lin.

There are two seals impressed: one, T'ai-shih, a title given to Han-lin graduates; one, Sung Ching-lien. Ching-lien was Sung Lien's tzu, a name or style taken at the age of twenty.

Ch'ien Lung's inscription

A painting of Buddhist¹ images, the work of Chang Shêng-wên, of the Ta Li kingdom of Sung times.

Paintings of the Ta Li kingdom are not to be seen every day; in collections of paintings of different dynasties, there are few attributed to (men of this country). Now in the Palace is kept a long roll of Buddhist images by Chang Shêng-wên, a man of Ta Li. On it, there are inscriptions, one by the monk Miao-kuang, written in the 5th year of Shêng Tê, the cyclical year kêng-tzu, and one by Sung Lien, which states that this date corresponds to the 4th year of Chia Hsi, during the reign of Li Tsung of the Sung dynasty (A. D. 1240).

Formerly, I saw in Chang Chao's Collection of essays,² an eulogy of a picture roll by an unknown artist of the Five Dynasties, and I am not sure that the author may not have been referring to the same painting, as he had made a thorough study of the Ta Li style. At the beginning of this eulogy, is given the date, the 1st year of the period Wên Ching of the usurper Tuan Ssu-ying, which has been found to

1. The character used is 'fan', which probably derives from the Sanskrit and is explained as meaning "pure." Its use is almost entirely restricted, however, to the indication of anything Buddhist, e.g., a temple, a prayer, etc.; and it is commonly used to indicate the Sanskrit language. As employed here, it suggests the Indian derivation of the divinities depicted. It would not be used to refer to Ch'an painting.

2. Chang Chao was numbered by Ch'ien Lung among his "Five Men of Letters." In 1733, Chang Chao was President of the Board of Punishments; and in 1735, he himself narrowly escaped execution for his failure to arrange the management of the aboriginal territories in Kueichou. See Giles, *A Chinese biographical dictionary*, No. 23. I have not had an opportunity to examine the Collection of essays referred to, the text of which might throw a different light on what Ch'ien Lung has to say. Hence, my translation is merely tentative.

correspond to the 3rd year of K'ai Yün of the Posterior Chin, or A. D. 946.¹ Now, the roll under discussion is a production of Southern Sung times and dates thus some three hundred years later.² He (the author of the eulogy, presumably) records a painting of the A-tso-yeh³ Kuanyin; but this painting of various Buddhas, Bodhisattvas, Brahmā, Arhats, the Eight Classes⁴ and other divinities, does not include an A-tso-yeh Kuanyin. Thus, it is clear that this is not the same painting seen by Chang Chao. In this roll, the various divinities are splendid in appearance, well executed in colour and gold and full of vitality. The paper, made from the mulberry, is of excellent quality and old, though fine in texture, it is durable. It may be compared with the Chin-su-chien paper.⁵ An old painting, so well preserved as this, should indeed be esteemed and treasured. The fact that the work was done by a foreigner should not cause any to regard it lightly.⁶

The various parts of the painting are sadly out of place. By examining the eulogies and criticisms, we learn that in the time of Hung Wu of the Ming dynasty (1368-99), this painting was in the form of a long roll and was kept in the T'ien-chieh temple by the monk Tê-t' ai. At the time of Chêng T'ung (1436-50), the roll was damaged by water⁷ and was made up into an album. It is not known at what time it was again mounted as a roll and thus restored to its earlier form. The mounting and remounting gave opportunity for mistakes in arrangement. At the beginning of the roll are the standard-bearers and retainers in procession and the emperor himself holding an incense burner in an attitude of reverence. The mutual relationships are not properly indicated, for at the end of the roll are painted the kings

1. There is a mistake here of one year; according to the NCYS-Ch, chuan 1, pages 34 b and 35 a (NCYS-Fr, page 90), the period Wen Ching commenced during the 2nd year of K'ai Yün, or A.D. 945.

2. Ch'ien Lung is reckoning the date in accordance with Sung Lien's interpretation of Miao-kuang's date, i. e. circa 1240.

3. This name is, of course, a transliteration. I do not know to what it refers.

4. The Pa pu, or Eight Classes, comprise Deva (gods or angels), Nāga (serpent or dragon gods), Yalpa (nature spirits), Gandharva (celestial musicians, usually half-bird, half-human or divine), Asura (Titans or giants), Garuḍa (bird-like beings, enemies of the Nāga), Kinnara (beings sometimes pictured with human bodies and horses heads, sometimes like fairies), and Mahoraga (being half-python, half-human or divine).

5. A yellow paper made during the T'ang dynasty and used for writing the Sūtra. The paper of the long roll, I may add, does not have the appearance of having been yellowed in any other way than by age.

6. Ch'ien Lung regards the people of the semi-independent kingdoms of the south before A. D. 1253 as foreigners; and indeed, the vast majority of the inhabitants at that time must have been non-Chinese. The civilization, too, must have been far more strongly tinged with Indian and Nepalese influence than that of China proper.

7. No doubt during a fire at the temple.

of sixteen countries in India. The monk Tsung-lo says that these kings are Outside¹ Guardians of the Law. Individuals of the same class should be put together.²

At my (the Emperor's) order, Ting Kuan-p'êng³ copied this painting, and styled his copy a painting of a foreign king worshipping Buddhist divinities. After the Four Guardian Kings,⁴ come the various Buddhas, Patriarchs and Bodhisattvas, on to the two precious banners.⁵ Thus, doing each figure separately, he copied the roll. I have had these two rolls, the source and the stream of the world of the Law treasured together, so that the roll may never again be wrongly remounted with its parts in disorder, but that this original scroll may be as it was of old.

In ancient times, there were (Wu) Tao-tzu, (Lu) Lêng-ch'ieh,⁶ and other masters who chose Buddhist subjects for their paintings. So splendidly did they succeed in realizing the grandeur and majesty of the various manifestations that their works have been copied without end.

I have not heard that on the Lion Throne or in the Deer Park,⁷ there were traces of vulgarity. Although the Buddha is without the illusions of the social self

1. The character 'wai', literally, "outside," is used for heterodox, and may mean that these kings were Brahmins converted to Buddhism.

2. The preceding passage may mean that Ch'ien Lung believed that the emperor and his retinue should be placed at the end of the roll with the sixteen kings, or it may mean that the sixteen kings should follow the emperor and precede the pantheon. Since it would be unseemly indeed to make the emperor turn his back on the divinities, I have given Ch'ien Lung the benefit of the doubt. His statement that the remounting gave occasion for changes in arrangement is certainly correct.

3. Ting Kuan-p'êng was a well-known painter at the court of Ch'ien Lung. In the Palace Museum collection, I saw many paintings by him, but not the copy of this long roll which Ch'ien Lung tells us that he made at the Imperial command.

4. In the painting as I saw it, there were none of the Four Guardian Kings, and two red Vajrapāṇi preceded the various Buddhas and Bodhisattvas.

5. At the end, are painted two large banners on which are Sanskrit inscriptions. A copy of these was sent to Baron von Stael Holstein for translation by the officials of the Museum—or was to be sent; I have not heard the result. Unfortunately, I did not complete my description of the painting, made at the Palace Museum in Peking in the winter of 1931-2, having to leave China before I reached the banners in the course of my study.

6. Lu Lêng-ch'ieh was a pupil of Wu Tao tzu's, probably the most important of the immediate followers of the master. He painted landscapes also but was best known for his pictures of Buddhist subjects; the most famous of his productions, was called "The Sixteen Arhat crossing the sea." See Waley, *Index of Chinese artists*, p. 65, and *Introduction to the history of Chinese painting*, pp. 118-9; see also Giles, *Introduction to the history of Chinese pictorial art*, p. 53 and *Shina gwakka jinmei jisho*, Vol. II, p. 149 a. The name Lêng-ch'ieh in a transliteration of the Sanskrit Laṅkā.

7. Śākyasiṃha, the "Lion of the Śākyas," is one of the names of Śākyamuni Buddha, and he is frequently represented as seated on a Lion Throne. The Deer Park is doubtless the Deer Park at Sārnāth near Benares, where he preached his first sermon.

or of the ego, and although, whether united or separated (i.e., whether manifested in the world as Śākyamuni—or other Maṇuṣa Buddhas—or unmanifest in the Dharmakāya), he has no idea of distinguishing, nevertheless, we in this world of desire, if we wish to suggest by painting the peace that passeth understanding, must seek to do so by symbols like Mount Sumeru and the fragrant sea (that surrounds it). Thus, even one drop in the tide of phenomena, we naturally separate into the pure and the ordinary.

I have recorded the preceding.

The year of Kuei-wei of the reign of Ch'ien Lung (1763), the 10th month, the 15th day, written by the Imperial brush and stamped with three seals—one, Ch'ien Lung; one, Tê-ta-tzu-tsai - - -

To be continued

SOME ASPECTS OF STŪPA SYMBOLISM*

By ANAGARIKA BRAHMACARI GOVINDA

V. Pre-buddhistic origins of stūpa symbolism

In Mahāyāna Buddhism the transcendental symbolism of the crowning parts of the stūpa got a new impetus. Their structure became more and more elaborate and extensive and the number of stories steadily increased from five to seven, to nine, to eleven, and finally to thirteen Bhūmis. The general outline of the stūpa was no longer dominated by the dome but determined by an upward movement which raised and multiplied the substructure, narrowed the dome, enlarged the Harmikā and elongated the spire. The direction of the religious outlook had turned from a completed past to the growing future, from the ideal of an accomplished Buddha to that of a becoming one, from the world as it is to the world as it should be and as it had been dreamt of in the vision of mount Meru's supramundane realms. In this vision the religious aspirations of the Buddhists and the followers of the Vedas met; on this ground only their compromise was possible. We are therefore justified in thinking that it was not a mere accident that at the time when Mahāyāna was in its bloom, at about the fifth century, a type of religious architecture came into existence which realized the spiritual and structural tendency of this vision (which was embodied in the crowning parts of the stūpa) in a parallel but otherwise independent form, developing into what is known to us as the Śikhara type of temple.

The earliest stages of this type are still wrapped in darkness. It seems that they did not originate before the Gupta period. The earliest example dating from the fifth century is a votive Śikhara temple found at Sarnath.

The village hut itself is the prototype of these shrines. And as the hut serves the earthly life, the shrine serves the cult of life-giving and life-preserving forces (generally personified in the sun-god). It stood in the shadow of the sacred tree and was surrounded by a fence as a demarcation of the sacred

* See J. I. S. O. A., vol. II, pp. 87-105.

place. The ground-plan of the shrine, like that of the altar, was almost square and the roof high, either on account of the fire or in order to distinguish it from ordinary huts. The development of pyramidal and conical forms (as in the case of the spire of the stūpa) was more or less pre-conditioned.

The temples were erected within the village, while the tumuli which served the cult of the dead were built outside their walls. The Buddhist stūpa which combined the elements of the village sanctuary with that of the ancient tumulus recognized in its form that life and death are only the two sides or poles of the one reality of the world, complementing and conditioning each other, as the co-existent principles of Viṣṇu and Śiva.¹

To think them separate is illusion and only as long as the veil of Māyā has not been lifted, the worship of these two forces proceeds separately, sometimes even as two different forms of religion. But once it has been understood that the plant cannot be born to the light before the seed has perished in the dark womb of the earth, that the egg must break in order to give life to a new being, that transformation is that which conditions life, "that we are living our death and dying our life"—if this has been understood, then the great synthesis takes place, and the foundation of a world-religion is established. Existence is constant transformation, i.e. it combines the elements of stability and change. Transformation without constancy, law, or rhythm is destruction. Constancy without transformation means eternal death. He who wants to 'preserve' his life will lose it. He who does not find his inner law (dharma) will perish. The principle of 'Śiva' without the regulating force of 'Viṣṇu' is destruction. The principle of 'Viṣṇu' without the creative dynamics of 'Śiva' is stagnation. The same holds good for all the other pairs of opposites under which the universe appears to us. Their mutual relations and their interpenetration in every stage of existence are illustrated by the architectural composition and development of the stūpa and the ideas connected with it.

The hemisphere stands for the dark and motherly forces of the earth, the transforming power of death (and rebirth), the concentration of yoga and asceticism (ascetics and yogins always preferred cemeteries).

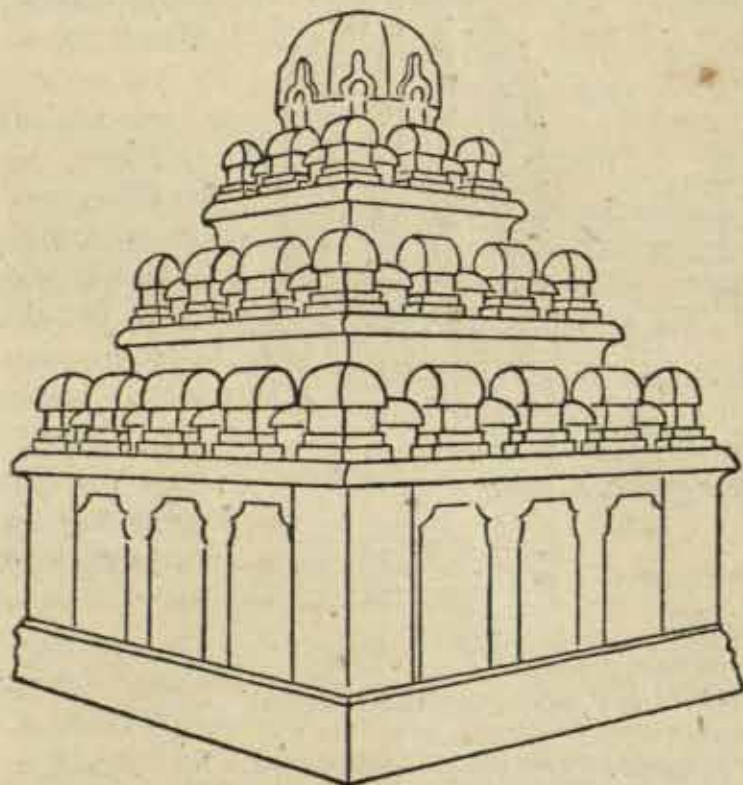
The cone as well as the similar pyramidal forms, characterised by one-pointedness and vertical direction stand for the forces of the sun: light and life, represented by the fire-altar (harmikā) and the tree (spire). The tree later

1. It must be understood, however, that while considering the principles of Śiva and Viṣṇu we are not so much concerned with the historical aspect of architecture but with the basic tendencies of their inherent symbolism.

on includes all the other symbols representing the universe (mount Meru). The sun and the stars are its fruits, and its branches the different world-planes. Tree worship has been preserved in Buddhism until the present day, the worship of light in that of Amitābha (the Buddha of infinite light, the sun-Buddha, who emanates innumerable 'enlightened beings', the worship of life in that of Amitāyus (who is only another form of Amitābha). The idea of the Ādibuddha and his emanations shows that with the advent of Mahāyāna the symbols of the solar cult came again to the foreground.

VI. Relations between stūpa and Hindu-architecture

With the revival of Brāhmaṇism Śiva became the exponent of all those principles that were connected with the hemisphere of the stūpa while Viṣṇu continued the tradition of sun worship as represented in the conical or pyramidal spire.



Stūpi-principle in Viṃāna-architecture

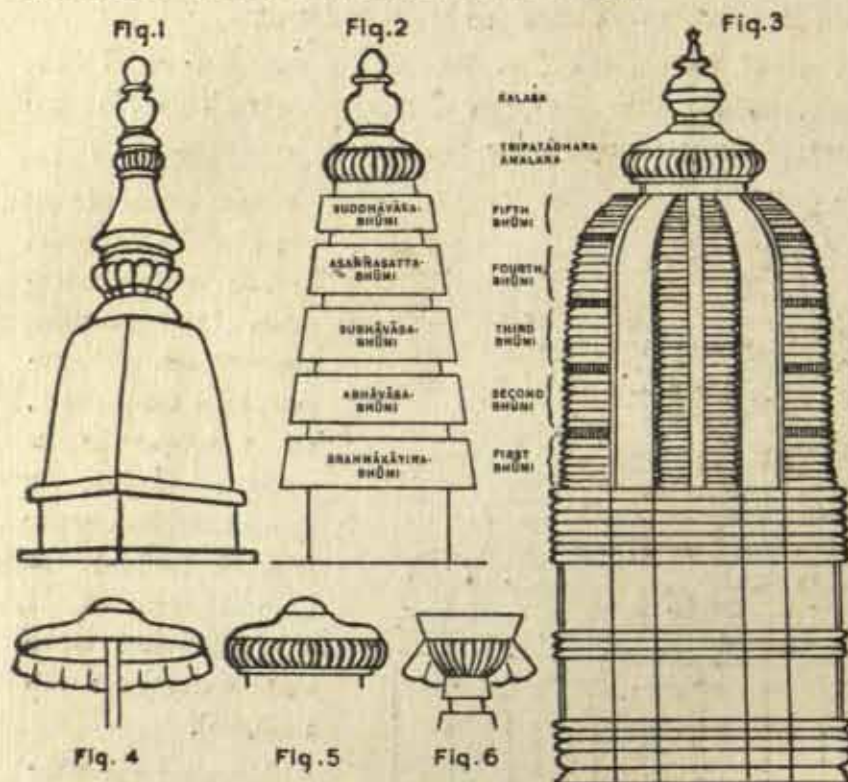
Outline of the Dharmarāja ratha in Maṣalipuram as an example of the Viṃāna-type of temples, in which the cupola (stūpi) or pavilion-principle governs the system, and in which each unit expresses centralisation. In the general composition the horizontal character is stronger than the upward movement.

Śiva is called the yogin among the gods; he unites in himself asceticism and ecstasy, concentration and activity; he is the liberator, the destroyer of the world of illusion, the transformer, the creative principle (liṅgam), the potential force of the womb (therefore moon and water are his attributes).

Viṣṇu represents the law, the direction in movement, the sun that rotates and moves in its prescribed course; he is the preserver of life, the protector of the world, the illuminator, who rides in his sun car (viṃāna) from

horizon to horizon, the loving friend and helper of all creatures (cf. avatārs). His main attribute is the wheel of the law (dharmacakra).

The south of India is mainly Śivaitic and has preserved the dome as the crowning part of the temple. Up to the present day the technical term for this dome or cupola is "stūpi" (see drawing on p. 27). The north, however, which is more inclined towards Viṣṇuism, prefers the Śikhara (see drawings, below). This fact proves, that psychologically and symbolically the cupola is closer related to the principle of Śiva, the Śikhara to that of Viṣṇu.



Architectural and symbolical relations between the Śikhara and the crowning part of the stūpa

Simplified elevation of an Orissa Śikhara (fig. 3) with its five Bhūmis, comparable to the Rūpaloka-bhūmis of the Buddhist psychocosmos, represented by the spire of a stūpa with tentative reconstruction of an Āmalaka-kulaśa-termination (Fig. 2). Fig. 1 shows a similar termination of a modern Nepalese stūpa. The combination of Āmalaka and Tripatadhāra (Fig. 5) has been preserved in the termination of the Tibetan stūpa (mchorten) (Fig. 6). Tripatadhāra is here replaced by an honorific umbrella from which most probably it has been derived. The shape of the Tripatadhāra is exactly the same as that of the original honorific umbrella (Fig. 4 and upper part of Fig. 5).

The Bhūmis culminate in the Vedikā, the sacred quadrangular enclosure (Sinh,

The crowning spire of a stūpa with its Bhūmis or strata of world planes, in this respect corresponds to the Śikhara. In the Orissa temples (Fig. 3) it is divided into five Bhūmis, which are subdivided again into smaller strata (just as the Bhūmis in the psycho-cosmic world system of Buddhism: there are, for instance, five Rūpaloka-bhūmis, each of them subdivided into three and more classes).

"hatareaes kotuva," corresponding to the Harmikā and the Vedic altar), which is crowned by the Āmalaka or Amalasāra, the 'pure kernel', upon which the Amṛtakalaśa, the vessel with the water of immortality—which is also the attribute of Buddha Amitāyus is placed. According to the Divyāvadāna the primitive Caitya ended in a kind of pot, which was called Kalāśa (Tucci, "Indo-Tibetica" I, p. 47, nI).

There can be no doubt about the symbolical relationship between the Mahāyāna-Buddha Amitābha, the Buddha of infinite light (and life, in his aspect of Amitāyus) and Viṣṇu, the sun-god. Both of them are supposed to incarnate their love and compassion in the form of helpers and teachers of humanity : as Bodhisattvas and avatārs. Both of them have the wheel of the law as their attribute. The Dharmacakra is also ascribed to the historical Buddha Śākyamuni. But it was only used to represent him in his Viṣṇuitic aspect, as the establisher of the Dharma, in the act of setting in motion the wheel of the law at his first sermon at Sārnāth. The other great events of his life, his enlightenment and his Parinirvāṇa, were hinted at by the tree of enlightenment and the Caitya. This means that the historical Buddha cannot be connected exclusively with either the Viṣṇuitic or the Śivaitic aspect. He represents the one or the other according to the period of his life. The orthodox school has never given any attribute to their Buddha image because their worship was centred on the one historical Buddha and even when his predecessors were depicted he could easily be recognized by his position. Later on, when other Buddhas were introduced by the Mahāyānists, Śākyamuni was characterised by the alms-bowl, the symbol of the ascetic, which shows that his quality of a yogin, his Śivaitic aspect, was felt as his main characteristic by the followers of Mahāyāna. And in fact the orthodox schools themselves emphasised strongly the ascetic side of Buddhism (vinaya) and in their architecture the tumulus or dome shape of the stūpa prevailed. The followers of the Mahāyāna on the other hand tried to avoid the exclusiveness of asceticism by taking the whole world into their scheme of salvation and emphasised the Viṣṇuitic qualities of the Buddha which transcend the historical personality and remain a permanent source of light to the world. Thus the solar symbolism of the world tree came again into prominence, while the hemisphere of the stūpa became one element among others and the vertical development of the monument proceeded further.

VII. Fundamental form-principles

Before we continue our description it may be useful to summarize the main ideas suggested by the two fundamental form-principles, hemisphere and cone :

the former standing for centralisation, the latter for vertical direction and one-pointedness, which may also be represented by tapering pyramids with square or polygonal base.

Hemisphere :

lunar worship
 motherhood—earth
 symbols : moon, taurus, Trisūla, yoni-
 lingam
 night (unity of interpenetration)
 cult of the dead
 tumulus
 hemisphere of the stūpa
 cupola, pavilions, barrel-vaulted roofs

 horizontal development
 concentration
 inner activity
 inner transformation
 asceticism (hermit life)

 revolution (parāvṛtti)
 intuitive
 yoga
 help from within
 self-deliverance
 belief in the divine quality of man
 Śiva, the yogin
 the transformer
 creative (potential)
 becoming and dissolving
 freedom (nirvāṇa)

Cone :

solar worship
 fatherhood—sky
 symbols : sun, disc, wheel, lotus, tree

 day (unfoldment, differentiation)
 cult of life
 village sanctuary
 conical or pyramidal spire
 pyramidal and conical towers with
 square and polygonal bases
 vertical development
 emanation
 outer activity
 inner stability
 worldly or practical morality (family
 life)
 evolution
 discursive
 pūjā
 help from without
 deliverance by grace
 belief in the human quality of god
 Viṣṇu, the solar god
 the preserver
 stimulative (growth)
 being
 law (karma)

These two categories of principles complement each other and were never completely separated, as the history of religion and religious architecture shows. There was, on the contrary, a constant tendency towards fusion which succeeded more or less in the periods of highest religious culture and experience. But the equation Śiva-Viṣṇu was never completely solved, because there is an irrational

residue beyond expression and calculation which has its root in the fact that the world cannot be divided into equal halves, because there is a third principle which takes part in the other two. In this way there are no complete contrasts—even in opposites there is something in common—and on the other hand there is no absolute identity between anything existing in the world.

The third great principle which partly overlaps the other two is the *Brahmā* principle. Its main features are those of extension, unfoldment, birth, manifestation, materialisation, universal expansion. In its expansive character it is not determined by one direction like the *Viṣṇu* principle, but acts in all directions simultaneously. Its stereometrical equivalent is the cube.

We have not yet spoken of this fundamental form, because it has been combined with both the other principles of architecture and has no deciding influence on our classification. Just as in Hindu religion, *Brahmā* is supposed to be inherent in the aspects of *Śiva* and *Viṣṇu*, and is not considered and worshipped separately, so the principle of *Brahmā*, of materialisation, is immanent in the other two principles, in so far as they take material shape, come into appearance and unfold themselves.

The Buddhist starts from the experience of the world of sense perception and frees himself from its overpowering diversity and its unsatiable thirst of becoming by analysing its elements and reducing them to their fundamental laws. He thus overcomes the *Brahmā* aspect of the world by the *Viṣṇu* aspect of the law ('*dharma*' in its noumenal character, '*karma*' in its phenomenal appearance, in its relation to action). This struggle is the foundation of the *Buddha-sāsana*, represented in the basis of the *stūpa*, the mass of which is reduced step by step, from its greatest unfoldment to its greatest concentration. The personality of the seeker of truth, however, with progressive understanding loses the narrowness of particularity. He becomes the embodiment of the ineluctable law, of the living and yet so rigid procedure of the world. And so the new aim presents itself, not only as freedom from the limitations of personality and the impulses that form and maintain it, but equally as freedom from the law of the world, which is the world itself; for the world does not possess this law as something additional but consists in this conformity to law, i.e., in action and reaction (*karma-law-cosmos-world*). In this sense the Enlightened One is able to overcome the world within his own being by the annihilation of karmic tendencies (*saṃskāra*) and the chain of dependent origination (*pratītyasamutpāda*) by which *nirvāṇa* is realized. This is the last step from the principle of *Viṣṇu* to the principle of *Śiva*—as symbolized in the *stūpa*'s hemisphere—the deliverance from the formed, to the un-formed: the ultimate transition

from law to freedom. While the first stage seeks freedom in the 'cosmos', the deliverance from becoming into being and from the undirected and indiscriminate thirst for existence, the 'chaos', to the consciously directed existence, the last stage seeks freedom from the 'cosmos'. The term cosmos as used here, denotes the experience of the world under the aspect of the law. Buddhism itself also belongs to the 'cosmos', that is, as far as its mental form is concerned. Only in meditation, with attainment of the Arūpaloka stages, does the breaking loose from the 'cosmos' begin, and nirvāṇa lies beyond these.

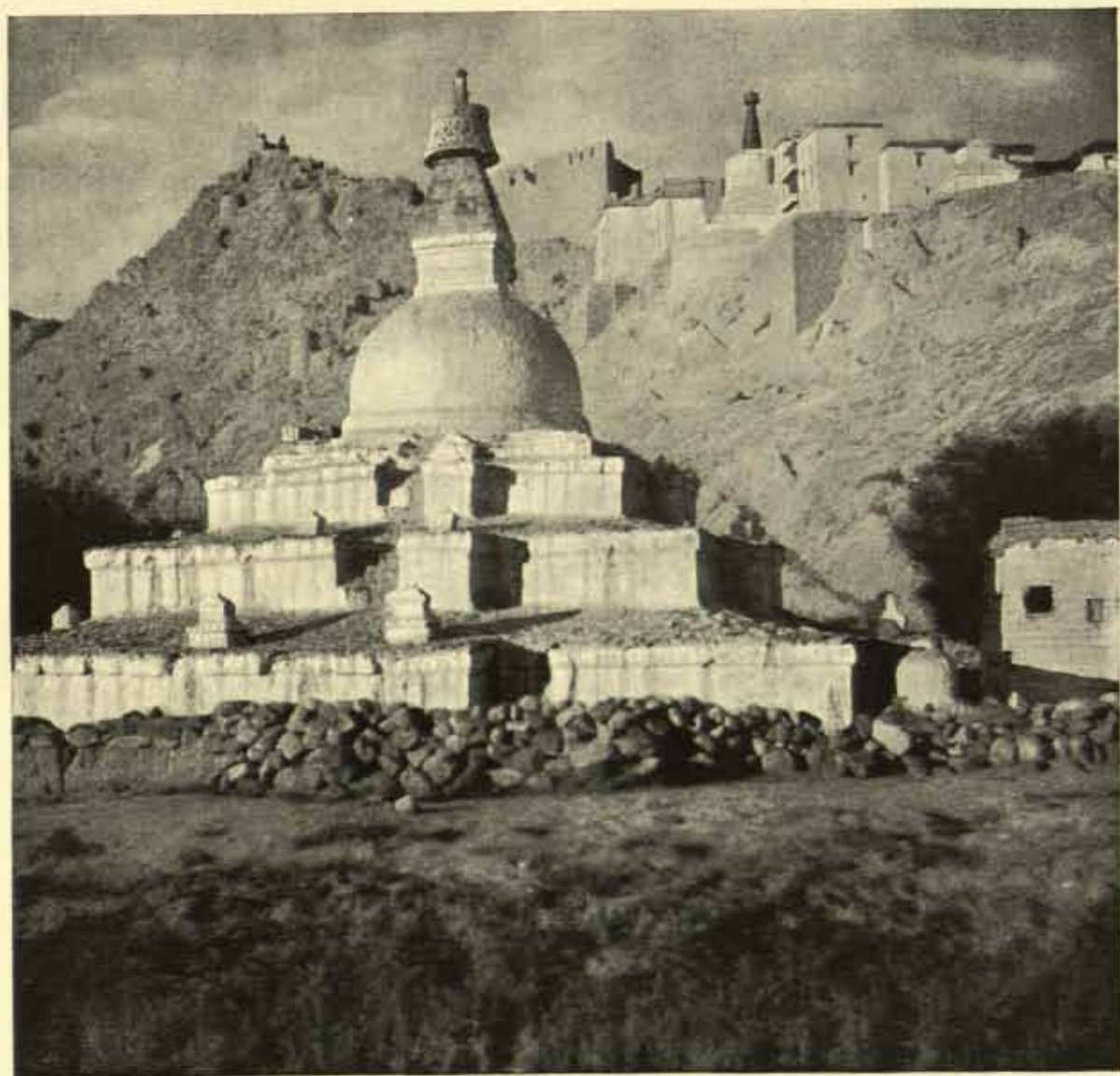
But in order to be freed from the 'cosmos'—the ultimate object of suffering in the stage of the highest, most refined consciousness—one must be capable of experiencing it, must really experience it. One must first have found one's way to freedom in the law before one can attain to freedom from the law, that is to freedom final and complete.

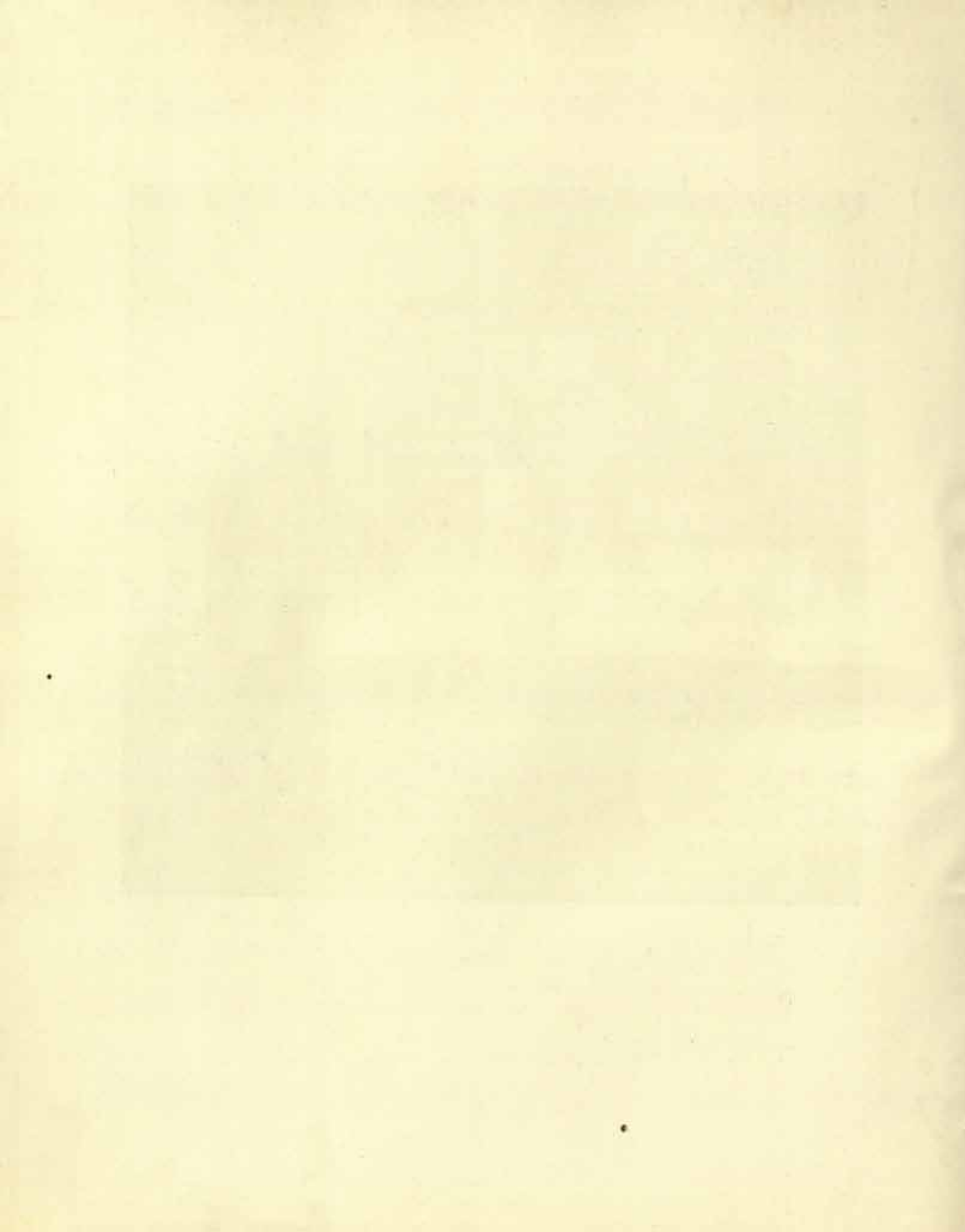
The Parinirvāṇa of the Buddha becomes the starting point for his followers and for the future world, to go his way again, on the basis of his Noble Eightfold Path, into which he condensed his experience. This new basis is represented by the Harmikā from which the tree of life rises as a symbol of future attainments, fulfilling the sacrifice and the message of the past. The spire shows again the gradual reduction of the world (cosmos) until it reaches the point of complete unity which transcends all 'cosmic' experience and realizes the perfect Śūnyatā or metaphysical emptiness. The cone is crowned with a ball¹ (kaeraella) or similar forms of the Śivaitic principle.

It goes without saying that the formal and symbolical development in conformity with the principles of Brahmā, Viṣṇu and Śiva took place automatically, i.e., in accordance with the inner necessities of the human psyche, without being conscious to the originators of those monuments,—at least not in the earlier periods. Later on, specially among Indian Buddhist architects, these principles may have become known to those who were initiated into the esoteric meaning of architectural forms and metaphysical symbolism.

In the Mānasāra the four-sided pillar is called Brahmakāṇḍa, the eight-sided one Viṣṇukāṇḍa, the round column Candrakāṇḍa (candra, the moon: symbol of Śiva). This harmonizes well with our respective classifications of the main elements of the stūpa (though we arrived at our conclusions in a different and safer way): the Brahmā character of the square platform and (later on)

1. Perhaps derived from the kalāśa.





the square terraces of the base; the Śivaitic character of the dome; the Viṣṇuitic character of the Harmikā which, as we shall see later on, was identified with the Eightfold Path. But we have to keep in mind that in architecture the ground-plans of the different parts are not alone decisive, but there is also their development in the third dimension and the relations among themselves, which are determined by their architectural composition and modify their meaning. The cubical Harmikā, for instance, which starts already from the principle of Śiva (hemisphere) can not have the same symbolical value as a cubical element in the actual basis of the monument. The basal terraces grow narrower with every step, which means that the Brahmā principle decreases and gives room to another. The vertical and one-pointed tendency itself is a feature of the Viṣṇuitic principle. In the ground-plan the hemisphere and the cone show the same shape, which means that also symbolically they have something in common, namely the Śivaitic principle; but in the third dimension the cone is quite different from the hemisphere, expressing a one-pointed vertical movement, which means that the Viṣṇuitic principle is combined with it. In this sense we can say that the cone itself represents the Viṣṇuitic character and that the shape of its ground-plan only modifies it towards the principles of Brahmā or Śiva.

In later Buddhist symbolism the four-sided pillar is associated with the Buddha, the eight-sided with the Saṅgha, the sixteen-sided one or the round column with the Dharma. Buddha has been put in the place of Brahmā, because he is the originator, the creator of the Buddhist religion, the Saṅgha is compared with Viṣṇu, as the preserver of this doctrine, and the Dharma is compared with Śiva, because it is not the world-preserving law of god Viṣṇu but the law that proclaims the impermanence, the suffering and the non-substantiality of the world.

This transformed terminology is of no importance as far as our architectural definitions go and is interesting only in so far as it shows that god Viṣṇu's Dharma is not to be considered an equivalent of the term Dharma as used in Buddhism.

VIII. Scholastic symbolism

Scholastic symbolism though it had its origin in the philosophy and psychology of orthodox schools existed side by side with the symbolism of later periods.¹

1. The division of Mahāyāna and Hīnayāna has probably never been so strict as some scholars believe and if we like to use these terms we should be conscious of their limited historical meaning. They originated at Kaniṣka's famous council, where a discussion arose about the ideals of Buddhism. According to the Tripiṭaka, liberation can be attained in

The extension of the name Mahāyāna was, and is, of a vague and fluid kind. Those to whom it was applied formed no closed unit. And this is true of most of the so-called 'sects'. They frequently overlapped in their heretical views."¹)

This overlapping can be observed also with regard to the symbolism of the stūpa and there to an even greater extent, as architecture is more apt to express fundamental ideas than small dogmatical differences. These fundamental ideas

three ways : by that of an Arahan, by that of a Paccekabuddha, and by that of a Sammasambuddha. While the Sammasambuddha does not enter Parinibbāna before having taught to the world the Dhamma which he has found through his own efforts in innumerable existences, the Pacceka-buddha and the Arahan are realizing this Dhamma (the former independently, the latter under the guidance of a Sammasambuddha) in the shortest possible way, without possessing or cultivating the faculties of a world teacher.

It seems that originally the Arahan, the Paccekabuddha and the Sammasambuddha were merely classified as three types of men, while in Kariṣka's time they were conceived as ideals, and from this point of view there could be no doubt that the ideal of a Perfect Enlightened One was the highest. It is not probable that any Buddhist school rejected this ideal, but there may have been individuals who preferred the shorter way of an Arahan either because they found it more congenial to their own temperament and character or because they thought that there was little chance of ever attaining the highest ideal. Thus in each school of Buddhism there must have been followers of the greater (mahāyāna) as well as of the lesser (hīnayāna) ideal.

In fact even nowadays it is a custom in the southern countries of Buddhism, that all those who are earnestly interested in their religion choose one of these ideals, and most of them decide for the ideal of Buddhahood, the Bodhisattvamārga. The Mahāyāna ideal is recognized and followed even in the countries of so-called Hīnayāna Buddhism and the terms Hīnayāna and Mahāyāna should not be used as distinctive characteristics of two separate groups or schools of Buddhism but only in the sense of individual ideals or in the strictly historical sense of the two parties at Kariṣka's council at which, by the way, the Theravādins, though they were later on wrongly identified with Hīnayānists, were not present, while from those who were present only the followers of the exclusive Mahāyāna ideal have survived. The different schools should be called by the names they give to themselves, and as there are none who call their school Hīnayāna this term may be dropped altogether.

The fact that the Theravādins did not enter into the discussion about these two ideals is not only asserted by the impartial attitude of the Pāli Tipiṣaka which leaves the choice to the individual, but also by the Kathāvatthu, the latest book of the Abhidhamma, dealing with the points of controversy with regard to the early eighteen schools of Buddhism, among which neither the term Mahāyāna nor Hīnayāna occurs.

Where among all these schools does the rise of Mahāyānism come in ? The Chinese pilgrims speak of Mahāyānists and Hīnayānists, of Mahāsāṅghikas, Mahīśāsakas, Sarvāstivādins and Sammitīyas, of Śhāviras, Lokottaravādins, of the Pubbasela and Aparasela Vihāras. The date assigned to Fa-hian is about A. D. 400. The commentary, as we have it, written either by Buddhaghosa, or, possibly, by 'one of his school' is probably half a century later. Why are these well-known divisions in the Buddhist world omitted by the latter writer ?

One thing seems fairly clear in this yet unsolved problem, namely that Fa-Hian and Yuan-Chwang whose chronicles brought the distinction into prominence have given the Chinese versions of the names Mahāyāna and Hīnayāna to institutions which they recognized as such, either by first-hand observation or by hearsay, institutions which in Buddhaghosa's school were known under quite different designations.

1. C. A. F. Rhys Davids, "Points of Controversy" (Kathā-Vatthu), pp. XLV-XLVI.

were those of the Abhidhamma which contains the philosophical and psychological foundation common to all schools of Buddhism, whether realistic or idealistic, empirical or metaphysical, objectivistic or subjectivistic, etc.

In this way we find in the Tibetan Tanjur a description and explanation of the stūpa (mc'od rten)¹ in terms of the orthodox Abhidhamma, which throws a new light on the ideas that were connected with the stūpa even in pre-Mahāyāna times.

As we have seen in the case of the Ceylonese Dāgobas the socle of the stūpa which was formerly of a low cylindrical shape had been divided into three steps to which later on a new basis was added, while the three concentric steps slowly merged into the cupola in the form of 'ornamental bangles'.

A similar process took place in the development of the Indian stūpa: the cylindric socle was first raised and later on subdivided into a number of steps, but instead of losing its independence it gained in importance by taking in the railings and Torāṇas. The railings became decorative elements of the surface of the elevated substructure and in place of the Torāṇas there were staircases leading from the four quarters of the universe to the terrace on top of the socle.

These staircases which emphasised the universal character of the monument were apparently fore-runners of the square basal structures, which led up to the cupola in several steps. This change coincided with the advent of Mahāyāna Buddhism and was, it seems, equally accepted by all Indian schools of Buddhism just as the universal attitude itself of the Mahāyāna.

The symbolical meaning of the different parts of the stūpa according to the description of the Tanjur is as follows (cf. scheme, in elevation on p. 36, and in horizontal projection on p. 40):

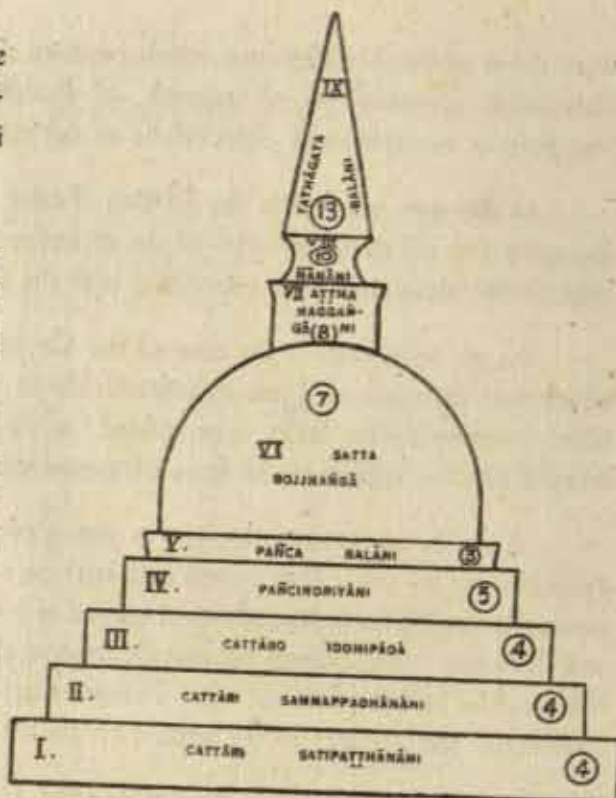
I. The first step of the four-sided basal structure, i. e., the foundation of the whole building corresponds to the Four Foundations of Mindfulness (*cattāri satipaṭṭhānāni*), namely:

(1) mindfulness as regards the body (*kāyānupassanā satipaṭṭhānam*); (2) mindfulness as regards sensation (*vedanānupassanā satip.*); (3) mindfulness as regards the mind (*cittānupassanā satip.*); (4) mindfulness as regards the phenomena (*dhammānupassanā s.*).

1. Cf. Tucci: *Indo-Tibetica I*: "Mc'od rten e Ts'a ts'a nel Tibet Indiano ed Occidentale".

II. The second step of the four-sided basal structure corresponds to the Four Efforts (cattāri sammappadhānāni) :

(1) the effort to destroy the evil which has arisen (uppannānaṃ pāpakānaṃ pahānāya vāyāmo) ; (2) the effort to prevent the evil which has not yet arisen (anuppannānaṃ pāpakānaṃ anuppādāya vāyāmo) ; (3) the effort to produce the good which has not yet arisen (anuppannānaṃ kusālānaṃ uppādāya vāyāmo) ; (4) the effort to cultivate the good that has arisen (uppannānaṃ kusālānaṃ bhīyobhāvāya vāyāmo).



III. The third step of the four-sided basal structure corresponds to the Four Psychic Powers (cattāro iddhipādā) :

(1) the desire to act (chandiddhipādo) ; (2) energy (vīriyiddhipādo) ; (3) thought (cittiddhipādo) ; (4) investigation (vīmaṃsiddhipādo).

IV. The fourth step or the top of the four-sided basal structure corresponds to the Five Faculties (pañcindriyāni) :

(1) the faculty of faith (saddhindriyaṃ) ; (2) the faculty of energy (vīriyindriyaṃ) ; (3) the faculty of mindfulness (satindriyaṃ) ; (4) the faculty of concentration (samādhindriyaṃ) ; (5) the faculty of reason (paññindriyaṃ).

V. The circular basis of the cupola corresponds to the Five Forces (pañca balāni) which are of the same kind as the Faculties, namely the forces of faith, energy, mindfulness, concentration and reason. These two groups represent the passive (latent) and the active side of the same properties and they can be regarded practically as one category. The same holds good of their architectural counterparts : they were originally one element, the mediator between the cubic substructure and

the hemisphere, and were split into two according to the usual tendency of later periods to subdivide or to multiply the original elements.

Obviously only the three fourfold categories were to represent originally the cubic basal structure and in fact the older types of square-terraced stūpas show only three steps, as we can see from the usual Ceylonese, Nepalese and Burmese Dāgobas and from certain Tibetan Chortens which represent replicas of ancient Indian stūpas. A good example of the latter kind is a Chorten built by one of the kings of Western Tibet at Sheh in the Upper Indus Valley (Plate V).

VI. The cupola (aṇḍa) represents the Seven Factors of Enlightenment (satta bojjhaṅgā) :

- (1) mindfulness (satisambojjhaṅgo) ; (2) discerning the truth (dhammavicāya sambojjhaṅgo) ; (3) energy (viriya sambojjhaṅgo) ; (4) rapture (pīti sambojjhaṅgo) ; (5) serenity (passaddhi sambojjhaṅgo) ; (6) concentration (samādhi sambojjhaṅgo) ; (7) equanimity (upekkhā sambojjhaṅgo).

VII. The Harmikā corresponds to the Eightfold Path (aṭṭha maggaṅgāni) :

- (1) right views (sammā diṭṭhi) ; (2) right aspirations (sammā saṃkappo) ; (3) right speech (sammā vācā) ; (4) right action (sammā kammanto) ; (5) right livelihood (sammā ājīvo) ; (6) right effort (sammā vāyāmo) ; (7) right mindfulness (sammā sati) ; (8) right concentration (sammā samādhi).

VIII. The stem of the tree of life corresponds to the Tenfold Knowledge (dāśaṇḍa) :

- (1) knowledge of the law ; (2) knowledge of other persons' thoughts ; (3) knowledge of relations ; (4) empirical knowledge ; (5) knowledge of suffering ; (6) knowledge of the cause of suffering ; (7) knowledge of the annihilation of suffering ; (8) knowledge of the way that leads to the annihilation of suffering ; (9) knowledge of the things connected with despair ; (10) knowledge of the non-production of things.

Up to the Harmikā or the seventh element in the construction of the stūpa, the Tanjur follows word by word the enumerations of the Pāli-Abhidhamma as found for instance in the third paragraph of the seventh chapter (Samuccaya-Saṅgaha) of Anuruddha's Abhidhammattha-Saṅgaha. Though this work cannot have been written before the eighth century A. D., it is exclusively compiled from the canonical Abhidhamma books and if we see a Tibetan text like the one mentioned based on a parallel Sanskrit version which does not only have the same subject-matter but even the same arrangement down to the smallest details like the

order in which the respective terms follow each other, we witness the faithfulness of tradition and the accuracy of Indian and Tibetan compilers and translators. While Thera Anuruddha was compiling his *Abhidhammattha-Saṅgaha* in Ceylon, thousands of miles away in Tibet pious monks were translating Sanskrit texts into their own language. And though both drew their knowledge from a source that lay at least thousand years back, their results were in almost perfect accordance ! Where however certain differences occur, they cannot be attributed to misunderstandings but to later additions which are necessary expressions of a historical development.

In our particular case for instance, it is characteristic that the categories representing the stūpa up to the *Harmikā* are identical with those of the orthodox canon while those which correspond to the tree of life show certain deviations. This indicates that the development of the more elaborate shape and symbolism of the crowning parts of the stūpa (*hī*) took place in later periods and under the influence of post-canonical ideas closely connected with the growth of *Mahāyāna*.

The deviations of the post-canonical categories can be seen by a comparison with the corresponding group, as found in the Pāli canon (*Dīgha-Nikāya* III, 33) :

(1) *dharme ñāṇaṃ* ; (2) *anvaye ñāṇaṃ* ; (3) *paricchede ñāṇaṃ* ; (4) *sammuti ñāṇaṃ* ; (5) *dukkhe ñāṇaṃ* ; (6) *dukkha-samudaye ñāṇaṃ* ; (7) *dukkha-nirodhe ñāṇaṃ* ; (8) *magge ñāṇaṃ*.

The last two items of the Tibetan classification are not contained in this group, though they may be found in other combinations (for instance as *anuloma* and *paṭiloma paṭiccasamuppāda*). More typical deviations are to be found in the next group, representing

IX. the thirteen discs or layers of the tree of life which correspond to the mystical powers of the Buddha. Ten of them are mentioned in *Aṅguttara-Nikāya*, *Dasaka-Nipata* xxii.

The 13 mystical powers according to the Tanjur :

(1) The mystical power, consisting in the knowledge of the places which are suitable for the preaching and the activity of the Buddha ; (2) the knowledge of the ripening of the different kinds of karma ; (3) the knowledge of all the (states of) meditations, liberations, ecstasies, and unions with higher spheres ; (4) the knowledge of the superior and inferior faculties ; (5) the knowledge of the different inclinations of other beings ; (6) the knowledge of the different spheres of existence ; (7) the knowledge of those ways which lead to any

desired end ; (8) the knowledge and recollection of former existences ; (9) the knowledge of the time of death and of rebirth ; (10) the destruction of evil forces ; (11 to 13) the three foundations of the particular mindfulness of the Buddhas (*āveṇikasmṛtyupasthāna*).

The 10 powers (*dasa-tathāgata balāni*) according to *Āṅguttara-Nikāya* :

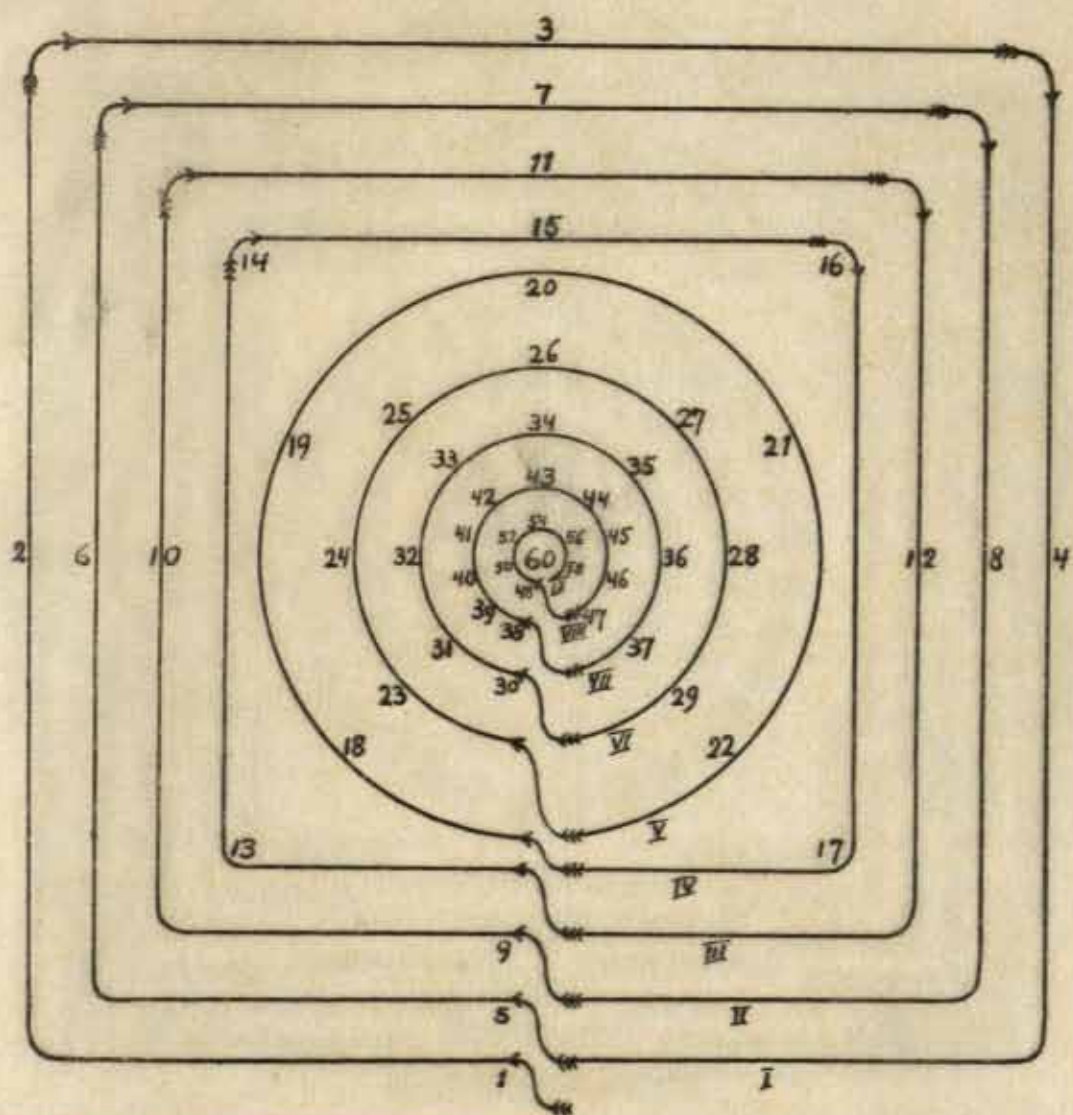
(1) The Enlightened one perceives what is possible as possible, what is impossible as impossible in accordance with reality ; (2) he perceives the results of actions done in the past, the present, and the future according to circumstances and causes, etc. ; (3) he perceives every result, etc. ; (4) he perceives the world with its different elements, etc. ; (5) he perceives the inclinations of other beings, etc. ; (6) he perceives the superior or inferior faculties of other beings, etc. ; (7) he perceives the purity or impurity of the states of trance and of liberation, of concentration and its attainments, etc. ; (8) he remembers innumerable former existences, etc. ; (9) he perceives with the celestial eye, the purified, the supra-human how the beings re-appear according to their deeds, etc. ; (10) by conquering his passions he has attained, perceived and realized by himself the passionless liberation of heart and mind, etc..

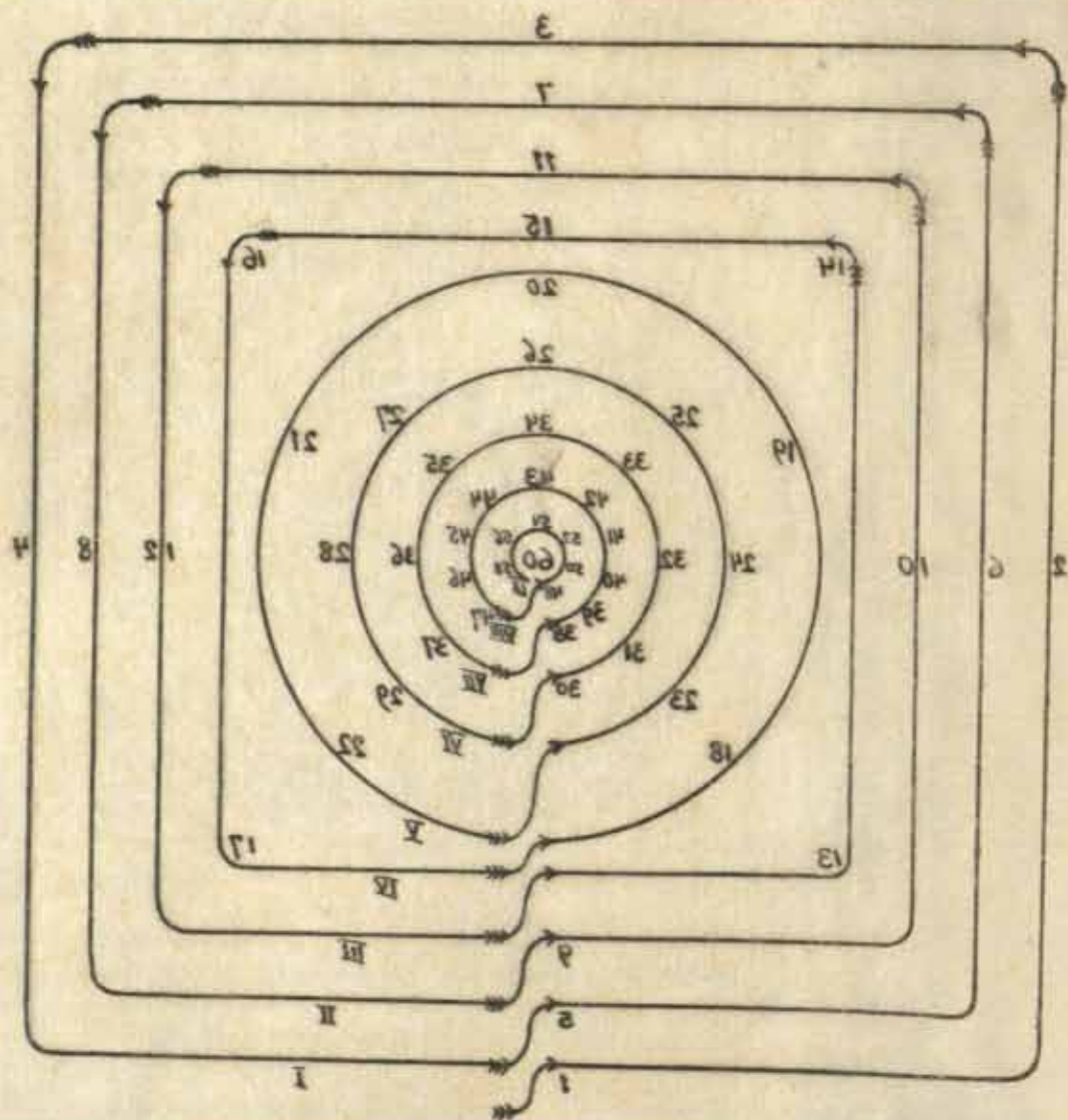
At first sight this scholastic symbolism will appear rather arbitrary, but if we examine it more carefully we find that it is consistent with the constructive principles of the *stūpa* and their ideology. It represents the way to enlightenment, revealing the psychological structure of the Buddha-Dharma and the qualities of the Enlightened One in whom the Dharma is realized. The *stūpa*, accordingly, is as much a memorial for the Buddhas and saints of the past as a guide to the enlightenment of every individual and a pledge for the Buddhas to come.

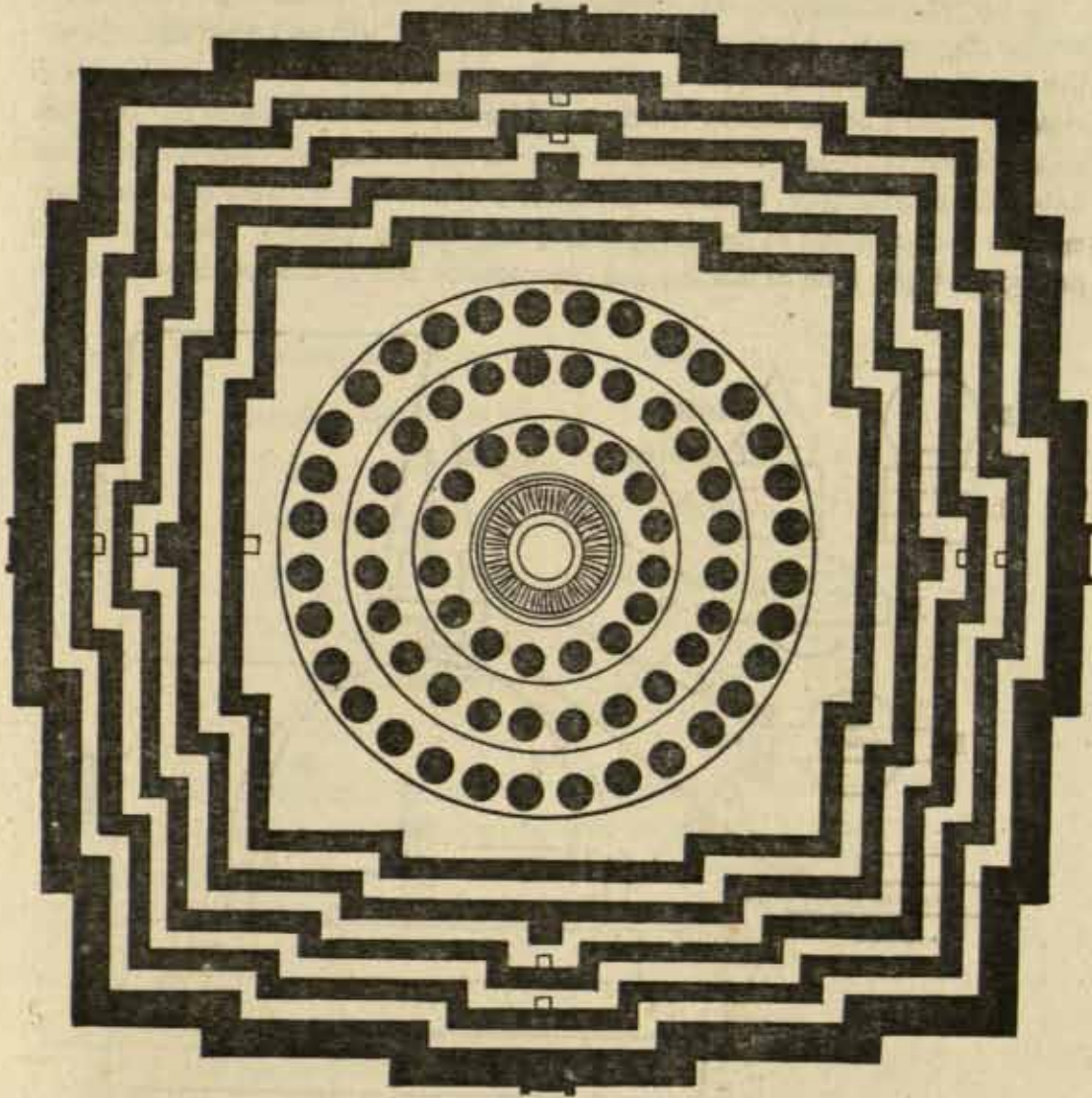
As the *stūpa* consists of three main elements, socle, hemisphere and crowning parts, the spiritual development also proceeds in a threefold way. The first part (foundation) contains the preparatory, the second one (hemisphere) the essential conditions or psychic elements of enlightenment, the third one (*harmikā* and tree of life) consists in its realisation. Each of these main parts has again three subdivisions.

The first, preparatory step is mental and analytical. Just as the foundation of the monument rests on the natural ground, the foundation of the spiritual building of Buddhism rests on the experience and analysis of nature as far as it is accessible in the psycho-physical constitution of man.

The second preparatory step is moral : morality based on the insight into the nature of life.

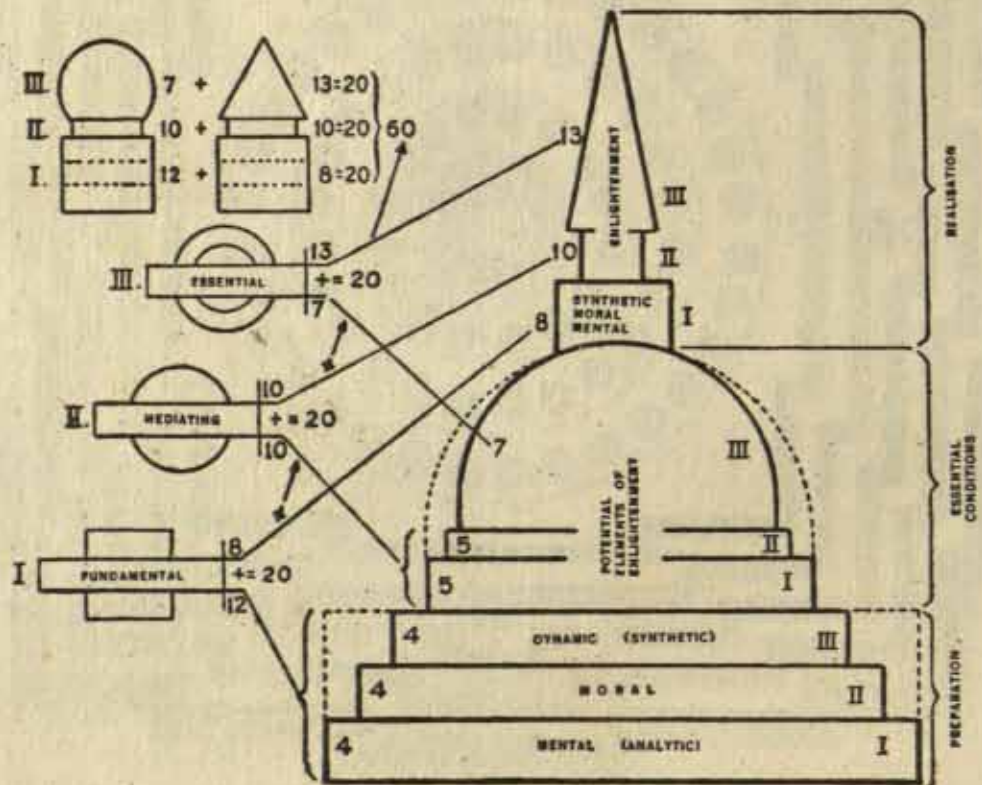






The first step of the upper triad (the harmikā) corresponds to the three steps of the substructure : it starts with right views and aspirations (sammā dīṭṭhi and sammā saṃkappo) which are the outcome of the analytic knowledge (paññā) prepared in the first step ; it continues with right speech, right action, and right livelihood (sammā vācā, s. kammanto, s. ajīvo), which is the fulfilment of morality (sīlaṃ) ; it culminates in right energy, concentration and meditation (sammā vāyāmo, s. sati, s. samādhi) in which the dynamic forces of psyche reach their greatest potentiality.

Knowledge, morality, and concentration (paññā, sīlaṃ, samādhi) are the pillars of the Buddha-sāsana. Morality has no meaning or value without knowledge. Therefore knowledge is placed before morality. Concentration on the other hand without morality is like a house without foundation. Morality is the discipline in the outer life on which concentration, the discipline of the inner life, is built up. Morality thus has to precede concentration. Concentration again is of no value in itself; it is an instrument for the attainment of insight (vipassanā) and wisdom (paññā), which in its turn produces a higher form of morality and concentration until by this spiral-like progres-



sion (in which the same elements re-appear on each higher stage in greater intensity) Bodhi or enlightenment is attained. On the first step Paññā is not more than an intellectual attitude, based on investigation and reflection (vitakkavicāra). On the corresponding step of the higher triad it is wisdom based on the experience of meditation (inner vision) and in the last two stages it is enlightenment as the true nature of a Tathāgata. These two highest stages (represented by the stem and the 13 Bhūmis of the tree of life) correspond to the factors of enlightenment (bojjhaṅgā) and to those faculties and forces which form their basis.

The parallelism is also obvious in the architectural forms and in the numerical composition of their elements. The ground-plans of substructure, intermediate part, hemisphere, Harmikā, stem and cone of the tree of life are : square, circle, circle, square, circle, circle. Their further relations may be seen from the drawing on p. 42 and the following table :

	ground-plan :	square	circle	circle
	function :	fundamental	mediating	essential
upper half :	formal designation :	harmikā	stem	cone
	numerical designation :	4 + 4	5 + 5	13
lower half :	numerical designation :	4 + 4 + 4	5 + 5	7
	formal designation :	substructure	intermediate parts	hemisphere
	sum of elements :	$5 \times 4 = 20$	$4 \times 5 = 20$	$13 + 7 = 20$
60				

The fundamental functions are expressed by even numbers, the essential by odd numbers, and the mediating by even numbers (10) composed of odd halves. The intermediate parts belong essentially to the next higher elements, i.e., to the main parts of the stūpa (hemisphere and cone : stūpa and Śikhara principle). This is proved by the fact that the hemisphere includes nearly all the elements of the preceding two steps, namely Viriyaṃ, Sati, Samādhi and Paññā (in form of dhammavicāyaṃ) and the cone contains similar elements as the stem, namely different aspects of Paññā. In the stem they are more fundamental and general, and in the cone more differentiated and specialised.

The symbolism of numbers is well developed in Buddhist philosophy, art and architecture. The following example may suffice to give an idea of the numerical relationship between the scholastic stūpa and the co-existing psycho-cosmology. Within the three worlds (ti-loka) or main forms of consciousness (cittāni), Kāma-, Rūpa-, and Arūpa-loka, there are fifteen word-planes (six in kāma-, five in rūpa-, four in arūpa-loka), thirty classes of beings (ten in kāma-, sixteen in rūpa-, four in arūpa-loka, according to their states of consciousness), and there

are sixty elements of spiritual development, as represented by the stūpa. In figures¹ :

$$\begin{aligned} 3 &= (\text{key-number}) && = \frac{48}{16} \\ \text{I) } 15 &= 5 \times 3 && = \frac{48}{3} \\ \text{II) } 30 &= 5 \times (3 + 3) && = \frac{48}{2} \\ \text{III) } 60 &= 5 \times (3 + 3 + 3 + 3) = 60 \end{aligned}$$

These sixty elements constitute a continuous way ascending through the three worlds and its different states of existence in the form of a spiral, spiritual Pradakṣiṇā-patha. This idea has been materialized most perfectly in the great terrace-stūpa of Barabudūr. Though this monument belongs to the later Mahāyāna period (VIIIth century) it can be seen from the drawing on p. 41 that the actual ground-plan of Barabudūr fits exactly on the spiritual ground-plan of the orthodox stūpa as explained by scholastic symbolism. Barabudūr has the unbroken tradition of a millenium, and instead of more or less justified speculations which have been made about its symbolism, we are now in a position to know at least the fundamental ideas which were accepted by the Buddhists of all schools and which hold good even for the Burmese and Siamese pagodas of later periods, in which Mahāyāna and Theravāda meet in a new synthesis.

1. Cf. part III, proportions of the Dāgoba : The universal aspect of the Dharma which I compared to the dimension of space, is expressed by categories in which the number three prevails in the same sense as in the vertical development or composition of Buddhist architecture.

THE SOLAR WHEEL AT SĀRNĀTH AND IN BUDDHIST MONUMENTS

By J. PRZYLUCKI

This is how the capital of the Sārnāth pillar is described in the Sārnāth Museum Catalogue :

"Capital of Asoka column (ht. 7 ft. ; width across the abacus 2 ft. 10 in.). The lower portion, 2 ft. in height, has, as usual, the shape of a bell decorated with conventional petals in Persepolitan style. They are sixteen in number. The necking above the bell is circular in horizontal section and has a torus moulding with plain surface. The middle portion, which is fashioned into a circular abacus resembling a common drum 1 ft. 1½ in. high, is decorated with four wheels, of twenty-four spokes each, in high relief. The ends of the axles are left rough, from which it may be surmised that they were originally covered with caps probably of precious metal. This is proved by the existence of three fine holes pierced into the rim of each axle, into which metal pins were evidently inserted to keep the cap in position. The spaces between the wheels are occupied by the figures of an elephant, a bull, a horse and a lion, following each other from right to left in the direction of the Pradakṣiṇā. Three of these animals are represented as walking, the horse as running at full gallop. These figures are all more or less damaged, but they are wonderfully life-like and their pose graceful."

"The abacus is surmounted with figures of four life-sized lions placed back to back, so that only the fore-parts are shown. They are each 3 ft. 9 in. high. Two of them are in perfect preservation. The heads of the other two were found detached, and have been refixed. The upper paw of one and the lower paw of the other were not recovered. In place of eye-balls some sort of precious stones were originally inserted into the sockets, as is clearly shown by the existence of very fine holes in the upper and lower lids, which received thin iron pins to keep the jewels in position. One such pin still remains in the upper lid of the left eye of one of the lions."

"The capital was carved out of a single block of sandstone, but is now broken across just above the bell. It was originally surmounted by a wheel (cakra), the symbol of the Buddhist Law, supported on a short stone shaft. The latter was not discovered, but its thickness can be estimated from the mortice hole, 8 in. diameter, drilled into the stone between the lions' heads. Of the wheel itself, four small fragments were found. The ends of thirteen spokes remain on these pieces. Their total number was presumably thirty-two - - - The material of which the capital is made is a black-spotted, buff-coloured sandstone from Chunār, but of a much finer grain than the Chunār stone used in the construction of houses in Benares and its neighbourhood." (1)

In order to understand the significance of the Sārnāth monument, one must compare it to the great cosmic pillar of which it is merely the reduced image. Among the many allusions to this mythical pillar scattered over Indian literature, one of the most precise is found in the eighteenth piece of the "Thirty-two Tales of the Throne" :

"On the summit of mount Udaya there is the shrine of a deity ; before it stretches a lake which has yet never been seen, and to which one descends, down the four sides, by golden steps, resplendent and enriched with precious stones, with pearls and with coral.¹ In the centre of this lake stands a column of gold, and on this column there is a throne, of gold also and inlaid with various gems. From sunrise to midday, the column, bearing the throne, ascends gradually until it touches the disk of the sun ; from midday to sunset, it sinks down until it is back in the middle of the lake as before. And this takes place every day."²

The mythical column mentioned in this tale is not without some analogy with the monument which we are studying here :

1. The Sārnāth pillar, like so many other columns belonging to the same type and the images of which ornate the stūpas was crowned by a wheel with thirty-two spokes. In the "Thirty-two Tales of the Throne"³ we see that the top part of a column of gold touches the solar disk at noon. The wheel which surmounted the Sārnāth pillar was probably intended to mark this conjunction.

2. The golden column is surmounted by a throne. Below the solar wheel, the Sārnāth pillar has a group of four lions which support this wheel and, conse-

1. One may suppose that here the text has been altered, and that originally its wording described four flights of steps, each adorned with a different ratna.

2. Translation by Feer, pp. 127-28.

3. Mark the recurrence of the number 32.

quently, act as a throne for the image of the god Sun. The throne made of lions is a very ancient element in Indian civilization.¹

3. In Indian art, the lotus is frequently used as the support of a deity. Its flower floats on the surface of the waters and opens out according to the intensity of the light. The eighteenth of the "Thirty-two Tales of the Throne" suggests the vision of a gigantic lotus stalk which would rise out of the lake so that the sun might rest upon it at midday. The Sāmāth pillar, surmounted by a solar disk, bears precisely the image of a lotus flower absolutely full-blown because its petals are thrown back downwards.

In Babylonian astrology, one finds, below the great triad : the Sun, the Moon, Venus, a group of four planets, every one of which is in relation to a point of the compass and to a given colour : Mercury, Mars, Jupiter, Saturn.² On the Babylonian monuments these four planets are pictured by small roses, all alike. At Sāmāth we see four small wheels between the symbolical animals. These wheels may represent the four secondary planets, because they have twenty-four spokes only, while the big solar wheel probably possessed thirty-two. Besides, we know that at Babylon a particular gem corresponded to each planet. At Sāmāth each one of the small wheels was provided with a precious cap.

The symbolism of the Sāmāth pillar may then be explained according to a cosmology, one of the essential features of which is a correspondence between a point of the compass, a river, a colour, a planet, a precious stone and a symbolical animal. I have already pointed out the signs of similar conceptions in the traditions relative to the city of the Cakravartin, and I have shown that their origin must probably be sought in Babylonian civilization.³ At Sāmāth, everything invites us to look towards the West : the cosmic axis, the lions, the capital and the wheels.(2)

In his monumental work, "Barabudur", which the Bulletin de l'Ecole Française d'Extrême-Orient is publishing presently, and which affords such an important contribution to the study of many problems of Indian art and civilization, M. Mus considers that our conclusions relative to the Sāmāth pillar are "acquired"(3)

1. Cf. *siṃhāsana* = throne. For this type of representations, in India and in civilizations of the Near-Orient, cf. Perrot and Chipiez, "Histoire de l'Art", V, p. 713.

2. Jeremias, *Handbuch*, p. 175.

3. "La ville du Cakravartin, influences babyloniennes sur la civilisation de l'Inde", *Rocznik Orientalistyczny*, V, pp. 165-85.

and he strives to complete them. It does not seem sufficient to him to see in this column just a support for the sun. We are of the same opinion because we said that the column of gold which stands in the middle of the mythical lake is no other than the cosmic axis. Moreover, M. Mus wants that this column should indicate the zenithal direction, and this is evidence itself.

"The four planets, proceeds M. Mus, are the regents of the four orients, owing to the bare fact of their mystical conjunction with the sun, theoretically at the four points of the compass, and at the four seasons of the year. Now, we are told that at Sārnāth each one of the small wheels possessed a precious stone which capped the top of the axle, and that, in all probability, each separate little cap was made of the gem which corresponded symbolically to one of the planets. But may not these precious stones have actually embodied in this way the stars which rule the four quarters? The wheels placed behind them, like the wheel on the top of the monument, would then be so many reproductions of the sun, pictured by the radiant image of the magical pole, which, in its turn, is no other than the opening which allows the light to penetrate in this world. The sun would be shown here soaring up in conjunction with each one of the "solar" planets which divide the year: and it is the place to recall king Saṃghatissa putting, says the Mahāvamsa, four precious stones in the centre of the four "suns" of the Mahāstūpa. This allusion restores their full meaning to the axle-caps of Sārnāth - - - "

"It is no longer permitted to doubt that the crowning wheel of Sārnāth is the sun, and consequently that the four smaller, but similar, wheels of the four orients, are also, and owing to this analogy itself, the sun passing at the four orients: we have indicated the meaning of this disposition in the bounds of the annual cycle. If they are not the consequence of mere material conditions of execution (would it have been possible not to give the crowning wheel larger dimensions than to those which decorated the sides of the abacus?) the differences in their size and in the number of their spokes may be explained by the religious preeminence of the zenith; but all five symbols illustrate the same object." (4)

In short, M. Mus believes the five wheels of the Sārnāth pillar to be equal symbols of the sun, and he thinks to find the proof of this in the Mahāvamsa, chap. 36, verses 65-66. Let us test the weight of this argument:

visum sataṣaḥaṣṣaggaḥ cāturo ca mahāmaṇi
 majjhe catunnaṃ suriyānaṃ ṭhapāpesi mahīpati,
 thūpassa muddhaṇi tathā anaggaṃ vajiracumbaṭaṃ.

"the king put four great gems, each worth a hundred thousand (pieces of money) in the middle of the four suns, and upon the spire of the stūpa a priceless ring of diamond."

In the Pāli text nothing indicates the place of the "four suns". W. Geiger translates: "- - - in the middle of the four suns (which were placed on the four sides of the "tee")" and this translation is adopted by M. Mus. But there is no document to back him there. We do not know of any stūpa the "tee" of which is decorated with four suns. True, the stūpas of Sāñcī and of Amarāvati have often enough a wheel supported by a column, and this wheel, like that which crowns the Sārnāth pillar, is probably a solar symbol, but it is not placed upon the "tee" of the stūpa. Let us see where those wheels may have been placed.

"In the surroundings of the stūpa, says M. G. Combaz, as well as in that of the sanctuaries, there were isolated pillars supporting, above a capital in the shape of a bell, various emblems - - - Around the great stūpa of Sāñcī, five or six of those have been discovered; they seem to have been placed near the Torāṇas by the side or in front of them.

"Their real place in regard to the monuments is sometimes rather hard to make out, because many of them have been displaced and others are left as the sole remains of the monuments which they accompanied and which have totally disappeared.

"Besides, the most ancient sculptures show us the stūpa guarded by two (or four ?) pillars.¹

"If the Gandhāra ruins have not yielded complete models, one may however suppose that the few Indo-Hellenistic capitals found there must have belonged to columns. Gandhāran sculptures testify to the existence of pillars around the stūpas² as well as around certain sanctuaries.³

"It seems to result that the pillars, either single or in pairs, were generally placed by, or in front of, the entrances. But we do not possess enough elements yet to be certain of their true significance." (5)

1. At Barhut, W. Cohn, op. cit., pl. 6; At Mathurā, Vogel, op. cit., pl. V.

2. A. Foucher, op. cit., figs. 23, 24.

3. Ibid., fig. 41.

If stone pillars, sometimes crowned by a wheel, were often placed by the entrance of the stūpas, it is likely that the "four suns" mentioned in the Mahāvamsa were four solar wheels placed, not upon the "tee" in the middle of the stūpa, but upon four columns of stone erected in front of the four entrances.

This induction seems again more probable according to the fourth tale of the Sūtrāṃkāra, which we give here abridged : In the kingdom of Ceylon, a man had obtained a pearl the size of his knee. He offered it to the king, who went to a stūpa and "placed the pearl upon the pillar of the stūpa door. There it shone brightly like a great star. The king's palace was lighted up by it as by a rising sun - - -." One day a burglar climbed up the pillar, stole the pearl, but fell down afterwards and broke his leg. The king opened an inquest. Bloodstains were found at the foot of the door pillar, and the robber was discovered in the end.(6)

In this tale, the king of Ceylon, when he puts a big gem upon the pillar of the stūpa entrance, probably in the middle of a solar wheel, acts like Saṃghatissa did, who placed "four great gems...in the middle of the four suns" of the Mahāstūpa. Far from explaining the significance of the four small wheels on the Sārnāth pillar, this instance merely confirms the symbolism of the big wheel.

True, the Mahāvamsa mentions "four suns" which must have been at the four entrances of the stūpa, and consequently at the four points of the compass. But this testimony is a late one, and we can not be allowed to use it as an argument for the explanation, in a monument much more ancient, of some elements the purport of which is quite different.

As far as we know, the Sārnāth pillar is an isolated monument, probably anterior to Aśoka. This monument bears five wheels on its top. Later on, the stūpas are flanked by pillars supporting a wheel. The number of these pillars varies greatly from one stūpa to the other. Of course one may compare the big wheels which surmount them to the big wheel of Sārnāth, but it has in no way been proved that at Sārnāth the four small wheels should be suns as well, and we believe that in the present state of our knowledge we should best look upon them only as planets.(7)

NOTES

(1) Quoted by Monahan, The early history of Bengal, p. 223.

(2) For further developments of these ideas, cf. Le symbolisme du pilier de Sārnāth, Etudes d'orientalisme publiées par le Musée Guimet à la mémoire de R. Linossier, t. II, pp. 481-498. I have shown in this article that the four animals of the Sārnāth pillar may be found again in the Indian traditions relative to lake Anavatapta.

- (3) P. Mus, Barabudur, BEFEO, t. 32, p. 416.
- (4) Barabudur, *ibid.*, p. 422-423.
- (5) G. Combaz, L'évolution du stūpa en Asie, p. 212.
- (6) Sūtrālaṅkāra, Translation by E. Huber, p. 30-32.
- (7) For the largest wheel of Sārnāth, M. Mus suggests a double symbolism : it would illustrate both the Sun and

the planet Venus, in her quality of Queen of Heaven and Mother of the Gods. (Barabudur, *ibid.*, p. 417). We believe, however, than one must choose. If the Great Goddess is represented by the stone column, then she is the cosmic prop which sustains the Sun and the celestial world. As such, she is the mother of the gods and ranks first in the universe. If, on the contrary, she is the planet Venus, her position is subaltern only. These two conceptions are testified historically, but at different periods or regions. It seems hardly likely that they could have been expressed at the same time, and on a single monument.

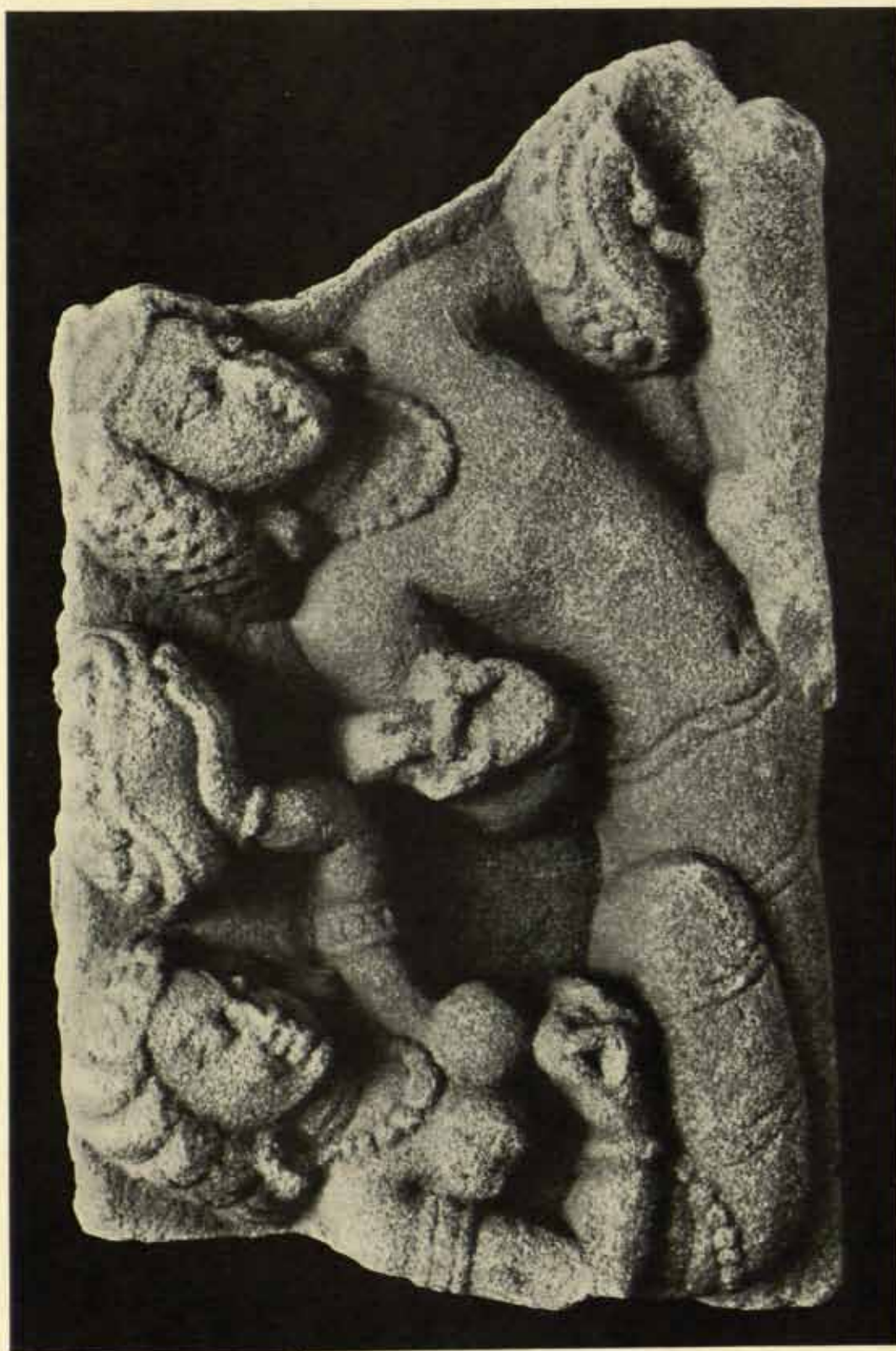
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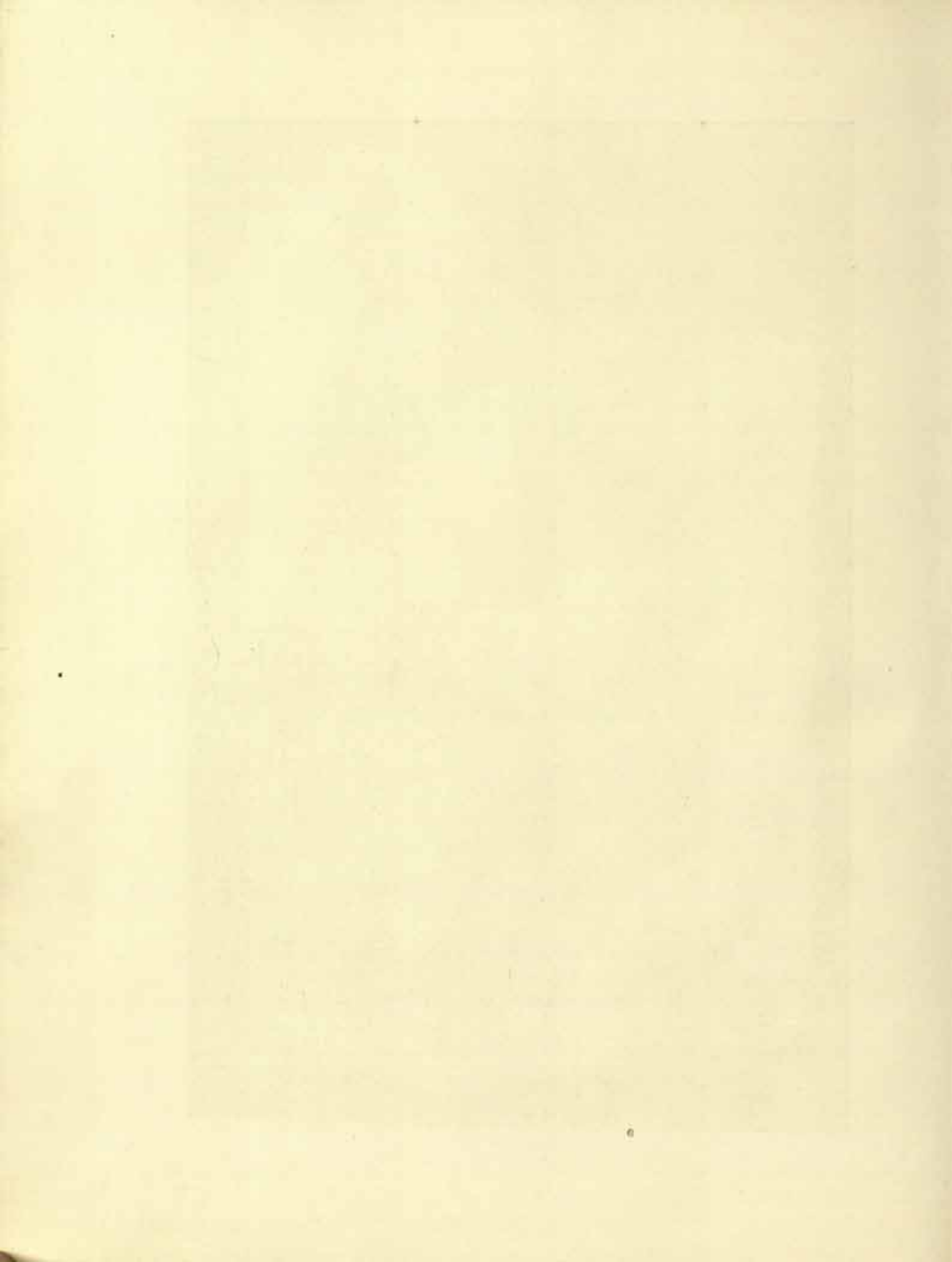
VIDYĀDHARA

By JITENDRA NATH BANERJEA

The relief (Pl. VI)¹ in grey sandstone from Sārnāth shows a male and a female figure flying through the air. They carry offerings in baskets in their left hands, the right hand of the male figure is in the Vitarka mudrā and that of the female figure holds an offering which she has evidently taken from her basket. The female figure is being carried by her companion on the back of his right leg which is stretched out to its utmost extent while his left leg bent at the knee touches his waist. The craftsman has emphasised the smooth wave like movement of the figures through the Antarikṣa region. Both the figures are sparingly ornamented, but their modes of dressing the hair require special attention. The mass of hair on the head of the male figure and the heavy tresses shown in descending tiers down the head and shoulders of the female one remind us of the modes of hair-arrangements frequently to be found on the Gupta figures of the 5th and the 6th centuries A.D. A comparison can be made with the varieties of coiffure on the heads of the Gaṇas depicted in the carved fragments of the dado of the Śiva temple discovered among the ruins of Bhumārā. The flying figures on either side of Śiva's bust in the lintel of this temple have their hair arranged in exactly the same manner and similar are the hair arrangements of many of the imperial Gupta sovereigns in their portraits on their gold coins. The upper parts of the bodies of the two flying figures are left bare, while the presence of drapery below is suggested by means of two incised parallel lines at regular intervals. The expression on the face of the male figure is serene while that on the face of his companion is illuminated by just a happy smile. Both of them are shown looking intently on some object which evidently was the central figure in the composition, the cult-picture—a Buddha, a Viṣṇu or a Śiva. The relief seems

1. The original is in the Indian Museum, Calcutta (No. 9513). It is labelled "Gandharvas hovering with flowers in their hands; 5th-6th centuries A. D., Sārnāth." Its size is (7×5½)."





to have formed either part of the upper portion of the *Prabhavali* of an image or more likely it might have been a part of a lintel similar to the one with the flying figures over the main sanctum of the *Bhumārā* temple¹ referred to above.

Such figures appear as accessory ones in early and mediaeval Indian art. Even sometime before the introduction of the cult-picture in iconic form, when its presence in a particular relief is indicated by means of symbols, these figures occasionally hover to either side of them. The early Buddhist monuments of *Bārhut*, *Sāñcī* and *Amarāvati*, etc. and the Jaina caves of *Udayagiri* near *Bhuvaneśvar* clearly show this. To refer to one or two typical cases from *Bārhut*, *Sāñcī* and *Udayagiri*: The flying garland bearers on the oft-reproduced Bodhi-tree shrine from *Bārhut*² and similar other figures on the lintel of the eastern gateway of *Sāñcī*³ are hybrid in appearance, the lower halves of their bodies are bird-like while the upper halves are human with wings attached to their shoulders or waists.⁴ But the elaborately dressed flying figures on either sides of the *Toraṇas* in the animated scenes on the friezes of the rock-cut temples at *Udayagiri* are entirely human. And a glance at one of the reliefs on the eastern gateway of *Sāñcī*, as well as at those of Buddha's visit to *Trayastrimśa* heaven and his descent at *Saṅkīsa* on one of the *Bārhut* uprights⁵ will prove that even at this period a distinction is made by the craftsman between the hybrid and the fully human figures flying towards the centre of the relief. When the iconic form of the cult picture is introduced, these figurines become more regular in their appearance on the top corners and gradual developments are discernible. Thus, the early *Mathurā* artists make frequent use of these two types and their

1. R. D. Banerji, *The Temple of Śiva at Bhumārā*, Memoir of the Archaeological Survey of India, No. 16 Pl. IX. b. Our relief might also have belonged to a subsidiary niche on the outer side of the main shrine. Two such niches of the ruined Gupta temple at Deogarh, one containing the figures of *Nara* and *Nārāyaṇa* and the other the *Kari-varada* form of *Viṣṇu*, show exactly similar flying couples on their top sections. The third niche of the same temple, with the figure of *Śeṣaśāyī Viṣṇu* in it, shows divinities like *Hara-Pārvatī*, *Indra* and *Kārtikeya* flying in the air; they are seated on their respective mounts which, as their tensely strained legs and bodies show, are soaring through space. For plates, see T. A. G. Rao, *Elements of Hindu Iconography*, Pls. XXXII, LXXI; William Cohn, *Indische Plastik*, pl. 24.

2. Cunningham, *The Stupa of Bharhut*, Pl. XIII, outer face.

3. Grünwedel, *Buddhist Art*, figs. 4 and 17.

4. Cf. Grünwedel's remarks about them, op. cit., p. 47.

5. Grünwedel, op. cit., fig. 17; Cunningham, op. cit., pl. XVII, cf. also plate XIII middle figure and plate XXXI, fig. 1, where on the proper right we find the hybrid garland-bearing figure while on the proper left is the flying human figure.

tendency to differentiate between them is manifest.¹ But they seem to have gradually discontinued the practice of making use of both these motifs; they retained the human flying figures². By the Hellenistic craftsmen of Gandhāra also the garland bearing cherubim and female flying figures were frequently employed. The indigenous artists of the Gupta period, on the other hand made occasional use of flying pairs of human figures, like the sculptor of our relief³. Sometimes, however, the male figures in these pairs hold swords in their hands⁴. The sculptors of the mediaeval period introduce a new canon in their usage of these motifs. They not only retain the use of both the variants but allot well-marked position to both in their comprehensive scheme of the decorated stela (*prabhāvalī*). The hybrid couples, not now in the usual flying pose are shown playing on musical instruments just above the Makara motif on either side of the central figure, while the entirely human garland bearing figures, sometimes singly and at other times with their consorts borne on their legs are shown hovering on either side of the Kīrttimukha; thus in a fully complete stela, the order of arrangement of the decorative motifs from the pedestal (*piṭhikā*) upwards is first the leogryph (lion upon elephant, *gajaśārdūla*), then the Makara transom, above it the hybrid pair playing on lute and dancing, a little higher up the flying garland-bearers and lastly the finial, the Kīrttimukha. But now almost invariably a new feature is introduced in the flying figure motif; that these figures are soaring through the *Antarikṣa* region is now not only indicated by the distinctive pose of the legs, but also by the conventional representation of clouds for their background⁵.

As regards the exact nomenclature of these two motifs, previous writers on Indian art were not sure about it. The hybrid flying figures are usually described as *Suparṇas* while the human ones as *Gandharvas*, *Devas* or flying angels, the latter sometimes as *Vidyādharas*. We are not certain how they were

1. V. Smith, 'Jaina Stūpa and other antiquities of Mathurā'; pl. XVI. fig. 1. Two flying figurines are side by side, the one to the left with his mutilated face is purely human while the other is a mixed being. Smith remarks about the former: 'The mutilated male figure to the left of the umbrella seems to be intended for a *Gandharva*'.

2. Cf. the *Bodhisattva* statuette from Katra; Vogel, *Mathura Museum Catalogue*, p. 47, Pl. vii; cf. also Bühler's description of the *Jaina āyāgapata* of an unknown donor, *Epigraphia Indica*, vol. II, p. 311-313, pl. I, b; inside the outer fringe of the circle are the figures of the seated Jinas, tree within railing and stūpa with pairs of well-dressed flower and garland bearing human couples flying towards the central piece.

3. They were still in the habit of employing on rare occasions the hybrid flying figure; cf. R. D. Banerji, *Bas-reliefs of Badami*, p. 56-7.

4. R. D. Banerji, *op. cit.*, pl. XV, fig. a; Garuda on cornice, two flying couples, one on either side of it, the male figures carrying swords.

5. R. D. Banerji, *The Eastern school of sculpture*, Pl. XLV. figs. a, c, etc.

known to the artists of early period ; they seem to have been included within the class of secondary gods or attendants mentioned in Brāhman, Buddhist or Jain mythology¹. In later iconographic works however they are distinctively mentioned, and the manner in which they have been described in some of these leaves little doubt as to their denomination, the hybrid being a Gandharva and the human a Vidyādhara. To quote a few lines about the Vidyādharas and Gandharvas from the section on Yakṣa-Vidyādhara-dilakṣaṇaṁ from Mānasāra : Evaṁ tu yakṣa-rūpaṁ syād vidyādharamāsanānvitaṁ //7// Purataḥ priṣṭhapādaḥ ca lāṅgalākārau eva ca/ Jānvāśritau hastau gopuroddhṛtahastakau //8// Evaṁ vidyādharaḥ proktāḥ sarvābharaṇabhūṣitāḥ/ Nṛtaṁ vā vaiṇavaṁ vāpi vaisākhaṁ sthānakaṁ tu vā //9// Gīta vīṇā vidhānaṁ ca gandharvāśceti kathyate/ Carāṇaṁ paśusamānaṁ cordhvakāyaṁ tu narābham //10// Vadanāṁ garūḍabhāvaṁ bāhukau ca pakṣayuktau//² Making proper allowance for the difficulty of accurately rendering these poses by words, one should observe that the author has in a faithful manner described the peculiar flying poses of the Vidyādharas, the epithet lāṅgalākārau (plough share like) applied to their legs being very significant ; his description of the Gandharvas also clearly testifies to their hybrid character. We may remain in some doubt about attributing these names to earlier representations of these motifs in Indian art ; but on one of the lower reliefs of the so-called Prasenaḥ pillar of Bārhut,³ is shown the Vidyādhara, though not in his usual pose. The relief bears an inscription which, as correctly read and translated by B. M. Barua, is 'Vijapi vijādhara,' i. e. 'the spell-muttering Vidyādhara.' It depicts the Vidyādhara, an artful magician, standing on a rocky ground, tying his turban ; a female figure, by his side, holding

1. Grünwedel, op. cit., p. 47, fig. n. 2. The author enumerates six classes of secondary gods in Brāhman mythology viz : (1) Kinnaras, (2) Kirīpurūṣas, (3) Gandharvas, (4) Pannagas or Nāgas, (5) Siddhas, (6) Vidyādhara, with a short description of each. These correspond more or less to the Vyantara gods of the Jains, viz. Prācās, Bhūtas, Yakṣas, Rākṣasas, Kinnaras, Kirīpurūṣas, Mahoragas and Gandharvas. The eight classes of demigods enumerated in Buddhist literature are Devas, Nāgas, Rākṣasas, Gandharvas, Asuras, Garuḍas, Kinnaras, and Mahoragas.

The last two lists do not contain the name of the 6th in the Brāhmanical one.

2. P. K. Acharya, Mānasāra, p. 370. The Agnipurāṇa tells us : Vīṇāstā Kinnarāḥ syurmālāvidyādharaśca khe, ch. 51, v. 17, evidently not distinguishing between the Gandharvas and Kinnaras. The Mānasāra too does not distinguish between them. But the Matsya purāṇa distinguishes between the two and mentions the Vidyādharas also, though it does not furnish us with the details of their features, (ch. 259, v. 25.) The Viṣṇudharmottara (ch. 42, v. 9-10) also describes the Vidyādharas, the description closely following their representation in later art : Rudrapramāṇāḥ kartavyāstaiḥ vidyādharaḥ nṛpaḥ/ sapatnikāḥcāte kār्या mālyāśatikāradhārīṇaḥ //9// khaḍgahastācāte kār्या gaganavāṇā vā bhuvi.

3. Cunningham, op. cit., Pl. XV, side. He could not translate the inscription and his reading of it was also faulty. The correct reading and translation are referred to above.

in her right hand three flowers ; his sword and armour are shown hanging from a tree behind him. Barua thinks that this illustrates a scene from the Samugga Jātaka (F. 436), narrating how a demon was outwitted by a tricky Vidyādhara.¹ The Vidyādhara in the story is referred to as 'Vāyussa putto nāma vijjādhara sannaddhakhaggo ākāseṇa gacchati'² i. e. 'the son of Vāyu, who was a magician, girt about with a sword, was walking through the air.'³ Thus, we see, that the Vidyādhara motif seems to have been known by this name to early Indian artists, though in this particular relief, the Vidyādhara is shown in a standing and not a flying pose. In later literature the Vidyādharas are frequently referred to as dwellers of the highest peaks of the Himālayas and as sky-rovers, semidivine beings, attendants of Śiva and masters in the arts of magic.⁴

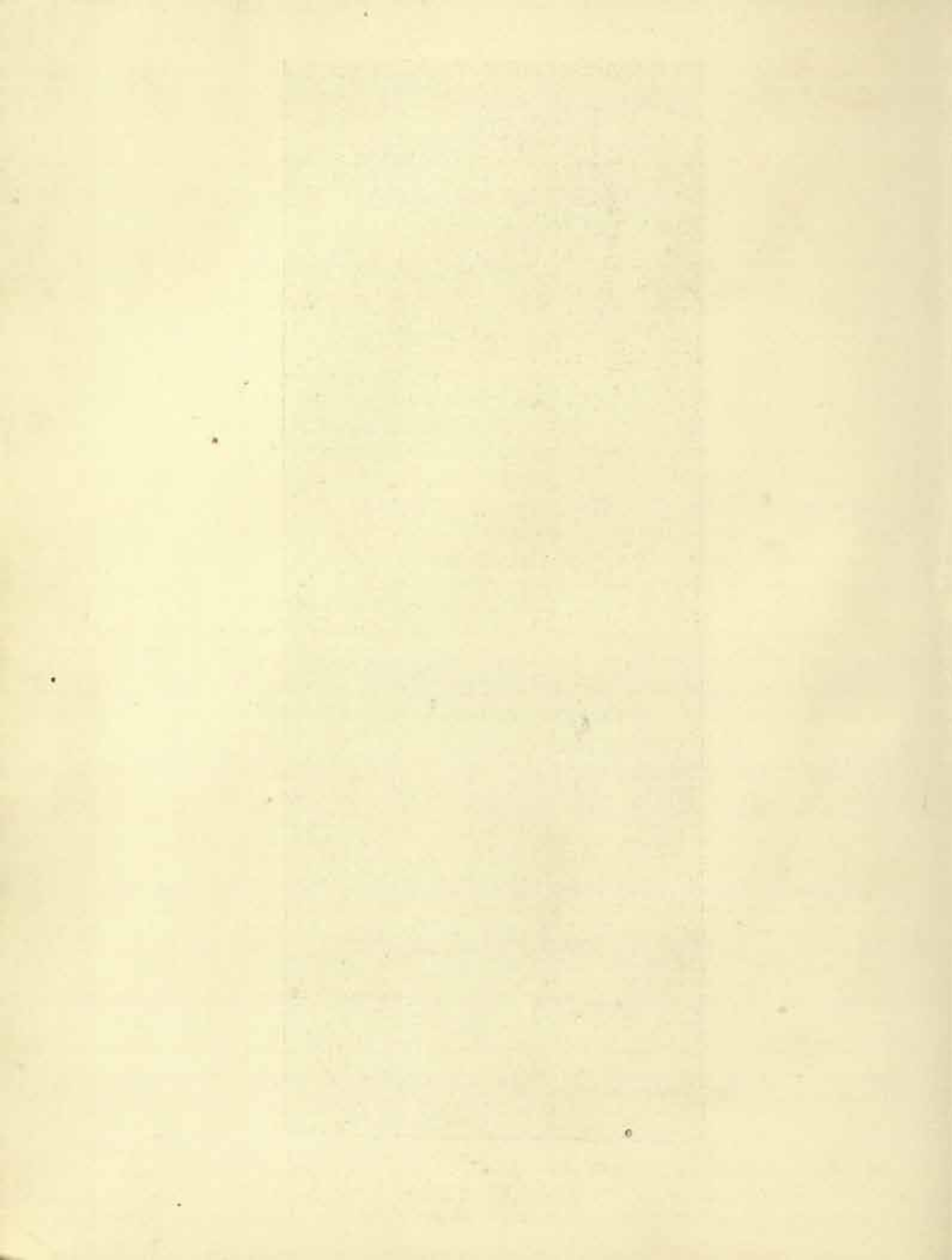
1. B. M. Barua, *Barhut*. Vol. II, pp. 132-33.

2. Fausboll, *Jātaka*, vol. III, p. 528.

3. Cowell, *Jātaka*, Translation, vol. III, p. 314.

4. C. H. Tawney, *Kathāsaritsāgara*, Translation. Many are the stories here narrated about the Vidyādharas. Jimūtavāhana, son of Jimūtaketu, the king of the Vidyādharas, says on one occasion 'Formerly I was a sly-roaming Vidyādhara ; and once on a time I was passing over a peak of the Himālaya, and then Śiva who was below, sporting with Gaurī, being angry at my passing above him, cursed me.....' Tawney, *ibid*, vol. I, p. 176.





PAINTINGS AT BĀDĀMĪ

By ST. KRAMRISCH

The earliest Brāhmaṇical wall paintings yet known in India were noticed by the writer and subsequently photographed in the large Vaiṣṇava cave (known as cave III) in Bādāmī, Kāladgī collectorate, Bījāpur District, Deccan. The cave has a dated inscription of Maṅgaśvara, the Cālukya king. It records the completion of the cave in the year Śaka 500 (578 A.D.).¹ Apart from being the earliest Brāhmaṇical wall paintings, these are also the earliest records of painting in India which are definitely dated. The Buddhist wall paintings at Ajaṇṭā can be dated on stylistical and epigraphical grounds, and there is a considerable affinity between the later work at Ajaṇṭā and the Bādāmī paintings. The cave has been visited frequently and has been commented upon exhaustively in archaeological literature. But while the sculptures at Bādāmī were the subject of a monograph (R. D. Banerji, *Bas-reliefs at Bādāmī*), these paintings were not dealt with.² They occupy the concave surface of a heavily vaulted cornice, which affords protection against the rain and the strong light of the sun, and the latter may have blinded the visitors to the cave. The paintings though faint, are of a high quality. Their subjects apparently are Śivaite; there is in front of a red curtain a figure of a pale complexion dancing (Śiva?), the right arm raised, with Kaṭaka hasta, the left arm thrown across his body (gaja hasta) and the face dance-intoxicated. Massive red columns with white cushion capitals emerge above (Pl. VII).³ This scene, however, is less

1. cf. *Indian Antiquary*: Burgess, *Rock-cut temples at Bādāmī*, vol. VI, pp. 363, 364; Fleet, *Sanskrit and Old Canarese inscriptions*, vol. X, p. 57.

2. Burgess, *Archaeological Survey of Western India, Report*, vol. I, p. 20, mentions only "Remains of painting are still distinctly traceable on the underside of the caves (see p. 58, note 4) and on the carved roof of the verandah. Possibly traces might also be discovered on the larger images, but unfortunately they have been besmeared with whitewash by some photographer." "Remains of frescoes at Bādāmī" are also mentioned by Codrington, "The culture of mediaeval India as illustrated by the Ajanta frescoes," *Indian Antiquary*, vol. LIX, p. 159. Nothing further is said about them.

3. To the left and not shown in the reproduction, on one level with the capitals of the large columns there is a human face with large round earrings (patra kuṇḍala), its body faintly visible and possibly holding a drum (mṛdaṅga) in the direction of the dancing figure. This figure appears to be larger than the dancing one. The painting in these parts

clearly discernible than the one next to it, which is also set in front of columns. It shows a group of heads, and amongst them those of Śiva and Pārvatī may be recognised¹ (Pls. VIII and IX). The figure to the left proper of Pārvatī could be her father, Parvatarāja. A sugar-cane seems to be held by another figure. The two main figures, Śiva with matted hair,² and Pārvatī with a veil, stretch out their hands in the ceremony of 'pāṇigrahaṇa'—i.e., the taking hold of the hands in the act of betrothal (kalyāṇasundaramūrti). Women look down on the scenes from a gallery.³ The figures are painted in what looks now a pale buff shade (Śiva, Pārvatī) or dark brown (an attendant figure with fly-whisk) or else a greenish blue. They are fully modelled in colour, with high lights. Divided from this scene by a Śārdūla carved in the round, a flying couple of Vidyādhara are placed against a feathery cloud and the wizard Vidyādhara raises his delicately shaped left hand in Mṛgaśīrṣa mudrā (Pl. X). There are several other portions of paintings preserved in this cave as well as in the smaller Vaiṣṇava cave (cave II)⁴. Wherever

however is very faint and damaged. The red curtain is fixed on a rod in front of the columns, at some distance below the capitals and extends behind the shoulder of the large figure.

1. The painting has peeled away to the right proper of Śiva and the right half of a dark brown male figure with a fly-whisk can be distinguished beyond it; above the bare patch there are traces possibly of the upper part of one more head. Cf. also 'The Illustrated London News,' 8th. August 1936 p. 249.

2. The same type of Jaṭā-makūṭa can be discerned on the dancing figure in the preceding scene (Pl. VII) with a loose braid of hair falling to the shoulder.

3. 'The marriage of Śiva and Pārvatī' is represented in relief in cave I (Banerji, op. cit. p. 10). The version there, however differs. The painting, incomplete and damaged as it is and besides not altogether in keeping with any of the known versions of this scene in sculpture or as given in the texts, may yet be correctly identified. The other versions of this scene in Elephanta, in Ellora in the Dhūmar and Rāmeśvara caves and elsewhere (cf. T. Gopinatha Rao, Elements of Hindu iconography, for inst. vol. II, part I, pl. CII, where Pārvatī is shown to the left of Śiva, as in the Bādāmī painting and in the texts, whereas she appears on his right in the other reliefs) show discrepancies, in details.

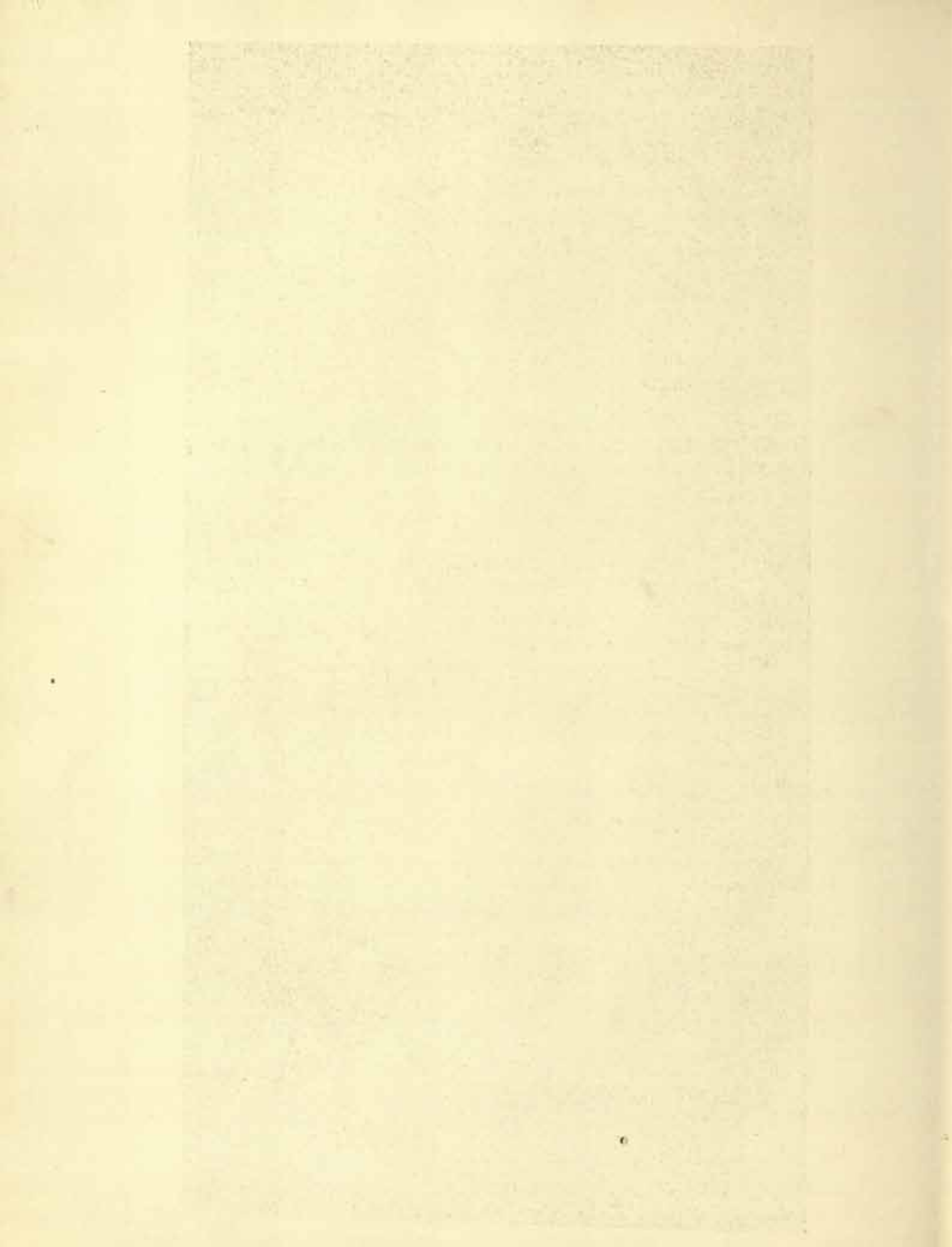
The relative size of the figures varies from the standard. That of Pārvatī should be as high as the eye, the chin, the shoulder or the chest of Śiva, whereas she is at least equal to Śiva's figure in the painting. All the heads, moreover in this group are more or less on one level, if not of the same size and this refers also to the figure with the fly-whisk to the right proper of Śiva.

The position of Pārvatī may be interpreted as seated on the lap of her father on a raised seat, or as having mounted a stone (cf. Vedic Index I, p. 494).

Sivaitic scenes and figures do not occur in painting alone in this Vaiṣṇava cave. They are also carved on brackets of the pillars of the verandah, Śiva and Pārvatī for inst. on the western side of the first pillar from the east, Ardhanārīśvara on the eastern face of the second pillar from the east, and on others Śiva, Pārvatī and Kārtikeya and again Śiva and Pārvatī. (cf. R. D. Banerji, op. cit. pp. 33, 34.)

4. They are on the ceiling of cave II; a medallion for instance, in the centre with Viṣṇu on Garuḍa being carved, (cf. Banerji, op. cit., Pl. XIII a) the rest of the panel filled with painting, and on a back wall there are outlines of large figures. In cave III some more fragmentary traces of clouds with flying figures are left on the underside of the eaves. Terra verde and Indian red are the colours best preserved also on the reliefs of the ceiling, whereas the large figures of the wall panels and on the brackets of the pillars were cleaned of every trace of colour and coating. The rock itself is streaked in distinct bands of light and dark buff and these appear, laid bare as they now are, to tear asunder the plastic continuity of the figures.





the walls of the cave were not sculptured they were covered with paintings. Moreover, the sculptures were altogether painted and the same colours were used for both. The plastic form was painted (there are abundant traces to show this), the painted surface in its turn being fully modelled with all the means available to painting. Sculpture and painting in India are closely connected. Sculpture is the primary art and painting comes up to it with its own means. The interconnection and collaboration of the two is preserved nowhere as clearly as in the large Vaiṣṇava cave, Bādāmī and also in cave II, Ajaṇṭā¹ where votaries are painted in front of rocks and between plants, in large panels at right angles on either side of a sculptured group on the back wall of the bay, with Hārītī and Pāṇcika carved as mighty gods. The painted votaries in the lateral panels are shown approaching them. The carved figures are still with traces of plaster, etc. while in-between them foliage is painted on the flat ground.

The whole cave must have been painted as soon as the carving was finished and Maṅgalīśvara's inscription refers to the completed cave, fully painted in its sculptured parts and bedecked with painted scenes where the walls were smoothed into surfaces. These are not always large. Even in-between carved figures, as those of Garuḍa² and that of a Śārdūla (Pl. X) the intervening part of the curved roof has painted figures and the two Vidyādhara's hovering in front of clouds are part of the plastic conception of the whole. In other instances (cf. p. 58, note 4) the major part of the composition was carved and the rest painted on the flat wall. Carving and painting here are as closely connected as for instance drawing and painting. The paintings, quite apart from considerations of style could not have been added at a later date. They formed indispensably part of the entire "most wonderful workmanship" which according to the inscription was lavished on this cave. In painting as in sculpture the same effect is sought. The roundly modelled form is 'bodied forth' from the rock : tangibly rounded in sculpture, modelled in colour and with high lights, in painting. These high lights are not the result of 'wiping out'³ and also in Ajaṇṭā they are laid on. They mark not only the places which have come forth to the highest degree, but they are also put in finally by the last strokes of the brush and are highest on the painted surface.

1. Yazdani, *Ajanta*, vol. II. Pls. XXXIII, XXXIV.

2. cf. Banerji, *op. cit.*, Pl. XV a.

3. Coomaraswamy, *Vijayadharas*, chapter XLI, *JAOS*, vol. 52, p. 18, note 9; Binyon : Yazdani, *Ajanta*, vol. I, p. XV. That the high lights were 'sponged out' is actually an erroneous impression, as Binyon himself suggests.

The paintings are technically of the same type as later paintings in Ajanta. They do however not exactly conform to any of the styles represented there. The figures resemble to some extent those shown by Yazdani, Ajanta II, Pl. XXIX. There however the modelling is more summary and massed up into broad surfaces. A pattern-like regularity hardens its texture. In the majority of the Ajanta paintings there is coherence in the way the volume of the face is driven forwards. Tightly the skin fits the firm modelling. At Bādāmi plastic modulation hovers on its expanse and its delicacy rests there. In it the impact by which it has been bodied forth, spends itself. Risen to the surface it makes it appear 'as if breathing.'

Modelling hovers on the surface of physiognomies of variegated type and makes them sensitive in texture and expression. With the quality of the modelling is combined a line of a similar nature. It does not clasp the contour tightly. It assists in modelling an evanescent volume. Varying in thickness, it is elastic and nowhere calligraphic. Curvedly ambient, its speed is slow. The outline which is finally drawn on top of the first outline and after this has been filled with colour at times deviates from it. This is conspicuous on Pārvaṭī's chin for instance where it adds softness. A movement in suspense lingers on brows and lowered lids. The arch of the brow may be doubly drawn, a-tremble in its two-fold curve¹ and close to the flutter of Pārvaṭī's veil, and the metal lustre of the large, round earrings². They gleam in the warm atmosphere, in the wilting fragrance exhaled by the faces.

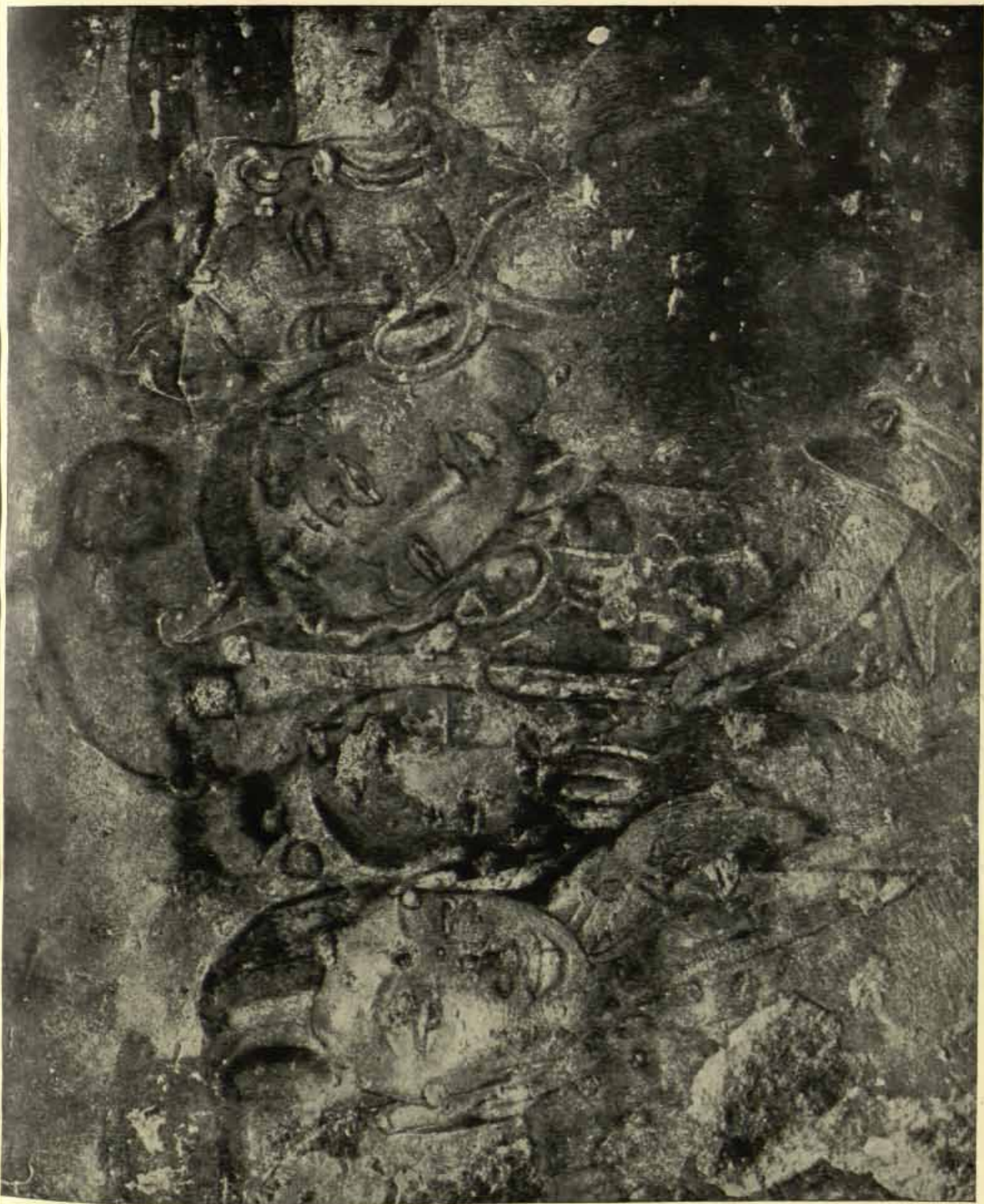
Limpid face rests next to face. The mouths do not add a word to the eyes listening to the silence of the bodies. They are formed in keeping with nose, angle and shape of the face. Flowers to a bunch contribute similarly organic form, each of its kind.³ One mood variously refracted plays over the entire instrument of this figured presence. Intense and benign, Śiva holds out his arm. Of the hand which is seen below the right arm stretched out by Pārvaṭī the

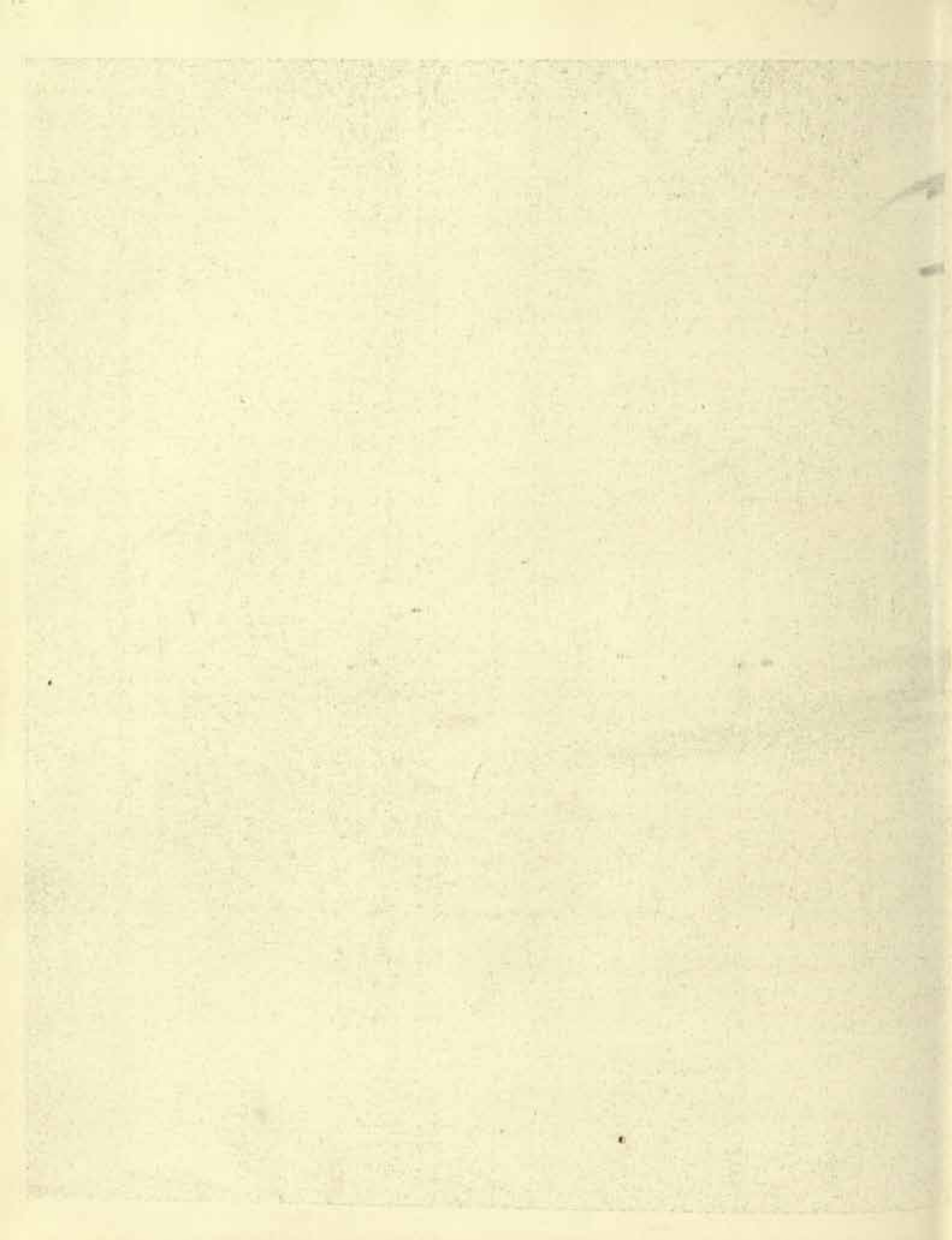
1. The deviation of the outer end of the calligraphic line of the eyebrows of the figure of Padmapāṇi or of that of the Cāturmahārjakāyika (Abhidharmakośa, III, 62, d) in cave I (Yazdani, Ajanta, vol. I, Pls. XXVI and XXVII) from the line below, is by way of an improvement of the curvilinear sweep and not meant to convey a movement in suspense which is the underlying mood of the Bādāmi paintings.

2. cf. Ajanta, I, c. Pls. XI, XX, XXXII. There is however no exact counterpart of the shape of her diadem.

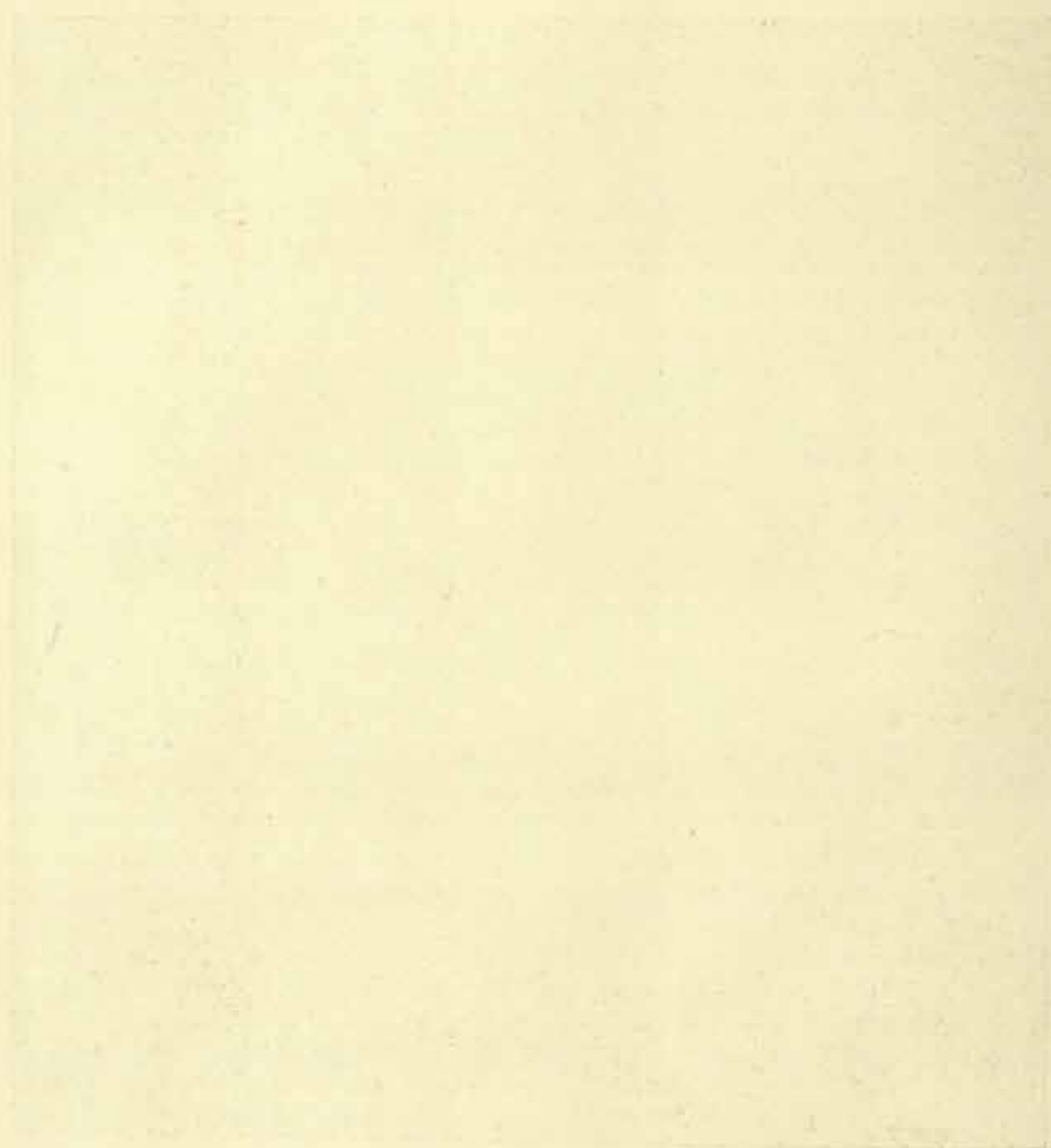
3. The heads appear to be approximately of human size. The face of Śiva has a Drāviḍian cast. From the Viṣṇudharmottara, ch. 42 'men should be painted according to their country', it is evident that a knowledge of the types of the people of India was required of the painter. In their images the gods are lent, to an allusive extent, the traits of the people who worship them.

The curved shape above the head of Pārvaṭī remains unidentified.









fingers are as delicate as the flutter of her veil. She bends forward with her arms in his direction. This movement her father communicates to her. He gives her away, her body is yet held back while the inclined head gravitates forward heavy with the knowledge of Śiva's presence and not turned towards him. As a group however they all cohere and so does the group of women with their transparent veils in the gallery above¹. Some rest their hands on the balustrade. Maybe they dropped flowers.

It should be kept in mind that the paintings are on a vaulted roof. Its smoothed and concave surface must have been covered with them throughout its length. None of the other wall paintings hitherto known are on architecturally curved surfaces. The technical achievement rests, no doubt, on a widely practised tradition.

1. Capitals of columns emerge above their heads. Those of the gallery are topped, it seems, in addition to the large 'cushion' by a second ring shape, and the part between the two looks straight in one case and broadens towards the top with a concave profile, in another. The main columns however are heavy (Pl. VII; Pl. VIII extreme right). There is no bulbous part below the cushion, a frequent feature of the slender columns in the Ajaṇṭa paintings; the capitals of columns painted in cave I. Ajaṇṭa (cf. Griffith, Ajaṇṭa, Pl. X, Q) and in cave II (Y., op. cit. Part II, Pl. XIX) but for the bulbous-ending of the shaft are very similar; their proportions and the shape of the capital above the 'cushion' vary.

A RELIEF OF RSYA ŚRĀGA IN THE MATHURĀ MUSEUM

By V. S. AGRAWALA and B. S. UPADHYA

On railing pillar No. J. 7 in the Mathurā Museum is carved the figure of a boy (Pl. XI) which Dr. J. Ph. Vogel has described in his Catalogue of the Mathurā Museum : "—a male figure of Faun-like appearance with elaborate turban, necklace of beads and other ornaments. He is standing under a mango tree in blossom with his right hand raised to his lips, and with his left placed against his thigh. He wears a sash round his waist and a curious necklace round his shoulders. Over the tree is a balcony without figures." Writing later about the same image in his book 'La Sculpture de Mathurā' Dr. Vogel identifies this figure as that of a young man, probably a Yakṣa, of a fashionable type. He also suggests that its pose resembles that of Harpokrates found at Taxilā by Sir John Marshall (p. 102, Pl. XXI, fig. (b) ; see Archaeological Survey Report 1912-13, Pl. XX, figs. f, g, h, for the statuette of Harpokrates).

The figure cannot be that of Harpokrates. The difference in the attitudes of the right hand of the Mathurā figure and of the Taxilā statuette is striking. In the Harpokrates figure the index-finger of the right hand touches the lower lip which is indicative of silence. If we were to trace a parallel to this pose of Harpokrates' finger in Sanskrit literature it could be found in the figure of Nandī, who in Kalidāsa's Kumārasambhava (III, 41) guards the entrance of Śiva's place of meditation. "Nandī posted at the entrance of the bower, having a golden staff resting against his forearm, bade the Gaṇas to observe stillness with a gesture in which a finger of his right hand touched his mouth." Only one finger was needed to indicate the gesture of 'silence'.

Two fingers of the right hand however of the figure on the Mathurā railing-pillar, the index and the middle one, are placed on the lower part of the chin and do not touch the lower lip as the finger of the Taxilā statuette

does. This Mudrā is indicative of astonishment (*vismaya*) and reflection (*vitarka*). The eye-balls are turned upwards and the whole expression is one of deliberation in which an awareness of the immediate surroundings is absent. Satisfaction beams on the face.

The decisive symbol however in the iconography of this figure is the dwarfish horn ($2\frac{3}{4}$ " projecting against a leafy background above the forehead from under the turban. This feature suggests the identification of the figure with Ṛṣya Śṛṅga. The story of this sage occurs at length in the Rāmāyaṇa, Bālakāṇḍa, Sarga 10, and Mahābhārata, Vana Parva, Adhyaya 110-113. The legend is also related with a lyrical charm by the poet Kṣemendra in the sixty-fifth Pallava of his Bodhisattvāvadāna Kalpalatā.¹ All the versions agree that the Muni-kumāra was born of a hind (mṛgyāmutpannah) and won the name of Ṛṣya Śṛṅga. Kṣemendra calls him Eka-Śṛṅga from a single horn growing on his brow.

He was the son of saint Kāśyapa and having lived in a solitary forest, knew nothing of women. He was tempted by maidens sent for this purpose by king Lomapāda. The maidens after stirring his amorous emotions went away, but the mind of their fresh victim turned constantly to them. He neglected his duties of a religious student, and when his father questioned him as to what had happened, he related innocently his meeting with another 'Brahmacārin' who had bewitched his mind. Next day when Kāśyapa was not in the hermitage, the maidens returned and enticed away Ṛṣya Śṛṅga on a floating hermitage to the kingdom of Lomapāda. On his arrival the king bestowed his daughter on him in marriage.

The most suggestive moment in the story is that in which the young Brahmacārin has for the first time beheld a maiden. "And through him then her eyes did flash/ a current of celestial fire; the poor boy did not understand/ the rushing feeling of desire." (Journal of the Buddhist Text Society of India, Vol. I. Pt. II, p. 5, V. 26.)

It is this state which the sculptor has shown on the railing pillar. The upturned (ūrdhvaḍṛṣṭi; Vanaparva III 21) and rolling (vighūrṇamāna; Kṣ. V 63) eyes are clearly discernible. The version of the Mahābhārata also refers to beautiful and fragrant garlands twined with silken threads which the maidens gave him. The Mathurā figure actually wears a conspicuous garland thrown over both shoulders. The young sage is also shown adorned with a necklace of big

1. Bodhisattvāvadāna, LXVI, 18; cf. also Mahābhārata, ch. 110. V. 39.

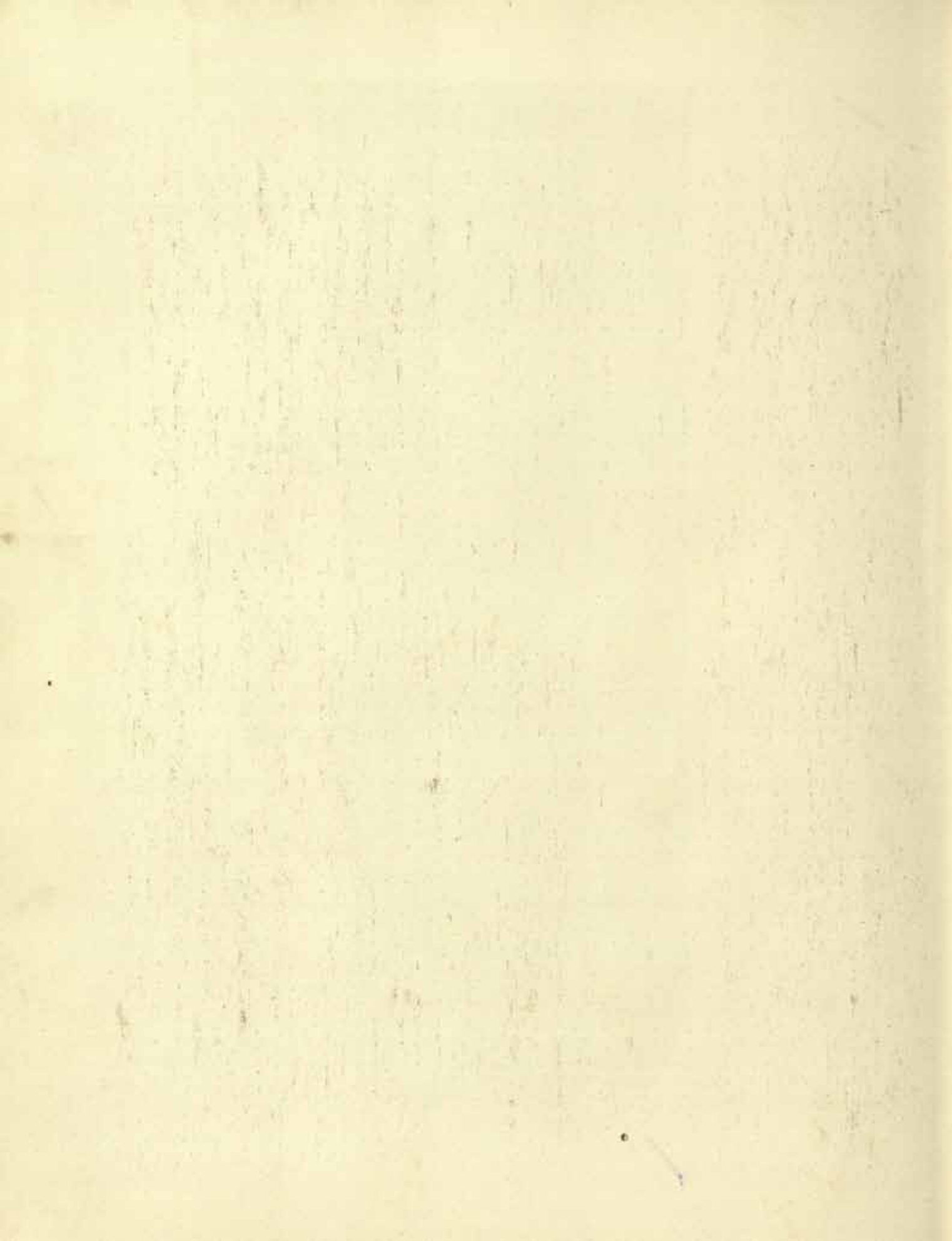
pearls and several wristlets. There are two pendants in the ears. Thus he has been bedecked by his female paramours.

The figure which was described as one of Faun-like appearance can be no other than that of R̥ṣya Śr̥ṅga, whose story was a favourite subject with both the Brāhmaṇical and Buddhist writers. Hiuen Tsang says that the place of the sage Ekaśr̥ṅga was situated somewhere near Peshawar in the Gandhāra territory. "Going North-West from the stone-cell above 100 li or so (from Poluṣa, the modern town of Pali near Peshawar), we cross a small hill and come to a large mountain. To the south of the mountain is a Saṅghārama, with a few priests as occupants, who study the great Vehicle. By the side of it is a stūpa, built by Aśoka Rāja. This is the place which in olden time was occupied by Ekaśr̥ṅga R̥ṣi. Deceived by a pleasure woman he lost his spiritual faculties. The woman, mounting his shoulders, returned to the city".¹ The Buddhist version of this legend is that Buddha was once born as R̥ṣya Śr̥ṅga and the maiden who allured him was Yaśodharā.

1. "This account of Hiuen Tsang about Ekaśr̥ṅga is evidently based on the episode of R̥ṣya Śr̥ṅga in the Rāmāyaṇa. According to Kṣemendra, the maiden who enticed away Ekaśr̥ṅga was a princess of pure morals. The story of Ekaśr̥ṅga is constantly referred to in Buddhist books. See Eitel's Handbook, Catena of Buddhist Scripture, p. 260; Romantic Legend, p. 124; Yule's Marco Polo, vol. II, p. 233. Ind. Ant. Vol. I, p. 244; Vol. II, pp. 140f."

Journal and Text of the Buddhist Text Society of India, I, c. p. 14.





CAVE TEMPLES NEAR TIRUMALAIPURAM AND THEIR PAINTINGS

By T. N. RAMACHANDRAN

One of the cave temples has been noticed already¹ and included in the List of Protected Monuments accepted by the Government of India², the credit, however, for the discovery of the paintings goes to Dr. Jouveau Dubreuil, to whom we also owe the discovery of paintings in the Kailāsanātha temple at Conjeevaram. Acting on his information, Dr. Gravelly commissioned me to visit the place and secure sketches and tracings of the paintings with the aid of an artist. The place was accordingly visited in the last week of September 1935 and careful sketches and tracings were prepared for us by Mr. C. Sivaramamurti, who has also written a note on the paintings.

Description of the cave : Four miles east of Kaṭṭayanallūr station, in the Tinnevely District, by a bad road, or three miles across the fields as the crow flies, in quite an out of the way place, just in the midst of a dreary moor, there stands a rocky hillock called Varnāchchippārai or Varnāchchimalai facing the Podiyāl mountain range where it is believed sage Agastya rests, on whose side has been carved the cave temple containing these pictures. The journey to the cave is tedious and the access to the rather elevated ground of the temple so difficult that the first feeling one experiences on setting foot in the cave is one of utter disappointment if a desire to see the paintings alone has prompted the journey and not an interest in sculpture. It requires great patience to scrutinise and an application of oil or some such thing to the sooty surface to reveal to the eye painted forms.

The cave temple³ resembles in its architecture Pallava cave temples of the Mahendra style such as those at Māmaṇḍūr, Dalavānūr, Trichinopoly, Maṇḍagapaṭṭu,

1. Longhurst, Pallava Architecture, Part II, p. 49.

2. Corrected up to Sept. 1928, Madras, p. 34, No. 326.

3. Measurements of the cave and its parts :—Cave : length 20' 3", breadth 13' 6", height 8' 10"; Pillar : length and breadth 2' 3"; Panels—Brahmā : length 5' 11", breadth 3' 4"; Natarāja—length 5' 7", breadth 4' 8";

Śittannavāsai, etc. It faces north and has two pillars and two pilasters. The pillars are cubical, the central part of each being octagonal. The cubical parts bear conventional lotus designs as at Trichinopoly, Dalavānūr, etc. The corbels have a smooth and slightly projecting central band with wave pattern on either side as at Bāhūr and Koḍumbālūr in the Tamil country and at Kukkanūr in the Cālukyan country. Access to the cave can be only by a ladder as there are no steps and the cave itself is situated at a height of about 12 feet. The pillar on the left has an inscription in Tamil characters of the 12th and 13th centuries A. D. on five of its octagonal sides.¹ The letters are faintly visible on two sides only while on the other sides they are badly weathered. The inscription appears to register a gift of land by (or in the time of) the Pāṇḍya king Śrīvallabhadeva and mentions the seat called Pāṇḍiyarājan in Aḷagiya-Pāṇḍiyan-kūḍam in the place of Śolāntaka-caturvedimaṅgalam, a village in Pākanūr-kūṇṇam. Śrīvallabhadeva has been identified with the Pāṇḍya Jaṭavarman Śrīvallabha² who was a contemporary of the Coḷa king Kulottuṅga I (1070-1120 A. D.). This Śrīvallabhadeva is called here a Cakravartin and is stated to have been seated at the time of the grant on his throne called Pāṇḍiyarājan in the Aḷagiya-Pāṇḍiyan hall at Śolāntaka-caturvedimaṅgalam which was a surname of Kuruvitturai.

On the eastern wall, (which is the left side of the cave), facing west, is a panel with the figure of Brahmā sculptured in it, whose description is as follows :

Viṅgu—length 5' 6", breadth 4' 7"; Gaṇeśa—length 4' 11", breadth 4' 5"; Left Dvārapāla—length 5' 10", breadth 2' 9½"; Right Dvārapāla—length 5' 11", breadth 2' 7"; Shrine, Opening—length 5' 5", breadth 3' 2"; Shrine—length 7' 7", breadth 8' 2", height 5' 10"; Liṅga—height 2', cir. 4' 4½"; Base of liṅga—length 3' 6", breadth 3' 3", height 2'; Nandi—length 5' 5", breadth 3' 9".

1. M. E. R., No. 592 of 1915. (For typographical reasons not all the characters could be properly transliterated. Ed.)

- Line. 1. Svasti Śri [H] Mīna (Viyaḷattu)
 " 2. Chakkarava (r) ttiṅaḷ Śri Vallabhade-
 " 3. var Pākanūr-kūṇṇam-choḷāntaka-
 " 4. chchatuppedimaṅgalattu (vaḍa) pāl
 " 5. koyilin uḷḷal Aḷagiya-Pāṇḍiyan-
 " 6. kūḍattup-paḷḷikkattil Pāṇḍiyarāja-
 " 7. nil eḷundaruḷi irundu tu (-kavūr kūṇṇam) Vira-
 " 8. Nārāyaṇamaṅgalattu Sabhaiyāraiyaḷ i-
 " 9. ṇṇāṭṭu-raṇa.....
 " 10.ṇṇayyat-tiruvāymolindaruḷiṇapaḍi nā-
 " 11. ṇṇi eṇṇina Bārapāḷapuram ta.....
 " 12.maṅgalattu bhūmi i(n)ṇāṅṇellai-
 " 13. kkuṇ uṇṇaṇṇi nīṇṇilāṇṇaḷuḷ.....rām ku-
 " 14. laṇṇi kuṇṇuḷi uṇṇu.....me-
 " 15. nokkiya maramuḷi kiṇṇokkiya kiṇṇu

2. M. E. R., 1909, p. 79, para 23.

He has four heads, one of which is hidden behind the others, and wears Jaṭā-makuṭas. Only two ears are shown and they have ordinary Kuṇḍalas. He has the Yajñopavita which is thrown over the right arm as in Pallava sculptures representing Brahmā and Viṣṇu. His upper right arm has an Akṣamālā, while the lower right displays its fingers clenched as in holding but no content is visible. His upper left holds a book (Veda) and the lower left carries a Kuṇḍikā as in the case of the Parel image said to represent Maheśvara. The lower garment is similar to that found in Pallava Viṣṇu sculptures. The Udara-bandha is present. He stands in the Sama-bhaṅga pose facing a shrine wherein a Śiva-liṅga is set up.

On the southern wall of the temple (which faces north) are three panels divided by two pilasters which are, like the cubical pillars, octagonal in their centres. The panel on the extreme left (Pl. XII) shows Naṭarāja dancing between two Gaṇas, the Gaṇa on the right playing on a lute. The Gaṇa on the left is defaced. Naṭarāja is in the "catura" pose, has Jaṭā-makuṭa, Patra-kuṇḍalas, Yajñopavita, Udara-bandha and loin cloth while a snake encircles his thighs. The loin cloth is secured to the waist by a sash with knots in front and with its ends also hanging in front. The contents of his hands are: Upper right not clear, perhaps flame of fire; upper left, bent down and holding a book or more probably a Dhakkā; lower right with palm resembling the cobra's hood but suggestive of Abhaya; lower left thrown outward in the Daṇḍa-hasta pose as in the case of dancing Bālakṛṣṇa. The legs are bent bow-like symmetrically suggesting a well measured dance. The crescent moon is shown very prominently on the Jaṭā-makuṭa.

On the brackets of the cubical pilasters between this panel and the next one are found remains of paintings very badly preserved (Pl. XIII, Figs. 2, 3, 6).

The second panel which is the central panel, also facing north, shows Viṣṇu sculptured in it between two worshipping Gaṇas which resemble Pallava Gaṇas in every detail. They have Karaṇḍa-makuṭas of the Pallava type and Patra-kuṇḍalas. Viṣṇu stands in the Sama-bhaṅga pose with lower garment drawn high up and heavily conventionalised. He has a Kiriṭa-makuṭa also conventionalised like the modern Tirupati cap, a halo behind his head, Makara-kuṇḍalas in his ears, Yajñopavita thrown over his right arm as in Pallava sculptures and Udara-bandha. His upper arms bear Cakra and Śaṅkha (both mutilated); his lower right is in Ardha-dhyāna pose (also suggesting varada) while his lower left is in the Kaṭyavalambita pose. Aṅgadas and wristlets are shown not only in the case of Viṣṇu but also in the case of Brahmā and Naṭarāja.

The third panel on the extreme right of the same wall contains a beautiful sculpture of Gaṇeśa sitting with right leg placed vertical and left leg horizontal to the base. The head of Gaṇeśa is that of a typical elephant (not conventionalised), the left tusk being shown broken while the trunk is turned towards the right holding a wood-apple. His upper right arm has a snake-like noose, while his upper left holds a goad; his lower right holds a Modaka, while the lower left is in the Kaṭyavalāmbita pose with palm turned inward (as some bad actors and amateurs do on the stage). Udara-bandha is conspicuous while the navel is indicated by a cross.

The west wall of the cave has a rough opening to the shrine wherein a cylindrical liṅga is placed on a Pīṭha. On the left side of the opening stands a Dvārapāla bent towards the shrine. He has a Karaṇḍa-makūṭa superficially like those of the Pallava period and Kuṇḍalas, looking like Patra-kuṇḍalas, besides ornaments such as necklace, Aṅgadas, wristlets and Yajñopavīta. He wears a loin cloth secured by a sash-like belt. Around the thighs is a cloth tied ornamentally on the left (as some South Indian dandies are dressed), to the elegant tied ends of which the sculptor has given a resemblance to a parrot. His right arm is in the Kaṭyavalāmbita pose while his left is in the Kaṭaka. He has a fierce-looking moustache. On the right side of the opening is another panel with a typical Dvārapāla turning towards the opening. Though similar to the other Dvārapāla in all respects he is standing leaning on his mace, which though held by his left hand acts as support to his right arm, the arm pit of which is placed on the top of the mace. The parrot-like hangings of the ornamental cloth that were found in the other Dvārapāla are not found in this. The figure with its moustache is reminiscent of local warriors.

A bull (Nandi) recumbent, was carved out of the same rock in the centre of the cave, facing the shrine. It has been so badly mutilated (local version attributes this to iconoclasm) that only parts of its body with a hoof now remain.

Unfinished cave temple on the same hill : This is on the other side of the hill and faces south east. It is superficially similar to the finished cave temple, though smaller, and presents the following features : (1) Left side of the facade contains a panel with a crude sculpture of a seated figure probably intended for a Dvārapāla as it occupies the niche usually filled by Dvārapālas. (2) It has the usual two pillars but they are cubical without either corbels or octagonal parts. (3) The interior is divided into two blocks by an intervening block of rock which has not



been cut away. On the walls spaces for panels have been scooped but no carving has been attempted. Nor is the ceiling finished. (4) No shrine for the *liṅga* is found as in the other cave. It would appear that the work in the cave was suddenly abandoned. The villagers give the following legend to account for this : The sculptor who was working on one side of the hill on the cave which is now finished heard chisel sounds issuing from the other side of the cave and was wondering who else could do that kind of work without his knowledge and permission. He came stealthily and found to his dismay that it was his own youthful son who was working out a new cave uninitiated and inexperienced. The boy used to carry food to his father. Enraged that his son should be practising his own trade without initiation, he murdered him, thereby preventing the completion of a rock temple that might have surpassed his. The measurements of the cave are the same as those of the hall of the finished cave temple. Being unfinished it illustrates the process of cave temple planning and cutting.

Places of interest in the vicinity : About 5 miles west of Kaḍayanallūr Railway station, at the foot of the Western Ghats is another cave temple which appears from reports to be similar to the Tirumalaipuram cave temple with a shrine in it dedicated to a goddess called Pechchi. My informant, one Mr. E. R. Gopala Iyer, a native of the place told me that the hill was named Pechchippārai after the goddess Pechchi and that the cave temple has cubical pillars similar to those of the Tirumalaipuram cave temple, and that there were inscriptions in it in some unknown characters. Adjoining the cave there is, I am told, a perennial stream called Karumbāru (skt. *Ikṣunadī*).

A mile to the east of the Kaḍayanallūr Ry. station is a structural temple called Śeṁpakavalli Amman Koil now in utter ruins. The whole ruin here with a dried Teppakuḷam, or tank intended for floating images during festivals, and fallen pillars etc., indicates a temple complex. In tracts of about a square mile area, half a mile to the north of Kaḍayanallūr station, traces of smelt iron and old pots with pieces of bones indicate the previous existence there of some kind of habitation. Traces of old ramparts and cannon balls can be seen in the same tracts. To the south of the temple complex Śeṁpakavalli Amman koil, by about 3 furlongs is a temple called Koṭṭamāḍan Koil. Local legend is that the deity called Koṭṭamāḍan is guarding the northern gateway of the local fort. The distance between Koṭṭamāḍan Koil and the Tirumalaipuram cave will be about $1\frac{1}{2}$ miles as the crow flies. Kulasekharamaṅgalam is a village about 5 miles from the cave temple, which was reported to me as another place of interest but I had no time to visit it.

Paintings : The ceiling of the cave (excluding that of the shrine) was once elaborately painted over. Lotuses, lilies (Pl. XIII, Fig. 4), scrolls (Pl. XIII, Fig. 6), birds such as ducks (Pl. XIII, Fig. 5), borders and other geometrical designs appear to have been the favourite themes. A dancing figure, probably that of a Gaṇa with a drummer on its left is all that is left on the ceiling of what was once an elaborate dance scene (Pl. XIII, Fig. 1). The panels and the brackets also appear to have been painted over but the latter alone show today some traces which have been sketched (Pl. XIII, Figs. 2 and 3). The southern wall contains these traces and wherever they are, they are covered by black soot and fungus. During rains water splashes against the ceiling and the brackets aided by strong winds as the cave faces a narrow valley between two hills through which winds rush. The paintings at the south-eastern end, between Gaṇeśa and the left Dvārapāla have suffered considerable damage.

The date of the cave and the paintings : I have not made any systematic comparative study of these paintings with any of known date. But we have the testimony of Prof. Dubreuil that they must be works of the Pāṇḍya kings who were contemporaneous with the Pallavas. His observations in this connection are worth noting—"I discovered a very small but extremely interesting fresco-painting of the Pallava epoch. The date is not doubtful because the painting is on a pillar, the bracket (*bodigai*) of which is decorated exactly as at Śittannavāsal. The discovery is important, the painting being the sole specimen of Pāṇḍya frescoes." It may be interesting to note that while the scroll designs (Pl. XIII, Fig. 6) compare very well with similar ones found at Śittannavāsal, the sage-like persons (Pl. XIII, Figs. 2 and 3) wear shirts decorated with flowers and a towel-like covering of the lower part of the body exactly as at Sīyamaṅgalam.¹ While the cave temple is admittedly similar to those of Mahendra I and similarities in decorative details between the paintings here and those at Śittannavāsal are easily discernible, a study of the corbels will however show that they are of the type occurring at Bāhūr, Koḍumbālūr and Kukkanūr. Though the three temples cited are later than the caves of Mahendra, there is reason to think that the type of corbels in question may have originated in the Coḷa and Pāṇḍya country at an earlier date. The question of dating this temple seems to have puzzled Mr. Longhurst who, though admitting that the cave temple was similar to the Mahendra temple of Trichinopoly was led to assign it to the Māmallā period (640 to 674 A. D.), the period of Mahendra's son, from a consideration of the style of the bas-relief images it contains. While it is not easy to

1. Jouveau Dubreuil, *Pallava Antiquities*, vol. I, pl. xviii.

agree with him when he says "There can be little doubt that this old Śaiva temple was excavated by the Pallavas and the style of the bas-relief images it contains seems to indicate that it belongs to the Māmallā period" because we know that Pallava power did not extend so far, his indication of the date of the temple may be accepted. The temple was probably executed in the seventh or eighth centuries A. D., by either the Pāṇḍyas or their feudatories, who adopted or were influenced by the Pallava style of architecture. It is likely that the paintings in question may be equally old. The absence of Subrahmaṇya in the carvings of the temple (especially when we find Gaṇeśa) is significant inasmuch as the temple is right in the centre of the country which was the cradle of the Murugaṇ (Subrahmaṇya) cult. This may be cited as a negative argument which speaks for the relative antiquity of the cave temple.

NOTE ON THE PAINTINGS AT TIRUMALAIPURAM

By C. SIVARAMAMURTI

The paintings at Śittannavāsai and Conjeevaram give us a knowledge of painting as it flourished under the patronage of the Pallava monarchs. Mr. Govindaswami who deserves our thanks for his discovery of paintings in the Brihadīśvara temple at Tanjore¹, has supplied us with a fund of material for an elaborate study of painting in the days of the Coja kings. About the same time that S. K. Govindaswami lighted on the hidden paintings in the great temple at Tanjore, K. V. Ramachandran published his discovery of Kerala paintings at Tiruvanjikulam and Trichur which he tentatively assigns to the IIth century A. D. on the strength of the evidence of a Malayalam inscription thereabout². The Pallavas, Cojas, Pāṇdyas and the Keralas were the four important powers in the South from very early times; paintings to represent the artistic attainments of the people of three at least of these, the Pallavas, the Cojas and the Keralas have been discovered. And now Prof. Dubreuil has drawn our attention to the existence of fragments of paintings in a cave temple near Tirumalaipuram which he assigns to the Pāṇḍyan period.

The painting representing Gaṇas in the medallion just in the centre of the ceiling (Pl. XIII, Fig. 1) affords good scope for studying the work of the painter of the cave. The remark of the king in the Viddhasālabhaṇjikā that the picture before his eye with its continuous and free flow of line and epitomized sketching appeared rich in form because of the curves representing the ample limbs, fits the drawing of Gaṇas wherein a minimum number of flowing and sinuous lines gives an air of richness to the whole painting. The painter's mastery of line is revealed to a greater extent in the figure of a heavenly being riding a furious lion painted on the ceiling near the panel of Brahmā. The wild ferocity of the lion and the dignified serenity of the figure riding it are balanced in a masterly fashion. The figure is unfortu-

1. J. I. S. O. A. vol. I, pp. 73—80; Sivaramamurti, *Some Frescoes of the Cojas*, Triveni, vol. VI, No. 3, pp. 227-234.

2. Triveni, vol. IV, No. 2, pp. 17-26.



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nately so completely covered with a film of soot that even an application of oil does not aid any further than giving just an idea of it and I could not make a copy. Though the pictures here are fairly rich in 'rekḥā', i.e. line, they are poor in 'bhūṣaṇa', i.e. ornamentation which is a distinguishing characteristic of the Coḷa paintings. Of the few ornaments that have been used, the Patrakuṇḍalas on the ears of the Gaṇas remind us of those of some of the figures at Ajaṇṭā and Śittannavāsai. The robes that cover the bodies of the bearded men in the group of figures painted on the side panel of the capital of the pilaster are peculiar and flowers are worked on them.

The colour is here much the same as is given in the Śilpa texts : yellow, vermilion, red, black, blue and green. The outline appears to have been drawn first with red and then with black. This is apparent from the occasional slight deviation of the black line from the red or an absence of a black line over the red in certain places as for instance in the Kuṇḍalas where the middle stroke is left red.

Now to consider the paintings in detail : Among the figures of the dancing Gaṇas on the ceiling the drummer has his head bent and reminds us of a similar figure in the Brihadīśvara temple at Tanjore. If we are to take the figures of the bearded men (Pl. XIII, Figs. 2 and 3) in the company of women as Ṛṣis engaged in amorous sports they would be examples of descriptions given in the Śilparatna which forbids the representation of 'tapasvīlīlā' in ordinary homes. Śrī Harṣa has elaborately described the figures of such sporting Ṛṣis on the walls of the Citraśālā of Nala's palace in his Naiṣadhiyacarita. But considering the dress of the bearded men and the figure of a boar on the shoulder of one of them they may be hunters as Dr. Raghavan suggests. K. V. Ramachandran thinks that the picture may represent the revelry of the Yavana referred to in the Silappadhikaram. He tells me that in the Urkankathai there is a reference to the body-guard of the Pāṇḍyan king, of Yavana women who practised the cult of Astarte at Madura and indulged in Bacchanalian orgies.

The figure of the woman which remains uninjured has feminine grace in every line that goes to form it ; but the face of another woman which is all that is left of her is surpassing in its charm and dignity. But it must be confessed that the figures of the two bearded persons are not so perfect, and closer scrutiny shows that the heads are slightly large and the legs short.

The lotuses painted white on an indigo background cover a considerable space of the ceiling. They are simple in treatment and effective. The lotus

scroll as well as the ornamental pattern painted in black and tinted blue on the brackets of the pilaster show a masterful design.

The painting of the fierce lion on the ceiling described before but unfortunately not sketched points to a careful study of the moods of animals. The lion however is somewhat conventional in its form while the figure of the duck (Pl. XIII, Fig. 5) is a sympathetic animal study. The twist of the neck and the turn of the head, perhaps to rest its beak on its downy back, and its short legs suggestive of its slow movement and awkward gait heighten its effect.

The discovery of the paintings adds a fresh page and a very valuable one to the history of painting in South India and I thank Dr. Gravelly and Mr. Ramachandran for the opportunity they have given me to copy these paintings.

AN EARLY IVORY

By K. P. JAYASWAL



Amongst the antiquities found this year in the Patna excavations already described in this Journal, Vol. III, p. 125 is a carved ivory plaque representing a soldier (inset opposite). The head and the lower part of the legs are missing. The relief has been recovered from a depth of $12\frac{1}{2}$ feet, Mahalla Mahendra. Its measures are $2'' \times \frac{3}{4}''$. It may be of Maurya date and is now in the Patna Museum No. 991 (1936).

The right hand of the warrior holds a sword erect and the left hand has a shield. The figure wears a fitting coat, tight at the waist and with a pleated effect below. The undergarment is draped.

The figure may be compared with the soldier figure on the Bārhut railing. The costume however is different there. The coat is neither crossed at the neck nor pleated below the waist, as in the present example. It is bound with a tasseled string around the neck, opens straight along the middle line and fits smoothly and without folds also below the waist where it is tied with a knot. The tightly clinging loin cloth in the Bārhut relief has an ornamented panel in the middle and its rigid pattern is altogether different from the drapery of the ivory soldier. The sword moreover is sheathed and appears to be more pointed in outline.

There is also a figure of a soldier carved in the rock at the Rānī Gumphā, Udayagiri, Orissa.

Amongst the scanty relics of ivory figures preserved in India the present one is important on account of its age and subject. It may be also compared with a terra-cotta plaque of a soldier ($2\frac{1}{2} \times 1\frac{1}{8}$) excavated by Dr. Spooner at Bulandibagh.

MINIATURE PICTURE OF A YOUTH HOLDING A CAMEL

By PERCY BROWN

This appears to be a portrait of a young man of princely appearance in the costume of the Mughal period of the last half of the 17th century. The head dress is unusual and not one ordinarily worn by the Mughals, but in his earring are the two pearls, a fashion initiated by Jehangir (1605-27). His costume is that of a Mughal of the royal family and he carries the spear, bow, sword, dagger, and shield-usually seen in portraits of this period. It seems clear that the picture was intended to represent also a portrait of the young man's favourite riding camel, evidently a well-bred and spirited animal, gaily caparisoned. The landscape suggests the edge of some kind of desert land, there is a water effect in the foreground, trees in the middle distance, but the yellow soil seems to indicate barren or sandy hills fading away in the distance.

In style the picture is a mixture of 'kalms', in the texture of the green foreground there is the horizontal line-work of the Kāñgra painters, and in the trees with their separate leafage there is also the handling of the Hill Rājputs. Yet the figure appears to be essentially Mughal, as is also the treatment and disposition of the flowering shrubs. The atmospheric effect of the distance with the clouds is not usual in pictures produced before the 18th century.

The records accompanying this picture affirm that it was prepared by some artists settled on the western side of India, possibly Gujarāt¹.

1. The painting and records are in the collection of Aga Hydar Hassan, Hyderabad, Deccan.



TWO SCENES FROM THE RĀMĀYANA PAINTINGS ON THE WALLS OF THE MATTĀNCHE RI PALACE AT COCHIN

By P. ANUJAN ACHAN

In the June issue 1935 of the Journal of the Indian Society of Oriental Art, I have published a few scenes from the marriage of Śiva and Pārvati as depicted on the walls of the Mattāncheri palace at Cochin. In the present issue two scenes are reproduced from the Rāmāyaṇa paintings executed on the walls of another chamber of the same palace. The story of Śrī Rāmacandra beginning from his birth to Sītā's return to Ayodhya from her captivity is shown by the mural paintings in this chamber. The whole story is completed in seven or eight panels distributed on the three walls of the western chamber in the upper story of the palace. The two scenes published here are only a portion of the first and the third panels. The episode is painted in a style different from the contemporary schools of art in South India. The Rāmāyaṇa paintings being the first of the series of mural paintings in the palace may be said to be as old as the palace itself, which was originally built by the Portuguese and presented to the Rāja of Cochin in 1552 A. D.

Pl. XV represents the birth of Rāmacandra and his brothers. The three queen mothers fully attired with royal ornaments appear in a sitting posture ready to give birth to the children. They are being supported by two female attendants on either side, while just below each of them is seated a nurse receiving with both her hands the child that is being born. The faces of the queens give expression to both Snigdha and Karuṇa rasas, associated with the pleasant anticipation of the birth of a son and with physical pain. The four babies are placed on separate pieces of carpet on the floor beside their mothers. Of the three queens, Kausalyā is seen sitting in the centre giving birth to Rāmacandra, the perpetuator of the Ikṣvāku race; Kaikeyī to her right giving birth to Bharata; and Sumitrā to Kausalyā's left giving birth to Lakṣmaṇa and Śatrughna. Just below this scene, in the lower half of the panel, we

have king Daśaratha performing the sacrifice for begetting a son, and Agni emerging out of the sacrificial fire with the 'pāyasa', and the king distributing the pudding among his three queens.

The second scene (Pl. XVI) which is only a portion of the panel, represents the demon Virādha whom Rāmacandra had to encounter while wandering in the Daṇḍaka forest with his wife Sītā and brother Lakṣmaṇa. Virādha, the great man-eater, with his hollow frightful eyes and huge face, holding an iron dart in his right hand approaches Rāmacandra and his brother to kill them and take away Sītā as his wife. In the painting Rāmacandra is seen unmoved holding a bow in his left hand, while his right hand is kept in a gesture of communication. Virādha is the chief of the Rākṣasas dwelling in the Daṇḍaka forest. He wears a large crown on his forehead and he has a lion and an elephant as round ear-rings. They hang prominently over his shoulders. His pointed dart is conspicuous for its three-pronged ends. Between Rāmacandra and the demon, stands a devotee with his hands held high up in prayer and his eyes fixed on Rāmacandra. Behind Rāmacandra on the left end of the panel stands Sītā frightened, and Lakṣmaṇa ready to discharge his arrow towards the villain. On the upper half of the panel is depicted the death of Virādha, while the lower half indicates the earlier portion of the story of Rāmacandra, namely the crossing of the Ganges in Guha's boat, etc.

The publication of a 'A Guide to the Mattāncheri Palace' is considered by the Government of Cochin, wherein details of all the paintings will be published.



NOTE ON UṢNĪṢA*

By St. KRAMRISCH

"The 'moon-fluid' in moving upward through the nerve centres awakeneth these karmic principles¹ into activity and the upper extremity of the median-nerve² is set into overwhelming vibration.

And thus is produced the invisible psychic protuberance on the crown of the head. When the protuberance becometh filled with the vital force of the transmuted seminal-fluid³, one attaineth the transcendental boon of the great symbol, and realizeth the state of the great Vajra-dhāra".⁴

"By repeatedly practising this exercise⁵, the most advanced yogin ought most certainly to be able to produce signs of proficiency.

These signs are as followeth : a swelling up of the flesh on the crown of the head (around the aperture of Brahmā) and the issuing from there of blood and yellowish watery secretions ; and the ability to pierce the swelling with a stalk of grass"⁶.

"The invisible psychic protuberance", i.e. the Uṣṇīṣa is realized in the passages quoted above as a temporary phenomenon brought about by yoga practices ; it actually appears on the body and is a symptom analogous to stigmatisation. Such bodily symptoms occur in Catholicism and in yoga, to this day. The inset on p. 83,

* See J. I. S. O. A. Vol. III. pp. 148-165, Kramrisch, Emblems of the Universal Being.

1. i.e., of the nerve centres, the Cakras.

2. i.e., the Sūṣumṇā.

3. i.e., 'the moon-fluid'.

4. W. Y. Evans Wentz, Tibetan Yoga and Secret Doctrines, p. 201.

5. of visualizing within the heart centre on the 'median-nerve' a dot, the symbolical embodiment of breath and mind inseparably united, and of visualizing then as overshadowing the crown of the head, the root-guru as being the form of Vajra-dhāra When this has been accomplished in the heart of the guru the syllable Hūṃ is visualized ; imagine at the same time the dot in the heart to be rising up into the guru's heart. Then allowing the dot to blend with the Hūṃ in the guru's heart "in the state of at-one-ment, abide in that state....." (abridged from op. cit., pp. 265-267).

6. Ibid. p. 267.

right, shows a yoginī, with a hemispherical protuberance on her forehead and head (at the place of the fontanella major, —the Uṣṇīṣa is at the site of the fontanella minor). It appears at this suture of the skull while the yoginī is in samādhi. It disappears afterwards and leaves no trace (inset on p. 83, left)¹.

The sun and moon principles, i.e. the Vajriṇī nāḍī which is 'sūrya svarūpa' and the Citriṇī nāḍī which is 'candra svarūpa' are active in the fiery Suṣumṇā. The 'psychic protuberance' of the yoginī appears above the Ājñā cakra and below the Brahmaṇḍa. In this region lunar efficiency is strong. According to the Sammo-hana Tantra² "Indu (the moon, here Bindu) is in the region of the forehead and above is Bodhinī herself. Above Bodhinī shines the excellent Nāda, in form like the half moon; above this is the lustrous Mahānāda- - - Bindu, Bīja (who is Bodhinī-rūpa, i.e. Śakti as Bodhinī) and Nāda are different aspects of Sakala Parameśvara³. Bindu is the Śiva aspect, Bīja is Śakti and Nāda is the connection of reciprocity of the one to the other. Above these is Mahānāda, which is the 'half of Śiva' (Sivārdha). By this is meant that here Śiva is in the form of Ardhanaṛiśvara⁴. These stages are part of 'the intermediate body of the cause' (kāraṇāvāntaraśarīra), i.e. of Sakala Parameśvara.

Above all these is the lotus of a thousand petals. Within its womb and inseparable from its pericarp in which is the Brahmaṇḍa, is the white lotus of twelve letters. It covers the top of the channel of Kuṇḍali⁵ (i.e. the Citriṇī nāḍī which is of moon nature). This location of the 'uṣṇīṣa' differs from that on the images of the Buddha. Both however are emblems and symptoms of samādhi.

The moon principle of the Uṣṇīṣa may be symbolized on the image by "the pearl Candrakāntā (beloved of the moon). When the moon is about to reflect its light in it, there rises a spring of water"⁶. Moon symbolism transpires in these aspects of the Uṣṇīṣa. The swelling and its fluid contents, are equivalent to the pearl from which rises a spring of water when the moon is about to reflect its light in it.

1. These two photographs were given to me for reproduction by Dr. D. R. Bhandarkar, who has also met himself the yoginī. She is Śrī Śrī Ānandamayī Devī, from Comilla District (Bengal), and lives in Dacca. The yoginī does not belong to any sect.

2. Śaṭcakra Nīrūpaṇa, v. 40; comm. (Avalon, The Serpent Power, p. 104).

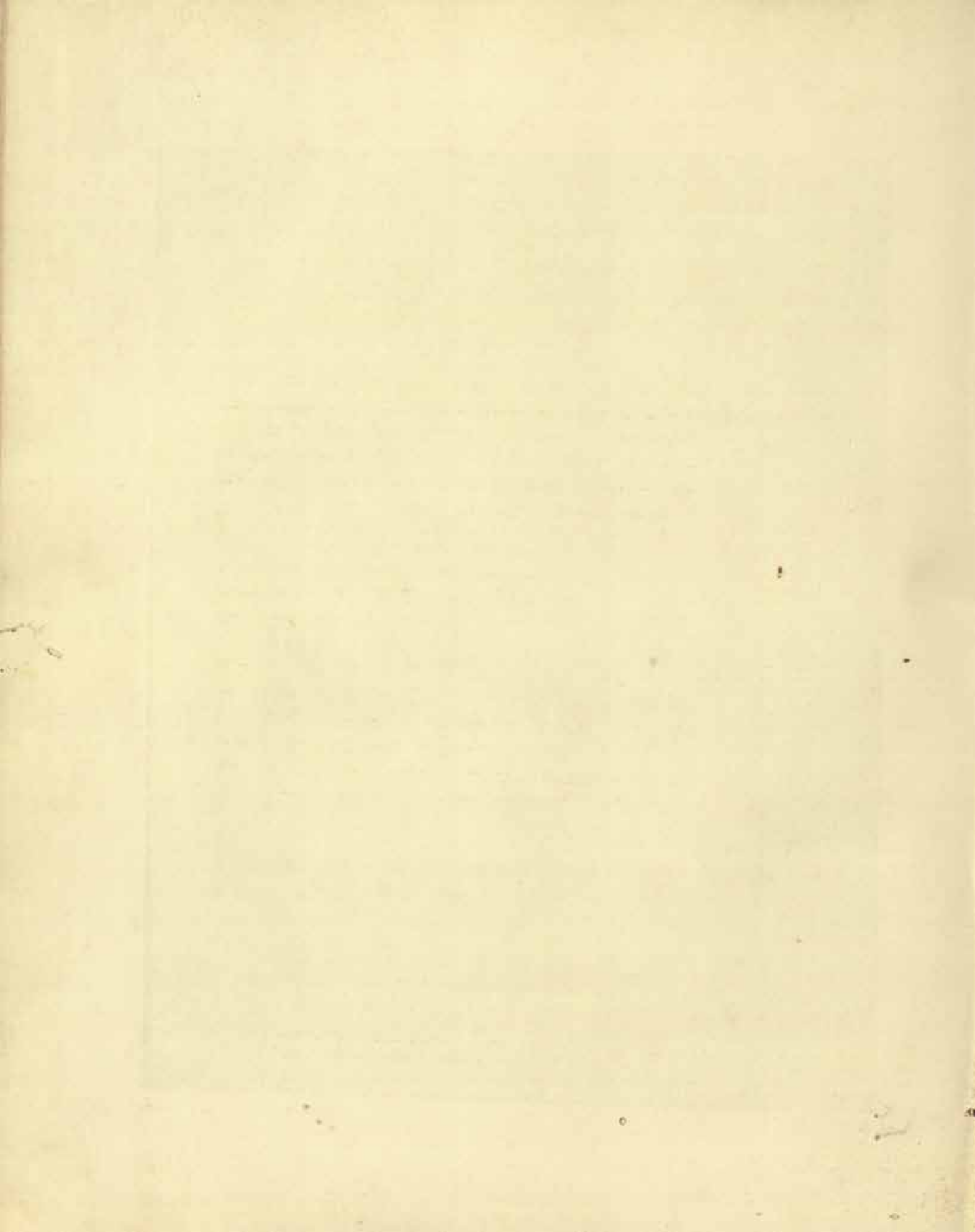
3. opposed to nīṣkala, i.e., nirguṇa.

4. ibid. v. 39; and comm.

5. Cf. Pādukā pañcaka, v. 1. (Avalon, op. cit. p. 165).

6. Hiuen Tsang (Julien) Mémoires, Vol. II p. 145 (see Emblems, I, c., p. 156).





The images of the gods are visualisations of states of consciousness and of their contents, and their emblems are signs of their proficiency. From here the epithet of Śiva 'Uṣṇīṣin'¹ may be interpreted afresh.

The image of Buddha alone shows the Uṣṇīṣa while all the other Indian images have a high head effected by several types of crowns, with the exception of the images of Śiva and of Avalokiteśvara. These have their long hair matted and piled up high on the head.

Śiva is 'trinetra' and with his three eyes he beholds the plenitude of time. Avalokiteśvara also has three eyes and his name like that of Śiva, Dṛṣṭiguru, also implies his triune vision. Śiva has the crescent moon on his braided hair and one type of his image is Candrasekhara mūrti. The serpent is coiled around his body in several places. He carries the emblems of month and year and is himself also Kāla, time, the black one, deadly as the moon in his underworld phase.

Avalokiteśvara has many Śivaitic traits and they are well-known. Some of them may be mentioned in this connection. In his Sīṃhanāda and other forms he has the crescent moon on his Jaṭā-makuṭa. As Sugatisandarśana Lokeśvara and also as Pretasantarpita and Vajradharma Lokeśvara he is placed on the moon over the lotus². Sīṃhanāda also holds the Trisūla entwined by the snake³. With the moon aspect conform the androgynous form of Śiva (Ardhanārīśvara) and the androgynous potentiality and form of Avalokiteśvara (in his Far Eastern images), as emblems of perpetual generation, of life and time ever renewed from within itself. Avalokiteśvara who takes the shape of all gods⁴, most conspicuously as far as his images show, is invested with that of Śiva. Very frequently his colour is white⁵ and so is that of Śiva (pāṇḍuranga).

As Uṣṇīṣin, the transmuted moon aspect of Śiva the Mahāyogin has risen to the Brahmarandhra, the place of nirvāṇa. It is enveloped however, by the hair

1. Mahābhārata, XIII.

2. B. Bhattacharyya, Buddhist iconography, pp. 49-51.

3. The two curved prongs of the Trisūla are reminiscent of horns of the crescent or full moon or of such horned animals as the bull, etc. which symbolize the moon.

4. Kāraṇḍavyūha, p. 21.

5. As Bhairava and Mahākāla, Śiva is dark (cf. dark moon, Bhairava is moreover accompanied by a dark dog—the dog of the moon); (cf. also the worshippers of Śiva Mallari, surrounded by seven dogs, conducting themselves like dogs; T. Gopinatha Rao, Elements of Hindu iconography, Vol. II, Part I, p. 191).

of Śiva. The crescent of the moon and the female shape of the Gaṅgā, the waters, are its ornaments.¹

The Amitāyur dhyāna sūtra² speaks of Avalokiteśvara as having "a 'turban' (uṣṇīṣa śiraskatā)"³ and says that apart from having a transformed Buddha in his 'crown', "all the other signs of his body and the minor marks of excellence are perfect and not at all different from those of Buddha except the signs of having the 'turban' on his head and the top of his head invisible, which two signs of him are inferior to the World-Honoured one", i.e. the entire expanse of his broad and high head along with the Uṣṇīṣa are covered by his long and matted hair. Avalokiteśvara has Śivaitic affinities in essence and appearance and in iconography the two are one. As the god is, so is he beheld. Not only were Śivaitic features transferred to the Buddhist divinity Avalokiteśvara. A cognate visualisation endows both the images with references to the moon and with androgynous tendencies. Kuan-Yin did not take over the features of Ardhanārīśvara. Either of these aspects manifests in its own way, analogous qualities.

In yoga practice an actual swelling may come about spontaneously in the final state of at-one-ment by the intensity of the process which leads upward. The protuberance at the time of samādhi of the yoginī, is situated between the Ājñā cakra and the Brahma-randhra. It extends over the Kāraṇāvāntara śarīra and its centre corresponds to the twelve petalled lotus which is included in the Sahasrāra; according to the Pādukā pañcaka the twelve petalled lotus is connected with the Sahasrāra in such a way that the one cannot be thought of without thinking of the other.⁴ There are however two distinct methods⁵ of placing it. In the case of the 'psychic protuberance' of the yoginī it appears beheld below the regions of moon and sun (candra maṇḍala and sūrya maṇḍala) which are below the Brahma-randhra and all of them are within the pericarp of the Sahasrāra.⁶ The protuberance corresponds in shape to the Uṣṇīṣa as figured on Buddha images. Its regularity and the sharp circle of demarcation against the flatness of the forehead are conspicuous.⁷

1. The meaning of these symbols and of their relation is obvious. Re : hair symbolism, cf. Emblems, I. c., p. 157.

2. SBE, Vol. XLIX, part II, pp. 182-184. (Translated from the Chinese; the Sanskrit original is not available).

3. Erroneous translation; Uṣṇīṣa śiraskatā however makes the meaning clear. cf. J. N. Banerji, I. H. Q. VII, p. 499.

4. Obviously stands again for Uṣṇīṣa śiraskatā which refers to the capacious quality of the skull.

5-7. op. cit. pp. 167; 181; 179.

8. Half of the shape only is visible, the rest lies underneath the hair. The enlarged dot of the Tilaka mark seems to show the extent to which the skin is distended.

In Tibetan yoga the end of the *Suṣumṇā* within the body, at the site of the *Brahmarandhra* is, in accordance with tradition as formed by the images of the Buddha, the place of the invisible psychic protuberance, the *Uṣṇīṣa*. The possibility of an actual appearance on the body, of a 'psychic protuberance', is not the origin of the emblem, but is one of its exemplifications and a sign of proficiency. The moon symbolism is implicitly part of the emblem¹ and may be more or less pronounced.



1. *Emblems*, l. c., p. 156.

Read on p. 155, *ibid.* note 12 instead of 'Vārtt. on Pāṇini VI, 1. 94 has' 'Menier—Williams refers to Vārtt. on Pāṇini VI, 1. 94 and has'; on p. 156 instead of 'eyebrows, and its place is called Avimukta'—'eyebrows', and its place is called Avimukta.

REVIEWS

Elements of Buddhist Iconography, by Ananda K. Coomaraswamy, Harvard University Press, 1935, with a foreword by Walter Eugene Clark, published under the auspices of the Harvard—Yenching Institute.

This work by Dr. Coomaraswamy is a notable addition to the growing literature on Buddhist iconography and leaves nothing to be desired by way of the presentation of the subject, the wealth of information, and the excellence of set up. The work is divided into two parts, part I dealing with Tree of Life, Earth-Lotus and Word-Wheel, and part II with The Place of the Lotus-throne, and both followed by copious and illuminating Notes. The essential features of Dr. Coomaraswamy's masterly exposition of Buddhist symbolism are described by Mr. Clark in his Foreword.

Buddhist literature yields on an analysis of its contents many ready-made literary forms,—the legends, the anecdotes, the similes and metaphors, the phrases and idioms, from the current Indian stock, and the course of development of this literature cannot be studied apart from, or without references to, various literary processes in India. Still, whatever finds its place in the composition of Buddhist literature, is expected to suggest one and the same trend of thought, one and the same direction of progressive mind, namely, 'vimutti' or emancipation.

In the Buddhist context, this is the only underlying meaning of all word-symbols or literary forms. Vimutti is the rasa or central interest which gives a new character or colouring to every component part as also to the whole. Similarly with reference to symbols it has to be ascertained and considered what new aspect of significance they gained when they were employed in the general scheme of Buddhist art.

There are besides evidences to show that, so far as Buddhism is concerned, in many instances, literary descriptions or explanations followed upon the forms of art. As an example, Bo-trees of different Buddhas may be cited. In the Mahāpadāna Suttanta (Dīgha Nikāya), the Bo-trees are mere names mentioned in passing, while in Buddhaghosa's commentary, they are described in the most exaggerated terms, far beyond the scope of original reference. The explanation of this literary development lies in the earlier delineations of the Bo-trees at Bārhat, Sāñci, Bodhi-Gaya, Amarāvati and the rest. In other words, it is one and the same impulse that has worked in two planes of expression, which are interdependent.

Leaving aside some minor points, the work under review shall long continue as a standard work of immense value for its suggestiveness.

B. M. Barua

Rāgas and Rāginīs. A Pictorial and Iconographic Study of Indian Musical Modes based on Original Sources, by O. C. Gangoly. Calcutta, Clive Press, 14, Old Court House Lane. Vol. II, 1934.

This is an unusual publication. The second volume appeared first; it has six coloured plates of an average quality and of which three have been reproduced already in O. C. Gangoly's "Masterpieces of Indian Painting" and 337 photographs mostly of quarter plate size. The entire edition of the book is confined to 36 copies in all and the monochrome illustrations are actual photographic prints mostly of quarter-plate size. Each copy is priced at Rs. 265 only.

There are other unusual features about Mr. Gangoly's latest production. Mr. Gangoly apparently does not consider accuracy in the matter of reproducing Sanskrit and Hindi words, verses or texts or the transliteration thereof, to be of much importance. Mistakes of transliteration commence from the title page which reproduces in red type a Sanskrit verse, in which there are six errors. Even the source of the text is not accurately quoted. So far as the texts on the pictures themselves are concerned, it is a hopeless task to try and enumerate the number of mistakes and misprints which occur almost on every page of the book. This is particularly objectionable as in a good many cases the Hindi verses are neatly and generally legibly inscribed on the pictures and they have been inaccurately transliterated on the printed page. The present production holds a record not only for its price but also for the extraordinary number of mistakes and misprints not merely as compared with Mr. O. C. Gangoly's publications but almost with any similar publication in India.

In this book moreover the pages of the text have not been numbered. There are discrepancies even in the titles of the Rāginis on the plates and on the pages opposite. The various Rāga and Rāginī pictures are not arranged according to any intelligible system. Photographs of Rāgas or Rāginīs from the various collections in India as well as outside, follow one another at random. Besides the labour of collecting the photographs, which are of great interest, Mr. Gangoly has generally given the Sanskrit and typical Hindi texts (where such are not already inscribed on the pictures) from authoritative books on Indian music. The Hindi and Sanskrit texts are rendered into English rather of a pedestrian nature and not infrequently has Mr. Gangoly misunderstood the verses. The English renderings are not always clear nor do they accurately give the meaning of the original texts. Aesthetic criticism or chronological questions connected with the pictures are generally absent so far as Volume II is concerned. It is something however that the author has generally related the 101 Rāgas and the Rāginīs to the various types of Nāyakas and Nāyikās with which they are so intimately connected. He has however failed to relate the various Rāgamālā pictures to the seasons. The author made use of Deva's (written "Deo") famous Hindi books, but he has apparently not seen his *Aṣṭayāma*. There are a number of new identifications. The well-known picture of a pair of girls dancing together from the Bhārat Kālā Pariṣad is shown to be Rāginī Harhvirī. A number of pictures formerly classified as Nāyikā pictures are identified with illustrations of the Rāgamālā.

Volume I consists of 86 pages of text and 4 pages of bibliography. It will be an underestimate to say that there are on an average 3 misprints or mistakes of spelling per page.

The result of these numerous inaccuracies is often diverting: 'Dīpaka-rāga: ravishingly graceful as he rides (rides) on a rutted (sic) elephant'. 'The hero is a tender-hearted young man' (page 63). 'Solidarity' changes into 'sildarity' (page 40); 'bespeaks' into 'despeaks'; Kākubh into Kūkabh; 'turgid' into 'turbid' (page 70); 1627 (?) into 162y A. D. (page 65); hybrid into hybird (page 74). These samples must suffice.

The object of Mr. Gangoly's work is 'not a contribution to the scientific study of Indian music, but to survey a phase of Indian painting which has for its subject matter the mythological Indian melodies. It is an endeavour to look at music through the spectacles of painting'. Mr. Gangoly's claim to have 'put together a large amount of materials which are widely scattered and are inaccessible to many students' is undoubtedly justified. What was expected, however, in a work of this kind was a more exhaustive analysis of the Rāgamālās from the point of view of painting than what is actually given. More than half the work has been taken up with an historical sketch of the extant literature on Indian music. This portion is likely to be of some use to foreign students of Indian music. The writing is difficult and the overloading of it with Sanskrit words in the text as well as with original texts in the footnotes makes it even more forbidding. It would have been better if the original texts had been relegated to the appendices and the history of Indian music given in a general narrative.

Considerable space has been devoted to the examination of the Rāgamālā texts, Sanskrit, Hindi and to a small extent Persian and Bengali. This part of the book cannot by its very nature be exhaustive. The bulk of the Rāgamālā literature is in Hindi and it is interesting to note that the Hindi language in the past appears to have furnished a common repertoire for songs, not only to the Hindi speaking parts, but also further south. It is well known that several writers of Gujarati and Marathi have in the past composed their songs in Hindi or rather the Braj dialect of it. It is also noticeable that the repertoire of Northern Indian music is chiefly old Hindi which also was the medium in which the mediaeval

minstrels and wandering devotees conveyed their message of bhakti to the masses. It is curious that Mr. Gangoly has overlooked the musical character of the Rāgas used in the famous and so frequently illustrated Gita Govinda of Jayadeva.

The material gathered by Mr. Gangoly as regards the history of Indian music as well as the Rāgamālā texts is undoubtedly valuable. The principal contribution, however, which was expected from Mr. Gangoly was the nature and the extent of the relationship between music and its pictorial treatment at the hands of the artists from the 16th to about the middle of 19th century, and it is in this respect that the book has very little to offer in the way of any appreciable addition to our existing knowledge. The chief question has hitherto been whether the pictorial representations of individual Rāgas are in fact genetically related to the dominant emotions aroused by the musical patterns of the individual Rāgas; and it remains still unsolved. It has been known that a good number of Rāgamālā pictures owe their origin to, and are inspired by, the motifs of seasonal changes, of the rhetorical conventions of ancient Kāvya. For instance, several of the Rāgamālā pictures can definitely be regarded as cognate to the Bāramāsāh or seasonal pictures. Similarly a fair number of the Rāgamālās can be shown to have been definitely derived from the conventional descriptions of the various types of heroes and heroines in older Kāvya literature. How is it that pictures drawing their inspiration from the depiction of seasons and of poetic conventions suddenly evolved into a system of pictorial representation of musical patterns? No musician has hitherto attempted to relate the pictorial versions of the Rāgamālās with the feeling or the Bhāva or Rasa evoked by the musical constitution of the individual Rāgas.

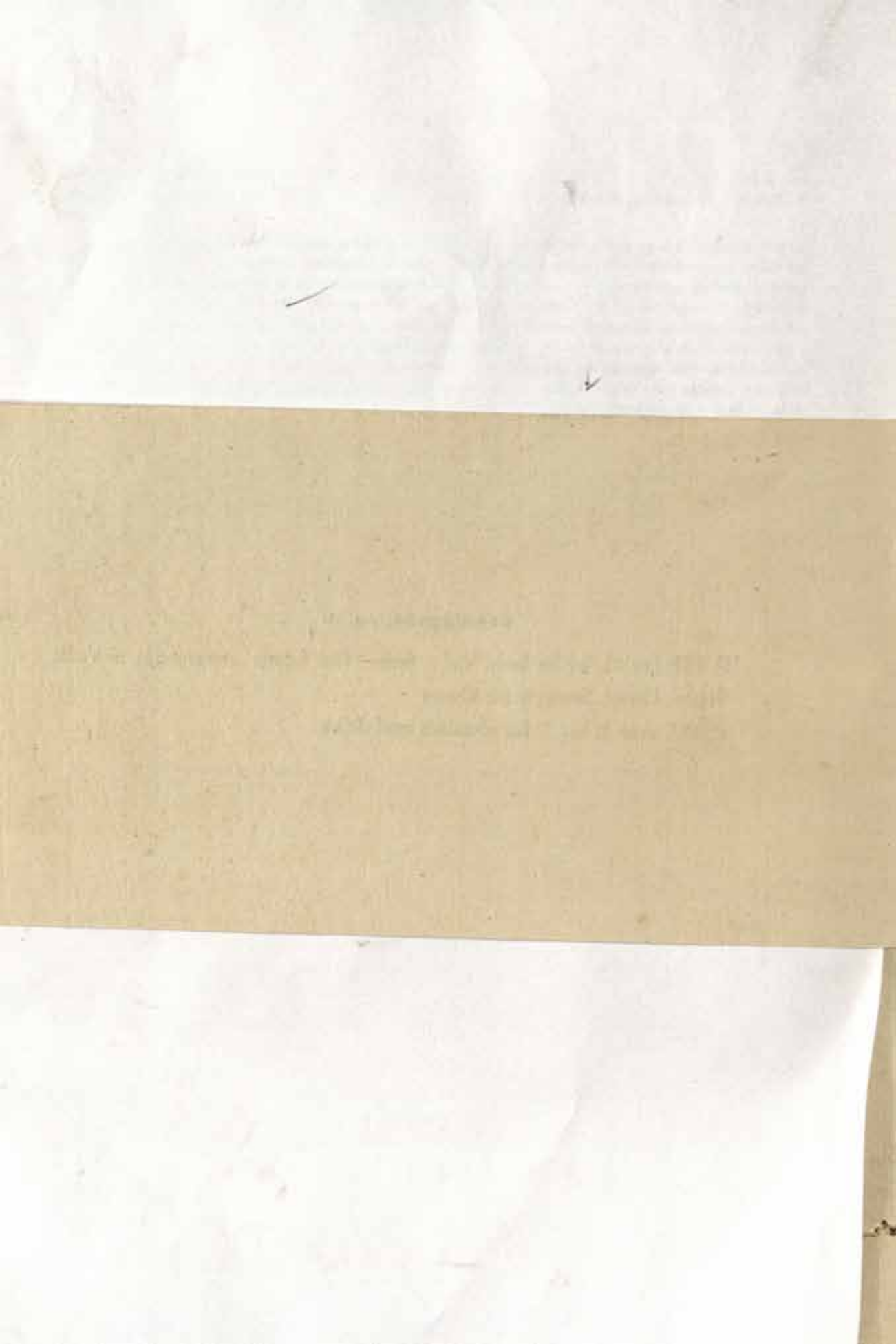
There can be but little doubt that the Rāgamālā pictures have nothing to do with the purely musical structure of the Rāgas. Some of the pictures of the Rāga Megha and its derivatives are obviously pictorial transcripts of the conventional ideas associated with the monsoon. It is also noticeable that songs of this particular Rāga Megha are also generally associated with the onset of the rains. The question, however, whether there is any organic relationship between the words of the song, the pictorial versions of the Rāga and the musical structure of the Rāga itself, is still to be solved. There is for example no organic relationship between the melodic structure of the Nādamaya Śarira and the iconographic or the Devamaya treatment of a particular Rāga. It is also to be remembered that old Sanskrit writings on rhetoric and music ordinarily associated particular colours with specific Devatās and Rasas for which no rational explanation has hitherto been forthcoming. Even the various notes are said to have their specific colours and presiding deities. In this connection it should be noted that the Indian artists were not satisfied merely with the production of pictorial versions of Rāgas but have also had pictures of the various Tālas or time-beats. A series of these Tāla pictures is to be found hung on the walls of the Poona Bhārata Itihāsa Saṁśodhaka Maṇḍala. It will be a mistake to regard the pictures of the Rāgamālās and the Tālas as anything more than pictures inspired chiefly by traditional and current literary versions. There is at present no evidence to show that they were pictorial interpretations per se of any particular musical patterns or of the Bhāva or Rasa evoked by them.

N. C. Mehta, I. C. S.

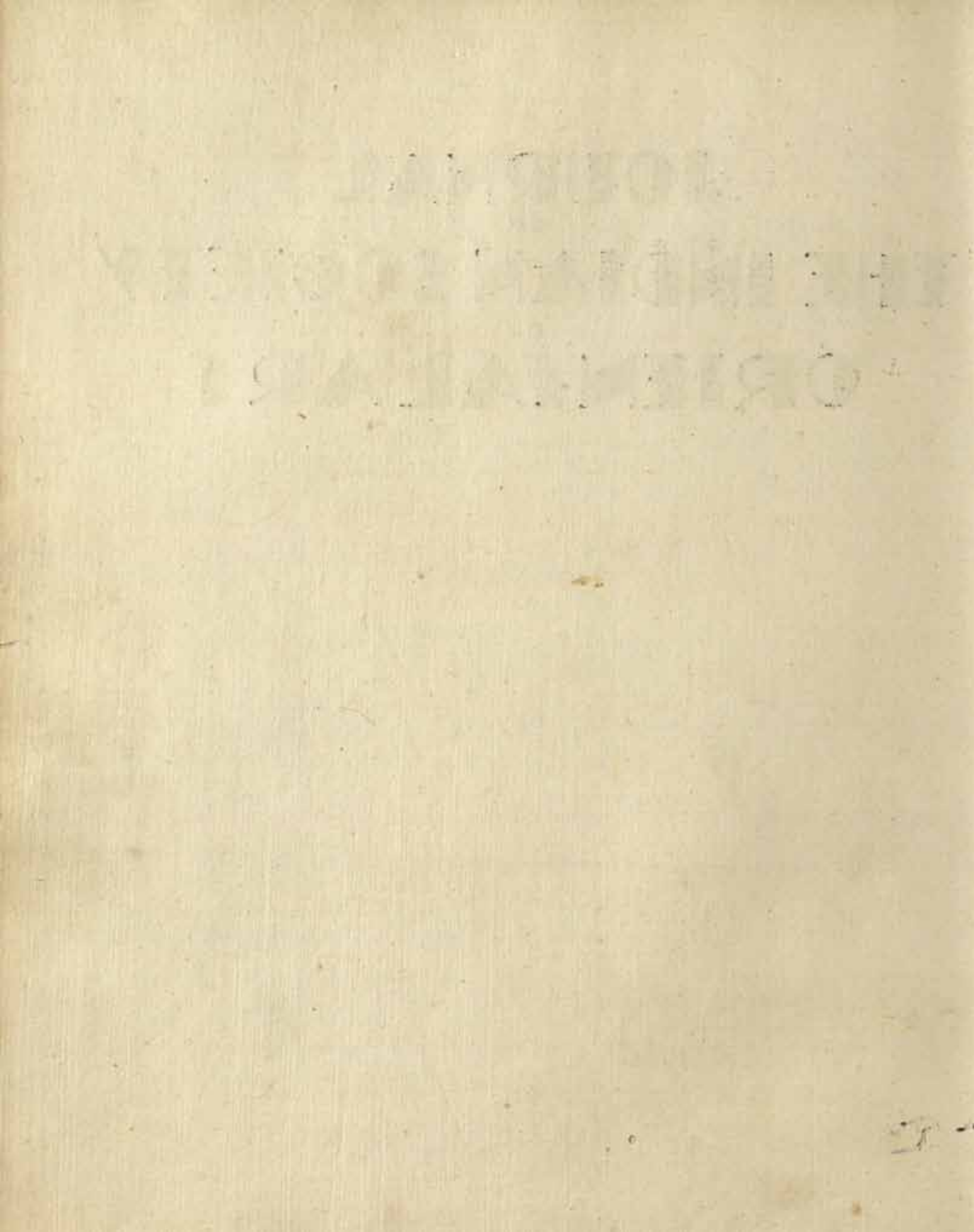
CORRIGENDA, Vol. III

P. 132, line 13, for for flesh, read : flesh. The former corresponds to Vedic 'Night', Urvāṣī, Saranyū, the Queen

P. 137, note 2, line 2, for somabhiḥ read dhībhiḥ



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OF
THE INDIAN SOCIETY
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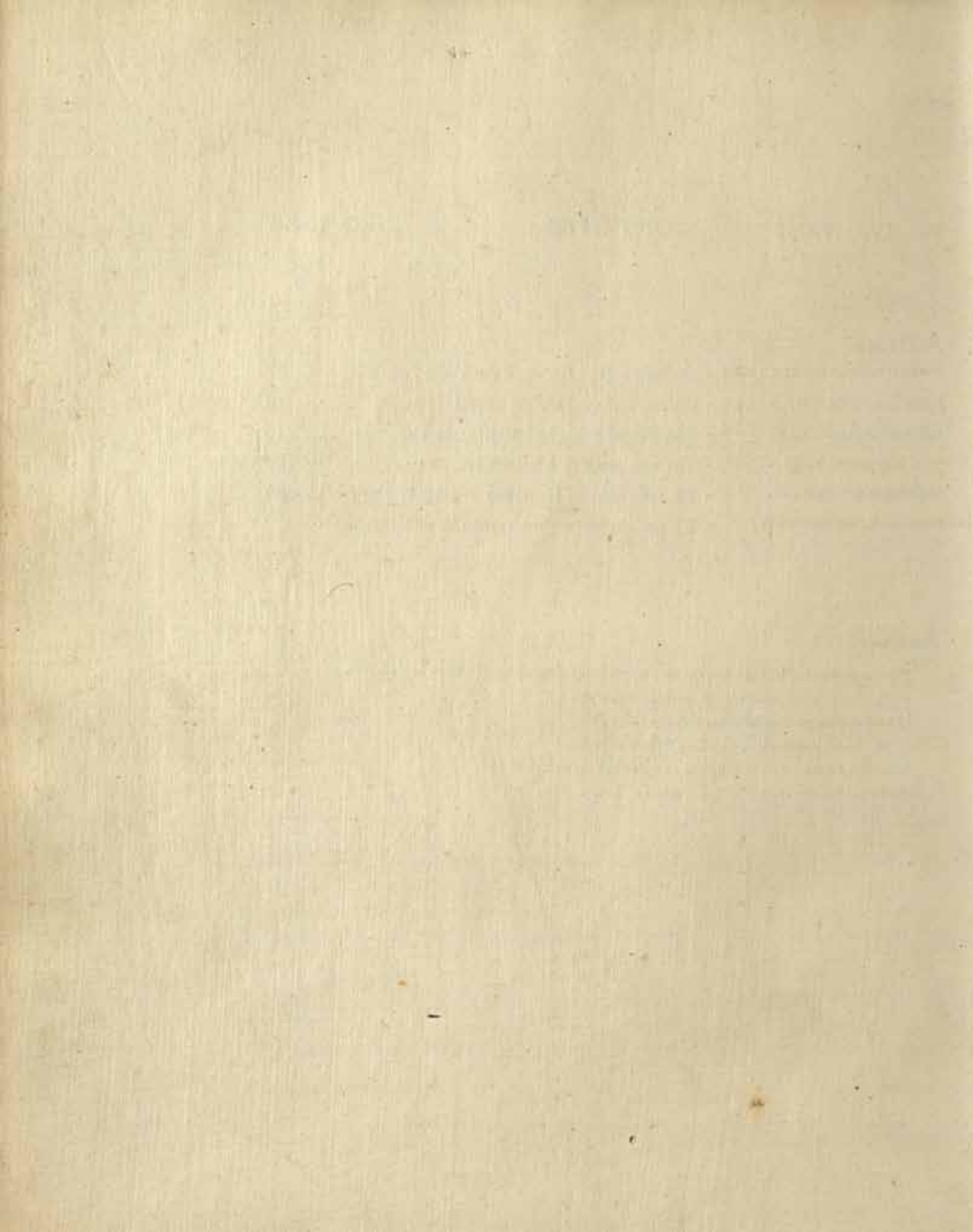
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ARCHAEOLOGICAL TRACES OF THE VEDIC ARYANS

By ROBERT HEINE-GELDERN

While plenty of efforts have been made to ascertain the origin of the Vedic Aryans and the date of their immigration into India by philological, linguistical and even astronomical methods, archaeology has until now taken no part in this research. Indeed, not the slightest archaeological trace, no finds whatever made in Indian soil could with any probability be ascribed to the Aryans of the early Vedic period. As late as 1921 Sir John Marshall, in the first volume of the *Cambridge History of India*, still mentions the tumuli of Lauryā Nandangarh in Bihar as the only monuments possibly dating from Vedic, i. e., in this case, from late Vedic times (8th or 7th century B. C.).

Since the excavations at Mohenjo-daro and Harappā, however, a series of North-Indian finds begin to distinguish themselves from the pre-Aryan culture discovered at these sites, finds we are now bound to discern as from a later date than the Indus civilization and possibly belonging to the Vedic age. They will form the subject of the following investigations.

I. The trunnion-axe from the Kurram-Valley

The Annual Report of the Archaeological Survey of India for the year 1913-14 reproduced a trunnion axe found near the village of Shalozan in the valley of the river Kurram, a tributary of the Indus in the region of the Indo-Afghan frontier (Fig. 1)¹. The type does not occur in Mohenjo-daro and Harappā, neither is it known from elsewhere in India. However, it is far spread in the Near East and in Europe (Fig. 7, p. 91) and we may thus be able to draw certain conclusions from its occurrence in the Kurram Valley, concerning cultural connections between India and the West during a definite period.

Trunnion axes of copper or bronze have been found in Eastern Russia, in Crimea, North-Persia, Caucasia, Asia Minor, Syria, Palestine, Egypt, Rhodes, Crete, Greece, Italy, Sicily, Sardinia, Spain, Hungary, Germany, Holland, England and Ireland. Later, during the Hallstatt Period, the same form has been wrought in iron.

1. Annual Report of the Archaeological Survey of India 1913/14, p. 247, pl. LXVII. Hirananda Sāstri, Recent additions to our knowledge of the copper age antiquities of the Indian Empire, Journ. and Proc. of the Asiatic Soc. of Bengal XI (1925) pl. V.

If we try to systematise the trunnion axes from a typological point of view, we shall find axes with no real trunnions at all, but with a slight swelling of the sides only, at one end of the row, and at the other one axes with distinctly modelled trunnions setting off at right angles from the narrow sides of the axe. Sir Flinders Petrie has pointed out that it is obvious which way the development took¹. The more or less straight-lined axes with highly developed trunnions, whether of bronze or iron, have been—with the exception of one iron axe from Asia Minor—found only in Europe and belong to the Hallstatt civilization or to a contemporary period, i.e. to the first millennium B. C., whereas the shapes with slightly indicated trunnions show up as early as the first half of the second millennium B. C.

Even among the very earliest trunnion axes we may discern three different types which I shall denote with I, II, and III. These three types are closely related to each other and probably descend from a common root.²

Type I shows a sharply separated butt and forepart, the former being much narrower than the latter. Axes of this type might really rather be called shoulder axes; they are, however, not to be separated genetically from the trunnion axes. An axe of this type has been found in the Canaanitic layer at Jericho and certainly dates from the first half of the second millennium B. C.³ The type is very rare and only known from Palestine, Egypt, South Italy, Sicily and Sardinia (Fig. 7 [1, 2, 3]).

The oldest form of type II, which I shall call type IIa, is best represented by an axe from Haghia Triada on the isle of Crete (Fig. 7 [4])⁴. Though the circumstances of this find have not been made quite clear, we can still presume almost with certainty that it belongs to the 16th century B. C. Its characteristics are the trapezoid shape of the butt part and the strongly concave edges of the forepart. The spots, where in later periods the trunnions show up, are only marked by a slight swelling. The Berlin Archaeological Seminary owns an axe of this type from the old Hittite capital at Boghazkoy in Asia Minor. A third one has been excavated at Kul-Tepe in Cappadocia (Fig. 7 [5])⁵.

Type IIa must have developed, probably about the middle of the second millennium B. C., into type IIb, met as yet only in Eastern Asia Minor. Type IIb has real trunnions, though these are set off distinctly from the butt-part only, merging without interruption into the forepart. The butt part is trapezoid in shape, the forepart, owing to its concave edges, very slender in the middle, reaching the width of the butt-part in the cutting edge only (Fig. 7 [6, 7, 8]). Axes of this type have been found at Boghazkoy, in the vicinity of Kalsery, and at Alishar Hüyük⁶. The axe from Alishar Hüyük, (Fig. 7 [6]) having been found by Von der Osten in the stratum which corresponds to the Hittite Empire, is certainly older than 1200 B. C.

The butt-part of type IIc mostly approaches the rectangular shape, though trapezoid shapes still occur. But the principal difference between types IIc and IIb lies in the trunnions which are no more sharply set off from the

1. W. M. Flinders Petrie, *Tools and weapons, illustrated by the Egyptian collection in University College, London, British School of Archaeology in Egypt and Egyptian Research Account*, 22nd year (1916) p. 17.

2. Professor Przeworski has recently given a classification of trunnion axes differing from mine. See: Stefan Przeworski, *Der Grottenfund von Ordu, Archiv Orientalny VII (1935) pp. 403-414, VIII (1936) pp. 49-57*. I shall, of course, only deal with the question as far as it is of importance for ascertaining the date and affinities of the trunnion axe from the Kurram Valley.

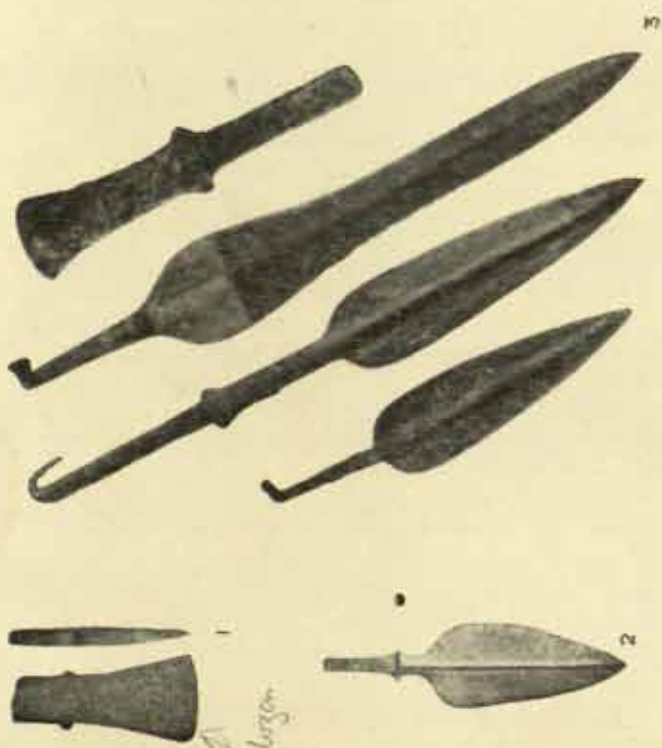
3. E. Sellin und C. Watzinger, *Jericho (Leipzig 1913) p. 119, C. Watzinger, Denkmäler Palaestinas I (Leipzig 1933) fig. 49*.

4. F. Halbherr, *Resti dell' eta Micenea scoperti ad Haghia Triada presso Phaistos, Monumenti Antichi XIII (1903) pp. 63-70*.

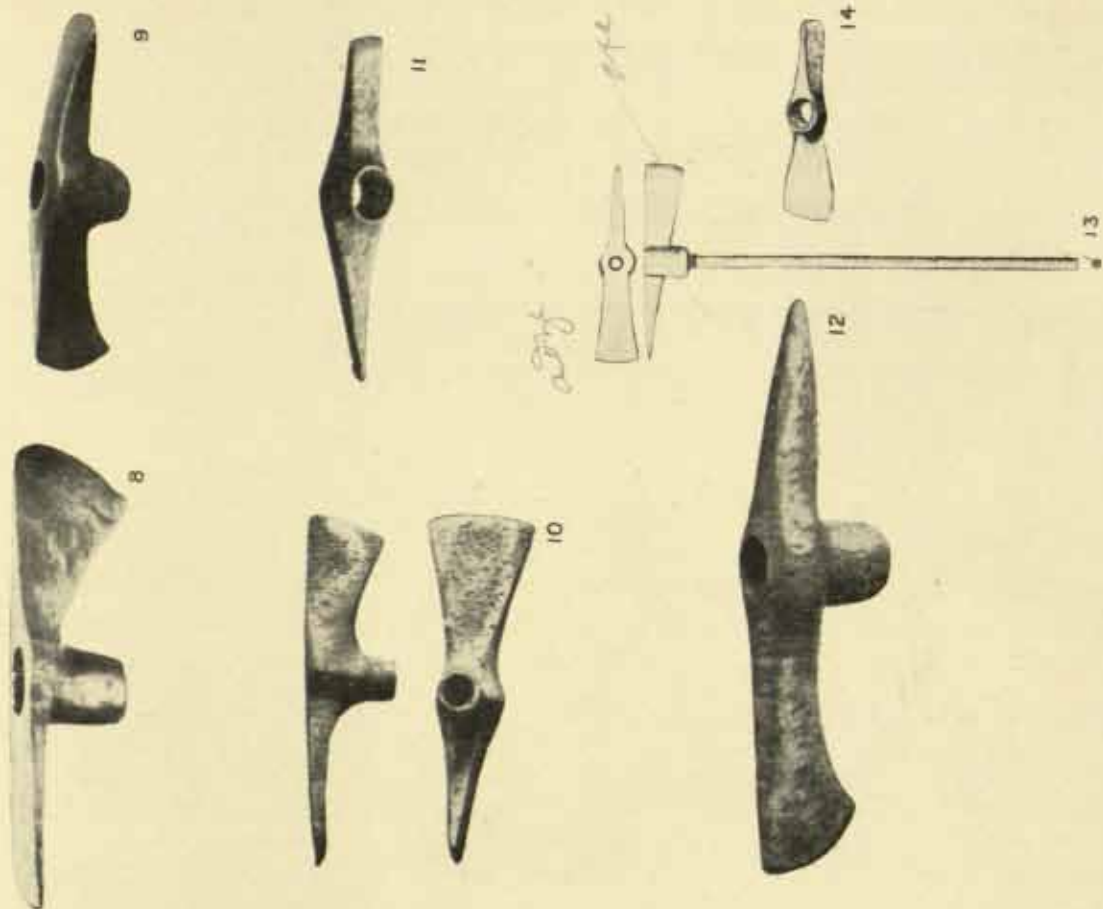
5. Przeworski, *op. cit.*, VII p. 409, p. 411, fig. 1a, pl. L b. E. Chantre, *Recherches archeologiques dans l' Asie occidentale, Mission en Cappadoce 1893-1894. (Paris 1898) p. 79*.

6. Chantre, *op. cit.*, p. 79. H. Winckler, *Vorläufige Nachrichten über die Ausgrabungen in Boghaz-koei, Mitteilungen der Deutschen Orientgesellschaft XXXV (1907) pp. 7-8*. H. Bonnet, *Die Waffen der Völker des alten Orients (Leipzig 1926) p. 23*. Hans Henning von der Osten, *Discoveries in Anatolia 1930-1931, University of Chicago, Oriental Institute Communications XIV (1933) pp. 50-51*. Przeworski, *op. cit.*, VII, pp. 409, 411 fig. 1 b, pl. XLIX a, b, c, pl. L a.

1704

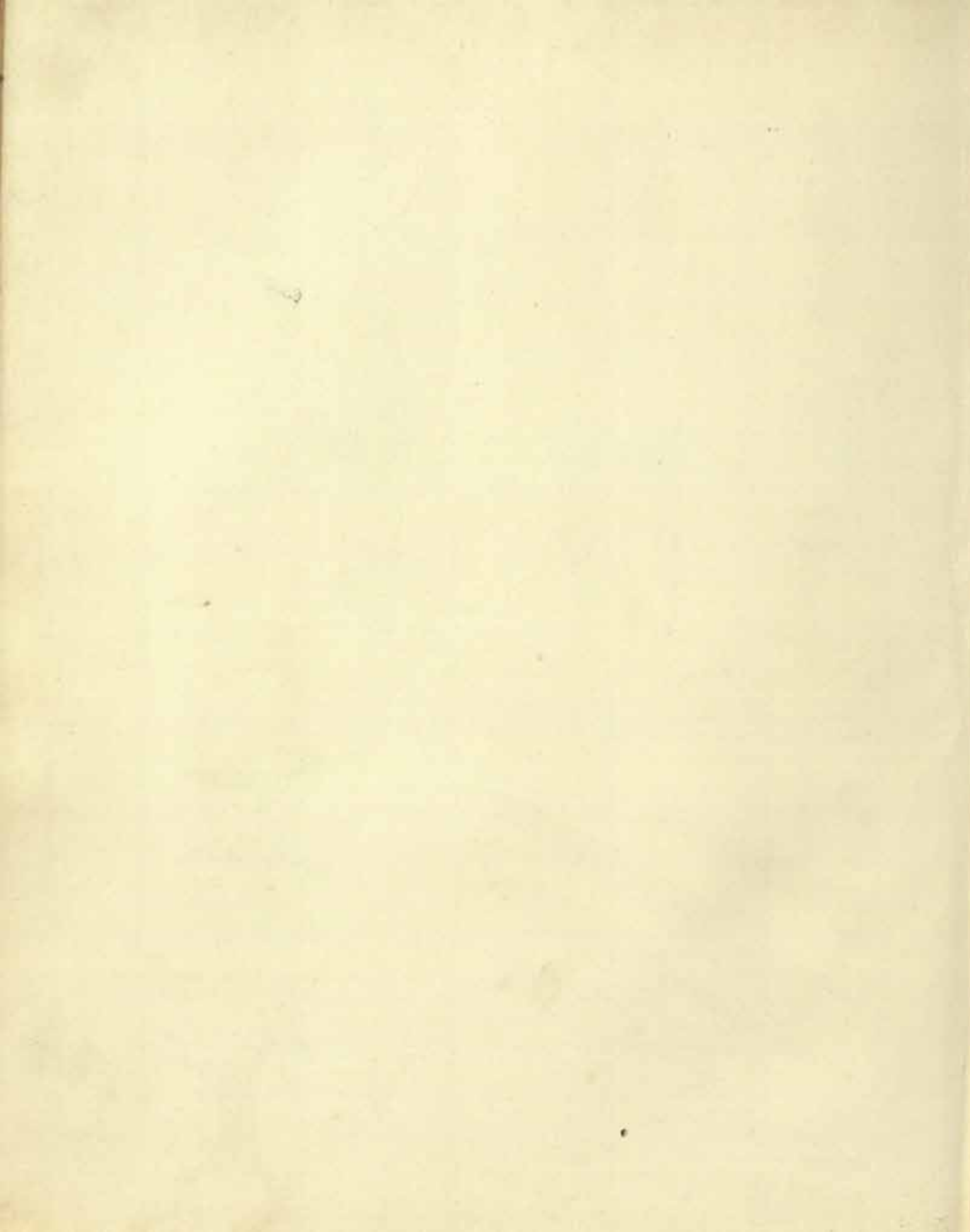


Chalazion



1705

1706



butt-part, but simply sprout from it in a curve, the same as from the forepart (Fig. 7 [9-12]). The butt-part being the same as in types IIa and IIb, broad and heavy, and the forepart in relation to it very slender, it looks as if two different pieces were joined together rather unharmoniously. This disharmony between butt-part and forepart is indeed the most characteristic feature of all axes of type II.

Axes of type IIc are known from Bolu (Fig. 7 [11]), Boghazkoey, Yazilikaya, Alishar Hüyük, and Ordu, all these places being situated in Eastern Asia Minor, and from Kertsh in Crimea¹. At Boghazkoey as well as at Alishar Hüyük (Fig. 7 [10]) such axes have been found in the post-Hittite, i.e. Phrygian stratum. There is thus no doubt that they belong to a later date than 1200 B. C. At Alishar Hüyük a stone mould of a IIc axe has even been found in a stratum of the first millennium B. C.². The find of Ordu which contained an axe of this type (Fig. 7 [9]), has been assigned by Przeworski after thorough examination to the 12th century B. C.³. The age of the axe of Kertsh (Fig. 7 [12]) may be inferred from its engraved ornaments in the style of Koban. Tallgren thinks it to belong to the period about 1000 B. C., while Przeworski dates it in the 12th or 11th century⁴. Thus it is evident that type IIc shows not only a more developed character than IIb, but belongs in fact to a later date. While types IIa and IIb belong to the Hittite period and are, as far as we can date them, all older than 1200 B. C., IIc belongs to post-Hittite times and all datable axes of this type are younger than 1200. Doubtless, IIc has developed from IIb, maybe under the influence of axes of type III. An axe of type IIIa from Kaisery in Asia Minor is in the possession of the museum at Stockholm⁵. Type IIIb, as we later shall see, had found its way as well to the West of Asia Minor (Troy, Rhodos) as into its Eastern neighbourhood (Transcaucasia).

In contradistinction to the axes of type II those of type III have got a narrower or at least never a larger butt-part than forepart. With IIIa, the oldest form of this type, the curved edges join at an obtuse angle and the "trunnions" are not much more than a lateral swelling of the blade. The oldest known axe of this type is probably the one Macalister found in the stratum of the first Semitic period at Gezer, dating from the first half of the second millennium B. C. (Fig. 7 [13]). Another axe of the same type (Fig. 7 [14]) was excavated in the second Semitic stratum (1600 to 1200 B. C.) and a third one in a grave in the neighbourhood of Gezer which, from the ceramics it contained, can be assigned to the 13th century B. C.⁶ Two other axes, not yet published, are said to have been found at Tell el-Mutesellim in a grave of the period about 1500 B. C.⁷ An axe from Beisan in Palestine (Fig. 7 [15]) dates from the reign of the Egyptian king Seti I. (1313-1292 B. C.), still another one from Palestine, found at Tell Abu Hawâm, is from the period between 1100 and 925 B. C.⁸ Other axes of this type have been found in Syria and Palestine at Kaisariye, Beth-Pelet, Tell

1. Kurt Bittel, Die James Simon-Grabung in Bogazkoey September 1931, *Mitteilungen der Deutschen Orientgesellschaft* LXX (1932) p. 15; *Neue Funde vorklassischer Zeit aus Kleinasien*, *Archaeologischer Anzeiger* 1934, pp. 354-355; Bogazkoey, *Abhandlungen der Preussischen Akademie der Wissenschaften, Phil.-Hist. Klasse* (Berlin 1935) pp. 52-53; *Vorläufiger Bericht über die Ausgrabungen in Bogazkoey 1935*, *Mitteilungen der Deutschen Orientgesellschaft* LXXIV (1936) p. 54. Przeworski, op. cit., VII, pp. 403-410; pl. XLVII a. Remzi Oguz, *Anadolu arkeologiya tarihinde Alişar hafriyatı*, *Türk Tarih, Arkeologiya ve Etnografya Dergisi* I (1933) p. 59, fig. 53. W. Greenwell, On some rare forms of bronze weapons and implements, *Archaeologia* LVIII (1902) p. 12.

2. Von der Osten, op. cit., pp. 31, 34.

3. Przeworski, op. cit., VIII, pp. 57, 61.

4. A. M. Tallgren, Die kupfernen Flachaxte mit seitlichen Zapfen, *Finska Fornminnes Föreningens Tidskrift* XXVI (1912) p. 22; *La Pontide préscythique après l'introduction des métaux*, *Eurasia Septentrionalis Antiqua* II (1926) p. 179. Przeworski, op. cit., VIII, pp. 50-51.

5. Przeworski, op. cit., VII p. 409, pl. XLIX d.

6. R. A. S. Macalister, *The excavations of Gezer* (London 1912) I, pp. 334-335, II, p. 243, III, pl. LXXXIX 17, pl. CXCII 7, 8. Przeworski, op. cit., VIII, p. 53. About the dates of the first and second Semitic periods see: P. Thomsen, *Gezer, Reallexikon der Vorgeschichte*, herausgegeben von M. Ebert, IV, p. 325.

7. Bittel, *Bogazkoey*, pp. 52-53.

8. Alan Rowe, *The expedition at Beisan*, *Museum Journal* XVIII (1927) p. 436. R. W. Hamilton, *Excavations at Tell Abu Hawâm*, *The Quarterly of the Department of Antiquities in Palestine* IV (1935) p. 26.

Addul, and el-Mishrife¹. Thus, while type II of the trunnion axe originated in Asia Minor and Crete, type III, or at least its oldest sub-type, IIIa had its real home in Syria and Palestine, where it seems to have been in use from before 1600 to about 1000 B. C.

Type IIIb is characterised by the side-edges of the forepart being the straight-lined prolongation of the edges of the butt-part, the whole axe thus having grown into one complex instead of consisting of two markedly separated parts as before. The small protuberances at the sides, too, have become real trunnions showing a triangular side-view (Fig. 7 [18-33]). In some rather rare cases these trunnions are turned backwards, thus giving the impression of claws (Fig. 7 [34-35]).

Axes of type IIIb have been found in East Russia (region of the rivers Kama and Bielaia), on the isle of Rhodos, in Italy, Sicily, Sardinia, Spain, England, Ireland, and Holland²; further North Persia (Tureng Type near Astrabad) and Georgia.³ Moreover, moulds of such axes have been found at Troy and at Gezer in Palestine (Fig. 7 [29, 30]).⁴ Type IIIb thus occurs, with the exception of Gezer, only in the extreme West of Asia Minor, in the Northern borderlands of Southwest Asia, in East Russia, and in the maritime regions of Southern and Western Europe. From this curious distribution Tallgren concluded that the trunnion axe had been spread by a seafaring nation who used to visit distant countries in search for metals. He thought that this nation were the Phenicians and that, consequently, the trunnion axe had originated in Syria.⁵ Hawkes, too, presumes that the trunnion axe was brought to England and Ireland from the Mediterranean regions by way of the Atlantic.⁶

Type IIIa changes into IIIb so gradually that it is hardly possible to draw the line between the two. There is really no very great difference between some of the above mentioned IIIa axes from Syria and Palestine and axes of type IIIb. In Sardinia, too, and in Spain and Ireland we find trunnion axes which we well might hesitate whether to consider as belonging to type IIIb or IIIa. It is obvious, therefore, that type IIIb has developed from IIIa and that Tallgren was on the whole quite right to ascribe the origin of the European trunnion axe to Syria. This becomes still more remarkable, as in 1912 when Tallgren uttered this opinion, no trunnion axe had yet been found in Syria. Still, we are not yet able to decide whether the final development of type IIIa to IIIb took place in Syria or, maybe, in the Aegean regions. The mould from Gezer, though having been designed for casting a typical IIIb axe, does not entitle us to presume that this development has actually taken place in Syria; being later than 1200 B.C., it might possibly be due to the Aegean influence so prevalent at this period in Palestine.

1. Flinders Petrie, *Beth-Pelet*, British School of Archaeology in Egypt (London 1930) pl. L, Fig. 584; *Tools and weapons*, p. 17, pl. XVIII, fig. 111. Comte du Mesnil du Buisson, *L'ancienne Quatna ou les ruines d'el-Mishrife au N.-E. de Homs*, Syria VIII (1927) p. 285, pl. LXIX 1, pl. LXX 2.

2. A. M. Tallgren, *Collection Zaoussailov au Musée Historique de Finlande a Helsingfors*, I (Helsingfors 1916) pp. 21-22; *Die kupfernen Flachaxe etc.*, pp. 21-22, 25. Chr. Blinkenberg et K. F. Kinch, *Lindos*, I (Berlin 1931) p. 67, pl. 3, fig. 7. P. Orsi, *Ascie piatte in rame e bronzo della Sicilia*, *Bulletino di Paleontologia Italiana* XXIV (1898) pp. 162-163. G. A. Collini, *Le antichità di Tolfa e di Allumiere e il principio della età del ferro in Italia*, *ibidem* XXXVI (1911) p. 114. G. Pinza, *Monumenti primitivi della Sardegna*, *Monumenti Antichi* XI (1901) pp. 155, 172, pl. XVII fig. 16, 21. L. Siret, *Questions de chronologie et d'ethnographie ibériques* (Paris 1913) pp. 361-367. John Evans, *L'âge du bronze, instruments, armes et ornements de la Grande Bretagne et de l'Irlande* (Paris 1882) pp. 73-74, 113, 182-183. O. Montelius, *The chronology of the British bronze age*, *Archaeologia* LXI (1908) p. 138. W. J. Hemp, *The trunnion celt in Britain*, *Antiquaries Journal* V (1925) pp. 51-54. E. Rademacher, *Holland, Reallexikon der Vorgeschichte*, herausgegeben von M. Ebert, V, p. 346, pl. 103 B, fig. 8.

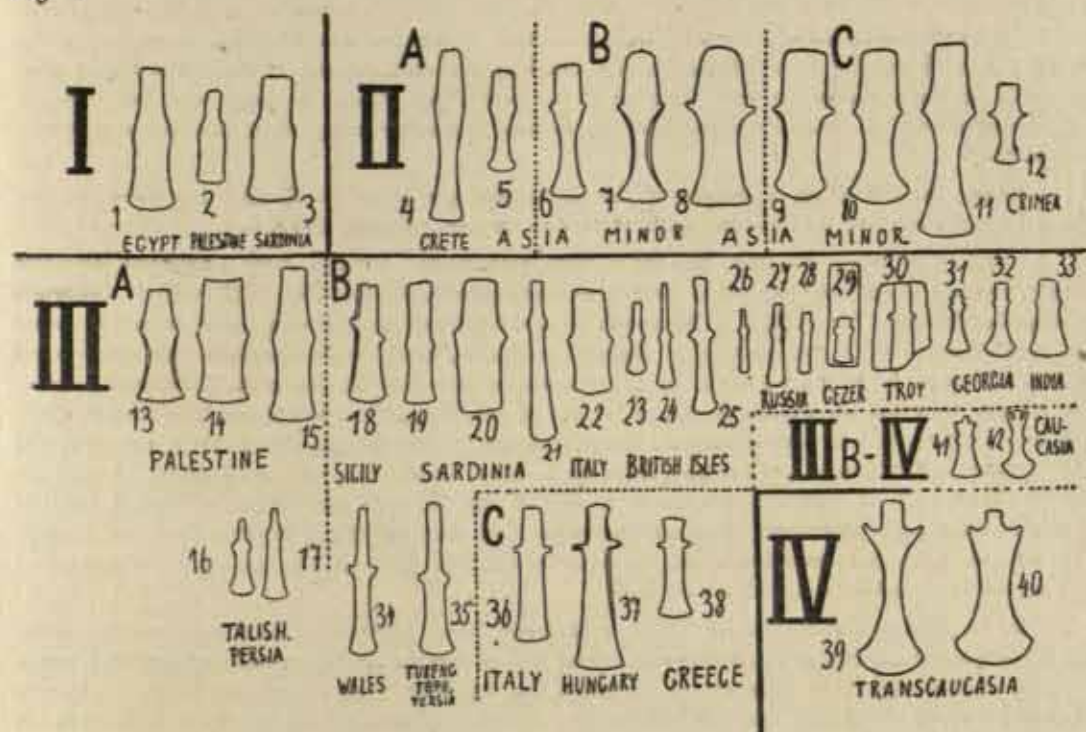
3. D. R. Wulsin, *Excavations at Tureng Tepe, near Astrabad*, *Bulletin of the American Institute of Persian Art and Archaeology* II (1932), Supplement, pl. XX. G. Nioradze, *Der Verwahrfund von Kvemo-Sasirethi, Georgien*, *Eurasia Septentrionalis Antiqua* VII (1932) p. 87.

4. A. Goetze in: W. Doerpfeld, *Troja und Ilion* (Athens 1902) p. 405. Macalister, *op. cit.*, II, p. 266.

5. Tallgren, *Die kupfernen Flachaxe etc.*, pp. 27-28.

6. Chr. Hawkes, *Die Erforschung der Spätbronzezeit, Hallstatt, und Latène-Zeit in England und Wales von 1914 bis 1931*, 21. Bericht der Roemisch-Germanischen Kommission (1931) p. 90.

Fig. 7



Type IIIc has been certainly developed from IIIb on European soil. The trunnions are longer and decidedly more marked. They are blunt and show no more triangular side-views but trapezoid or rectangular outlines (Fig. 7 [36-38]). Bronze axes of this type are not frequent. We know some from Dodona in Epirus, from Allumiere in Middle Italy (transitional period from bronze to iron age), from Kis-Koeszeg in Hungary (early Hallstatt Period), from England and Scotland. * The earliest occurrence of this type may be traced to about 1000 B. C. As is well known, it reoccurs in iron and has as such been used during the Hallstatt Period of Central Europe till the 5th century B. C.

The appearance of type IIIc forms, in South and West Europe at least, a terminus ante quem for IIIb, the latter thus having scarcely outlasted the end of the second millennium B. C. In general, axes of type IIIb will be ascribed to the last phases of the bronze age, i. e., the last centuries of the second millennium B. C. Hawkes, for instance, considers the late bronze age of Britain, at which period the trunnion axe made its first appearance in that country, to have begun about 1100 B. C. * The mould from Gazer (Fig. 7 [29]) was found in the stratum of the third Semitic period, the latter being dated by Thomsen from about 1200 to 950 B. C. *. Concerning the date of the mould from Troy (Fig. 7 [30]) we are dependent on presumptions only, no authentic statements about the stratum where it had been found having been made. Goetze thinks it to belong to the seventh stratum, considering its likeness to European axes. *. If he is right, as he probably is, this would mean—as only stratum VIIb will

1. C. Carapanos, *Dodone et ses ruines* (Paris 1878) pp. 100-101, pl. LIV figs. 7, 9, 10. Collini, op. cit., p. 113. M. Hoernes, *Eine höchst seltene Form von Bronzebeilen*, *Wiener Prähistorische Zeitschrift* IV (1917) pp. 39-40. Evans, op. cit., figs. 195, 197, 198. L. F. Chitty, *Three bronze implements from the Edgebold brickyard, Meole Brace, Shropshire*, *Antiquaries Journal* V (1925) p. 409.

2. Siret, op. cit., pp. 361 ff., Hemp, op. cit., p. 53. Hawkes, op. cit., pp. 87, 90.

3. Macalister, op. cit., II, p. 266. Thomsen, op. cit., p. 326.

4. Goetze, op. cit., p. 405.

have to be considered that the mould is not older than 1200 B. C. Indirect conclusions as to the date of the appearance of type IIIb in Asia Minor and the borderlands of the Black Sea may perhaps be drawn from the influence that IIIb seems to have had on type II in these regions. I recall the fact that type IIc which, as set forth above, developed from IIb probably under influence of IIIb, turned up after the breakdown of the Hittite Empire about 1200 B. C. It is at this time that type IIIb probably first reached Asia Minor. Its spread might well have had some connection with the ethnical movements of the so-called Aegean wandering, which took place at exactly the same period.

As we presently shall see, a discussion of the chronological position of the Georgian and Persian trunnion axes of IIIb type shall again yield the same result, i.e. a date between 1200 and 1000 B. C.

I shall denote as type IV a shape only known from Transcaucasia. This type shows a very short rectangular butt-part, trunnions turned backwards, and a forepart with strongly curved edges (Fig. 7 [39, 40]).¹ Concerning its date, Nioradze thinks that the find of Kvemo-Sasirethi which contained two such axes, could not be more ancient than the 13th century B. C. Przeworski, after thorough examination, comes to the conclusion that it must belong to the 12th century.² By this we gather an indirect indication concerning the date of the Transcaucasian axes of type IIIb too. Nioradze has reproduced, besides an axe of pure IIIb type from Lecchum in West Georgia (Fig. 7 [32]) and another one with doubled trunnions from Bakurciche in East Georgia, (Fig. 7 [31]), two axes, one from Sasirethi in East Georgia and one from Zchinvali in South Ossetia, showing bastard shapes of types IIIb and IV. The forepart of these axes corresponds to that of type IIIb, while the butt-part is identical with that of type IV, both types of trunnions being united on one and the same axe (Fig. 7 [41-42]). We may conclude from this that both shapes were simultaneously in use in Transcaucasia. Thus type IIIb, too, may be inferred almost with certainty to belong here to the 12th century B. C.

In the Caspian coastal region of Talish, in Northwest Persia, H. and J. de Morgan found two bronze trunnion axes, doubtlessly of type III, but somewhat differing in shape from the usual forms, thus not allowing a certain statement whether they belong genetically to IIIa or IIIb (Fig. 7 [16, 17]).³ As one of these axes has been found in a grave together with a long sword, such as made its appearance only in the second part of the Talish bronze age, this shape obviously belongs to the second or third periods of the local bronze age culture which, according to Dr. Hancar, cover the interval between 1200 and 1000 B.C.⁴ These two Northwest Persian trunnion axes, too, thus belong to the last two centuries of the second millennium.

In a small mound close to Tureng Tepe near Astrabad in North Persia, Wulsin found a bronze trunnion axe of type IIIb which does not, however, show the usual triangular trunnions, but curved ones turned backwards (Figs. 3, 7 [35]). It was excavated from a grave which, considering its stratigraphic situation, we may discern as of late bronze age.⁵ As I shall have to explain later on, the whole stratum belongs to the period between 1200 and 1000 B. C.

Let us return to the axe from Shalozan in the Kurram valley. A glance at figures 1 and 7 will suffice to show that it belongs to type IIIb. The nearest regions where axes of this kind have been found are Tureng Tepe (near Astrabad), Georgia, and East Russia. The nearest in shape to the Indian axe are those from Georgia. Whereas the East Russian axes (Fig. 7 [27, 28]), like most European ones and like the mould from Troy show straight-lined edges, those of the Georgian axes (Fig. 7 [31, 32]) are curved like the edges of the axe from the Kurram valley (Fig. 7 [33]). This pleads for an ancient intercourse between India and Transcaucasia. The axes from Talish (Fig. 7 [16, 17]), though

1. E. Roesler, *Neue Ausgrabungen und archaologische Forschungsreisen in Transkaukasien*, Zeitschrift für Ethnologie XXX (1898) Verhandlungen, p. 443. A. A. Ivanovski, *Po Zavrakavazii, Materialy po Archeologii Kavkaza VI* (1911) pls. IV, XVI. Nioradze, op. cit., pp. 85-87. Przeworski, op. cit., VIII, p. 51.

2. Nioradze, op. cit., p. 97. Przeworski, op. cit., VIII, pp. 60, 61.

3. J. de Morgan, *Mission scientifique en Perse*, IV/1 (Paris 1896) p. 77; *La préhistoire orientale*, III (Paris 1927) pp. 207-208. H. de Morgan, *Recherches au Talyche persan*, Délégation en Perse, Mémoires VIII (Paris 1905) pp. 257-258.

4. F. Hancar, *Kaukasus-Luristan, Eurasia Septentrionalis Antiqua IX* (1934) p. 69.

5. Wulsin, op. cit., p. 12, pl. XX.

belonging to type III, are of forms too unique to be reckoned among the direct genetic ancestors of the Indian axe. The same is true of the axe from Tureng Tepe near Astrabad (Fig. 7 [35]). The latter differs from the Indian axe by its much prolonged butt-part and the claw-like trunnions. It obviously belongs to the above mentioned secondary form of type IIIb with claw-like trunnions, specimens of which are known from Rhodos, Spain, Britain, and Ireland.¹ The shape with claw-like and the one with triangular trunnions have, however, probably spread at the same period. We may therefore consider the axe from Tureng Tepe—though certainly not the ancestral form of the axe from the Kurram—as a trace of the ethnical or cultural wave which brought the trunnion axe from Transcaucasia to India. We shall see in the next chapter that Tureng Tepe has yielded yet another shape of axes which must have reached North Persia and India, coming from the same Western regions, at about the same period. The trunnion axes from Talish, though differing somewhat in shape, may with some probability be considered as another trace of this same migration.

As we have seen, the trunnion axes of the type IIIb, as far as there is a possibility of dating them, are to be assigned in Europe as well as in Palestine, Asia Minor, Georgia, and North Persia, without exception to the period between 1200 and 1000 B. C. We shall be justified therefore to assume that the ethnical or cultural movement which brought the trunnion axe from Transcaucasia through North Persia to India, must have taken place between 1200 and 1000 B. C.

2. An axe-adze from Mohenjo-daro

In the winter of 1927-28 a bronze axe-adze of the type with a tubular collar was found in the upper strata of Mohenjo-daro (Fig. 8). It is the only one of its kind and, in fact, the only axe with a shaft-hole known to have ever been found in India. "That it belongs to the late period is certain", says Mackay, "for it was found at a level well above that of the intermediate period". From a remark by Childe probably based on oral information we learn that "it is regarded by its discoverer, Dr. Mackay, as a late intruder".² I am inclined to doubt, indeed, that it is really contemporary even with the latest period of the old pre-Aryan city of Mohenjo-daro, and should consider it as of much later date.

Similar axe-adzes have been found at five different points of Iran and the Near East: at Tureng Tepe near Astrabad, at Tepe Hissar near Damghan, both in North Persia, in the temple of Anu-Adad at Assur, and at Faskau and Malkop in North Caucasia.

Two copper axe-adzes of the same shape as the Indian one were among the so-called "treasure of Astrabad", found at Tureng Tepe almost a century ago and published by Bode in 1844.³ E. F. Schmidt found similar copper axe-adzes in Hissar III, the most recent stratum of Tepe Hissar near Damghan (Fig. 10).⁴ Damghan and Astrabad are only about 90 kilometres distant from each other, and as Contenau has pointed out, Hissar III and the late bronze age stratum of Tureng Tepe, the same that yielded the above mentioned trunnion axe and from which came in all probability Bode's axe-adzes, too, belong fundamentally to the same culture.⁵ If we are able to date Hissar III and the contemporary strata of Tureng Tepe, we shall attain the date of the axe-adzes too.

1. Siret, *op. cit.*, p. 362. Evans, *op. cit.*, 113. Hemp, *op. cit.*, p. 51. Blinkenberg et Kinch, *op. cit.*, pl. 3, fig. 7.

2. E. J. H. Mackay, *Excavations at Mohenjodaro*, Annual Report of the Archaeological Survey of India 1927-28, p. 76, pl. XXV. V. Gordon Childe, *Eurasian shaft-hole axes*, *Eurasia Septentrionalis Antiqua* IX (1934) p. 164.

3. C. A. de Bode, *On a recently opened tumulus in the neighbourhood of Astrabad*, *Archaeologia* XXX (1844) pl. XVI.

4. E. F. Schmidt, *Tepe Hissar excavations 1931*, *Museum Journal* XXIII (1933) pp. 400, 444, pls. CXVIII, CLII, CLIII.

5. G. Contenau, *Le trésor d'Astrabad et les fouilles de Tépé-Hissar*, *Revue d'Assyriologie* XXXI (1934) 77-80.

Rostovtzev thought to recognise Sumerian traits in the "treasure of Astrabad" and was of opinion that it could not originate from a later date than 3000 B. C.;¹ Salomon Reinach, again, would find Mycenaean influence in the "treasure" and believed the middle of the second millennium B. C. to be its right date.² Contenau is of very much the same opinion and dates the treasure in the later half of the second millennium. By reason of a distinct relationship between the gray pottery of Hissar III and the ceramics found in the uppermost layers of Tepe Giyan near Nehavend, he drew the conclusion that Hissar III assigned by E. F. Schmidt and Pope to the first half of the second millennium may have lasted till about 1300 or 1250 B. C.³ Anyway, after the finds of Tepe Hissar have been made, there can be no more discussion of dating back the "treasure of Astrabad" into the fourth millennium B. C. I even believe that a further reduction of Contenau's and Reinach's dating may be more to the point.

Schmidt was able to discern three successive cultures at Tepe Hissar, one with painted ceramics (Hissar I) and two with grey ceramics (Hissar II and III). He believes that the change from Hissar I to Hissar II was due to the invasion of foreign conquerors, but that on the contrary Hissar II slowly developed into Hissar III, partly under Western influences.⁴ Recently, E. F. Schmidt informed Dr. Hancar by letter, that by now he discerns in Hissar III three different stages.

We need not trouble about the chronology of Hissar I. Concerning the dating of Hissar II the pins with heads in forms of double loops or double scrolls⁵ may perhaps give us some indication, as we are able to compare them with those of Troy. Unfortunately the date of the latter is not yet definitely determined. Goetze reproduces them among objects from the periods II to V, though he has some doubts about the loop-headed pins belonging to Troy II to V and not to a later period and though he thinks that the double scroll pins may even have lasted till Troy VII.⁶ Hancar believes that these types of pins belong to Troy VI and argues from these and from other connections with Troy, that the Transcaucasian Gandsha-Karabagh Culture which comprises scroll-headed pins must have taken birth between 1400 and 1250 B.C. He even follows up these relations, by reason of the pin types, as far as the province of Talish on the Caspian Sea.⁷ Here we may recall the relations between bronze-age weapons from Talish and from the Aegean regions noticed by Déchelette.⁸ It is not a very great distance from Talish to Damghan (Tepe Hissar), and the relations of the pin-shapes of Hissar II with those of Troy VI would certainly conform to the Mycenaean influences which S. Reinach and Contenau thought to discover in Hissar III. According to this we might be entitled to date Hissar II between 1400 and 1200 B. C., though, considering the uncertainty about the dating of the Trojan finds, we shall have to face the possibility and, I think, even probability, that the pins in question belong to Troy II till V and that the connections between the Aegean regions and Hissar II will belong to this period. The fact that Hissar II as well as Troy II had daggers with crooked tangs seems to confirm this hypothesis.⁹ But if it proves true, as is my opinion, that there exists a relation between Hissar II and Troy II till V, this would mean that the beginnings of Hissar II reach back at least to the beginning of the second millennium B.C., if not even into the later centuries of the third. However, I see no

1. M. Rostovtzev, The Sumerian treasure of Astrabad, *Journal of Egyptian Archaeology* VI (1920) pp. 4-27; The Sumerian treasure of Astrabad again, *Studies presented to F. L. Griffith* (London 1932) pp. 341-345.

2. S. Reinach, La représentation du galop dans l'art ancien et moderne, *Revue Archéologique*, 3me série XXXVII (1900) pp. 252-254.

3. G. Contenau, L'ancienne civilisation de l'Iran, *Gazette des Beaux-Arts* LXXIV-2 (1932) p. 10; Le trésor d'Astrabad etc., pp. 77-80. G. Contenau et R. Ghirshman, Fouilles du Tépé-Giyan près de Nehavend 1931-1932, Musée du Louvre, Département des Antiquités Orientales, Série Archéologique, III (Paris 1935) pp. 86-87. Schmidt, *op.cit.*, p. 390. A. Upham Pope, New light on the art of prehistoric Persia, *Illustrated London News*, January 28, 1933, p. 116.

4. Schmidt, *op.cit.*, pp. 341, 365, 366, 389, 472-474.

5. Schmidt, *op. cit.*, p. 377, pl. CIV.

6. Goetze, *op.cit.*, pp. 356-357, 395, 406.

7. F. Hancar, Die Nadelformen des praehistorischen Kaukasusgebietes, *Eurasia Septentrionalis Antiqua* VII (1932) pp. 127-130.

8. J. Déchelette, Note sur les influences égéennes au Caucase, *L'Anthropologie* XXI (1910) pp. 425-434.

9. Goetze, *op. cit.*, pp. 329, 344. Schmidt, *op.cit.*, p. 377, pl. CIII.

reason as yet to justify Pope's dating of Hissar II between 3000 and 2000 B.C. As mentioned before, the chronology of Hissar III and of the contemporary strata of Tureng Tepe near Astrabad is of special importance to us on account of their relations to India, both the axe-adze and the trunnion axe occurring at this period. I think that it shall not prove impossible to ascertain its approximate date.

The large two-pronged copper forks found as well in Hissar III (Fig. 44) as at Tureng Tepe are most closely related to similar bronze forks from Central and Western Persia and Transcaucasia (Fig. 43)¹. Such forks were excavated, for instance, in a graveyard of the earliest iron age at Sialk near Kashan, halfway between Teheran and Isfahan, dating in the opinion of Ghirshman from the 12th or 11th century². The very same kind of forks are to be found in the Transcaucasian Gandsha-Karabagh Culture, dated by Hancar between 1400 and 700 B. C. This wide range of time that Hancar assumes for the present concerning the Gandsha-Karabagh Culture may well be restricted to a somewhat shorter period for Hissar III and the corresponding strata of Tureng Tepe inasmuch as by the complete absence of any trace of iron, we may exclude a later date than 1000 B. C. Though we know that the farther we go East, the later we shall find that iron was used, we are not entitled to assume that the difference in time between the beginnings of the iron age on the Southwest coast of the Caspian Sea, in Talish, according to Hancar about 1000 B. C.³, and in the regions around the Southeast corner of that sea, at Damghan and Astrabad, was a very large one.

Schmidt found in Hissar III a metal object, the sole representative of its kind, which he thought to be a fan (Fig. 15). "Had this object not been found with a richly equipped male skeleton," he says, "one might have been inclined to define it as an exaggerated hairpin, since it leaned against the right lower and posterior part of the skull".⁴ In my opinion it is indeed not to be doubted that here we have to deal with a disk-headed pin showing greatest likeness in shape as well as in ornament to the disk-headed bronze pins of Luristan with their ornaments arranged in concentric circles (Fig. 16)⁵. Compare the rows of knobs on the rim! The Hissar pin, it is true, differs from those from Luristan by its material (copper) and its size (it is just double the size of the largest Luristan pins reproduced by Godard), but this is not essential. The position in the grave, on the right-hand side of the dead man's head, corresponds to the way the big disk-headed pins were placed in the North Caucasian graveyards of the region of Koban.⁶ In Caucasia these pins had been worn as head-gear by women, whereas at Tepe Hissar the object in question was found in a man's grave. However, to my opinion, this does not entitle us to dispute its nature as a pin. Maybe it had been used for some ritual reason. We might think, for instance, of the "change of sex", well known to ethnologists, men dressing up as priestesses. It is significant that Schmidt supposes the grave in which the pin-head was found by reason of some unusual objects it contained, to have been that of a priest.⁷

Anyhow, the solitary disk-headed pin of Tepe Hissar must be considered there as a foreign element. From where had this shape come? I think it rather improbable that it had been taken over from Luristan, as its ornaments seem to be of more archaic type than those of the Luristan pins hitherto known. Besides, the Hissar pin shows on both sides the remnants of braidings fitting into its chased ornaments, evidently concentric circle patterns. Now one of the Luristan disk-headed pins reproduced by Godard is decorated with concentric braided motives, and it seems rather plausible that this ornament is an imitation of real braidings like those of the Hissar pin. If this proves true we should naturally have to consider the Hissar pin as the more ancient form. We shall meet with the same phenomenon when

1. Bode, *op. cit.*, pl. XVI. Schmidt, *op. cit.*, pp. 400, 443-444, pls. CXX, CLII, CLIII. J. Hummel, *Zur Archäologie Azerbeidzans, Eurasia Septentrionalis Antiqua VIII* (1933) pp. 223-224, 234. F. Hancar, *Kaukasus-Luristan, Eurasia Septentrionalis Antiqua IX* (1934) pp. 50-52, figs. 8, 14.

2. R. Ghirshman, *Rapport préliminaire sur les fouilles de Tépé Sialk près de Kashan (Iran), Syria XVI* (1935) pp. 244, 245.

3. Hancar, *Kaukasus-Luristan*, p. 81.

4. Schmidt, *op. cit.*, pp. 401, 446, pls. CXXIII, CLII, CLIII.

5. A. Godard, *Bronzes du Luristan, Ars Asiatica XVII* (Paris 1931) p. 72, pl. XXXIV.

6. Hancar, *Die Nadelformen etc.*, p. 152.

7. Schmidt, *op. cit.*, pp. 417, 444-446.

dealing with the so-called sepulchral idols, those of Hissar III bearing a more archaic character than those of Luristan.

Godard and Hancar have already pointed out that the disk-headed pins of Luristan must be related to those of the Koban Culture and form part of a cultural complex of North Caucasian origin. Still, I do not think it possible to trace the descent of the Luristan disk-headed pins and therewith of the Hissar pin in a straight line up to those of Koban, as the heads of the latter are neither circular in shape nor do they show the characteristic concentric circular ornaments of Luristan and Hissar. We may find perhaps the closest connections of the North and West Persian pins among those of the early bronze age of Hungary and Central Europe (Fig. 17).⁴ Doubtlessly, there is a genetic relation between the two, considering their unmistakable conformity in shape and ornament, though we do not know as yet the connecting links. The ethnic or cultural current which brought these forms from Europe to Asia, was forced to take its way through Caucasia, and the disk-headed pins of Koban, Tili, etc. in the North Caucasus⁵ are, in spite of their locally somewhat changed shapes, most probably to be considered as traces of this migration. This interpretation is quite in accordance with Tallgren's opinion, who pointed out that the Koban Culture was connected by way of the South Russian Steppe Culture both with the bronze age civilization of the countries round the Danube and with the Aunjetitz Culture.⁶

Apart from the disk-headed pin, another copper object pointing into the same direction, that is the North Caucasus, was found by Schmidt in a Hissar III grave of a little girl. Schmidt believes it to be a flat spoon or stirrer⁷. To me there is little doubt that we have got here a specimen of a racquet-pin, although the typical scroll of such pins is missing (Fig. 36). The racquet-pin makes its appearance at Ur in Babylonia as early as the third millennium B.C., then it disappears again. In Europe it belongs to the early bronze age, in the Northern Caucasus to the Koban Culture (Fig. 35).⁸ The latter comprises, according to Tallgren, the period from about the 15th into the 9th century, while Hancar assumes as its date the time between 1200 and 1000 B.C.⁹ Lissauer's argument of a genetic connection between the racquet-pins of the Koban Culture and those of the early bronze age of Central Europe is quite out of question on account of their wide difference in date¹⁰; that we are confronted here with a mere coincidence will to-day certainly no more be accepted as valid. Manifold archaeological as well as ethnological experiences have taught us to recognise genetic connection if we meet with such consummate conformity of shape as with the racquet-pins from Ur, Europe and Caucasia, even should we not yet have found the connecting links.

1. P. Reinecke, Beiträge zur Kenntnis der frühen Bronzezeit Mitteleuropas, Mitteilungen der Anthropologischen Gesellschaft in Wien XXXII (1902) p. 112. A. Lissauer, Erster Bericht über die Tätigkeit der von der Deutschen Anthropologischen Gesellschaft gewählten Kommission für prähistorische Typenkarten, Zeitschrift für Ethnologie XXXVI (1904) pp. 574-576. K. von Miske, Versuch eines chronologischen Systems der ungarländischen Bronzezeit, Archiv für Anthropologie XLIII (1917) pp. 255, 256. G. Behrens, Frühbronzezeitliche Gräber aus Ungarn, Prähistorische Zeitschrift XI, XII (1919, 1920) pp. 119, 120. V. Gordon Childe, The Danube in prehistory (Oxford 1929) pl. IX, fig. A. 6.

2. E. Chantre, Recherches anthropologiques au Caucase, II, Atlas (Paris 1886) pls. XIX 5, XIX bis 3. Countess Uvarov, Mogilniki sjevernogo Kavkaza, Materialy po Archeologii Kavkaza VIII (1900) pls. XXVI 3, XXVIII 3. J. de Morgan, La préhistoire orientale, III (Paris 1927) p. 319. Hancar, Die Nadelformen etc., pp. 141, 143, 154-155, 172, 173.

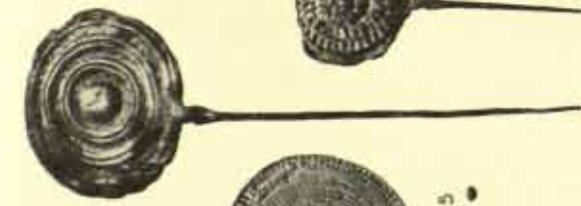
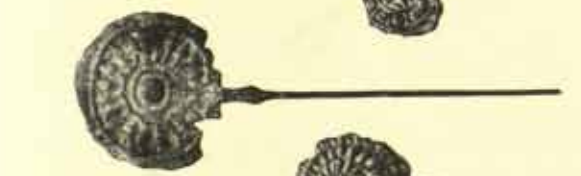
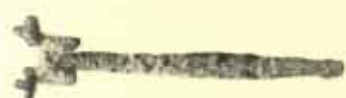
3. A. M. Tallgren, Etudes sur le Caucase du nord, Eurasia Septentrionalis Antiqua IV (1929) p. 40; Caucasian monuments: the Kazbek treasure, ibidem V (1930) pp. 175-177; Zu der nordkaukasischen frühen Bronzezeit, ibidem VI (1931) p. 145.

4. Schmidt, op. cit., pp. 401, 452, pl. CXXI, fig. A.

5. V. Gordon Childe, The most ancient East (London 1928) p. 189; The Danube in prehistory, fig. 132, pl. IX, fig. A 5. Reinecke, op. cit., pp. 115-116. Lissauer, op. cit., pp. 573-574. Chantre, Recherches anthropologiques etc., pl. XIX, figs. 1-4. Uvarov, op. cit., pls. XXVI, fig. 4, XXVII, figs. 1, 2, XXVIII, figs. 1, 2. R. Virchow, Das Gräberfeld von Koban (Berlin 1883) pls. IV, fig. 14, V, fig. 2, VI, figs. 1, 2. Hancar, Die Nadelformen etc., pp. 141-142.

6. A. M. Tallgren, Koban, Reallexikon der Vorgeschichte, herausgegeben von M. Ebert, VII, p. 12. Hancar, Kaukasus-Luristan, p. 89.

7. Lissauer, op. cit., p. 574.



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H. Frankfort is of opinion that the racquet-pins originated primarily in the Caucasian regions whence they spread at different times south into Babylonia and west into Europe.¹ However, I think it still more probable that they are of old oriental (Babylonian?) origin and that they found their way to Europe in the early bronze age and were carried back to the East, to Caucasasia, during later migrations, a case by no means rare in the happenings and shiftings of cultures and peoples. Anyhow, I think we can safely bring the pin from Hissar III—if, as is most probable, it proves to be one—into connection with the racquet-pins of the North Caucasus. This again allows us to presume relations between Hissar III and the Koban Culture. As we shall presently see, there are still other finds that will reveal strong Koban influences on the Hissar III culture.

In graves of Hissar III which, considering their sites and the death offerings they contained, were most probably the burial-places of nobles, Schmidt usually found among others a small copper wand, its upper end being shaped into some figure or group of figures (Fig. 21). Pope states that such wands will only be found in the latest of the three periods of Hissar III, which I shall call Hissar IIIc. One of these graves contained a wand fixed in a small, narrow-mouthed earthen-ware vessel. In some other cases a small flask of copper (Fig. 21, lower left-hand corner) or lead (Fig. 18) served the same purpose.² Schmidt pointed out the conformity of these objects and the so-called sepulchral idols of Luristan, the latter being fixed into bronze flasks by way of sockets (Figs. 19, 20). A connection between the two is indeed obvious.

Dussaud believes to be able to trace the stylistic features of the sepulchral idols of Luristan to the art of the New Babylonian Empire (7th to 6th century B.C.), but he thinks that the majority of the actual idols known until now belong to the Parthian period. Rostovtzeff thinks that the Luristan art culminated in the time from the 7th to the 4th century, while Hancar and Koenig date the greater part of the Luristan bronzes between 700 and 600 B. C. *. If the Luristan idols actually belong to the first millennium, Luristan could never have had an influence on Hissar III. But even should we, according to Godard, date them in the second millennium, still it would remain impossible to deduct the North Persian idols from those of Luristan. It suffices to compare the simple shaped wands of Hissar IIIc with the ample ornamental and plastic modelling of the Luristan finds, the latter being moreover built up in three separate parts and their sockets much better fitted to their use than the simple metal or earthenware vessels in which the Hissar wands were fixed. These small vessels from Hissar give indeed the impression of being the original form from which the Luristan sockets were developed. We may conclude that the idols of Hissar IIIc and those of Luristan are connected in a similar way as the disk-headed pins of these same regions.

Considering all this we might be entitled to presume that the idols of Luristan are genetic descendants of those of North Persia and that they only changed into more complicated shapes under Babylonian influence. However, to my mind it seems more probable that both forms had developed from a common root; and just as for the disk-headed pins, we may probably assign North Caucasasia for this too. The crowning of the idol wands of Hissar III is quite unmistakably like the crowning of North Caucasian pins from Koban. Compare Figs. 21, 22, 23 and 24. Among the Hissar wands we may distinguish some with their pronged ends ending each in an animal head; some are crowned by animal shapes, some by many figured groups, and some have a sort of cross-like top. All of these forms are to be found as crownings of Koban pins too (Figs. 22, 23, 25).⁴ Moreover, there seems to be a sort of functional relationship between the copper wands

1. H. Frankfort, *Archaeology and the Sumerian problem*, *Studies in Ancient Oriental Civilization* IV (Chicago 1932) pp. 52-55.

2. Schmidt, *op.cit.*, pp. 407, 414-417, 442, 444, 446, 452, pls. CXXVIII, (Fig. 460) CXXXI, CXXXIV A, CLII, CLIII. Pope, *op.cit.*, pp. 116-117, figs. 4, 7.

3. R. Dussaud, *Haches a douilles de type asiatique*, *Syria* XI (1930) pp. 254, 257-258, 269. M. Rostovtzeff, *Some remarks on the Luristan bronzes*, *Jahrbuch für prähistorische und ethnographische Kunst* 1931, p. 55. Hancar, *Kaukasus-Luristan*, pp. 106-107. F. W. Koenig, *Älteste Geschichte der Meder und Perser*, *Der Alte Orient* XXXIII, fasc. 3/4 (Leipzig 1934) p. 32.

4. Schmidt, *op.cit.*, pl. CXXXI. Chantre, *Recherches anthropologiques etc.*, pls. XIX bis, figs. 6, 7, XX, figs. 2, 4, XXbis, fig. 5. Uvarov, *op.cit.*, fig. 52, pls. XXIV, fig. 4, XXIX, fig. 4, XXXIX, figs. 5, 6. Hancar, *Die Nadelformen etc.*, pp. 145-148.

of Hissar and the above mentioned pins, pins taking in fact the place of the North Persian wands in the Luristan idols. Hancar pointed out the connection between many of the Luristan pins and pins of Koban¹. We may add that similarities are recognisable, too, between the heads of Luristan pins and crownings of Hissar wands (compare Figs. 21 and 24). Here again the latter are more closely related to the Koban pins than the Luristan pins. We are thus again led to establish a distinct connection of Hissar IIIc with North Caucasia in the time between 1200 and 1000 B.C.

In Hissar III small double animal-protomes made of copper or serpentine were found by Schmidt (Fig. 5). They are very much like the bronze double animal-protomes of Armenia, Transcaucasia and North Caucasia and are doubtlessly connected with them. It is a characteristic symptom that they are to be found in Luristan too (Fig. 6)². Two of such double animals from Kedabeg Kalakent in Gandsha, Transcaucasia, (Fig. 4) show the greatest likeness to those of Hissar III. As they belong to the Gandsha-Karabagh Culture, they will have to be dated in the same period as the copper forks, occurring also in Hissar III, i.e. the last centuries of the second millennium B.C.

As mentioned before, a dagger with a crooked tang found in Hissar II is very much like similar daggers from Troy II and, as these too, is doubtlessly related to the daggers of Cyprus. The same shape has survived in Hissar III, though here and in Tureng Tepe it underwent some further development. In particular the pointed end of the tang was changed to a knob (Fig. 3, the dagger to the right)³. Besides these we find daggers or spear-heads with a middle ridge and a stop for the hilt or, as the case may be, the shaft, they too having crooked tangs (Fig. 3, the central dagger)⁴. As Prof. Menghin pointed out to me, we have to deal here with a form belonging to the South Russian Steppe Culture. Similar daggers (or spear-heads?), with the sole difference that the tang is broad, short and straight instead of long and crooked, are widely spread between Kiev and the Volga (Fig. 2).⁵ There is no doubt that this shape originated in the South Russian steppes, where we are able to trace its development back to primitive, flat copper daggers⁶. As up till now it has not been found in Caucasia we can not yet decide which way it took coming to North Persia. If it was not after all through the Caucasus, it must have come either along the East coast of the Caspian Sea or, maybe, by the sea itself.⁷ I shall return to this question once more.

In North Persia the straight tang had, under influence of the Cyprian-Trojan daggers which had been in use since Hissar II, changed to a crooked one, sometimes with a knobbed end. We should be inclined, therefore, to call these weapons daggers—Tallgren does not decide this point in the case of Russia—if Pope had not reproduced a blade of this kind together with a lance-shaft, both being found together and, in his opinion, belonging to each other.⁸ However, be it dagger or spear-head, these weapons will yield yet another clue for the dating of Hissar

1. Hancar, *Kaukasus-Luristan*, pp. 99-100.

2. Schmidt, op. cit., p. 418, pls. CXXXIII "H 488", "H 498", CXXXIV "H 763". Uvarov, op. cit., pl. XCII, fig. 13. Ivanovski, op. cit. Pl. VI, figs. 1, 2. E. H. Minns, *Small bronzes from Northern Asia*, *Antiquaries Journal* X (1930) p. 20, pls. III, IV. F. von Rexroth, *Bronzen aus Luristan*, *Orientalische Zeitschrift* XVIII (1932) figs. 15, 18.

3. Salmāna-i-Pārs IX (Tehāfan 1934) p. 38. Wulsin, op. cit., pl. XX. Pope, op. cit. fig. 2. A similar dagger, alleged to have been found in Kurdistan, was reproduced by J. de Morgan, *Préhistoire orientale*, p. 233.

4. Bode, op. cit., fig. 10. Schmidt, op. cit., p. 400, pl. CXIX. Wulsin, op. cit., pl. XX. Here in one case there is no stop, the tang being directly united to the blade.

5. Tallgren, *Collection Zauustailov etc.*, I, p. 26, pl. VI, figs. 1, 2; *La Pontide préscythique etc.*, pp. 198-200, figs. 83 (4, 5), 86 (2), 109 (4, 7-9).

6. Tallgren, *Collection Zauustailov etc.*, I, pp. 23-26, pl. V, figs. 1-5; *La Pontide préscythique etc.*, pp. 105-106, 198, figs. 46 (7, 8), 53 (2), 109 (m 1-3).

7. A dagger (or spear-head) with middle ridge and tang, but without a stop, was found in a bronze age dolmen of Abchasia in the Western Caucasus. Cf. M. M. Ivascenko, *Beiträge zur Vorgeschichte Abchasiens*, *Eurasia Septentrionalis Antiqua* VII (1932) fig. 1 (4). This weapon is similar to the one from Tureng Tepe reproduced here in Fig. 3 (the first from the left-hand side), the sole difference being that the tang is not crooked as in the latter, but straight. This pleads for the diffusion of the weapons in question by way of Caucasia.

8. Pope, op. cit., fig. 5. One wonders whether the blade and the hoops from which latter the shaft was reconstructed, really belong to each other.

III and Tureng Tepe. According to Tallgren, in Russia this kind of weapon belongs to the bronze age.¹ Now the flat daggers with tang and stop which preceded it, do not occur before the period of the wooden chamber tombs, a period which Tallgren primarily dated from 1400 to 1100 B.C., but latter on rectified to 1300 till 1000 B.C.² It is obvious that the afore mentioned weapons must belong to a later date than the flat shaped ones from which they had developed. However, they can be proved to have existed about 1100 or, at the very latest, 1000 B. C. by two casting moulds of this period found at Derewnaya near Kiev, while two specimens from the Government Yekatarinoslaw may, by reason of their engraved ornaments, be dated between 1300 and 1000 B. C.³ We shall not be wrong, therefore, if we assume that the tanged daggers (or spear-heads) with stop belong to the period from 1200 to 1000 B. C. Our dating of Hissar IIIc and Tureng Tepe from 1200 to 1000 B. C. was derived from the connections of these sites with Koban and Transcaucasia; here, from a quite different region, we find a new assertion of these dates.

We may still raise the question, however, whether this dating is valid for the whole of Hissar III or for a part only of this period. In his first account, Schmidt considered Hissar III as a unity, but later on, as mentioned before, he thought to discern within Hissar III three different periods, though unfortunately nothing has been published about this as yet. Pope's statement that the wand-shaped grave idols only occur in the latest period which I have called IIIc gives us some indication. Now, copper forks, disk-headed pin, racquet-pin, double animal-protomes and daggers (or spearheads) with stop and crooked tang were all found in graves which contained wand-shaped grave-idols too, so that it is obvious that they all belong to this same Hissar IIIc period, and that it is this last period of Hissar III only which is to be dated between 1200 and 1000 B. C. As this investigation into the chronological position of Hissar III has been made with the object of dating the copper axe-adzes, it is of great importance that such an axe-adze has been found in a grave together with a wand-shaped grave-idol and a copper fork.⁴ This proves that the axe-adze, too, belongs to Hissar IIIc and is to be dated therefore from 1200 to 1000 B. C.

Copper forks, trunnion axe and double animal-protomes have shown us the connections of Hissar IIIc and the contemporary strata or Tureng Tepe with Transcaucasia, disk-headed pin, racquet-pin and wand-shaped idols the connections with North Caucasia (Koban), and the daggers or spear-heads with stop, the relations with the South Russian steppes. The question arises, whether the axe-adze, too, has come from the West to North Persia and India. I think this may be answered in the affirmative.

Underneath the foundations of the Anu-Adad temple at Assur, erected by the Assyrian king Salmanassar III, (859—824 B. C.), eight small axe-adzes were found, which had probably been deposited there as a sort of sacrifice or as symbols of the deity.⁵ In shape they are almost identical with those from Tepe Hissar, Tureng Tepe, and Mohenjo-daro, though they differ from them very much in size, the head of the largest being no more than 8.2 centimetres in length. Their handle is a bronze staff half a centimetre thick (Fig. 13). Obviously they are small models intended for ritual purpose only and never put to practical use. Naturally, it is quite out of the question to deduct the North Persian axe-adzes from these much younger Assyrian ones. The same may be said concerning a bronze pickaxe from Faskau in the North Caucasus, now in the possession of the Vienna Ethnographical Museum (Fig. 12).⁶ Excepting that a pick takes the place of the adze, it conforms so completely with the axe-adzes from Assyria, North Persia, and India, that we may safely presume a connection. However, as Dr. Hancar kindly informs me, the date of the North Caucasian iron age culture, to which the finds from Faskau belong, lies between 900 and 600 B. C., so that this Caucasian pickaxe, too, is doubtlessly younger than the North Persian axe-adzes.

1. Tallgren, *Collection Zaoussailov* etc., I, p. 26.

2. Tallgren, *La Pontide préscythique* etc., pp. 106, 142; *Zur Chronologie der ost-europäischen Bronzezeit*, *Mitteilungen der Anthropologischen Gesellschaft in Wien* LXI (1931) p. 96.

3. Tallgren, *La Pontide préscythique* etc., pp. 148-149, 200; *Zur Chronologie* etc., p. 91.

4. Schmidt, *op.cit.*, pp. 442-444, pls. CLII, CLIII A.

5. W. Andrae, *Der Anu-Adad-Tempel in Assur* (Leipzig 1909) pp. 53-54.

6. I owe the photograph of this object to the amiability of Dr. Hancar who is about to publish the Caucasian collections of the Vienna "Museum für Voelkerkunde".

A copper axe-adze from Maikop in the Kuban region (Northwest Caucasia), on the contrary, can be of no earlier origin than the middle of the second millennium B. C., whatever opinion we may accept concerning the much disputed dating of Maikop¹. Unfortunately, the insufficient reproductions (Fig. 14) do not allow us to discern with certainty, whether the axe from Maikop has a genuine tubular collar for the shaft like the Asiatic specimens hitherto mentioned, or only a narrow ring round the shaft-hole like some of the European axe-adzes.

In Europe, copper axe-adzes of the earliest type, without collar at all, make their appearance about 2000 to 1900 B. C. in Crete as well as in the Balkans and in the regions north of the lower Danube (Rumania, Transylvania, Galicia, Ukraine, etc.). Somewhat later, this type gets a narrow collar in shape of a ring surrounding the shaft-hole. At last, it develops into the type with a tubular collar, known from Rumania, Transylvania (Fig. 9), and Ukraine (Fig. 11)². We shall not be wrong in dating this latest type of European copper axe-adzes into the second quarter of the second millennium B. C. The specimens from Caucasia, Assyria, North Persia and India are so similar to these European axe-adzes with tubular collar that a connection between both cannot be doubted. At the same time, as the shape appears much earlier in Europe than in Asia, and as in Europe we can trace its development from a still earlier form, there can be no doubt whatever, as to its having spread from the West to the East where it locally survived at least till the 9th century B. C. (Faskau, Assur). From this we gather the impression, that the axe-adzes of Hissar Ilıc, of Tureng Tepe, and of Mohenjo-daro give evidence of a cultural or more probably ethnical wave which invaded Asia after starting from the South Russian steppes or even from the Danubian regions.

If we consider the fact that in Hissar Ilıc and at Tureng Tepe together with the axe-adzes daggers (or spear-heads) were found, the shape of which originated also in the South Russian steppes, it will seem extremely probable that both, axe-adzes and daggers (or spear-heads) with stop, were brought not only from the same region, but at the same time and by the same migration to North Persia, where they were found in the same strata. Therewith we may date this migration between 1200 and 1000 B. C. Concerning the daggers or spear-heads we have left the question unanswered, whether they reached North Persia by crossing Caucasia or round the East Coast of the Caspian Sea. However, the occurrence of the axe-adze at Maikop before 1500 B. C. and, though at a much later date, at Faskau and Assur, entitles us to presume that this South Russian migration took its way through Caucasia and Northwest Iran.

Consequently, we may state, as a result of this investigation, that the axe-adze must have been brought to India between 1200 and 1000 B. C. by a migration from the South Russian steppes passing through Caucasia and North Persia.

3. A bronze dagger from the Panjāb

The National Museum of Antiquities at Edinburgh possesses a large bronze dagger from the Panjāb, presented as a gift to the museum by J. M. Douie in 1883³. Unfortunately, no further particulars are known about the circumstances of this find. Hilt and blade are of one cast. The length of the hilt is 11 centimetres, the length of the blade about 35

1. M. Rostovzev, *L'age du cuivre dans le Caucase septentrional*, *Revue Archéologique*, 5 me série XII (1920) p. 6.

2. M. Roska, *Die stratigraphische Lage der Doppelbeile mit gekreuzten Schneiden aus Rotkupfer in Siebenbürgen*, *Archaeologiai Értesítő* XIII (1928) pp. 48-53, 305-306. Childe, *The Danube in prehistory*, pp. 204-205. Jon Nestor, *Der Stand der Vorgeschichtsforschung in Rumänien*, 22. *Bericht der Roemisch-Germanischen Kommission* (1932) pp. 76-79. Tallgren, *La Pontide préscythique etc.*, pp. 172-173. fig. 99 (6). I am obliged to the Directors of the National Museum of Hungary at Budapest for the kind permission to publish the photograph of an axe-adze from Züberk, Transylvania, reproduced in Fig. 9.

3. V. A. Smith, *The copper age and prehistoric bronze implements of India*, *Indian Antiquary* XXXIV (1905) p. 243.

centimetres. The hilt shows cavities, formerly probably incrustated with some other material, wood, bone or ivory (Fig. 27) ¹.

To my knowledge, no other similar object has been found in India. However, this kind of dagger is common in ancient Western Asia. Shapes resembling it occur in Egypt and Palestine from the Hyksos period down to the 18th dynasty. Sir Flinders Petrie thinks that they came from the East ². Another region where daggers of this kind are widely spread is Western Persia; but there they belong to much more recent times. In the Northwest, in Talish, they belong to the last period of the bronze age and to the beginning of the earliest iron age, i.e. to the period from 1200 to 1000 or 900 B. C. ³. These Talish weapons are similar to the Indian dagger in size and in shape of the blade as well as of the pommel of the hilt, and their hilts show cavities for incrustations; but they differ from the Panjāb dagger in that they show no forth-jutting angles at the hilt, which is, on the contrary, quite straight-lined (Fig. 26). A glance at the figures 28 to 31 will teach us that the dagger from the Panjāb seems to be still nearer connected with the daggers from Luristan (Figs. 28, 29), Nehavend, Kirmanshah, and Kashan, whose hilts all show the characteristic outline with forth-jutting angles. They belong to the same period as the daggers from Talish. In the graves of the uppermost stratum of Tepe Giyan near Nehavend a bronze dagger of the above described type was found (Fig. 30), the same stratum containing a few iron daggers and other objects which evidently were to be dated shortly before 1000 B. C. Contenau dates the whole stratum between 1400 and 1100 B. C. A dagger of the same kind was found by Ghirshman in an early iron age graveyard at Sialk, near Kashan in Central Persia, certainly not older than the 11th or 12th century. Finally one of two daggers found together near Kirmanshah and now in the possession of the British Museum, shows an inscription telling us that it was made during the reign of the Babylonian king Marduk-nadin-akhe, whose rule lasted from 1116 to 1101 B. C. (Fig. 31) ⁴.

All this entitles us to date the Panjāb dagger between 1200 and 1000 B. C. We gain thus another proof that India was subjected during this period to influences from Western Iran, from the region between Babylonia and Caucasia.

4. Antennae swords from the Ganges plain

In Fatehgarh on the river Ganges (Province of Agra and Oudh) thirteen copper swords were found, four of which, being in the possession of the Indian Museum at Calcutta, were published by Vincent A. Smith (Fig. 32). At Bithur on the river Ganges and in the Hardoi District some more were found ⁵. With all of them hilt and blade are of one cast. Six of the nine swords which have been either reproduced or described have got antennae hilts. Another antennae sword, probably also from Fatehgarh, is in the British Museum. The "antennae" are usually drawn to thin ends. Hilt and blade are in one without the slightest mark of separation, the blade being leaf-shaped with a distinct middle ridge. The largest of the swords published by Smith is about 74.5, the smallest 42 centimetres. The sword on dagger from Bithur, reproduced by Hirānanda Śāstri, is still smaller, being only about 37.5 centimetres in length (Fig. 34).

At Mohenjo-daro and Harappā no swords were found, as was to be expected, considering the remote period of these sites. From what we know about the history of its spreading in Western Asia, we may take for granted, that the

1. I am obliged to the courtesy of the Director of the National Museum of Antiquities in Edinburgh for allowing me to publish this photograph.

2. Petrie, *Tools and weapons*, p. 29, pl. XXXIV 52. Watzinger, *Denkmaeler Palaestinas*, figs. 50, 51. Bonnet *op. cit.*, pp. 64-70.

3. H. de Morgan, *op. cit.*, figs. 462, 637. J. de Morgan, *Mission scientifique etc.*, pp. 65-68; *La préhistoire orientale*, III, pp. 203-204, 268-269.

4. Godard, *op. cit.*, p. 38, pl. VIII, figs. 18, 19. L. Legrain, *Luristan bronzes in the University Museum (Philadelphia 1934)* pl. XI, fig. 42. C. J. Gadd, *More Luristan bronzes*, *British Museum Quarterly* VI (1932) p. 80, pl. XXX a; *Bronzes from North-West Persia*, *ibidem* VII (1933) pp. 44-45, pl. XVIII. G. Contenau et R. Ghirshman, *Rapport préliminaire sur les fouilles de Tépé-Giyan, près Nehavend (Perse)*, *Syria* XIV (1933) pp. 4, 10, pl. 1; *Fouilles du Tépé-Giyan etc.*, pp. 43-44, 76, 80. Ghirshman, *Rapport préliminaire sur les fouilles de Tépé Sialk etc.*, pp. 244, 245.

5. Smith, *op. cit.*, pp. 232, 237, 241, pl. III. Hirānanda Śāstri, *op. cit.*, pp. 3-5, pls. II, IV. J. Coggin Brown, *Catalogue raisonné of the prehistoric antiquities in the Indian Museum at Calcutta (Simla 1917)* pp. 144-145, 152.

sword—a weapon of undoubted European origin—cannot have reached India before the 13th century. Nevertheless we may not assume too late a date for the Indian copper swords, as iron is mentioned already in the *Atharvaveda*.¹

To my knowledge, swords with antennae hilts have not yet been found in Western Asia. However, the Koban Culture of North Caucasia produced bronze daggers with antennae hilts (Fig. 33), so similar to those of the Indian swords, that we are bound to presume some connection.² Besides the hole in the hilt, the only other difference in shape of real importance is the distinct separation of hilt and blade with the Koban weapons, while in India they are all in one. With a one-cast weapon this feature could, however, easily have been dropped in the course of time. An antennae dagger from Bithur, reproduced by H. Śāstrī, and another from Koban, belonging to the Museum at Saint Germain are exactly the same size. It is interesting that this weapon from Bithur has not got thin long antennae like the other Indian copper swords, but short blunt ones, just like the Koban daggers (Fig. 34).

From this we may gather that the Indian antennae sword, too, is due to Western influence, just as the trunion axe, the axe-adze, and the bronze dagger from the Panjab. This time the influence seems to have come from the region of the North Caucasian Koban Culture. Therewith the date of this influence appears to be fixed: 1200 to 1000 B. C. A connection of the Indian swords beyond the Caucasus with the European swords of the late bronze age is not to be doubted. We may call to mind that in Egypt, too, the European sword turns up shortly before 1200 B. C., at a period when warriors from the North in great numbers came to that country, partly as invading enemies and partly as mercenaries of the Egyptian kings.³

5. Harpoon-heads from the Ganges plain

A number of harpoon-heads were found in the Western Ganges region, most of them of copper, a few of bronze. We are able to discern two types. With both types the round haft finds its continuation in a strong middle ridge reaching to the point. The blade of type I is symmetrically barbed through its whole length (Fig. 37). With the second type, half of its length is taken up by a simply barbed blade. Below this to the right and left of the haft there are two or three thorn-shaped barbs (Fig. 41).⁴

It is extremely probable that these harpoons from the Ganges region belong to the same period as the copper swords, though we cannot prove it as yet. Anyway, at Bithur, one of the principal find places of these harpoon-heads, a copper antennae dagger was found too, as mentioned before. The Indus civilization was devoid of harpoons.

Javelin-heads and arrow-points with simple barbs and a haft prolonged into a middle ridge were found in Transcaucasia (Fig. 38), Talish, and Luristan (Figs. 39, 42).⁵ They are exceedingly like the forepart of the second type of Indian harpoons (Fig. 41). Considering all the other connections between the two regions, we may well be allowed to put the question, whether type II of the Indian harpoons has not developed from javelin-heads like those of Transcaucasia, Northwest Persia and Luristan by simply adding a double row of barbs.

Some of the prehistoric rock paintings of the Kaimur Range, representing hunting scenes, show harpoons similar to those found in the Ganges region. Cockburn, the discoverer of these rock paintings, thought that they represented

1. A. A. Macdonell and A. B. Keith, *Vedic index of names and subjects* (London 1912) I. pp. 31-32, 115, II, p. 398.

2. Chantre, *Recherches anthropologiques etc.*, pl. Vbis, fig. 2. Uvarov, *op. cit.*, pl. IX, fig. 1. J. de Morgan *La préhistoire orientale*, III, fig. 322 (2).

3. Max Burchardt, *Ein datiertes Bronzeschwert aus Aegypten*, *Præhistorische Zeitschrift* IV (1912) p. 233.

4. *Proceedings of the Asiatic Society of Bengal* 1868, p. 251. V. A. Smith, *The copper age and prehistoric bronze implements of India*, *Indian Antiquary* XXXIV (1905) pp. 231, 232, 234-235, 237-238, 242-243, pls. I, II, IV; *ibidem* XXXVI (1907) pp. 53-54, pls. VI, VII. H. Śāstrī, *op. cit.*, pp. 3-6, pls. I, II, III. Brown, *op. cit.*, pp. 142-143.

5. H. de Morgan, *op. cit.*, figs. 575, 621. Ivanovski, *op. cit.*, pl. VIII, figs. 27, 32, 34, pl. XV, figs. 27, 28. Godard, *op. cit.*, p. 45, pl. XIII. Hancar, *Kaukasus-Luristan*, pp. 50, 64, 67, 69, fig. 3. Gadd, *More Luristan bronzes*, pl. XXIX d.



26



27



28

Luristan



32



33



34



35



36



29



30



31

From Kermanshah in Persia



37



38



39



40



41



42



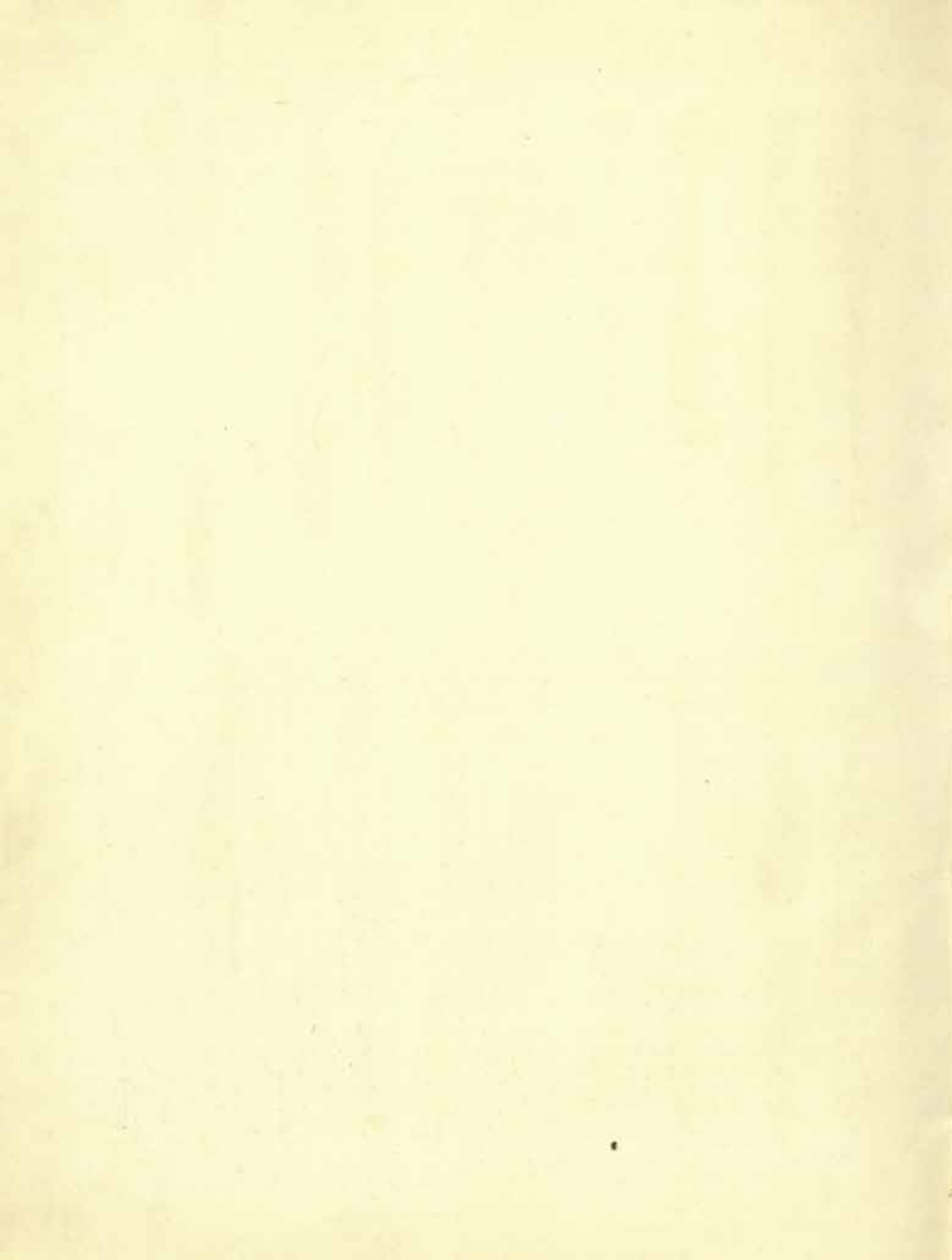
43



44

*Tape Giyan
with iron rings*

*Inscribed
made in the reign of
Darius - at the
16-110 (B.C.)*



harpoons made of wood with stone splinters fastened to them as barbs.¹ He may be right in some instances, type I of the copper harpoons having most likely developed from a similar stone age shape. But in other cases, especially in the rhinoceros hunting scene reproduced by him, we have, assuming that his drawings are correct, got to deal with a shape identical with type II and almost certainly of metal.

I presume that type II of the Indian harpoons resulted from the contact of the indigenous type I with the above mentioned javelin-heads of Western origin. The likelihood of this hypothesis would gain by far, once we could prove that similar javelin-heads were used in India too. Vincent A. Smith, in fact, mentions a bronze spear-head with simple barbs, probably found at Itāwa on the River Jamnā, and belonging, at that time, to the British Museum, though now, unfortunately, no more to be traced. He describes it as "a simply barbed lanceolate blade without any extra hooks or barbs".² It must have been very similar to the javelin-heads of Transcaucasia and Luristan. Cockburn further has reproduced a drawing of a lance from a cave-painting near Lohri, the shape of its head being absolutely identical with that of the Luristan and Transcaucasian javelin-heads (Fig. 40).³ It is extremely probable, that a form of weapon similar to the latter has indeed been used in India too. This gives us still another link between India and West Asia. Considering that the javelin-heads in question belong to the Transcaucasian Gandsha-Karabagh Culture, we may conclude that this connection, again, took place during the last centuries of the second millenium B.C.

Results and conclusions

We have succeeded in tracing the origins of five different prehistoric forms found in Northern India, all of them undoubtedly belonging to a later period than the Indus Civilization. Again and again we were led to state connections between India and the regions reaching from the Caucasus to Luristan. Ever again we were compelled to date these connections from 1200 to 1000 B.C. We may sum up the results as follows.

1. Trunnion axe : Coming from Transcaucasia by way of North Persia ; date 1200 to 1000 B.C.
2. Axe-adze : Originating from the Danubian regions, South Russia and North Caucasia, and come by way of North Persia ; date 1200 to 1000 B.C. ⁴

1. J. Cockburn, On the recent existence of *Rhinoceros Indicus* in the North-Western Provinces, and a description of a tracing of an archaic rock painting from Mirzapore representing the hunting of this animal, *Journal of the Asiatic Society of Bengal* LII (1883) Part II, pp. 58, 60-63, pls. VII, VIII ; Cave drawings in the Kaimur Range, *Journal of the Royal Asiatic Society* 1899, fig. 3. Rai Sahib Manoranjan Ghosh, Rock-paintings and other antiquities of prehistoric and later times, *Memoirs of the Archaeological Survey of India*, XXIV (Calcutta 1932) pl. XX b.

2. Smith, *Indian Antiquary* XXXIV, p. 241.

3. Cockburn, On the recent existence etc., p. 62, pl. VIII B. Cockburn thought that this drawing represented a spear with an iron head. I see no reason for this. It may have been of copper or bronze as well.

4. If in fact the axe-adze of Mohenjo-daro belongs to the late period of the Indus Civilization, as the Annual Report of the Archaeological Survey informs us, this would imply that the prehistoric city of Mohenjo-daro has not, as was supposed until now, been deserted during the third millenium B.C., but that it was still inhabited about 1200 B.C. However, I presume that this axe-adze may have nothing whatever to do with the ancient city and that it got only incidentally into its top layers.

3. Bronze dagger from the Panjāb : The region of origin of this shape is West Persia ; date 1200 to 1000 B. C.

4. Antennae swords : Ultimately to be connected with European swords, but strongly influenced by North Caucasian forms of the Koban Culture ; date 1200 to 1000 B. C.

5. Harpoon-heads of type II or the simply barbed spear-heads preceding them : Region of origin Transcaucasia and West Persia ; date 1300 to 1000 B. C.

It is hardly to be doubted that trunnion axe and axe-adze were brought to India by the same ethnical or cultural wave, both these implements occurring within one and the same period at Tureng Tepe in North Persia. Whether this presumption will prove true for the other three forms is not yet confirmed, though it seems most probable. We may not as yet say with certainty whether these five shapes have been brought to India by trading intercourse or by an ethnical migration. Both alternatives are possible. However, I think that there are far more reasons speaking in favour of the latter, and it is this one I am going to discuss.

We shall be able to appreciate the full import of these proofs of cultural intercourse between India, North Persia and the regions between the Caucasus and Luristan during the time from 1200 to 1000 B. C. if we consider the historical facts of the same or a slightly earlier period, familiar to us from Egyptian and West Asiatic written documents. We know that during the 15th and 14th centuries B. C. Indo-Aryan princes and warriors ruled in Northern Mesopotamia, Syria and Palestine, above all in the Mesopotamian kingdom of Mitanni. Moreover, should it prove true, as it probably will, that the Indo-European words in the Kassitic language are Indo-Aryan, this would give evidence of Indo-Aryan colonisation of West Asian regions as far back as the first centuries of the second millenium B. C.

The fact that the Indo-Aryans in Mitanni and Syria were only a small number of conquerors renders it very probable that the great masses of the Indo-Aryan population from which these warriors had swarmed out, had remained farther north or north-eastward, in Kurdistan, Armenia, or Transcaucasia. Hüsing presumed that the genuine abode of the Indo-Aryans during the Mitanni period must have been Armenia. Kretschmer has brought forth a series of arguments to the point that Indo-Aryans resided in Armenia and Eastern Asia Minor. He even thinks that the Scythian name for the Caucasus, recorded by Plinius, Croucasis, may be derived etymologically from an Indo-Aryan root, which would be another

proof of Indo-Aryan tribes having aboded for a longer period in the neighbourhood of these mountains.¹

Our scrutiny of archaeological finds from Northern India has led us on to the track of an ethnical or cultural wave, to be dated between 1200 and 1000 B. C., a wave we were able to trace back into just those regions of Western Asia where in all probability Indo-Aryans resided during the 14th century B. C. This may justify us to raise the question whether this wave could not have been the same that brought the Indo-Aryans from Western Asia to India, and whether the archaeological finds treated here, might not be considered as traces of this migration.

The question has often been discussed, whether the Indo-Aryans who took such a prominent part in the history of Western Asia during the 15th and 14th centuries, were the direct ancestors of the Vedic Aryans of India, or whether they represent only a side-branch, separated at an early period from the main bulk of the people. Both eventualities are equally conceivable. Should it, however, prove possible to discover in a larger measure traces of West Asian linguistic and cultural influence in the idioms and civilizations of the Aryans of India, we might presume with a high degree of probability that the Vedic Aryans were indeed the true descendants of the Aryans of Western Asia.

In fact, Porzig thought to have found quite a number of West Asian linguistic and cultural traces in India. He came to the conclusion that "the Aryans found in Mitanni were no detached branch, but kept in closest touch with the main bulk of the people. For all Aryans, including those who later populated parts of India, have been subjected to influences which could only have occurred in Mitanni or its neighbouring regions." Kretschmer was able to disclose still more important signs of influence from Asia Minor among the Aryans of India, and Wüst suggests, by reason of the relatively numerous traces of West Asian influences in the 8th maṇḍala of the R̥gveda, that this maṇḍala was written in Mitanni during the 15th or 14th century.²

1. Georg Hüsing, *Die Inder von Boghaz-koei*, *Prace lingwistyczne ofiarowane Janowi Baudouinowi de Courtenay* (Krakow 1921) p. 161; *Die Wanderung der arischen Inder*, *Mitteilungen der Anthropologischen Gesellschaft in Wien* LVII (1927) Sitz. Ber., pp. 121, 123. Paul Kretschmer, *Der Name der Lykier und andere kleinasiatische Voelkernamen*, *Kleinasiatische Forschungen I* (1930) pp. 6-7; *Weiteres zur Urgeschichte der Inder*, *Zeitschrift für vergleichende Sprachforschung*, Neue Folge LV (1928) pp. 92-101.

2. W. Porzig, *Kleinasiatisch-indische Beziehungen*, *Zeitschrift für Indologie und Iranistik V* (1927) pp. 265-280. P. Kretschmer, *Varuṇa und die Urgeschichte der Inder*, *Wiener Zeitschrift für die Kunde des Morgenlandes XXXIII* (1926) pp. 1-22; *Indra und der hethitische Gott Inaraz*, *Kleinasiatische Forschungen I* (1930) pp. 297-317; *Weiteres zur Urgeschichte der Inder*, pp. 75-92, 96-97. W. Wüst, *Ueber das Alter des R̥gveda und die Hauptfragen der indo-arischen Frühgeschichte*, *Wiener Zeitschrift für die Kunde des Morgenlandes XXXIV* (1927) pp. 171-177.

The great number of traces of ancient West Asian linguistic and cultural influence in Aryan India, disclosed by Kretschmer, Porzig and Wüest, and those pointed out at an earlier date by Oldenberg and B. Geiger,¹ are paralleled now by the archaeological evidence commented upon. The descendance of the Vedic Aryans of India from the Indo-Aryans of Western Asia gains thereby greatest probability.

A I beg to be allowed to assume for the time being as a certainty the hypothesis, that the archaeological finds we discussed, are in fact traces of the Indo-Aryan migration. Now let us see, which conclusions we are able to draw from this.

The relations of the Indian finds as well as of those from Hissar IIIc with the Koban Culture of North Caucasia do not permit us to assume a date earlier than 1200 B. C. However, the complete lack of any trace of iron in Hissar IIIc excludes with nearly absolute certainty any period later than about 1000 B. C. So the migration of the Indo-Aryans must have come to pass—according to our hypothesis—between 1200 and 1000 B. C. At the same time it becomes evident that this migration did not begin in Mitanni, but was started by a branch of Indo-Aryans living farther north or north-eastward, in Kurdistan, Armenia, North-west Persia, or Transcaucasia, i. e. in the regions to which all archaeological traces pointed back as to their land of origin, and where, as mentioned before, the main bulk of the Indo-Aryan people probably aboded during the Mitanni period.

Moreover, the finds we commented upon, yield indications as to the roads along which the Indo-Aryan migration progressed. Brunnhofer, Hüsing, Hillebrandt, and Wüest have mentioned numerous and, to my mind, absolutely convincing instances, proving that the Vedic Aryans reached India by way of Northern Iran and that on their way they aboded some time in the frontier-regions of Iran and Turan, where they came in touch with the Parthians and fought Dahas and Parnians.² And in this very same region, the only one where the Indo-Aryans could have come across these peoples, we have been able to ascertain, at Tepe Hissar and at Tureng Tepe, distinct traces of Caucasian and Transcaucasian influence, among

1. H. Oldenberg, *Die Religion des Veda* (Berlin 1894) pp. 194-195. Bernhard Geiger, *Die Amesä Spentas*, *Kais. Akademie der Wissenschaften in Wien, Philos.-histor. Klasse, Sitz. Ber.* CLXXVI, 7. Abhandlung (Wien 1916) pp. 139-163.

2. H. Brunnhofer, *Urgeschichte der Arier in Vorder-und Centralasien* (Leipzig 1893). G. Hüsing, *Voelkerschichten in Iran*, *Mitteilungen der Anthropologischen Gesellschaft in Wien* XXXXVI (1916) pp. 201-202; *Die Wanderungen der arischen Inder*, pp. 122-123. A. Hillebrandt, *Zur vedischen Mythologie und Voelkerbewegung*, *Zeitschrift für Indologie und Iranistik* III (1924) pp. 11-12, 15-16, 22; *Vedische Mythologie*, 2nd edition (Breslau 1927/29) I, pp. 499-519, II, pp. 239-248. Wüest, *op. cit.*, pp. 177-182.

them two shapes, axe-adze and trunnion axe, both of which have reached India too. The inhabitants of Hissar IIIc were certainly no Vedic Aryans. The earth-burial, practised without exception, and the complete lack of any signs of cremation, are sufficient proof for that. Still, is it really too audacious to presume that the South Russian, Caucasian, and Transcaucasian shapes were brought along from the West to North Persia by the Indo-Aryans, or other nations taking part in their migration, and that here we have to deal actually with traces, may be only with indirect ones, of that great ethnical wave whose progress lead the Indo-Aryans to India ?

There is indeed one very strong argument in favour of the assumption that all the shapes of weapons, tools, ornaments, and ritual objects from Hissar IIIc and Tureng Tepe we commented upon—trunnion axe, axe-adze, copper fork, dagger (or spear-head) with stop, disk-headed pin, racquet-pin, double animal-protomes, wand-shaped sepulchral idols—did not primarily form part of the local civilization, but were of foreign origin : Neither at Shah Tepe near Astrabad, distant 21 kilometers only from Tureng Tepe, nor in the upper strata of Anau III, has a single specimen of the afore mentioned forms been found, though the cultures of both these sites are closely related as well as contemporary with those of Tureng Tepe and Hissar III.¹ This can only be explained if we assume that these forms were of external origin and that they were only taken up by the inhabitants of such places as came in close contact with the foreign invaders, to whom they were special. Arne has recently uttered the conjecture that the civilization of the gray-black ceramics in the steppes near Astrabad (Shah Tepe, Tureng Tepe) may have been destroyed by the first waves of immigrating Indo-Europeans.² Apart from Arne's much earlier datings, this coincides absolutely with our conception. However, we may conclude from the presence of the above mentioned Western forms at Hissar IIIc and Tureng Tepe, that these sites had been in touch with the invaders for a longer period before their ultimate destruction.

On the other hand, the residence of the Indo-Aryans in North Iran and the region of the Turkestan frontier cannot have lasted an unlimited time. At the very utmost we might give it two hundred years, though I personally am inclined to believe that the whole migration of the Indo-Aryans from Northwest Persia, Armenia,

1. Cf. Hubert Schmidt, *The archaeological excavations at Anau, Explorations in Turkestan*, edited by Raphael Pumpelly (Washington 1908) I, pp. 104-186, and T. J. Arne, *The Swedish archaeological expedition to Iran 1932-1933*, *Acta Archaeologica* VI (1935) pp. 1-48.

2. T. J. Arne, *La steppe turkomanne et ses antiquités*, *Geografiska Annaler* XVII (1935) p. 42.

or Transcaucasia to India did not take much longer than half a century. Considering that the distance they had to cross is approximately the same the Vandals had to travel when migrating within less than thirty years from Pannonia through Central Europe, France and Spain to Africa, fifty years or may be less for the Indian migration will not seem any more improbable. A domicile of a few decades in North Iran would well suffice to engrave into the minds of the people the memory of the battles against Dahas and Parnians which has left its sediment in the *Ṛgveda*. Here, too, we may compare the short period of the "Heroic Age" during the Great migration which has left so deep an impression on the minds of the Germanic people and is still reflected by their poetry.

Sir Aurel Stein has pointed out, that the mentioning of two rather unimportant rivers like Krumu and Gomati (Kurram and Gumal) and their affluents *Yavyāvati* and *Hariyūpiyā* (Zhob and Hariob) in the *Ṛgveda*, might permit us the conclusion, that the Aryans, when immigrating into India, aboded for a longer period in the region of these rivers, i.e. in *Waziristān*.¹ It may be mere chance that the only trunnion axe known from India was found on the river Kurram, but still it would seem a rather significant chance. If anywhere, here is the region, where excavations might yield important results concerning the immigration of the Aryans into India and the culture they brought with them.

What may have been the historical events which caused the Indo-Aryans to migrate from their seats in the Northern parts of South-west Asia where they had lived for at least three centuries, perhaps even for half a millenium or more? We might be inclined to accept the troubles which caused the destruction of the Mitanni empire in the second half of the 14th century, as the primary impulse. But besides that this date would seem about a century too early, we are not at all sure that the Indo-Aryans from the North who undertook this migration had ever belonged to the Mitanni empire. From the chronological point of view another possibility, pointed out by Hüsing, would seem to me much more satisfactory, viz. that this migrating eastward of the Indo-Aryans was brought about by the so-called Aegean wandering, more specially by the invasion of Asia Minor and Armenia by tribes of the Phrygo-Thracian group of peoples, pushing forward towards the East in course of the 12th century A. D.²

1. Sir Aurel Stein, *An archaeological tour in Waziristān and Northern Baluchistān*, *Memoirs of the Archaeological Survey of India* XXXVII (1929) pp. 2-3; *The Indo-Iranian borderlands: their prehistory in the light of geography and of recent explorations*, *Journal of the Royal Anthropological Institute* LXIV (1934) p. 200.

2. Hüsing, *Die Wanderung der arischen Inder*, p. 123.

However, our archaeological investigations may suggest still another way of explaining the facts. The occurrence in India of swords, which ultimately must be derived from European swords of the late bronze age, and the shape of whose hilts is derived from a North Caucasian type, and the occurrence, in India too, of an axe-adze, whose ancestry may be traced back to the South Russian steppes and to the region of the lower Danube, is remarkable in itself. It will become still more remarkable if considered in connection with the North Caucasian and South Russian influences traceable in Hissar IIIc and at Tureng Tepe. As we have proved above, the South Russian, North Caucasian, and Transcaucasian influences in Hissar IIIc show up simultaneously. It is extremely probable that this holds true of India too, though we are not as yet able to prove it. This would mean, that in India, too, elements of South Russian origin (axe-adze), of North Caucasian (antennae swords), and of Transcaucasian and West Persian origin (trunnion axe, Panjāb dagger, harpoon-heads) made their appearance at the same time. We might explain this—always presuming that the archaeological finds commented upon are in truth traces of the Indo-Aryan migration—as follows :

The main bulk of the Indo-Aryans had resided since the first half of the second millenium B. C. in Kurdistan, Armenia, Northwest Persia or Transcaucasia. Occasionally conquering hosts swarmed out to the Kassites, to Mitanni, to Syria, hosts, who after a longer or shorter period were again and again absorbed by the conquered indigenous population. Sometime between 1200 and 1000 B. C., very probably about or shortly after 1200, an ethnical wave, pressing forward from South Russia across Caucasia, struck the main body of the Indo-Aryans, tearing them from their abodes and occasioning therewith the migration which finally led them through Northern Iran to India. The conglomerate of cultural elements from South Russia, North Caucasia, Transcaucasia and West Persia, we were able to discern in North Persia and India, would be easily explained by the numerous ethnical and cultural contacts which must have occurred in the course of these wanderings. For one thing seems to be certain, according to the archaeological circumstances : Not one nation only took part in the migration whose traces we have been pursuing, but quite a number of nations, the same as in the migration of the Phrygians, Philistines, etc. about 1200 B. C., in the migration of the Scythians and Cimmerians in the 8th and 7th centuries, and in the great migration of the Huns, the Alanes, and the Germanic nations in the days of the late Roman Empire.

We are not as yet able to ascertain which nation it was, that, coming from the North by way of Caucasia, gave the first impuls to the Indo-Aryan migration.

However, it seems to me highly probable that this impulse stood in causal connection with the "Aegean" migration, which must have come to pass about the same period or very little earlier, and that it was most probably occasioned by the same events, i. e. the expanding of the Thracians and Cimmerians over the Danube regions and South Russia. The nations partaking in this movement would thus have progressed on their way southward into Asia, along both the East and West coast of the Black Sea. Considered from this point of view, the migration of the Indo-Aryans to India does no more represent itself as a single event, but as a link in a large chain of powerful ethnical fluctuations, which shook the whole ancient civilization from the Pontus to Egypt and from Greece to the river Ganges, and brought about fundamental changes in the face of the old world.¹

Concerning Luristan, Hancar claims a distinct historical difference between its connections with the Transcaucasian Gandsha-Karabagh Culture and North-west Persian Talish Culture, and its relations to the culture of North Caucasia. According to his theory, the first named connections would have begun about 1300 B. C., and would have lasted till into the early iron age, while he as well as Koenig consider the North Caucasian cultural elements of Luristan to be due to the invasion of that country by Cimmerians and Scythians in the 7th century B. C.² However, if we recall that North Caucasian and Transcaucasian elements and partly even the same as in Luristan, are to be found in Hissar IIIc occurring simultaneously not only in the same stratum but in the very same graves, we may well raise the question whether this assumption of two temporally differing groups of Northern influences for the Luristan region is justified. There are many indications which, to my mind, are more in favour of the theory that swarms of the same host of wandering nations which, migrating eastward, eventually reached North Persia and India, branched off southward to Luristan, carrying along with them North Caucasian and Transcaucasian

1. Cf. the postscript at the end of this article.—I want to mention still another way of interpreting the archaeological state of things, but without crediting it with very much importance. We might assume that the main bulk of the Indo-Aryans had not yet reached West Asia about the middle of the second millenium, as we presumed before, but were still abiding to the North of the Caucasian mountains. The Indo-Aryans in Mitanni, Syria and Palestine would then have been only casual groups of warriors and conquerors, being in the same relation to the main body of their nation as were these Scythians who, in the 7th century, founded an empire in Armenia, Asia Minor, and Syria, while the chief masses of their people had remained to the North of the Caucasus. Should this have been the case, the Indo-Aryans themselves would, in all probability, have been the nation which, starting from the North about 1200 B. C., crossed the Caucasus and pushed on to India, carrying along with them not only foreign cultural elements which they had taken up on their way through Caucasia and Northwest Persia, but probably, too, some of the tribes they met in the course of their migration.

2. Hancar, *Kaukasus-Luristan*, pp. 87, 106-107, and *passim*. Koenig, *op. cit.*, pp. 19, 32.

cultural elements, all at the same period between 1200 and 1000 B. C.¹ This would explain the conformity of the archaeological finds from Luristan with those from Tepe Hissar as well as with those from Northern India.

Let us recapitulate :

Our research has proved with certainty that there must have been cultural intercourse of some kind between Northern India on the one hand, and West Persia, Transcaucasia, the Northern Caucasus, and South Russia on the other, during the period from about 1200 to 1000 B. C., and that distinct traces of these connections are to be found in North Persia (Hissar IIIc, Tureng Tepe). Everything else, all interpretation of these finds as traces of a great ethnical migration, their connection with the Vedic Aryans, is as yet only hypothetical, though this hypothesis has extremely strong reasons speaking in its favour. We shall only gain certainty by systematic field-work.

However, the aim of this essay would be achieved, should I have been able to persuade the scientific world, that archaeology, having stood aside for so long, deserves to take its place among the sciences who may help to elucidate the Indo-Aryan problem.

Before terminating, I want to express my sincerest thanks to Prof. Viktor Christian, Prof. Oswald Menghin, Dr. Franz Hancar, and Dr. Eduard Beninger, who all willingly obliged me by giving every information concerning the special sphere of their work, and by helping me to attain the necessary literature, otherwise hardly available in Vienna.

Postscript

I have repeatedly referred to the early iron age graveyard "B" at Sialk, near Kashan, Central Persia, which contained bronze daggers of the West Persian type, similar to the Panjāb dagger, and bronze forks, similar to those of Transcaucasia, Hissar IIIc and Tureng Tepe. In his preliminary report, R. Ghirshman had observed that distinct relations existed between the cultural contents of this graveyard, to be dated according to him in the 12th or 11th century, and the civilizations of Luristan on the one hand, of Talish, Transcaucasia, North Caucasia (Koban), the Danubian regions, Thrace, Thessaly, and the Phrygian period of Asia Minor on the other.² In a recent article, just published, he further expounds his views about the historical

1. Cf. the postscript.

2. Ghirshman, *Rapport préliminaire sur les fouilles de Tépé Sialk* etc., p. 245.

significance of these cultural relations.¹ He emphasises the radical difference between the civilization of graveyard "B" at Sialk and the other local cultural strata. At the same time he points out that a similar difference exists between the content of some graves of Luristan affinities at Tepe Giyan near Nehavend, West Persia, and all the earlier (or partly even contemporary) graves at that site. From all this he infers that graveyard "B" of Sialk as well as the "Luristan graves" of Tepe Giyan are to be considered as traces of a great ethnical migration which, starting from the regions of the lower Danube, passed through South Russia, Caucasasia and Western Persia, eventually reaching Luristan, while at the same time another wave went southward from the same point of origin and, after crossing the Bosphorus, invaded Asia Minor. The parallels between objects from Sialk "B" and others from Armenia, Transcaucasia, Koban, Thessaly (12th to 11th century), and the Phrygian strata of Gordion in Asia Minor, which Ghirshman produces in support of this hypothesis, are most convincing. He concludes by raising the question, whether the latest inhabitants of prehistoric Sialk, the people whose dead are buried in graveyard "B", might not have been the first tribes of Aryans to invade the Iranian table-land.

I need not say how perfectly the views of Mr. Ghirshman agree with the results attained above, concerning the date, the point of origin, and the way of that great ethnic fluctuation which ultimately seems to have caused the Vedic Aryans to move on to India, and concerning its synchronism with the "Aegean" migration of the Tracians, Phrygians, etc. It is true that Ghirshman, in ascribing graveyard "B" of Sialk to Aryans, thinks of Iranians, while we concerned ourselves with the ancestors of the Indo-Aryans. However, this is no contradiction, next to nothing being known as yet about the real nature of the early relations between Vedic Aryans and Iranians. I have deliberately avoided to refer to this question, the archaeological and historical evidence being, as yet, far too scant to allow us to tackle this difficult problem.

I owe to the article of Ghirshman a reference to two earlier papers, the importance of which for the subject treated here I confess to have overlooked.² In these papers G. Wilke pointed out a great number of most remarkable conformities between the early iron age civilizations of Caucasasia and the bronze age cultures of

1. R. Ghirshman, 'Notes sur les peuples et l'art de l'Iran préhistorique, *Revue des Arts Asiatiques* X (1936) pp. 33-36.

2. G. Wilke, *Archaeologische Parallelen aus dem Kaukasus und den unteren Donauländern*, *Zeitschrift für Ethnologie* XXXVI (1904) pp. 39-104; *Vorgeschichtliche Beziehungen zwischen Kaukasus und dem unteren Donauebiet, ein Beitrag zum Arierproblem*, *Mitteilungen der Anthropologischen Gesellschaft in Wien* XXXVIII (1908) pp. 136-171.

the Danubian regions. From these connections he inferred that the Cimmerians, starting from the region of the lower Danube, divided into two branches, one of them wandering southward and invading Asia Minor from the West, taking along with them the Thracians, Brigians, and Mysians, the other passing through South Russia and the Caucasian mountains to Transcaucasia and Armenia which they reached between 1250 and 1150 B. C. From these Eastern "Cimmerians" Wilke derives the Aryans (in the restricted sense of Iranians and Indo-Aryans), and he even supposes, much as I have done, that the migration of the Indo-Aryans from Transcaucasia or Armenia to India is to be considered as a direct continuation of that great movement which had come from the Northwest of the Black Sea. Wilke was wrong, of course, in identifying the Aryans with the Cimmerians, and many of his other details, too, will have to be rejected in the light of recent research; but on the whole, he shall probably prove to have correctly perceived the principal traits of the historical events. His archaeological evidence, as far at least, as the connections between Caucasia and the West are concerned, seems to corroborate our own results. Whether or not Cimmerian hosts, as early as 1200 B. C., crossed the Caucasus and invaded Transcaucasia and Armenia, as they actually did five hundred years later, cannot, at present, be proved nor denied. In the opinion of Dr. Hancar, the Cimmerians, at this early period, came at least as far as the valleys of the Northern slopes of the Caucasus, where they settled and produced the Koban Culture.¹ It is, thus, not impossible that the ethnic wave which, as I have expounded above, must have come from the North over the Caucasus about 1200 B. C., and seems to have struck the Indo-Aryans, causing them to move on to the East, may indeed have been Cimmerian.

1. Franz Hancar, Die Beile aus Koban in der Wiener Sammlung kaukasischer Altertümer, Wiener Prähistorische Zeitschrift XXI (1934) pp. 39-41.



Explanation of signs on map

- + Showing where trunnion axes of type IIIb have been found.
- " " axe-adzes with tubular collar have been found.
- ▼ " " daggers of West Persian type " " "
- U " " copper swords (India) and bronze daggers (North Caucasia) with antennae hilts have been found.
- A " " copper harpoon-heads of type I (India) and simply barbed bronze javelin and arrow-heads (Transcaucasia, Talish, Luristan) have been found.
- T. Tureng Tepe.
- H. Tepe Hissar.
- S. Tepe Sialk.

Plate XVII, Figs. 1-6.

- Fig. 1 : Trunnion axe from the Kurram Valley. (An. Rep. Arch. Surv. Ind.).
- Fig. 2 : Bronze dagger or spear-head, South Russia. (Tallgren, La Pontide préscythique etc.).
- Fig. 3 : Bronze or copper trunnion axe and daggers or—the two to the left—spear-heads, Tureng Tepe, near Astrabad, North Persia. (Wulsin, op. cit.).
- Fig. 4 : Double animal-protome, bronze, Kedabeg-Kalakent, Transcaucasia. (Ivanovski, op. cit.).
- Fig. 5 : Double animal-protome, copper, Tepe Hissar, North Persia. (Schmidt, op. cit.).
- Fig. 6 : Double animal-protome, bronze, Luristan. (Rexroth, op. cit.).
- Fig. 7 (p. 91) : Trunnion axes of bronze or copper.

Plate XVII, Figs. 8-14.

- Fig. 8 : Bronze axe-adze, Mohenjo-daro. (An. Rep. Arch. Surv. Ind.).
- Fig. 9 : Copper axe-adze, Zsibek, Transylvania. (National Museum of Hungary, Budapest).
- Fig. 10 : Copper axe-adze, Tepe Hissar, North Persia. (Schmidt, op. cit.).
- Fig. 11 : Axe-adze from the Upper Dniepr, Russia. (Tallgren, La Pontide préscythique etc.).
- Fig. 12 : Bronze pickaxe, Faskau, North Caucasia. (Museum für Voelkerkunde, Vienna).
- Fig. 13 : Bronze axe-adze, Assur, Mesopotamia. (Andrae, op. cit.).
- Fig. 14 : Copper axe-adze, Maikop, North Caucasia. (Rostovzev, L'âge du cuivre etc.).

Plate XVIII, Figs 15-20.

- Fig. 15 : Copper object, probably a pin-head, Tepe Hissar, North Persia. (Schmidt, op. cit.).
 Fig. 16 : Bronze pins, Luristan. (Godard, op. cit.).
 Fig. 17 : Bronze pin, Lower Austria. (Niederoesterreichisches Landesmuseum, Vienna).
 Fig. 18 : Copper wand, "sepulchral idol", in lead flask, Tepe Hissar, North Persia. (Pope, op. cit.).
 Figs. 19, 20 : Bronze "sepulchral idols", Luristan. (Godard, op. cit.).

Plate XVIII, Figs. 21-25.

- Fig. 21 : Copper wands, "sepulchral idols", and copper vessel used for fixing a wand, Tepe Hissar, North Persia. (Schmidt, op. cit.).
 Figs. 22, 23, 25 : Bronze pins, Koban, North Caucasus. (Uvarov, op. cit.).
 Fig. 24 : Bronze pin, Luristan. (Godard, op. cit.).

Plate XIX, Figs. 26-31.

- Fig. 26 : Bronze dagger, early iron age, Talish, North-west Persia. (J. de Morgan, *Préhistoire orientale*).
 Fig. 27 : Bronze dagger, Panjāb. (National Museum of Antiquities, Edinburgh).
 Fig. 28 : Bronze daggers, Luristan. (Godard, op. cit.).
 Fig. 29 : Bronze dagger, Luristan. (British Museum Quarterly).
 Fig. 30 : Bronze dagger, Tepe Giyan, near Nehavend, West Persia. (Contenau et Ghirshman, op. cit.).
 Fig. 31 : Inscribed bronze daggers, the inscription of the one to the right dating it to the reign of king Marduk-nadin-akhe of Babylon, 1116-1101 B.C., Kirmanshah, West Persia. (British Museum Quarterly).

Plate XIX, Figs. 32-36.

- Fig. 32 : Copper swords, Fatehgarh, United Provinces of Agra and Oudh, now Indian Museum, Calcutta. (Smith, op. cit.).
 35 Fig. 33 : Bronze dagger, Koban, North Caucasus. (Uvarov, op. cit.).
 Fig. 34 : Copper dagger, Bithur, United Provinces of Agra and Oudh. (Śāstri, op. cit.).
 33 Fig. 35 : Bronze pin, Koban, North Caucasus. (Uvarov, op. cit.).
 Fig. 36 : Copper object, probably a pin-head, Tepe Hissar, North Persia. (Schmidt, op. cit.).

Plate XIX, Figs. 37-44.

- Fig. 37 : Copper harpoon-head, Bithur, United Provinces of Agra and Oudh. (Śāstri, op. cit.).
 Fig. 38 : Bronze javelin-head, Transcaucasia. (Ivanovski, op. cit.).
 Fig. 39 : Bronze javelin-head, Luristan. (Godard, op. cit.).
 Fig. 40 : From the drawing of a spear in a cave at Lohri, Kaimur Range. (Cockburne, *On the recent existence of Rhinoceros Indicus etc.*).
 Fig. 41 : Copper harpoon-head, Raipur, Bijnor District, United Provinces of Agra and Oudh. (Smith, op. cit.).
 Fig. 42 : Bronze arrow-head, Luristan. (British Museum Quarterly).
 Fig. 43 : Bronze fork, Kalakent, Transcaucasia. (Hancar, *Kaukasus-Luristan*).
 Fig. 44 : Copper forks, Tepe Hissar, North Persia. (Schmidt, op. cit.).

A LONG ROLL OF BUDDHIST IMAGES*

By HELEN B. CHAPIN

Part III. Iconographical data : a description of the painting¹

The Imperial procession

The label (much worn) reads : Li Chên Huang Ti P'iao Hsin hua, i. e., "The Emperor Li Chên had this painting made."

The procession consists of six groups, as follows :

1. Eight barefooted warriors with halberds and sticks with fur (?) on top.
2. A standard-bearer, carrying a huge dragon shield in his left hand, attended by four officials (?), each bearing a different kind of spear or other tall weapon, a falconer and a boy with a water-pot. The boy is the only one of the group who wears shoes.²
3. Seven officials with very tall black hats edged with gold, one of them carrying an ink slab and two brushes. All wear elaborate costumes and shoes.
4. Another group of officials, four in number, three with tall black hats, one of whom holds a banner of ribbon. The fourth is dressed in a tiger skin coat piped with red, with a red crenellated border.
5. The Emperor in gorgeous robes, wearing a very high red and gold crown and red shoes. On his robe, are the ancient symbols described in the Shu ching, mountains, hatchet, the symbol 畝, grains or rice, a pair of dragons, and the sun and the moon. Both the latter are represented by discs; that of the sun is red and has a crow in it, while that of the moon is white, enclosed by a ring of silver, and has either a toad or a rabbit in it. The Emperor carries an incense burner in his right hand and a rosary in his left, as befits a devotee. He is immediately attended by two men, each wearing a black and red hat and carrying a huge fan or banner on a pole, and by two boys with bobbed hair, one bearing a flywhisk and a drum (or cup?), the other holding in both hands something which looks like a sword wrapped in cloth.³

* continued from JISOA, vol. IV, pp. 1-24.

1. taken from notes made in Peking, 1931-2 (incomplete).
2. Even to-day, several of the indigenous tribes of the South, for example, the Miao, do not wear shoes. Needless to say, the shoes constitute a very important part of the dress to the Chinese, who, men or women, never exhibit the bare foot in public. An exception is perhaps to be noted of some of the Southerners whose only home is a boat.

3. In the Yunnanese painted scroll formerly in the possession of Yamanaka and Company, which I saw in New York, and of which I have photographs, the minister of the ruler Shun Hua-chên (Chung Hsing) is represented carrying a sword which the text inscribed on the painting tells us was handed down from Chang-lo-chin-ch'iu, who, according to the Nan Chao yeh shih (NCYS-Ch, chuan I, page 9 a; NCYS-Fr, page 31), received from T'ai Tsung of T'ang in A. D. 649 the investiture of Shou-ling Ta Chiang-chün, or Grand Marshal Commandant-in-chief. Shun Hua-chên reigned from 897 to 902. It is possible that the boy in our painting is represented as carrying this very sword.

6. In front of the Emperor, a high official in a tall hat, black, red and gold, with two black streamers, dressed in gorgeous robes, carrying a sword in his left hand and looking back at the Emperor. He is accompanied by a monk holding a begging bowl and a small boy in a gold coat with a collar.

The pantheon

The labels (partially illegible) read: *Ta sheng tso chih ? ?* and *Ta sheng yu chih ? ?*. In all probability, the two blanks in each case should be filled by the characters *Chin-kang*, which corresponds to the Sanskrit *vajra* (thunderbolt). The inscriptions would then respectively read: "The Great Holy *Vajrapāṇi* (holder of the vajra) of the left" and "The Great Holy *Vajrapāṇi* of the right."

Two red *Vajrapāṇi* stand facing each other, each with a white-skinned attendant with red hair dressed in armour and another dwarf attendant (in one case, white; in the other, red; both with black hair) and a white lion. Each group is on a conventionalized rock near a river (?) bank.

Second group. The Temptation of the Buddha by *Māra*. The scene, which is not labelled, shows in the upper portion many demons with various kinds of weapons. The Buddha is seated in *bhūmiśparśa mudrā* on kusa grass on a throne, upheld by two small attendants. The bodhi tree is not represented. In front, apparently running around on the extension of the base of the throne, is seen a female figure, probably the earth goddess, whom the Buddha has just called to witness his worthiness. To the proper right, is a torch bearer; to the proper left, are demons in the act of dropping their weapons and taking to flight. Below, in the centre, *Māra*, dressed in armour, is seated, writing on the ground. In India, Dr. Coomaraswamy informs me, this attitude is a mark of failure, of disappointment. With *Māra*, are seven ladies, probably his daughters (suggesting the seven passions), although most accounts of the Temptation mention only three. Below, to the left, are a man with a bow and two children; to the right, are three seated figures, possibly—if the seven are not—intended for *Māra*'s daughters.

Third group. The central figure is a divinity of natural flesh colour with four heads, each of which is provided with three eyes, and eight arms. A halo of fire, in which birds' heads are seen, surrounds him. Each top hand holds a sword, each second hand, a vajra, each third, a spear, while the two fourth hands are joined in a *mudrā* in front. He has two legs and wears snakes for bracelets and anklets. He is accompanied by four attendants, two of whom are *Brahmā* (with a conch; he should hold a mirror) and *Indra* (with flowers). Both *Brahmā* and *Indra* have headdresses of a type which occurs in the Tun-huang paintings. In front, is a dish containing jewels.

Fourth group. The label reads: *Tso chih ch'ing lung*, "The Green Dragon on the left." The dragon king, in human form, dressed in armour and holding a halberd, stands on a rock in the midst of a blue sea. Beside him is the Green Dragon. He is attended also by a white monster holding a vase and by a beautiful woman, who holds in her raised hands a dish of lotus petals (the lower right corner) and above, by the wind and thunder gods—the latter with bats' wings—and the lightening goddess (*Lieh Ch'üeh*) clasping the mirrors by means of which she directs flashes to her victims. In the group are also a whiskered gentleman with a brush and scroll to the left and a white-haired old man with a bowl and grasses (?) to the right. This latter may be a rain god; and what I have called tentatively grasses may be intended for a willow branch. The Green Dragon precedes Buddhism in China as the force or god who presides over the East.

Fifth group. The label reads: *Yu chih-pai hu*, "The White Tiger on the right." The Tiger King stands on another rock in the same sea, facing the Green Dragon. He is dressed in armour and holds a naked sword in his right hand. Above him soars the White Tiger, looking like a dragon, except that he has hair instead of scales. The king is attended by a man in a black cap and top boots, who holds an open scroll in his hands, and by a *Nāgini*, dressed in white, with a single white snake—a jewel on its head—rising behind and above her human head. She holds a dish containing a large jewel. The man attendant is in the lower left corner; above him is a human figure, with three birds' heads on its single body, holding a bottle (?) made out of a tiger skin. The *Nāgini* stands on the water to the proper left of the king. The White Tiger is, of course, one of the Gods of the Four Directions, he who guards the West; but because two of these are missing, together with two of the group of the Eight Great Dragon Kings, he is here included, with the Green Dragon of the East, among the Eight Great Dragon Kings.

Sixth group. The label reads: *Pai-nan't'o lung wang*, "The dragon king Upananda." The dragon king, whose body is human and gold in colour, who has a hood of five snakes, each head surmounted by a jewel, is seated in

lalita āsana on his own tail which rests on the surface of the water. He holds a cluster of flowers in his right hand. In attendance on him, are two Nāgas with heavy eyebrows, moustaches and beards, whose noses have a Jewish contour, and four Nāginis, of whom the Queen alone has three snake heads above her human one, the others having only one each. She holds in both hands a vase containing jewels. Whereas the King is gold in color, all his attendants are flesh-coloured. Below are two servants: to the right, a cock-headed individual holding a dish of jewels (?) in his right hand and a spear in his left, and to the left, a Nāga holding a red box (?). Between them is a Nāga's head (?) appearing above the water.

Seventh group. The label reads: So-chieh hai lung wang, "The Dragon King of the So-chieh sea." This dragon king is like the preceding except that he has nine snake heads above his human one instead of five, and is attended by six Nāginis, one of whom has three snake heads above her human one. She holds a red vase full of jewels. Immediately in front are the same two attendants as in the preceding picture, in this case, far enough above the surface of the water to show their human bodies merging into those of snakes; the cock-headed personage is holding a spear in his right hand and three jewels (no dish) in his left. The Nāga holds a dish of jewels. Between the two is a conch shell from which a snake's head emerges. Below to the right, is an ox-headed, red-bodied, hairy individual, holding a trident in his left hand seated on a rock. To the left, is a flesh-coloured personage with a tiger's head, seated on another rock.

The eighth to the eleventh group. These groups are unlabelled, and the central figure of each is a dragon king. They may possibly be touched up, or they may only seem so because they are less stained than the preceding images, for the work is good. They are in a somewhat different style and may be entirely from another hand. All four are much further from Indian models than those just described. The first of these four, the fifth of the Eight Great Dragon Kings, is in full human form—no snake heads—with a white beard and white hair. He is partially clothed in armour, and wears black boots up to his knees. He holds a mace in his right hand and a transparent circular object in his left. Beside him is a gray dragon, and behind him is a dragon-like, yet half-human individual, holding a dragon banner. In the lower right corner, a peculiar kind of sea-monster holds a transparent bowl in which a number of jewels may be seen¹.

The twelfth group. The label reads: T'ien wang Ti-shih chung, "The Heavenly King Indra and his retinue." Indra, in flowing robes, holding an incense burner in his left hand, advances towards the left, attended by a standard-bearer, six ladies and an official. Most of the figures and faces in the group have been touched up, but the standard-bearer is the original, very expressive and good, and Indra himself also, I think.

The thirteenth group. The label reads: Fan wang Ti-shih, "King Brahmā Śakra." Brahmā advances from the left to meet Indra, carrying a fan in his right hand and attended by a standard-bearer, six ladies and an official. The standard-bearer's face and that of the official seem to be the original work; the others are re-touched. Musical instruments are shown flying through the air.

The fourteenth to the thirtieth group. These together constitute the group of the Sixteen Ārhat, or Disciples of the Buddha. A label gives the Chinese form—transliteration—of the name of each. It will be seen that, although they are in a different order from that in which Visser gives them,² each one corresponds with one in his list.

1. Chu-ch'ia Pan-t'o-chia Tsun-che, i. e., "The Venerable Cōṭṭa Panthaka." No. 16 in Visser's list, illustrated Plate XIV. 2. Ah-shih-to Tsun-che, i. e., "The Venerable Ajita." No. 15 in Visser's list. 3. Fa-na-p'o-ssu Tsun-che, i. e., "The Venerable Vanavāsi." No. 14 in Visser's list. 4. Yin-chieh-t'o-lo Tsun-che, i. e., "The Venerable Ingada (?)." No. 13 in Visser's list. 5. Na-chia-hsū-na Tsun-che, i. e., "The Venerable Nāgasena." No. 12 in Visser's list. 6. Lo-hu-lo Tsun-che, i. e., "The Venerable Rāhula." No. 11 in Visser's list. 7. Pan-t'o-chia Tsun-che, i. e., "The Venerable Panthaka." No. 10 in Visser's list. 8. Hsū-t'uan(po)-chia Tsun-che, i. e., "The Venerable Svapāka (Gopaka)." No. 9 in Visser's list. 9. No-chū-lo Tsun-che, i. e., "The Venerable Nakula." No. 5 in Visser's list. 10. Po-t'o-lo Tsun-che, i. e., "The Venerable Bhadra." No. 6 in Visser's list. 11. Su-p'o-t'o Tsun-che, i. e., "The Venerable Subhinda." No. 4 in Visser's list. 12. Chia-no-chia-po-li-chien-she Tsun-che, i. e., "The Venerable Kanaka Bharadvāja." No. 3 in Visser's list. 13. Chia-no-chia Fa-t'o Tsun-che, i. e., "The Venerable Kanaka Vatsa." No. 2 in Visser's list. 14. Fa-she-fu-to-lo Tsun-che, i. e., "The Venerable Vajraputra." No. 8 in

1. My notes do not give detailed descriptions of the other dragon kings.

2. *Op. cit.*, pages 58-9.

Visser's list. 15. Chia-li-chia Tsun-che, i. e., "The Venerable Kālīka." No. 7 in Visser's list. 16. Pin-tu-lo Ch'i-lo-chien-she Tsun-che, i. e., "The Venerable Piṇḍola Bharadvāja." No. 1 in Visser's list.

My notes do not include descriptions of the Ārḥats, but from photographs which I have, I will describe briefly though necessarily without reference to colour—the last two, Kālīka and Piṇḍola Bharadvāja. Kālīka is seated on a rock behind which are swirling waves. In front, on the other hand, there is level ground, on which to the right stands a hooded monk, with heavy black eyebrows, moustache and beard, his hands joined (not añjali mudrā), and out of which to the left, grows a clump of lilies. The rock on which Kālīka is seated, apparently on a cushion of flowers, provides him with a back and also, in the form of a projection, with a stand for a dish of fruits (?). Kālīka himself is presented as powerful of frame, though by no means young (he is wrinkled), with well-shaped head, all shaven and shorn, and bushy eyebrows. He wears a monk's robe which leaves his right shoulder bare and the outer "patched" garment of the monks which partially covers the bare shoulder. On his feet are sandals. His proper right hand rests on the rock, and his left on his knee. In the upper left¹ corner is another hooded monk, with a smooth face, wearing shoes.

The next and last of the group is Piṇḍola Bharadvāja (JISOA vol. IV, Pl. I, Fig. 3.) His face is individual and expressive. He sits in the meditation posture on a rock in a milder sea (there is certainly something missing between the two figures; perhaps the remounting is responsible for the changes in the order of the Ārḥats and the placing side by side of these two). He has a scarf tied around his neck over his monk's robes. His shoes are before him on the rock, and in front, resting on land separated by only a very little from the rock, is a four-legged table, quite bare and empty. In the lower right corner, is an attendant with bare feet, wearing a skirt and a cape with a pleated ruffle. He holds a tall bamboo staff. In the background, is a very interesting landscape with innumerable mountain streams flowing into the sea which extends also throughout the background of the following picture.

The thirty-first group. Śākyamuni Buddha on a thousand-petalled lotus, possibly as performing the Great Miracle of Śrāvastī. The label reads: Wei Fa-chieh yu-ching teng, i. e., "For the sake of reasonable beings (Sanskrit, pudgala) in the World of the Law." Śākyamuni Buddha, whose body is gold in colour, who is dressed in robes of three shades of red, whose right hand is in the dharmacakra mudrā, while the left is extended over his knee, is seated within a circular halo which rests on the pod of a huge lotus, the yellow stamens of which are shown around the lower half of the halo; from this centre extend the many petals of an enormous white lotus. On each petal and on the breast of the Buddha is a design, the top part of which is the same in every case, whereas there are many variations of the lower part. To the right and left of the lotus, extend rays of five (?) different colours. Just below the Buddha, outside the circular halo, on one of the white lotus petals, is a monk in a white robe, seated with a red scarf in his hands.* The whole is an apparition or manifestation due to the successful ritual of a sādḥaka, or adept, who, gold in colour and naked above the waist, kneels on his right knee, his hands in añjali mudrā, before an altar, on which are arranged a conch shell, a dish of lotus petals, a dish containing something indeterminable, a bowl filled high with rice, and a tall object, perhaps a candlestick. Above his head, is a garlanded cloud canopy. A golden thread goes from his heart to the lotus, to every petal of which it extends, as well as to the breast of the Buddha. To the right, kneels a Nāgini, with one snake's head (in which is a white jewel) above her human head; she holds a dish containing a jewel. The label to the left reads: Nan-wu Shih-chia Fo hui, i. e., "Adoration to Śākya (muni) Buddha!"

It is just possible that the design repeated on the petals and on the breast of the Buddha with variations is a form of the Chinese character for long life, which it somewhat resembles (shou). If so, the question arises as to what connection the philosophy or magic back of this picture has with the worship of Amitāyus (the Buddha of Long Life) as practiced in Tibet. There the Lamas hold one end of a thread the other end of which is placed in the jar containing amṛta (the nectar of immortality), or something symbolizing it, resting in the lap of an image of Amitāyus. Another question which comes up is the possible relation of this picture to the thousand-petalled lotus in the head, which is supposed to burst open into full bloom upon the attainment of enlightenment. This theory, elaborated by the Tantric

1. i. e., the spectator's left. Hereafter in this paper, unless otherwise specified, left and right will mean the spectator's left and right.

2. I may here simply note the custom of honouring of images as well as living incarnations of divinities with scarfs, which obtains in Tibet. I do not know the origin of this custom.

Hindus,⁴ is also part of Buddhist yoga doctrines.⁵ If this supposition has anything of reality in it, the Nāgini to the right may represent Kuṇḍalinī, the serpent power (personified as a Nāga-goddess) residing in the Mūladhāra, or first centre, at the base of the spine. This power ascends during successful yoga through the four centres intermediate between the Mūladhāra and the topmost one; and when it, or she, i.e., Kuṇḍalinī, attains the highest centre, then the thousand-petalled lotus blooms and the adept experiences the bliss of samādhi. Though these questions remain to be answered, the manifestation is probably that of Śākyamuni performing the Great Miracle of Śrāvastī, in which he showed to the wondering heretics many replicas of himself, each seated in a thousand-petalled lotus. It is unnecessary to add that one and the same image may be associated with several different ideas or even themes.

The thirty-second to the forty-seventh group. These are monks, so-called patriarchs, of the Ch'an sect. Each bears a label, as follows.

1. Tsun-che Chia-yeh, i.e., "Kāśyapa, the Venerable." 2. Tsun-che Ah-nan, i.e., "Ānanda, the Venerable." 3. Ta-mo Ta Shih, i.e., "The Great Master (Bodhi)dharma." 4. Hui-k'o Ta Shih, i.e., "The Great Master Hui-k'o." 5. Seng-ts'an Ta Shih, i.e., "The Great Master Seng-ts'an." 6. Tao-hsin Ta Shih, i.e., "The Great Master Tao-hsin." 7. Indecipherable. It should read, Hung-jen Ta Shih, "The Great Master Hung-jen." 8. Hui-neng Ta Shih, i.e., "The Great Master Hui-neng." 9. Shen-hui Ta Shih, i.e., "The Great Master Shen-hui." 10. Ho-shang Hui (?) chung, i.e., "Hui-chung, the Monk." In all probability, the third character, at present illegible, was hui. 11. Hsien-che Mai-t'ao, i.e., "Mai-t'ao, the Worthy." 12. Shun-t'ao Ta ?, i.e., "The great Master (?) Shun-t'ao." 13. Fa-kuang Ho-shang, "The Monk Fa-kuang." 14. Ma-ho-lo-tso, i.e., Mahārāja." 15. Tsan-t'ao-to Ho-shang, i.e., "The Monk Tsan-t'ao-to." 16. Sha-t'ao-to.

Of these, Kāśyapa and Ānanda are well-known as disciples of the historic Buddha Śākyamuni. Bodhidharma is one of the most interesting figures in the study of Chinese Buddhism. According to Ch'an tradition, he is the 28th Indian and first Chinese patriarch, and brought the Buddha's begging bowl to China with him in A. D. 520. But Hu Shih has proved that he must have been in China before this date, say, about 470; he has also established the legendary character of much that is recorded of Bodhidharma.⁶ Hui-k'o, a Chinese monk, was his pupil; he lived from A. D. 486-493, and taught Seng-ts'an, the next in line, who died in 606. Then come Tao-hsin, whose dates are 580-651, and fifth in the list of patriarchs counting from Bodhidharma, Hung-jen who lived from 605 to 675. The sixth is Hui-neng, who had an immense influence on later Ch'an and on Zen in Japan. He died in 713. These six, from Bodhidharma to Hui-neng, constitute the group of the Six Patriarchs, constantly referred to in Ch'an writings, and often depicted in Ch'an art, for the most part, separately. Various anecdotes and legends concerning them may be found in Suzuki's *Essays in Zen Buddhism*. Shen-hui was a pupil of Hui-neng's; he died in 760. Hui-chung, who is probably meant to follow him in our list, was religious adviser to the Emperor Su Tsung, who reigned from 756 to 762, and also to his successor Tai Tsung, who ruled from 763 to 779. The others, I have so far failed to identify.

My notes do not include descriptions of these monks, but from the photographs which I have, I will give a brief account of Kāśyapa and Bodhidharma (*JISOA*, vol IV, Pl. I, Figs. 1 and 2) as they appear in the long roll necessarily, without reference to colour. Kāśyapa is seated on a rock in the midst of the same sea which extends behind the thousand-petalled lotus described above. He is holding the mantle of the patriarchate—received from Śākyamuni himself⁷—in both hands. His lips are opened in the smile with which he is said to have received the essence of Buddhism (Ch'an)

1. See Avalon, *The six centres and the serpent power*.

2. I can not now place my finger on a reference, but I recall having seen this statement in more than one book; and in the Lamaist temple Yung Ho Kung in Peiping (Peking). I saw a drawing indicating the six centres in the body.

3. am at present unable to explain the presence of this title in a list of monks.

4. Hu Shih, *The development of Zen Buddhism in China*, *The Chinese Social and Political Science Review*, Peking, 1931, pages 475-505. See also the account in Chinese by the same author called *P'u-ti-ta mo k'ao* (A study of Bodhidharma) in *Hu Shih wen ts'un san chi*, Vol. II, pp. 449-465. See also Pelliot, *T'oung Pao*, 1923, pp. 253-261.

5. according to tradition.

transmitted to him in silence by Śākyamuni¹. Ānanda, the second patriarch, who received the essence in his turn from Kāśyapa, is seen standing (a smaller figure) to the left in the foreground, his hands in añjali mudrā. In the background, a very precipitous rocky coast rises from the sea.

Bodhidharma—who does not in the actual painting immediately follow Kāśyapa—is seated on a large chair made of tree branches, placed under a gnarled old pine tree, overgrown with creeping vines. Bodhidharma as here portrayed differs from the usual later representations in being more slightly built and in lacking the hairiness which ordinarily distinguishes him. Until I recently came across a reproduction in the *Bijutsu kenkyū* for September, 1934, I did not know of another picture of Bodhidharma in the same mood. Mr. Watanabe, in this periodical, describes and reproduces a scroll done by Ch'i Sung and presented by him to the Emperor Jen Tsung in A. D. 1061. This scroll is divided into two registers in the upper of which are portrayed the Ch'an patriarchs, each one with a pupil, while in the lower register is written a biography of each patriarch illustrated above. The picture of Bodhidharma—with Hui-k'o kneeling before him, holding the bowl and robe, the insignia of the patriarchate, and nearby the severed arm on a table²—forms an interesting parallel to that in the long roll. Bodhidharma in these two representations—and only in these two among those which I know—is of slight build and lacks both the excessive hairiness and the glowering expression which are commonly associated with him. Since this scroll, the Chuan fa cheng tsung ting tsu t'u chuan, is an early Sung production, dating from the 11th century, the fact that Bodhidharma in the Palace Museum painting resembles the image in this scroll rather than the later type is an added indication that the long roll is the original painting of 1173-1176.

After this digression, let us return to our description of the Bodhidharma group in the Palace Museum painting. Before the Master, on a draped table, rests a tray which contains Hui-k'o's arm wrapped in cloth, while Hui-k'o, his left sleeve empty, stands respectfully on the right of Bodhidharma's chair. Bodhidharma is seated with his legs crossed and holds in his left hand a garment, intended for the mantle which formed with the Buddha's begging bowl the insignia of the patriarchate. Two episodes³ in Hui-k'o's career are thus—here as well as in the 11th century scroll—, in the manner common to Oriental and Mediaeval Western artists, combined in a single composition. Hui-k'o, refused by Bodhidharma, persisted, remaining outside his door during a snowstorm; and when even then, he was not admitted, he cut off his arm and sent it in to the Master as a token of his sincerity. He was accepted and became Bodhidharma's pupil. In the picture in our long roll, a peacock is perched on a limb of the old pine, while his mate is seen below, in front of Bodhidharma's chair.

All the Ārhats and all the Ch'an monks have haloes. I have noted that the landscapes forming the background of the series are very interesting.

The forty-eighth group. The label reads: Fan seng Kuan-shih-yin?, i.e., "The Indian monk, (an incarnation of) Avalokiteśvara." Unfortunately, my notes do not include a description of this figure, nor do I have a photograph. It would be interesting to compare this image with the Indian monk who was an incarnation of Avalokiteśvara, represented in the Yunnanese scroll formerly in the possession of Yamanaka and Company, of which I have photographs. See also the sixtieth group.

The forty-ninth group. This picture represents the visit of Mañjuśrī Bodhisattva to the layman Vimalakīrti. (JISOA, vol. IV, Pl. II). The label to the right reads: Wen-shu ch'ing wen, i.e., "Mañjuśrī begs to ask..." and is continued in the next label (just above and to the right of the figure of Vimalakīrti): Wei-mo Ta Shih, i.e., "The scholar and gentleman Vimalakīrti." Vimalakīrti was the ideal Buddhist lay disciple, who had position, wealth, wife and children, and yet lived without attachment. For the visit of Mañjuśrī to Vimalakīrti, see Waley, *op. cit.*, Introduction, pages XLI—XLII, and text, pages 91-2; Yetts, *Catalogue of the Eumorphopoulos collection*, vol. III p. 27.

To the right, Mañjuśrī is seated on a throne, his hands in añjali mudrā. Above him, unsupported in the air, is a canopy. He is attended by three monks and two devas, probably Brahmā and Indra; in front of the throne

1. See Suzuki, *Essays in Zen Buddhism*, 1st series, page 155.

2. Illustrated, *op. cit.*, Plate IX. The scroll at present belongs to the temple Kanchi-in, Kyoto.

3. The presentation of the severed arm to Bodhidharma and the transmission of the insignia of the patriarchate, between which years elapsed.

is his lion, white in colour, running. Between Mañjuśrī and Vimalakīrti is an offering table (?) or, more likely, a seat, which is empty. Further in the foreground, is a monk on a mat, his shoes off and to one side, kotowing to Vimalakīrti. He may be Śāriputra. Above, the Bodhisattva, bringing the inexhaustible bowl of rice, comes swiftly on a cloud, and behind him is a Deva carrying an unidentifiable object. To the left, is seated Vimalakīrti. He is seen in three-quarters view. With his right hand in a form of dharmacakra mudrā (?), he is engaged in dissertation or argument, for proficiency in which he is noted. His body is gold in colour, and he is dressed in a plain inner robe, over which is another with a design of flying storks in outline. He wears a large white turban with a flying streamer. He is seated on a mat on a raised platform with four legs, which is provided with a back and an armrest in the form of a dragon; on this, his left arm rests. Above him is a large canopy (or roof), supported by red pillars. The terrace on which his chair stands ends in a gold railing, beyond which is water and a distant shore. In the immediate foreground, though not directly in front of Vimalakīrti, who, as I have said, is seen in three-quarters view, and is looking toward Mañjuśrī, is another white lion, his head turned in the direction of the first. Behind Vimalakīrti and in attendance on him, is a lady dressed in a white dress with red trimmings, red shoes and a red headdress, holding a flower (?). In the foreground, to the extreme left of the whole group, are three bearded men, one of whom holds a staff in his right hand and is supported on his left by a boy attendant. The second, a stout gentleman, makes a mudrā, while the third carries a small white lion.

This whole group is exceedingly well executed. The figures of Vimalakīrti and the lady attendant may be compared with the painting of the same subject (the companion piece with Mañjuśrī is missing) exhibited in Tokyo in 1929 and reproduced in the catalogue, the name of which is *Tōsō genmin meigwa taikwan*.¹ The three bearded men probably represent Central Asian types.

The fiftieth group. The label to the right reads: *Feng wei Huang Ti P'iao Hsin hua*, i.e., "Painted for the Emperor and offered to him." Śākyamuni Buddha sits in the centre of a large group on a lion throne, his hands in dharmacakra mudrā, dressed in red and yellow robes. Behind him is a huge, plain white halo; and within this outer halo is an elaborate inner halo, shaped like a leaf of the Bodhi tree, encircling the head of the Blessed One. Above is a circular canopy with hanging garlands, to each side of which is a flying Apsaras, carrying flowers. Rays of light radiate in all directions from the Buddha. The whole group is in the shade of four (?) trees, the leaves of which are seen above the topmost heads. To the extreme right of the leaves is seen a phoenix and to the extreme left, a dragon. The Buddha is immediately attended by Kāśyapa to the proper left and Ānanda to the proper right, both standing. It will be noted that, in accordance with tradition, Kāśyapa is represented as an old man and Ānanda as a young one. Seated in meditation in front of the throne is a monk whose body is gold in colour, dressed in a yellow outer robe and pink under robe, with a dull gold scarf over his shoulders. His hands are in dhyāna mudrā. In the immediate foreground, are the seven gems of the Cakravartin: from right to left, 1. the wheel; 2. the general with a sword (or perhaps the minister ?); 3. the minister with a mace in the right hand and a jewel in the left (or perhaps the general ?); 4. the woman; 5. the cintāmani; 6. the elephant; and 7. the horse. To the right of the wheel, is an important person, probably a king or prince of Yunnan, kneeling with an incense burner in his hands. An attendant, in a black hat, stands nearby, his hands in añjali mudrā. Ānanda is dressed in a red and yellow robe and holds in both hands a ju-i; Kāśyapa, in purple and yellow, holds an indeterminate object in his left hand and makes the dharmacakra mudrā with his right. Behind Kāśyapa, is a Bodhisattva (or deva ?) with a large bowl, and between the two, is a child. Associated with Ānanda in the same way are two similar figures. The form of the Bodhisattva with the bowl on Kāśyapa's side is partially hidden by the larger figure of Avalokiteśvara Bodhisattva, standing on two lotuses, with a flask in his right hand, which is extended downward. He wears a crown, in which is the Dhyāni Buddha Amitābha, and elaborate ornaments. Opposite him, partially hiding the corresponding Bodhisattva with a bowl on Ānanda's side, is Mahāsthāmaprāpta, similarly dressed, with a crown in which is the Dhyāni Buddha, and with ornaments, one string of which he holds in his left hand, extended downward, while in his right, half-raised, he holds a jar (usually, a flask). To the right of Avalokiteśvara, in the foreground, is Mañjuśrī, seated on his lion, which is in a recumbent position. In the corresponding place to the left, making a trinity with Śākyamuni Buddha in the centre, is Samantabhadra, seated on his elephant, which is also reclining. Mañjuśrī holds the *Prajñāpāramitā sūtra* in his left hand and the Sword of Truth (with which he cleaves the clouds of ignorance) in his right.

1. This catalogue is not at present available to me, but I have a slide of this picture, made from one of the plates of the catalogue.

His face, even under its repainting, shows Central Asian influence—for example, in his almond eyes and pointed ears.¹ Both Mañjuśrī's lion and Samantabhadra's elephant rest on lotuses. A fat child to the right of Mañjuśrī holds a lotus in his left hand, at which the lion seems to be looking. Samantabhadra holds in his right hand a five-pointed vajra and in his left, a spray of flowers. Standing to his right, corresponding to the child with the lotus, is a Brahman with a long staff, probably Vasu Ṛṣi. We shall presently find Śrī Mahādevī, to whom he is so often pendant,² on the other side, though not in an exactly corresponding position. Behind Mañjuśrī, are four monks and Indra, the latter with an incense burner. Behind Samantabhadra, are four monks and Brahmā, the latter holding a fan. These eight monks, together with Kāśyapa and Ānanda, constitute the Ten Great Disciples. They are: 1. Kāśyapa; 2. Ānanda; 3. Śāriputra; 4. Subhōti; 5. Pūrṇa; 6. Maudgalyāyana; 7. Katyāyana; 8. Aniruddha; 9. Upālī; 10. Rāhula.³ Behind Brahmā is a child; and behind Indra, is another. To the right of Indra, is a bearded figure, wearing a crown, his hands in añjali mudrā; to his right is a red-haired and red-bearded figure, playing a sheng; and to his right, is Ekaśrīṅga, the One-horned Ṛṣi. To the Ṛṣi's right, is a six-armed, three-headed (each head with a third eye), elaborately crowned divinity, holding up the sun in his left hand and the moon in his right. He may be a form of Avalokiteśvara. To his proper left, between him and Indra, are two red-faced warriors in armour. To the spectator's right of Mañjuśrī, and of the same size as the Rider of the Lion, is Vaiśravaṇa, with a stūpa in his right hand and a trident in his left, standing on a rock. He is dressed in armour and wears a crown. He has moustaches and a goatee and decidedly almond eyes. On one side (spectator's right) is the figure of Śrī Mahādevī (probably pendant to Vasu Ṛṣi on the opposite side of the group, already described) and a very fat little boy, holding a jar of jewels. To the right of Śrī and under the divinity holding the sun and the moon is a large red Vajrapāṇi, holding a huge vajra aloft in his right hand. Above Mañjuśrī and above Samantabhadra are large two-tiered canopies each surmounted by a wheel, with ju-i shaped clouds beneath; these, together with the canopy over the central figure of Śākyamuni, indicate the trinity and help to unite the group.

On the other side, to the spectator's left of Brahmā, is an attendant, wearing a crown with peaks (like some in the Tun-huang paintings), and joining his hands in añjali mudrā. Above him is seen the head of a demon with red hair and tusks, on whose head is a skull. To the left, stands a crowned king in armour, his hands in a mudrā, with heavy eyebrows, moustaches and beard. Still further to the left is a man in white with a lion's skin on, the head appearing above his own and the mane flowing over his shoulders. He also is bearded, though not so heavily, and holds in his hands a hu. Below him are two personages, to the left a red demon with white tusks, who has a peculiar, unidentifiable headdress, and a crowned warrior king in armour, with elaborate sleeves, who holds in his left hand the long handle of a spear (?). In the foreground, to the left of Samantabhadra and Vasu Ṛṣi, in the position on the left side of the group held by Vaiśravaṇa on the right, is a warrior king, standing on a rock, who may be intended for Virūdhaka. He has a full beard all around his face, large, fierce eyes and a long, large nose. He is dressed in armour and wears a peculiar, triangular helmet, with what looks like a jester's bell on top. In his left hand, he carries a bow and in his right, an arrow. Behind him and to his proper right, is a short, scowling demon, with a pointed finial projecting from his headdress. He wears a skirt of tigerskin and tigerskin gaiters. To the extreme left of the group is a red Vajrapāṇi, corresponding to his double on the other side. While the one on the right holds a large vajra, however, his mate simply clenches his raised left hand and extends the other straight downward, every muscle contracted.

The main figures in the group are, as I have said, Śākyamuni Buddha and the two attendant Bodhisattvas Mañjuśrī and Samantabhadra. The Buddha is the largest figure in the group, as is to be expected; of the same size as Mañjuśrī and Samantabhadra, are Avalokiteśvara and Mahāśāhmaprāpta, the two Guardian Kings (Vaiśravaṇa and Virūdhaka) and the two red Vajrapāṇi. Kāśyapa and Ānanda are a little smaller; and most of the other members of the group are about the same size as the two monks, but, unlike them, are only partially visible. Vasu Ṛṣi, Śrī Mahādevī and the children are still smaller. The whole group is held together by the two Vajrapāṇi and by the background of the trees in foliage and the rays of light which form a kind of halo for the whole assemblage.

1. Dr. Ernst Waldschmidt, of the Museum für Voelkerkunde in Berlin, is wrong in saying, as he did to me personally in the spring of 1932, that only demons are represented with pointed ears. This case of Mañjuśrī is not by any means the only one in which sattvic divinities are so represented.

2. See Chapin, *op. cit.*, Part II, pages 111-129.

3. See Visser, *op. cit.*, page 29.

The label to the left of the group reads: nan-wu Shih-chia-mu-ni Fo hui, i. e., "Adoration to the assembly of Śākyamuni Buddha."

The fifty-first group. The inscription to the right of this group reads: Yao-shih Liu-li-kuang Fo hui, i. e., "The assembly of Bhaisajyaguru Vaidīryaprabhāsa Buddha!"

In the centre of the group, seated in bhadrasana (both legs pendant)¹ on an elaborate throne, a lotus under each foot, is the Buddha of Healing, Bhaisajyaguru, his hands in dharmacakra mudrā. He is dressed in an under robe of very pale blue with a border of pale yellow, another inner robe of pink, and an outer robe of red, with borders bearing a flower or tendril design in red and gold. This garment, of course, corresponds to the "patched" robe of the monk. His whole figure is enclosed in a transparent halo, of which the gold edge alone is visible. Behind the throne, which is so high and wide that it forms a kind of halo, are two trees, between which are two streamers of red and white waving clouds, seemingly emanating from the throne. Other similar rays issue from two Bodhisattvas, who stand nearby, one holding a bowl on the right, and the other opposite, holding a very tall monk's staff like that carried by Kṣitigarbha.

The throne is covered with intricate decorations and the high back has eight lobes. Crowning the topmost point is a jewel on a lotus, backed by a tiny halo shaped like the leaf of the Bodhi tree. At the point on each side where the lobes end and the straight sides of the back of the throne, which has no arms, begin, extends a dragon's head, with a jewel in its mouth and an elaborate pendant piece of jewelry. Below the dragon's head on each side, issuing from the back of the throne are two lotuses, on the upper of which is a boy riding a rearing goat, while on the lower is a swan.² The throne is two-tiered and at each of the two corners of both tiers is a jewel on a lotus, backed by a small halo shaped like the leaf of the Bodhi tree. In front of the throne is a dais, similar in construction and decoration, on which rest the two lotuses upholding the feet of the Buddha. In front of the dais, is a table with offerings: in the centre, a dragon encircling a rock set on a red-gold lotus stand; to the right, a rock and to the left, a dish of flowers (?). The floor is parquetry in diamond shapes and jewels lie scattered here and there over its surface. In the foreground, to the right of the table, a Bodhisattva kneels, his hands in añjali mudrā; opposite, is a monk kneeling, hands clasped one over another. With each of these two figures, is a child, seen from the back, worshipping.

To the Buddha's proper left, is Sūryaprabhā Bodhisattva, seated on a lotus throne under a canopy which hangs unsupported in the air. Besides a small halo around his head, he has also a halo formed of rays issuing from behind the upper part of his body. His feet rest on a lotus which in turn rests on a pedestal. In Sūryaprabhā's elaborate headdress, is a small red disc, the sign or symbol of the sun. In attendance, standing behind Sūryaprabhā, are two Bodhisattvas, the one to the left with hands in a form of dharmacakra mudrā, the other opposite with hands in a special mudrā, in which the two index fingers are joined above the rest which are locked. Below the latter is a monk standing, his hands in añjali mudrā. In the foreground, are two of the Twelve Generals.

To the proper right of the Buddha, opposite Sūryaprabhā, is Candraprabhā Bodhisattva, seated on a lotus throne under a canopy, which is unsupported in the air. Besides the Bodhisattva with the tall monk's staff, he is attended by two Bodhisattvas and by a monk who holds a rosary in his right hand and raises his left, clenched to form a fist. In front, are two of the Twelve Generals. Candraprabhā is similar to Sūryaprabhā, except that he has in his headdress a small white disc, the sign or symbol of the moon.

To the right, beyond Sūryaprabhā, is a group which includes Brahmā,³ holding a fan in his right hand and making a mudrā with his left. Behind this divinity, to the left, is a Chinese official, wearing a T'ang hat and holding a hu. To the right is Vaidraṇa, a broad figure with raised eyebrows and wrinkled brow. In his proper right hand, he holds a sword and in his left, a stūpa. He wears armour but, instead of a helmet, he has a peculiar crown composed of segments,

1. It may be noted in passing that the Bhaisajyaguru of the Kondo (Main Hall) of the temple of Horyūji is seated in the same way.

2. Similar, if I remember correctly, to the decoration of the throne of the Buddha in the large piece of T'ang embroidery exhibited by the Kyoto Museum.

3. In the headdress of this figure is an ornament somewhat resembling a Dhyāni Buddha, but I believe this resemblance to be fortuitous.

from which hang streamers to the right and left of his face. His halo is flame-encircled. To the right are two demons, dressed in tigerskins, one of whom holds a trident with flying streamers, and the other, an enormous club, like an Irishman's blackthorn. Between this latter demon and Brahmā, is an old man, holding an incense burner in his left hand. In the foreground, are four of the Twelve Generals and a bearded man, with a crown or headdress, his hands in añjali mudrā. The old man and the two demons are the only ones on the right of the Buddha who are without haloes.

To the left of the Candraprabha group on the other side—opposite Brahmā—is Indra, holding a ju-l. Behind is a man biting his under lip with his teeth, his hands clasped, and a warrior with a pike. A demon holds a standard with a bear on it. A creature like a dragon is partially seen. Besides the four Generals, who complete the group of twelve, there are two other warriors.

Four trees stand in the background, of which two are behind the throne of the Buddha and the other two are one to the right of the canopy over Sūryaprabha and the other opposite to the left of the canopy over Candraprabha. The canopies over the Bodhisattvas of the Sunlight and the Moonlight are elaborate two-tiered affairs, with lobed projections bearing jewels, one at each point, with a tripartite jewel at the very top. Jewelry and pleated ribbons and streamers hang from the canopies. The Buddha's high throne extends to the top of the picture and he has no canopy. At the extreme right and extreme left in the upper corner, is a bit of cloud.

(To be continued)

THE BENGAL SCHOOL OF PAINTING, TO-DAY

By NIHAR RANJAN RAY.

Indian art is only one aspect of the whole problem of our present cultural expression. It cannot be treated apart from our general problems of life and society.

The revival of Indian arts and crafts was brought about by the genius of one man, Abanindranath Tagore, who with his chief disciple, Nandalal Bose, supplied the initiative and drive to the new movement. For more than two decades these two masters struggled to build up a school of art, fully alive to our old artistic tradition in painting, and, secondarily, in sculpture. Both of these masters, rich in thought-content as well as in technique, were successful, in course of time, in rearing a band of artists who, taking opportunity of the chances offered to them, spread over the whole of India, carrying the teaching of the Bengal school to the other centres of art in India. A modern Indian school of painting has thus gradually come into existence. These artists in their turn are training another band of students who are only remotely related to the two original masters, Abanindranath Tagore and Nandalal Bose, through their immediate 'gurus'. The Bengal school has now seen the third generation, of its followers and adherents. We are now in a position to have a whole view of the march of the revival and evaluate its contents.

Abanindranath and Nandalal and possibly about half-a-dozen of their immediate followers claim to communicate the essence or rhythm of movement in compositions of line and colour, and not the story on the surface, the thought-reaction to a given subject, not the subject itself. To this end they employ a technique which stresses precision of drawing, proportion or harmony of the parts to one another and to the whole, and illumination or clarity including intelligibility as essential conditions of beauty.

The second and third generations of the new movement are gradually falling out and deviating from the path initiated by Abanindranath, Gaganendranath and



Nandalal. These masters appealed to subjectivism; they emphasised the content of thought and ideas in a work of art more than the pure grammar of it; but their followers lacked the intellectual background of their masters, which they wanted to shield by imitating well-known masterpieces either by translating them wholesale in different colours or altered compositions, or by taking a piece from here and adding another from there, specially by adopting subjects with well-known historical or mythological associations that have by themselves an appeal to the Indian mind.

The emphasis of the masters on subjectivism and thought-content seem to have offered to the disciples an excuse for retreat from the initial schooling of drawing and composition. A few of the artists of the third generation however are showing signs of escape or emergence from the rut. The rumblings of the new life and thought around us seem to knock at the gates of their mind; they seem slowly but gradually to react, but with a mind perplexed they draw their lines that falter in their feebleness. New designs, new colours, new perspectives and their significance seem gradually to show a new consciousness, but they are not as yet certain of themselves. Old historical and mythological subjects which are losing some of their drive and import for the modern mind still persist, but in their treatment a fresh interpretation sometimes makes itself felt. Paintings in miniature are still largely in practice and even large-scale wall-paintings are often but miniatures transferred on to the walls.

But all visual art is largely moulded by an understanding public. What have we done as members of the public, and what is our duty? The present situation in our country, the intellectual groove into which we have sunk, excludes even the possibility of intelligent understanding and helpful criticism. The meaningless jargon and phrases, always revealing the sentimentality that sees in a work of art an essentially exhibitionist performance, that monthly and periodically flood our magazines are neither criticism nor appreciation. We have not yet been able to appraise our old masters, not to speak of Abanindranath, Gaganendranath or Nandalal, because we have no point of view of our own.

Most critics are not aware of the mal-adjustment between the tradition of Indian art and present-day society. A mere aestheticism also does not promote the understanding nor is the craftsman helped if the "decorative" quality of his work is praised.

The different tendencies that are now at work at the studios of Bengali artists range from one of an idealistic and partly sentimental approach which is evident

not only in the subject matter but in the technique as well, to one which loves to dwell chiefly on the planes of actuality and lands the artists on a more or less complex compositional experiment. Intermediate between these two, lies a purely decorative one more or less in a conventional manner akin to that of Rajput miniatures. Of course there are gradations of kind and degree, and experiments in permutations and combinations, but nevertheless all these are reducible to the three tendencies just noted.

The first tendency is historically the earliest and perhaps the most effective of the Bengal school of artists, and this is why it persists to this day in all its charm, and finds its warmest adherent in Abanindranath Tagore who was also its originator and most ardent advocate. But while Abanindranath clung tenaciously to it and gave, as a result, some of his best creations, Nandalal never ceases to experiment on new lines which open before him varied channels of expression. In some of his recent works, he treats traditional subject-matter frankly in a decorative and conventional manner, not altogether unknown to Indian pictorial tradition (Pl. XXI, Rādhā's separation).

Abanindranath's attitude is evident in "Surrender (dās-khat)" (Pl. XX) where by means of his deft colour-washes he achieves a misty softness to the point almost of evaporation. The emotional import of the subject helps this achievement; and though the well known Mughal and Rajput atmosphere is apparent, the miniature travels a long way from the purely linear compositional scheme of the older masters. The attitude of the artist is purely subjective; trees and background intensify the mystic emotionalism that is in the subject itself.

Recently a new experience seems to be disturbing the younger group of artists. A purely subjective as much as a traditional approach seems to leave them in discontent, and they are, as it were, fumbling to seek a new angle of vision. Little by little they seem to respond to the social contents and environs of our times, the murmurs of a life in conflict and incongruities seem to disturb them and they are about to re-act. See, for example, the representation by a young artist of a street scene from northern Calcutta (Pl. XXII) where colour and crowd jostle in a most disorderly fashion with seeming disregard of all traffic signals and mutual convenience. The attitude is objective, no attempt at interpretation is either aimed or achieved, and a faithfulness to the contents of the artist's subject matter is more than evident. Essentials and non-essentials receive the same amount of consideration.







The painting however is not merely representational, and it goes beyond illustration. Composition (the diagonal movement and its counter-movement ; moreover the angle of movement on the left) spontaneously results even if the drawing of some of the figures is feeble and faltering. The naive representation of the actual, the recent attitude of some of our painters, is still in an initial and promising stage.

THE VINE MOTIF IN MATHURĀ ART

By V. S. AGRAWALA

Recently we acquired for the Mathurā Museum a relief carved with a scene of the worship of a Śiva Liṅga (No. 2661. Pl. XXIII. Fig. 1). Two persons wearing Scythian dress, boots, trousers and coat, and holding garlands and flowers in their hands are shown as worshippers, paying their homage to the deity, i. e. Śiva Liṅga placed on a pedestal. This is the earliest representation in Mathurā art in which the actual worship of a Brahmanical deity is depicted. A flying celestial poised in the air and showering flowers is also carved in the proper left corner of the sunken arch containing the scene, and is similar to the Deva figures found in Buddhist sculptures of Mathurā. (Cf. Kāra Bodhisattva image, Vogel's Catalogue, A. 1).

What invests this sculpture with an importance in excess of the iconographic value pointed out above, is the vertical border on the proper left side representing the vine creeper (*Vitis vinifera*). The cinque-foiled compound leaves and the cluster of grapes are shown alternating with each other. On the lower leaf inside a semi-circular tendril is perched a peacock looking towards the worshipping figures and the deity.

It is of some interest to note that in the repertoire of the decorative motifs familiar to the Mathurā sculptors during the Kuṣāṇa period, the vine occupied an important place, probably next to lotus and Aśoka-tree. It has been possible to trace this feature on the following seven sculptures from Mathurā, all of the Kuṣāṇa period :—

1. Śiva Liṅga relief described above (No. 2661).
2. Big stone bowl (No. 97), about 3'-3" in diameter, carved all round with a border of vine, 10'-3" long, of which about 1'-6" is broken away. The encircling creeper is arranged as an undulating scroll with about thirty-five leaves and eighteen grape-clusters. It issues forth from the navel of a squatting Yakṣa and occurs in this specimen as the most luxuriant representation of this motif at

Mathurā. The base is conceived of and represented as a full-blown lotus, the symbol of cosmic purity and fulness. The surmounting border of the vine-creeper (drākṣā-vallī) most likely points to the joys of the 'Cup of Life', which offers its exhilaration to the human individual here represented as a Yakṣa (Pl. XXIII. Fig. 2).

3. stone bowl similar to the above (No. 662), from Palikheṛa (Pl. XXIII Fig. 3).

In this the vine motif is shown mixed up with that of Aśoka. The stalk is shown issuing from the mouth of a seated pot-bellied Yakṣa, who holds the other end of the stalk in his right hand. The single compound vine leaf and the bunch of grape fruit are clearly visible on the proper left side of the Yakṣa figure under the crest of the scroll. The bowl is inscribed on the upper rim and the decipherable portion reads as 'Saṃghiyānam parigaḥa' (Annual Pro. Report, H. and B. Monts., N. C., 1917, p. 8; Coomaraswamy, *Yakṣas*, Pt. II, p. 65) but as some letters are broken away in the beginning it is possible that the name originally read Mahā-saṃghiyānam, which would show that the gift was given to the priests of the Mahāsaṃghika sect, which was one of the eighteen schools of Buddhism. That it flourished at Mathurā is also proved by another inscription engraved on the pedestal of a Buddha image (No. 1612) reading Āpanaka-vihāre Mahāsaṃghiyānam parigahe.

4. Fragment of a proper left doorjamb, which is described in Dr. Vogel's Catalogue of the Mathura Museum (p. 2). The front proper left side contains a decorative band of Aśoka design. The proper right side of the stone which was turned to the passage of the doorway is decorated with a vine border, having eleven fully developed leaves and three fruit bunches. The vine is shown coming out from the open jaws of a Makara, carved horizontally at the base of the decorative band (Pl. XXIII. Fig. 4).

The above four sculptures are preserved in the Museum at Mathurā and the following three at Lucknow.

5. Door-jamb (J. 526) carved with a band of undulating vine scroll, in which each curve with the exception of one contains a cluster of grapes and some leaves. The creeper issues out of the navel of a standing Yakṣa of corpulent features. It is illustrated in Codrington's *Ancient India*, p. 46, fig. 17, and in Smith's *Jaina Stupa*, plate 26.

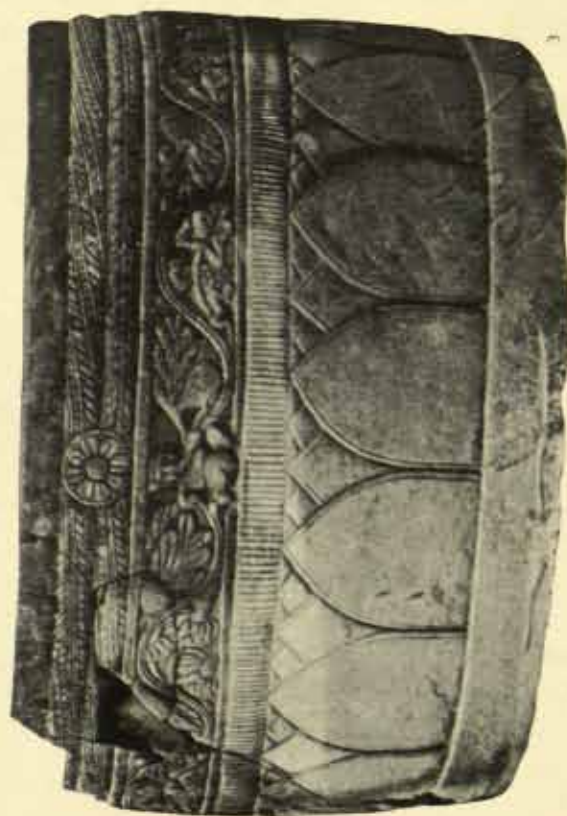
6. Jaina Āyāgapatta from Kaṅkāli Tilā (J. 253) : on one side is the border of vine springing from a Pūrṇa-ghaṭa. (Coomaraswamy's *Yakṣas*, Part II ; Smith's *Jaina Stupa*, plate X).

7. Relief from Kaṅkāli Tilā carved with four-petalled and eight-petalled lotuses having on the upper rim the border of Aśoka and on the lower that of vine (Smith's *Jaina Stupa*, plate XXII). As a portion of the relief on the proper left side is broken away, it is not possible to know in this case the source of the vine, whether it was a *Yakṣa*, *Makara*, or *Pūrṇaghaṭa*.

It is interesting to note here that viticulture was known in India from very early times. Watts supposed the plant and its products to have been known for perhaps 3000 years in this country (*Dictionary of Economic Products*, Vol. VI, part IV, p. 264). That the earliest classic literature of India necessitates our acceptance of the vine or of a vine as having been known to the Sanskrit authors, is a matter upon which there can be little room for doubt' (*ibid.* p. 269). Grapes have been mentioned both by *Suśruta* and *Caraka* (*ibid.* p. 263). The best reference perhaps occurs in *Kauṭilya* who tells us that this commodity was being imported from the lands of *Kāpiśi* or *Harahūra* (northern and western Afghanistan) : "Mṛdvikā-raso madhu. Tasya svadeśo vyākhyānam Kāpiśāyanam Hārharakamiti". (*Book II*, ch. XXV).

Pāṇini derives the word *Kāpiśāyana* from *Kāpiśi* (*kāpiśyāḥ śphak*, IV, 2. 99) and the *Kāśikā* gives '*Kāpiśāyanam madhu*' and '*Kāpiśāyani drākṣā*' as illustrations, which show that the adjective was prefixed before nouns alike to those of *Kauṭilya*. It is not improbable that *Pāṇini* himself was aware of the grapes of the *Kāpiśi* region, and that in his own days also the phrase *Kāpiśāyanam* was prefixed to '*madhu*' in the then current form of speech. We possess stronger evidence regarding the import of grape wines from the north-west in the Maurya period, as a correspondence between *Bindusāra* and *Antiochos* is recorded in which the former requested the Greek king to send him some figs and raisin wine (*Smith's Early History of India*, p. 155), which must have been the same as the '*mṛdvikā raso*' of *Kauṭilya*.

With the establishment of the *Kuṣāṇa* empire comprising both *Mathurā* and *Kabul* under one banner, the import of raisin wine on account of increased intercourse with the north-west appears to have received greater impetus. In the early centuries of the Christian era the importation of *Yavana* wines is also referred to in the literature of the *Tamil* land (*ibid.* p. 463). Even in the far south where commerce with the *Roman* empire flourished, the importation of these wines from



across the seas was a common feature of trade in this period (ibid. p. 463). It is said that during the last years of the Roman Republic Italy had become such a wine country that the relation between wine and corn was reversed, wine was exported and corn imported. Cato was of opinion that of all kinds of culture that of the grapes was the most profitable. The cultivation of the vine in the Roman provinces threatened to choke the cultivation of grain to such a degree that the emperor Domitian in an excess of anxiety, ordered that half and more than half of all the vine-yards outside Italy should be destroyed. (Watt's Dictionary, p. 267). The Kuṣāṇa and Roman empires came within six hundred miles of each other. Italy was at this time famed as the favourite land of Bacchus and the evidence of the Kuṣāṇa art in India amply bears out the popularity of Kubera worship as the Indian counter-part of Bacchus. We find a number of Bacchanalian groups discovered from Mathurā (A.S.R., 1922-23, R. P. Chanda 'The Mathurā school of sculpture, p. 167, and pl. XXXVIII, b.). The one from Palikhera (C. 2) preserved in the Mathurā Museum actually shows a grape cluster held in the hand of the female attendant standing beside the wife of Kubera. It must have been at this time that the artists adopted the vine motif as a decorative element of their work.

AN EXHIBITION OF DRAVIDIAN BRONZES IN PARIS

BY PIERRE DUPONT

An important exhibition of Indian Art has been held at C. T. Loo's in Paris¹, chiefly of Dravidian bronzes and specimens of other schools were also on view.

Mathurā was represented by several sculptures of the Kuṣāṇa and of the Gupta period ; and among them the remarkable head of a Bodhisattva in dark red sandstone—published already by Coomaraswamy² with the headdress wrought in the manner of a goldsmith's work and decorated with a Kīrtimukha, heraldic animals and Makara heads. To the Amarāvati school belonged casement plaques of a stūpa and the head of a lion³. There were twenty-six Dravidian bronzes belonging to the main types of Brahmanical iconography. Of the Śaiva group there were two images of Naṭarāja, one of Śiva Samapāda-sthānaka, one of Śiva Sukhāsana and one Bhairava. To these must be added two Somaskanda, one representation of Śiva with Gaurī, 4 figures of Umā and finally a Śaiva attribute, a Trisūla. Of the Vaiṣṇava group were images of one Viṣṇu, two Kṛṣṇa, one Śrī Devī, one Rukmiṇī (?) and one Vaiṣṇavī; the last belonged to a series of the seven mothers. Among the figures of saints there were two Tirujñāna-Saṃbandha Svāmī and, no doubt, an Apparsvāmīgal and a Tiruppāṇālvār.

It is easy indeed to identify most of these bronzes. It is however very difficult in the present stage of our knowledge, to date them. All we know is that they may be distributed within a period from the twelfth to the sixteenth century. The first publications of Dravidian bronzes, especially 'South Indian Bronzes' by O. C. Gangoly were chiefly concerned with iconography and made it easy to solve a number of iconographical problems while the chronology hitherto has remained very uncertain. Dating has been attempted but recently and especially by Gravely and Ramachandran⁴. The authors had at their disposal the large collection of the

1. Exposition de sculptures et bronzes anciens de l'Inde. Paris, 1935.

2. Ibid. No. 5, Pl. II ; A. K. Coomaraswamy, History of Indian and Indonesian Art, pl. XXVIII, fig. 99.

3. Exposition, Nos. 6 and 7 ; pls. III and IV.

4. F. H. Gravely and T. N. Ramachandran, Catalogue of the South Indian Metal images in the Madras Government Museum, B. M. G. M. Vol. I, 1932.

Madras Museum. They have made use of all the preceding researches and notably of some articles by Hadaway published in 'Rūpam'. One of their most interesting remarks is that the making of Dravidian bronzes must have chiefly developed when religious processions had come into favour, i.e., in the Coḷa period. Actually there is not one bronze which could be attributed with any certainty to the Pallavas. There are only a few dated statues, a Kālī of the early Coḷa period, a Candrasekhara and some other images of late Coḷa date, a Naṭarāja from Vijayanagar and another Naṭarāja of even more recent date. Under these circumstances the best method will consist in comparing the bronzes with stone sculptures. The latter can be dated with greater ease. It will be necessary however to take into account technical differences and also archaisms which may subsist in some details even in late specimens. Gravelly and Ramachandran have utilised in this respect the observations made by Jouveau-Dubreuil in his *Archéologie du Sud de l'Inde*. They have established some cohering series, particularly with regard to the Viṣṇu figures, some of these offer actual analogies to Coḷa stone sculpture and may go back to the tenth century A. D.

This is their general characterisation of Coḷa bronzes: "We may mention as specially noteworthy a kind of smooth roundness in the treatment of the face, a comparative simplicity in decoration, necklaces in a broad flat series, all of them more or less circular and none hanging down between the breasts or bent into more ornate shape, one at least bearing a fringe of pendants, a distinctive ornament which is sometimes present projecting from the outer side of the arm at or immediately above the elbow, and the treatment of the girdle, often unusually realistic, but specially characterised by the elegance of its projecting bows when these are present".

Based on such observations it has been possible to date some of the bronzes exhibited by Loo. Four of them were of exceptional iconographic and archaeological importance, a Naṭarāja, 55 cm high, of the thirteenth century approximately and superior to the majority of similar known images. The image has been acquired by the Museum van Aziatische Kunst in Amsterdam, it has been studied in detail¹. The others are a Bhairava (Pl. XXIV, Fig. 1)² offered by M. Loo to the Musée Guimet, a Rukmiṇī (Pl. XXIV, Fig. 3)³ and a Trisūla (Pl. XXIV, Fig. 2)⁴.

1. Published in Exposition No. 9, p. 7, pl. V. and studied in *Maandblad voor beeldende Kunsten*.

2. Exposition No. 13, p. 8, pl. VII.

3. Ibid. No. 30, p. 13, pl. XIX.

4. Ibid. No. 15, p. 9, pl. IX.

According to tradition, the representation of Bhairava alludes as a rule to the conflict during which Śiva cut off the fifth head of Brahmā and with his trident beat Viṣṇu¹. In his terrible form of Bhairava as protector of the universe, Śiva is shown naked. The Tantrasāra enumerates eight forms in which he may be worshipped². In any case he has a skull in his coiffure and this is sometimes considered to be the head of Brahmā and his hands hold weapons. The Madras Museum has three statues of Bhairava, one with ten hands and another with four³. Theoretically at least there are many varieties of this divinity, almost all have four hands⁴ and are accompanied by a dog.

The one in the Musée Guimet has eight arms. According to a special tradition concerning the representation of terrible types, the hair is dishevelled and the eyes with knotted eyebrows are very large and protruding. A skull with a cobra passing below it decorates the hair. The ears have Makara-kunḍala and Patra-kunḍala respectively. The necklaces are fairly flat and have a series of pendentives. Some of the attributes are not quite distinct. The drum, sword, goad, noose and the scull-cup however can be recognised. Possibly a cobra and a bell are also shown. A large circle is placed at the middle of the height of the chest. A cobra is twisted around the hips and raises its head to the left of the figure, one of the garlands carries very stylised heads.

It is difficult to assign this exceptional statue to a definite style. The modelling of the bust, the design of arms and legs are careful and also that of the naturalistic cobra. The proportions of the body are fairly exact and the stylised treatment is restricted almost to the hair and the garland of skulls only. This piece, with some Coja features can be assigned to approximately as late as the twelfth century.

Pl. XXIV. Fig. 3, has been called Rukmiṇī though not without hesitation in the catalogue of the exhibition. It is not easy to distinguish Śrī Devī, Bhū Devī and Pārvatī, especially as their emblems, theoretically held in the right hand are actually conspicuous by their absense in the majority of cases. All of them wear high and decorated headdresses (karaṇḍa mukuṭa) whereas the simple lateral chignon (keśa-bandha) characterizes some particular forms of these divinities, for instance Śrī Devī in her Rukmiṇī aspect in which she corresponds to Viṣṇu in his Kṛṣṇa aspect. The hair as it is dressed in Pl. XXIV, Fig. 3, consists of curly ringlets held, it

1. Jouveau-Dubreuil, op. cit. II, pp. 25-27.

2. A. Krishna Sastri, South Indian Images of Gods and Goddesses, p. 151.

3. Gravelly and Ramachandran, op. cit. pp. 115-116.

4. G. Rao, Elements of Hindu Iconography II, p. 177.

appears, by a small diadem making a sort of horizontal pad from one temple to the other. This is rather rare and cannot be considered as characteristic. The earrings of cup shape (*patra-kunḍala*) belong especially to Śrī Devī, Rukmiṇī and also to Pārvatī. The flexion of the hip to the right distinguishes Bhū Devī and also the right hand in Kataka-hasta and the left pendant hand. Amongst the images found at Chimakurti, Bhū Devī, it may be added, wears *Patra-kunḍala*¹. It is likely that the image is a particular representation of Bhū Devī.

The other characteristics of this statue belong to known types, i. e., the three necklaces, the string crossed on the chest and the traditional bracelets. Only the armrings with plaques, in the middle of the arms are peculiar. The loin cloth covers the legs to an unequal height and is considerably stylised. It is kept in position with the help of a fourfold belt of goldsmith's work to which is attached a large ribbon which has a number of loops in front and large knots on either side. A circular lotus makes the pedestal.

Although this statue is not as ancient as the preceding one, the fairly round shape of the face, the suppleness of the body and the relatively discrete use of ornaments allow to assign it to the thirteenth or fourteenth century.

The *Trisūla* is a Śaiva attribute of highest antiquity. In its origin the Buddhist *Triratna* is related to it and their symbolism, originally it seems, is not Aryan. To this day tridents are fixed in the ground in the vicinity of South Indian villages and have a tutelary function. Frequently they are planted near the sanctuaries of goddesses² whose names appear also in Tantric texts. The approximation of *Triratna* and *Trisūla* may belong to a historical period and may be accidental; the *Trisūla* can be seen on the Gaṇeśa temple at Mavalipuram at the place occupied in Buddhist sanctuaries, by the *Triratna*³. Pl. XXIV, Fig. 2 not only shows the trident itself and its tubular handle but also the bronze basis into which the wooden shaft was fitted. Apart from its aesthetic value, the *Trisūla* has two chief characteristic features, i. e., the circular form of the two lateral prongs and the figure of Śiva with his *Vāhana* in front of the central prong. Jouveau-Dubreuil has shown that the *Trisūla* with a circular outline belongs to the Pallava period and differs from the 'Dravidian' form where the prongs are noticeably parallel. The figure of Śiva has loose hair and a round face; garment and jewellery are conspicuously simple; his body is elegantly and proportionately built. His attitude is natural, with the right leg crossed over the left and the right arm resting on the head of Nandin.

1. Gravelly and Ramachandran, op. cit. p. 73.

2. A Krishna Sastri, op. cit. p. 223.

3. Jouveau-Dubreuil, op. cit. II, p. 20.

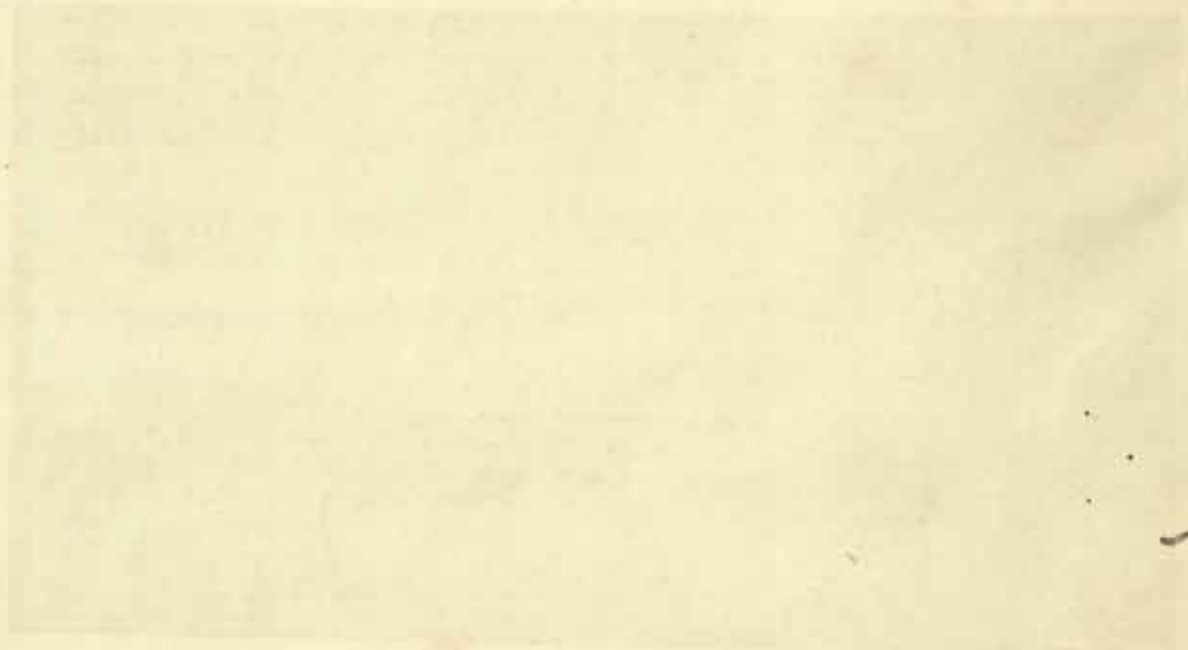
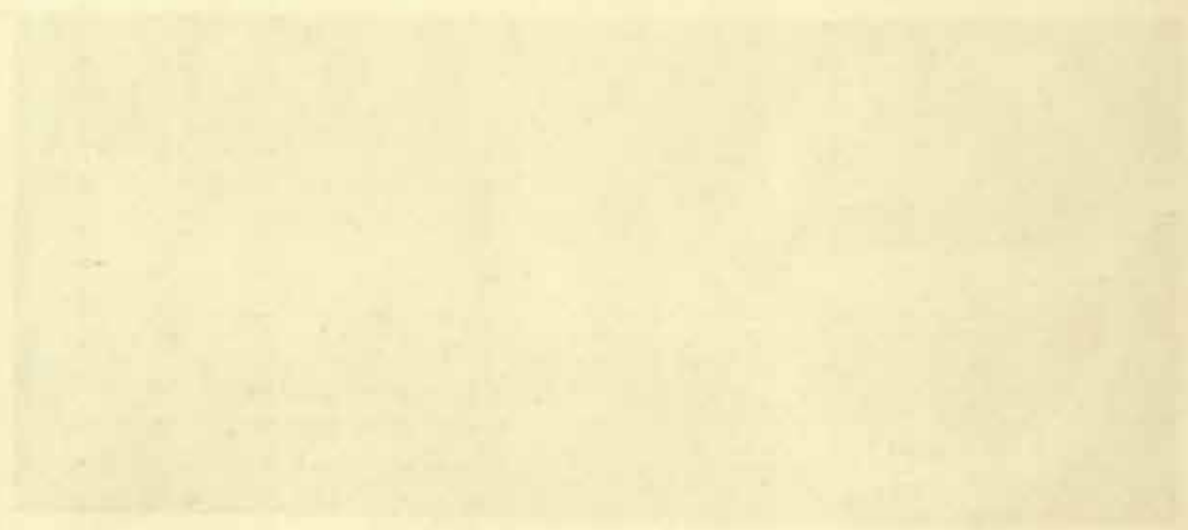
This bronze seems to have been cast and gone over afterwards with great care. The two lateral prongs of the Trisūla start with a floral motif in very slight relief and the handle is adorned with a delicate garland. The lotus of the base is also very carefully treated, stylised as it is and adopted to its purpose.

The relative proportions of Vāhana and the god will perhaps help towards some further chronologic precision. According to Jouveau-Dubreuil, the Vāhana has been introduced into South India as late as the twelfth century¹. The shape alone of the Trisūla suffices to attribute it without hesitation to this early date.

These three examples give a good idea of the exhibition in which also a number of other interesting bronzes were included. The exhibition has been one of the most important contributions to South Indian archaeology during recent years.

1. Jouveau-Dubreuil, *op. cit.* II, p. 46.





AN ANCIENT TEXT ON THE CASTING OF METAL IMAGES

By SARASI KUMAR SARASWATI

The *Abhilaṣitārtha-cintāmaṇi*, also known as *Mānasollāsa* or *Mānasollāsa Śāstra*, is a work purported to have been composed by king *Someśvara Bhūloka-malla*, of the Western *Čālukya* line of *Kalyāṇi*, who came to the throne in 1124-25 A.D.¹ Two authoritative editions of the book are known; one, under the title of *Abhilaṣitārtha-cintāmaṇi* by Dr. R. Shama Sastry, has been published by the Mysore Government, while the other, under the title of *Mānasollāsa*, has been printed in the Gaekwad's Oriental Series. From internal evidence both the editors have deduced the date of the composition of the work as the Śaka year 1052 or 1131 A.D. It consists of five 'prakaraṇas' of twenty chapters each, and comprises a wide range of subjects. In the first prakaraṇa in connection with the topic of 'adoration to the gods' (*devatā-bhakti*) it incidentally refers to the process of manufacture of metal images. Though consisting of only twenty one verses, the information, given here, is by far the best of the few hitherto-known texts on the subject, as it furnishes us with every detail of the process, stage by stage, from the preparation of the model to the finishing of the metal cast.

The method employed in India for the casting of bronze or metal images must have been something akin to what is known as 'cire perdue' or 'the lost wax' process. A passage, quoted without its source by Mr. O. C. Gangoly in his *South Indian*

1. Though the authorship of the book has been clearly attributed to *Someśvara* in a verse in the introduction (verse 10), the encyclopaedic nature of the work, giving expert information on many highly technical matters, would rather suggest that it was perhaps the composition of a vastly learned man or the joint compilation of many scholars and experts who assigned the honour of authorship to his or their patron king. A reference to the following verse (274) in the second prakaraṇa should also go to corroborate this inference.

Pakṣaccheda bhayāyāts bhūbhṛd-rakṣā-vidhāyinaḥ /
Upamām vahataḥ sāṅgāt Someśvara-mahābhujah //

In this verse *Someśvara*, the alleged author, is himself made the standard of comparison and no author should be guilty of so flagrant a piece of vanity. The verse is more in the strain of an eulogy, which the court poets are apt to shower on their royal patrons.

Bronzes, lays down that the metal images are to be made from wax. But the texts are usually very scarce regarding the actual details of this process. Mr. T. A. Gopinath Rao, in his *Elements of Hindu Iconography*, Vol. I, pt. I, pp. 50-51, quotes three such texts, which are however very meagre in detail, only the last one, which is from the *Viṣṇu Saṁhitā* (paṭala XIV), giving us the whole process, simply as a general statement. Prof. Jitendra Nath Banerjea, of the Calcutta University has kindly drawn my attention to the *Mānasāra*, which devotes a complete chapter (chapter LXVIII) to describe the method of casting images under the title of *Madhucchiṣṭa-vidhānam*. But the *Mānasāra* text concerns itself chiefly with the ritualistic side of the subject, and the information as regards the technique of the process is so meagre that the *Viṣṇu Saṁhitā* text of only three lines should be regarded as much more explicit, from the technical point of view, than a whole chapter, devoted to this special subject, in the *Mānasāra*. The little information that it possesses is further obliterated by the extremely corrupt form of the text, which is difficult to understand in a good many places, and this difficulty has again been enhanced by the hopeless translation of the passages by Dr. Acharyya, even where the meaning is quite clear.¹ In short the *Mānasāra* text adds nothing new, beyond the information of the hitherto-known texts, except the fact that the model is enjoined to be shown to the villagers and other worshippers (for their approval) before the moulding and casting are resorted to. But the text under note, which has so far escaped the notice of scholars, gives us many details, otherwise unknown, such as, the preparation of the model, and also of the clay for the mould, the application of coats over the model and their drying up, preparation of the crucible for the melting of the metal, melting of different metals, pouring in of the molten metal into the mould and the latter's removal, etc., and as such the text is important and worthy of quoting in full. Compared to modern conditions it was a crude process no doubt, but it was also very simple and was, in all probability, current throughout the whole of India for the making of bronze or metal images. The process is strikingly similar to the Greek

1. The hopelessness of Dr. Acharyya's translation is evident from his translation of the following passage. The text, of course, is extremely corrupt, but, I think, there can be no doubt as to its sense, which is quite clear.

Tat piṇḍam-uttāpayed-vā madhucchiṣṭ-odgamaib puṇah /

Karttur-icchā yathā lohair-dhṛtam-etat prāśasyate (?) //

Pūṇḍaj-jalair saṁprokṣya tyaktvā tad-ardha (ūrdha) mṛtikām /

Dr. Acharyya translates it thus :—

"That idol (lit. ball) should be dried up and besmeared with a new coating of wax again.

"If the master so wishes, it may be covered with metals (iron) ; that is preferred.

"The half, besmeared with earth should be left put, and the rest should be washed with water by sprinkling."

The sense of the passage, I think, is too evident to require any comment on Dr. Acharyya's translation.

method of bronze-casting as given in Richter's book, *The Sculpture and Sculptors of the Greeks* (pp. 136-137). Its efficacy can best be ascertained from the fine quality of the products of this process that have come down to us both in India and in Greece. The Newari artists of Nepal are still producing many excellent works in metal by an almost similar process. (*Modern Review*, XL, p. 426).

Text.¹

नवताल प्रमाणेन लक्षणैः समगिवताम् ।
 प्रतिमां कारयेत् पूर्वमुदितेन विचक्षणः ॥
 सर्वावयवसम्पूर्णां किञ्चित् पीतां दृशोः प्रियाम् ।
 यथोक्तैरायुधैर्युक्तां बाहुभिश्च यथोदितैः ॥
 तत्पृष्ठस्कन्धदेशे च कृकाट्यां मुकुटेऽथवा ।
 हेमपुष्पनिभं दीर्घं नालकं मदनोद्भवम् ॥
 स्थापयित्वा ततश्चार्चां लिम्पेत् संस्कृतया मृदा ।
 मर्मां तुषमर्यां घृष्टां कार्पासं शतशः क्षतम् ॥
 लवणं चूर्णितं श्लक्ष्णं स्वल्पं संयोजयेन्मृदा ।
 पेपयेत् सर्वमेकत्रे सुश्लक्ष्णे च शिलातले ॥
 वारत्रयं तदावर्त्य तेन लिम्पेत् समन्ततः ।
 स्वच्छः स्यात् प्रथमोलेपः क्लृप्तायां कृतशोषणः ॥
 दिनद्वयं व्यतीते तु द्वितीयः स्यात्ततः पुनः ।
 तस्मिंश्चुके तृतीयस्तु निविडोलेप इष्यते ॥
 नालकस्य मुखं त्यक्त्वा सर्वमालेपयेन्मृदा ।
 शोषयेत्तत् प्रयत्नेन युक्तिभिर्बुद्धिमान्नरः ॥
 सिक्थकं तोलयेदादावर्चालम् विचक्षणः ।
 रीत्या ताम्रेण रौप्येण हेम्ना वा कारयेत्ततः ॥
 सिक्थ्यादशगुणं ताम्रं रीतिद्वयं च कल्पयेत् ॥
 रजतं द्वादशगुणं हेमस्यात् षोडशोत्तरम् ॥
 मृदा संवेष्टयेद्द्रव्यं यदिष्टं कनकादिकम् ।
 नालिकेरा कृतिं मूषां पूर्ववत् परिशोषयेत् ॥

1. The text given here has been reconstructed with reference to the texts given in both the editions of the work.

2. There is also a second reading चटगुणं

वङ्गौ प्रताप्य तामर्चां सिक्थं निःसारयेत्ततः ।
 मूर्धां प्रतापयेत् पश्चात् पावकोच्छ्रित् वह्निना ॥
 रौतिस्ताम्रं च रसतां नवाङ्गारेर्ब्रजेदुधुवम् ।
 तताङ्गारेर्विनिक्षिप्तै रजतं रसतां ब्रजेत् ॥
 सुवर्णं रसतां याति पञ्चकृत्वः प्रदीपितैः ।
 मूर्धामूर्द्धणि निर्माय रन्ध्रं लौहशलाकया ॥
 सन्दंशेन दडं धृत्वा ततां मूर्धां समुदरेत् ।
 ततार्चानालकस्यास्ये वर्त्तिं प्रज्वलितां न्यसेत् ॥
 सन्दंशेन धृतां मूर्धां नमयित्वा प्रयत्नतः ।
 रसं तु नालकस्यास्ये क्षिपेदच्छिन्नधारया ॥
 नालकानन पर्यन्तं संपूर्य्य विरमेत्ततः ।
 स्फोटयेत्तु समीपस्थं पावकं तापशान्तये ॥
 शीतलत्वं च यातायां प्रतिमायां स्वभावतः ।
 स्फोटयेन्मृत्तिकां दग्धां विदग्धोलघुहस्तकः ॥
 ततो द्रव्यमयी साऽर्चा यथा मदननिर्मिता ।
 जायते तादृशी साक्षाद्ङ्गोपाङ्गोपशोभिता ॥
 यत्र क्वाप्यधिकं पश्येच्चारणैस्तत् प्रशान्तये [त्] ।
 नालकं हृदयेष्वापि पश्चादुज्ज्वलतां नयेत् ॥
 अनेन विधिना सम्यग् विधायार्चां शुभेतिथौ ।
 विधिवत्तां प्रतिष्ठाप्य पूजयेत् प्रत्यहं नृपः ॥

First Prakaraṇa, Verses 77-97.

Translation¹.

According to the navatāla measurement² as mentioned before, the expert should first prepare the image (i.e., the model), complete with all the limbs, yellowish in colour, beautiful to look at and with the weapons and arms as prescribed³.

1. The strictly literal method of translation has been discarded at times for making the sense clearer to the readers, not conversant with the technical matter. It has of course been followed as far as possible.

2. The rules of the navatāla measurement have been given in detail in many of the familiar texts and might be passed over here.

3. Our text does not give us the material of which the image or rather the model would have to be first made. But, from the subsequent verses, prescribing the melting away of the wax of the model by the application of heat it is evident that a wax model is intended. The text again does not say whether the model would have to be made of solid

After placing wax tubes of the length of a 'dhatura' flower on the back, on the shoulders and on the neck or the crown (of the image)¹, (the artist) should besmear the image with refined clay.

(Here comes the preparation of clay)

To clay should be added charred husk finely rubbed, cotton severed a hundred times and a little salt finely powdered². All these (when mixed with clay) should be (finely) ground on a smooth stone and (the paste) should be applied three times all over and round (the image).

The first layer (of clay) should be transparent (and thin) and should be dried up in shade. After a couple of days a second layer should again (be applied). When dry again, there should be the third coating thickly applied.

(One) should besmear the whole (image or the model) with clay leaving the mouths of the tubes open; and the wise man should dry up (the clay coatings) with care and judgment.

The expert should first (i.e., before beginning the process, just mentioned) measure the wax of the image, which would have to be made in either brass, or copper, or silver or gold.

Brass and copper should be taken ten times that of wax³, silver twelve times and gold sixteen.

(Then one) should encase the metal, either gold or one that is desired, with clay and the cocoanut-shaped crucible (thus formed) should be dried up in the afore-said manner⁴.

wax or with an inner core. Though solid casting was the general rule in case of statues, with regard to the cost and weight in case of the bigger images it is apparent that hollow casting was resorted to. But the cast image was not meant to be hollow in the strict sense of the term. Several metal images (Mahasthan Mafijuri, Bogra image of Śrī, Sultangunj copper Buddha, etc.) exhibit a core still sticking tightly to the inside of the images. Presumably it were not meant to be taken out. It appears that the wax model was worked over an inner core of a compound, composed perhaps of charred husk, clay, etc.,—probably the same preparation that has been prescribed in this text for the clay mould of the image.

1. It is evident that several tubes, which would act as holes in the mould were intended. It may be that one was meant for pouring in molten metal and the remaining for the passage of air. It is possible also that because molten metal would cool quickly several passages were simultaneously used for pouring molten metal, there being additional holes for the passage of air.

2. The *Arśumadbhedāgama* of Kāśyapa (chap. 81) and the *Agastyasakalādhikāra* (chap. 10), each contain a chapter on the preparation of clay (*mṛt-saṁskāra*).

3. According to a variant reading brass and copper may also be eight times that of wax.

4. It is possible that the crucible was also made of clay prepared in the same manner as the clay for the mould (see note 2).

Next (one) should melt away the wax (from the mould) by heating the image (i.e., the mould) in fire and should afterwards heat the crucible in cinders.

Brass and copper melt surely with (the help of) cinders just kindled. Silver melts with (the help of) glowing cinders, while gold with (the help of) cinders flaming fivefold.¹

After making a hole with an iron rod on the top of the crucible and holding it tightly with a pair of tongs (one) should bring the heated crucible (out of the cinders).

(One) should place a burning wick in the mouth of the tube of the heated (mould of the) image.²

After bending carefully the crucible, held tightly by the tongs, (one) should pour molten metal into the mouth of the tube in a continuous stream and should stop when it is full to the brim of the tube.

The adjacent fire should be put out for the purpose of cooling (the mould with the molten metal). When the image (i.e., the mould) gets naturally cool the expert should break up the clay (mould) very carefully.

Then the metal image (thus prepared) verily resembles that in wax, endowed with similar limbs and other details.

When there is seen anything superfluous that should be put right with *chāraṇa*³, the tubes should also be cut away and after that (the image) would have to be finished.

After making an image by this method, the king should instal it on an auspicious day according to the usual rites and should offer daily worship to it.

1. It is of course impossible to ascertain the degree of heat in the different cases. But the meaning is quite clear. Brass and copper melt easily with little heat, silver with a heat somewhat higher than that, while gold with perhaps the highest degree that the cinders can rise to.

2. The utility of this procedure cannot be ascertained.

3. *Chāraṇa* is perhaps a technical term, meaning most probably a kind of tool.

REVIEWS

Catalogue des Collections Indo-Chinoises, par Pierre Dupont, Philippe Stern etc.

Musée Guimet, Paris.

Though published under the modest title of a catalogue, the booklet deserves special attention of the students of Indo-chinese art and antiquities. P. Dupont leads with an Introduction to the Musée Guimet collections in Paris and adds another stimulating chapter on the diverse "Schools of Siamese Art." He shows how the finds of the P'ong Tuk site led Mr. le May to link up the origin of the Buddhist art of Siam with the art in Amarāvati although Mr. Jouveau Dubreuil appears to be sceptical about direct contact.

The bronze Buddhas of the C'ieng Sên School (as named by G. Coedès) seated in vajrāsana, and with uṣṇīṣa in lotus bud and head covered with thick curls etc., are traced to Pāla art (8-12 pp. century).

Another valuable paper on the art of Champa communicated by Mme G. De Coral Remusat discusses the chronology of the Cham monuments. The Śiva of Binh Dinh seated in padmāsana (fig. 8-1, plate XII) is in sharp contrast to other statues with characteristics "almost Aryan."

Mon. Ph. Stern in his "sketch of the evolution of Khmer statuary discusses with characteristic details the grounds of his new chronological computation.

1. The Pre-Angkor period : 6th-8th century A. D.
2. The early Angkor period, mid 9th to mid 10th century, represented by the styles of Roluos and Koh Ker.
3. Middle Angkor period, end of 10th century to the middle of 12th century represented by the styles of Bantay Srei, Baphuon and Angkor Vat.
4. Late Angkor period : second half of 12th century to 13th century A. D. represented by the art of Bayon where Śaivism emerges with clear emphasis.

The few plates accompanying the text are excellent.

Kalidas Nag.

An Outline of Indian Temple Architecture, by F. H. Gravely.

Bulletin of the Madras Government Museum, New Series, General Section, Vol. III Pt. 2, Madras 1936.

The essay concludes with a query "May not this deeply rooted tendency to vertical repetition indicate some sort of fundamental unity underlying all the various styles of Indian temple architecture?"—Each statement in this valuable contribution is descriptive and aims at helping towards a classification of Indian temples according to their architecture. Their diversity is shown and with every statement new problems arise to the mind of the reader. Wisely however only a bare "outline" is given. It has neither continuity nor completeness. This is done consciously and with an awareness of the, as yet unavoidably disconnected, knowledge of facts observed; and even intentionally, for all the ancient texts on Indian architecture are left aside so that their terminology, itself not always concomitant with the facts as far as they have been observed, may not mislead. With these partly unavoidable and partly self-imposed limitations the essay attempts a classification of Indian temple architecture based on external form and decorative detail. These are discriminated following the geographical distribution of the monuments.

Such an approach from the outside can only be preliminary and partial. Its value lies in the insistence on further information about Indian temples as well as the less conspicuous small shrines which play an important part in the typology of Indian architecture.

As a summary of our present knowledge of the distribution of types of temple architecture, it conveys condensed information. Its purpose will be fulfilled if it stimulates "the production of workable hypotheses that would render intelligible the various forms of pillars, corbels, niches, etc., and not only these but also all the types of decorative detail belonging to the various regional traditions of temple building. When this preliminary work will be completed, the time will have come to ask for the prototypes which underly the various styles of Indian architecture.

St. Kramrisch.

Bharatiya Chitra Kala (Indian Painting), by **Nan Lal Chamanlal Mehta, I. C. S.**, Published by the Hindustani Academy (U. P.) Allahabad. pp. 100 with 42 illustrations.

Our vernacular journals are vying with one another in publishing articles, often illustrated, on art, specially on painting. But so far we have not seen any good general survey of Indian painting as Mr. Mehta has given us. His Hindi monograph will help we are sure, the larger public not knowing English, in following the broad outline of the history of our pictorial art. After a series of general observations in his opening chapter, *Chitra-Mimamsa*, Mr. Mehta follows step by step the landmarks in Indian painting (*Prāchīn Chitra paramparā*) till he reaches the third section of his book "Islamic culture and Indian pictorial art." The Mughal Epoch forms the subject of the fourth chapter which is followed by a special section on the characteristics of Hindu art, the melody and season pictures (*Rāga mālā* and *Rasa chitra*). In conclusion the author summarises his observations on the development and expansion of Hindu pictorial tradition. His treatment is throughout lucid and will fulfil the purpose of popularizing the subject. But in their zeal for "vulgarisation" the publishers have reduced considerably the value of the illustrations, the weakest items in the book. As documents these are fairly representative, as reproductions often atrocious, the opening picture "*Morapriya*" being the worst in the series. We hope these typographical but grave defects in a book on art will be rectified in a future edition of the useful text.

Kalidas Nag.

The Great Temple at Tanjore, by **J. M. Somasundaram**, Madras, 1935.

The monograph of 89 pages judiciously compiles available information, archaeological, historical, *śthalapurāṇic* and legendary, about the Great Temple. The understanding of the temple with its images, paintings and carvings is greatly helped by viewing it in its proper surroundings of setting, festivals and legends.

Along with an account of the contributions towards the growth of the temple, its *maṇḍapa*s and smaller shrines by successive dynasties, based on their inscriptions, the author gives equal importance to current legends, such as those on p. 12 about the large stone figure of Nandin ($12 \times 19\frac{1}{2} \times 8\frac{1}{2}$) which "according to tradition imperceptibly grows in size, with the progress of time. It was feared it might become too large for the *maṇḍapa* erected over it..... Another tradition says that it grew to its present size due to the presence of a live toad within the massive gneiss....."

Considerable insight is afforded by these and other legends, into the way in which such a sculpture is looked at by the people, and into the vision alike, according to which it was carved.

The booklet truly, and not only in the historical sense, gives a "connected account" of the Great Temple. Its architecture, etc. might have been discussed more systematically; and its value would be increased if the twenty four plates would be better reproductions of views and objects selected with more discrimination.

St. Kramrisch.

Indian pictorial art as developed in book-illustrations, by **Hirananda Sastri**, Gækwad's Archaeological Series No. 1, Baroda State Press 1936.

An archaeological series started under the authority of the Government of His Highness the Maharaja Gækwad of Baroda is under an obligation from the outset in view of the achievement of the Gækwad's Oriental Series. It is hoped that the subsequent publications of the archaeological series will be on the same level; No. 1 "Indian pictorial art as developed in book illustrations" does not attain to it. Dr. Sastri, the Director of Archaeology, Baroda State, in the present essay defends a thesis "that pictorial art did develop in India in book illustrations as well" (concluding sentence of the essay, p. 18) which nobody disputes at the present state of our knowledge.

The text gives marginal informations about book illustrations. Some are of importance as they draw attention to less known subjects or types of book illustrations: the sacrificial tools and altars illustrated in manuscripts of the Śrauta and Śulva Sūtras; and also to Citra-kāvya in various "bandhas" (cf. Kramrisch, JISOA 1934, p. 114, Pl. XXXIX, Fig. 1. An illuminated Gīta Govinda Ms.)

Jaina book illustrations are discussed at greater length and especially with regard to the dates of some of the manuscripts, most unsatisfactorily reproduced on Pls. VII a—XIII. "The earliest known illustrated paper manuscript of the Kalpasūtra" is said to be dated Śaṃvat 1125 (p. 10). Although the reproduction (Pl. VIII) is poor indeed, it is yet sufficiently clear to show that the type of the illustration compares with well-known examples of the early sixteenth century. From a stylistic point of view the date (i. e., 1068 A. D.) is precluded. No other paper manuscript of this date is known.

The connection between certain features and the costume of figures current in "Jaina" paintings and the similar traits in S. Indian, Orissan and Burmese painting is valid and has been observed before. Dr. Sastri suggests (p. 15) contact with the Śakas as responsible for these traits. The hypothesis deserves further investigation.

The indiscriminate selection of illustrations, (especially Pls. III and IV) the carelessness of reproduction (Pl. XIV, which is scarcely visible), the lack in the text of a methodical approach, and actual knowledge, of 'Indian pictorial art' leave much room for improvement in the future publications of the Gāekwad's archaeological series. There are many 'bhaṇḍāras' or collections of manuscripts in the territory which now belongs to H. H. the Maharaja Gāekwad of Baroda besides various archaeological monuments, to be adequately dealt with in publications which are being looked forward with keen anticipation.

St. Kramrisch.

The Twin Pagodas of Zayton (Harvard-Yenching Institute, Monograph Series, Vol. II), pp. 95 and 72 plate and 5 plans, by Prof. G. Ecke of the Fu-jen University, Pei-p'ing and Prof. P. Demiéville of the National School of Oriental Languages, Paris; Harvard University Press, Cambridge, Massachusetts, 1935.

The book contains a detailed study of two old Chinese Pagodas from various points of view. The two pagodas belong to a place called Ch'üan-chou in the Province of Fu-chien. Zayton is the medieval name of the place and is referred to by the great Venetian traveller Marco Polo and also by the Arab author Ibn Batutah who wrote in the middle of the 14th century. So far as it can be ascertained from the accounts of these two writers Zayton was one of the greatest harbours in the east "frequented by all ships of India which bring thither spicery and all other kinds of costly wares". The growth of Zayton or Ch'üan-chou was continuous, beginning from the T'ang period till the 14th century when it had reached its highest development. The oldest Buddhist institution of the place was the K'ai-yuan temple, built in the end of the 7th century. It gradually developed into an imposing Buddhist institution and reached the height of its prosperity in the 13th and 14th centuries. Old accounts tell us that about the year 1300 the number of monks living in the K'ai-yuan temple was not less than 1000 while Odoric de Pordenone who visited the place between 1316 and 1330 A. D. tells us that the number of monks living there was 3000.

The two pagodas which have been the object of the present study are ordinarily called Western and Eastern Pagodas. The origin of the Western Pagoda goes back to the 916 A. D. while that of the Eastern Pagoda may be traced back to the last quarter of the 9th century. The pagodas were destroyed by fire at different times till at last they were rebuilt in stone. The Western Pagoda was rebuilt between 1228 and 1237 and the Eastern one was begun in 1238 but completed in 1250. Since then only minor repairs have been made.

The present study is divided in two parts: the first which contains the history of the harbour of Zayton, a study of the architecture of the two pagodas and also a study of the sculpture, is the work of Prof. Ecke and the second part consisting of the detailed study of the iconography and a historical study of the old institutions, is the work of Prof. Demiéville. The volume contains a large number of plates illustrating the details of sculpture and the necessary plans and maps which help to locate the old sites of the institutions.

The two pagodas are five storied, the Western one has a height of about 150 ft. and the Eastern one about 163 ft. It is made of massive blocks of granite which has "outstanding tensile strength and is easy to cleave." The design is unique and ingenious and was imitated in Japan, for example in the construction of the famous Nandaimon

of the Todaiji. The style is the famous Sung style of wooden construction which could be easily reproduced in stone. The style is called in Japan "the Indian style" for reasons which have not yet been well explained. "As an ornament within the architectural scheme of each pagoda eighty panels with life-size figures carved in the middle relief are inserted into the ashlar framework. The main motifs are Patriarchs and Arhats, real or imaginary monastic portraits, and a series of Bodhisattvas and Guardians. The basements are decorated with Yakṣa Atlantes and with ornamental and narrative panel friezes, the pentroofs with minor mythological beings as ridge-figures. Originally the forty outer and inner niches of each tower were filled with sculptures in the round... but only two out of the eighty niche figures are left." The artists possessed a fair knowledge of classical Buddhism and the canonical texts. "Most of the panels are so carefully executed that it is possible to determine exactly their literary sources, often down to the particular Chinese version which the artists followed. Such a comprehensive 'Bible de pierre' of Buddhism is hardly to be found elsewhere in the Far East." Prof. Demiéville has not spared any pains to make his iconographical study as complete as possible by tracing the legends to the particular Chinese Buddhist text or texts on which they are based.

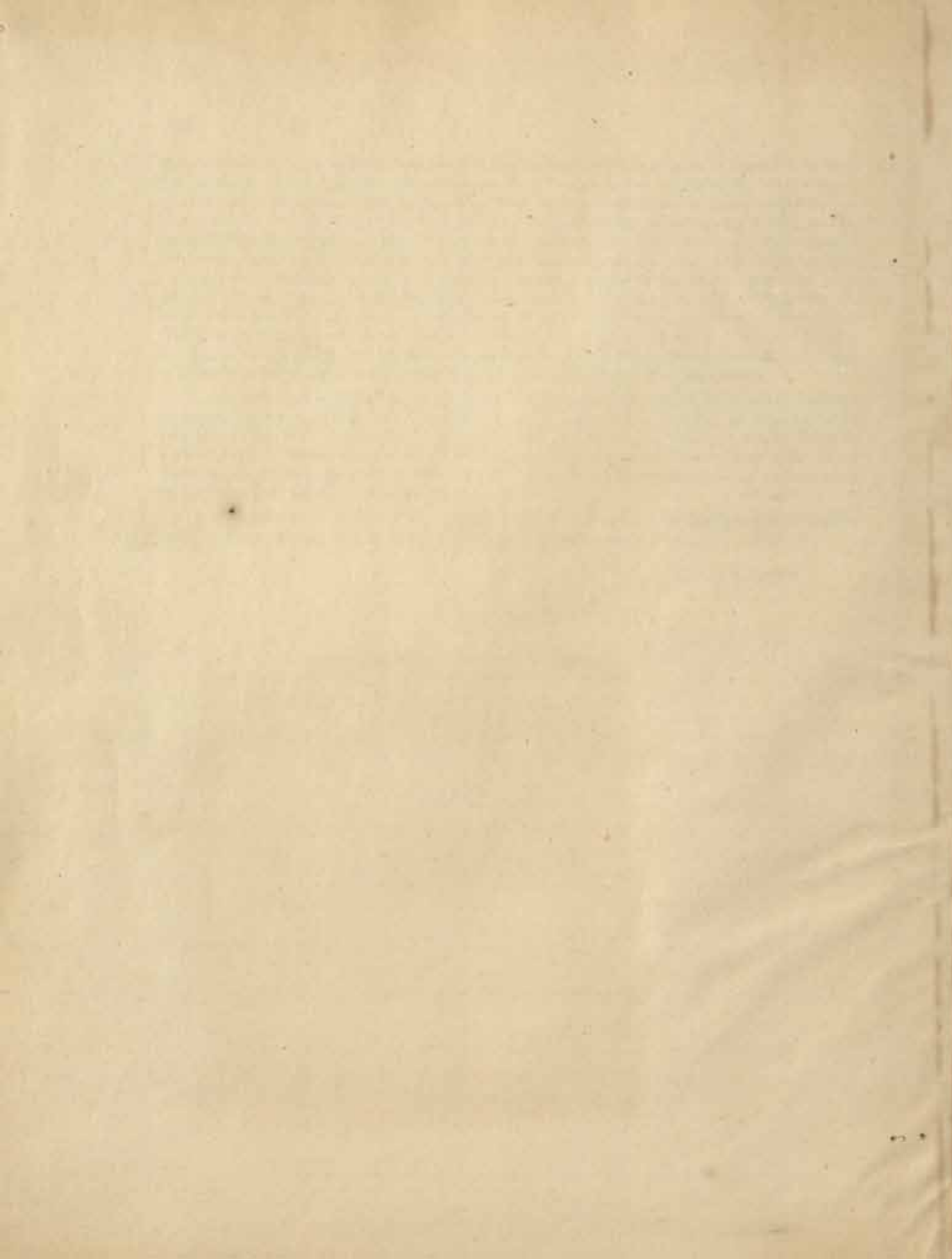
Amongst the ruins of Zayton there are also traces of Hindu temples. Some of the pillars contain medallions representing Kāliya-damana, Kṛṣṇa with flute standing on lotus, conch and discus symbols of Viṣṇu above, the polycephalus Nāga which encircles him, Kṛṣṇa tied to the mortar and uprooting the Yamalārjuna tree, the Narasimha avatāra of Viṣṇu, the Śivaliṅga and a cow offering milk to it, etc. The style of architecture is South Indian and it appears that the pillars belonged to temples, both Śivite and Viṣṇavite, of a trading Hindu community which probably lived at Zayton in the 14th century or a little earlier.

The present work, coming from two authorities who had the opportunity of carrying on their investigation locally, supplies us with a model for detailed study of Buddhist art and architecture in China.

P. C. Bagchi.

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