BOOK 'III.
DRAVIDIAN STYLE.

CHAPTER I.
INTRODUCTORY.

The limits within which the Dravidian style of architecture prevailed in India are not difficult to define or understand. Practically they are those of the Madras Presidency, or, to speak more correctly, they are identical with the spread of the people speaking Tamil, or the cognate tongues. Dr. Caldwell, in his 'Grammar,' estimated these, in 1874, at forty-five or forty-six millions, but he includes among them a number of tribes, such as the Tudas and Gonds, who, it is true, speak dialects closely allied to the Tamil tongues, but unless we know their history, language is only a poor test of race, and in this instance architecture does not come to our aid. And, so far as we at present know, these tribes are in too rude a state to have any architecture of their own in a sufficiently advanced state for our purposes. Putting them aside, therefore, for the present, we still have, according to the census of 1901, over fifty-two millions of people speaking Tamil, Telugu, Kanarese, and Malayalam, whom we have no reason for doubting are practically of the same race, and who, in so far as they are Hindús—not Jains, but followers of Siva and Vishnu—practise one style of architecture, and that known as the Dravidian. On the east coast the boundaries of the

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2 This total includes the Madras Presidency, Mysore, Travankor, part of the Bombay Presidency and Haidarabad.
In the last named there are 5,148,000 Telugu people and 1,563,000 Kanarese.

<table>
<thead>
<tr>
<th>Language</th>
<th>Total Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tamil</td>
<td>16,299,000</td>
</tr>
<tr>
<td>Malayalam</td>
<td>5,278,000</td>
</tr>
<tr>
<td>Telugu</td>
<td>20,409,000</td>
</tr>
<tr>
<td>Kanarese</td>
<td>10,234,000</td>
</tr>
</tbody>
</table>

The totals in each language are:---

53,220,000
style extend as far north as the mouth of the Krishnâ, and it penetrates sporadically and irregularly into the Nizâm’s territories, but chiefly through the Telugu speaking districts.

On the west coast its natural boundary northwards is the Krishnâ to the Dhârwar district, and thence south-east, past Vijayanagar and to the east of Sravana-Belgola and north of Mysore city westwards to the coast. Much of the Kanarese country lies to the north and west of this, and a large part of the Telugu area is to the north of it; but, of course, examples of the style are to be found beyond this line, and of other styles within it. At Elûrâ in latitude 20° N. we have it, but this is most probably due to the Râshtrakûta kings having employed architects from their capital of Mâlkhed, 200 miles to the south. It took no permanent root there, however, while the reflex wave brought the northern styles into Mysore or other southern countries, where their presence was as little to be expected as that of the Dravidian so far north.

Although considerable progress has lately been made in the right direction, no satisfactory solution has yet been arrived at of the problem of the origin of the Dravidians. So far as history is concerned, in such glimmerings of tradition as we possess, at the earliest time at which we find any mention of them the most civilised and important of their communities occupied the extreme southern point of the peninsula.¹ North of them all was forest, but between the Christian Era and the Muhammadan invasion we find the jungle gradually disappearing, and the southern races pushing northwards, till, in the 14th century, they were checked and driven back by the Moslim.

Till we know more about the origin of these Dravidian races, however, it seems expedient for the present to assume that the Tamil-speaking races are practically aboriginal. As far back as their traditions reach, we find the Drâvida Desa, or southern part of India, divided into kingdoms or states, of which three are frequently mentioned—the Pândyas, the Cholas, and the Cheras,² forming a little triarchy of powers, not often interfered with by the other nations of the peninsula, nor interfering with those beyond their limits. During the greater part of their existence their relations of war and

² In Aroka’s second edict reference is made to Chola, Pândya, Satiyaputra, Keralaaputra and Ceylon; and, as Kerala is well known as the name of the Chera country, we have here mention of all three states together with ‘Satiyaputra,’ which may possibly be that of the Satyakarnis of Banavasi. The Aroka inscriptions discovered in 1853 in Mysore are indicative of the wide influence of that emperor.
peace have been chiefly among themselves, and they have
grown up a separate people, as unlike the rest of the world
as can well be conceived.

Of the three the most southern was the Pândya kingdom,
which occupied the extreme south of the peninsula from
Cape Comorin to the Vellâr river\(^1\) in the Pudukottai state
on the east coast, and to Achchankovil Pass\(^2\) on the west,
including the southern part of Travan kor. It seems to have
been of sufficient importance about the time of the Christian
Era to have attracted the special attention of Greek and
Roman geographers and merchants. How much earlier it
became a state, or had a regular succession of rulers, we
know not,\(^3\) but it seems to have attained to some consistency
as early as five or six centuries before the Christian Era,
for we find its princes referred to in the earliest Singalese
traditions of the ‘Mahâwansa.’\(^4\) Their early capital was
probably Korkai or Kolkai, at the mouth of the Tâmraparni
close to Kâyal, and known to the early geographers as the
seat of the pearl fishery; but the Pândya princes, at an early
date, either removed to Madurâ, or possibly they had another
capital there. This continued to be the seat of government
of the later rulers of the country from some time in the 12th
century till its absorption in the middle of the 18th.

During the long period of their rule, the Pândyas had
several epochs of great brilliancy and power, followed by
long intervening periods of depression owing to frequent
invasions from their neighbours the Chola kings of
Trichinopoly. The 1st century, and afterwards the 5th
or 6th, seem to have been those in which they especially
distinguished themselves. The large number of gold, silver
and copper coins, chiefly of the Roman emperors from
Augustus to Nero, that have been found at different places
in the region, indicate a considerable commerce with the West
at that age. We have lists of kings, but how far mythical
we know not, the times at which any of them lived being
quite unknown before the 9th or 10th century, and such as
have been approximately ascertained between the 9th and
13th century are those mentioned in Chola inscriptions. If
buildings of the first ten or twelve centuries exist, which is by

\(^1\) It falls into Falks Strait in 10° 8' N.

\(^2\) In N. latitude 9° 6'.

\(^3\) See Bishop Caldwell’s ‘Political and

\(^4\) Vijaya sends to the Pândya king for

General History of the District of Timneck-
his daughter.—‘Mahâwansa,’ ch. vii.

vally’ (Madras; 1881); and ‘Indian

And the second and fourth Sinhalese


princes are named Pându-vañca and

Pândukâbhaya, as being of Pândya
descent.
no means improbable, they are still unknown to us, and must remain so till the full results of the Archæological Surveys are adequately published. In the early ages of their history the Pândya kings are believed to have been Buddhists, but one of them, perhaps in the 12th century, became a Saiva, and persecuted the heterodox sect mercilessly.

The Muhammadans, led by Malik Kâfûr, conquered Madurâ in 1311, and for about half a century they held the country, till dispossessed by a new line of Pândya princes, who were probably more or less under the supremacy of Vijayanagar. About 1525, however, the Nâyyaks—officers of Vijayanagar—usurped supreme power at Madurâ, and ruled there till 1736. By far the most distinguished prince of the Nâyyak dynasty was Tirumalai Nâyyak, who ruled from 1623 till 1659. This prince adorned the capital city of Madurâ with many splendid edifices, some of which have been drawn by Daniell and others. What more ancient remains there are will not be known till they have been carefully and scientifically surveyed, and the results published.

The Chola kingdom extended northward from the border of the Pândya country and the valley of the Kâveri and Kolerân rivers, whose banks seem always to have been its principal seat, to the Pâlâr river or nearly to Madras, all along the eastern coast, called after them Cholamandalam or Coromandel. Westwards their kingdom extended into Mysore, but the boundaries varied at different periods, and, after the fall of the Pallavas of Kânchî, they advanced northwards to the limits of the Eastern Chalukyas of Vengi. The date of the origin of their kingdom is not known, but the mention of Chola as a state in the Asoka edicts is proof of its antiquity. Their early capital was Uraiyyûr, now a suburb of Trichinopoly. The earliest princes of the dynasty, whose position we can assign, belong to the 9th century, but it is only with Râjarâja I., who became king in 983, that any connected chronology commences. Their epoch of greatest glory was between the 10th and 12th centuries, when they seem to have conquered not only their neighbours the Pallavas, Pândyas and Cheras, but even to have surpassed the bounds of the triarchy, and carried their arms into Ceylon, and to have maintained an equal struggle with the Chalukyas in the north. Their capital during this period was at Kânchî, now Conjivaram, which they had wrested from the Pallavas. By the middle of the 13th century, however, their power had waned, and they sank step by step, first under the Muhammadans, from whom it passed to the Nâyyaks of Madurâ, and then to the Marâthas.

The Cheras occupied the country northward of the Pândya
kingdom, and westward of the Chola, stretching along the west or Malabar coast to Honâwar: whether they ever occupied any considerable portion of Mysore or of Koimbatur is not so certain. The capital was Karûr or Vanji, probably adjacent to Cranganor in the Cochin state. Tradition assigns to the state a series of kings styled Perumâl, who seem to have been elective, and are mentioned as Pândyas and Cholas, but the list ended with Cherumân Perumâl, in the 9th century, who is said to have become a Moslim. No Chera inscriptions have as yet come to light to help us to unravel their history, and the territory was probably divided into principalities, whose main defence was the mountain range, separating their country from their eastern neighbours.

But however this may be, the old Chera region is best defined by its architecture, for the style of Hindû temple, Jaina basti, and Moslim mosque, is distinctly one throughout the country from the north of Kanara to the south of Travankor. Jainism probably penetrated into the country at an early date, and till late in the 16th century the Tuluva râjas were Jains, whilst the colossal statues at Kârkala and Venûr in South Kanara and at Sravan-Belgola in Mysore, with the bastis at Mûdabidri, Bhatkal and elsewhere testify to their zeal. On the other hand, the Malayâlis are snake worshippers to the present day; in their gardens the Hindûs usually provide a “Nágakotta” or snake shrine.

A fourth dynasty, already mentioned, appears at an early date in the history of the Dekhan; the Pallavas possibly rose to power on the decay of the Andhra power in the third century, and they seem to have secured much of the Chola country, probably before the 5th. About A.D. 400 Samudragupta, among other princes, claimed to have overthrown Vishnugopa of Kânchi, who was doubtless a Pallava king, and recent epigraphical research has now brought to light details respecting this dynasty which ruled the country called Drâvida from their capital at Kânchi, now Conjiwaram. In the 7th century they were at war with the Chalukyas of Bâdâmi, and Narasimhavarman I. claimed to have destroyed Bâdâmi during the reign of the Chalukya king Pulikesin II. (A.D. 609-642), whilst his father Mahendravarman had, at an earlier date, defeated the same king near Kânchi when

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2 Ajax, p. 43, note 3.
3 The ‘Mahâbhârata,’ ‘Vishnu Purâna,’ and ‘Varâha Mihira’ (in the 6th century), frequently mention the Pahlavas among the tribes in the north-west, and some scholars have tried to identify them with the Pallavas, who were in the south-east of India as early as the 2nd century, but the similarity of names alone will hardly justify the assumption of identity.
he invaded Drāvida.\(^1\) Probably about this period the Pallavas extended their rule over the Bellāri district and parts of Mysore; but in the following century we learn that Vikramāditya II., the Chalukya king, about 740, defeated Nandivarman Pallava and entered Kānci, bestowing gifts on the shrine of Rājasimhesvara—now the Kailāsanātha temple—built by Narasimhavarman II. A century later they were attacked by the Rāṣṭrakūtas, and their power seems to have been broken, and they gradually succumbed to the Cholas, who re-asserted their power in the 10th century.

Parāntaka or Vīranārāyana (cir. A.D. 907-946) advanced the Chola power and boasts of taking Madurā from the Pāṇḍya king and the invasion of Ceylon,\(^2\) as also of gilding the “Golden Hall” at Chidambaram, the then famed temple of his race. His son Rājāditya was killed in battle by the Rāṣṭrakūta king Krishna III., and a period of civil war followed till 985, when Rājarāja secured the throne and carried his conquests as far as Kalinga on the north, to Kollam or Quilon on the west, and to Ceylon in the south.\(^3\) Though a Śāiva, we have a long copperplate grant of the 21st year of his reign granting a village to a Buddhist temple at Negapattam built by a king of Katāha—apparently in the eastern peninsula;\(^4\) but his great architectural monument was the Tanjor temple. For a century after Rājarāja I. the Cholas maintained the commanding position he had gained for his dynasty, but from the time of Vikrama Chola (1118-1135), their power gradually waned, and after this the rise of the Ballālas in Mysore, and the revival of the Pāṇḍyas in the south, seem to have checked them to such an extent that they never regained their previous position.

Although, politically, these states always remained distinct, and generally antagonistic, the people belonged to the same race. Their architecture is different from any other found in India, but united in itself, and has gone through a process of gradual change from the earliest times at which we become acquainted with it, until we lose sight of it altogether in the last century. This change is invariably for the worse, the earlier specimens being in all instances the most perfect, and the degree of degradation forming, as mentioned above, a tolerably exact chronometric scale, by which we may measure the age of the buildings.

Buddhism does not seem to have ever gained such a footing

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2 The ‘Māhāwansa’ seems to place this invasion in the time of Udaya III., A.D. 964-972; but the flight of the Pāṇḍu king from Madurā to Ceylon is mentioned under Kāsyapa IV., A.D. 929-939, ‘Māhāwansa,’ chh. iii., liii.
3 ‘Māhāwansa,’ ch. iv.
4 Ante, p. 206.
among the Dravidian races generally as it did in northern and western India; yet, in the 7th century, when Hiuen Tsiang visited Kâñcipuram, most probably when Narasimhavarman I. was the Pallava sovereign, he reckoned “some hundred of sanghârâmas with ten thousand priests” in the Drâvida country, all belonging to the Sthâvira school of the Mahâyâna, with eighty Hindu temples and many Jaina heretics. In Malakûta or the Pândya country he reports from hearsay that the monasteries were mostly ruinous, whilst Jains were numerous; and for the Chola province, which he probably passed through, he makes a like statement. Like their temples at Negapattam, Buddhist monasteries would mostly be of brick, and when the sect disappeared, whether from persecution—as tradition asserts—or through absorption into Vaishnava or other sects, their buildings would be pulled down or altered for other purposes.

The Jaina religion long continued to flourish at Conjivaram and in Mysore; but, though influential from their intelligence, the Jains never formed more than a small numerical fraction of the people among whom they were located.

The Hindu religion, which was probably always supreme in the Dravidian districts, now commonly designated the Brahmanical, is divided into the worshippers of Siva and Vishnu, which are quite distinct and almost antagonistic; but both are so overloaded with absurd fables and monstrous superstitions that it is very difficult to ascertain what they really are or ever were. Nor are we yet in a position to speak confidently of their origin.

Both these religions have borrowed an immense amount of nomenclature from the more abstract religions of the Aryan races, and both profess to venerate the Vedas and other scriptures in the Sanskrit language. Indeed it is all but impossible that the intellectual superiority of that race should not make itself felt on the inferior tribes, but it is most important always to bear in mind that the Sanskrit-speaking Aryan was a stranger in India. It cannot indeed be too often repeated that all that is intellectually great in that country—all, indeed, which is written—belongs to them; but all that is built—all, indeed, which is artistic—belongs to other races, who were either aboriginal or immigrated into India at earlier or subsequent periods, and from other sources than those which supplied the Aryan stock.

There does not seem to be any essential difference either in plan or form between the Saiva and Vaishnava temples in the

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1 Beal, 'Buddhist Records,' vol. ii, p. 229.
south of India. It is only by observing the images or emblems worshipped, or by reading the stories represented in the numerous sculptures with which a temple is adorned, that we find out the god to whom it is dedicated. Whoe'er he may be, the temples consist almost invariably of the four following parts, arranged in various manners, as afterwards to be explained, but differing in themselves only according to the age in which they were executed:—

1. The principal part, the actual temple itself, is called the *Vimāna*. It is always square in plan, and surmounted by a pyramidal roof of one or more storeys; and it contains the cell in which the image of the god or his emblem is placed.

2. The porches or *Mantapams*, which always cover and precede the door leading to the cell.

3. Gate-pyramids, *Gopurams*, which are the principal features in the quadrangular enclosures that surround the more notable temples.

4. Pillared halls or *Chaultris*—properly *Chhāwāttis*—used for various purposes, and which are the invariable accompaniments of these temples.

Besides these, a temple always contains tanks or wells for water—to be used either for sacred purposes or the convenience of the priests—dwellings for all the various grades of the priesthood are attached to it, and numerous other buildings for state or convenience.

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1 *Vimāna* is generally used to designate "a chariot" or vehicle of the gods, a moving palace; hence it includes the shrine and spire.

2 In Sanskrit—*Mandapa*, a pavilion or open porch, thence a hall, and a temple.

3 *Gopura* means a town gate, hence an entrance, applied to the lofty towers over the entries to southern temples. The later style of gopurams dates from the 16th century, and do not properly belong to the original Dravidian temples. They were probably intended for purposes of defence against invasion and plunder.

4 *Chhāwāttis* or *Chhāwātt* is a public lodging place, a shelter for travellers.
CHAPTER II.

HINDU CONSTRUCTION.

CONTENTS.
Arches—Domes—Plans—Sikharas.

ARCHES.

Before proceeding to describe the arrangements of Hindu or Jaina temples, it may add to the clearness of what follows on the various styles if we first explain the peculiar modes of constructing arches and domes which they invariably employed.

As remarked above, although we cannot assert that the Buddhists never employed a true arch, this at least is certain—that, except in the roofs of one or two small chaityas recently discovered, no structural example has been found in India, and that all the arched or circular forms found in the caves are without exception copies of wooden forms, and nowhere even simulate stone construction. With the Hindus and Jains the case is different: they use stone arches and stone domes which are not copied from wooden forms at all; but these are invariably horizontal arches, never formed or intended to be formed with radiating voussoirs.

It has been explained, in speaking of Pelasgic art, how prevalent these forms were in ancient Greece and Asia Minor, and how long they continued to be employed even after the principles of the true arch were perfectly understood. In India, however, the adherence to this form of construction is even more remarkable. As the Hindus quaintly express it, "an arch never sleeps"; and it is true that a radiating arch does contain in itself a vis viva which is always tending to thrust its haunches outwards, and goes far to insure the ultimate destruction of every building where it is employed: while the horizontal forms employed by the Hindus are in stable equilibrium, and, unless disturbed by violence, might remain so for ever.

1 Fergusson's 'Ancient and Mediaeval Architecture' (3rd ed.), vol. i, pp. 243 et seq.
There can be no doubt that the Hindús carried their horror of an arch to an excess which frequently led them to worse faults on the other side. In city walls, for instance, where there is a superabundant abutment on either hand to counteract any thrust, the horizontal principle is entirely misplaced. If we take, for instance, one of the city gates at Vijayanagar (Woodcut No. 168), we cannot help perceiving that with much smaller stones and less trouble a far more stable construction could have been obtained, so long as the wall on either hand remained entire. What the Hindú feared was that if the wall were shattered, as we now find it, the arch would have fallen, though the horizontal layers still remain in their places.

Instead of a continuous bracket like that shown in the last example, a more usual form, in modern times at least, is that of several detached brackets placed a little distance apart the one from the other. When used in moderation this is the more pleasing form of the two, and in southern India it is generally used with great success. In the north they are liable to exaggerate it, as in the gateway from Jhinjhuwádá in Gujarát (Woodcut No. 169, p. 312), when it becomes unpleasing, though singularly characteristic of the style.¹

¹ Other examples of the same style may be seen in the gateways of Dabhoi.—Burgess and Cousens, ‘The Antiquities of Dabhoi in Gujarát,’ plates 10, 13, and 16.
It is this horizontal or bracket mode of construction that is the formative principle of the Dravidian or Southern style of Hindû architecture, every form and every ornament depending almost wholly upon it. In the north, however, another development of the same principle is found in the horizontal dome, which is scarcely known in the south, but which has given a new character to the style, and, as one of its most beautiful features, demands a somewhat detailed explanation.

**Domes.**

It is to be regretted that, while so much has been written on the history of the pointed arch, so little should have been said regarding the history of domes: the one being a mere constructive peculiarity that might very well have been dispensed with; the other being the noblest feature in the styles in which it prevails, and perhaps the most important acquisition with which science has enriched the art of architecture.

The so-called Treasuries of Mycenae and Orchomenos, as well as the chambers in Etruscan tombs, prove that as early as ten or twelve centuries before Christ the Pelasgic races had learned the art of roofing circular chambers with stone vaults, not constructed, as we construct them, with radiating vaults, on the principle of the common arch, but by successive layers of stones converging to a point, and closed by one large stone at the apex.

Whoever invented the true or radiating arch, the Romans were the first who applied it as a regular and essential architectural feature, and who at the same time introduced its complement, the radiating dome, into architectural construction;
at what period it is not now known. The earliest example, the Pantheon, is also the finest and largest; but we have lost entirely the innumerable steps by which the architects must have slowly progressed to so daring an experiment.

There is, however, a vast difference between these two classes of domes, which it is necessary to bear in mind in order to understand what follows.

The Roman arch and Roman dome are always constructed (Woodcut No. 170) on the principle of voussoirs, or truncated wedges, radiating from a centre. This enabled the Romans to cover much larger spaces with their domes than perhaps was possible on the horizontal principle; but it involved the inconvenience of great lateral thrusts, continually tending to split the dome and tear the building in pieces, and requiring immense and massive abutments to counteract their destructive energy.

The Indian or horizontal dome never can be made circular in section, except when used on the smallest scale, but almost always takes a form more or less pointed (Woodcut No. 171). From the time of the building of the Treasury of Mycenæ\(^1\) to the birth of Christ, we have a tolerably complete series of arches and vaults constructed on this principle, but few domes properly so called. After the Christian Era the first example is found in a singular tomb at Mylassa,\(^2\) near Halicarnassus in Caria,\(^3\) where the dome exhibits all the peculiarities of construction found in the Jaina temples of India. After this we almost lose the thread of its history till the form reappears in porches like those of the 11th century on Mount Abû, where it is a perfectly established architectural feature, that must have been practised long before it could be used as we find it in that building. Whether we shall ever be able to recover the lost links in this chain is more than doubtful, but it would be deeply interesting to the history of art if it could be done. In the meantime, there is no difficulty in explaining the constructive steps by which the object is now attained in India. These may also throw some

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\(^1\) 'History of Ancient and Medieval Architecture,' vol. i. p. 243.

\(^2\) Ibid. p. 371; and ante, p. 209.

\(^3\) Fully illustrated in vol. ii. of the Dilettanti Society's 'Antiquities of Ionia.'
light on the history of the invention, though this is not, of course, capable of direct proof.

The simplest mode of roofing a small square space supported by four pillars is merely to run an architrave or stone beam from each pillar, and cover the intermediate opening by a plain stone slab. Unless, however, slabs of great dimensions are available, this mode of construction has a limit very soon arrived at. The next step therefore is to reduce the extent of the central space to be covered by cutting off its corners; this is done by triangular stones placed in each angle of the square, as in Woodcut No. 172, thus employing five stones instead of one. By this means, the size of the central stone remaining the same, the side of the square space so roofed is increased in the ratio of ten to seven, the actual area being doubled. The next step in the process (Woodcut No. 173) is by employing three tiers and nine stones, instead of two tiers and five stones, which quadruples the area roofed. Thus, if the central stone is 4 ft., by the second process the space roofed will be about 5 ft. 8 in.; by the third 8 ft. square; by a fourth process (Woodcut No. 174)—with four tiers and thirteen stones—the extent roofed may be 9 ft. or 10 ft., always assuming the central stone to remain 4 ft. square. All these forms are still currently used in India, but with four pillars the process is seldom carried further than this; with another tier, however, and eight pillars (as shown in Woodcut No. 175), it may be carried a step further—exactly the extent to which it is carried in the tomb at Mylassa above referred to. In this, however, as
in all instances of octagonal domes in this style, instead of the octagonal form being left as such, there are always four external pillars at the angles, so that the square shape is retained, with twelve pillars, of which the eight internal pillars may be taken as mere insertions to support the long architrave between the four angular pillars.

It is evident that here again we come to a limit beyond which we cannot progress without using large and long stones. This was sometimes met by cutting off the angles of the octagon, and making the lower course of sixteen sides. When this has been done an awkwardness arises in getting back to the square form. This was escaped from, in all the instances I am acquainted with, by adopting circular courses for all above that with sixteen sides. In many instances the lower course with sixteen sides is altogether omitted, and the circles placed immediately

on the octagon, as in the temple of Vimala at Abû (Woodcut No. 284, vol. ii. p. 39). It is difficult to say how far this system
might be carried constructively without danger of weakness. The Indian domes seldom exceed 30 ft. in diameter, but this may have arisen more from the difficulty of getting architraves above 12 ft. or 13 ft. in length to support the sides, than from any inability to construct domes of larger diameter in themselves. This last difficulty was to some extent got over by a system of bracketing, by which more than half the bearing of the architrave was thrown on the capital of the column, as shown in Woodcut No. 176. Of course this method might have been carried to any extent, so that a very short architrave would suffice for a large dome; but whether this could be done with elegance is another matter. The Indians seem to have thought not; at least, as far as I know, they never carried it to any extent. Instead of bracketing, however, they sometimes used struts, as shown in Woodcut No. 176, but it is questionable whether that could ever be made a really serviceable constructive expedient in stone architecture.

The great advantage to be derived from the mode of constructing domes just described was the power it gave of placing them on pillars without having anything to fear from the lateral thrust of the vault. The Romans never even attempted this, but always, so to speak, brought their vaults down to the ground, or at least could only erect them on great cylinders, which confined the space on every side. The Byzantine architects cut away a great deal of the substructure, but nevertheless could never get rid of the great heavy piers they were forced to employ to support their domes and in all ages were forced to use either heavy abutments externally, or to crowd their interiors with masses of masonry, so as in a great measure to sacrifice either the external effect or the internal convenience of their buildings to the constructive exigencies of their domes. This in India never was the case; all the pressure was vertical, and to ensure stability it only required sufficient strength in the support to bear the downward pressure of the mass—an advantage the importance of which is not easily over-estimated.

One of the consequences of this mode of construction was, that all the decoration of the Indian domes was horizontal, or, in other words, the ornaments were ranged in concentric rings, one above the other, instead of being disposed in vertical ribs, as in Roman or Gothic vaults. This arrangement allows of far more variety without any offence to good taste, and practically has rendered some of the Indian domes the most

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1 The tendency of the Indian construction, however, was to make the section of the dome nearly conical as each course or ring of stone, after the first two or three, had about the same amount of projection inwards.
exquisite specimens of elaborate roofing that can anywhere be seen. Another consequence of this mode of construction was the employment of pendants from the centres of the domes, which are used to an extent that would have surprised even the Tudor architects of our own country. With them, however, the pendant was an architectural tour de force, requiring great constructive ingenuity and large masses to counterbalance it, and is always tending to destroy the building it ornaments; while the Indian pendant, on the contrary, only adds its own weight to that of the dome, and has no other prejudicial tendency. Its forms, too, generally have a lightness and elegance never even imagined in Gothic art; it hangs from the centre of a dome more like a lustre of crystal drops than a solid mass of marble or of stone.

As before remarked, the eight pillars that support the dome are almost never left by themselves, the base being made square by the addition of four others at the angles. There are many small buildings so constructed with only twelve pillars, as shown in the annexed diagram (No. 177), but two more are oftener added on each face, making twenty altogether, as shown on the upper side of the annexed diagram (No 178); or four on each face, making twenty-eight; or again, two in front of these four, or six on each face, so as to make thirty-six; and the same system of aggregation is carried on till the number of pillars reaches fifty-six (Woodcut No. 179), which is the largest number I ever saw surrounding one dome; but any number of these domes may surround one temple, or central dome, and the number consequently be multiplied almost ad infinitum. When so great a number of pillars is introduced as in the last instance, it is usual to make the outmost compartment on each face square, and surmount it with a smaller dome. This is occasionally though rarely done even with the smallest number.

The first result of this arrangement is, that the Hindûs obtained singularly varied outline in plan, producing the happiest effects of light and shade with every change in the sun's position. Another result was, that by the accentuation of the salient and re-entering angles, they produced those strongly-
marked vertical lines which give such an appearance of height to Gothic designs. To accomplish this, however, the Western architects were obliged to employ buttresses, pinnacles, and other constructive expedients. The Hindus obtained it by a new disposition of the plan without anywhere interrupting the composition. This form of outline also expresses the internal arrangements of the porch better than could be done by the simpler outline of either a square or circle, such as is usually employed in Europe. Its greatest merit, however, is, that the length of the greater aisles is exactly proportioned to their relative width as compared with that of the subordinate aisles. The entrance being in the angle, the great aisle forms the diagonal, and is consequently in the ratio of 10 to 7, as compared to what it would be if the entrance were in the centre of the side, where we usually place it. From the introduction of the octagonal dome in the centre the same proportion (correctly 1000 to 707) prevails between the central and side aisles, and this again is perhaps the most pleasing that has yet been introduced anywhere. In Gothic churches the principal aisles are generally twice as wide as the side ones, but they are also twice as high, which restores the proportion. Here, where the height of all is the same, or, nearly so, this gradation just suffices to give variety, and to mark the relative importance of the parts, without the one overpowering the other: and neither has the appearance of being too broad nor too narrow.

It is, of course, difficult for those who have never seen a building of the class just described to judge of the effect of these arrangements; and they have seldom been practised in Europe. There is, however, one building in which they have accidentally been employed to a considerable extent, and which owes its whole beauty to the manner in which it follows the arrangement above described. That building is Sir Christopher Wren’s church of St. Stephens, Walbrook. Internally its principal feature is a dome supported on eight pillars, with four more in the angles, and two principal aisles crossing the building at right angles, with smaller square compartments on each side. This church is the great architect’s masterpiece, but it would have
been greatly improved had its resemblance to a Hindū porch been more complete. The necessity of confining the dome and aisles within four walls greatly injures the effect as compared with the Indian examples. Even the Indian plan of roofing, explained above, might be used in such a building with much less expense and less constructive danger than a Gothic vault of the same extent.

PLANS.

Till the discovery of the small Buddhist chaitya halls at Tèr and Chezarla and elsewhere, already described (p. 126), there was only one temple in India which gave us any hint of how the plans of such halls were related to those of Hindū and Jaina temples. Fortunately, however, its evidence is so distinct that there could be very little doubt about the matter. The temple in question is situated in the village of Aihole, in Bijāpūr district, in western India, not far from the place where the original capital of the Chalukyan sovereigns was situated, and near the caves of Bādāmi on the one hand and the temples of Pattadakal on the other. Its date is uncertain to some extent, since an inscription on its outer gateway recording a grant to the temple, during the reign of Vikramaḍitya-Satyāśraya, is undated;¹ and there were two Chalukya kings of this name—one ruling between A.D. 655 and 680, and the other between 733 and 746. But the grant was to a temple already established, and even if made in the 8th century the fame might well be of fifty or eighty years earlier date, as its architecture would indicate. It is thus not only one of the oldest structural temples known to exist in western India, but in fact one of the only three yet discovered that can with any certainty be said to have been erected before the beginning of the 8th century.

This temple, as the sculptures testify, was dedicated to Vishnu—the special divinity of the Chalukyas; but the words carved in Kanarese on the basement—"the holy Jaina temple"—seems to indicate that at one time it had been claimed or appropriated by the Jains, and this, with some misconception as to the character of the sculptures, has led to the mistake of its being supposed that it was originally Jaina. Its original dedication is fortunately, however, of very little importance for our present purposes. The age when this temple was erected was the age of toleration in India. The Chinese traveller Hiuen Tsiang has left us a most vivid description of a great

¹ 'Indian Antiquary,' vol. viii. pp. 285-286; and 'Archæological Survey of Western India,' vol. i. pp. 40 et seqq.
quinquennial festival, at which he was present at Allahābād in A.D. 643, at which the great King Silāditya presided, and distributed alms and honours, on alternate days, to Buddhists, Brahmans, and heretics of all classes, who were assembled there in tens of thousands, and seem to have felt no jealousy of each other, or rivalry that led, at least, to any disturbance.\(^1\) It was on the eve of a disruption that led to the most violent contests, but up to that time we have no reason to believe that they did not all use similar edifices for their religious purposes, with only such slight modifications as their different formulæ may have required (Woodcut No. 180).

Be this as it may, any one who will compare the plan of the chaitya at Sāncḥī (Woodcut No. 47), which is certainly Buddhist, with that of this temple at Aiḥole, which is Vaishnava, can hardly fail to perceive how nearly identical they must have been when complete. In both instances, it will be observed, the apse is solid, and it appears that this always was the case in structural free-standing chaityas. At least, in all the rock-cut examples, so far as is known, the pillars round the apse are different from those that separate the nave from the aisles; they never have capitals or bases, and are mere plain makeshifts. From the nature of their situation in the rock, light could not be admitted to the aisle behind the apse from the outside, but must be borrowed from the front, and a solid apse was consequently inadmissible; but in free-standing examples, as at Aiḥole, it was easy to introduce windows there or anywhere. Another change was necessary when, from an apse sheltering a relic-shrine, it became a cell containing an image of a god; a door was then indispensable, and also a thickening of the wall when it was necessary it should bear a tower or sikha to mark the position of the cella on the outside. Omitting the verandah, the other changes introduced between the erection of these two examples are only such as were required to adapt the points of support in the temple to carry a heavy stone roof, instead of the light wooden superstructure of the primitive Buddhist chaitya (Woodcut No. 181).

It may be a question, and one not easy to settle in the present state of our knowledge, whether the Buddhist chaityas had or had not verandahs, like the Aiḥole example. The rock-

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cut examples naturally give us no information on this subject, but the presumption certainly is, looking at their extreme appropriateness in that climate, that they had this appendage, sometimes at least, though not perhaps usually.

If from this temple at Aihole we pass to the neighbouring

Saiva one of Pāpanātha at Pattadakal, built probably not very much later, we find that we have passed the boundary line that separates the ancient from the mediæval architecture of India, in so far at least as plans are concerned (Woodcut No. 182). The circular forms of the Buddhists have entirely disappeared, and the cell has become the base of a square tower, as it

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remained ever afterwards. The nave of the chaitya has become a well defined mandapa or porch in front of, but distinct from, the cell, and these two features in an infinite variety of forms, and with various subordinate adjuncts, are the essential elements of the plans of the Jaina and Hindu temples of all the subsequent ages.

The procession-path round the cell—called pradakshina—as that round the apse, remained for some centuries as a common but not a universal feature. The verandah disappeared. Round a windowless cell it was useless, and the pillared porches contained in themselves all the elements of shelter or of shadow that were required.

Sikh Haras.

There is one other peculiarity common to both Hindu and Jaina architecture in the north of India that requires notice, before proceeding to describe particular examples. It is the form of the towers or spires called Sikh Haras or Vimanas, which invariably surmount the cells in which the images are placed. It is probably correct to assert that the images of the Tirthankaras are invariably placed in oblong or square cells, and those of Hindu deities in square—generally cubical cells, of no great dimension, and that these cells receive their light from the doorway only. It seems also an invariable rule that the presence and position of the cell should be indicated externally by a tower or spire, and that these towers, though square or nearly so in plan, should have a curvilinear outline in elevation. If the tower at Bodh-Gaya (ante, p. 78) retains unaltered the original form given to it when erected about the 5th or 6th century, this dictum would not apply to Buddhist architecture. As it is, however, the only Buddhist sikhara yet discovered it is hardly fair to draw any decided inference from one single example, while with Jaina or Hindu towers I know of no exception. Take, for instance, the tower represented in the following woodcut (No. 183), which purports to be an elevation of the celebrated Black Pagoda at Kanarak in Orissa, and may be looked upon as a typical example of the style, and of which it may be considered of a fair medium example. The upper part of the tower, to some extent, overhangs its base. It bends inward towards the summit, and is surmounted by what is called an Amalaka—a massive circular coping stone which supports a vase called amritakalasa or amritakarakara, i.e. “dew
vessel.”¹ Its peculiar corrugated form occurs frequently in old examples as a sort of blocking course dividing the sikharas horizontally into numerous small compartments, and it seems as if what is used there in a straight-lined form was employed as a circular ornament at the summit. It is a very beautiful architectural device, and was, as far as I can see, adopted only because it was so, and contrasted brilliantly with the flat ornaments with which it was employed. At present

¹ The “amalaka” has been popularly supposed to be derived from amalaka—the Phyllanthus emblica, Emblica officinalis or Emblica myrobalam; but, though an article of Hindū materia medica, it is so insignificant a berry that it could hardly be thought of as an architectural model.

May it not be from amala—“pure,” “spotless”? Amalarilā—“pure stone,” is applied to this crowning member.—Beal, ‘Buddhist Records,’ vol. ii pp. 136-137; Foucher, ‘L’Art Gréco-Bouddhique du Gandhāra,’ tome i. p. 96n.
Whatever its origin, this amalaka is generally surmounted by a flat dome of reverse curvature, in the centre of which stands the kalasa-karka, or pinnacle, in the form of a vase, generally of very beautiful and graceful design.

The great and at-first sight puzzling question is, from what original is this curious combination of forms derived? It is like nothing found anywhere out of India, and like no utilitarian form in India, that we now know of. It cannot be derived from the dome-like forms of the topes. They are circular.
both in plan and elevation. The Sikharas are straight-lined in plan, and their section is never a segment of a circle; it is not derived from any many-storeyed buildings, as the sikharas or vimānas of the Dravidian architecture of the south of India, which seem certainly to have been copied from the many storeyed vihāras of the Buddhists, and we cannot fancy any class of domestic building which could have formed a model out of which they could have been elaborated. One curious thing we do know, which is that all the ancient roofs in India, whether represented in the bas-reliefs or copied in the caves, were invariably curvilinear—generally circular or rather ogee—having a ridge added externally to throw off the rain from that weakest part; but nothing on any bas-relief or painting gives us a hint of any building like these sikharas.

Another curious and perplexing circumstance regarding the sikharas is that when we first meet them, at Bhuvaneswar, for instance, on the Bay of Bengal, or at Pattadakal in the 7th century, near the west coast of India, the style is complete and settled in all its parts. There was no hesitation then, nor has there been any since. During the twelve or thirteen centuries that have elapsed since the erection of these earliest known examples, they have gone on becoming more and more attenuated, till they are almost as pointed as Gothic spires, and their degree of attenuation is no bad test of their age; but they never changed in any essential feature of the design. All the parts found in the oldest examples are retained in the most recent, and are easily recognisable in the buildings of the present time.

The one hypothesis that occurs to me as sufficient to account for this peculiarity is to assume that it was a constructive necessity. If we take for instance an assumed section of the diagram (Woodcut No. 184, p. 324), it will be seen how easily a very tall pointed horizontal arch, like that of the Treasury at Mycenae referred to above, p. 312, would fit its external form. In that case we might assume that the tower at Bodh-Gayā took a straight-lined form like the doorway at Missolonghi and the ‘Gate of Lions’ at Mycenae, while the Hindūs took the more graceful curvilinear shape, which certainly was more common in remote classical antiquity,¹ and as it is found in Persia may have reached India at a remote period.

This hypothesis does not account for the change from

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¹ See Woodcuts Nos. 102, 114, 124, 126, 129, 172, 177 and 178 of vol. i. of the author’s ‘History of Ancient and Medieval Architecture,’ 3rd edn.; and for the Missolonghi doorway and Mycenae Gate of Lyons,—Ibid., Nos. 130 and 131 on p. 247.
the square to the circular form in the upper part, nor for its peculiar ornamentation; but that may be owing to our having none of the earlier examples. When we first meet with the form, either in Dhârwâr or Orissa, it is complete in all its parts, and had evidently reached that state of perfection through long stages of tentative experience. The discovery of some earlier examples than we now know may one day tell us by what steps that degree of perfection was reached, but in the meanwhile I fear we must rest content with the theory just explained, which, on the whole, may be considered sufficient for present purposes at least.  

1 In his work on the 'Antiquities of Orissa,' vol. 1., Bâbu Râjendralâl Mitra suggests at page 31 something of this sort, but if his diagram were all that is to be said in favour of the hypothesis, I would feel inclined to reject it.
CHAPTER III.

DRAVIDIAN ROCK-CUT TEMPLES.

CONTENTS.

Mamallapuram—Kailas, Elura.

Although it may not be possible to point out the origin of the Dravidian style, and trace its early history with the same precision as we can that of Buddhist architecture, there is nothing so mysterious about it as there is regarding the styles of northern India, nor does it burst on us full blown at once as is the case with the architecture of the Chalukyas. Hitherto, the great difficulty in the case has been, that the temples of southern India have almost all been found to be of so modern a date. The great building age there was the 16th and 17th centuries of our era. Some structural buildings, it is true, could be traced back to the 11th or 12th with certainty, but beyond that all was to a great extent conjecture; and if it were not for rock-cut examples, we could hardly go back much further with anything like certainty. Recent investigations, however, combined with improved knowledge and greater familiarity with the subject, have now altered this state of affairs to a great extent. It seems hardly doubtful now that the Kailas at Elura, and the great temples at Pattadakal, are anterior to the 10th century.¹ In fact, it has been ascertained that they date from the 8th, and the "raths," as they are called, at Mamallapuram or the "Seven Pagodas" on the Madras coast, are as early as the 7th century, and are in reality the oldest examples of their class known, and the prototypes of the style.

One circumstance which prevented the age of the Mamallapuram raths being before detected is, that being all cut in granite and in single blocks, they show no sign of wearing or decay, which is so frequently a test of age in structural buildings, and being all in the same material produces a family likeness among them, which makes it at first sight difficult to discriminate between what is old and what new. More than this, they all

possess the curious peculiarity of being unfinished, whether standing free, as the raths, or cut in the rock, as caves, or on its face, as the great bas-relief; they are all left with one-third or one-fourth merely blocked out, and in some instances with the intention merely indicated. It looks as if the workmen had been suddenly called off while the whole was in progress, and native traditions, which always are framed to account for what is otherwise most unintelligible, have seized on this peculiarity, and make it the prominent feature in their myths. Add to this that it is only of late we have acquired that knowledge of the subject and familiarity with its details, which enable us to check the vagaries of Indian speculation. From all these causes it is not difficult to understand how easily mistakes may be made in treating of such mysterious objects.

If we do not know all we would wish about the antiquities of Māmallapuram, 1 it is not because attempts have not been made to supply the information. Situated on an open beach, within 32 miles of Madras, it has been more visited and oftener described than any other place in India. The first volume of the ‘Asiatic Researches’ (1788) contained an exhaustive paper on them by Wm. Chambers. This was followed in the fifth (1798) by another by Mr Goldingham. In the second volume of the ‘Transactions of the Royal Asiatic Society’ (1830) there appeared what was then considered a most successful attempt to decipher the inscriptions there, by Dr. Guy Babington, accompanied by views of most of the sculptures. Before this, however, in 1816, Colonel Colin Mackenzie had employed his staff to make detailed drawings of all the sculptures and architectural details, and he left a collection of about forty drawings, which are now, in manuscript, in the India Office. Like all such collections, without descriptive text, they are nearly useless for scientific purposes. The ‘Madras Journal,’ in 1844, contained a guide to the place by Lieutenant J. Braddock, with notes by the Rev. G. W. Mahon, the Rev. W. Taylor, and Sir Walter Elliot; 2 and almost every journal of every traveller in these parts contains some hint regarding them, or some attempt to describe and explain their peculiarities or beauties. With the exception of the Mackenzie MS.—the

1 The name of this place, among English writers, has been subject to various changes; a century ago it usually figured as Maha Balipuram, as in Southey’s ‘Curse of Kehama’; Dr. Babington stated that in the inscriptions it was called Mahāmallapuram; the Rev. W. Taylor made it Māmallapuram, which is now accepted; other forms were Mavallivaram, Mahāvallipur, etc.

most of these were collected in a volume in 1869 by a Lieutenant Carr, and published at the expense of the Madras Government, but, unfortunately, as too often happens, the editor selected had no general knowledge of the subject, nor had he apparently much local familiarity with the place. His work in consequence added nothing to our previous stores.

In 1883 the editor called attention to the temple of Kailåsanåthaswåmin at Conjivaram as a Pallava temple of probably about the 7th century, containing a number of early inscriptions. On examination by Dr. Hultsch, these were found partly to belong to the same period as those of the raths at Måmallapuram. The temple, now seemingly a Vaishnava shrine, was erected by the Pallava king Råjasimha

1 It included also a short account of the place written in Kanarese for Col. Mackenzie in 1803, with a translation. The publication was issued in two forms—in atlas folio, 96 pp., and also in octavo, 246 pp., with folding plates, and with the same errata.

2 A survey of the monuments at Måmallapuram was made a considerable time ago, by the Archaeological Survey of Madras.

3 Hultsch, 'South Indian Inscriptions,' vol. i. pp. 8ff.

4 'Cave Temples of India,' p. 110.
The oldest and most interesting group of these monuments are the so-called five "Raths" or monolithic temples standing on the seashore to the south of the other rock excavations. One of these, having an apsidal termination, appears in the centre of the preceding woodcut (No. 185) a little detached from the rest. The other four stand in a line running from north-north-east to south-south-west, and look as if they had been carved out of a single stone or rock, which originally, if that were so, must have been between 35 ft. and 40 ft. high at its southern end, sinking to half that height at its northern extremity, and its width diminishing in like proportion.

The first on the north is the Draupadī Rath—a mere pānsālā or cell 11 ft. square externally, and with a curvilinear roof rising to about 18 ft. high (Woodcut No. 186). Apparently it was once crowned by a finial of some sort, but its form cannot now be ascertained. This rath is the most completely finished of the five, and is now unique of its kind, but must have belonged to an extensive class of buildings when it was executed, and their form consequently becomes important in the history of the style. The cell inside measures 6 ft. 6 in. in depth by 4 ft. 6 in. across, on the back wall of which is a four-armed Saktī or female divinity, probably Lākshmi, with some attendants: the dwārpalas also are females, as are the figures on the north, east, and south sides.

1 Ratha has much the same meaning as Vimāna—a chariot or covered car.
The next is known as Arjuna's rath, and is a small copy of Dharmarāja's—the last to the southwards—the only difference being that Arjuna's is very much smaller than the other, measuring 11 ft. 6 in. by 16 ft. in plan, and 20 ft. in height. A cell has been excavated inside, only 4 ft. 6 in. by 5 ft., but it contains no image; the figures on the outside walls, however, seem to show that it was dedicated to Śiva. It is cracked from top to bottom, and part of the finial has fallen off. The roofs of the lower and first stories are ornamented with those ranges of little simulated cells which became the distinguishing characteristics of Dravidian architecture, and it is surmounted by an octagonal dome which is an equally universal feature of the style.

The third—Bhima's rath—seen partially in the Woodcut No. 185, is very remarkable: it is an oblong building having a curvilinear shaped roof with a straight ridge. Its dimensions are nearly 48 ft. long, 25 ft. wide, and 25 ft. high. Externally, it seems to have been completely carved, but internally only partially excavated, the works being apparently stopped by some accident. It is cracked completely through, so that daylight can be seen through it, and several masses of the rock have fallen to the ground—this has been ascribed to an earthquake and other causes. My impression is, the explanation is not far to seek, but arose from unskilfulness on the part of workmen employed in a first attempt. Having completed the exterior, they set to work to excavate the interior so as to make it resemble a structural building of the same class, leaving only such pillars and supports as were sufficient to support a wooden roof of the ordinary construction (Woodcut No. 187). In this instance it was a mass of solid granite which, had the excavation been completed, would certainly have crushed the lower storey to powder. As it was, the builders seem to have taken the hint of the crack and stopped the further progress of the works.

1 The dotted hatching on this plan represents a suggested mode in which the rath might have been completed if finished as intended.
It is a little difficult to say how it was intended to have been completed. The centre was occupied by a hall about 9 or 10 ft. wide by 30 ft. open on one or probably both sides, and intended to be closed at both ends. This central hall was surrounded by a verandah measuring 5 ft. 3 in. in the clear on the sides, but only 3 ft. at the ends. There would then have been ten or twelve pillars in the centre and two at each end. One of these is represented in the annexed woodcut (No 188), and they are all of the same pattern, which, in fact, with very slight modifications, is universal at Mâmallapuram. They all have bases representing Vâlîs or conventional lions, with spreading capitals, and of proportions perfectly suited to a building of the dimensions of this one, if executed in wood.

The fourth and most southerly, however—Dharmarâja’s rath—is the finest and most interesting of the group. A view of it has already been given (Woodcut No. 89) and it is shown on the right hand of Woodcut No. 185. As will be seen from the annexed plan (No. 189), its dimensions are 25 ft. 9 in., by 28 ft. 8 in., and its height is rather more than 35 ft. It is consequently much larger than Arjuna’s rath, but even with these dimensions it can only be considered as a model. The three upper storeys are ornamented with those little simulated cells mentioned above, and which are so universal in the south of India; the front of each of these cells with their connecting links, is adorned with a representation of one of those semi-circular dormer windows which are so usual in Buddhist architecture. Here each has a human head looking outwards. Behind these cells the walls are divided by slender pilasters into narrow compartments, and in each is placed the statue of a deity of the Hindû Pantheon, among which are found representations of
Siva, Brahma, and Vislну in various characters as Arddhanāri Narasimha, Varāha, etc.—none of them with more than four arms.¹ Over these figures are seventeen short epigraphs containing epithets that were long misunderstood; but from a comparison of them with the very similar series round the inside of the enclosure of the Kailāsanātha temple at Kānchipuram, a clue is obtained that enables us to fix the date of these monuments. Stated briefly, it stands thus:—On the east side of the third storey of this rath is the epigraph—“The temple of the holy Atyantakāma - Pallavesvara: Ranajaya,” and this Atyantakāma, in the other storeys is styled Narasimha Śrīnidhi, Śrībhara, etc. On the monolithic temple of Ganesa, to be noticed below, and in the Dharmarāja Mantapa cave are identical inscriptions of the same Atyantakāma-Śrīnidhi-Śrībhara; and at Sāluvankuppam cave is an inscription of King Atiranachanda with the names of Atyantakāma, Śrībhara, Ranajaya, Kālakāla, etc.—which are also epithets of Rājasimha in the Kānchī inscriptions. Now we learn from copperplate grants that the Pallava king, Rājasimha, bore the names of Kālakāla, Narasimhavishnu and Narasimhavarman, and must have reigned about the last quarter of the 7th century. We can hardly escape the conclusion, then, that Rājasimha, Atyantakāma, Atiranachanda, etc., are all names (or birudas) of one king, the son and successor of Ugradanda - Lokāditya or Paramesvaravarman.² His dedications are all Saiva, and their occurrence on so many of the Māmallapuram shrines supports the testimony, previously founded on the style alone, that they belong to one time, and were all excavated within a short period about A.D. 670 to 700.

As stated above, we have on this rath many of the gods of the Hindū Pantheon, but in forms more subdued than are to be found elsewhere. The one extravagance is that they generally have four arms—never more—to distinguish them from mortals; but none of those combinations or extravagances we find in the caves at Elūrā, Elephanta, and elsewhere. It is the

¹ 'Transactions of the Royal Asiatic Society,' vol. ii. plates 16, 17; or Carr's compilation.
soberest and most reasonable version of the Pantheon yet discovered, and, consequently, one of the most interesting, as well probably, as the earliest.\(^1\)

The upper three storeys are entirely finished externally with their sculptures, the lower one merely blocked out; and it is difficult to say how far it was intended to excavate the interior. A cell was excavated to a depth of 5 ft. in the third storey, and it may have been intended to enlarge it. A similar attempt has been made in the second storey, but only to the depth of 4 ft. From there being six pilasters on the outside of the third storey, we may gather that in a structural building its roof

\(^1\) These figures, properly drawn or photographed, would be almost indispensable for the illustration of Hindu mythology.
would have been supported by thirty-six wooden posts, and in like manner that the second storey would have had sixty-four supports, but, of course, with some of these omitted in the centre. From its extreme irregularity it is not easy to suggest what may have been the intended arrangement of the lowest storey; but, from the wider spacing of the pillars externally, it is evident that in a structural building stone, and not wood, would have been employed. From the arrangement of the exterior we gather that there would have been four free-standing pillars in the centre, as shown in dotted lines in the plan and section (Nos. 189 and 191). It is not clear, however, how many of the
eight piers that surrounded these four were free-standing or attached as pilasters to thick external walls. What stopped the completion of this and the other raths, we shall never learn. They are certainly very like Buddhist buildings, as we learn to know them from the early caves, and it seems hardly to admit of doubt that we have here petrifactions of the later forms of Buddhist architecture,¹ and of the first forms of that of the Dravidians.

The want of interiors in these raths makes it sometimes difficult to make this so clear as it might be. We cannot, for instance, tell whether the apsidal rath, called Sahadeva and Nakula’s, to the west of the line of the others, and forming the fifth of the group, was intended to reproduce a chaitya hall or a vihāra like that in Woodcut No. 63. Though small, it is one of the most interesting of the whole; but like the others, it is very unfinished, especially on the east side. Its dimensions are 18 ft. in length—north and south, by 11 ft. across, and about 16 ft. in height. It faces north, on which side there is a small projecting portico (Woodcut No. 193), supported by two pillars, and within is a small empty cell. Externally the back end is apsidal, and so perhaps, if on a larger scale, its interior might have been; as it is, it is too small, and the square form is more convenient in such an apartment.

The interest of this rath lies in the fact that it represented, on a small scale, the exterior of one of those chaitya halls, which form so important a feature in the western groups of Buddhist caves, of which, until the discovery of the Chezarla and Têt structures, we had no other instance from which to judge of what the external appearance may have been of the structural chaityas, from which the cave-temple examples were copied. But this rath being in several storeys, and the whole so conventionalised by the different uses to which they are applied for the purposes of a different religion, that we must not stretch analogies too far.²

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¹ Among the remains found at Bharaut is a bas-relief representing a building so exactly like the long rath here, that there can be no doubt that such buildings were used in the north of India two centuries at least before Christ, but to what purpose they were applied is not so clear. The one at Bharaut seems to have contained the thrones or altars of the four last Buddhas.

² Among the sculptures of the Gandhāra monasteries are several representing façades of buildings. They may be cells or chaitya halls, but, at all events, they are almost exact reproductions of the façade of this rath (see Woodcut No. 123, page 216). Being used as frameworks for sculpture, the northern examples are, of course, conventionalised; but it is impossible to mistake the identity of intention.
The sixth—the Ganesa rath—situated at a distance of three-

quarters of a mile north of the others—is represented in the woodcut (No. 194), which, strange to say, is the most nearly finished of any, and gives a fair idea of the form these oblong temples took. Though small, it is a singularly elegant little temple. In plan, its dimensions are 19 ft. by 11 ft. 3 in., and 28 ft. in height. It is in three storeys with very elegant details, and of a form very common afterwards in Dravidian architecture.
for gopurams or gateways. The roof has a straight ridge, adorned at the ends by Saiva trisulas, and similar emblems
crowned the dormer windows. The ridge was ornamented by nine small pinnacles, which also continue to be employed. Though entering in the side, this temple was never intended to be pierced through.

On the back wall of the verandah is an inscription in old and very florid characters, dedicating the shrine to Siva by King Atyantakāma-Ranajaya,¹ now identified with Rājasimha Pallava of the end of the 7th century.

What interests us most here, however, is that the square raths are the originals from which all the vimānas in southern India were copied, and continued to be copied nearly unchanged to a very late period. Woodcut No. 195, for instance, represents one from Madura, erected in the 18th century. It is changed, it is true, and the cells and some of the earlier features are hardly recognisable; but the wonder rather is that eleven centuries should not have more completely obliterated all traces of the original. There is nothing, however, in it which cannot be easily recognised in intermediate examples, and

¹ Hultzsch's 'South Indian Inscriptions,' vol. i. pp. 4-8.
their gradual transformation detected by any one familiar with the subject. On the other hand, the oblong raths were halls or porticos with the Buddhists, and became the gateways or gopurams which are frequently—indeed generally—more important parts of later Dravidian temples than the vimānas themselves. They, too, like the vimānas, retain their original

features very little changed to the present day, as may be seen from the annexed example from a modern Tamil temple on the opposite shore of the Gulf of Manār (Woodcut No. 196). To all this, however, we shall have frequent opportunities of referring in the sequel, and it will become much plainer as we proceed.

The other antiquities at Māmallapurānī, though very
interesting in themselves, are not nearly so important for our history as the raths just described. The caves are generally small, and fail architecturally, from the feebleness and tenuity of their supports. The southern cave-diggers had evidently not been grounded in the art, like their northern compeers, by the Buddhists. The long experience of the latter in the art taught them that ponderous masses were not only necessary to support their roofs, but for architectural effect; and neither they nor the Hindûs who succeeded them in the north ever hesitated to use pillars of two or three diameters in height, or to crowd them together to any required extent. In the south, on the contrary, the cave-diggers tried to copy literally the structural pillars used to support wooden roofs. Hence, I believe, the accident to the long rath, and hence certainly the poor and modern look of these southern caves, which has long proved such a stumbling-block to all who have tried to guess their age. Their sculpture is better, and some of their best designs rank with those of Ellurâ and Elephanta, to which they were anterior. The Bâdâmi sculptures, executed in the 6th century (A.D. 579), are so similar in style with the best examples in the Mâmallapuram caves, that we had concluded they could not be far distant in date, and must be placed in the preceding century; and this has since been supported by the contents of the inscriptions in the Dharmarâja mantapam at the Sâluvankuppam cave.
The great bas-relief on the rock, 90 ft. by 30 ft., is perhaps the most remarkable thing of its class in India. It is close to the Ganesa ratha, and is locally known as ‘Arjuna’s Penance,’ but what it was meant to represent is still a puzzle. It is in two sections divided by a crack or split in the rock, in which are placed a great Nāga wearing a crown surrounded by a seven-fold hood (Woodcut No. 197); under him is a Nāgini with the usual triple hood; and below this a large cobra’s head. The figures on both sides are directed towards this recess. On the left there is a small shrine below and a devotee worshipping at it, whilst behind are several wild beasts; above the shrine is a yogi standing on one foot before a deva, four armed, with a sort of sceptre and attendants, and behind and above him all the figures are in pairs—male and female—with only two arms each. On the rock to the right, there are two large and some smaller elephants, and above them three tiers of figures, represented as floating through the air, all two-armed, mostly in pairs, some with birds’ legs and wings (Gandharvas), and wild beasts behind. There seems nothing to enable us to fix its age with absolute certainty;
it can hardly, however, be doubted that it belongs to about the
8th century.

There is one other antiquity at a place called Sāluvan-
kuppam, half a mile north of Māmallapuram village, which
deserves notice as a descendant of the tiger cave at Udayagiri
near Katak (Woodcut No. 272). Here, not one, but a dozen
tiger or lion heads welcome the anchorite to his abode, or rather,
the devotee to his shrine (Woodcut No. 198). Here, too, they
are conventionalised as we always find them in Chalukyan art;
and this example serves, like every other, to show how the Hindu
imagination in art runs wild when once freed from the trammels
of sober imitation of natural things, which we found to be its
characteristic in the early stages of Buddhist art.

Here is an inscription in two different alphabets of King
Atiranachanda, who has also the birudas or epithets of Atyanta-
kāma, etc., from which he appears to be identical with the
Rājasimha-Narasimha who executed the Dharmarāja rath and
probably most of the excavated shrines at Māmallapuram.

KAILĀS, ELŪRĀ.

From the raths at Māmallapuram to the Kailās at Elūrā
the transition is easy, but the step considerable. At the first-
named place we have manifest copies of structures intended
originally for other purposes and used at Māmallapuram in
a fragmentary and disjointed manner. At Elūrā, on the
contrary, the whole is welded together, and we have a perfect
Dravidian temple, as complete in all its parts as at any future
period, and so far advanced that we might have some difficulty
in tracing the parts back to their originals without the fortunate
possession of the examples on the Madras shore.

Independently, however, of its historical or ethnographical
value, the Kailās is itself one of the most singular and interesting
monuments of architectural art in India. Its beauty and singu-
larly always excited the astonishment of travellers, and, in
consequence, it is better known than almost any other structure
in that country, from the numerous views and sketches of it that
have been published. Unlike the Buddhist excavations we have
hitherto been describing, it is not a mere interior chamber cut in
the rock, but is a model of a complete temple, such as might
have been erected on the plain. In other words, the rock has
been cut away, externally as well as internally. The older caves
are of a much more natural and rational design than this temple,
because, in cutting away the rock around it to provide an
exterior, the whole has necessarily been placed in a pit. In the
cognate temples at Māmallapuram (Woodcut No. 185) this diffi-
cultry has been escaped by the fact that the boulders of granite out of which they are hewn were found lying free on the shore; but at Elūra, no insulated rock being available, a pit was dug around the temple in the sloping side of the hill, about 106 ft. deep at its inmost side, and half that height at the entrance or gopuram, the floor of the pit being 160 ft. wide and 280 ft. in length. In the centre of this rectangular court stands the temple, as shown in the accompanying plan (Woodcut No. 199), consisting of a vimāna, 56 ft. in height, preceded by a large square porch, supported by sixteen columns (owing probably to the immense weight to be borne); before this stands a detached porch for the Bull Nandi, reached by a bridge; and in front of all stands the gateway, which is in like manner connected with the last porch by a bridge, the whole being cut out of the native rock. Besides these there are two pillars, or dhwajastambhas (literally banner staves) left standing on each side of the detached porch, and two elephants about the size of life. Round the court there is a peristylar cloister with cells, and above are some halls (not shown in the plan), which give to the whole a complexity, and at the same time a completeness, which never fail to strike the beholder with astonishment and awe.

As will be seen from the view (Woodcut No. 200), the outline of the vimāna or sikhara is at first sight very similar to that

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1 This plan represents the temple and surrounding shrines at the level of their upper floors, but the surrounding court at the lower level of the entrance. At the upper level on the north side is the Lankavara temple, the hall of which is about 75 ft. long by 50 ft. wide, exclusive of the shrine.
of the raths at Māmallapuram, but on closer inspection we find everything so modified at Elūrā as to make up a perfect and

well-understood design. The vimāna with its five surrounding cells and the porch in front of it, with its side balconies, make a complete Hindū temple, such as are found in hundreds in India, and instead of the simulated cells that surround the upper storey in the Madras example, they become realities, but used for widely different purposes. Instead of being simulated residences, the five cells that surround the central temple, on the same platform, are each devoted to a separate divinity, and complete the whole as a Sīvālaya or "abode of Siva," whilst they group most pleasingly with the central vimāna.1 Here, too, they are independent, and separated from the temple itself.

1 These shrines are now empty, but their purposes are thus explained: North and south of the shrine are doorways leading out upon the platform, on which they stand, and which forms a pradakshina round the Linga shrine; and passing out by the south door the first shrine on the south was appropriated to the Mātris or seven mothers, arranged along the back wall with Kārtikaswāmin or Siva at the left end, and Ganesa with Bhringi at the right; the next—at the
In the west corner of the north side of the court is a small chapel (Woodcut No. 201) that is probably of an early date. The guards or dwarpâls, at the door of the cella inside the principal temple, were the river goddesses Gângâ and Yamunâ; and this chapel was dedicated to the trio—Sarasvatî, Gângâ, and Yami or Yamunâ—the first, on the left, standing on a south-east corner—was dedicated to the disgusting Chanda, to whom the refuse of the offerings are thrown; on the east is the shrine of Pârvati, whose place is just behind her lord’s; that on the north-east belongs to Bhairava or Rudra, “the terrible”; and the fifth, on the north side, opposite to the Somasûtra, or outlet for the washings of the Linga—which it is unlawful to pass in performing the pradakshina ritual—is the shrine of Gânera. The Mâtris are often represented in Saiva sculpture. They occur at Elûrâ again in cave temples 14, 21, and 22, as also under the bridge leading to the Nandi shrine here; and are found at Elephanta, Gulwâdâ, and elsewhere.—‘Cave Temples of India,’ pp. 428, 434, 453, and plate 72; ‘Archaeological Survey of Western India,’ vol. v. pp. 39, 40, and plate 34.
lotus flower, with foliage and birds behind her; the central one on a makara or conventionalised alligator; and the third on a tortoise, with water plants represented behind them, and richly-carved torans above. All three are in almost entire relief. These figures are scarcely found in later sculptures, whilst they are frequent in cave temples of the 5th and later centuries. The apartment is about 23½ ft. long by 9 deep, and 11 ft. high, and has two free-standing pillars and two in antis, of a pattern differing entirely from those of the temple, but of a much earlier type than those in the Lankeswara. They have low bases and shafts of sixteen sides, with cushion capitals and bracket abaci. The frieze above has been divided into small compartments, with seven small groups of figures in them. The excavation above has only the front of its balcony completed.

Though much damaged by Moslim violence, the lower part of the entrance to the court shows a considerable advance on anything found at Mâmallapuram, and an approach to what the gopurams afterwards became, in so far at least, as the perpendicular parts are concerned; instead, however, of the tall pyramids which were so universal in later times, the entrance to the Kailâs exhibits only what may be called the germ of such an arrangement. It is the upper member of a gopuram placed on the flat roof of the gateway, and so small as not to be visible except from above.¹

On each side of the Nandi Mandap stands a square pillar or dhwajastambha, bearing the trisula or ensign of Siva, now much

¹ In Daniell's 'Oriental Scenery' (1816), pt. iv. plate 12, the gateway is shown, and in plate 15 the upper part of it. Being cut in the rock, no addition or alteration could afterwards have been intended.
defaced (Woodcut No. 202). They are 49 feet high, inclusive
of the trident on the top and of very elegant proportions.1
Their analogy to the lion pillars of the Buddhists (Woodcut
No. 7) and the Chaumukh pillars of the Jains must be at
once recognised, each bearing a symbol of the creed.

In the south of India, among the Jains, as mentioned in a
later chapter, such pillars are very common, usually standing
singly in front of the temples, and were apparently intended to
carry quadruple figures of Tirthankaras—known as Chaumukhs.
They generally consist of a single block of granite, square at
base, changing to an octagon, and again to a figure of sixteen

1 There must have been an inscription
just above the base of this one, but it
has long since disappeared. For a fuller
account of Kailas and its accessories see

"The Cave Temples of India," pp. 448-
462, and plates 80-84; and "Archaeo-
logical Survey of Western India," vol. v.
pp. 26-37, and plates 1, 4, 24-31.
sides, with a capital of very elegant shape. Some, however, are circular, and, indeed, their variety is great. They range from 30 ft. to 40 ft. and even 50 ft. in height, and, whatever their dimensions, are among the most elegant specimens of art in southern India. Typical Jaina examples of these exist at Sravana-Belgola and Venūr in Mysore and at Guruvāyankeri in South Kanara (Woodcut, vol. ii., No. 308).

One class of the Stambhas at Hindū temples was intended to carry lamps at festivals, of which Woodcut No. 203 represents a specimen; but another class—the dhwaja-stambhas—like the above at Elūrā, are frequently in pairs, and bear the symbol of the sect—the triśula or Garuda. Besides the well-known pillar at Eran, a fine example of a Vaishnava Stambha, consisting of a very lofty square tapering monolith, carved with a creeper pattern up each face and standing on an elaborately carved base, is found at Sompalle in South Arkat district. At Balagāmi is one 35 ft. high, erected by Somesvāra I Chalukya, about 1047, crowned by a human figure having two birds’ heads, called a Gandabheunda, a form of Garuda. There is a well-known example also at Jáipur (Woodcut, vol. ii., No. 321), and another, removed from the Kanārak temple, stands in front of the great Purī temple.

Fortunately we have now the means of determining the age of the Kailās with some precision. Kīrtivarman II. of the Western Chalukyas was overthrown by Dantidurga the Rāshtrakūṭa king of Mālkhed before A.D. 754, and soon after the subjugation was completed by his successor Krishna I. who ruled from about 757 till 783. One of the achievements ascribed to this latter king is the construction of a wonderful Saiva temple in “the hill Elāpura,” which is to be identified with this Kailās temple.

After the temple itself was finished fresh additions appear to have been made from time to time in the rock walls of the surrounding court. The large cave temple, known as Lankēvara, cut in the scarp on the north side of the court, differs so markedly from the style of the central temple, that it must be ascribed to fully one if not two centuries later. Some excavations, too, are quite unfinished, and works may have gone on till the 12th century.

Considerable misconception exists on the subject of cutting

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1 'Indian Antiquary,' vol. xii. p. 229. Thirty years ago, on the remains of painting on the roof of the small porch, was a fragment of an inscription in which the name “Karnāru,” i.e. Krishna, was still legible in old characters.

2 For a view of the interior of Lankēvara, see Fergusson's 'Illustrations of the Rock-cut Temples of India,' 17th plate.
temples in the rock. Almost everyone who sees these temples is struck with the apparently prodigious amount of labour bestowed on their excavation, and there is no doubt that their monolithic character is the principal source of the awe and wonder with which they have been regarded, and that, had the Kailâs been an edifice of masonry situated on the plain, it would scarcely have attracted the attention of European travellers. In reality, however, it is considerably easier and less expensive to excavate a temple than to build one. Take, for instance, the Kailâs, the most wonderful of all this class. To excavate the area on which it stands would require the removal of about 100,000 cubic yards of rock, but, as the base of the temple is solid and the superstructure massive, it occupies in round numbers about one-half of the excavated area, so that the question is simply this—whether it is easier to chip away 50,000 yards of rock, and shoot it to spoil (to borrow a railway term) down a hillside, or to quarry 50,000 cubic yards of stone, remove it, probably a mile at least to the place where the temple is to be built, and then to raise and set it. The excavating process would probably cost about one-tenth of the other. The sculpture and ornament would be the same in both instances, more especially in India, where buildings are always set up in block, and the carving executed in situ. Nevertheless, the impression produced on all spectators by these monolithic masses, their unalterable character, and appearance of eternal durability, point to the process as one meriting more attention than it has hitherto received in modern times; and if any rock were found as uniform and as easily worked as the Indian amygdaloidal traps, we might hand down to posterity some more durable monument than many we are now erecting at far greater cost.