

NEUROLOGY IN ANCIENT INDIA :
MŪLĀDHĀRA CAKRA—A PHYSIOLOGICAL REALITY

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INTRODUCTION

The *Ṣaṭcakra* (six centres) and *Kuṇḍalinī* have traditionally always been considered occult and mystic by Western scholars, thanks to their cultural and communication gap with practical Yoga.

Mulādhāra Cakra :

Mulaṃ ādhāra ṣaṭkānām Mūlādhāraṃ prakīrtitam. (Rudra Yāmalam—27/58)

Mūlādhāra cakra literally means the root-base nerve station. It is the first of the six centres of Yogic neurology which have been utilized for *haṭha yoga* since the time of *R̥gveda*.

Starting from John Woodroffe, all modern scholars have regarded the six centres as some mystical structures. There is confusion, too, about the site of the six centres. The scriptures state that the centres are in the *suṣumṇā*. *Suṣumṇā* is wrongly translated as the spinal cord and it is concluded that the centres are in the spinal cord. That is a wrong conclusion because *suṣumṇā* means the entire neural axis and not the anatomic spinal cord. Artificial anatomical divisions like spinal cord are not acceptable in Yogic philosophy which has a functional approach; concerning itself only with the flow of nerve impulses, which is unobstructed throughout the neural axis.

As regards the site of *mūlādhāra cakra*, it is clearly stated to be *attached* to *suṣumṇā*, below the penis and above the anus, *i.e.* the midperineum. There is only one nerve-structure present at this site, and that is the Inferior Hypogastric Plexus with all its ramifications.

Now, *mūlādhāra* is the playground for *apāna vāyu* (*Jñāneśvari Gītā-6/200*). The functions of *apāna* are well known. They are excretion of urine, stool, semen,

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and foetus and the sex act (*Yoga Yāgyavalkyam*—4/67). The same functions are allotted to *mūlādhāra* in *Ṣaṭcakra Nirūpaṇa* (as this paper shows). But, according to modern neurology these are the reflex functions carried out through the Inferior Hypogastric Plexus.

Thus, anatomically as well as physiologically the identity of *mūlādhāra cakra* is quite clear.

The mystery about the *cakras* becomes deeper, because most scholars try to appreciate them in isolation, without investigating their cause and purpose and their proper context within the scheme of creation of the human body which is so lucidly explained by *Sāṃkhya Darśana* (Joshi, B.C., 1984).

The tantrik aspect of Ṣaṭcakra :

In biologic terms the human body is built on the same principles as lower animals and the human nervous system too is not far different in pattern from that in lower mammals. The nerve-structures which are the anatomical base for *ṣaṭcakra* are already present in the central nervous system. A *haṭha yogi* projects his concentrated will-power into these nerve centres to transform and elevate their normal function. *Bandha* and *prāṇāyāma* are helpful in this.

Thus, the anatomical nerve centres are only a medium for *ṣaṭcakra projection* utilized by a *Yogi* to rise above his mortal body. Man differs from lower animals in that he is conscious of himself as a person and is responsible for his actions, which the animals are not. By projecting the will-power into the nerve centres for awakening of *kundalinī*, *Yoga* has found a method to elevate the human intellect to a higher level of consciousness. For success in this process, *yama*, *niyama*, *āsana*, and *prāṇāyāma* are essential basic requirements. In other words, this path is open for those who adopt the *Yogic* culture and not for others.

As a continuation of my study of *Yogic* neurology, the present paper attempts to scientifically explain the description of *mūlādhāra cakra* available in *Ṣaṭcakra Nirūpaṇa*. Those influenced by the writings of John Woodroffe consider the six *cakras* as mystical and not physically present in the body, which is proved here to be not true. *Mūlādhāra* has got a clear physiological identity.

REVIEW OF LITERATURE

The six centres have been known to *Yogis* since the Vedic times. Adequate description is available in *Saubhāgya Lakṣmī Upaniṣad* which is a part of *R̥gveda*. The practical *tāntrik* aspects are dealt with in great detail in *Rudra Yāmala Tantra*, but the neurological aspects are best covered in *Ṣaṭcakra Nirūpaṇa*, authored by *Pūrṇānanda* in 1577, A.D.

Perhaps the only modern scholar that ever seriously attempted to explain them, even if unsuccessfully, was Sir John Woodroffe. In his book entitled *Serpent Power* Woodroffe has correctly and adequately explained the *Sāṃkhya* and *Yoga* background for six centres, but having little acquaintance with neurology, he has dismally missed the aspects of neuroanatomy-physiology which are described in *Ṣaṭcakra Nirūpaṇa* with marvellous accuracy.

For a foreigner, Woodroffe's *Serpent Power* shows an amazingly deep study of Indian philosophy. Despite this, he has failed to grasp the *ṣaṭcakra* in the right perspective. In Chap. I of his book he writes : "Physiology does not know of *cakras* as centres of *prāṇa vāyu* and those who appeal to physiology only are likely to return unsuited". In Chap. V he says, "to some extent *cakras* involve an account of Western anatomy and physiology of the Central Nervous System, but the rest of it is *Tāntric occultism*".

Thus, he has totally overlooked the most important Yogic entity that is the Parasympathetic System (*prāṇa* and *apāna*). Because of this serious omission he was unable to correlate *ṣaṭcakra* with modern neurology, so much so that it becomes necessary for him to describe the Filum Terminale as the site for *kuṇḍalinī* and *mulādhāra cakra*.

The occult image of *ṣaṭcakra* is again magnified due to the countless mistakes in translation by Woodroffe due to his nonacquaintance with neurology. For example, in Verse I he spoils the morphology of *suṣumṇā* by accepting the wrong recension *grathita* in place of *prathita* which he accepts in footnote. Again, in Verse 35 he spoils the correct description of cerebrospinal fluid by changing *jaladhavala* to *baladhavala*. It is not possible to count all his mistakes here.

A theosophist, C.W. Leadbeater, who was a contemporary of John Woodroffe, earned quite some fame with his hotch-potch of Yogic theories, which Woodroffe has rightly called absurd and ignorant (*Serpent Power*, page 85 footnote).

In his monograph *Chakras* Leadbeater writes "Hindu Yogis were not particularly interested in physiological or anatomical features of the body" (page 115). According to him *cakras* are *force centres* in the subtle etheric body. They are the points of connection at which energy flows from the etheric double to the physical human body (page 3, 4). He confesses that his source of knowledge for *cakras* is *Serpent Power* (page 95). Thus, he makes himself meaningless.

In his book *The Mysterious Kuṇḍalinī* Dr. V. G. Rele attempts to give a physiological explanation for *ṣaṭcakra* and *kuṇḍalinī*, in a casual, superficial manner, depending on *Serpent Power*, and without giving attention to the original sanskrit verses. Despite this, he has correlated the *ṣaṭcakra* and *kuṇḍalinī* with the Para-

sympathetic system which Woodroffe could not. He identifies *mūlādhāra cakra* as the Inferior Hypogastric Plexus and *kuṇḍalinī* as the right Vagus nerve. At least he looked in the right direction, even if superficially.

For appreciation of *mūlādhāra cakra* in its proper context, it is necessary to have a grasp of Yogic philosophy of creation of human body and this vast macrocosm. The human body, according to Yoga, is only an epitome of the macrocosm.

In a previous paper (Joshi, B.C., 1984-85) it has been brought out that the physical manifestation of the human body is a compound (*samghāta*) constituted by twentyfour *vikāra* of *mūla prakṛti*. To begin with *prakṛti* has three *guṇa* (*triguṇa*), balanced equal. *Vikāra* are produced in stages due to progressive imbalance of *triguṇa* where *tamoguṇa* keeps increasing. This process ends with the formation of *pṛthvi tattva*. Therefore being the last *vikāra* *pṛthvi* has the maximum share of *tamoguṇa*. All attributes of *pṛthvi tattva* i.e. bulk, grossness, heaviness, inertia, and stability are due to its high *tamoguṇa*. To the human body *pṛthvi tattva* provides the physical base for its existence, and the nerve-station *mūlādhāra* is posted in it to manage basic body functions, from which the *cakra* derives its name.

In another paper (Joshi, B.C., 1984) it was established that

1. *Suṣumnā* means the entire neural axis from the mid-brain to sacral parasympathetic segments of spinal cord.
2. *Prāṇa* means the electrical motor nerve impulses, both somatic and autonomic.
3. *Prajñā* means electrical sensory afferent impulses both somatic and autonomic.
4. *Prāṇa* has ten divisions, of which
 - Div. I. *Prāṇa* means cranial parasympathetic motor impulses,
 - Div. II. *Apāna* means sacral parasympathetic motor impulses,
 - Div. III. *Samāna* means sympathetic motor impulses.

Apāna plays its role through the agency of *mūlādhāra cakra*, as the present paper explores.

SOURCE MATERIAL AND METHOD

Verse 4 to verse 13 of *Ṣaṭcakra Nirūpaṇa* deal with the *mūlādhāra cakra* in full detail. These verses form the material for this paper. The author provides a word to word, accurate literal translation for each verse which is followed by his observation and comments.

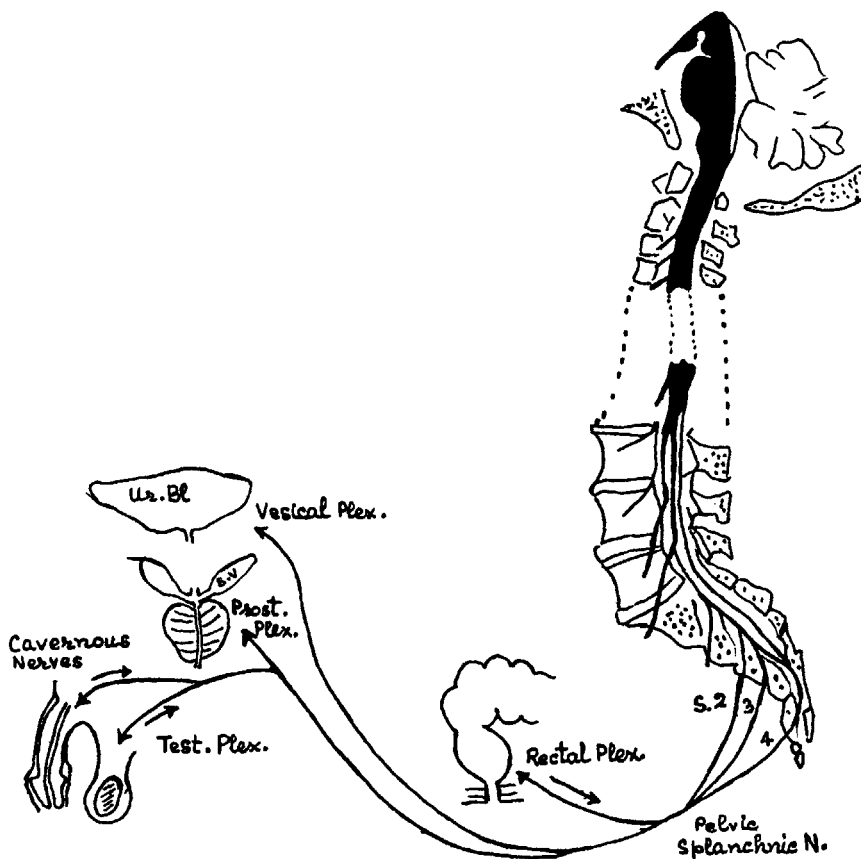
It is found that every single word in these verses has a purpose, and the style of verses is meaningful too. Hence, it was necessary to observe utmost precision in translation, for which a scientific approach has been adopted, avoiding allegory and metaphor. This has paid rich dividends. While the original text is a *tāntrik* work, the present paper is restricted purely to bring out its neurological content.

INFERIOR HYPOGASTRIC PLEXUS

Suṣumnā means the entire neural axis from mid-brain to sacral cord.

The Inferior Hypogastric Plexus with its four divisions hangs down from neural axis.

- Div. 1. Middle rectal plexus controls normal defecation.
- Div. 2. Vesical plexus has exclusive control of normal micturition.
- Div. 3. Prostatic plexus supplies the prostate seminal vesicles and bulbourethral glands.
- Div. 4. Greater and lesser cavernous nerves supply the penis.



INFERIOR HYPOGASTRIC PLEXUS.

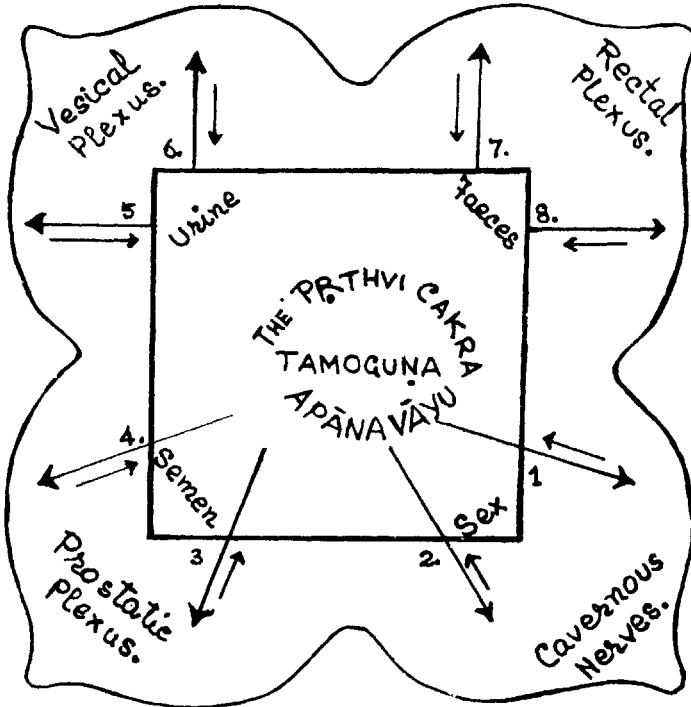
MŪLĀDHĀRA CAKRA IS INFERIOR HYPOGASTRIC PLEXUS

Situated below the penis and above the anus. Hanging down attached to the mouth of neural axis. *Mūlādhāra* has four red petals (red for action).

Inside it is *prthvi cakra* full to *tamoḡuṇa*. Hence it is the abode of all excretory processes. *Apāna vāyu* controls excretion of urine, stool, semen, and foetus.

Mūlādhāra cakra has eight weapons (ŚULĀSTAK) :

1. Lubrication reflex.
2. Erection reflex.
3. Emission reflex.
4. Ejaculation reflex.
5. Micturition reflex.
6. Urinary Retention reflex.
7. Defecation reflex.
8. Fecal retention reflex.



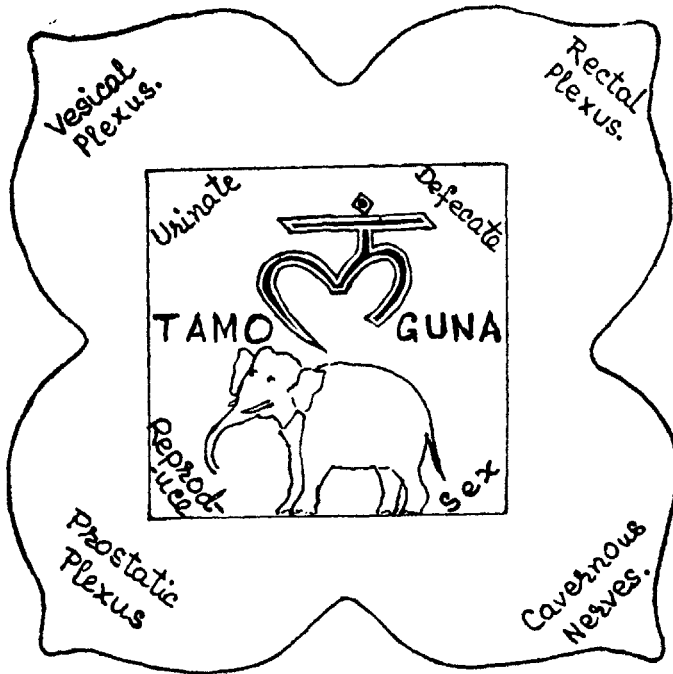
PRTHVI CAKRA IN MŪLĀDHĀRA

MŪLĀDHĀRA CAKRA CONTROLS ANIMAL FUNCTIONS OF
PELVIC ORGANS

ॐ represents *prthvi tattva* with its *tamoḡuṇa*. It rides over an elephant.

Elephant represents heaviness, stability, and animalism in the human body.

Elephant urinates, defecates, reproduces, and enjoys sex, but is ignorant of the self.



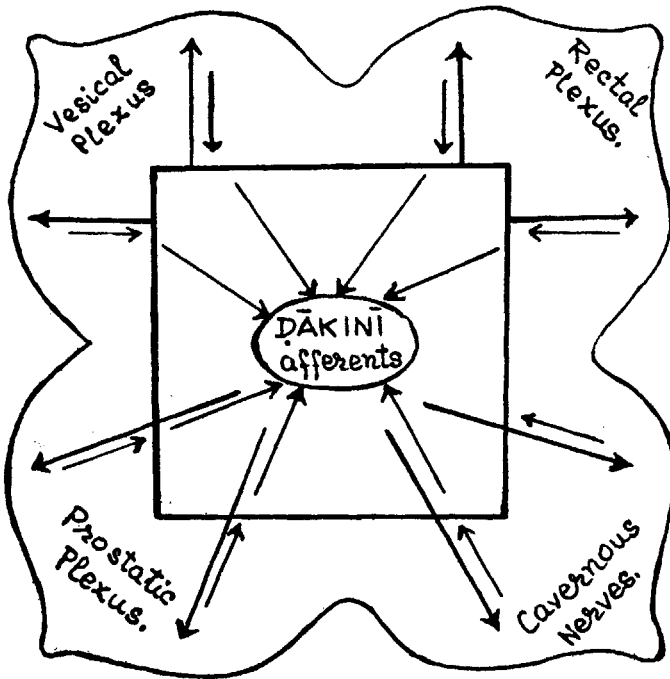
ELEPHANT—ANIMALISM IN MŪLĀDHĀRA

DĀKINĪ MEANS SENSORY IMPULSES OF INFERIOR HYPOGASTRIC PLEXUS

Vasudatra devī ca Dākinī abhikhyā Prakāśam vahanti sadā śuddha buddheh. S. Nī—7
 Here lives *Devī Dākinī* always carrying the illumination of pure information (This proves that *Dākinī* represents sensory afferent centre). Compare this with—
Prajñayā upasthamāruhya upasthena ratim prajātimāpnoti, K. B. Up. 3/6

Sensory impulses riding the penis/clitoris convey the pleasure of coitus and the pain of parturition (B. C. Joshi 1976).

Thus *Dākinī* consists of those peripheral ganglionic cells which receive the sacral para-sympathetic afferents from all four petals of *Mūlādhāra*.



MŪLĀDHĀRA CAKRA-DĀKINĪ

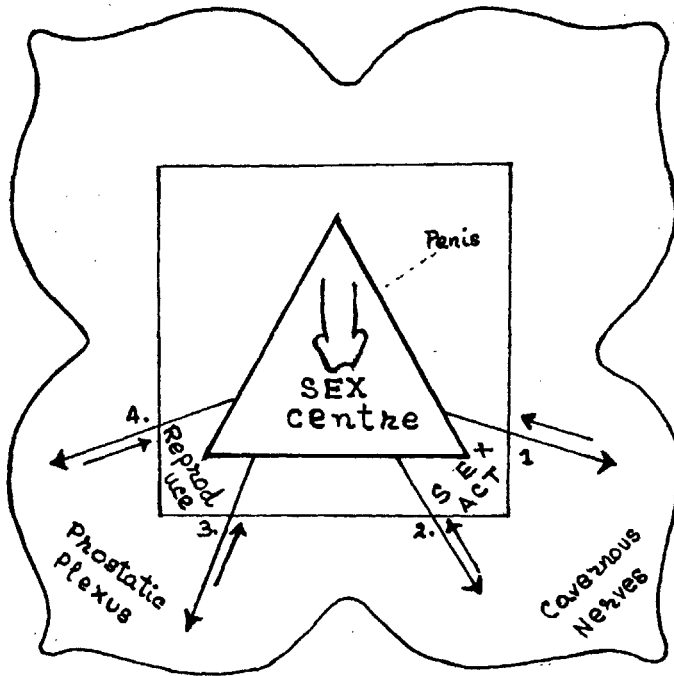
MŪLĀDHĀRA CAKRA CONTROLS SEX AND REPRODUCTION

Vajrākhyā vakradēse nivasati satatam karṇikā madhya samsthām. Konam tat trīpurākhyam tadidiva vilasat komalam kāmarupam. Kandarpanāma vāyuh nivasati satatam tasya madhye. Jiveso bandhu jīva prakaramabhihasan kotisurya prakāśah. S. N.—8.

Inside *mūlādhāra* is that triangle of electrical sex impulses called *Tripurā*. The extremely red and bright motor sex impulse which is the warden of soul always lives here.

Extreme red is for intense *rajoguṇa* which means very active.

Extreme brightness due to electrical (*taḍit*) discharges. (*Jiveśah*) because sex imprisons the *jīva ātmā*



CHATURASTRA
(Four weapons)

1. Lubrication reflex.
2. Erection reflex.
3. Emission reflex.
4. Ejaculation reflex.

SEX CENTRE—PERIPHERAL GANGLION CONTROLLING SEX ACT.

Legend

- Plate 1** — This is the factual position as is known to physiology today.
- Plate 2** — Compare with plate 1.
Four petals of *mūlādhāra* each with its two weapons of action correspond to four sub-divisions of Inferior Hypogastric plexus.
In the female, parturition reflex replaces emission and ejaculation of semen.
- Plate 3** — The animal in our pelvis is very necessary for survival of self and the race. But there is more to a human person than this animalism.
The elephant is personification of *tamoḡaṇa*.
- Plate 4** — It is clearly stated that *Dākinī* is the carrier of pure *bud dhi* (*prajñā*) i.e. sensory afferent part of eight weapons of action. (That is what makes it *rakta-netrā* or overseer of action).
- Plate 5** — The neurologic mechanism of sex function is explained. Four weapons are part of *śulāṣṭāk*. The sex centre of *Tripurā* and the *Śiva liṅga* represent peripheral ganglia controlling sex act and erection.

OBSERVATION

*Athādhāra padmaṃ Suṣumṇāsyalagnam. Bhujādhogudordhvam catuḥṣoṇapa-
tram Adhovaktramudyat suvarṇāva varṇaiḥ vakārādi sāntaiḥ yuta veda varṇaiḥ.*
(S. Ni-4)

“Now is described the Root-Base Nerve station with four red petals which hangs face down attached to the mouth of *suṣumṇā*, and sited below the penis and above the anus. It has four seed letters of golden brilliance from *Va* to *Sa*. (on it's four petals)”.

The term mūlādhāra cakra

(Literally meaning the Root-Base Nerve Station)

What does it convey ?

Sprouting from *pṛthvi tattva*, the last *vikāra* of *mūla-prakṛti*, where *kula-kunḍa-
linī* comes to lock itself to sleep, *mūlādhāra* is the nervous mechanism controlling the basic (earthly) biologic functions of body viz. the four excretions and sex and reproduction, controlled directly through the sacral parasympathetic, and respiration, digestion, and speech controlled indirectly through the cranial parasympathetic, with *kula-kunḍalini* presiding over both the divisions.

Attached to the mouth of suṣumṇā :

Mūlādhāra is described here hanging downwards attached to the mouth of *suṣumṇā*.

It is necessary to state at the risk of repetition, that *suṣumṇā* means the entire neural axis from the mid-brain to the sacral cord, with its sprawling branches. Thus, *mūlādhāra* hangs down from the sacral end of neural axis.

Sited below the penis and above the anus and hanging face downwards :

In terms of modern anatomy this is the surface marking for the mid-perineum. The only nervous structure at this place is the Inferior Hypogastric Plexus with its sub-plexuses and ramifications, and it does indeed hang down from the neural axis (See Plate I).

Four red petals :

Red is the colour for *rajoguṇa*, i.e. action, which is present in four main branches of this nerve-station.

Four petals :

The Inferior Hypogastric Plexus constitutes the sacral division of parasympathetic system which directly controls the excretion of faeces, urine, semen, and foetus and the execution of sex act and reproduction. These functions are executed through its four very active sub-divisions :

1. The rectal plexus,
2. The vesical plexus,
3. The prostatic plexus,
4. The cavernous nerves.

These same functions are confirmed as belonging to *mūlādhāra cakra* in the succeeding verses. Hence, these four sub-divisions of Inferior Hypogastric Plexus are the four red petals of *mūlādhāra*.

Four Bijākṣara of golden brilliance :

These syllables are for the specific powers of action invested in each of the four petals. The science of *Mantra*-power forms an important part of *Tāntrikism* and *Yoga*, but discussion of it is beyond the limited scope of the present paper.

Amuṣṁindharāyāḥ catuṣkṇa cakram samudbhāsi śulāṣṭakairāvṛtantat. lasat pītavarṇam tadit komalaṅgam tadamṅke samāste dharāyāḥ svabījam.

(S. Nī—5)

Caturbāhubhuṣaṅṅ gaḅendrādhīruḁham.

“In this (*mūlādhāra cakra*) is the four-cornered *prthvi cakra*, surrounded by eight weapons (of action).

In the lap of that is the shining-yellow, four-armed *prthvi bīja*, with its delicate electric body, mounted on a magnificent elephant” (See Plate 3).

Dharā cakra and dharā bīja :

How are these two related to *mūlādhāra* ? In my paper on *kula-kunḍalinī* (mentioned above) I have reviewed the process which causes the manifestation of human body. It is the stretch power of the imbalance of *triḡuṇa*, called *kunḍalinī*, which conducts this process. The process stops at the last *vikāra*, *prthvi tattva*, which therefore carries the highest load of *tamoguṇa*. Thus, when the five *mahā-bhūta* combine to compound a body (*Deha-saṅghāta*), it is the *prthvi tattva* which provides it its form, bulk, weight, inertia, and the basic organic functions, all because of its high *tamoguṇa-rajoguṇa*.

The nervous system sprouts as a necessity of nature to distribute the *prāṇa* flow to all body organs, and *mūlādhāra* is that nerve station which gets associated in the administration of the basic biologic mechanisms invested in *prthvi tattva*. It is thus, that *dharā cakra* with its *bīja* forms the core of *mūlādhāra cakra*.

Four cornered cakra :

The four-cornered shape allotted to *prthvi tattva* spells solidity, stability, and inertia.

Eight weapons (Śulāṣṭak) :

As explained earlier (Joshi, B. C., 1984) these eight weapons are physically present in *mūlādhāra* as eight pelvic parasympathetic reflexes of the Inferior Hypogastric Plexus. They are

1. Lubrication reflex, 2. Erection reflex, 3. Emission reflex, 4. Ejaculation reflex, 5. Micturition reflex, 6. Urinary retention reflex, 7. Defecation reflex, 8. Fecal retention reflex.

Delicate electric body :

It has been known to Yoga since the Vedic times, that all nerve impulses are electrical in nature, as proved by the etymology of the word *prāṇa*.

In *Saṭcakra Nirūpaṇa* the words *taḍit* and *vidyut* occur nine times, which emphasises the presence of electrical impulses in the neural axis. Here, *prthvi bīja* by virtue of its electrical embodiment controls all the pelvic functions through *mūlādhāra* mechanism.

Adorned with four arms (Caturbāhubhuṣam) :

The above eight reflexes are wielded by the four arms of the *prthvi cakra* invested in the four red petals of the *mūlādhāra* i.e. the rectal plexus, prostatic plexus, vesical plexus and cavernous nerves.

Riding a magnificent elephant (Gajendrādhirūḍham) :

Woodroffe has translated this as mounted on the king of elephants (*airāvata*). *Gajendra* is not a synonym for *airāvata* (see *Amara Koṣa*). Hence, Woodroffe's translation is unwarranted. It creates an unnecessary mystic impression.

Gajendra-mokṣa is a famous narrative in *Śrīmat Bhāgavat* (8/3, 8/4). It gives the following attributes for the elephant species :

<i>Antarbahīscāvṛttayebha yonyā.</i>	(8/3/25)
<i>Gajaḥ stabdhamatiḥ</i>	(8/4/10)
<i>Konjarīm yonimātma smṛtīvināśinīm.</i>	(8/4/12)

Thus, the elephant species, the most bulky among animals, is completely wrapped in ignorance of the self, living only for eating, defecating, urinating, and sex.

Since, the *prthvi tattva* in *mūlādhāra* personifies and controls the carnality and animalism of the human body, i.e. excretions and sex and reproduction, it is appropriately described as mounted on an elephant.

Because of its *tamoguṇa*, *prthvi tattva* is responsible for the weight, bulk, and inertia of the human body. Hence again the elephant is an appropriate symbol for its mount.

Paśu-bhāva :

This animalism present in every mortal is a fact of biology. Yoga identifies this as *paśu bhāva* (*Rudra Yāmala*—Ch. 6). Hard sex and nudity is identified as animal play in the following verse :

Paśukrīḍām digvasanām Kāminīm Prakataṣṭanīm. (Rud. Yām—22/48)

A Yogi is able to rise above this *paśu bhāva* and mortality with the help of *kuṇḍalinī* awakening (*Rud. Yām.—6/13-36*). The *paśu* then becomes *nārāyana*. (*Rud. Yām.—6/49-50*).

Paśu is also very clearly defined in *Śrī Viṣṇu Purāṇa*, 1/5/10-11.

Tadamke navinārkatulya prakāśah bīkuḥ sṛṣṭīkāri lasatvedabakuh mukhāmbhoja lakṣmīcaturbhāga bhedah. (S. Ni.—6)

“In the lap of that (*dharā bīja*) is the miniature creator (*Brahmā*), aglow as the new sun and with four arms and four faces”.

Śiśuh sṛṣṭikārī is the key-word in this verse. Literally *śiśuh* means a baby. But *Brahmā* is the *pitāmaha* for all creation. *Pitāmaha* cannot be a baby. Hence *Śiśuh sṛṣṭikārī* here means a miniature representation of the creative power, meaning that the control of reproductive function vested in this nerve centre is partial and not full-fledged.

Spermatogenesis/oogenesis is known to have no nervous control, yet the testis, epididymis, and prostate do receive a part of their nerve supply from the Inferior Hypogastric Plexus. The seminal fluid is necessary for nourishment, motility and survival of sperms and the epididymis is responsible for the fertilization power of the sperms. Thus, the nervous mechanisms do contribute to minor and peripheral aspects of reproduction.

Aglow as the new sun :

This confirms that the impulses here, which partially control the reproductive mechanism, are electrical in nature.

*Vasedatra devī ca Dākinyabhikhyā lasadvedabāhūjjvālā raktanetrā. Samānodi-
tāneka surya prakāśā prakāśam vahantī sadā śuddhabuddheh. (S. Ni-7)*

“Here dwells *Devī Dākini*, with four arms and brilliant red eyes and aglow like several suns together. It always carries the light of pure perception”.

Light of pure perception :

Śuddhabuddhiprakāśam is the key word. It identifies *Dākini* as the carrier of pure *buddhi*.

Buddhi is a synonym for *prajñā*, whose function is most lucidly described in *Kauṣītakī Brāhmaṇa Upaniṣad*, as I have already shown (Joshi, B.C., 1984.).

Prajñā means all types of sensory afferent impulses in the human body. The following line from the *Upaniṣad* pertains to sensory sex function :

Prajñyā upasthamāruhya upasthena ratim prajātimāpnoti
(*Kau. Br. Up.—3/6*)

“Through *prajñā* it rides over the penis to receive the bliss of sex act and reproduction”.

This is confirmed by *Māṭṛkābheda Tantra* where the mechanism of pleasure during the sex act is described as follows

*Āyonyagramadhonālaṃ sadānandmayam śibe. Śruṇu carvangi subhage tan-
madhye lingatādanāt. Yadrūpaṃ parmānandam tannāsti bhuvanatrāye.*
(*Mā. Bhe. Tantra, 2/7-8*)

“The descending tract reaches upto the clitoris. It is always full of pleasure. When this is hit with the penis, it gives immense and uncomparable pleasure”.

The word *śuddhabodha* is also used in Verse 2.

Tadgrathana racanayā śuddhabodha prabodha.

There, it describes the role of the spinal grey column for sensory perception (explained in my previous paper).

In the light of the above explanation *Devī Dākinī* in this verse represents the sensory afferent components in the Inferior Hypogastric Plexus. Dr. Rele identifies *Dākinī* as efferent impulse, which is not correct.

Bright red eyes :

Red is the colour for *rajoguṇa* and action. *Dākinī* is the overseer of action, as all the pelvic reflexes are mediated through it. Brightness is due to the electrical nature of the sensory impulses.

Vajrākhyā vaktradēse vilasati satatam

karnīkāmādhya saṁstham.

Konaṁ tat traipurākhyam taḍidīva vilasat

komalam kāmarūpaṁ.

Kandarpa nāma vāyur vilasati satatam

tasyamādhye samantāt.

Jiveso bandhujīvaprakaramabhihasan

kotisurya prakāśaḥ.

“At the mouth of *vajrā* within the *mūlādhāra* is that delicate electrical triangle which represents sex. It is named after *Tripurā*. In it resides always the deep crimson impulse called *Kandarpa*, which is bright as ten million suns, and is the custodian of *jīva ātmā*”.

Deep crimson vāyu, bright as ten million suns :

The sex impulses are a part of *apāna vāyu*. Deep crimson stands for heavy *rajoguṇa*, which is present in the sharp-shooting action involved in the very intense traffic of nerve impulses necessary during the sex act. The brightness of ten million suns is caused by the same extremely intense discharge of nerve impulses, because they are electrical in nature. Reference to the same triangle of sex is available in *Mātrkābheda Tantra* as follows :

*Caturastārdikam devī tatkundaṁ kāmarūpakam Evaṁ kundaṁ Mahēśāni nāla-
traya bibhūṣitam. Homakundaṁidaṁ devī sarvatantre pariṣkṛtam.*

(*Mā. Bhe. Tantra—3/19, 21, 23*)

“O Pārṇati, this fire-pit of sex is eulogised in every *tantra*. It has four weapons and three tracts. Ascending tract goes upto the cerebrum, middle tract connects the *mūlādhāra* to *maṇipūr cakra*, and the descending tract always full of pleasure reaches upto the glans penis”.

Jiveśaḥ—Custodian of *jīva ātmā* :

Yoga tells us that sex and hunger are the two instruments of nature that keep the *jīva ātmā* bonded in this mortal body. Thus, sex is a custodian or jailor of *jīva*.

This interpretation of *jīveśaḥ* is confirmed by following verses of *Kuṇḍalinī Sahasranām* of *Rudra Yāmala Tantra*—36/154, 160.

Kāmayāga siddhikarī kāmamaithuna yāminī Kārāgār janāpalyā kārāgār prā-pālinī.

“*Kula-kuṇḍalinī* which gives success in sex *yajña* is the chief warden of the jail” (The jail being the body with *jīva ātmā* as prisoner). In fact sex is only a facet of *ahamkāra* as we will discuss.

Tanmadhye lingarūpī drutkanakakalā

komalah paścimāsyah

jñāna dhyāna prakāśaḥ

svayam kisalayākāra rupah Svayambhu

Vidyutpūrṇa indubimbaprakara karacaya

snigdha santāna hāsi.

Kāśivāsī vilāsī vilastī

saridāvartarūpaprakākārah.

(S. Ni—9)

“Inside that (triangle of sex) is the bud-shaped phallus (*linga*), *Svayambhu*, delicate as molten gold, with His face downwards. He is revealed by knowledge (*tattva jñāna*) and meditation.

“Fully charged with bio-electricity and lubricated with his own produce which sparkles like a bunch of moon-rays, amorous and dynamic like a whirlpool, He is the same *Śiva* that lives in *Kāśī*”.

Same Śiva-linga that lives in Kāśī :

The origin of *linga-pūjā* is described in *Vāmana Purāna* (6/66-86). The *Śiva-linga*, worshipped by Hindus, actually represents the male organ of *Śiva*. Thus, *mūlādhāra* is the natural abode of *linga* as is *Kāśī*. Amorous, because it is armed with sex, *i.e.* erect.

Phallus as a deity :

Tantra worships the phallus as the consort of *kuṇḍalinī*, using this immense power for the liberation of *jīva-ātmā* from its bonds. We will discuss this later. In the human female *yonī-agra* (clitoris) is the counterpart of male penis as *Mātrkābheda Tantra* (2/7) tells us.

Lubricated with his own sparkling produce (Snigdha santāha hāsi) :

Indubimbaparakara karacaya and *hāsi*, these two adjectives qualify produce (*santāna*) which keeps the amorous phallus *snigdha*—lubricated. These mean that the amorous or the erect penis is lubricated with its own produce which is sparkling and cool like a bunch of moonrays. This is correct, as is known to physiology today. The penile lubricant is indeed produced by urethral glands of penis.

Full of electric charge and with the pattern of a whirlpool (Vidyutpūrṇa, saridāvarta rupaparakārah) :

Both these terms qualify *Svayambhu* which is *vilāsi* (amorous) i.e. erect and armed with sex impulse, and *snigdha*—lubricated.

The erect and lubricated phallus is described as full of electric charge (i.e. *prāṇa*) and because of its electric charge, it is full of dynamism in the pattern of a whirlpool. A whirlpool is always in constant motion without changing its position or form.

During the sex act the charged penis gets earthed in the consort, leading to loss of its charge of *prāṇa* (electricity). So, it becomes spent up, lax and flail, as does the man himself.

This could be a topic for scientific investigation and we will discuss it further. In *The Mysterious Kuṇḍalinī* Dr. Rele has identified the *Svayambhu Linga* as the lower end of the spinal dural sac. That is absurd. *Dura* is not nervous tissue.

Revealed by knowledge and meditation (Jñāna dhyāna prakāśah) :

The phallus as the male organ is grossly visible but the nerve impulse in *mūlādhāra* which activates it is visible only to a Yogi with meditation, preceded by *tattva jñāna* (received from *guru*). In Yogic terms, *tattva jñāna* is the only knowledge that is relevant (*Gītā*, 7/2) and meditation is the priceless method which reveals all truth. Therefore, the laboratory techniques and dead-body dissection are worthless.

Woodroffe's translation of this verse is distorted, senseless, and mystic.

*Tasyordve bisatantu sodarlasat
sukṣmā jaganmohinī*

*Brahmadvāramukhaṃ mukhena madhuram
samācchādayanti svayam*

*Śaṃkhāvartanibhā navīna capalā
mālā vilāsaspadā*

*Suptāsarpasamā śiroparilasat
sārdha trivṛttākṛtīh.*

“Around and above that (phallus) is the very fine *jagan mohini* (*māyā śakti*)—a fresh garland of lightning shaped like a spiral of a conch-shell with three and a half circles, and sleeping like a snake around (His) head”.

Jagan mohini—World bewilderer :

This means the *māyā śakti*, which conjures up this kaleidoscopic world out of nothing (*avyakta*), and because of which we perceive all this variety where there is none. I have tried to explain this nature of *kula-kunḍalinī* elsewhere (Joshi, B.C., 1984-85).

Garland of lightning (*capalā-mālā*) :

According to *Śiva Sūtra*, *kunḍalinī* is *prāṇa* or electric impulse :

Prāṇo vā śrute (5), *Saiva kunḍalinī* (6) (*Śaktipāta*—5,6).

Sleeping (*Suptā*):

I explained in that paper that it is necessary for *kunḍalinī* to lock itself and sleep to enable the human organism to survive. Hence, this impulse, though present, is not awake in the normal person, where it is futile to try to demonstrate it. It can be demonstrated only by a Yogi, to himself, in his own body.

Like a serpent (*Sarpasamā*):

It is the serpent *Śeṣanāga* that holds the universe on its hood. *Viṣṇu* sleeps in the lap of the same serpent.

Kunḍalinī is that serpent which holds the human body alive and imprisons the *jīva ātmā* in it.

According to *Śrīmat Bhāgavata* this serpent represents *ahaṃkāra* which is an inalienable part of *māyā śakti* of *para brahma*.

*Mahat tattvāt vikurvānāt
Bhagvatvīrya sambhavāt*

*Kriyā śaktih ahaṃkārah
trividhah samapadyata*

*Sahasra śirasam sākṣāt
Anantam pracakṣyate*

*Samkarsanākhyam puruṣam
bhūtendriya manomayaṃ*

(Sri. Bh.—3/26/23, 25)

“The thousand hooded *ananta* (*śeṣa nāga*) called *Samkarsana* is the personification of *ahaṃkāra*—the power of action in its three divisions (*sattva*, *raja*, and *tama*).

Three and a half circles. What are they ? (Sārdha trivṛttākṛtīh) :

The journey of *kuṇḍalinī* from *avyakta* to the manifestation of human body involves three spirals of descent. These three spirals are :

1. *Avyakta* to *mahat tattva*,
2. *Mahat tattva* to *ahaṃkāra*,
3. (a) *Ahaṃkāra* to *mahābhūta*, and
(b) *Ahaṃkāra* to *indriya* and *mana*.

Thus, the spirals of *kuṇḍalinī* represent the stages of its descent and it is the stretch of these same spirals that makes *kuṇḍalinī* to shoot home when awakened. I have explained this, in the earlier paper, with a diagram.

Kuṇḍalinī sleeps in the *mūlādhāra*, because the *pṛthvi tattva* present there is the last *vikāra* of *mūla prakṛti* where *kuṇḍalinī* stops.

The correct name is *Kula-Kuṇḍalinī*, because, this deity presides over the para-sympathetic system (*Kula*) as confirmed by *Kuṇḍalinī Sahasra Nāma* in *Rudra Yāmala Tantra*, 36/166.

*Kujanti kula-kuṇḍali ca madhuraṃ
mattāli mālāsphuṭaṃ*

*Vacāṃ komala kāvya bandha racanā
bhedātibheda kramaiḥ*

*Śvāsocchvāsa bibhañjanena jagatāṃ
jīvo yayā dhāryate.*

*Sā mūlāmbuja gahvare vilasati
proddām dīptāvalī.*

(S.Ni.—11)

“Within the pit of *mūlādhāra*, the brilliant *kula-kunḍalinī* hums voicelessly with varied sublime literary compositions in all the different languages. By dividing the inspiration from the expiration it sustains life in all living beings”.

Kula-kunḍalinī controlling the sacral parasympathetic (*apāna*) through Inferior Hypogastric Plexus (*mūlādhāra*) was described in the preceding verse which is anatomically correct.

The present verse reveals that *kunḍalinī* (sited in the *mūlādhāra*) has fundamental control over the cranial parasympathetic functions—speech and respiration. Origin of speech from *mūlādhāra* is confirmed by *Alaṅkāra Kaustubha*.

*Mūlādhārāt prathamamudito
Yastu bhāvah parākhyah
Puścāt paśyantiyath hrdayago
buddhiyuṅ madhyamākhyah.*

Control of food-desire too is attributed to *kunḍalinī* in *Māṭṛkābheda Tantra* (3/3-5). There is no anatomical evidence available to prove this. On the other hand, the circumstantial evidence available is irrefutable, as we will discuss.

Voiceless humming like a swarm of bees (Mattāli mālā asphutam kujantī) :

This refers to the origin and presence of *parā vāṇī* in *kunḍalinī*. The humming is not physical. It is perceptible to a Yogi only on meditation, as *kunḍalinī* itself is. Interpretation of *asphuta* as indistinct does not apply here.

Komala kāvya-bandha recanā bheda kramaih :

Sublime literary compositions differing in variety as prose and poetry, etc.

Vacām atibheda kramaih :

Any and all the spoken languages of the world, which may be totally different from each other, as for example, German, Japanese, and Persian.

According to the modern linguistics, the organ of speech is the larynx, controlled by the vagi. Yoga recognises that, but it has a much deeper analysis of the origins of *vāṇī* and *artha* (i.e. the speech and what it denotes).

The laryngeal speech is only the last of the four stages of *vāṇī*, designated as *vaikhari vāṇī*. This stage has its origin in subtler forms called (1) *parā*, (2) *paśyantī*, and (3) *madhyamā vāṇī*, which will be explained under discussion.

Here, *parā vāṇī* is sited in *kunḍalinī* and shown as the precursor of all types of speech. Thus, the *kunḍalinī śakti* presides over the laryngeal function. Unbelievable, but proved true by Pandit Gopikrishna (see discussion).

According to *Śiva Sūtra*, *kuṇḍalinī* is the *mātrkā-śakti* of *para brahma*. *Mātrkā* means the alphabet, which is the repository of all knowledge. Thus, the alphabetical speech and knowledge is the gross manifestation of *kuṇḍalinī*.

Maintains life by dividing the inspiration from the expiration (Śvāsochāś bibhanjanena jīvo dhāryate) :

This is a clear description of the stretch reflex of the lung, mediated through the vagi, without which there can be no respiration. *Kuṇḍalinī* is shown as controlling this cranial parasympathetic function. Again Woodroffe has omitted translating the word *bibhanjanena* and missed this deep understanding of physiology by Yoga. One can only conclude that he had no knowledge about the control of respiration.

DISCUSSION

The *mūlādhāra cakra* can be correctly appreciated only when placed in its proper context in the total process of creation of the human person, which is not different from the creation of the macrocosm (*brahmāṇḍa*).

Yoga teaches that a living person is made up of two distinct entities : (1) the *jīva ātmā* which is *cetana* (conscious) and (2) the body or corpse which is *jaḍa* (non-conscious).

The manifestation of body (corpse) evolves from the unmanifest (*avyakta*) through a process in which *kuṇḍalinī śakti* plays key role, till the manifestation gets fully substantiated on the evolution of the last *vikāra*, the *pṛthvi tattva*.

Prāṇa (electrical nerve impulse) itself a *jaḍa vikāra* is necessary to run the biological systems of the body. Hence, the necessity for the evolution of a nervous system—the channel through which *prāṇa* may operate. *Prāṇa* operates under the patronage of *kula-kuṇḍalinī* to maintain the body.

All excretions, and sex and reproduction involve activity and catabolism, which are functions of *rajoḡuṇa-tamoḡuṇa*, hence of *pṛthvi tattva*. It is this vital spot that *mūlādhāra cakra* controls, or to put it the other way, it is because of this control of basic biologic functions that this nerve station is called *mūlādhāra*.

It may be noted that in Yogic parlance the foetus and semen too are excretions like urine and stool, all four being mediated through *apāna vāyu*, the sacral parasympathetic.

The deities in *mūlādhāra cakra* :

Four deities are described in *mūlādhāra* :

- | | |
|---------------------|--|
| 1. <i>Ḍākinī</i> | 2. <i>Brahmā</i> |
| 3. <i>Svayambhu</i> | 4. <i>Kula-kunḍalinī (Śrī Paramēśvari)</i> |

Innumerable deities with many fantastic shapes are an inalienable part of Hindu religious thinking. It is necessary to appreciate their meaning and significance.

There is a marathon debate available on this in the ninth *Brāhmaṇa* of *Bṛhad-āraṇyaka Upaniṣad*. Sage Yāgyavalkya explains the total number of Hindu deities and the meaning and identification of each. Giving the etymology of words like *rudra*, *āditya*, etc. he shows that these are not some superior beings living in a distant heaven, but are the physical powers that control the universe.

Ṣaṭcakra Nirūpaṇa provides functional identification for all four deities in *mūlādhāra*. Thus, *Ḍākinī* is the conveyor of pure perception (*śuddha buddhi prabodhā*), meaning the sensory afferents in the plexus. Succeeding sections show *Rākinī*, *Lākinī*, *Hākinī*, *Śākinī*, and *Kākinī* as congeners of *Ḍākinī* at higher levels in neural axis. Control of these impulses helps a Yogi in *Kunḍalinī Jāgarāna*.

Yo japet Ḍākinī mantram

Cetnanyā Kunḍalijhatit.

(*Rud. Yām—30/19*)

Svayambhu is clearly identified as the amorous penis.

Brahmā the creator of life is present as *śiśu* or minor which means control of minor aspects of creative process but not its core.

Finally, the *Kula-kunḍalinī* is identified as *jagan mohinī (māyā śakti)* which causes the physical manifestation of the body and endows the *jīva-ātmā* with *ahaṃkāra*.

The *māyā śakti* or *parā śakti* is most clearly described in *Śvetāśvatara Upaniṣad* as follows :

Ajāmekāṃ lohita śukla kṛṣṇāṃ

bahvi prajā sṛjamānā sarūpā (4/5)

Tasminanyo māyayā saṃniruddhah (4/9)

Māyāṃ tu prakṛtiṃ vidyāt (4/10)

Pārasya śaktih vividheva śrūyate

svābhāvikī jñāna bala kriyā ca (6/8)

“*Maya śakti* is *prakṛti* made up of *tri-guṇa*. It creates all the beings from *tri-guṇa* and binds the *jīva ātmā*. All knowledge, power, and action belong to this *parā śakti* of *para brahma*.

Why does kuṇḍalinī sleep in mūlādhāra ?

Pṛithvi tattva is the last *vikāra* of *mūla prakṛti*. Hence, the progress of imbalance of *tri-guṇa* stops at it. *Kuṇḍalinī* represents the stretch of this imbalance. Hence, it has to lock itself to sleep at this spot so that the physical manifestation of body may continue (Joshi, B.C., 1984-85).

Having produced the body (*deha samghāt*), the *māyā śakti* then fetters the *jīva ātmā* with sex. The sexual identity arises from *ahaṃkāra*—the serpent.

Sex is the custodian of jīva ātmā :

According to *Bhāgavat Gītā* (3/37) sex is the enemy of *jīva*. Sex and hunger are the two forces because of which a man can never have freedom and peace.

Whether in a man or in a woman, the *jīva ātmā* is only a part of *para brahma* (*Gītā*, 15/7). The sex differentiation is in the body only. Thus, when a man identifies himself as a male, different from female, he plays a puppet to his body *ahaṃkāra*. Blinded by sex a man dances to its tunes all his life. Thus sex is the jailor and custodian of *jīva*.

Woodroffe explains that *kāma* is *jīveśah* because it is responsible for continuance of life, as it is a part of *apāna*. *Jīveśah* literally means lord of *jīva* and not of *jīvana*, and *apāna* is only one of the ten *prāṇa* that maintain life. Hence, this explanation is unacceptable.

Śiva-linga as a deity—(The so-called phallic cult) :

Vāmana Purāṇa (6/66-86) proves that the *Śiva linga* actually represents the human male organ (phallus).

Being the chief organ for sex and reproduction, the phallus is an immense power. Without it there is no procreation. Thus it is the parent of all creation. Armed with sex impulse, it binds the *jīva ātmā* like a slave and the man dances to its tune till death. The sex act is invested with immense pleasure, only to ensure that there is no lapse in reproduction. When this aim is overlooked by over-indulgence and misuse of sex, it surely destroys the man as well as the society. Thus, the phallus becomes *rudra* (meaning that it makes the person weep), and *mahākāla* and *grasiṣṇu* (meaning the great destroyer and devourer of every thing). This position is explained in *Bhāgavat Gītā* (7/11, 3/37-43, and 13/16).

The mythological story of *kāmadahana* carries a great message. Lord *Śiva*, the phallus, is present in all of us. It is much tortured with sex demands. This story tells us to keep sex in its proper place and not to let it drive you mad.

Gītā (3/41) advises *kill this sinner*. No doubt sex is the master of man, but it is a master to be punished and cut to size and not to be pampered.

The erect phallus full of electric charge (Vidyut-pūrṇa vilāsī svayambhu) :

Significance of Bio-electricity.

Since the Vedic times Hindus have been conscious about the presence and significance of bio-electricity in human body called *ojas*.

Namaste as a greeting for all avoids mutual body-touching. Wooden sandals and *kuśāsana* are meant to insulate the body from earthing. Conversely, there are situations where transmission of *ojas* by personal contact is desirable. These are feet touching of parents and *guru*, head smelling of son by father, and *śaktipāta* into the disciple.

The sex act involves total body-contact with the consort and a terrific electric discharge from the erect penis into vagina. The erect penis is here described as *vidyut pūrṇa*, *snigdha*, and *vilāsī i.e.* electrically charged, lubricated, and amorous.

This Yogic concept offers scope for scientific investigation by Kirlean photography or other methods.

Asamsarga is an important step for Yoga (*Pātanjali Yoga Sūtra* 2/40). But this is quite different from the cult of untouchability prevalent in Hindu society, which has no religious sanction.

The elephant in mūlādhāra :

Modern science tells us that man is the species of animals which is the highest in the ladder of evolution. Yoga analyses this in far greater depth and applies that to benefit. According to Yoga, it is the faculty of intellect that differentiates a human person. With intellect man has built civilizations, which no animal can. The same intellect is used by Yoga for the higher goal of realization of self, which is again, impossible for lower animals.

Paśu bhāva :

Now, the intellectual faculty needs to be sustained with a healthy normal body with its biologic mechanism, which means that the person must eat, drink, digest, defecate, urinate, *etc.* and finally also continue the race by reproduction. These basic biologic functions are common to all animals *i.e.* they represent animalism. Animalism is the foundation necessary for survival of higher faculties peculiar to the human species.

By this clear analysis, Yoga provides us with the right perspective in life. The modern Western civilization gives total importance to animalism denying the evolution of intellect which differentiates the humans. The West has utilized intellect to increase material prosperity, corporal comfort, and consumerism. This anti-Yogic, unwise, and self defeating approach of science has brought the humanity to the brink of extinction, as is evident today. It can be corrected only if we place our animalism in its proper place.

Yogic theory for genesis of speech (Vāk bheda) :

According to Yoga śabda brahma is an immense power, which manifests through four stages.

Vaikharī śabdaniṣpattiḥ

madhyamā śruti gocarā

Dyotitārthā tu paśyanti

sukṣmā vāganpāyini

(Śābdakalpadrūm)

1. *Parā vānī* (supreme speech), the non-physical and motionless (*aspanda*) sound, corresponding to *para brahma*, the fourth *mātrā* of *Om̐kār*.
2. *Paśyanti vānī*, the sound with non-specific motion (*sāmānya spanda*), corresponding to *kārana brahma*, the third *mātrā* of *Om̐kār* and the casual body.
3. *Madhyamā vānī*, the sound with specific and identified motion—the cognitive idea for speech present in the intellect before actual speaking. This corresponds to *hiranyagarbha*, the subtle body and the second *mātrā* of *Om̐kār*.
4. *Vaikharī vānī*, the gross, uttered speech which issues from the larynx and the mouth. It is physical speech corresponding to *virāt brahma*, the gross human body and the first *mātrā* of *Om̐kār*.

Thus, *Om̐kār* with its four *mātrā* represents the complete śabdabrahma (*Māndūkya Upaniṣad*).

In the West, linguistics as a proper science is relatively of recent origin.

The body organs like the lungs, the tongue, the mouth, *etc.* which help to produce speech, do not have speech as their sole purpose, yet they all coordinate wonderfully well to produce the exact sound needed. Hence, the spoken speech must have its actual origin in some central agency before it is coordinated by these various organs.

Yoga, with its four stages of speech, gives an indepth analysis of this central mechanism, which finds no recognition in modern linguistics.

The *vaikhari vāni* has its origin in the subtle forms sited in *kunḍalinī*, where all the languages of the world have a common identity. Therefore, a Yogi who can reach the *kunḍalinī* becomes all of a sudden fluent in all languages, spoken any where, that were quite unknown to him.

The experience of Pandit Gopikrishna :

In absence of material proof it is not possible for the modern science to accept existence of subtle and supraphysical stages of speech, but a Yogi can prove that by meditation. Ample proof is provided by the personal experience of a living author, Pandit Gopikrishna.* In his book *Kunḍalinī* (Chap. 16) he states that he was acquainted only with Kashmiri, English and Panjabi and had a workable knowledge of Urdu. He knew nothing of poetry and had no taste for it. With the awakening of *kunḍalinī*, lines of a beautiful verse in Kashmiri suddenly floated into his vision and disappeared. There was a cadence like the humming of a swarm of bees enchanting and melodious. Lines of the verse occurred one after the other, fully formed, complete with language, rhyme and metre to pass before his internal eye for expression. Verses occurred suddenly at odd times in day or night. After a fortnight, the language changed. Rhymes occurred in English. Having no knowledge of english poetry beyond the school books, he was unable to judge their excellence. Next, the poems occurred in Urdu, succeeded by Panjabi. A few days later he had to receive verses in Persian, which he had never read, nor could he understand it or speak. It was a great strain and exertion for him to jot down the few Persian verses, and he was obliged to desist for some time. After a short period of rest, he again felt a thrill of deep excitement and fear, and had to write down a poem in German. He had never learnt this language nor even seen a book written in it. German was followed by French, Italian, Sanskrit and Arabic verses. He felt he was in contact with the fount of all knowledge and could take down most of the well-known languages of the earth.

He was overwhelmed by his visits to supersensible realm, during which his lustrous conscious self floated in a vividly bright conscious plane commanding knowledge of all sciences, philosophies, and arts in a formless, measureless ocean of wisdom.

This experience of a meditator confirms with precision what is described in Verse 11 of *Ṣaṭcakra Nirūpaṇa*. There can be no explanation for the Gopikrishna

*Pandit Gopikrishna—Kashmiri Brāhmiṇ, born 1903, started meditating from 1920. Achieved *kunḍalinī* awakening in 1949.

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phenomenon without accepting the Yogic theory for genesis of speech. This puts to shreds, too, the belief of modern linguistics that a language is an acquired possession. The fable where Sant Jñāneśvar made a domestic buffalo to recite Vedic hymns may not be a fable after all.

It is interesting that in the same book (Chap. 13) Pandit Gopikrishna emphasises that *ṣaṭcakra* are not a physiological reality.

“I did not come across even a vestige of any *cakra* in any part of cerebrospinal system. To assume their existence even for an instance in these days of physiological knowledge and research would mean nothing short of an insult to intelligence”.

The present paper provides physiological proof. All that is needed is correct interpretation of the Sanskrit texts with correct translation.

I believe that Gopikrishna's experience is true, but he achieved it without the guidance of a *Guru* and without proper practice of *haṭha yoga* which he admits, and he never studied physiology. Hence, his above statement about *ṣaṭcakra* is unauthorised and not acceptable. I would put a simple question to him. Does he have a physiological explanation for his *kunḍalinī* experience ?

The *Saubhāgya Lakṣmī Usaniṣad* describes two distinct methods for Yoga : (1) *raja yoga* and (2) *haṭha yoga*. *Ṣaṭcakra* are not involved in the former but only in the latter and there a *Guru* is necessary.

Bhāgavat Gītā (6/41-44) states that a *yoga sādḥaka* may fall from Yoga (*Yoga-bhraṣṭa*) but he does not lose what he had achieved. In the next birth, he starts from where he had fallen ; in fact he is inexorably pulled to that. This explains the Gopikrishna phenomenon.

There is a long-standing dispute in linguistic-philosophy between Rationalists and Empirialists. While the former claim that mind (or reason) is the sole source of human knowledge, the latter believe that all knowledge derives from experience. This dispute disappears, if you accept the Yogic concept that *antahkaraṇa* (mind) does not expire with the death of mortal body but is carried over to the next birth (*Gītā*, 15/8). Thus while human knowledge does originate with the mind, the latter itself is the experience carried over from previous births. *Antahkaraṇa* (mind) consists of four entities : (1) *mana* (desirer), (2) *buddhi* (intellect), (3) *chitta* (experience-recorder) and (4) *ahaṃkāra* (the sense of me).

In his book *Language and Mind* Noam Chomsky comes very close to this Yogic concept when he writes : “We are endowed with a number of faculties to which we give the name ‘Mind’, which plays a crucial role in our acquisition of knowledge and enables us to act as free agents undertermined by external stimuli in the environment”.

Śabda brahma is extolled in *The Bible* (John-1) and by several saints like Guru Nanak Dev.

Meditation—a priceless method of investigation :

It is repeatedly stressed in *Saṭcakra Nirūpaṇa* that this knowledge of neurology was revealed by mediation (*dhyāna*).

Bṛhadāraṇyaka Upaniṣad confirms that this entire universe can be known by *dhyāna*.

Ātmā vā are nididhyāsitaḥ.

Ātmano vā are matya vijñānenedaṃ sarvaṃ veditaṃ.

(*Br. Up.* 2/4/5)

Thus the scope of *dhyāna* is limitless. For *dhyāna*, the only instrument needed by a *Yogi* is his own body and mind. No expenses are involved, no laboratories are needed, and there is no torture and killing of experimental animals. The happenings of physiological processes are directly perceived live because they are happening in the own body of the *Yogi*. The modern neurologists till only a few years back had to depend on dead body dissection and dead tissue microscopy, and hence were unable to grasp the live body mechanism, despite their expensive laboratories.

Despite these advantages of *dhyāna* there is little hope for modern scientists succeeding at it.

The correct method for *dhyāna* is described in *Bhāgavat Gītā* (6/10-15 and 18/51-52) with lucid details available in corresponding sections of *Jñāneśvari Gītā*. In the anti-*Yogi* and unfavourable environment of modern civilization it is impossible to practice *yama* and *niyama* which are essential pre-requisites for *dhyāna*.

The observations obtained in this paper leave no doubt about the identity of *mūlādhāra cakra*. A correct literal translation and a sincere search within the parameters of modern physiology show that the six *cakras* and *kuṇḍalinī* are a master-achievement in applied physiology, and it is in this application that *Yoga* triumphs over modern science. A *Yogi* rises to a higher level of consciousness than the human species is endowed with. Mystery and occultism were woven around *saṭcakra* by a few foreign scholars like Woodroffe and Leadbeater.

The place of Yogadarśana :

The Western science, which took firm roots only after the seventeenth century, can not trace its origin beyond the Greek Schools (300 B.C.).

Both *Sāṃkhya* and *Yoga Darśana* take origin from the prehistoric Vedic era. The concept of creation advocated by Yoga was revealed to *Rṣis* (Seers) and is revealed again every time that a Yogi attains his goal. This truth from the Vedas has remained unchanged ever since (*Bhāgavat Gītā*, 2/16). In contrast the concepts and philosophies of the West keep changing with every new research. In fact the word Re-Search (meaning search again) connotes that scientists do not believe as true whatever it is that they know.

CONCLUSIONS

The *ṣaṭcakra* and the *kundalini* have traditionally been regarded as occult and mystic in the West, without any deep study in the proper context.

Known from the Vedic era, *haṭha yoga* has been much misunderstood by foreign scholars and the Indians influenced by them.

Haṭha yoga rationale can be grasped only with its proper context, that is *Sāṃkhya Darśana*. Based on normal human neuroanatomy-physiology, *haṭha yoga* ascends to the realm of *tantra* and through it to *laya yoga*.

A correct literal translation of Verses 4 to 12 of *Ṣaṭcakra Nirūpaṇa* reveals that *mūlādhāra cakra* is identical with the Inferior Hypogastric Plexus, not only in structure but also in its entire physiological function. Physiology is explained here in greater detail than is available with modern neurology, and the explanation is lucid with symbols, deities and animals conforming to Yogic philosophy. Deities represent specific nervous functions and the elephant represents animalism of the human person.

All the pelvic reflexes are correctly explained with special attention given to their afferent and efferent arms and the mediating nerve-cells.

The sex act, sexual reflexes and the action of penis receive special description.

The electrical nature of all nerve-impulses is repeatedly emphasised and the erect penis is described full of electric charge—a worthwhile idea for scientific investigation.

Kundalini is described as the force of *triṣuṇa* or *māyā śakti* sleeping in the *mūlādhāra* and controlling the sacral as well as the cranial parasympathetic functions *i.e.* all pelvic excretions and sex, speech, respiration, and digestion. This does not fit with the physiology known to us today, and hence needs to be investigated.

The Yogic theory of genesis of laryngeal speech is proved by the Gopikrishna phenomenon. Scientific investigation of this could be rewarding.

Haṭha yoga and *kuṇḍalinī* are a master achievement of ancient Indians in applied neurology. It should be accorded its proper place in the History of Science.

BIBLIOGRAPHY

- Alakṁāra Kaustubha*, Ed. by Dr. Ravi Sankar Nāgar, 1st Edn., Chaukhamba Vidya Bhavan, Varanasi, 1983.
- Chomsky* by John Lyons, 4th Edn., Fontana Books, London, 1971.
- Joshi, B. C., Nature of Kula-Kuṇḍalinī, *Yoga-Mīmāṃsā*, XXIII (3), 1984-85.
- Joshi, B. C., Neurology in Ancient India—Some Evidences, *Indian Journal of History of Science*, 19 (4), 366, 1984.
- Kauśītaki Brāhmaṇa Upaniṣad*, *Upaniṣad Saṃgraha*, 1st Edn., Motilal Banarasi Dass, Delhi, 1981.
- Leadbeater, C. W., *Chakras—A Monograph*, 11th Edn., Theosophical Publishing House, Madras, 1979.
- Māṭṛkābheda Tantra*, Ed. by Ram Kumar Rai, 1st Edn., Prachya Prakasan, Varanasi, 1983.
- Pandit Gopikrishna, *Kuṇḍalinī—A Path to Higher Consciousness*, 1st Edn., Orient Paperbacks, Delhi, 1976.
- Pātanjala Yoga Sūtra*, *Yoga Darśana*, Ed. by H. K. Goenka, 14th Edn., Geeta Press, Gorakhpur, 1984.
- Rele, V. G., *The Mysterious Kuṇḍalinī*, 10th Edn., Taraporewala & Sons Pvt. Ltd., Bombay, 1960.
- Rudra Yāmalam*, 1st Edn., Sampurnanand Sanskrit Viswa Vidyalaya, Varanasi, 1980.
- Śaktipāta*, Ed. by Swami Viṣṇutirtha, 5th Edn., Vijnana Press, Rishikesh, 1981.
- Ṣaṭcakra Nirūpaṇa*, *Arthur Avalon Tantrik Text*, Vol. II, 1st Edn., Luzac & Co., London, 1919.
- Saubhāgya Lakṣmī Upaniṣad*, *Upaniṣad, Saṃgraha*, 1st Edn., Motilal Banarasi Dass, Delhi, 1981.
- Srimat Bhāgavat Mahāpurāṇa*, Moola, 10th Edn., Geeta Press, Gorakhpur, 1980.
- Svetāśvatar Upaniṣad*, *Upaniṣad Saṃgraha*, 1st Edn., Motilal Banarasi Dass, 1981.
- Woodroffe, J., *Serpent Power*, 7th Edn., Ganesh & Co., Madras, 1964.
- Yoga Yāgyavalkyam*, Ed. by K. Sāmbasiva Sāstri, 1st Edn., Maharaja of Travancore, Trivandrum, 1919.