

THREE

ICONOMETRY AND ANATOMY OF THE FEMALE FIGURE

The artist who works for religious monuments has a very little freedom for the expression of his genius. He has to follow the religious canons for making the images of the gods, goddesses and other celestial beings and also for the sculptures meant primarily for decoration of the temple. The study of the female figures, i.e. the goddesses, demi-goddesses and the terrestrial women will therefore be incomplete without the study of the canonical principles for making the images.

The traditional iconoplastic art of India is bound by the śilpaśāstric canons. These texts¹ which are generally ascribed to the Gupta or the post-Gupta

1. Brihatsamhitā Ch.58, Skukraniti ch.IV, Vishnu-dharmottara, Matsyapurāna, Hayasirsa Pancharatra, etc.

period by scholars, have dominated the Indian iconoplastic art.¹ They describe in details the way the images of different gods and goddesses are to be carved. Apart from the general description of lānchhanas, weapons, ornaments etc., these texts also prescribe the proportions of various limbs of the images of gods and goddesses. Since the images for worship must be pleasing and beautiful, it implies that they must also be proportionate. Generally disproportionate things are not beautiful. So śastras insist on proportion and claim that the images which are strictly fashioned according to these principles only are worthy of worship. Such images bring prosperity to the worshipper and also to the sculptor, whereas icons deviating from the canonical prescriptions bring ill-luck to the worshipper as well as to the carver. The dogmatism of the śilpaśāstric principles, on the one hand restricted the sculptor's freedom and on the another, it helped to produce extraordinary images even from

1. Bose, P.N., Principles of Indian Silpasastra, p.6.

the not-so-talented sculptors. The masterpieces of Indian sculptures were not created by any divinely gifted Michelangelo but were created by numerous anonymous artists.¹ The contribution of śilpa principles to Indian art is beyond doubt.

The system of iconometric proportions prescribed by śilpa texts is known as tālamāna. The relative measurement of each and every limb is given in the tāla system. The prescribed proportion is not uniform for all the images but differs from god to god. In drawing and painting as well as in sculpture the measurements are based on the length of face.² Face is taken as an Unit for measurement of height as well as length and width of various limbs. Matsyapurana states that the limbs should be made proportionate to the face.³ As the word tālamāna indicates face is taken as the important measure in Indian iconometry.

1. Munsterberg, H., Art of India and South-east Asia, p.87.

2. Perard, Victor, Anatomy and Drawing, p.XI.

3. मुखमानेन कर्तव्या सर्वावयव कल्पना,

Quoted by Panchamukhi, R.S., Gandharvas and Kinnaras in Indian Iconography, p.53.

In tālamāna also the head is an important unit and is generally taken as 12 aṅgulas. The term tāla literally means the palm of the hand, by implication it is a measure of length between the tip of the middle finger and end of the palm near the wrist.¹ This is equal to face length.²

Aṅgula is an absolute as well as a relative unit.³ Although smaller units upto paramāṅgu are described in śilpa texts; aṅgula and yava are important from the practical point of view. They are adequate for practical purpose; and hence used in canonical prescriptions. Angula is the length of the middle digit of the middle finger either of the sculptor, architect or the donor. This is known as matrāṅgula. Another type, the dehāṅgula is obtained by dividing the height of an image by 124, 120 or 116 equal parts.⁴ For

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1. Rao T.A.G., Talamana or Iconometry, p.35.
 2. Perard, V., op.cit.
 3. Rao, T.A.G., Elements of Hindu Iconography, Vol.1, Part II; Appendix B pp.1-2.
 4. Ibid., p.2.

smaller measurements the āṅgula is divided into eight parts and $1/8$ of āṅgula is known as yava.

As seen above the tāla is the face length, i.e. from the hair on forehead to chin. The normal height of human body is $7\frac{1}{2}$ heads.¹ It seems that the Indian sculptors being interested in carving super-human beauty were not interested in normal human proportions and hence the ratio of head and height was increased and the figures of goddesses were elongated.² Following are the prescribed tālamānas for different devī images.³

Madhyama-dāsa tāla (120 dehāṅgulas) - Sridevī,
Bhumīdevī, Umā, Sarasvatī, Durgā, Saptamātrikās,
Uśā, Jyeshthā.

Navatālā-Apsarās

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1. Perard, V., op.cit., p.XI.
 2. Elongation of female figure to make it more graceful is customary in fashion drawings even today. The figures in fashion drawings measure $8\frac{1}{2}$ heads and sometimes 9 heads. See 'How To Draw and Paint Fashions, Viola French.
 3. Rao, T.A.G., op.cit., p.40.

Though agamic texts prescribed madhyama daśatāla for Saptamātrikas, Mānasara has prescribed nine tāla system.¹ According to Śilpa Prakāśa devi images should be in ashtatāla.² According to Śukranīti female figures should always be in 7 tāla proportion.³ Probably this is applicable only to terrestrial woman for whom this proportion is normal (Fig.1). In saptatāla system the height of the figure is 84 āngulas while length of face is 12 āngulas and hence the ratio of length and tāla is 7. The head-height ratio for other measures is as under:-

	Height	Length of face	Ratio of height & tāla
Daśatāla (Madhyama)	120 āngula	13	9½
Navatāla (")	108 "	12	9
Saptatāla(")	84 "	12	7

1. Acharya, P.K., Architecture of Manasara, p.554

2. Kaulacara, Silpa Prakasa, p.127.

3. सर्वे स्त्री सप्तताला सप्ततालाश्च वामनः १० ४११ ११

स्त्रीणां मय्यवा न्स्वा न्सप्तताले विभावयेत ११ ५०१ ११

Sukracharya, 'Sukraniti (tr) Mihirachandra, pp.120 & 127.

It is clear from the above table that in the case of female figures the maximum head-height ratio is $9\frac{1}{4}$. Taller figures appear more graceful and hence in sculpture and painting elongated figures are often seen.

It is interesting to note here that the head-height ratio for apsarās is higher than that for terrestrial women and still higher for goddesses. This corresponds to the ascending order of beauty (Fig.1 and 2). Apsaras are supposed to be more beautiful than terrestrial women and the goddesses even more beautiful than the apsarās. Goddesses are the beauty personified, and hence their images should be made as beautiful and as pleasing as possible. Āgamas insist that the deities should always be conceived as youthful figures¹ of 16 years² i.e. in their prime youth. It is the superhuman beauty, perfect in all respects, that āgamas aim at and for this they insist on strict adherence to the canonical measurements as given below:

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1. Tagore, A., Modern Review, March 1914, p.281.
 2. Rao T.A.G., Talamana or Iconometry, p.43.

Tāla Systems according to Śukranīti¹

	9 tala	8 tala	7 tala
1. Length of face	12	12	12
2. Length of neck	4	4	3
3. Length of Chest (Hikka sutra to stana sutra)	12	10	9
4. Stana sutra to nabhi	12	10	9
5. Nabhi to medhra sutra	12	10	9
6. Length of thighs	24	21	18
7. Length of knees	4	4	3
8. Length of forelegs	24	21	18
9. Height of foot	4	4	3
	108	96	84

Iconometric proportions for creating superhuman beauty were to be followed in case of images meant for worship. But all the images are not to be worshipped. Some of

1. Rao T.A.G., op.cit., p.43.

the images are mainly for decoration of the temple. Whenever a goddess is shown independently she is shown as a multihanded super woman but whenever she is shown along with her consort, she is not the principal figure and hence the canonical prescriptions are set aside. The same thing is true in the case of panels depicting various mythological incidents. The sculptor gets more freedom. Devīs are not only given the normal human proportions but are represented as experiencing the typically human emotions. It appears that whenever there is scope for freedom of expression, the artists tend to follow the normal human proportions. This fact accounts for the so called secular approach in religious art.

Canonical texts also allow some freedom to the artists saying that the rules are for the benefit of the ignorant.¹ Though the genius are allowed to use their discretion, the lesser artists are certainly profited by the canonical prescriptions of proportions. The importance of canonical measurement cannot be ignored at least as checks. From the detailed

1. Kramrisch, S., Vishnudharmottara, p.4.

measurements of each and every limb one may feel that the measurements were difficult to follow in actual practice. To some extent this is true but there were some mechanical aids like the lambaphalaka, described by T.A.G. Rao, to make the work of measurement easier.¹

Alongwith the measurements of different limbs of the goddesses, the canonical texts also prescribe the shapes of different limbs for super-human beauty.² Since the human beings are imperfect, the shapes prescribed for various limbs are taken from nature. These shapes, together with proportions are intended to raise the beauty of the idol above the accidental beauty of the human beings.³ The creation of supra-mundane beauty being the main consideration in shaping the figures of the goddesses, canonical texts, recommend little exaggeration of the outer corner of the eyes, breasts and hips. This emphasis imparts elegance to

1. EHI., Vol.1; Part II, Appendix B, p.29.

2. Described in the Chapter 4.

3. Rowland, B., The Art and Architecture of India, p.9.

the female figure and makes it more pleasing.¹

The knowledge of anatomy i.e. the understanding of internal bone and muscle structure was not felt essential in drawing and carving the celestial as well as human figures. It is not that the human anatomy was not known to Indians. Susruta's work written probably in the 7th cent. B.C. gives anatomical details based on actual dissection.² But excepting the Gāndhāra school figures were never depicted with prominent muscles, and hence the necessity of the thorough knowledge of anatomy was never felt by the Indian artists or sculptors. Only in the case of Chāmuṇḍā and Kālī, whose figures are depicted skeleton-like, the Indian artist is required to show his knowledge of anatomy. But here too he eliminates the details and shows the bone structure in highly stylized form. The Āgamas prohibit the artists from showing the muscles on the body of the celestials. Anyway, the female

1. Banerji, J.N., DHI, p.

2. Dasgupta, S.N., Fundamentals of Indian Art, p.27.
Also Jaggi, O.P., Indian System of Medicine,
p.17.

figures are never muscular. The carving of the soft, plump and sensuous female figures does not need much knowledge of bones and muscles.

Anatomical details were always subordinated by the Indian artist. It was necessary for imparting super human appearance to the idol. By avoiding anatomical details the sculptors simplified the form. In Indian sculpture of classical period the details were never allowed to disturb the major masses of the figure.¹ Even the ornaments and the folds of drapery are carved in such a way that they rarely interfere the major masses. Without disturbing the continuity of the major masses the ornaments enhance the softness of the flesh convexities, and drapery being diaphanous does not in any way interfere with the major planes of the body. The sculptures of classical phase are marked by all these characteristics.

The sculptures and paintings being the works of highly trained guild artists², well conversant with the secular

1. Rawson, P., Indian Sculpture, p.96.

2. Rowland, B., op.cit., p.29.

art, are often characterized by the freedom of approach and treatment in the depiction of religious subjects. The female figures whose femininity is often exaggerated have strong tactual appeal.¹ For the secular artists a goddess is first of all a woman and then a deity. They gave her the form they knew and the contours they felt. Indian artists never copied or studied directly from the models. It was from the memories of these tactile and visual sensations, that the Indian artists fashioned the female figures of the Goddesses and worldly women. Being relied solely on memories the details were naturally eliminated and the essentials were exaggerated.²

1. Rawson, P., Indian Art, p.29.

2. Postman, L. and Egan, J.P., Experimental Psychology, p.298, 99.