



THE BIOLOGICAL FOUNDATIONS OF AESTHETICS: AN INDIAN PERSPECTIVE

by

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Prof. Frederick Turner's introductory-statement on 'In Pursuit of Beauty: the Biological Foundations of Aesthetics' pertinently draws attention to the inadequacy if not inappropriateness of the Platonic, Cartesian and Kantian division of the world into mental and physical or C.P. Snows' 'Two Cultures' as also to the significance of the proposed changes which are taking place in a wide range of disciplines, neuroscience, psychophysics, psychology, cultural and physical anthropology literary theory and criticism, oral tradition studies, visual perception studies, mythology, infant and child development studies and the evolutionary study of ritual. All these, he has rightly reminded us, are leading to a new approach to aesthetics. Further he has drawn attention to the complex non-linear dynamic systems in which every part depends on the behaviour of the whole, the whole can be sensitively dependant on the parts and new and unpredictable form of organisation can emerge through spontaneous symmetry breaking. "These non-linear feature are especially characteristic of biological systems and are so par-excellence of the complex feed back processes of the nervous systems of higher social animals such as ourselves."

It is against the background of these observations and in confirmation (of these observations) that the Indian perspective more specifically the traditional Indian world view becomes relevant. The cosmology, cosmogonies attitudes

to the phenomenal world and theories of aesthetics are solidly grounded in the understanding of the complexity of the body, the nervous system, the psychic responses and its focus on an experiential state of momentary 'release' from the so-much-ness, of the 'here and now'.

Fundamental to it all is the firm assertion of the inter-relationship and inter-dependence and inter-connectedness of the parts and the whole, the whole permeating each part, each part representing the whole. Logically, there are no dichotomies or polarities of binary opposites set up of inanimate-animate, inorganic - organic, Nature - man, physical - spiritual, secular - sacred. One could go on to extend this to state that had empirical studies been at their command, the earliest articulators of this world view may have talked about the complementarity of the right and left brain functions.

## I

Very early in the Indian tradition in the hymns of the Rg Veda (3000 - 2500 BC) occurs a verse which is of relevance. Creation is described as the cosmic Man (Purusa) comprising the five primal elements and entering the body of Man through the five sense organs.

In the first of the Vedas occurs a verse:

"The moon was born from his mind; the Sun

came into being from his eye;  
 from his mouth came Indra and Agni,  
 while from his breath the Wind was born.  
 From his navel issued the Air;  
 from his head unfurled the Sky,  
 the Earth from his feet, from his ear the four  
 directions.  
 Thus have the worlds been organised.

RV X 90.13-14

Translation: R. Panikkar

In the Atharva Veda is an even more pointed  
 reference to the senses - as follows:-

"These five sense-organs, with the mind as the sixth  
 within my heart, inspired by Brahman,  
 by which the awe-inspiring is created,  
 through them to us be peace"

AV XIX 9.5

Translation: R. Panikkar

In the Yajur Veda is a prayer, which alludes to the  
 sense - mind relationship:

"That mind, the divine which when one is wakeful or  
 asleep, reaches far, which is the far reaching light of all  
 lights (sense of all senses) may that mind of mine be of good  
 intent. By which the active and the wise perform the duties  
 in sacrifice and intellectual activities that which is the

wonder being inside the beings may that mind of mine be of beautiful intent."

YV XXXIV.1.4

The perception and, therefore, the metaphor of the cosmic man is sustained through many thousand verses to elucidate the world phenomena, the movement of the universe and to draw attention to its macro and micro dimensions.

Alongside and directly related to it is the notion of the relationship of inanimate and animate and Man in Nature rather than Man and Nature. Thus any form can be transmuted or transubstantiated to another. Countless hymns speak of the relationship of inorganic and organic, the inanimate and animate, matter and energy. Each is transmutable. This notion of transformation and reversibility leads to the central role of the principle of complementarity rather than conflict or a linear progressive order. Thus male and female, man and woman, masculine and feminine are parts of one whole and are mutually dependent.

This further reduced to the body and mind of Man is visualised as the one Being comprising two birds on a single branch one that eats relishes and the other that watches. The one is the 'experiencer' and the other is the watcher (bhoktā and dr̥sta) and one cannot survive without the other.

"Two birds, fast bound companions clasp close the self same tree of these two the one eats sweet fruit the other looks on without eating."

Manduka Upanishad III 1.1

Translation R.E. Hume.

388-4

Further the human being is visualised as comprising the purely physical, the biological with the sense organs and sense perceptions, body, mind, intellect and self in a hierarchical order but each interconnected and interdependent. A single verse sums it all up.

"He who has not understanding (a-vijñana),  
 whose mind is not constant by held firm-  
 His senses are uncontrolled,  
 Like the vicious horses of a chariot-driver.  
 He, however, who has understanding,  
 whose mind is constantly held firm-  
 His senses are under control,  
 Like the good horses of a chariot-driver"

Kath UP III.5-6

Translation R.E.Hume

An ascending order is suggested amongst the different faculties. The wise thus always applies his mind, has the senses subdued like good horses of the chariot.

A hierarchy is also explicitly enunciated:

"The separate nature of the senses,  
 And that their arising and setting  
 Is of things that come into being apart  
 (from himself),  
 The wise man recognises, and sorrows not.  
 Higher than the senses (indriya) is the mind  
 (manas);

Above the mind is the true being (sattva).

Over the true being is the Great self (i.e. buddi,  
intellect);

Above the Great is the unmanifest (avyakta)."

Kath UP VI 6-7

Translation R.E. Hume

The 'senses' here are the principle actors, they are the indispensable horses, without whom no chariots run. However, it is these horses which have to be controlled and harnessed with concentration and direction to reach the highest goals of a sense of release.

And finally whether in life or art it is a play of form when primal energies enter to give rise to multiplicity of forms and ultimately the very multiplicity of forms (visual and aural) lead one to that state beyond form, which is the aesthetic experience of momentary bliss (ananda) and release

"As the one fire has entered the world

And becomes corresponding in form to every form

So the one Inner Soul (antaratman) of all things

Is corresponding in form to every form and yet is  
outsider

The Inner soul of all things the one controller

Who makes his one form manifold

The wise who perceive him as standing in one self

They and no others have eternal happiness (bliss)"

KU V 9-13

Translation RE Hume

## II

Although one could add considerably to the cluster to notions identified above in the context of the biological foundations of aesthetics. I shall concentrate on the discourse on the sense organs, sense perceptions and the role of the mind, intellect and consciousness before elucidating the theory of aesthetics popularly called Rasa.

As has been mentioned above the awareness of the crucial role of the senses the senses organs and senses perceptions appears very early in Indian speculative thought. Re-read from the point of view post-renaissance and Cartesian dualism it would appear that the much talked about other worldly view of the Orientalist was couched in the earthy concrete imagery of the body and the senses. There is no airy fairy transcendence here. It is grounded in the biological world and the body system while recognising the potential of transcendence. A movement from the gross to the subtle from the physical to the metaphysical is implied but not dualism. One leads to the other but they are not in conflict.

To return to the sense organs and perceptions, etymologically the Sanskrit word Indriya, eludes to two attribute one of 'semen' (retas) and other of radiance and energy. Each of the principal Vedas namely Rgveda Yajurveda



Atharva and Sāma Veda devote several hymns to sense perceptions and their capacity for energising radiating as also of their capacity to move outward and to withdraw inward.

The Vedas gave rise to two principal developments. One of an elaborate system of ritual and the other of speculation and verbalisation. The system of ritual was a concretisation of the notions of space, time, replicating the creation of the universe as also sacralising senses, body, mind, consciousness of the Human through participatory rites of congregation. The texts of speculation were the intellection and verbalisation of these notions and were help and guide to solitary meditation and reflection or introspection. The two were connected and interpenetrated. Thus all ritual particularly those called 'sacrifices' (Yajna) (in Oriental discourse) were systematically developed multi-media and sensory performative acts of great aesthetic beauty. The multilayered brick altars correspond to the multilayering of the body, mind system and the offerings to the fire altars were symbolic acts offering the most potent in the human i.e. the 'senses'. The mighty archetectonic structures of these rituals lasting over five, seven, nine, eleven or twenty one days were ritual re-enactments of the creation the making and dissolution of the universe and the re-establishment of a new symmetry. It was the physical terrestrial which suggested the celestial in fact one led to the other.

The texts of speculative thought on the other

concentrated on the dynamic process within the physical and psychical man. Thus nine from amongst the thirteen principal Upanisads concentrate on the role of the senses, the distinctiveness and inter-relationship of the motor and sensory functions and above all the place of the mind. Is 'mind' the sixth sense if so what are its attributes? The discourse is sophisticated and a reminiscent of the modern discourse on complexity and complexification.

The various schools of Indian philosophy emerge from the discourse in early speculative thought. Amongst the six systems of 'seeing' and Perceiving (darsana) the Sāṃkhya enunciates clearly a theory of sense perceptions and mind. The traditional system of Indian medicine Ayurveda is directly related to the Sāṃkhya philosophy. It views body system and comprising a state of symmetry and balance amongst the three attributes of vāta (air), pitta (bile) and kapha (phelgm) and a delicate balance between the sense organs, sense perceptions, mind, intellect and consciousness. From this emerges a highly refined bio-psychic system of medicine, which we popularly called the psychosomatic holistic system of medicine. Philosophy and medicine are intertwined disciplines and are not comprehended as polarities of one dealing with the biological and the other with the metaphysical.

Briefly stated in the Sāṃkhya system of philosophy, the senses, the sense-organs, the sense-objects and sense-

perceptions are all discussed within the over arching framework of the notion of purusa (Man) and prakrti, (Nature) stasis & dynamic, the three gunas (qualities), the levels of the gross (sthūla) and subtle (sukṣma) and interplay of manas, (mind) ahamkāra (ego) and buddhi (intellect). The last three constitute the inner organ (antah-karana) which is supposed to be medium sized (madhyama-parimāna) neither small nor immense. They are the powers that open and close the gates, monitoring, controlling and registering whatever is carried through. The psyche of Man in the system is active (kartar) through the "five organs of action" and receptive (bhoktar) through the "five organs of perceptions". The two sets of five are vehicles respectively of his spontaneity and receptivity. These faculties work outwards (bahyendriya) and are compared to gates and doors, while manas (mind), ego (ahamkara), intellect, judgement (buddhi) are the doorkeepers. Since the manas (mind) cooperates directly with the ten faculties (bāhyendriya) it is considered to be the eleventh and is called the 'inner sense' (antar-indriya).

"The five sense-organs are known by the names ear, skin, eye, tongue and nose.

These are called buddhi-indriyas because they are the means (dvara) of perceiving sound, etc. by the internal organ.

Sages speak of five organs of action (karmendriya)

namely voice, hand, foot, organ of excretion and organ of generation

To these ten is added manas (mind). The group of eleven (indriyas) have the sattvaguna in predominance and proceed from the vaikṛta variety of aḥamkara (ego)".

(Samka 25)

(Tr. R.S. Bhattacharya

It is in the light of these perceptions that the concept of yoga has to be understood. It is a yoking together of all faculties, with capacity for stillness and dynamism. First articulated in the Upanisads it develops into the well known aphorisms of the yoga sutras "Yoga consists in the intentional stopping of the spontaneous activities of the mind stuff (Yoga Sutra)". Again both philosophic systems and schools of medicine lay equal emphasis on the concept both in biological and psychical terms. Caraka and Suśruta the writers of the classical texts of medicine devote many chapters to the relationship of the senses, body, mind and soul and the role of ego (aḥamkara) intellect (buddhi) cognition (vicāra) and consciousness (catena) in good health or a sense of pleasurable well being.

### III

Against such a pervasive and well articulated notion of the integral relationship of the biological the mental and

the highest states of consciousness in cosmologies, philosophy and medicine it was only natural that the aesthetic theories were also constructed upon the acceptance of the intrinsic relationship and interdependence of the senses, body mind intellect and consciousness and the mutual dependence of the biological and psychical. Also above all the commitment to the whole comprising parts and the parts reflecting the whole.

Bharata the first writer (2nd Cent. B.C. 2nd Cent. A.D.) on aesthetics in his Nāṭyaśāstra brings into one fold the essential elements of this speculative thought, particularly the detailed system of correlation of the sense, body, mind and soul on the one hand and the elaborate structure of the ritual of the Brahmanas on the other, in order to show another path to the experience of the formless, the Brahman, through the world of nāma and rupa (name and form).

Without explicitly stating so, he makes it clear that what he has set out to do is to present, through the process of impersonalization, a picture of the world of the senses. Taking the senses and the body, their correlation established with the macrocosm results in a system of impersonalizing emotion and thus evokes the intangible formless and the 'beyond form', through the very presentation of form. Rasa (joy release bliss, essence, juice flavour) and in the singular in its aspect of transcendence, however transitory, and in its aspect of concretization through the eight, or nine

Rasas, (principal emotive states) is the method of this impersonalization. In short, aesthetics is the path of the cultivation and chiselling of the senses. It includes evolution towards increasing subtlety and refinement. There has been so much discussion on the Rasa theory and its varied interpretations that it is not necessary to go into it here. What is necessary, however, is to point out the salient features of the elements which go to make up the whole. Behind it all is, as Hiriyanna rightly points out, the assumption: "The world of sense, equally with the world of thought, is but an appearance of the ultimate truth - an imperfect expression of it but yet adequate, if rightly approached, to point to the underlying unit. Neither our senses nor our mind can grasp this unity but so much of it as they can grasp is sufficient to find out its true meaning and realise it within ourselves".

The text of the Nāṭyaśāstra opens with a leading question why was the Nāṭya Veda (Drama Veda) created? It was created in response to a request from the gods, gandharvas, (celestial) and yaksas: (terrestrial beings) "We want an object of diversion which must be audible and visible". We are back to the eye and the ear of the Upanisads, where the two organs play a significant role in all cognitive experience. Then, too, the creator went into a state of yoga recalling the four Vedas. Obviously both the eye and the ear - and the state of internalization of the

senses, i.e. of yoga - are highly contextual terms which cannot be understood without the aid of all that we have considered vis-a-vis the Upanisads. Bharata is fully aware of this, for the very next verse sets out the objectives of this fifth Veda, 'which will be conducive to duty (dharma), wealth (artha) and will present the learning of the Sastras (texts) for all these actions (sarvakarma) and will review all the arts and crafts".

In saying this, Bharata clearly lays down the precise relationship between what he has to say and what has preceded his theory in speculative thought, both in the context of the four 'purusarthas (goals of life)' and in the multi-disciplinary aspects of the arts. Its ethical import and also its pure aesthetic context are clearly enunciated. In an oft-quoted verse he elaborates further by specifying the elements he has culled from each of the Vedas, taking words (pathya) literally speech from the Rg Veda, acting (abhinaya) i.e. body language from the Yajur-Veda, song (gita) from the Sama, and the emotions (rasa) from the Atharva-Veda (N.S.I, 17-18). He acknowledges his debt to the Vedas and the Upavedas. Now, most critics have slurred over this portion of the Natyasastra as being no more than lip service to the Vedas so frequent in Indian writing. A closer reading of these verses, along with what follows, shows that Bharata was very carefully stating, however aphoristically, a fundamental principle, namely, that the life of thought of the

Vedas and the Upavedas was not dissociated from the life of feeling of culture, of emotions, of senses and the body, and its multiplicity of expression.

Chapters I and II (where the erection of the theatre building and the stage is described) clearly lay the foundation of what is to follow in the analysis of the diverse media of expression, namely words, sound, movement of the human body, and tāla (rhythm). In propitiating the different directions and the deities of each of the directions, the pillars, and the two levels of the stage, Bharata is doing exactly what was done both by the Upanisads and by the Brahmans, namely, establishing the relationship of the physical to the psychical and metaphysical on the one hand, the limited physical space being made into a symbolic design (like the vedika of the yaṅna in the Vedas), and, on the other hand, considering those who perform on it not as particular individuals portraying subjective emotion, but as single entities who represent parts of an organic whole. The relationship between the microcosm and macrocosm is once again underlined and unless this basic objective is kept in view the Nāṭyaśāstra sounds, like many other subsequent texts of the arts, a jumble and medley of technical details.

The chapters which follow can be regrouped from the point of view of analysing word, sound, human body and rhythm, in order once again to stress the disciplined use of the senses, and the possibility of their expression outward



and external, on the one hand, and, on the other, the methods of internalizing these very senses, so as to arrive at the same experiential truth of the state of ānanda (joy release) mentioned in the Upanisads. In this respect, the basic postulates of early speculative thought - the particular being as an aspect of the universal, the formless expressing itself in a multiplicity of forms (with the ever-present consciousness that the forms lead to the annihilation of the individual in the one formless and beyond or trans-form) and the establishment of relationships and correspondences between the biological, physical and emotive and states of consciousness permeate considerations in aesthetics in all the arts, and result in an underlying unity of spirit, content, form, and technique. Indeed, it is these principles which then make the arts interdependent and interconnected on all levels.

Fundamental and the traditional Indian artist's concern is thus with 'Form' in the abstract, as design imbued with a surcharged consciousness of the totality. He gives this form many forms, always bearing in mind the inner state in which he saw the perfect Form. The technique of the particular arts is the methodology of evoking a similar psychical experience in the spectator or listener. He does this through impersonalization of the subjective. Indeed, his content is this impersonalized emotion. We can, indeed, postulate that this process of imperonalization of emotions

inevitably resulted to a sense of abstract design. The imagery of the Upanisads and the elaborate ritual of the Brahmans is the ground plan for each of the arts, be it architecture, sculpture, paintings, music, dance or drama. The artist thus repeats and perfects this imagery by giving it concrete shape in stone, sound, and movement.

Also it is necessary to point out that if the technique of each of the arts is broken up we find that the fundamentals of the techniques repeatedly draw attention to the relationship of Man with the Cosmos and of Man with Nature, in exactly the same way as the Upanisadic seers saw the verticality of Man set in the framework of a circle with directions. The body of Man is the one diameter of the wheel (cakra) with sixteen spokes, and the still centre. The nave of the wheel, is the navel of the body. The diameters represent the principles of the elements, earth, water, fire and sky. The verticality represents the axis of the brahma-sutra, (vertical median) so fundamental to the traditions of all the Indian art forms.

In architecture, it is seen both in the ground plan and the elevation plan. In either, one moves from the concrete to the abstract, from below upwards, from earth to sky, and from the outside to the inside, from outer darkness to inner light. Each part is related to the whole and the externalization leads to internalization of the senses, to a formless stillness collecting back to the centre.

In the case of sculpture also, a still centre is established along the two main axes; other vertical and horizontal axes are drawn to make the cage (pinjara); all are held together within a circumference. The cage is a basic motif and the word itself is significant at all levels.

In music, within the circle are triangles intersecting where the base of the srutis (microtones) and svaras (notes) ultimately lead to the timeless eternity of the apex. The image of the damaru (hour glass) is repeated with the tonic, the sāma stillness or one of the metrical cycle called tāla being the still centre. The parts are related to the centre and to each other in a cyclic movement in the same manner as a hierarchy of the different aspects of senses, body, mind, and intellect and consciousness, was established in the Upanisads.

In music correlatives are established, with the srutis (micro-tones) and svaras (notes) as units, to nature, animal life, and the deities. This is analogous to the description in the Upanisads of each of the senses representing different elements (bhutas), qualities (gunas), and aspects of the universe. It is significant that, while describing the different svaras, (notes) once again the imagery of the body is used; it is said that each of the svaras (notes) resides in a different part or limb of the body.

In contrast, sculpture, icons, and dance deal with the body itself. Here, the imagery of the Vedas and the

Upanisads is translated into concrete principles of form. Instead of using the imagery of the body and the senses to communicate the nature of the cosmos and the macrocosm, the body and the senses are impersonalized, almost abstracted, into pure design to suggest and evoke in the hearer and the onlooker the idea of the universal, the cosmic, and the infinite. The circle with sixteen spokes with a centre, the square with opposite lines meeting in points, and rhythmic movement within the periphery of a circle become its central motifs. The formal elements of these arts are directly derived from this conceptual background where the physical, biological realities are comprehended only to make us conscious that the human body and the senses are the necessary vehicles to evoke the state of beatitude and an awareness of perfect form and, finally, beyond form or transform (i.e. para-rupa) where particular features, individual characteristics, cease to have literal meaning. Correspondence between the physical, biological, psychical, and aesthetic is at the core of this approach to the aesthetic experience.

The theory first articulated in the beginning of our era, has guided approaches to artistic creation over two millennia. The text has given rise to innumerable interpretations and commentaries. The discourse is complex and sophisticated on the nature of the aesthetic experience as also aesthetic communication. The two key issues are the

causal or a-causal nature of the experience and the process of universalisation and the sudden illumination as in a flash of that which lies dormant in a spectator or hearer.

The most outstanding interpreter Abhinava Gupta (10th Cent. A.D.) sums it all up in the following words.

"The artistic creation is the direct or unconventionalized expression of a feeling of passion generalised', that is, freed from distinctions in time or space and therefore from individual relationships and practical interests, through an inner force of the artistic or creative intuition within the artist. This state of consciousness (rasa) embodied in the poem is transferred to the actor, the dancer, the recitor and to the spectator. Born in the heart of the poet, it flowers as it were in the actor and bears fruit in the spectator".

"If the artist or poet has the inner force of the creative intuition, the spectator is the man of cultivated emotion in whom lie dormant the different states of being, and when he sees them manifested, revealed on the stage through movement, sound and decor, he is lifted to that ultimate state of bliss known as ananda".

Translation Gnoli.

From the above simplified narration of a long and complex history, perhaps the proximity of the new

developments which Prof. Turner speaks about and ancient Indian world view, cosmology, ritual structures, speculative thought, schools of philosophy and medicine and aesthetic theories will be self evident.

It will be clear that in this world view, sense-perceptions, cognition and consciousness were undoubtedly identified as differentiated categories, but were seen as intrinsically inter-related and inter-woven. A system of correspondence between sense perceptions and psychological states could be developed only within a framework of holism and multi-layeredness.

Today post Newtonian science and developments in astrophysics quantum theories and micro biology and plant morphology has recognised the presence of consciousness however undefinable, but certainly experienceable and recognisable. Recent work of natural scientists as also physicists points towards this. One need not elaborate on the work of Bohr, Bohm, Lovelock, Penicare, Penrose and others. Ancient Indian theories of cosmologies, cosmogenesis, medicine and aesthetics are remote predecessors, even if there appears to be little evidence of empirical studies through experimentation. Thus the question to be asked is from where did these perceptions come? And what was the method? Obviously and so far as we know, it was not experimentation in the laboratory sense although mathematics and computational sciences were highly developed. This brings us

back to where we started i.e. the sense faculties of these were highly evolved. Sensitive observation of phenomenon through the eye and the ear and other senses, enabled them to make connection and recognise that the observer and observed were inter-related. Questions which the most recent science is asking were also their questions couched undoubtedly in a different imagery and vocabulary. What is of interest to us today is not the recognition of proximity but the fact that after a long detour journey of fragmentation and over specialisation, we have returned to ask perennial questions, whether in biology or aesthetics.

Kapila Vatsyayan