

## Origin and Transformation of Honeysuckle Motif in Mauryan Art

Vinay Kumar

### Introduction

There are many art motifs in Mauryan art which are taken as evidence of foreign influence on Indian art. The most enigmatic among these is the 'palmette'/'honeysuckle' motif traced variously to West Asian, Greek, or Persian or Greco-Persian sources. Undoubtedly it is of West Asian origin, as A.K. Coomaraswamy, Nihar Ranjan Ray and John Irwin have rightly pointed out. It underwent great formal changes on the Indian soil from the very beginning, deliberate, pre-planned and well thought of, as it were. Boardman is of the view that the flame-leaf palmette on Mauryan pillars was a Greek invention derived from the old Mesopotamian motif of the straight leaved or fan- palmette. The abacus of Allahabad pillar depicts a repeat of palmette and lotus buds which appears to be reminiscent of the Greek knob-and-flower motif; the abacus was edged at the base with a chain of bead-and-reel ornament equally familiar in Greek art. Similarly, the abacus of elephant crowned Sankisa column is elaborately carved with rosettes and palmettes and their petals resemble the snake-hood. S.P. Gupta suggested a name for it, "*Nāgapuṣpa*". According to him "the palmettes of the pillars is thoroughly Indianized form of West Asian motif, i.e., honeysuckle." The Indian artists showed their vigour and creativity in Indianizing this motif as *nāgapuṣpa* motif. The round decorated abacus of Rampurva pillar shows honeysuckle or *nāgapuṣpa* motif with flowers. There is a flower of this kind in India but it is quite different from the honeysuckle or palmette. This is commonly known as *Nāgakesara*, *Nāgapuṣpa* (*Mesua ferrea*), *Kanakahvā*, *Hemakinjalkā* in

Sanskrit and Iron wood tree in English. In Hindi it is known as *Pīlā Nāgakesara*. This idea of transformation is best reflected in the 'honeysuckle' or '*nāgapuṣpa*' motif. This motif has been exploited in so rich a manner in Indian art in contrast to West Asia and Greek world that it has been the source of inspiration of various forms of Indian art motifs like *Triśūla*, *Triratna* and *Śrīvatsa*. The petals of 'honeysuckle' or 'palmette' are highly stylized and look like the snake-hoods. Hence it was named as *nāgapuṣpa*. It resembles the Greek anthemion and in West Asia it had various other forms. But the 'Aśokan' palmette is totally divorced from West Asian types. The palmette of 'Aśokan' pillars is a thoroughly Indianized version of the West Asian motif. The main features of this motif, therefore, differ from its West Asian and Greek counterparts.

According to *Oxford English Dictionary* 'Transformation' is the change from one expression, function or geometric figure to another by a variety of means. In art context transformation may be the transformation of 'form' or 'idea'. According to *Webster Comprehensive Dictionary* 'transformation is to change one expression or operation into equivalent to it or having similar properties.' When we analyze Mauryan art, we find that the vision of Aśoka regarding Indian art appears to be clear from the very beginning. He adopted from West Asia whatever suited our cultural ethos and were modified according to our tastes and requirements. This process is generally called 'transformation'. It was not 'influence' or 'copying' but incorporation through conscious efforts in the historical situation of close interaction of cultures of West Asian and Indian origins to adopt all that suited the nation's ethos. The concept which was not gainfully adopted was rejected. All ideas and all models were transformed and allowed to burst forth in thousands of new flowers. This is best reflected in the terracotta art, sculptural art and architecture of Mauryan period.

Honeysuckle is taken by Coomaraswamy as Blue Lotus,<sup>1</sup> but according to V.S. Agarwala it seems to be a flower comprised of six anthers and a pistil in the middle, probably the Indian *Mucakunda* flower<sup>2</sup> (*Pterospermum acerifolium*) (Fig.1) which commonly grows on tall wild trees in Madhya Pradesh (Jhansi-Lalitpur region), West Bengal, etc. With long and slightly curved petals and



Fig.1 : Honeysuckle flower in nature

more than 180 species of honeysuckle, with by far the greatest diversity in China, where over 100 species occur; by comparison, Europe and North America have only about 20 native species each. Widely known species include *Lonicera periclymenum* (European honeysuckle), *Lonicera japonica* (Japanese honeysuckle, white honeysuckle or Chinese honeysuckle) and *Lonicera sempervirens* (coral honeysuckle, trumpet honeysuckle or woodbine honeysuckle). The leaves are opposite, simple oval, and from 110 cm long; most are deciduous, but some are evergreen. Many of the species have sweetly-scented, bell-shaped flowers that produce a sweet, edible nectar. The fruit is a red, blue or black berry containing several seeds.

Palmette, also called anthemion (from the Greek flower), is an ornament of honeysuckle or fan-shaped leaves of a palm tree in a radiating cluster. It was largely employed in the Greek/Roman era to decorate (1) the fronts of *ante-fixae* (the vertical blocks which terminate the covering tiles of the roof of a Roman, Etruscan or Greek temple; as spaced they take the place of the cymatium and form a cresting along the sides of the temple. The face of the *ante-fixae* was richly carved with the anthemion ornament); (2) the upper portion of the stele or vertical tombstones; (3) the necking of the Ionic columns of the Erechtheum and its continuation as a decorative frieze on the walls of the same and (4) the cymatium of a cornice (cymatium is a moulding on the cornice of classical buildings

thread like pistils, it is an extremely stylized original motif. Both palmette and honeysuckle are found as alternating motifs on the frieze of the Rampurva Bull-Capital of Aśoka. Honeysuckles (*Lonicera Caprifolium*) are arching shrubs or twining vines in the family Caprifoliaceae, native to the northern hemisphere. There are

sometimes decorated with an anthemion. It is characteristic of Ionic columns and can appear as part of the entablature, the epistylium and the capital).

It is thought that the honeysuckle/palmette originated in ancient Egypt, and was originally based on features of various flowers, including the papyrus and the lotus or lily representing lower and upper Egypt and their fertile union, before it became associated with the palm tree. The most common placement of the palmette or anthemion in the ancient world was its architectural use in a repeating pattern as a border, frame or frieze. In this ornamental role it supports and points to the main image (deity, hero, martyr, saint . . .) housed in the 'cella' of the temple or mounted on the wall panel that it frames. The palmette is related to a range of motifs in differing cultures and periods. In ancient Egypt palmette motifs existed both as a form of flower and as a stylized tree, often referred to as a tree of life. The placement of the palmette-related motifs in ancient Egypt was on the lower registers of temple walls representing emergence of the first fertile mound from the chaos of the primal swamp, on tomb walls, on funereal monuments, on death masks, coffin lids and on door lintels. It is associated both with death and life. It seems to have been thought of as offering communication between the two worlds. The groupings of motifs have a sacred, auspicious and often magical or miracle-working connotation in West Asian art. Associated both with flowers and palm trees, the palmette brings together the fertility symbolism of both. Both the calyx of the flower and the crown of the palm tree are the centre of reproductive activity and the source of new growth, and both are graphically associated with human sexuality.

According to Irwin, India borrowed honeysuckle motif directly from West Asia quite independent of Greece and Persia and used them in a manner neither the Greeks nor the Persians intended. To the Greeks and Persians, it was decorative element; to the Indians it was symbol of fecundity. He associates the whole symbology with Indra myth. He says: "On the abacuses of the Aśokan pillars celestial waters are symbolized by honeysuckle or lotus motif. Presiding over their circulation (of waters between celestial and terrestrial sphere) is the goose or *harisa*."<sup>3</sup> The progress has been in stages; from Sankisa to Sanchi. At

Sankisa the palmette motif still retains some of the formalism and stiffness of the West Asian type while at Sanchi it became natural. Thus, in Aśokan period there is the conscious formal transformation of this foreign element into the native moulds so that the end-products become acceptable to the people. So, when this 'honeysuckle' motif was borrowed from western Asia, it was made to resemble Indian water-flowers, and within a short time it became the lotus of *padma* variety.

### Origin of Honeysuckle Motif

Irwin elaborately discussed this motif and traced its origin to Egypt as also its journey to Asia Minor, Greece, Iran and India.<sup>4</sup> It is “an ornament which the Greeks called 'anthemion' from 'anthos', a flower which was called in Western European Manual of Ornaments 'honeysuckle' after the climbing plant so familiar in English midsummer hedgerows properly known as *Lonicera periclymenum*.”

According to Irwin, “The ultimate source of the so-called “honeysuckle motif was lotus as stylized in Egyptian art (Fig.2). The basal drums of the Persepolitan pillar are conceptually nearest to Egyptian blue-lotus as depicted in Egyptian art (Fig.3). The blue lotus with peeping-petal convention was transmitted from Egypt to Persia either directly from

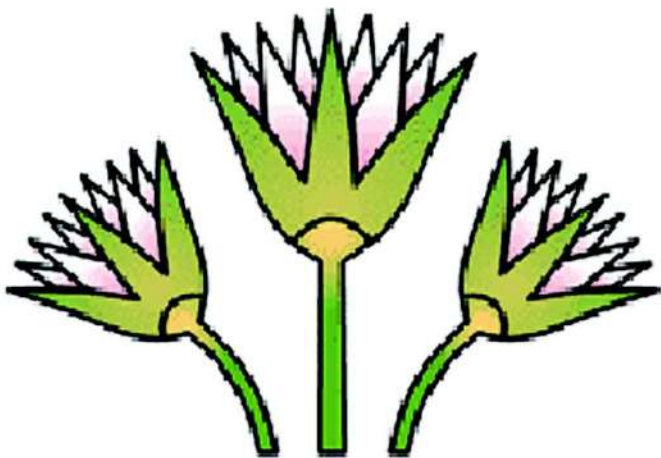


Fig.2 : Conventional form of the Egyptian Lotus

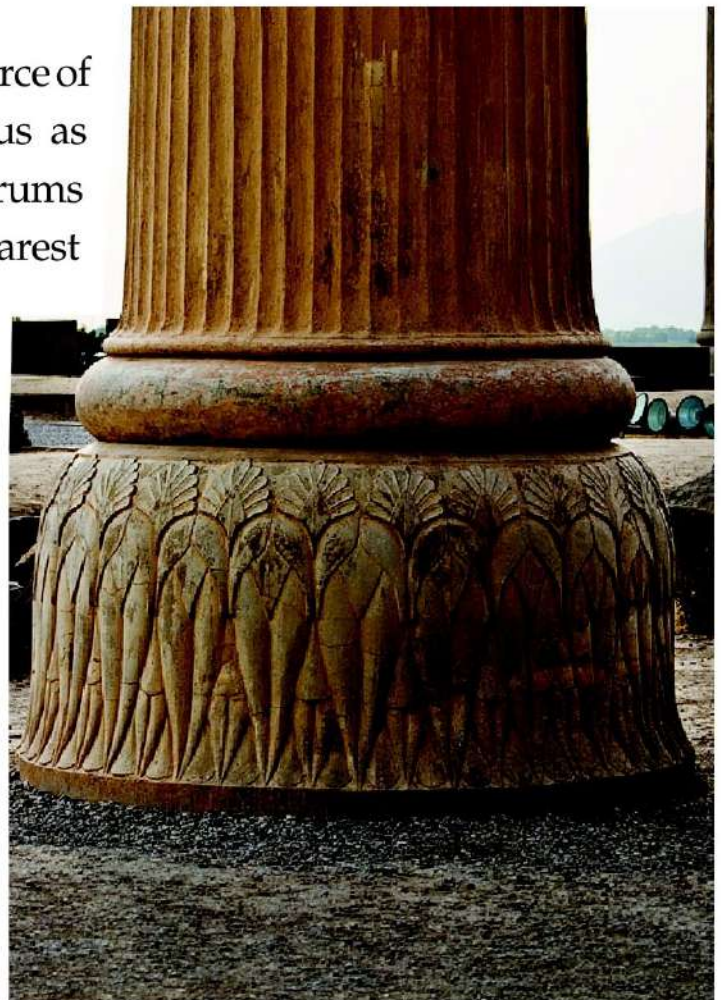


Fig.3 : Basal drum of a Persian pillar with Egyptian lotus buds palmette, etc.

Egypt after her conquest by Cambyses in BCE 525 when Egyptian craftsmen were known to have been brought to Iran or via the arts of Asia Minor where Egyptian influence had been associated from much earlier period."

Lotus is also, like Indians, sacred flower par excellence to Egyptians. In Egyptian art, the lotus-flower was stylized in association with another symbol of fecundity-the so-called Egyptian lily. These stylizations were often combined in Egyptian art as alternating motifs, giving rise to a conventional type of continuous floral border, which eventually spread in variously adapted forms.

In a well-known Assyrian variation, the 'Egyptian Lily' gave place to a bud, thus producing the 'knob-and-flower' motif (Fig.4). In other variations, the

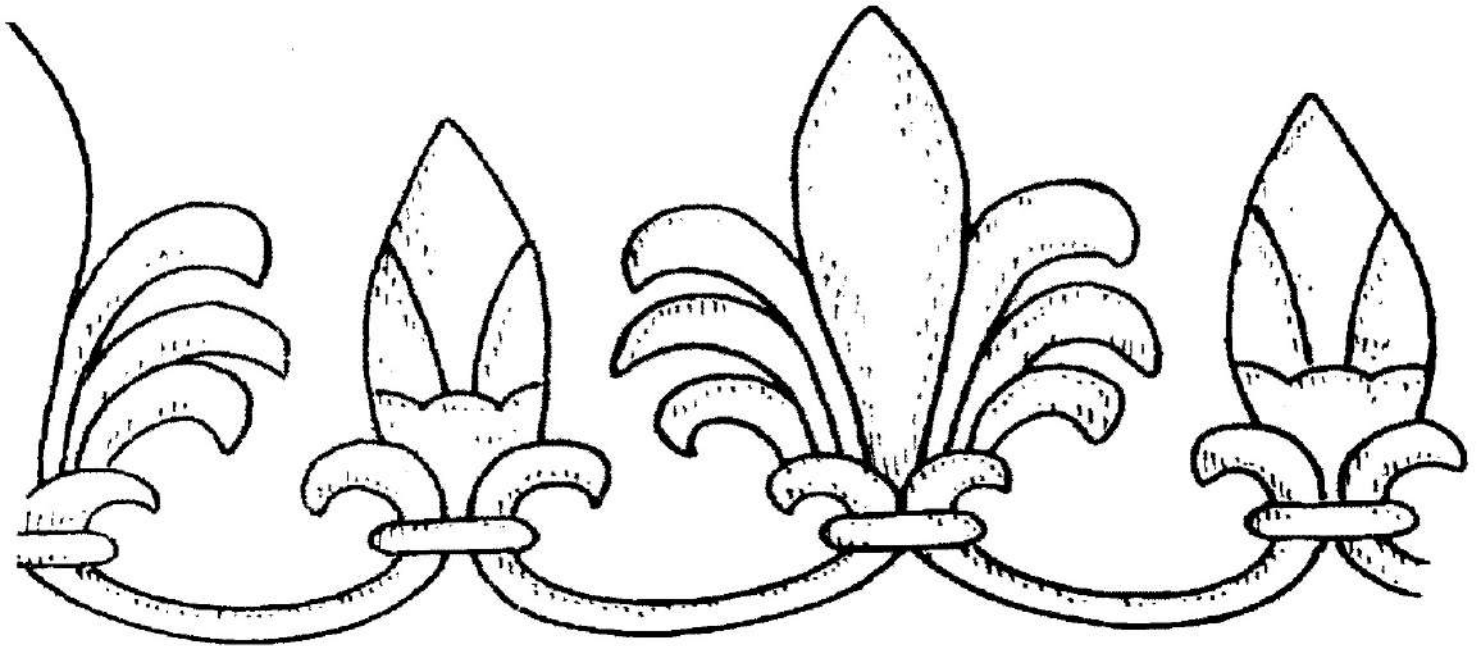


Fig.4 : The Assyrian 'Knob-and-flower'

'Egyptian lily' was replaced by a palmette which was simply a matter of substituting one sacred life-symbol with another, the date-palm being pre-eminently the sacred tree of Mesopotamia, the tree of life. This view is also supported by Mathur who thinks that honeysuckle really represents two flowers, the lotus and the lily, both of which symbolizes the water and also the tree of life originating in it. At Bharhut the flowers are shown singly arising out of lotuses.<sup>5</sup>

Both these variations took root in Asia Minor and became prominent in the architectural ornament of the Ionians. It was from Asia Minor that the Greeks in the sixth century BCE derived their own 'anthemion' already evident at Delphi' and reaching its mature form on the Erechtheion at Athens in the fifth century BCE (Figs.5 & 6).



Fig.5 : Ornament from an Ionic treasury late sixth century, *Delphi Museum*

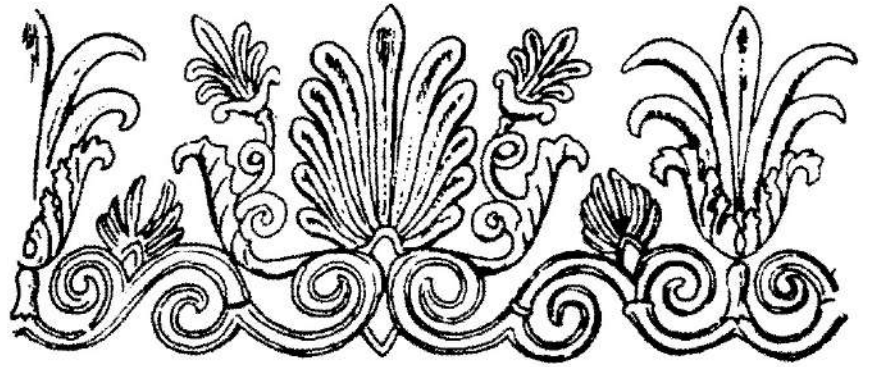


Fig.6 : Mature Greek anthemion. Sculptured frieze from the north portico of the Erechtheion Athens, 420-393 BC (After Irwin)

'By the Greeks the anthemion was already used strictly as ornament for *cyma recta* mouldings usually as a freeze at the top of the pilaster (Fig.7). A 'cyma' in Greek is a wave, a swell, a billow. In architecture it means a



Fig.7 : Anthemion and bead-and-reel motif on *cyma recta* moulding (After Irwin)

moulding which is concave at the top and convex at the bottom, sometimes called the *cyma recta* or *doric cyma* or *beak-moulding*.

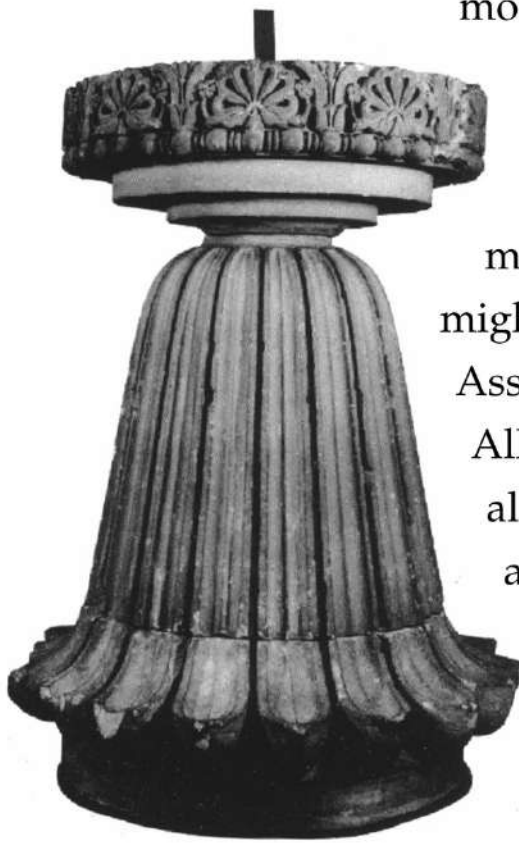


Fig.8 : Honeysuckle motif on the abacus of Allahabad Pillar Capital

Fergusson as early as 1876 suggested that the motif honeysuckle found on the Mauryan pillars might have originated in West Asia, particularly in Assyria. Regarding the honeysuckle ornament on the Allahabad column, Fergusson comments: "... and it is almost a literal copy of the honeysuckle ornament we are so familiar with used by the Greeks with the Ionic order (Fig.8). In this instance however, it is hardly probable that it was introduced directly by the Greeks, but is more likely to have been through Persia, from Assyria, whence the Greeks also originally obtained it."<sup>6</sup>

As regards the exact source of these borrowings, in Indian context it is argued that the same were not directly taken from the Achaemenids, but from the common source of Western Asia on the supposition that even prior to Achaemenid influence “in the middle of the first millennium BC, Greece, Iran and India were all peripheral cultures borrowing from the same West Asian source from that region which was constituted by Assyria, the Levant and Ionia. Artists of Greece, Iran and India employed these same borrowed motifs in a spirit totally alien to each other.” But the application of the term 'honeysuckle' to the plant ornament appearing in Indian abacuses is doubly misleading, because Indian version of the flower motif is in fact neither 'honeysuckle' nor Greek 'anthemion' (both were borrowers). The Indians used the same West Asian motif; however, they employed it as a flat decoration on the rim of the abacuses. Both the West Asians and the Indians saw the honeysuckle primarily as a symbol of fecundity. However, during the process of assimilation in India where the lotus was already endowed with the same symbolic qualities, it was natural that the borrowed honeysuckle should have been assimilated to the form of the Indian *padma*-lotus. In the process of Indianisation *ham̐sa* or goose is another example of Indianisation of the beautiful architectural ornament and is perhaps the only element in the Mauryan capitals, which is wholly Indian. The connection of *ham̐sa* and lotus with water is obvious. The goose in Indian folklore is conceived as feeding on lotuses.

### **Progressive Stages of Transformation of Honeysuckle Motif**

The 'honeysuckle' or 'palmette' motif occurs on several Aśokan pillars. We may commence with two observations: nothing exactly like this has ever been found anywhere in the world; it is not the naturalistic depiction of lotus, or of anthemion, or of *mucakunda* (*pterospermum acerifolium*). The Aśokan palmette is totally different from West Asian types. The palmette of Aśokan pillars is a thoroughly Indianized version of a basically West Asian motif. Since its petals resemble the serpent hood, it was called as *nāgapuṣpa*. The main features of this motif, therefore, differ from its West Asian and Greek counterparts:

1. The snake-hood like curls that characterize the Asokan palmettes is nowhere to be found in identical form outside India. In a few examples in

Greece, such as the one on a pilaster capital at the temple of Apollo in Didyma (BCE 310) or on the Doric entablature (the upper horizontal part of an order consisting of cornice, frieze and architrave from top to bottom (Fig.9). This area originally existed between the capitals and gutter of ancient classical buildings) in the temple of Aesculapius, Epidaurus (BCE 330), we have the anthemion flower with inward curves but even these examples are vastly different from the Indian specimens found on the capital from Basti.

The addition of an arched sepal at the base of the palmette (at Sankisa), where two sepals alone are shown, is not a usual feature of palmette motif outside India. This base or growth point of the Indian 'honeysuckle' on Sankisa elephant capital resembles a scale mound or hillock which Irwin regards it to represent Mt. Meru. In fact, Coomaraswamy was the first to draw our attention to similar stylization of primordial hill of earliest Indo-Aryan tradition. The palmette motif is shown along with rosette with five to eight petals, differently in different examples. A situation like this is unknown in West Asia and Greece.

2. Irwin draws our attention to another element, "the 'petals' of Indian rendering of the honeysuckle looking like serpents or *naga* being yet



Fig.9 : Pilaster capital at the temple of Apollo, Didyma

another key symbol of the creative water." He adds, "during the process of assimilation in India where the lotus was already endowed with the same symbolic quality, it was natural that the borrowed honeysuckle should have been assimilated to the form of Indian *padma-lotus*." Progressive stages of this transformation have been recognized in the sequence of drawings illustrated by Irwin. "The final and perhaps the most clinching of all indications of the Indianness of the design in the Sankisa abacus is the tiny detail leaf of a *pīpal* or *aśvattha* tree the cosmic tree of India *par excellence*."

3. At Sankisa the palmette sports a heart-shaped leaf, perhaps a *pīpal* leaf. It is also not a naturalistic situation. According to Irwin it describes the power or capacity of certain elements to combine with others and to produce a new whole, transcending its parts. Here the honeysuckle by association with the cosmic waters, the primordial hill and the serpent adds up to more than an image of fecundity. We agree with Irwin that the idea underlying the floral motifs was to represent aquatic plants and birds (geese have been shown on Sanchi, Lauriya-Nandangarh, Rampurva Lion (Fig.10) and Bodha-Gaya *Vajrāsana*), and to that extent interpretations in terms of water cosmology is perfectly justified, yet to be seen in every little detail of otherwise naturalistic depictions, something symbolic of the kind he visualizes is nothing short of imposing our own mind on something whose meaning should be as plain as their forms. As has been observed earlier, the palmette motif has several variations although the basic treatment of individual petals in each case

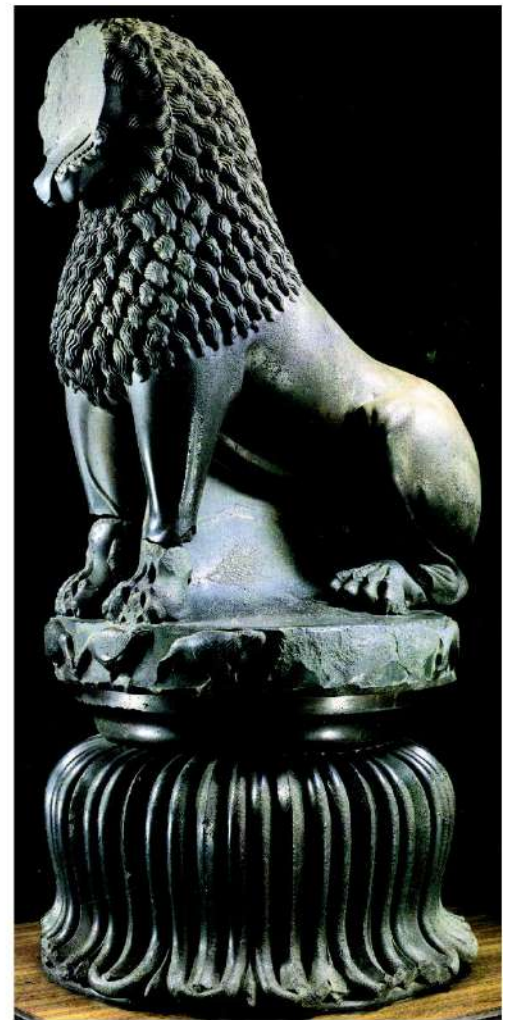


Fig.10 : Geese on Rampurva Lion capital (Indian Museum, Kolkata)

remains the same: hood like, with a sharp central ridge. Thus, in a very interesting variation on the Rampurva Bull Capital, the 'hoods' have been arranged in two tiers with three extra sepals in the middle of the pistil. In the example from Basti, the pistil has been shown in the most naturalistic fashion: it is not at all hood like, but tulip-shaped. Further, as happens in a matured flower, out of the pistil emerge two buds with seeds. In the example from Sanchi, the flower is small with simple naturalistic buds shown emerging from the tendrils.

4. On the Rampurva Bull Capital there is another flower, nearer in form to the Egyptian lily and West Asian, Greek and Achaemenian anthemion. But it is also different from them. While in India its basic treatment is naturalistic, in other countries it is highly stylized. According to Irwin in India these floral motifs seem to have a deeper significance in terms of water cosmology; perhaps, in Persia and Greece these motifs have been used purely as decorative friezes of geometric patterns, devoid of life-principle that emerges out of naturalistic depictions. The use of geese along with water flowers is not arbitrary. The goose was associated with floral motifs in India all along her art history in an aspect of fecundity of water, while this was not so in any of the West Asian countries.
5. Possibly, the bud motif on Sankisa and Allahabad capitals reflects the closest parallel with Greek and Achaemenid conventions half opened long petals with two to three sepals having drooping ends at the base; the pistil is equally long. In the Allahabad pillar, the pistil is two tiered with two extra branches at the upper end. This feature is never met with in West Asia, Greece and Persia. Undoubtedly this was a borrowed motif but imbued with a touch of difference, which we call the product of transformation.
6. Top of *Vajrāsana* at Bodhgaya is decorated with deeply carved geometric pattern resembling intersecting circles (Fig.11). The sides along the thickness show a variety of 'honeysuckle' or *nāgapuṣpa* motif, sometimes alternating with geese or *haṁsa*. Where the geese are shown, the *nāgapuṣpa*,



Fig.11 : *Vajrāsana* at Bodhgaya showing the *nāgapuṣpa* motif

sports its own flowers in the form of rosettes. The geese are shown with their bills drooping at the roots of the rosettes. In its formal representation, sensitive modelling and delicate mannerism, this sculptural piece is in direct relationship with the Asokan pillar art on one hand and the Sarnath fragments of geese on the other. It is a most remarkable work of art, wholly Indian in conception, deeply rooted in Indian cosmology and unparalleled in the history of Indian and West Asian art.

When compared with the same motif on Persian and Greek examples, they bear only distant resemblance while in representations on the Aśokan pillars, comparison becomes nearer home although still a lot differs in them. In fact, they are comparable only with those found on Bharhut-Sanchi group of monuments of late Sunga period. The one from Hajipur has the arched base with seven vertical ribs arranged in fan-like manner.

7. It replaces the position of the sepal as well as the simple arched base of the *nāgapuṣpa* in the Allahabad capital decoration. The pistil is somewhat lenticular. The petals are twisted and curved with one very special feature that occurs for the first time at Bharhut: the veins are shown in oblique or horizontal parallel lines as if they are separate hoods. But it should be carefully marked that these veins are also shown on the back of the petals. The two basal petals are of an extremely characteristic type: first, they spread out horizontally and then take a sharp upward turn, and finally end with out-turned ends. It is a convention that started in the first century

BCE; we just do not get it before that date here in India or elsewhere in the world. During that period the kings who ruled from Pataliputra belonged to the later Sunga and Kanva dynasties. Since Hajipur is across the river Ganga and was not part of the capital town, it must have belonged to the house of a wealthy merchant. For the other example also, the one from Lohanipur, the same observations hold good. The *nāgapuṣpa* motif on it is, however, slightly different. Its arched base is pointed with a small parallel arch inside at the base. The sepals have rounded outline and they are completely upturned. The overall treatment has been rather schematic with two petals swinging inside like hoods. It is flanked by rosettes.

From the above it is obvious that there has been a rather conscious attempt towards Indianisation of the architectural motif popularly known as 'honeysuckle'. They are borrowed and Indianised by the craftsmen who were responsible for the creation of the Mauryan capitals. The Aśokan pillar is, therefore, a strange amalgam of native and foreign elements. The characteristic feature of this mixture lies in the process of transformation through which the foreign elements were metamorphosed. The end-product, therefore, is a replica of neither the West Asian model nor the Indian prototype.

## Conclusion

Thus, we can see that the borrowed honeysuckle or palmette motif was not a part of 'glass-house plant' as pointed out by Ray but it entered the body-fabric of Indian art and impregnated it with great possibilities so much so that the form of *nandipada*, *śrīvatsa* and *triśūla* also emerged out of it.<sup>7</sup> Neither was it supported by the will of the king nor it weathered away from the Indian soil when the king was no more. But the people of India looked upon it as much a symbol of fecundity of water as they looked upon the *padma* (lotus). Nowhere in West Asia and the Greek world have the evidence of exploitation of this motif in such a rich manner. It is combined with mother goddess, it is represented with geese, it is depicted with *pīpal* leaf, it decorates the pillar capitals, it adorns the crest of gateways and it is prominent in ringstones. It has been the source of many art-motifs. Such as the

*triśūla*, *triratna* and *śrīvatsa*. It is not just the depiction of any flower that grows in nature and what was just a decorative element in Greek and Persian art, found on their architectural mouldings became possibly the greatest source of inspiration for many motifs in Indian art.

*Padma* (lotus) is superimposed on the 'honeysuckle' in the crest of the Bharhut *stūpa*-gateway and the flowers are shown arising out of lotuses. On the Sanchi gateway, in several representations, the honeysuckle is shown emerging out of the pericarp of the *padma* (lotus). On the Heliodorus Pillar capital at Vidisha we get an example of similar attempt the *padma* (lotus) petals of broad dimensions are practically imposed on the bell. In both the cases the idea conveyed was the same; *padma* was 'honeysuckle', 'honeysuckle' was *padma*. We know that *padma* (lotus) which went from India and entered Western Asia art remained a 'one time' affair since the Indian *padma* (lotus) could not identify itself with 'honeysuckle' or palmette of local moorings. But the 'honeysuckle', which came from Western Asia and entered India, became widely popular because it identified itself with the *padma* (lotus). The main reason behind this was that the decisive factor in early Indian or Mauryan art was not the Will of the King of Western Asian type but the Will of the King of Indian type in which social acceptance of things imported was of utmost importance. In the Indian context the Will was not arbitrary; in Western Asia, it was. The 'honeysuckle' motif in Mauryan art is sometimes combined with geese. In Greece and Western Asia it was hardly the case. Geese in Indian tradition represents the fecundity of water, it was again the outcome of the same process, which half-a-century later appeared in the form of 'honeysuckle' combined with *padma*. The problem of social acceptance was tackled through local identification. This is called 'the process of transformation leading to the extant of Indianization.' This is transformation of a foreign motif. In this lies the conscious effort and genius of Indian artists to adopt all that suited the nation's ethos. Thus, we can see a borrowed motif imbued with a touch of difference, which we call the product of Indianization of transformation.

## References & Notes

1. A.K. Coomaraswamy, *History of Indian and Indonesian Art*, 1965, p.11.
2. V.S. Agarwal, *Indian Art*, 1965, p.74.
3. John Irwin, 'Aśokan Pillars: A Reassessment of Evidence - IV - Symbolism', *Burlington Magazine* 118 (884), 1976, p.744.
4. Vijay Kumar Mathur, *Art and Culture Under the Śungas*, 1996, p.71.
5. John Irwin, 'Aśokan Pillars: A Reassessment of Evidence - III - Capitals', *Burlington Magazine* 117 (871), 1975, pp.639-42.
6. James Fergusson, *History of Indian and Eastern Architecture*, 1910, pp.58-59.
7. S.P. Gupta, *The Roots of Indian Art*, 1982, p.325.

## Bibliography

1. V.S. Agarwal, 1965: *Indian Art*. Varanasi: Prithvi Prakashan.
2. V.S. Agarwal, 1965: *Studies in Indian Art*. Varanasi: Vishwavidyalaya Prakashan.
3. U.P. Arora, 1981: *Motifs in Indian Mythology: Their Greek and Other Parallels*. New Delhi: Indika Publishing House.
4. L. Bachhofar, 1923: *Early Indian Sculptures*, 2 Vols. Paris: Pegasus Press.
5. Amelia Ann Blanford, 1891: *Egypt: The Birthplace of Greek Decorative Art*. New York: Harper & Brothers.
6. John Boardman, 1967: *The Art and Architecture of Ancient Greece*. London: Thames and Hudson.
7. G. Carotti, 1908: *A History of Art*, Vol. I *Ancient Art*. London: Duckworth.
8. Ramaprasad Chanda, 1927: *The Beginnings of Art in Eastern India with special reference to Sculptures in the Indian Museum*, Calcutta, MASI 30. Calcutta, Central Publication Branch.
9. A.K. Coomaraswamy, 1985: *History of Indian and Indonesian Art* (Rep.). New York: Dover Publication.
10. E. Errington 1992: *Crossroads of Asia: Transformation in Image and Symbol*. Cambridge: Ancient India and Iran Trust.
11. *Encyclopaedia Britannica*, Eleventh Edition.
12. James Fergusson, 1910: *History of Indian and Eastern Architecture*, Vol. I. London: John Murray.
13. R. Ghirshman, 1964: *Persia from the Origins to Alexander the Great*. London: Thames and Hudson.
14. S.P. Gupta, 1982: *The Roots of Indian Art*. New Delhi: B.R. Publishing Corporation.
15. S.P. Gupta, and Shashi Prabha Asthana 2006: *Elements of Indian Art*, (2<sup>nd</sup> ed.). New Delhi: D.K. Printworld.

16. Irene N. Gajjar, 1971: *Ancient Indian Art and the West*. Bombay: D.B. Taraporevala & Sons.
17. E.E. Herzfeld, 1941: *Iran in the Ancient East*. New York: Oxford University Press.
18. Susan L. Huntington, 1985: *The Art of Ancient India: Buddhist, Hindu, Jain*. New York: Weatherhill Inc.
19. John Irwin, 1973: Aśokan Pillars: A Re-assessment of Evidence. *Burlington Magazine* 115 (848): 706-720; 1974 Aśokan Pillars: A Re-assessment of Evidence II Structure. 116 (861): 712-727; Aśokan Pillars: A Re-assessment of Evidence III Capitals. 1975 117 (871): 631-643; Aśokan Pillars: A Re-assessment of Evidence IV Symbolism. 1976: 118 (884): 734-753.
20. A.W. 1957: *Greek Architecture*. London: Penguin Books.
21. Vijay Kumar Mathur, 1996: *Art and Culture under the Śungas*. Delhi: Bhartiya Kala Prakashan.
22. R.N. Misra, *Mauryan Art: A Re-Appraisal*. *Pragdhara* 11: 85-192.
23. A.K. Mitra, 1927: *Mauryan Art*. *Indian Historical Quarterly* III (3): 541-560.
24. C.B. Pandey, 1982: *Mauryan Art*. Delhi: Bhartiya Vidya Prakashan.
25. Ratan Parimoo, 2000: *Studies in Indian Sculpture*. New Delhi: Books & Books.
26. Georges Perrot and Charles Chipiez 1892: *History of Art in Persia*. London: Chapman and Hall.
27. A.U. Pope, (ed.), 1938: *A Survey of Persian Art*. London: Oxford University Press.
28. Nihar Ranjan Ray, 1945: *Maurya and Śunga Art*. Calcutta: University of Calcutta.
29. Nihar Ranjan Ray, 1975: *Maurya and Post Maurya Art*. New Delhi: ICHR.
30. Benjamin Rowland, 1977: *Art and Architecture of India: Buddhist, Hindu, Jain*. London: Penguin Publications.
31. S.K. Saraswati 1957: *Survey of Indian Sculpture*. Calcutta: K.L. Mukhopadhyay
32. Vincent A. Smith, 1905: Persian Influence on Mauryan India. *Indian Antiquary*.
33. Vincent A. Smith, 1969: *History of Fine Art in India and Ceylon* (3<sup>rd</sup> ed.). Bombay: D.B. Taraporevala and Sons.
34. Mortimer Wheeler, 1968: *Flames over Persepolis*. London: Weidenfeld and Nicolson.
35. Mortimer Wheeler, 1974: The Transformation of the Persepolis Architectural Motifs into Sculpture under Indian Mauryan dynasty. *Acta Iranica* II.
36. H.R. Zimmer, 1946: *Myths and Symbols in Indian Art and Civilization*, Bollingen Series VI. New York: Pantheon Books.
37. H.R. Zimmer, 1955: *The Art of Indian Asia: Its Mythology and Transformation*. New York: Pantheon Books.