Characteristics of the Kittens
THE PILLARS: The two units that link the lower and the upper portions of the temple are the walls and the pillars. The position assigned by the Silpa texts to these two units was one and the same, as both seemed to have served the same purpose. Both formed the structural units above the *prati* and below the *uttara*. The utilitarian purpose involved in erecting them was that they were to bear the brunt of the entablature, the attic and the tower. Inenable them to do so, the walls were added with the *kudvastaṁ* or pilasters, while the piers within the temple were distributed at regular intervals so that the heavy weight of the superstructure was equitably shared by all of them. Here, the pilasters on the walls not only played the role of the piers, but they imitated them quite often, in size and shape.

A "column in a building is stated by authorities to be regulator of the whole composition; and it is the one feature of the ancient architecture which illustrates its rise and progress as well as its perfection and weakness." The terms used for describing the piers in the *Silpa* to us are indicative of the role assigned to them. The terms like *āryakha*, *sandhaka*, *vidyōkha*, and *pada* which occur in the texts, literally mean legs, but, in the structure, they indicate pillars. This is in keeping with the basic concept of the Hindu architecture, which views the temple in terms of human organism. According to this, as the

1. *Zucker*, IL, 23 and 36.
leg bears the weight of the body the piers bear the weight of the superstructure. This role played by the piers probably brought to them the other names like bhāra, dhrāpa etc.

Let us now turn our attention to the piers found in the temples of Śrāvāṇa Belgoḷa and note whether they illustrate the "rise and progress" and reveal the "perfection and the weakness" of these monuments.

**The Classification.**

**THE TWO TYPES:** The pillars in general could be classified into two groups: the predominantly utilitarian piers; and, the conventional piers. Compared to the latter the former appear very simple as they possess minimum decorative details. They are the earliest to be conceived of by the architects and the primary motive involved in selecting them was utilitarian rather than aesthetic. But in course of time the latter did evolve out of the former.

1. The classification is rather rough as even the predominantly utilitarian piers have their own decorative characteristics. As Havell puts it, the "pillars or piers... are all primarily structural forms, and the decoration should not impair, but rather emphasise the structural functions of such part" (op. cit., P.85). According to this, the piers, whether utilitarian or conventional, dissolve themselves into one group.
Of those two, the utilitarian pillar, which is a simple but a heavy cubical block, is best suited to bear the heavy weight of the superstructure. But even these cubical blocks are decorated with carvings, and, in some cases, the angles of a section of the shaft are bevelled off and converted into the octagonal bands when this process was extended to the entire shaft, it led to the formation of an octagonal pier. These simple and heavy pillars were specially suited to, and were commonly used in, the rock-cut temples, but they were also adopted and utilised in the structural works in course of time. Another characteristic of these pillars with plastic designs are found at Aihole, (CA, Pl. VII & X), Badami (Ibid., Pl. XXIX etc.) and Pattadakal (Ibid., XXXIX, XL, XLIII etc.). While in the Pallava temples the cubical and the hybrid (cubical and octagonal) pillars developed side by side from the earliest times, in the Chalukyan region another cubical variety (a cubical block with a square protruding block in the upper part of the shaft) became very popular. The hybrid pillar, referred to above, was sparsely experimented by these architects.
pierces is that with some minor modification they were continued to be employed in the temples of different schools and ages and are done so even at present. In Sravana Belgola also, we come across these pierces, but they are slender in size and less elegant in appearance. Excepting in the navaranga of Bhadrārī Basti, these are not used as primary pillars in any of these bastis.

Let us now turn our attention to the second variety which we have named as the conventional pillars. Though the application of the concept of the European "order" is criticised by some scholars, the role played by the pierces in a structure or a style cannot be completely overlooked. Some conventions are adopted in certain geographical areas and these are continued for a certain period in that place. (But these geographical and chronological limitations are not rigidly followed, as these conventions, in fact or modified, have travelled to the distant places in different periods of history). These conventional pillars, apart from being utilitarian in purpose, also indicate a maturity of conception and mastery of workmanship. The outlook of the architect is here as much aesthetic as it is utilitarian.

THE DIFFERENT PARTS OF A PILLAR: A pillar could be divided from the bottom upwards into the following parts — (1) the upāśītha or avapāśītha, (2) the nītha or basement, (3) the shaft, (4) the kūma or capital and (5) the iṣud and phalaka or abacus, & (6) a bōdīkā or corbel.

1. The upāśītha.

In Sravana Belgola monuments almost all pillars have a nītha and a upāśītha. The upāśītha is normally
wider than the square **nīpha. The upāṇīṭhas are usually square, but in some cylindrical pillars we come across round upāṇīṭhas which are either in Cross-Peck, or Cross-Crease or in Double-Cross mould. One of the square types of upāṇīṭhas is found at the base of the navarāha pillars of Nājīgāna Basti. It is only a rectangular block. In the suktavatī of Kattala Basti there are cylindrical pillars with the upāṇīṭhas which are square in shape and smaller in size. The latter type of upāṇīṭhas is not reserved for the cylindrical pillars alone, for, it could be found even under the composite ( octagonal and sixteen sided) pillars found in the navarāha of Kattala Basti.

Among the square upāṇīṭhas, the most common variety is that which is formed of three tiers of bands or **nīphas. In these, the central nāṭṭa is smaller in width compared to the nāṭṭa found above and below it, as a result, the whole upāṇīṭha takes a convex shape at the edges. There are varieties even in this in some, the top band is formed of rectilinear lines while the lower one is in the shape of a stopped pyramid; in others, the upper and lower portions are shaped alike while the central one is in the form of a rectangular band. Among the square upāṇīṭhas there is one other variety. In this, the rectangular block contains the semi-circular moulding ( in the form of the beam-heads or dentils ) in the centre or in the centre as well as in the cornorne. Often, a flat vertical beam-head, either square or triangular, is found in the middle of this upāṇīṭha. These two types are found in the early and later Chālukyan temples. In the Jaina temple at Rāṭṭrādal we come across an three tier upāṇīṭha with a smaller central nāṭṭa, while in the temples of Kukkanur, Lakkurj, Kāvērī, Assagul and other later-Chālukyan models, the upāṇīṭhas have the

1. Alexander Ren, Chālukyan architecture, 1. IV
triangular vertical beam-heads in the centre. The latter pattern seems to have been followed by the Hēysalas. In some cases this vertical beam-head becomes square; or, it is found converted into a carved niche with a sculpture in it; or, it is changed into a semi-circular mould either in the middle or in the corners of the unāśīṭha. But all these features are first found in the later-Chālukyan temples and are later adopted, with minor modifications, in the Hēysala pillars. In Īravatī Beśa, the three-tier unāśīṭha, with flat central vertical beam-heads on its four faces, is found in the navarāṇa of Akkana Basti; while the rectangular blocks with semi-circular heads at the top and in the corners for the characteristic of the unāśīṭha of Pārśvanātha Basti on Chandragiri, Udēgale Basti on Vindhyagiri, and Jāntīśvara Basti at Jinarāṭhapura.

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for the pillars in the Kallēśvara temple at Dēgali; Pl. II, Bellikērjuna, temple at Kuruvalī; Pl. XIII for Kallesvara at Hālvāgalū.

1. For example, in the navarāṇa of Akkana Basti.

2. Vidē, Kēśava temple at Anekōḍa, MĀR, 1932, Pl. XII and the pillars in Sōmanāṭhapura. The Kēśava temple at Sōmanāṭhapura by A. Narasīmhashār, Pl. XVII.

3. Alexander Rea, op. cit., Pl. XII etc.
The other variety of upāṇītha is the circular one. It corresponds to padabandha motif of the silpa texts,1 and resembles a bowl. There are some varieties even in this. One of them is smaller in height and simpler in design; it connects the base of the pillar with the floor below and its edges slope down gracefully like the petals of a lotus. The second variety is in the form of an inverted bowl or ova-revossa. The third variety is formed of a double-ovā mould whose bottoms are clubbed together. This type of upāṇītha goes very well with the pillars where the shafts are cylindrical in shape.

The padabandha-upāṇīthas are not very popular in the temples of South-India, but they do appear in the early rock-cut and structural temples. The inverted bowl, but square on plan, is found at the base of the rock-cut pillars of Śuddāmi; but, the circular upāṇīthas found in the pillars of Śravana Belgola are not set with here, as completely cylindrical pillars are also not popularly set with in these temples. But in the rock-cut and the structural temples of the Pallavae we come across the ova or double-ovā type of upāṇīthas as found at Śravana Belgola. They are seen in the Varāha-temple and in temple No. 23 of the rock-cut variety;2 while in the structural works, we meet them in Kaśēvara and in Vaikunṭha Perumāl temples at Kailāśpuram.3 But in the Pallava temples, they form the bases of the sajant lions, whereas in the pillars of Śravana Belgola they are the upāṇīthas of the cylindrical pillars.

1. Acharya, Architecture of Manasara, Sheet No. ALVI.
2. Longhurst, op. cit., Pt. II, Pl. XXXIII.
3. Alexander Rea, Pallava Architecture, plgs. XIX, XXII, and XXXVII, etc.
While diversity is marked in the *ugāpīthas*, this is absent in regard to the *pīthas*. They are all quadrangular in shape whether the rest of the shaft is square, circular or many sided. The only minor difference is, their faces are occasionally sculptured with the human and animal figures in the pillars which belong to the post-Hoysala period. In the early temples of Karnataka we do come across the sculptures at the base of the piers; but, here, the mode of representation is done in quite a different way.¹ In a majority of the later-Chalukyan and Hoysala temples a quadrangular polished block, devoid of all carvings, designs, and decoration is found, though sculptures at the base of the piers are not completely unknown.² But in the pillars of the Hoysala period, once again the bases are carved with the human and animal figures. Certain themes like the acrobats, stick-players, calf-and-cow, ingenious ways of


2. For example in the *navaranga* of Chennakesava temple at Belur we have one or two pillars with the sculptures, but they are represented in a different way compared to the Vijayanagara model. See for the Inter-Chalukyan variety-Alexander Rea, Chalukyan Architecture, Pls. XXVI, XIX, XLVII, IV, etc.
representing two or three faces with a single body, erotic scenes etc., became very popular in this period. A study of this, which is beyond the scope of the present work, is fascinating by itself, and is likely to throw abundant light on the architectural characteristics of different periods of our history.1

Another feature found on the basement of the pillar in the nābbandha motif. This motif which appears at each

1. It is interesting to know that certain themes are popularly found in certain periods of history of temple architecture. The sculptures of the stick-players, the monkey with a fruit, the cow-feeding-self, the hunter-Kannappa taking off his eyes, the miraculous way in which the cow pours milk on the ant-hill or the nāga, the double-faced acrobats and animals which are invariably met with in the Vijayanagara period (and some of them were known but in a different way to the early Chālukya sculptors,) are completely absent in the Hoysala period. Even though we meet some plastic designs in the later-Chālukyan and the Hoysala periods, not only the theme of the sculptures is different but in design and workmanship also they differ.
of the four upper corners of the basement is another
feature which is never met with in the temples of Karnatak
till we come to the Vijayanagara period. As far as the
history of this motif goes, Dubreuil is of the opinion that
its first appearance in Tamil-nad is found at the closing
part of the later-Chola period or in about the 14th
century. This has been accepted by other scholars. The
motif which first makes its appearance in the Dravidian
temples of Tamilnad in the 16th century probably made its
way into Karnatak in the subsequent periods of history.
However, it is popularly found in the monuments of later-
Vijayanagara, Belogar and Mysore kings in Karnatak. At the
same time this motif is never met with, either in the early
or in the later Chalukyan and Hoysala temples.

The sculptures and the rācañcanda-motifs which we
come across in some pillars of Śrāvaṇa Belagola, naturally
differentiate them from the conventional pillars of this
region and separate them chronologically. None of the pillars
on Chandragiri has these two features. We come across them
in the porch of Gomuṣṭa on Vindhyagiri, in the pillars of
the so called Gulo-Kii-ajji-sanṭan and in the Moṣeyar-
sanṭan, etc. In the town, none of the structures built by
the Hoysalas possesses these two elements, but they are
seen in the pillars of the must which are the work of the modern
period.

2. Ibid., P. 43, sk. 3.
The Shaft.

Above the basement comes the shaft. It is the most important and conspicuous part of a pillar, for the main character of the pillar is seen in it. The Śilpa texts take the shaft alone into consideration, and not the nītha and the unānītha, while fixing the names to the different types of pillars. Mānasāra, for example, while describing the pillars states that the "columns are stated to be uniform from bottom to top; but the base of these may be quadrangular".¹ Rasing his judgment on this point, Mallayya also remarked that "since ... in all mixed types square is uniformly present at the basement, it is generally laid down that the basis of differentiation of a style ... is the shape of the sikharā".²

The pillars in the monuments of Śravāna Belgola abound in number and variety. But as indicated earlier they could be roughly brought under the two types vis., the utilitarian and the conventional. The plain non-bulbous pillars fall under the first category and the bulbous variety under the latter. The shafts of the pillars of Śravāna Belgola are examined, bearing in mind the following points:

1. Their characteristics.
2. Evolution of the characteristics and
3. Their correspondence with the Śilpa texts.

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1. Acharyya, P.K., op. cit., p. 553.
2. Santre., p. 216.
(A) THE NON-BALUSTRED PILLARS: The non-balustred pillars are fewer in number compared to the balustred variety. They fall into four groups.

1. The cubical pillars with octagonal bases: One of the non-balustred variety is the cubical in shape. The shaft of these pillars is cut into octagonal pattas at two or three stages, thus dividing the whole shaft into three or four cubical blocks respectively. These are the simplest type of pillars and they fall into the utilitarian group referred to earlier. The cubical blocks, with some part of the shaft containing the bevelled off angles, are found in the rock-cut temples of the Tailavas and in the rock-cut and the structural temples of the early-Charaka. The only difference between these and the variety found at Kwavana Belgola is that the latter is slender in size and more graceful in appearance than the former. Being the earliest to be conceived of by the architects, this type has continued to appear without any break till the modern times. But those pillars are not utilised as primary pillars in any of our bastis though they could be found in the mantara and porches.

2. A round shaft on a square base: This is the second type among the non-balustred pillars found at Kwavana Belgola. In this variety the pillars are usually heavy, with a square base, and a plain and round shaft. Over this shaft comes the capital which is either thin and cushion-shaped, or flat and wheel-shaped or disc-shaped. Above the

1. The earliest examples are found in the ralava temples themselves. See Vaitheya ralava temple, (western porch) - Alexander Rea. op. cit., Pl. LIVIII.
2. For example in the porch of Kattale Basti, Santisvaru Basti, etc.
capital. In some cases, an expanding-abacus, either plain or with floral designs.

This plain, cylindrical variety – devoid of designs, decorations and moulds – stands mid-way between the heavy utilitarian and the pleasing conventional pillars. Because of their size and shape, they appear more suited to bear the heavy weight of the superstructure at the same time, their simple, graceful shape adds majesty to the structure and enhances its aesthetic quality. This type of round pillar could be identified with the Vittapāda type of pillars of the Śilpa-texts.

Though this variety has been sanctioned by the Śilpa-texts, it seldom appears in the early temples of south India and, as Docum, 3 and, is sparsely seen even in the later structures. Till we come to the later Chalukya-Kalyana epochs they are not popularly found in Karnatak. This type

2. VICO, Longhurst, op. cit; Alexander Near, op. cit., Dubruil, op. cit., Of., Ramasundar, Ālī, ‘I. M. I.
3. Of., Cousens’ op. cit., Pl. CIX, Alexander Near Chalukyan architecture, Pl. I-XXIV, Cousens’ ‘Hedavalel Temples of the Deccan, Pl. I-XXIV. in Nolamale pillar though the upper portion is round, the shaft is decorated and is often octagonal, 3.Bartlett’s Honavati. As in early Pallava temples, this feature is not seen in the early Pandyan temples 3.Sivaramakurti, Kulagamalai and early Pandyan Rock-cut shrines.
of pillars is seen in the early part of the 12th century in the Mahānavaṇi mantapa on Chandragiri, which is a Hoysala work. They also appear in the porch of Chāvaḍarāya Basti. Four such pillars appear as primary pillars in the navarāṇa of Udaygol Basti on Vindhyagiri and another four bear the central ceiling of Gomanaṭa svatālana. Two pillars of this type are met with in the Mahānāsi of Pātvanatha basti at Bekka. Such cylindrical columns were also used as jāraḍa-pillars by the Hoysalas and the examples for this are found at Hājōbīla and Agrahāra Ecentre. Thus, outside śravaga Belagola, though we come across this variety of pillars in the Hoysala temples, they are not as popularly met with as the balustraded-variety.

1. MAR 1916, Pl. XVI and IX, 3, respectively.

2. For example, in the navarāṇa of Varadēvarāja temple at Aghalya which is a 12th century temple, we come across w.h., MAR 1939, Pl. V, 3. Also Vide., Pillared porch of Anavarā temple at Arasākere and in the porch of a double-temple in the north, MAR 1930, Pl. XVI; porch of Chamakēsava temple, Hullekere MAR 1933, Pl. XVII; Varasiśa temple at Śomanāṭhapura. R. Varasīḷeśchangar, The Kēśava temple at Śomanāṭhapura, Pl. XXII, (a) Vra. 392.
(3) **An octagonal shaft on a square basement.** In another type of pillars found at Sravana Belgola an octagonal shaft stands on a square basement. These pillars are not popularly found in the Hoysala temples but they could be seen in the early-Dravidian and the Chalukyan temples. In the Kollava temples of Mahendra style we come across these octagonal pillars with the saxon-lions at the base or completely octagonal pillars with no saxon-lions at the base. But the pillars of Sravana Belgola possess square basements while the rest of the shafts are octagonal. This type corresponds to the Vishvakarman or Harvasthāra pillars described in the Śilpa texts.

These pillars are found in the early-Pallava and early-Chalukyan temples. Though they are not very popular in the later-Chalukyan and the Hoysala temples, they are not completely unknown. However, they are least artistic in appearance.

In Sravana Belgola also this type of pillars is not met with in the bastie of Chandragiri. Even on Vindhyagiri, we do not come across them. But the thirty-two pillars in the navarana of Bapuṭī Bassi fall into this class. They are devoid of all grace and the aesthetic

1. Longhurst, op. cit., Pt. II, Pl. XIX.
2. Ibid., Pl. XXIII, the pillar in Varaha temple of Mahishasura-mardana, Pl. XXIV, etc.
4. Longhurst, op. cit., Pt. I, Pl. I(a), (b), etc.
5. Cousens, op. cit., Pl. XXXIII.
quality usually found in the Hoysala pillars elsewhere. They possess no separate capitals; and their brackets are in the form of a flat horizontal block with the under-side corners cut at forty-five degrees as in the carvings of the early-Chola period.

(4) A sixteen-sided shaft on a square-base: another variety in the non-balustered type of pillars is a tall tapering pillar with a sixteen-sided shaft and a square base. The shaft of the pillar either slightly narrows down as it goes up, or, remains in the same form from bottom to top. Its square basement differs from the square base at of the bulbous pillars in two ways: its faces are carved with the human, animal and floral designs and the top four corners of the basement contains the serpent-needs or the naśabendha.

As noted earlier, the 6 naśabendha-motifs at the upper corners of the basement are not seen in the pillars till we come to the later-Chola period. In Karnataka proper, very few temples have the pillars with the naśabendha motifs, but all of them belong to the Post-Hoysala period. For example, the navaratna pillars in the Śomāśvāra temple at Mūlasaragolā1 assigned to the middle-Vijayanagara period, bear this motif. In the 17th century monuments2 and i., some monuments of the time of Mysore Woṣyars,3 the pillars have this motif. In Śrāṅkaṇa4 and Miṣadidari,5 the pillars

1. Mahar. 1945, P. 21, Fig. 33 for the date of the temple.
2. Mahar. 1927, Pl. VIII, (2), the pillars in the Paṇḍalingu cells behind Gauriśvara temple, Mahar. 1929, Pl. 11 (1) of Jain Śāśthāmāha at Deli; etc.
3. Mahar. 1937, Pl. VII, (2) and (4).
5. Smith, op. cit., Fig. 6, P. 22.
within the temple as well as the śīmabhūtas also bear this motif.

In Śravannabelgola monuments, we do not have a single basti in which this type of pillars occupies a primary position. We do not come across them in any of the monuments on Chandragiri. But on Vindhyagiri, these pillars appear in the bastia of the fort wall or "śatki-śatki-bāgila" and in the porch in front of Jammate, in the bastia of Vodeyar and elsewhere. In the town, we come across them in the Jaina-matī. All these pillars belong to the post-Hoysala period as proved by the sculptures on the basement of the shaft, the nāḍaṅgana-motif and the floral ődō of annālā.

But the sixteen-sided pillars are well-known both in the Pallava and in the later-Chālukya-Hoysala epochs. For example, tall, tapering and graceful pillars with the sixteen sided shafts, are found in the Pallava temples of the Mahendrā period.¹ Such pillars, but smaller in size and less graceful in appearance, are found in the Chālukya-Hoysala temples within Kārnatak.² These sixteen sided pillars could be identified with what the Silpa-texts describe in different terms as the śilpa, śāhara, śāhara, śūdara, and pit-veda type of pillars.³

1. Longhurst, op. cit., Pt. II, Pl. XXIII, etc.
2. Burgess, ASI, Pl. 5; Cousens, op. cit., Fig.19. etc.
3. Tenzer, P. 217.
(B) THE BALESTERED PILLARS: Let us now turn our attention to the pillars whose shafts have a balustered-appearance. They fall under the conventional type of pillars mentioned above. They are not only found in a large number and in various manifestations, but they are invariably utilised as the primary piers in the structures of Śravasti Lālgāḍā both in the structures of Brāhmin as well as the Royvāla order.

The chief characteristic of this type of pillars is a bulbous appearance either on a section or on the entire portion of the shaft. The exact nature of this bulbous portion and the symbolism involved in it, have already been discussed by the scholars and it needs no repetition here. But two points connected with it deserve to be examined here as they help us to understand the exact circumstances under which this bulbous pillar emerged and how it became a convention in the temples of Karnatak. These are connected with the history and the nature of the evolution of the bell until on the shaft of these pillars.

THE HISTORY: The earliest instances of the pillars with bulbous swelling on a part of the shaft of the pillar could be found in the structures of the pre-Christian era. In the pillars found at Būhrut, Kālī, Nāsik etc., we find the pillars with the bulbous swelling on the upper portion of the shaft resembling an inverted-mūlaka.\(^2\) in

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2. Known, op. cit., Pls. XIII, XXIV and XXII respectively.
the Supta temples of the 5th century, this bulbous appearance takes the shape of a kuśāma (but not upturned) and in this form its appearance in the structures of Ajanta and Ellora, acting both as a capital and as an abacus. One important thing that we notice here is the slightly tapering shaft at the upper end of the shaft. This feature makes its earliest appearance in Karnataka in the Keshava Temple at Aihole in about the middle of the 6th century 1.

The conventional pillars of Karnataka differ from all those in details. Here, while the upper portion of the shaft remained tapering, it underwent a considerable transformation in the subsequent period. We start with, we witness the vertically stretched lotus-shaped motif on the upper portion of the shaft and a plain band below it; ultimately the upper portion takes the shape of a truncated-kuśāma and the lower portion takes a bell-shape. The former are called the rudimentary bell-shaped pillars and the latter are known as bell-shaped pillars. 2

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1. Ibid., Pl. XXIII, Pl. XLIII, fig. 3, etc.
2. Cupta, B.G., and Mahajan, B.D., Ajanta and Ellora, Pl. XLVII etc.
3. Ibid., Pl. XXXII etc.
4. Brown, op. cit., Pl. X and XLIV; also see P. 64.
5. The term "bell-shaped" used by Ferguson has been criticised by Havell as a "meaningless label" due to "not understanding the symbolism" involved in it — op. cit., P. 59. Despite this criticism, scholars have preferred to use the phrase used by Ferguson. This appears to be justified as many of our architectural terms.
Let us now trace the history of this pillar in Karnataka.

Goswami has pointed out that the earliest instance of bell-shaped pillars appears in the Jaina temple at Paṭṭadakal.1 This is a Dravidian structure of late 8th or early 10th century. The fact that it makes its appearance in a Jaina structure may be accidental, but that it first appears in a Dravidian structure appears to be very significant. As it appeared for the first time in the temple of the Chalukya kingdom, it remained a dominant characteristic of the piers of this region. But, at the same time, these pillars were not confined to the Chalukyan structures alone for we come across both the rudimentary bell-shaped and the bell-shaped pillars even in the structures built by the Śēchṭrakūtas and the Ganges in the southern part of Karnataka.

The following examples will prove this:

1. The Śūruchi temple at Harasimāṅgala,2 assigned to about 900 A.D., by M.H.Krishna, contains the bell-shaped pillars. This temple has been compared with Bhūgasṇedi temple of Mandi. The pillars of this structure appear to be more advanced compared with the pillars found like 'barrel-shape', 'wagon-shape', 'biscuit-shape', 'loaf-shape' have been drawn from the objects met with in everyday life.

1. CA, P.71, fig. 21.
2. MAR 1937, P.28.
in the temple of Paṭṭadakal. This is proved by the
floral designs on the abacus and the prominent bell-mould
on the shaft.

2. In Kāśēvāra temple at Nandi, \(^1\) Jaina Basti at
Jaṅgūr \(^2\) and Paṅchakūṭa Basti at Kaṅbadanālli, \(^3\)
we come across similar pillars. The bell-mould on the
shaft of these pillars is also prominent. These temples
belong to 9th or 10th century.

3. In Yōganārasiṇha temple at Dadaga \(^4\) and Kallēśvāra
temple at Jārji \(^5\) also we come across these pillars.
Though these temples belong to the (early and later part,
of 11th century respectively), the bell-mould does not
differ from the above variety.

While the bell-shaped pillars are found conspicuously
in these temples, there are some pillars in other temples
wherein it does not make its appearance in such a conspi-
cuous manner. In the nonabēśvāra temple at Nonabinakere, \(^6\)
the bell is still in a rudimentary form. This temple has
been assigned to the 10th century. In the Nandi-śānta
of Dēśēśvāra temple at Jādūr, the pillar bears an extremely

\[\begin{align*}
1. \ & \text{NAR 1937, Pl. XXI.} \\
2. \ & \text{Ibid., 1930, Pl. XI.} \\
3. \ & \text{Ibid., Pp. 44 ff.} \\
4. \ & \text{Ibid., 1940, Pl. XXI.} \\
5. \ & \text{Ibid., 1942, Pl. IX, (2).} \\
6. \ & \text{Ibid., 1939, Pl. XVII; P. 87.}
\end{align*}\]
inconspicuous bell-mould, but the upper portion of the shaft is terminated by the tapering end. This structure is also assigned to the 10th century.

All these facts prove that before 800 A.D., (or roughly before 9th century) the balustered pillars, with the bell-motif on the shaft, had not appeared in the temples of Karnataka. But between the 9th and 11th century, these pillars not only gained in popularity but became interwoven in the temple style of this place and are found as an invariable accompaniment of the rectangular structure of the Dravidian order and the stellate structure of the Hoyasales.

The bastis of Bravana Alexandria help in a small degree in strengthening this conclusion. In Chandraprabha Basti at Chandragiri, we come across these octagonal pillars with the bell-motif on shaft. This structure has been assigned to about 800 A.D. In the mantap of Indra IV we come across the bell-shaped pillars of sixteen sides. The date of this structure is given in an inscription found in it. According to this inscription, the mantap belongs to 982 A.D. Similar bell-shaped pillars are also found in Majjiga and Unavundaraya and other castles.

THE EVOLUTION: Let us now turn our attention to an examination of the circumstances under which this type of pillars emerged before they became interwoven in the temple style of Karnataka. Though some scholars have given a symbolic interpretation to the bell motif and have compared it to a lotus, none of them has drawn his examples from

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1. XXXII, 338 (57).
the temples of Karnataka in his interpretation of it. Even then, this interpretation applies only to the elucidation of the symbolism involved in the bell motif rather than the exact way in which it has been evolved.

Gouwsen attributes the emergence of the bell motif to a mechanical device rather than to any involved symbolism. Writing on the later-Chalukyan pillars in general, he said: "A peculiar feature in the later-Chalukyan temples is the turned pillar. The stone used - chloritic schist-being of very fine homogeneous texture, and not too hard, is easily cut or pared with a sharp tool. It seems, therefore, to have occurred to some inventive stone-worker, more alive to possibilities than his fellows, to save a very great amount of mere labour turning his pillar shafts in a lathe ... they appear to have got so fond of playing with their material in this manner that they were tempted to whittle down the central square block of the shaft to the round, producing a bulbous swelling in its place." 

1. Nevell takes up an Asokan pillar (op. cit., p. 88 ff.) and Bosch (op. cit., ) has given three examples - "the stem emerging from the mula-top" (p. 82), "the column and the kumbha growing together..." (p. 113), and a "bowl filled with a lotus bouquet from whose centre the shaft of the pillar rises straight upwards..." (p. 113).

2. CA., p.23. (Underlined in the present study)
Gousong's statement is not without a grain of truth. It is probable that the fancy of the sculptor-architect played some role in evolving this motif on the shaft of the pillar. But what appears unconvincing in his argument is the process in which it is said to have been evolved. He seems to think that "the central square block" was whittled down "to the round" only through a mechanical device and this process was confined to a particular type of stone. This argument appears unconvincing for the following reasons:

1. The history of the bell-shaped pillar, examined above, has shown that these pillars, either in a rudimentary or well-developed form, started appearing in the monuments of Karnataka in about the 9th century. Between the 9th and 11th centuries, this motif became increasingly popular though it underwent minor modifications. In the earlier stages, wherever the bell mould appears, the pillars are not only made out of pot-stone (as at Ramesvara temple at Garij) and soft or sand-stone (as at the Jaina temple at Pattadakal), but they are also made of granite-stone (as found in the Jaina bastis at Kumbadakal and Somanathapura). The polished surface of the shaft of these pillars clearly proves that as early as 9th or 10th century, the sculptor-architect of this place had not only come to know the art of making well polished bell-shaped pillars, but had widely applied it.

The bell mould found on the shaft of the pillars is definitely not due to the whittling down "the central square block of the shaft to the round, producing a bulbous swelling in its place". This is proved by the evidence, for the bulbous swelling in different parts of the pillars
and in different periods or style, was familiar to the Indian architect by that time. The only thing that was done by the Chalukya-Bhoysala architects was the adoption of this convention in a way in which it suited to his aesthetic taste. This important point, whichCouzen has missed, has been observed by Percy Brown. The latter writes that in "the preparation of these mouldings and their contours, whether sharp convex lines or deep sunk grooves, the workman showed considerable ingenuity and seems to have been allowed a fair amount of freedom in his designs; there is however one particular form almost always present, a conventional motif to accord with some ancient tradition, and that is a prominent bell-shaped member towards the lower half of the shaft".1

2. Couzen, while putting forward this theory of lathe-turned pillar, tried to elucidate the exact way in which it was done. He remarked that the turning in the lathe "would seem to have been carried out with the block in an upright position, and of course, this was done only in finishing process, the stone being first roughly cut as near as possible to the round". This process was not only unnecessary but it was not feasible. It was unnecessary because the architects in Karnataka was ion acquainted with the process of making the pillars in various ways and with various motifs, and they had long ago perfected the technique of polishing the stone. It is difficult to agree with Couzen that this process was evolved for carving the "a very great amount of mere labour", for, there was not merely, the labour that was involved in it even at

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1. Brown, op. cit., P. 170. But Brown was obviously influenced by Couzen in tracing this "special form" to a mechanical device."
that finishing process and there was no need to devise means to save it. Moreover, the application of the mechanical devices to evolve such sophisticated finish, which appears natural and convincing at present is to be viewed with certain amount of doubt when it is applied to 10th or 11th century circumstances. We have neither archaeological traces nor literary evidences to prove the existence of such a mechanical device. Many of the art traditions have come down to the modern times in the families of traditional architects, but there is no trace of its knowledge even among them. Even in the modern days such bulbous pillars are prepared by certain artists and a fine polish has been obtained - but these are hand made and no mechanical devices have been employed. Suppose - if such a mechanical device existed and is lost beyond the memory of the present generation, even then this process does not appear to be feasible for the following reasons:

I am grateful to the Atapati of the Siddhalingaswamy School of Architecture at Mysore for throwing light on this problem. He not only denied the existence any sort of mechanical device, excepting, of course certain hand-made moulds and casts, but showed the present author the way in which the bulbous pillars could be made. This school is greatly inspired by the Hoysala school of architecture-sculpture. I am also grateful to Prof. S.K. Narasimha who kindly discuss this problem with me. He also in his Special Lectures on Karnataka Architecture {No. II), organised by the KRL of Karnataka University, (yet unpublished) disapproved the idea of the employment of the mechanical devices in evolving either the bell-motif or the surface-polish on the shaft of the pillar.
(a) If we exclude the complex, granite pillars of the Dravidian temples of south India, the later-Chalukyan and the Hoysala pillars are the heaviest pillars that were ever utilised by the temple architects in Karnataka. In height, these pillars vary considerably, depending upon the height and the dimension of the temples. We have extremely tall pillars in the tall structures like Pārśvanātha Āstā in Chandragiri in Śravēṇa Belgalā and extremely heavy pillars in Śravēṇa Belgalā and Śēvantilāma. Āstās in Dīnānāthapura. Much heavier pillars are found in the pārvatīvara of Śeyalakṣmaṇa temple at Mālidē and elsewhere. Some of these pillars are about 3½ to 4½ feet wide and about 8 to 12 feet tall. As this estimate is confined to the pillars which are in a finished state, naturally their rough form could have been easily more than what these figures indicate. To rotate such heavy blocks in an upright position would have been an enormous task and beyond the need and the means, if not the capacity, of the architects of the time. The scholars who have elaborated the theory of lathe-turned pillars have gone to the extent of arguing that this block was rested on a wheel and then turned. If this wheel was a wooden one it could

1. While Cousens thinks that the mechanical device was used at "the finishing process, the stone being first roughly shaped to the required proportions, and then mounted in an upright position on a wheel by means of which the block was rotated against a chisel, not as a turning wheel" (OA, 2.23), Brown thinks that the "stone was first roughly shapped to the required proportions, and then mounted in an upright position on a wheel by means of which the block was rotated against a chisel, not as a turning wheel" (italicised by the author).
not have withstood the heavy weight of the stone-block and if it was a metal one, it could have helped only in adding weight to the already heavy block of the pillar. On any account this appears to be an impossible proposition.

(b) But more important than this was the impracticability of evolving this type of pillars in a mechanical process. Cousens had only bell-shaped and the swellings; portion of the shaft of a round pillar in his view, while Brown had the "baluster-like appearance" and the "rounded horizontal mouldings, resembling rings" in his view. But a real example of the later-Chälukyan and Hoyala pillar has some thing more than the baluster-like appearance and the horizontal mouldings; it is like the rest of the temple, a piece of sculptor’s art rivalling that of a goldsmith. It is very well known that the Hoyala sculptor left no space in a temple undecorated - this applies equally well to the pillars. The round pillars found in Čaśivirēśvara temple at Lakkundi; Siddhārāmēśvara at Niralgi, Jāmukēśvara at Lannavāci, Doddabasappa at Daṇḍal, and Akkana Basti at Ėravāḷa Belgola, to mention but only a few stand as a testimony to the dextrous workmanship of the Chälukya-Hoyala artists. With so much of delicate and dexterous hand-work (Pl. x, a) involving the scroll designs, beaded patterns, and convolution etc., it is very difficult to agree with Cousens that those were lathe-turned after which "many of these were never polished".

1. CA, P. 23.
2. Brown, loc. cit.,
3. CA, Pl. LXXI.
4. Ibid., Pl. LXXI.
5. Ibid., Pl. CXI.
6. Ibid., Pl. LXXIX.
7. EJ II, Pl. XXXVIII.
3. Finally, it is to be noted, that both Coomas and Brown confined their arguments to the bell-shaped pillars of a cylindrical type, and they left out a good number of bell-shaped pillars of multiple angles of this school. The indicated-square, octagonal, sixteen-sided, thirty-two-sided and sixty-four-sided pilasters and pillars found in these temples also bear the two important characteristics i.e., the baluster-like appearance and a shining polish. These many-sided pillars could not have been prepared in a lathe, for the equidivision of the shaft in the vertical form and the multiplication of horizontal but star-shaped ring-like mouldings and other delicate works could not be obtained in a mechanical process. For example, the multi-angled pilasters and pillars with vertical cuts and plastic designs found in Kaśivisvēvara temple at Lākṣūṇḍī,¹ Aravattukabada temple at Bāṇāpura,² Mahādeva temple at Iṭṭaḍi,³ Madhukēvara temple at Bāṇavāci and Kēśarēvara at Bāllīgāme,⁴ Sarasvati temple at Gadag,⁵ Akkana Basti at Uṇāvara Belgoa,⁶ and Īśvara temple at Mābhōdī and others.⁷ These facts prove that these pillars were an outcome of a patient and skillful labour of the sculptor-architects of Kumātak. The bell-motif was indeed "a conventional motif to accord with some ancient tradition.”

1. Ibid., Pl. LXXI.
2. Ibid., Pl. XXX.
3. Ibid., Pl. CIII.
4. Ibid., Pl. CXI.
5. Ibid., Pl. CXVI; CXVIII (left corner).
6. CO II, 34.
7. Kār, 1932, Pl. XIII.
but it was not evolved "by playing with the material", however, we have to agree with Cousens and others in thinking that the workmen of this area enjoyed a great amount of liberty in finishing these pillars and was able to reach a stage of perfection as he had a fine-grained stone at his disposal. Anyway, it goes to testify the ability of these workers who wrought such a wonderful polish and perfection on the shaft of the pillars so as to make the art-critics -- wonder that these could have been made out of machine.

Let us now examine the different variety of the bulbous pillars found at Sravana Belgola.

THE ROUND PILLARS: A large number of round pillars with a baluster-like appearance has been met with in the bauxis of Sravana Belgola. They stand on square pithas and three-tiered rectangular in upankithas. These pillars have one another type of upankithas which are not met with in other pillars i.e., the upankithas which are in the shape of a bowl, cyme-reverse cyme-root or a double-cyme moulds. These varieties of upankithas have already been examined above.

The round pillar is called by different names in the Silpa-texts. In Navamata, Kāvana-silpa, Kāmasrera is called Rudrakūnta, in Suruchiyanadhati it is called Jōkūnta and in Nihandhana and Mahārīti, it is called Vrittapanḍa.\[1\]

(a) The uniformly round pillars, from base to capital, are found only in the aukhanāsi and the navaranga of Kuttalā Basti and Chāvundārāya Basti on Chandragiri.

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These pillars have only उपात्मक and not पित्तक. The उपात्मक is either square or in the form of a स्वयं or double-स्वयं. The shaft proper has a baluster-like appearance. The lower part of the shaft is divided into two equal divisions by the lines that run round the shaft. Probably those are the earliest marks which later took the form of sharp convex discs.

(b) Another variety of round pillar has a square पित्तक and a rectangular उपात्मक. This type of pillar is found in some of the temples on Chandragiri, such as Mahajana Basti etc. Though they are popularly set with in the later-Chalukyan and the Hoysala temples, they become less popular from the middle of 14th century. In Karnatak proper, either a plain, non-bulbous variety or a composite variety becomes popular under the Vijayanagara, Woḍoyar and Pāḷḷaḷa periods. But in the coastal-Karnatakas, as seen in the temples of Ḍhāṭkal¹ and Miṣbhidari,² these bulbous pillars do continue to appear but with a remarkable metargynnomic. One general feature, which can be observed in the process of the development of this type of pillars from the earliest times is the gradual emergence of the bell mould and an increase in the plastic designs on the shaft is accompanied by a corresponding evolution in the capital and the abacus. From the Jain temple at Paṭṭadakal, if we traverse through the simple early pillars of the Jaina Bastis of Śravanā Relgoja and the ornate models of the later-Chalukya and Hoysala, and reach — as a strange

1. CA, 21. 61 or fig. 33 in P. 135.
2. Ferguson, op. cit., Vol. II, fig. 305, P. 76.
coincidence would have us to do - once again the pillars in the Jaina temple at Mūḍahidri etc., the metamorphosis that a single type of pillar has undergone would become evident to us. In this long journey for over a thousand years, it underwent cognizable transformations. To start with, the upper portion of the shaft was fluted and was in the shape of a vase (or in the term of Havell that of a lotus), and at its bottom there was only a flat band. In the intermediary stages, this band not only expanded vertically but it gained in prominence and began to reflect the vaso in the inverse form. The same evolution was pushed forward at the cost of the vase when it was completely collapsed by a truncated-khūhua and the entire shaft was ultimately dominated by the bell-motif. These stages could be clearly seen in the pillars found in Nājjīgama, Chāvunganāya, Kattala, Pārāvanātha Basti on Chandragiri Aragal Basti at Jinasātapa, and in the pillars of Akkasa Basti at Brahma Bejgala and Samśāvarā Basti at Jinasātapa. As some scholars have rightly said, this pillar is though an "outgrowth of the earlier Dravidian style," it becomes "a very different thing" under the later-Chālkuras and the Hoyasalas.  

THE OCTAGONAL PILLARS: The bulbous pillars with eight sides are found in the navavahā of Nājjīgama Basti. They also stand on square basements over the three-tiered yānītha, but the shaft proper and the capital are in the octagonal form. Here, the upper vase portion is well developed as in the early temples of Māmallapuras and Ādāmi,

1. From., p. 17.
but the bell portion is in the rudimentary form. It is of
some importance to note that it is one of the earliest
eightened pillars in South-India, and, perhaps, the
earliest of the bell-shaped pillars of this class. This
type of octagonal pillars may be identified with what the
majority of the jilpa texts describe as Viṣṇukāṇṭa and a
few others as Ṣa wyświetlā, type of pillars.

THE SIXTEEN SIDED PILLARS: Another type of bellous
pillar is the sixteen-sided one. The four pillars in the
mantap of Incra IV belong to this class. They have three-
tier unāṇāthas. Another set of these pillars is found in
Kattalo Sasti, but these have only rectangular unāṇāthas.
Over these unāṇāthas sit square pīṭhas in all these
pillars. All these pillars are identical in design and
workmanship, but the capitals that crown the shafts differ
in the two sets. Another point which deserves to be noted
here is the octagonal band at the foot of the shaft or on
the head of the jilpa. Such octagonal bands are found in
almost all pillars i.e., whether the shafts are cylindrical
or many sided. Often this band is sixteen-sided irrespective
of the number of the shaft above. Probably such bands were
introduced to serve as intermediaries between the quadrangular
basements and the round or many sided shafts above. They
are to be regarded as ornamental designs rather than as a
part of the shaft. This design probably corresponds to the

1. For the pillars of Māmall period Vīc.,
Longhurst, op. cit., Pt. II, Pl. XXIII etc.,
2. Of., CA, Pl. LIII; Burgess, op. cit.,
Pl. XXV, A.
sunga-pāda designs mentioned in a number of texts.\(^1\)

As these pillars contain the sixteen-sided shafts, they may be identified with the different names in which they have been called in different Śilpa-śāstras, i.e., Śānasa or Dvapara, Chandrakānta of Kāvyavāsinī, and Purandaradāsī, Budrakānta of Mānasāra, Śūdardāsī of Mahārāj,\(^2\) and Bīhendhara and Dvi-vajra.\(^3\) The sixteen-sided pillars, either on the upper-part of the shaft\(^4\) or from the base to bracket, are found in the early rock-cut and structural temples of the Pallavaś, but these pillars are not having the baluster-like appearance. In the early-Chālukyan temples also we come across a similar variety and not a bulbous variety.\(^5\) In the composite pillars found in the rock-cut temples at Badami, the major portion of the shaft from the base is sixteen-sided, but the upper portions are multi-angled.\(^7\)

4. Longhurst, *op. cit.*, Pl. XXIII etc.
5. *Ibid.*, see in the back row of the temple No. 3 (Pl. VII) and in the façade of Mahēśvara mantap (Pl. XXIV).
7. Burgess, *op. cit.*, Pl. XXIV.
Here also the uniformly bulbous pillars are noticed in the later-Chalukyan and the Hoysala temples. Sided pillars, both plain and bulbous, are popular and the former variety is continued even in the later period.

A COMPOSITE VARIETY: The composite pillars are fewer in number and variety compared with the pillars of the uniform variety. In Śravanabellōla, we come across only one variety of this among the bulbous pillars. These are found in the nayakaraṇa of Kattale Basti. They stand on the square niches. The shaft proper is divided into two parts: the lower 1/3 is octagonal and the rest of the upper portion (which is formed of the vase and the bell) is sixteen-sided. These composite pillars combine the features of the octagonal and the sixteen-sided pillars of Chandraprabha Bāsti and the rātanam of Indra IV respectively. This type of bell-shaped pillars is not only absent in the Pallava and early-Chalukyan temples but it seldom appears even in the later-Chalukyan and Hoysala temples of Karmata. Excepting this instance at Kattale Basti, we do not come across this type of pillars even in the temples of Śravanabellōla.

Though the silāras mention the composite pillars, they do not mention the octagonal and sixteen-sided variety, examined above.

THE MANY-SIDED PILLARS: We have so far examined the different types of pillars, but all these are roughly cylindrical in shape. Apart from the cylindrical pillars, we come across one other variety in which we witness not merely the vertical division of the shaft, but a vertical incision of the lines. For example the shaft of the octagonal
pillars examined above is roughly round in appearance, whereas the twelve-sided pillars are roughly square or indented-square. In the latter variety each of the four corners of the pillar has three vertical lines, and the shaft is not divided into twelve equal divisions, hence it could be called an indented-square rather twelve-sided pillar. The Śilpa-texts, which mention a square, circular, octagonal, sixteen-sided, thirty-two-sided and composite varieties of pillars, do not mention the twelve-sided pillars of the above variety. Hence we may include this variety under the square pillars and identify them with what the Śilpa-texts call as Puhāmakāṇata or Turvākṣa.

The four indented-square pillars found in the navarātra of Kāṭale Basti are not exactly bulbous in appearance, but they bear the vase and the bell design on the shaft though the latter portion is carved with the kīrtimukha designs. In the cubical pillars of the early-Chalukyan temples, we witness the indentations effected in the lower portion of the shaft, and these angles are further multiplied in some other instances of the same temples. Though the octagonal, sixteen-sided and cylindrical pillars are come across in the Pallava temples, the indented-square pillars of the above variety are hardly met with in those temples.

There is one important difference found between the usual octagonal and sixteen-sided pillars and the indented-square and the multi-sided pillars. In the former, the shaft is equitably divided into eight or sixteen parts

| 1. | Śa. Al. VIII; Pls. XXIX and XLII etc. |
| 2. | In Gave No. 3 at Badami. |
respectively and the vertical line found on the shaft of the pillar is merely a line of demarcation; in the latter, this equitable division of the shaft is not always found and the vertical lines are deeply incised. When the vertical division is effected at regular intervals, the whole shaft took the form of a star-shaped pillar with the alternating lines in projections and returns. Such pillars with thirty-two and sixty-four angles are found in the later-Chalukyan and Hoysala temples. Here, obviously, the indented-square pillars were the first and the star-shaped pillars are the last in the evolution of these pillars. But this evolution did not take place gradually, for we find the indented-square, twenty, thirty-two and sixty-four sided pillars standing side by side. But one remarkable feature that we witness is the retention of the bell motif on the shaft of the pilasters and the pillars of this variety. A number of examples for these could be given from the later-Chalukyan temples. This type of star-shaped pillar was not only fully evolved but it was very frequently employed in the structures of the Hoysalas.

We can observe the various stages in which the vertical angles were multiplied and how a star-shaped pillar was ultimately evolved from the instances found at Sravanabelgola. One of the pilasters in the navaraiga of Akkana Basti has an indented square shaft which corresponds to the shaft of the pillar found in Kattale Basti. But on the outer walls of the same basti, we not only find pilasters whose angles are further multiplied into five at each corner as in the pillars of Badami, but they are found bearing the bell-motif on the shaft proper. It is probably the completion of this multiplication of the angles on the entire shaft that led to the emergence of the star-shaped pillars. A fine specimen of this star-shaped pillar with the bell
Motif and a fine surface polish is found in the porch of Akshara Basti.1

The above study has made it clear that the bell-motif is not reserved for the cylindrical type of pillars alone, but it could be found in the pilasters and the pillars of multi-angled ones. While the baluster-like appearance on the shaft of the circular pillars has been regarded as an outcome of a mechanical process, there is no reason to think that the star-shaped pillars were also evolved in the same process. These star-shaped pillars became popular under the later-Chalukya and the Hoysala periods. This may be due to the perfect way in which the plan of the pillar agreed with the plan of the temples, i.e., the star-shaped pillar in a star-shaped structure. "The pillar constructed" says the author of Śatrasamuccaya "should befit the structure under construction. When a variety of shapes and ornamentations is presented, it is the primary concern of the architect to select some of these types as would conform to the nature of the structure and express its character... Variety with respect to shape of columns was not introduced without any end in view. Its legitimate source lies in the fundamental principle of harmony..."2

1. Though these pilasters and the pillars indicate the various stages in the development of the star-shaped pillar, it is to be noted that they appear in single temple side by side. This means that while the multiplication of angles steadily progressed, the older ones were never forgotten.

The star-shaped pillars which harmonised with the octagonal structures of the later-Halukyan and the Hoyualas fulfil the "fundamental principle of harmony". It is, probably, for this reason that they are absent in the rectangular structures found on Chandragiri and Vindhyagiri. Only when we come to the star-shaped structure like Akkana Basti we meet for the first time in Sravana Belgola the pillars and pilasters which are also star-shaped in appearance. Incidentally, it may be pointed out that Akkana Basti is the first stellate temple built in the pot-stone. Thus, we find the general plan of the temple influencing the various components of the structure and the entire process being regulated by the substance with which the structure has been built.

The Capital.

Let us now pass on to the fourth feature of a pillar, the capital. It is an architectural unit which is found in between the shaft and the abacus. It is almost universally present in the pillar, though its shape and size vary from time to time and from style to style. In the early rock-cut and structural temples and some simple structures of later period, the shaft is crowned by a horizontal block which acts both as corbel and as capital. These are called the bracket-capitals. We come across such variety at Sravana Belgola in the navaratnas of Chandāri Basti and other places. In the bastis of Jhandragiri, we come across a round number on the top of the shaft. This is popularly known as loaf-shaped capital or cushion-capital. This type of capitals is supposed to have first appeared in the temple of Lād-Zhān at Aihele in the middle of 5th century;¹ this,

¹ Brown, op. cit., P. 64.
however, continued to appear in the later temples for many centuries.

THE SHAPE: In the early temples of Śrāvana Belgola, the capital is in the form of a round coil or a cushion.

We find two interesting points here: (1) in some cases the capital indicates the sides of the shaft i.e., if the shaft is octagonal the capital is also octagonal and if the shaft is sixteen-sided the capital also becomes sixteen-sided; (2) in some other instances, irrespective of the number of sides the shaft bears the capital is plain in cushion-shaped.

In the round pillars found in the navaraṇa of Kattale Bati and Majjīgama Bāsti we come across such plain and cushion-capitals. Here, the plain surface of the capital is in agreement with the plain surface of the shaft of the pillar. But in the pillars of the mahāśāna of Indra IV, the shaft of the pillar is sixteen-sided, while the capital that surrounds it is plain and cushion-shaped. In the octagonal pillars found in the navaraṇa of Chandraprabha Bāsti, though the capitals are cushion-shaped they are eight-sided and agree with the number of the sides of the shaft. The same principle has been applied to the sixteen-sided pillars and the capitals found in the navaraṇa of Kattale Bāsti.

It would be of some interest to know the exact shape of the capital in a composite pillar. We have already noted that only one type of composite pillar with a shaft bearing eight and sixteen sides has been met with in the bastis of Śrāvana Belgola. Here, the lower portion of the shaft is octagonal, while the upper portion is sixteen-sided. But the capital that surrounds the shaft is neither octagonal nor sixteen-sided; it is plain and cushion-shaped as found in the cylindrical pillars.
In the multi-angled pillars, indented-square or star-shaped, we witness one important difference from the above variety. In this type the capital is no longer leaf or cushion-shaped; it is thick and disc-shaped with the serrated edges. Here the angles of the capital are invariably governed by the angles of the shaft. In the indented-square pillars found at Kattale Basti, the capitals are also indented-square, with three incised lines at each corner. This could also be observed in the two types of pilasters and the star-shaped pillar found in Akka Resi.

THE EVOLUTION: The evolution of the cushion-capital is as much interesting as the evolution of the bell-shaped pillars. The normal shape of the capital in most of the early-Chājurāya and the Pallava temples is that of a cushion. But this cushion takes the form of a tankala when it sits upon an octagonal or a sixteen-sided shaft. The examples for this are found in Chandraprabha and Kattale Bastis. But this difference on the surface of the capital is less interesting compared to the change found in the very shape of the capital. This change is mainly observable in the width and the height of the capital. In the early pillars, such as in the manḍap of Indra IV, Chandraprabha Basti and Āvatamśatiya Basti etc., the capital is exactly like a cushion and its width nearly surpasses the width of the upper part of the shaft. But we find a subtle change in the capitals of the composite pillars of Kattale Basti and the bell-shaped pillar of Pārvanaṭha Basti. Here the capitals tend to be thinner and wider, but they retain the plain and round form of the cushion-capital. In the pillar found in the Cauveriar of Śāntisvara Basti in the north-eastern corner of the enclosure of Chandragiri, we witness further changes. Here the round form of the cushion is absent; on the other hand, it is found taking the form of a wheel which expands in breadth
as it goes from the rim towards the nave. The outer surface of the rim is plain with well marked upper and lower edges. This wheel takes its full shape in the pot-stone pillars of the Inter-Chalukyas and the Hysalas, where not only the thick portion leading towards the nave is obscured by the circular lines, but even the flat surface of the rim is converted into an ornate band, with endless circular lines emanating from the nave and slowly dissolving in the outer rim. This gives the idea of a rotating wheel on its axle, the top of the shaft. These circular lines found in the upper and lower parts of the capital are in agreement with the circles found on the shaft of the pillar; while the beaded hangings on the face of the rim are in agreement with the pattern found on the upper portion of the bell-mouth of the shaft. Here, not only the shape of the capital is completely changed, but even the very size of the capital has undergone much change. The capital on the pillar of the Hysalas appears like a large ornate wheel. This wheel is once again, in agreement with the wheel-shaped member found beneath the phaligga of the abacus.

The above principle is also found applied to the indented-square and the star-shaped pillars. The indented-square capital found on the shaft of the pillar in Kattale Basti, is wider than the shaft itself, but, it is, as in the early pillars, cushion-shaped. In the multi-angled pilasters and the star-shaped pillars of Akmaka Basti, we witness extremely thick capitals bearing the serrated edges. But in the pilasters the breadth of the capitals thickens as it goes towards the nave; in the pillar, this feature is extremely inconspicuous. This principle is kept up even in the pillars of the post-Hysala period, but not without conspicuous changes. In the pillars found in the
porch of Somato-guttāvely on Vindhyagiri, the sixteen-sided shaft bears a sixteen-sided capital but the inner and the upper portion of the capital adopts the floral decoration on the rūpet and it is not as wide as the Hoysala capital. Another difference is found in the moulding of the surface of the rim. In the capitals of the Post-Hoysala pillar the outer edges of the thin wheel are rippled.

In conclusion the following points may be noted:

1. The cushion-capital forms an indispensable unit in the pillars of Karnatak. From the middle of the 8th century, when it makes its first appearance in the temple of Lāl-Khan, Aihole, it is almost invariably found in the pillars of this area. But in the time of the later-Chalukyan, it loses its cushion-shape and becomes slightly wider than the width of the upper portion of the shaft.

2. In the early period, often, the capital imitates the sides of the shaft. But in certain instances, specially in the composite pillars, it remains plain and cushion-shaped irrespective of the shape of the pillar.

3. In the later-Chalukyan and Hoysala temples, the capital like the shaft itself, underwent a great metamorphoses. In this period, the capital began to gain in width and the shape of the capital began to resemble a wheel. The circular lines between the nave and the rim of the wheel and the ornate face of the rim stand out conspicuously at this stage. This change in the shape of the wheel is accompanied by a change in the substance with which the pillars have been made i.e., from granite to jetstone.
4. Even in the post-Hoysala period, this type of capitals appear, but it differs from the pre-Chalukyan and the Chalukya-Hoysala pillars. The capital appears like a flower with the rippled rim, but this form is not invariably present.

The Abacus.

The architectural unit which crowns the capital is called abacus. It consists of two parts - a lotus shaped supporter and a flat square crowning member. The former is called tālā and the latter a phalaka or nālaṇi in the pravidāna temples. The tālā is lotus shaped and it resembles a wash-basin; the phalaka sits like a square-lid upon it. In architectural history, these two units are together known as an expanding-abacus.

Like the cushion-capital, the expanding-abacus is a part of the pillars of Karnataka; and, like the former, the latter has also undergone a subtle transformation from time to time. To observe this change one has to bear in mind: the width of the phalaka and the height and the shape of the tālā.

The expanding-abacus is absent in the pillars of some of the early temples of Karnataka as well as in Śrīśvarā. Even in Śrīvēra Belgoḷa, the pillars found in the maṇḍap of Indra IV, Śrīdamaprabha Maṭṭi, Māyīśavā Maṭṭi and some pillars found in the navaranga and sātanāśi of Śrīvēra Belgoḷa

1. Longhurst, op. cit., Pl. I, Pl. XX etc., Pl. II, Pl. XIII, or Ixili etc.
Basti and Kattale Basti, do not bear this unit. But wherever the idol or the basin-shaped member appears, it is conspicuous by its height, well-curved sides and the rounded edges. All these three units undergo changes in the subsequent periods. In Śāntīśvara Basti, in the north-easter corner of the enclosure on Chandragiri, the edge of the basin does not take a rounded-shape but it melts into the phalaka which sits over it. In the later-Chalukyan and the Hoysala pillars, the height of the idol is found reduced and the side-curves have become inconspicuous. Here also, as in the capital, the circles emanate from the nave and dissolve into the outer edge of the rim. The mouth of the top-edge of the basin-shaped idol neither takes the rounded form nor dissolves into the phalaka, but it gains in importance and takes the shape of a wheel. Here also the face of the rim is decorated with the beaded hangings. In the Hoysala pillars, as found in the navaranga of Akkanā Basti and Śāntīśvara Basti at Jinarāthapura, it appears as if one ornate wheel (capital) is superimposed by another ornate wheel (the supporter of the phalaka). In these pillars, the idol never takes the shape of a flower or munai found in the later-Chōla pillars of Tāmil-nāḍ. The munai becomes popular in the pillars of Kānpatak only in the post-Hoysala structures. Even in the Dravidian structures of South-India it is said to have made its appearance only "in the later Chola, Vijayanagar and Hoysala epochs". We come across this feature only in the pillars found in the porch of Jommaṭe-guttālēva on Vindāyagiri, and in the pillars of the mut in the town of Rāvana Belgola. In these pillars, the idol is much nearer to the original basin-shaped member, but unlike the latter, its outer curves subtly slope down and its rim "appears to have a series of

1. Dubreuil, op. cit., p. 42.
identations".  

The observations made above may be summed up thus:

1. The architectural member that crowns the capital is formed of two units (the idal or a basin-shaped member; a phalaka or a flat piece of square lid) and it is popularly known as an expanding-abacus. Like the rest of the pillar it has also undergone a transformation in different periods and styles of architecture.

2. In the early pillars, the idal is marked by its conspicuous height, well-formed side curves and the rounded upper edge. In course of time, the height of the basin was slowly reduced and the side curves became inconspicuous and the rounded edge was transformed into a conspicuous wheel. This wheel which supports the wide phalaka, reflects the wheel-shaped capital and contains the same beaded-hangings on the outer surface of the rim.

3. In the post-Karnata period the idal undergoes a considerable transformation again. It takes the shape of a flower and its side curves slope down subtly and the rim appears to have a series of indentations. It gives a picture of a lotus flower with the petals dropping down outwardly. This type of idal is popular in the later-Chola, Vijayanagar and Madura epochs and it does not appear earlier than the 14th century.

The Capitals.

The architectural unit which crowns the abacus is

1. Ibid.
called a bōdīcā or a corbel. Like the rest of the pillar, the corbel has also undergone a transformation in different periods of history. A fascinating sketch-study has been already made by the scholars on the evolution of the corbels of the Dravidian temples of Tamil-nādu;¹ such a study is yet to be attempted in other parts of South-India and the Deccan.

The monuments of Śravāṇa Belgola offer roughly two varieties of corbels: (a) a simple horizontal corbel called mada-bōdīcā and (b) the four-square corbel. The former variety is found in a large number in the early temples of this place; the latter becomes increasingly popular and almost indispensable in the monuments of 12th century and onwards.

The simple horizontal corbels of Śravāṇa Belgola correspond to the cōōcā-bōdīcā of the Pallava period.² Here, an horizontal block is cut at 45° or 35° at the lower corners. Before cutting off this angle, the architect marked the stonc with a square or rectangular diagram at the corners of this block. When the lower edge was cut off the rest of the right-angled mark remained on the block itself. This mark is not normally found on the corbels of pillars in Tamil-nādu, but it is an extremely insignificant factor. The examples for this variety may be found in Śravāṇa Belgola in Chandraprabha, Majjigaṇa, Chāvṛṇḍarāya and Kattale Nāṭia.

1. Dubrouil, op. cit., Pp. 39 ff; Gravely and Vivaramasūrti Jūdā, Pp. 16 ff etc.
2. Gravely and Rāmaṇḍāran, op. cit., figs. 3 in P. 17.
The four-square corbels were created out of a square block of stone. Here also the lower portion of the block has been cut at certain degrees. The profile of these four units of this block are left without any decoration in the pillars found in Śántisvāra Bāsti in the north-eastern corner of the enclosure of Chandragiri. Such simple, four-square corbels are found in Pañcheṣṭa Bāsti at Kaṭṭadahalli and elsewhere. But in the later-Chālukyan and the Hoysala temples, the profiles of these four blocks are decorated with certain motifs, especially with "roller" decorations, as observe such four-square corbels with the "roller" designs on the pillars found in Akkana Bāsti in Sravana Belgola and Śántisvāra Bāsti at Jinaśānapura.

Among other characteristics observable in the monuments of Sravana Belgola are the absence of the carved-corbels and the jatāṅga and the pūshpa-kōḍiṅga. Even in the pillars found in the āṭtā, which belong to the modern period, the last variety is missing and only the corbels with the median right-angled projections with the under-side cut at certain degrees, are found.