

Original Article

Raja Yoga — Philosophy and Neurology : Preliminary Considerations

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Editor's Introduction :

In this fascinating essay, the author draws parallels between the philosophy of Raja Yoga and Neurology.

जननीं सारदां देवीं रामकृष्णं जगद्गुरुम् ।

पादपद्मे तयोः श्रित्वा प्रणमामि मुहुर्मुहुः ॥

Offered in worship to the Holy feet of the Divine Mother of the universe, the Absolute Truth, with prayers for the grace of Sri Ramakrishna

Introduction :

The objective of this preliminary work is two fold. One, is to arrive at the Truths taught by the teachers of *Vedanta* (an understanding of the classic scriptures with special reference to the teachings of Sri Ramakrishna and Swami Vivekananda) through a framework of simple reasoning applied to universal human experiences. With this as the basis, to then try and understand the implications of these Truths to entities which we cannot separate from our experience of ourselves and reality – mind and consciousness. Two, to explore ways in which we may relate religious self experiences as described in *Raja yoga* (with specific references to the experiences and teachings of Sri Ramakrishna), to the structure and function of the nervous system which serves as the instrument of obtaining these experiences in the human being. As such, this work is a preliminary attempt, limited by personal understanding and should be viewed as a theorisation. It is meant to be speculative and not authoritative. The goal is to stimulate thinking and introspection and thence further exploration into the Truths and

experiences of the Vedantic tradition and its relation with contemporary observations, thinking and approaches. Though the presentation is of an impersonal nature, it deals with the nature of entities which form the very basis of all persons – that is, mind and consciousness. As Sri Ramakrishna taught, as many faiths, so many paths. Each individual may connect to the reality of themselves and the universe in uniquely different ways. Hence, the approach taken in the deliberations that follow may not be suited to all. If any reader feels uncomfortable by being confronted with arguments and reasoning relating to this impersonally-personal subject, specially if it conflicts with their own understanding, then proceed no further. But, if the reader is willing to undertake this study with a calm, unaffected and critical outlook, with a view to introspect into the nature of oneself, then welcome to this journey.

Philosophy : Quest for Truth

We often hear the phrase, change is the only constant. We see the world of change around us and in us. Though the time scales vary vastly, we recognise that no entity that we perceive through our senses or our mind, including our senses and mind remain without change. We hear giddy ideas of universe creations, both traditional and modern, where even space and time have resolved into a non-existence or a contracted existence or a different type of existence, depending on which theory excites our mental palate. We experience our own bodies aging, we are aware of the fickleness of our own minds and we are witnesses to our own personalities being moulded sometimes by

experience and at other times by will. As long as we have awareness, our own consciousness is the only constant in our lives, but even that seems to switch off in a state of deep sleep and apparently disappear in the amnesia of an unconscious state. To top it all, our meagre lives, barely specks in the seemingly unlimited vastness of a complex universe, come to being, play and dissolve away in the inevitability of time. The very existence of our individualities, which we so cling to, are hidden from us before the being of birth and after the apparent non-being of death. And yet, we human beings struggle endlessly against the futility of dying with the impossibility of being able to conceive our own non-existence, beat against the cage of a deterministic universe with raging blows of freedom, struggle against discord in a universe where every particle of existence is unlike every other particle with unending quests for concord and peace, work against the selfishness of every gene in our own bodies working toward its own survival and propagation over and above all others with feelings of oneness of unselfish love and sacrifice, fight against every form of weakness inherent in our limited frames of existence confronting a merciless 'invincible' nature with indefatigable expressions of strength and strive to be aware of the very depths of knowledge of a vast complex universe in spite of being limited in this framework of our tiny brains and so on. Most of us neither drown in futility nor in fatalism. But are we destined only to be endless waves in the ocean of time, made self-aware by an unseen chance, cry out in a three-day existence followed by forever silence? Or is there a way which leads beyond this prison of relative existence?

Change implies cause and effect. Every entity we experience is the effect of a preceding cause and is in turn the cause of other effects. But is this process eternal both ways in time? While it is not practically possible to follow effects to eternity, we may speculate the possibility of

cause and effect proceeding eternally backwards in time. However, if that is so, if cause and effect can proceed backwards eternally, since that process never stops, it will imply that it never began. Can we accept our current reality as having no starting point at all? Common sense would suggest no. If we concede that existence had a starting point, then that point cannot have a preceding cause. Which means that the chain of cause and effect itself predicts its own breakdown.

What could be the nature of this hypothetical causeless cause of all existence? The first idea that comes to mind could be that this entity is unlimited. Why so? If this entity is limited, then the next question would be what is it limited by? This would imply the existence of another entity limiting it through some characteristic. How do these two entities then differ from each other and what is the 'cause' of this difference in characteristic between these two entities leading to this limitation? This implies the existence of an even more fundamental entity which led to these effects. Which then inevitably brings the conclusion that this entity is bound by another cause thus defeating its own definition. So now we have postulated an unlimited causeless entity. Again, with the same reasoning as above, this entity can only be one or rather as some of our traditional philosophers like to call it - *non-dual*. If 'one' exists, it implies the existence of 'another' one. So, the word 'one' does not seem ideal. We will just imply its existence by calling it not two. Or *non-dual*. Non-duality implies indivisibility, meaning that this reality cannot be divided into two which would then make it two entities. One would realise that all these different words mean the same thing.

Again, this nondual, unlimited, causeless entity is eternal. Why? If it changes, then what is effecting this change? Which brings us back to the implication that there is another entity effecting this change going against our definition.

So, by simply considering that the chain of cause and effect cannot go eternally backwards, we have postulated a causeless cause of all of existence, which is indivisible, eternal, unlimited or infinite and non-dual. If anything can be called the *Absolute Truth*, an entity whose existence does not depend on the existence of any other, it would be this.

Space is divisible, even in the simplistic sense that we can distinguish two points in space by their differing locations. Hence this entity we just postulated, being indivisible, is also beyond space. Time implies change, hence this entity we postulated, being eternal, is beyond time. Hence, change is not the constant. The idea of change itself may imply that there has to be a changeless entity at the basis of it all. But how does this practically help us? If it were true that there is an Absolute Truth as the ultimate reality of existence, what difference does it make to us in our predicament? An infinite reality beyond all?

Cause and effect is perhaps the most common observation of the nature of the universe. But what about the animate? Surely the same causeless entity is the source of the animate as well. But with what implications to the relation between conscious beings and the causeless entity? Let us follow the same approach. The most basic experience of consciousness is that at least all conscious human beings experience themselves as individuals. Is not that so? What is individuality? It can be said to be a distinct set of characteristics which define that individual, and distinguish from everything and everyone else. What defines 'me' and separates 'I' from you is this sense of individuality. We started with the concept of change, now let us ask a simple question – can individuality change? Since it is a defining set of characteristics, which makes the individual unique, if those characteristics change then will it still be the same individual

or a different one? The answer to this seemingly simple question defines the central idea from which a whole world view may be developed. Indeed, the differing philosophies of the world may be characterised by the answer they give to this question. The answer we will give to this question here will be that we will accept that individuality cannot change. If it does so, then since the defining characteristics are changed, it will be a different individual. But none of us accept that as our bodies changed from childhood to adulthood we are not the same person. None of us feel comfort in the idea that our constantly changing thoughts and feelings represent different people at each point in time. We all live convinced by the experience that we are one and the same person, though every entity that we identify with, and call as ourselves, be it the body or mind is undergoing constant change. So then, if individuality cannot change by definition, what are we if not this changing body and mind?

In our initial consideration, we postulated a changeless entity. We came to the idea that this changeless entity is the Ultimate Reality of the universe, of all existence. We now have another idea that individuality is also a changeless entity. Can there be two changeless entities? If there were, then we would again ask the question: what is the difference between these two changeless entities? How did that difference come about? As before, in our first considerations, we will have to admit that a changeless entity must be beyond cause and effect, unlimited, eternal, infinite and indivisible. And most importantly non-dual. So if there cannot be more than one changeless entity, then the changeless Ultimate Reality and the changeless Individuality are one and the same. And since individuality (the name itself suggests that it cannot be divided) is the most basic experience of consciousness, this changeless Individuality that we arrived at should be the most fundamental experience of

consciousness. If we digest this simple Truth, arrived at by a simplistic analysis, then as per (*Advaita*) *Vedanta* philosophy, we have attained to the Ultimate Reality of all existence. There is nothing else left to be done. The purpose of human birth has been fulfilled.

The Consciousness of Non-duality :

Consider Infinite Consciousness as we postulated. Nothing exists except this. And it is Eternal and changeless. Now suppose it wants to say “I am”. Now the concept called I is always associated with a sense of individuality as we experience all through our lives. Now this I, being an individual, is defined by a set of characteristics unique to that individual, which distinguishes that individual from all else. But, if nothing exists except this particular Individual, how to define its set of characteristics? How to distinguish it, if nothing else exists except it? In relation to what or who should it be defined? Also who is there that will define it and with respect to whom or what? All characteristics are defined by their expressions in relation to an experience/in relation to something/in relation to someone. If we want to know a characteristic called wetness, for example, water is wet – we need water, we need a person who experiences the wetness of water, and we need that person to distinguish the experience of wetness from other experiences so that it can be recognised as a distinct experience of wetness in contrast to all other experiences. But if water is all that exists as an infinite ocean which let us say is conscious, and it is changeless, will it be possible for it to know itself without differentiating itself as knower, known and knowledge?

So we come to this faint idea, that this Infinite ocean does not have a sense called ‘I’. Because there is no entity which exists other than That. Now how to distinguish ‘I’ from that which is ‘Not I’ if nothing else exists? And how to know the characteristic of ‘I’ if it is changeless and

never ‘express itself in anyway’ (expression requires change)? So this Infinite consciousness cannot say ‘I’.

Can this Infinite ocean say ‘am’ at least? Well, the concept of ‘am’ exists and has meaning only in relation to the concept of ‘am not’. If an entity is Eternal and changeless, then it does not know something called ‘am not’. Is it then possible to have a concept called ‘am’?

All thought requires three entities – a thinker who is the subject, an object about which the thought process is occurring and the thought itself - even if the thought is about oneself, we are psychologically distinguishing an entity called (a) the thinker (b) another entity called the one about whom the thought is and the (c) process of thinking itself. If there is no duality, no differentiation of these three, is it possible to have a thought? All words spoken, need three entities – one who speaks the word, one about whom words are spoken and the words themselves. All action requires three entities – actor, part being acted and characteristics of the action itself. So we come to this idea that this entity is beyond thought, words and actions.

Now we find ourselves in a strange place. We looked at the universe of cause and effect and postulated an entity beyond cause and effect. In doing so we broke down cause and effect and hence the universe itself. We looked at individualities, and postulated that ‘Individual’ is a changeless entity. In doing so we broke down the sense of individuality itself. We broke down the very thing we started with. Then how is it that this changeless entity ‘caused’ this universe, these living beings, these thoughts, these words, these actions when it is itself changeless and without (beyond) thought word and action? How did this entity lead to Individuality when we just showed that it has no sense of ‘I’ even which is the basis of all individuality we experience? The stranger answer to this question is that this

question cannot be asked logically. Why not? How did the non-dual become this universe of duality? How did this entity which cannot even say “I am” become this universe of I and you? How did this entity, beyond space, time and causation, become this reality which cannot be experienced without space, time and causation? How did this entity which is without and beyond words and thought, become all this which speaks and thinks? We went through all this exhilarating exercise of analysing our own existence just to come to the point where we could not have come from our own source?

Let us do a thought experiment. Suppose there is a wave which is created by water, but it does not know that for the time being, nor can it perceive water. This wave is conscious of itself as a wave only and also able to experience other waves. It is experiencing itself as movement, as a form, as small or big in relation to other waves. It projects a time when it came to being by seeing other baby waves come into being and presuming it also came to being in the past. And it knows it will cease to exist by seeing other old waves cease to exist. But it struggles to understand what is going on, because all these phenomena seem to be happening on their own. It postulates that there is an entity called water, seeing that it cannot come to being, do all that it is doing on its own and cease to exist on its own. It sees that it is a dependent entity, and assumes that there is something more fundamental to itself which is creating it, sustaining it and ultimately dissolving it. Now this wave desperately wants to know that which created it and is making it do all that it sees itself doing and will dissolve it eventually. So it tries to take away its focus from other waves and also from its own form and manner etc and concentrates only on what is causing it. It begins then to perceive water, the substance of which it is a part, as it were. But still, it only sees water engaged in creating,

maintaining and dissolving all these waves but it still cannot know what water looks, feels and is like on its own, still, calm and not engaged in all this wavy activity. So it sets out to experience that by reaching a state where there is only calm water without waves in it. If that state comes about when there is calm water, then the wave can ‘know’ what water feels like. But wait! If the water became calm, there is no wave at all! So who is there who can tell what the experience feels like? Who is there who can even ask this question as to what the nature of water is? Can the wave logically ask this question “what is water?” when the only way to know is to bring about a state where there is no wave itself?

But still, only water exists in this scenario. From the ‘beginning’ to the ‘end’, only water existed. It made a wave, played with it and became calm. But the poor wave, finding itself existent but not able to see what caused it, had a hell of a time. It experienced age, smallness, bigness, good form, bad form, good movement, bad movement, being, non-being without knowing anything about what is going on. Then it saw something making it, keeping it and dissolving it and felt happy. But when it went to see what water actually is, it disappeared. From the viewpoint of the wave, all this activity is going on. But from the viewpoint of the water, what happened? First there was water, then there was water and at last there was water. All the activity never made any change to the substance of water itself!

This analogy gives us a semblance of an answer. We saw that in the postulation of this Absolute Reality, there was no concept called ‘I’ at all. All relative experience which we now have is based on an entity called I. It is the reason why we go through all this experience, and it is impossible to perceive anything at all without this idea of an individual subject called I. In relation to this alone, there is perception of objects and the process of perception. So this I

never knows anything other than what is known through the I. It is the fundamental entity according to itself. Nothing exists other than in relation to it. When it seeks Reality also, it initially experiences that Reality in relation to itself. But when it wants to know the Truth, it will ultimately disappear because Truth is Non-dual. And in Truth, there is no I. No differentiation of subject, object and relation between the two in that Ultimate state, and so who is there that can ask this question - how did the Non-dual become the dual? So this question cannot be asked logically. Because the answer lies beyond the existence of the I which is asking this question. And the I disappears when it reaches the state which is the answer.

So the best explanation we can come up with is that this universe is a delusively manifested perception of the Ultimate Reality (*Vivarta vada*). The Ultimate Reality is not actually modified but only appears to be so in relation to the 'I' through which it is perceived. And the 'I' itself is a part of that manifestation. What can be said is that every aspect of the nature of this universe of relative experience implies the existence of the Absolute Truth. The finite implies the Infinite. Cause and effect implies the Causeless Truth. The consciousness of individuality implies Non-dual Consciousness. The very perception of bondage, great or small, implies that Freedom is a more fundamental reality. The very perception of relative disturbance and relative non-disturbance implies a more fundamental reality of Peace. The very perception of time, implies a changeless Eternity. The very perception of relative sadness and relative pleasure implies that there is a more fundamental state of Undivided Bliss. And the very 'fact' of death implies a more fundamental reality of Immortality. And so on. Every experience, good or bad is a modified perception of this Ultimate Reality based on the nature of the I which is

experiencing it. We say 'good' when the perception is closer to and in tune with the Ultimate Reality and we say 'bad' when the perception is relative to an attitude which is against the nature of this fundamental Reality. We may have a purer and a purer experience of this Absolute Truth if the I relative to which we are perceiving it also becomes purer and purer.

This is crudely, the idea of Substance and matrix (*maya*). It is like an ice world – with ice earth, ice houses and ice animals and ice people inside an Infinite ocean of water. Water is the substance and ice is the modification. From the viewpoint of the modification, multitude exists, phenomena exist, time, space and causation exist. The ice world exists. But as soon as the modification resolves into Reality, the ice melts into water, Reality alone exists, Substance alone exists, which is beyond all description as we have seen before. Therefore the best that can be done through the medium of words and thought, is to imply Its Existence. And that Existence should be implied by all the phenomena of relative experience.

The one clinching point of this whole exercise is that experience of the one and only Reality is different relative to the nature and characteristics of the modification (I) through which the Reality is perceived. If there is identification with a modification, Reality experienced is relative. The same Reality is experienced in different ways based on the nature of the prism through which it is approached. This is called *maya*. It is an assumed identity, with self-defined characteristics of individuality which colours the perception of the same Reality through different viewpoints, and makes the Reality appear with the characteristics relative to itself. Ultimately, the recognition must come that Truth is the basis of and interpenetrates all relative experience. While nothing can be said of the aspect of Truth which is beyond attributes as

discussed earlier, all experience otherwise is an experience of the same Truth, through different attitudes at different stages of experience. Seen through the prism of the ego, the same Truth appears to be with attributes. In analogy, if the *nirguna* (without *guna* or attributes) *Brahman* is an infinite ocean without a wave, the *saguna* (with *guna* or attributes) *Brahman* is the same ocean playing the game of creating, sustaining and dissolving the waves of this universe. The Absolute Truth has two aspects, *Nirguna Shiva*, *Saguna Shakti*.

Shakti - Mother of the Universe :

The Absolute Truth is unknown and unknowable. It alone exists. Suppose however, that this Reality never created this universe we find ourselves in. Truth is there. There is no one to know about it, no one that exists apart from it, no phenomenon that implies its existence, no characteristic of its nature that is expressed. In such an impossible hypothesis, one cannot even ask the question, does such an entity exist? Because no one exists to ask that question. There is no such thing as a question. A Basis with no association, an Essence with no expression is beyond the concept of meaning. But now in contrast, allow another equally impossible universe of multitude of expressions as we experience. But without an unchanging Basis of Infinite Consciousness for its existence, to give it its meaning. An infinite series of finite unconscious eternally changing entities This is equally meaningless. So we see that an unknown and unknowable, expressionless Essence is without meaning. So is endless purposeless expression without a Truthful essence for its basis. What these two meaningless concoctions – essence and expression which are separate from each other are missing is ‘Someone. This Some-one has Infinite Consciousness as the basis and is perceived to be engaged in activity (and therefore recognised as ‘someone’ (a personal being) rather

than an abstract impersonal entity) – the most fundamental of which is creation, sustenance, and dissolution of the universe. This Someone will literally bridge the Infinite with the finite and will literally be the basis of all the fun that comes with the play of this universe, play the game of creating this madhouse of space, time and causation, this circus where individual souls come to tumble, this theatre where depressing acts of bondages and the ecstatic acts of freedom play out.

This Someone is Reality itself, in its dynamic aspect of creating, sustaining and dissolving the universe and therefore, can be described as the Mother of the universe.

We considered that it is illogical to ask the question *how did the Infinite become finite* or the non-dual differentiated into duality. However, one cannot doubt that what is perceived here has its basis in Reality. It is impossible to limit expressions of Infinity, and therefore impossible to state with certainty that such and such an experience is the highest perception of Infinity inside the realm of relative experience. Hence spiritual experience and progression is by nature limitless. We find even a personality like Sri Ramakrishna, the King of devotees, saying “As long as I live, so long do I learn” despite having easy access to the highest experience of *Nirvikalpa samadhi* in the palm of his hand.

Truth is the source of us all. And hence can be personalised as a parent. The impersonal aspect, the Infinite ocean without a wave, is more easily conceived as Father or *Shiva*. And the personal aspect, the same Infinite ocean with the waves of this universe is more easily conceived as Mother, *Kali (Shakti)*.

Those aspects of Reality which are the most essential manifestations of Truth, which are the most fundamental aspects of perception, the ceasing of which leads to the dissolution of relative experience is the highest we can know

about the Absolute Truth in the relative realm. All such experiences of the Absolute Truth, while the ego is still present, are experiences of the Mother of the universe. *Nirvikalpa samadhi*, where the ego is said to be absent, is an experience of the Father, *Shiva*.

In the initial analysis we said that the universe characterised by the multitude of entities, phenomena all resolve into Non-duality. Therefore as one goes toward Truth, resolution of the multitude of differentiated existence which we perceive normally should occur toward that tending to Non duality.

Personally, every conscious experience has three aspects to it. What is experienced? What is the awareness that comes with this experience? What is the feeling that comes with this experience? We find innumerable types of material things in the physical universe. But we now understand that all the different types of matter we perceive can be resolved into molecules and atoms. We further know that this level is again further resolved into subatomic particles. Though we may not have reached the culmination of knowledge in relation to subatomic particles, we have a general understanding that all matter can be eventually resolved into energy. From this example, we get an illustration of the resolution of a differentiated state to a more undifferentiated state. While modern science stops at matter, force and energy, the ideas in the *Sanatana* tradition enumerate many more layers to Reality before knocking at the doorstep of the Absolute Truth. But for now, if all differentiation in existence were to be resolved into the most fundamental indivisible aspect of Reality, but still be perceived from the viewpoint of a ripe or a mature ego (one that reflects Reality as it is, as much as possible), that existence would be called as *Sat* (undifferentiated existence).

Our awareness in routine experience of reality, is conditioned in many ways and hence

multifarious. We are aware of many different types of sensations, thoughts, perceptions, and ideas. However, each experience of awareness is conditioned by the perspective of the perceiver, the object of perception and the instrument of perception. If one were to resolve all these conditions to a basal level and make perception as unconditioned as possible, then the Ultimate reality as perceived through that would be called *Chit* (unconditioned awareness).

All experiences in the relative realm, are associated with a characterisation of how that experience 'felt' Conditions again influence how an experience feels. In general, like and dislike of the individual as well as how good or bad any particular experience is a reflection of Reality, is what might decide how an experience feels. Again, if these conditions were to be resolved, and a simple, pure feeling of Reality is obtained through the ripe ego, then that feeling is described as *Ananda* (Bliss).

The 'I, reflecting Reality, which is of the nature of *Sat-Chit-Ananda*, assumes, as its primary attributes, the same characteristics. That is, I exist, I am aware, I feel. This *Sat-Chit-Ananda* is the highest experience of the ego in the relative realm in a personal sense of the term. It may be experienced in a formless manner with attributes by an impersonal attitude and in a manner with form through a personal attitude. And many more besides, as Sri Ramakrishna tells us. A study of the experiences of saints, prophets and incarnations tell us about the feeling of a Blissful Light of Unconditioned Awareness. The experience of the Light is mentioned in all the religions.

This is from the individual viewpoint. In the universal viewpoint, the most basic function of the universe is its own creation, sustenance, and dissolution. The most fundamental essence of the manifested universe which performs these functions is Power or '*Shakti*.'

Nothing is more fundamental to this existence than the idea that the Ultimate reality is changeless whereas the relative reality is characterised by change. All change occurs in time. Therefore the Ultimate Reality as it manifests to us, nothing is more fundamental in that manifestation than the control of time. That is *Kali*. And it is the dissolution of time that brings the experience of Truth. Being the controller of time, She alone paves the way for the finite to melt away in the Infinite.

Brahma — Shakti Abheda :

In the Advaitic understanding of reality, the aspect of the Absolute Truth which is beyond attributes is given supreme importance. From that standpoint, all manifestation, including creation, sustenance, and dissolution, being changing phenomena, would become phenomena of *maya* and unrelated to the Truth.

But, in as much as the *nirguna* aspect of Truth is Absolute, that is, its existence does not depend on the existence of any other, the *Shakti* aspect of the same Truth is also Absolute as it is the ever present basis of all manifestation and therefore unchanging. It is Uncaused, Indivisible, beyond space and the controller of Time.

It is what creates the ego as waves springing out of water. It is the Reality from which all beings come, all beings live in and all beings go back to. The controller of the three *gunas* of nature. The waveless Infinite, beyond attributes and the dynamic aspect of Reality, perceived as creating, sustaining and dissolving are two aspects of the same Ultimate Truth (calm water versus same water in waves) as per Sri Ramakrishna.

The Real Self :

This Absolute Truth, in both its aspects, is the Ultimate Reality of all existence and is the same as the Self. Since it is non dual and the source of all conscious beings, the same Ultimate Reality is the inmost reality of all beings as well, the

Real Self, along with being the source of all of so-called inanimate existence. Since the most basic conscious experience of individuality implies its existence, it is also the ultimate or the highest Consciousness. Since it is the ultimate Truth, the source of all existence, by knowing it, all that exists becomes known. And so, the real quest of knowledge is a knowledge of the Self. It is the Real Individuality of all individuals. It is the One without a second. It is all that exists and it has become all.

In the relative realm, implying that Reality is perceived through an ego, there is the ever-present duality of ego and the Reality as perceived by it. In this state there is always a difference between the ego and Reality. In this realm, the highest Reality or *Shakti*, being the source, sustainer, and dissolver of all egos – is eternally and infinitely greater than all egos. However, in the egoless state of *Nirvikalpa samadhi*, only non-duality may be implied.

It is the Self of all, the Immortal which disallows us to believe that death of the body is the end of existence. It is the reason why though no human experience has ever gone against the inevitability of bodily death, we still do not become fatalists. It is the reason why it is impossible for us to conceive of our own non-being. In ignorance, there is fear of death because non-being is completely alien to our own real nature and the thought of it makes us uncomfortable.

It is the Self of all, the Infinite, the Unbound which gives human beings an indomitable sense of freedom against all the evidence of a deterministic universe. It is the reason why human beings can never accept bondage as normal or unsurmountable. It is the reason why it feels better to die beating against and breaking the walls of a cage than to resign oneself to submission. It is the reason why even when falsely identified with a limited skin cage of flesh and bones or with flimsy frameworks of

limiting thoughts, the human spirit still strives to overcome all odds.

It is the Self of all, the non-dual basis of all existence which forms the basis of our feeling of one-ness with another in any form and manner of love, with our feeling of one-ness with all likable experiences, with the feeling of universal one-ness with all in unselfish Love, nay with the feeling of One-ness with all of existence. One-ness or union is the fulfilment of love.

All happiness is derived from the feeling of love and like. I identify with the body; hence I like and find pleasure with experiences that nourish and survive it. I identify with an idea; hence I like and find pleasure with intellectual works that agree with my ideology. I identify with qualities; hence I am happy with anyone who expresses those qualities. I seek a desire; hence when I am united with a fulfilment of that desire, I experience one-ness with my desired state and therefore happiness. All experiences which bring happiness, psychologically have a basis of the feeling we call like and love. When we experience one-ness with that which we like and love we feel happy. If such is true of limited experiences of one-ness, what would the experience of the non-duality of all existence feel like? Unlimited Bliss. It is the Self of all, the Non dual which is Bliss. And is reflected in all other limited experiences of one-ness as happiness or pleasure.

It is the Self of all, Consciousness itself, being all of existence and having become all of existence is aware of all of existence and hence the source of all knowledge and is Omniscient, the unconditioned Awareness.

It is the Self of all, being One with all as their inmost reality, which therefore is the source of all harmony.

It is the Self of all, being the all in all, which is Peace itself. As there is no entity other than this Ultimate reality, how can there be discord?

It is the Self of all, which is the source of all morality. As the same entity is the Self of all living beings, nay the entire existence, we who in our present state feel separate from others, must treat others as we would treat ourselves. This golden rule “treat others as you would have them treat you”, is the source of all moral code. It is literally true, because ‘my’ real Self is ‘your’ real Self as also the Self of everyone else. Therefore, what I am doing to you, I am doing to me.

It is the Self of all, being the One without a second, which is purity itself, as there is no other entity that exists which can bring impurity to it.

It is the Self of all, fearlessness itself; being all that exists, who else is there that it can be afraid of?

It is the Self of all, the Ultimate reality from which the whole existence has sprung, which makes it also the source of all possibilities, and therefore the Omnipotent.

It is the Self of all, that which has become all, and therefore Omnipresent.

It is this which is called as God.

When we experience it as I and You, we exist in relation to it. When there is no I, then what Is, Is.

Layers of Reality :

From the viewpoint of the ego, the Absolute Truth is characterised by the complete absence of the ego. It is indescribable, even theoretically because it is beyond the three-fold differentiation of subject, object and the process of interaction between the two. It can be implied however, by the nature of the universe and individuality. In contrast, existence in the relative reality is not possible without having an ego. The ego is of the nature of an assumed identity but the assumption cannot be made without reflecting some aspect of reality onto itself. Relative to the nature of each assumption of the ego, Reality is

perceived by it in a different way. The Ultimate Truth is the repository of all possibilities. Each type of ego accesses the expression of different aspects of Reality based on its nature. The ego does not have any existence of its own. If there is no identification with a reflected aspect of reality, it ceases to exist immediately. This brings us to a dichotomy of existence which always characterises relative reality – ego and Reality as it appears to that ego. These two aspects must always be present when considering any experience inside the relative realm. Therefore, when analysing experiences, especially spiritual, the context provided by the attitude of the worshipper should not be missed. It is more a description of phenomenology – it is difficult to claim that ‘this’ is what it ‘is’ categorically. But this was perceived in this attitude through this type of ego is perhaps a better description.

Let us now clarify the last statement through an illustration from the Upanishad. (Taittiriya Upanishad, Part III, chapter 1). There was a boy named Bhṛgu. His father was Varuna. He went to his father and requested him to teach him about *Brahman* (the Ultimate Truth). His father said to him, “I will give you a characteristic of *Brahman*. Meditate on that characteristic definition and realise what is the entity which fits into that definition. Realise this entity through *tapasya*. The characteristic is that from which all beings come, that in which all beings live and that to which all beings go back – that is *Brahman*. Realise it through *tapasya*.”

So the boy began his introspection. One must realise that the one who is meditating is also a being who has come from, lives in and goes back to that Brahman which is being meditated upon. The introspection is what am I coming from, what am I living in and into what am I going back to?

It is literally a process of ‘self’ realisation. Now this boy comes to his first conclusion. He

experiences himself as a body made of matter in his usual state. He thinks the physical universe is *Brahman*. The body comes from this material universe, lives in it and when it dies goes back to the matter where it came from. So it should be that the material universe is *Brahman*. But somehow he is not satisfied with this realization. He goes back to his father, who repeats the same instruction and sends him back to his meditation.

Going a step further, he realises that all the matter in this universe can be resolved into force (*prana*). With this realization we must understand that he is viewing himself also as a being made of force. Not satisfied, he goes back, and is again sent back.

He then realises *Brahman* as mind (*mana*). (this is where modern understanding ends. The Bharatiya understanding is that, mind is an aspect of reality more fundamental than the forces of physical nature. And just as individual mind controls the forces and matter of the physical body, the layer of reality called mind controls the layers of reality more gross to itself, that is force and matter in the universe as well). He has now realised himself as mind. Better, but still not satisfied, he goes back to his father, and is again sent back.

The next layer that opens up to him is that *Brahman* is *vijnana*. *Vijnana* is variously translated as intelligence or knowledge. It is said to be the *buddhi* – intellect or the determinative faculty which gives the sanction to the mind to work through the material body. All actions performed by individuals who have not attained to the Truth are preceded by motive through desire, and it is the ego of individuality which creates desire and works through will which in turn creates impressions called the mind. It is the sense of individuality from which all the impressions called as mind are made. Again better but not satisfied, he goes back, and is again sent back.

At last, he realises Bliss (*Ananda*) as *Brahman*. With this realisation, he sees himself also in relation to Reality as Bliss. As we saw earlier, Bliss is an experience of non-duality, or oneness of all existence. Now, he is in a state of 'I', pure, where he can perceive Reality as non-dual Bliss (an experience of the *vidya-aham* or the ripe ego). Now he is seeing the one-ness of the whole of existence and himself as a being who comes from this *Sat-chit-ananda*, lives in it and goes back to it. (*Ananda* cannot be separated from *Sat* and *Chit*). At this stage he is satisfied and he no longer needs to go back to his father, content as he is in his realisation. This is the *Ananda-maya kosha*. It is still a *kosha* or sheath and not the Ultimate Reality itself. When this ego also vanishes then, the non-dual Absolute Truth is implied.

So in this example, we get a sense of what the layers of Reality mean. At each step, it is the same Reality which is perceived, but through differing conditions. If one identifies with the body, one experiences the same Reality as the physical universe. If one identifies with the mind, the same Reality is experienced as (cosmic) mind. Ultimately, as the ego is purified, only *Sat-Chit-Ananda* is experienced.

"M : "Why should your visions (of God) not be real? If they are unreal, then the world is still more unreal; for there is only one mind that is the instrument of perception. Your pure mind sees those visions, and our ordinary minds see worldly objects."

MASTER : "I see that you have grasped the idea of unreality.^[1]

Philosophy to Neurology :

Now with this background, a theorisation of the way in which higher aspects of reality relate to the human biological system can be attempted. Firstly, we need to understand that it is the Ultimate Reality, which is Infinite consciousness,

which through the reflections of the ripe ego, then individuality, then mind, then force enters and functions through the physical human being. Therefore, as far as perception is concerned, from the physical senses to the experience of *Brahman*, all experiences are available within the depth of the human being. Again, these layers of the human being are not conscious by themselves, they reflect Infinite consciousness, which in turn leads to the experience of self-awareness, of the three states of wakefulness, dream and sleep, of life and death. The perception of a higher aspect of reality is never lost under any circumstance in human beings, because, unless that Consciousness is reflected in these layers of the human being, a 'person' cannot exist. By the same token, death occurs when the layers of the individual soul – the *linga* and *karanasharira* (*linga sharira* is subtle body representing the layers of mind and *vijnana*, *karanasharira* is the causal body representing the *ananda-maya kosha*), with the Ultimate Reality as their basis, separate from the gross body of force and matter.

Swami Vivekananda explains the process of perception as per the Sankhya philosophy: "I will tell you a little of the Sankhya philosophy, upon which the whole of Raja-Yoga is based. According to the Sankhya philosophy, the genesis of perception is as follows: the affections of external objects are carried by the outer instruments to their respective brain centres or organs, the organs carry the affections to the mind, the mind to the determinative faculty, from this the Purusha (the soul) receives them, when perception results. Next he gives the order back, as it were, to the motor centres to do the needful. With the exception of the Purusha all of these are material, but the mind is much finer matter than the external instruments. That material of which the mind is composed goes also to form the subtle matter called the Tanmâtras. These

become gross and make the external matter. That is the psychology of the Sankhya. So that between the intellect and the grosser matter outside there is only a difference in degree. The Purusha is the only thing which is immaterial. The mind is an instrument, as it were, in the hands of the soul, through which the soul catches external objects. The mind is constantly changing and vacillating, and can, when perfected, either attach itself to several organs, to one, or to none. For instance, if I hear the clock with great attention, I will not, perhaps, see anything although my eyes may be open, showing that the mind was not attached to the seeing organ, while it was to the hearing organ. But the perfected mind can be attached to all the organs simultaneously. It has the reflexive power of looking back into its own depths. This reflexive power is what the Yogi wants to attain; by concentrating the powers of the mind, and turning them inward, he seeks to know what is happening inside.”^[2]

As a corollary, we must understand a peculiar situation created by modernity in the form of artificial intelligence - imitations of human behaviour with embedded algorithms and vast data programmed as much as possible to imitate human behaviour to the extent that it may be difficult to predict if one is dealing with an actual human being or an artificial imitation of one. From the background study and practice of the scriptures, it is clear that the human being is not merely flesh. There are more layers to this existence including the mind, individuality and ultimately the innermost reality beyond the ego – Truth. Thence, it is a straightforward conclusion that any amount of accuracy in the imitation which contains only physical components, how much ever it mimics the behaviour of a human is NOT the same as an actual human connected through the depth of ones being to the Ultimate reality, because all the other layers of reality are not present in that behavioural imitation. Nor

can this imitation be conscious or experience emotions or have an ethical sense which comes innately from the non-dual nature of Ultimate Reality.

As we considered previously, all relative perception of reality comes through the prism of the ego.

A pure attitude, relating to nothing except God and wanting nothing but God, will perceive what it wants – God. Identification with material – body and mind limits the understanding of reality and clouds the perception. Hence it is the clouding or limiting of perception, through false identification with matter that prevent the Reality to be perceived as it is. It is very much like wavy waters preventing the perception of the bottom of the lake. It is to be noted that a limited perception of what is already True through the framework of conditions leads to the outwardliness of the focus of conscious perception. It can perhaps be postulated in this context that *Chit* is unconditioned awareness, when it is limited by conditions, it becomes thought. Bliss (*Ananda*) which is unconditional, when conditioned, is perceived as emotion.

We saw that the first manifestation of the Ultimate Reality is as the Power of creation, sustenance, and dissolution of the universe. If this power is the final seemingly limitless expression of Infinity in the relative reality, this manifestation becomes limited by the lesser and lesser possibilities of the layers of reality from the ego to mind to force to matter. One must imagine how it would feel for the power of Infinite consciousness to be limited by the possibilities of these layers. The identification with matter is the most contracted and limited way in which one may experience Consciousness. As it were, the unlimitedness of the power of the Ultimate Reality becomes contracted in its perception and expression of possibilities, thereby resembling a spring which has become coiled (i.e., contracted in the

expression of its possibilities), called the *Kundalini*. This unnatural coiled up state of limited awareness is extremely uncomfortable to the soul, which knows the unlimitedness of the depths of its own being. As soon as the false identification is let go off, as with the example of Bhrugu seen above, the experience of matter gives way to the higher experience of oneself as force, then mind, then individuality and finally the bliss of Infinite existence.

The process through which this occurs is described by Sri Ramakrishna as follows.

MASTER : According to the yogis there are three nerves in the spinal column: Ida, Pingala, and Sushumna. Along the Sushumna are six lotuses, or centres, the lowest being known as the Muladhara. Then come successively Svadhithana, Manipura, Anahata, Visuddha, and Ajna. These are the six centres. The Kundalini, when awakened, passes through the lower centres and comes to the Anahata, which is at the heart. It stays there. At that time the mind of the aspirant is withdrawn from the three lower centres. He feels the awakening of Divine Consciousness and sees Light. In mute wonder he sees that radiance and cries out: 'What is this? What is this?' "After passing through the six centres, the Kundalini reaches the thousand petalled lotus known as the Sahasrara, and the aspirant goes into samadhi.

"According to the Vedas these centres are called 'bhumi', 'planes'. There are seven such planes. The centre at the heart corresponds to the fourth plane of the Vedas. According to the Tantra there is in this centre a lotus called Anahata, with twelve petals.

"The centre known as Visuddha is the fifth plane. This centre is at the throat and has a lotus with sixteen petals. When the Kundalini reaches this plane, the devotee longs to talk and hear only about God. Conversation on worldly subjects, on 'lust and gold', causes him great pain. He

leaves a place where people talk of these matters.

"Then comes the sixth plane, corresponding to the centre known as Ajna. This centre is located between the eyebrows and it has a lotus with two petals. When the Kundalini reaches it, the aspirant sees the form of God. But still there remains a slight barrier between the devotee and God. It is like a light inside a lantern. You may think you have touched the light, but in reality you cannot because of the barrier of glass.

"And last of all is the seventh plane, which, according to Tantra, is the centre of the thousand-petalled lotus. When the Kundalini arrives there, the aspirant goes into samadhi. In that lotus dwells Satchidananda Siva, the Absolute. There Kundalini, the awakened Power, unites with Siva. This is known as the union of Siva and Sakti. The state of samadhi "When the Kundalini rises to the Sahasrara and the mind goes into samadhi, the aspirant loses all consciousness of the outer world.^[3]

Let us try and correlate these descriptions to the various aspects of the structure and function of the nervous system.

Theory 1 : The number of petals in the different lotuses along the *Sushumna* in each anatomic region corresponds to the number of functional neurologic units at that particular anatomic level. This corresponds to the number of spinal nerves in the sacral, lumbar and cervical regions, half the number of spinal nerves in the thoracic region and the number of cerebral hemispheres in the brain.

The nervous system is divided into the central and peripheral nervous system. The brain and the spinal cord are the two parts of the Central Nervous System (CNS). (though they are conventionally named as separate, brain and spinal cord are anatomically continuous). The peripheral nervous system consists of nerves and ganglia (cluster of nerve bodies outside the CNS).

It has two divisions – afferent and efferent. The afferent nerve fibres transmit nerve impulses from the peripheral organs to the spinal cord and brain. The efferent nerve fibres carry information from the central nervous system to the peripheral organs to carry out an effect.

The spinal cord divides into 31 segments: these are anatomically divided as - cervical (neck region) 8, thoracic (chest region) 12, and the lumbar 5, sacral 5, (both lumbar and sacral regions form the lower back region, lumbar being above the sacral) and coccygeal 1 (correspondingly there are 31 pairs of spinal nerves: 8 cervical, 12 thoracic, 5 lumbar, 5 sacral, 1 coccygeal).

Though there are several named parts of the nervous system, anatomically the parts are continuous with one another and it functions as one whole with a very high level of integrity. It is the instrument through which, in the philosophical sense of the term, the mind and then the soul connects to and experiences the material.

From below to above, the coccyx is the final portion of the vertebral column, and corresponds to the tail in apes. In the human embryo temporarily there is a tail, with coccygeal vertebrae, associated nerves and the terminal portion of the spinal cord which gets resorbed eventually, what remains, is considered vestigial^[4] and hence is not of much consequence in our current consideration. As shown in the table, in the lumbar and sacral segments of the spinal cord, there are a total of 10 segments and as there are a pair of nerves in each segment, one from each side, 20 nerves that emerge from this region supplying both lower limbs and lower portion of the back and abdomen. The lotuses of the *Muladhara*, *Swadhisthana* and *Manipura* – representing the anal, genital and naval regions total up to 20 petals as well. In the cervical region also, which supplies the upper limbs, neck, chest and axilla (arm pit) the number of nerves is 16 (8 pairs, one from each side) and the number of

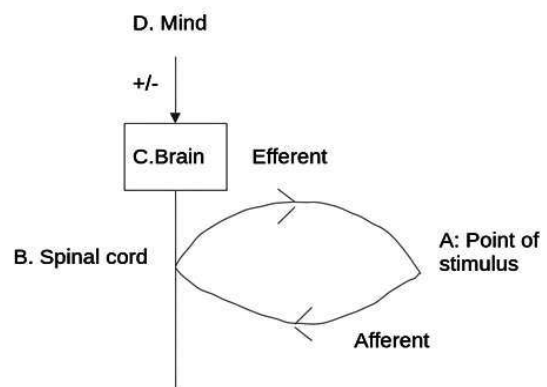
petals in the lotus of *Vishuddha* (throat centre) is 16.

In the thoracic region, however, it is seen that the number of petals in the *Anahata* lotus (heart centre) is exactly half the number of nerves emerging or the same as the number of segments. Now it may be argued that if the premise is correct, then for the nerves supplying the lower and upper limbs, there is a functional differentiation of right and left for the nerves as well as the limbs. Hence the right and left spinal nerves supplying the limbs should be counted separately. Whereas in the thoracic (chest) region, left and right side differentiation in the chest does not have much functional significance. This is to some extent corroborated by studies looking at stimulation of somatosensory cortex (part of the brain which receives and processes the sensory input from all parts of the body) responsiveness by functional Magnetic Resonance Imaging when limbs are stimulated versus trunk.^[5] Stimulation of the right and left limbs induces responsiveness in the opposite (left and right respectively) somatosensory cortex implying that left and right sides are distinguished, whereas stimulation of the trunk on either side leads to stimulation of the both sides of the relevant areas of the brain. This observation may give credence to the functional non differentiation of right and left thoracic areas in the way the brain processes information from this region and hence the pair of spinal nerves emerging in this region may be considered as one functional neurologic unit which explains the discrepancy in the nerve and petal number by exactly half.

All the information obtained from the various parts of the body are ultimately processed in the two cerebral hemispheres. The significant lateralisation of the function between the right and left hemispheres again makes for their consideration as two distinct entities. Hence two petals for two hemispheres (*Ajna* lotus).

Lotus	Location	Number of petals	Neuroanatomic Correlate
<i>Muladhara</i>	Organ of evacuation	4	There are 5 pairs of spinal nerves that emerge from lumbar and sacral spinal cord. (L1-5, S1-5) – making a total of 20 nerves. The total number of petals in the first three lotuses also number 20.
<i>Svadhithana</i>	Organ of procreation	6	
<i>Manipura</i>	Navel	10	
<i>Anahata</i>	Chest	12	T1-12 : 12 pairs of nerves emerge from the thoracic spinal cord. However the number of petals in the Anahata chakra is also 12 i.e., exactly half.
<i>Vishuddha</i>	Throat	16	C1-8 : 8 pairs, that is 16 nerves emerge in the region of the neck, i.e., the cervical spinal cord. Number of petals is also 16.
<i>Ajna</i>	Between the eyebrows	2	The location of this centre corresponds to the brain. As we all know, the numerous pathways of brain circuitry can be eventually resolved into two functional components i.e., the two cerebral hemispheres, corresponding to two petals in this lotus.
<i>Sahasrara</i>	Crown of the head	1000	This is beyond material, the experience of unconditioned awareness no longer limited to experience through a finite number of pathways of knowledge. Perhaps, hence the representation as a fully bloomed lotus of a thousand (innumerable) petals.

Theory 2 : A nerve can be represented as a petal symbolically as it functions in the manner of a loop of information processing (a petal looks like a loop as well) i.e., a nerve may be represented as a reflex arc of afferent pathway conveying information from the external environment and the body to the central nervous system and efferent pathway carrying the response of the central nervous system to the effector tissues. This reflex arc is symbolically represented as a petal.



Assume a stimulus from the environment or the body itself which has given its information to any one of the nerves eventually through the spinal cord to the brain. This is the afferent stimulus. In the materialistic world view, the physical universe being the all in all of existence, it should be impossible for the human awareness to wilfully detach from a sensation with the consequence of choosing not to perceive that sensation despite an intact nervous system and the presence of a stimulus. However, in the religious experience, this process of being able to withdraw the focus of consciousness from the external objects of the senses, then from the body itself, and eventually from the impressions we call as the mind and turn it toward its own source, i.e., the Infinite Consciousness is fundamental. "When he looked at Sri Ramakrishna he was struck with wonder; for the Master stood motionless, with eyes transfixed. He seemed not even to breathe. A devotee told M. that the Master was in samadhi. M. had never before seen or heard of such a thing. Silent with wonder, he thought: "Is it possible for a man to be so oblivious of the outer world in the consciousness of God?"^[6]

In the pages of the gospel, we find Sri Ramakrishna going into this state of samadhi time and again, several times in a day. "In bhava samadhi you will see the form of God, and in nirvikalpa samadhi you will realize Brahman, the Absolute Existence-Knowledge-Bliss. In nirvikalpa samadhi ego, name, and form do not exist."^[7]

At a lower level, this phenomenon would manifest as being able to choose to see or unsee with the eyes being open, choose to hear or not hear a sound, choose to or not to perceive pleasure or pain from any part of the body. It is like voluntarily being able to apply anaesthesia to the body, part or whole. Indeed, we find recorded similar experiences in the lives of many saints^[8].

In more common experience, we are all aware that we filter and choose which of the jumble of sensory stimuli that we can focus on consciously. Like for example, in a market, though various sounds are impinging on the ears at the same time, we donot seem to have trouble focusing on the conversation at hand. It is also a common experience, people who are lost in thought or emotion, do not seem to be able to hear sounds in their vicinity though there is nothing wrong with their ears, or the nerves or the brain, and so on. Consider if it would be possible to extend this phenomenon, to a scenario where there is such fullness of concentration on a purely mental object having no connection to any object in the external world, with the result that the mind is absorbed in it leading to loss of awareness of the body altogether.

"A person can achieve such single-mindedness in meditation that he will see nothing, hear nothing. He will not be conscious even of touch. A snake may crawl over his body, but he will not know it. Neither of them will be aware of the other. "In deep meditation the sense-organs stop functioning; the mind does not look outward. It is like closing the gate of the outer court in a house. There are five objects of the senses: form, taste, smell, touch, and sound. They are all left outside^[9]."

With this background let us look at the different possibilities of sensory experience or its absence in relation to the petal analogy. In usual experience, a sensory stimulus stimulates a receptor, then the nerve impulse generated travels to the spinal cord and thence to the brain where the sense is perceived, if the mind engages with this stimulus through an attachment and a reaction, then one may represent that state as the attachment between the sensory stimulus and the mind. In the figure, this will be represented as point D (mind) coming in contact with point B (spinal cord) through point C (brain) being

engaged by point A (sensory stimulus). In the analogy, if point A touches point B, then the petal should come into contact with the stem, as it were and look closed. Imagine the loop of the reflex arc coming backwards and touching the spinal cord i.e., A connecting to B.

If the attention of point D (mind) is taken away from C and hence B and A, then the stimulus would travel physically through the nerves but not be perceived by the person. Here all components of the arc are intact as it were without any point coming into contact with any other point. The petal would look open.

Finally, suppose the mind is detached from all the stimuli coming from a certain level in the spinal cord. Then one would be unconscious of the region of the body supplied by those nerve segments in the spinal cord. Consider this process of withdrawal of attachment going from the lowest portion of the spinal cord, segment by segment all the way to the brain, one then loses awareness of the body starting from the feet and moving upwards till all external awareness is withdrawn. During this process, as the focus of consciousness is withdrawn, taking the above analogy, the 'petals' at each level would 'open up'.

"During my sâdhanâ period I had all kinds of amazing visions. I distinctly perceived the communion of Âtman. A person exactly resembling me entered my body and began to commune with each one of the six lotuses. The petals of these lotuses had been closed; but as each of them experienced the communion, the drooping flower bloomed and turned itself upward. Thus blossomed forth the lotuses at the centres of Muladhara, Svadhithana, Anâhata, Visuddha, Âjnâ, and Sahasrara. The drooping flowers turned upward. I perceived all these things directly^[10]."

"You see," said he, "something goes up creeping from the feet to the head. Consciousness continues to exist as long as this power does not reach the head; but as soon as it reaches the head

all consciousness is completely lost. There is no seeing or hearing any more, not to speak of speaking. Who can speak? The very idea of 'I' and 'you' vanishes^[11]."

So it may be surmised, that nerve function, with consideration of mind being attached to and detached from its stimulus and sensory perception may be represented as closing and opening of a petal.

Theory 3 : The *Ida* and *Pingala* nerves of the yogis correspond to the afferent and efferent functions of the nervous system. This idea comes from Swami Vivekananda. He describes in his monumental book *Raja Yoga* - "We know there are two sorts of actions in these nerve currents, one afferent, the other efferent; one sensory and the other motor; one centripetal, and the other centrifugal. One carries the sensations to the brain, and the other from the brain to the outer body. The columns of sensory and motor fibres in the spinal cord are the *Ida* and *Pingala* of the Yogis. They are the main channels through which the afferent and efferent currents travel^[12]."

Theory 4 : Proposed framework to interpret the gradation of conscious experience represented by each of the lotuses along the *Sushumna*.

Sat-Chit-Ananda is the inmost Conscious Reality of human beings. This is reflected as the experience of individual consciousness. Each lotus and by corollary the corresponding neurologic segment of the brain or spinal cord represents a stage of experience of this reflected consciousness. The reflector in each stage, that is the part of the nervous system in which this experience is obtained is characterised by all the afferent and efferent stimuli/response which is obtained by each of these parts of the spinal cord and brain individually. The focus of consciousness may keep shifting between these different centres of perception which are different segments of the spinal cord and brain based on the will of the individual soul. The experience of the *Muladhara* lotus (mostly the sacral segment

of the spinal cord) represents the lowest level of human awareness, that of *Swadhisthana* (sacral and some segments of lumbar) represents a more expanded awareness and so on. Thus, the framework of thought, emotion and action gradually expands as the focus of consciousness goes upwards in the spinal cord toward the brain. Awareness in relation to the *Muladhara* lotus for example, is a mindset that is limited in its awareness, by the framework of sensory and motor experience obtained through those set of nerves and the thought and emotion it incites in the conscious being. As it moves upwards, the mind is expected to be detached from the lower set of nerves, the awareness expands to a better reflection of the Highest Conscious state, with the exclusion of the experiences of the lower state. Finally, while still remaining in the framework of thought and emotion, the experience of the *Ajna* lotus represents the highest level of human conscious experience.

“The seat of the mind is between the eyebrows; but its look is fixed on the navel and the organs of generation and evacuation, that is to say, on 'lust and gold'. But through spiritual discipline the same mind looks upward^[13].”

"The Vedas speak of seven planes where the mind dwells. When the mind is immersed in worldliness it dwells in the three lower planes- at the navel, the organ of generation, and the organ of evacuation. In that state the mind loses all its higher visions-it broods only on 'lust and gold'^[14].”

Relative influences on brain and behaviour :

It is common experience that average human and animal behaviour is highly influenced, directly or indirectly by the intent of physical survival and pleasure. In the philosophical perspective, this may be interpreted as a consequence of identification of 'self' with the physical body. As considered previously, the

false superimposition of the characteristics of the Real Self upon the objects that the ego falsely identifies with may explain many human behaviours. At the same time, other powerful influences at the physical level would be the avoidance of pain and the seeking of what is comfortable and pleasurable.

The nerve impulses which provide sensory afferent information from different levels of the spinal cord may be divided into those obtained from somatic (includes all inputs from the 5 senses – skin, eyes, ears, nose and taste) and visceral sources (information relayed to the brain from the internal organs). While the somatic afferent input may be linked to the interaction of the body with the external environment, the visceral afferent inputs are concerned with the states of the internal organs of the body. These are often ignored and scarcely studied but are probably of primary importance to neurologic function. Dynamic and continuous afferent visceral inputs, in toto, perhaps drive the brain's representation of the body's internal state which in turn builds the experience and awareness of the physical organism. It follows that this aspect influences human behaviour and awareness in the physical sense at least equally if not more, compared to the inputs from the external environment and their processing in the brain^[15]. Therefore, while attempting to characterise the framework of conscious awareness produced by the sensory information obtained from different segments of the spinal cord, the visceral inputs from those regions are very important. It is to be noted that the lower three centres, representing the organs of evacuation, generation and digestion – their functions and the level of conscious awareness that they represent are similar between animals and humans. Only when the human being transcends, in thought, emotion and action these three functions, is the 'human' being worth the name according to religious understanding.

Muladhara :

Anatomically this lotus is 'present' at the level of the organ of evacuation. In neuroanatomy, this would correspond, as seen before to the lumbo-sacral nerves which obtain sensory information from and regulate the functions of the lower limbs and the anal region. Assume that the conscious awareness at this stage is limited to the sensory perception obtained by these nerves alone and no other perception is possible. This means that this particular 'person' operates at a level where - no information is obtained about the body or its environment except that which is conveyed by these nerves. What is the level of awareness obtained in a conscious organism which is limited to perceive only that information which is coming from these set of nerves? It may be represented by a mindset which only knows about its own sensations be it interpreted as pleasure or pain, has no awareness of other organisms and has very limited awareness of its environment.

This being says, my awareness is limited only to my own sensations. I know not of other beings like or unlike me. I sense very little of the environment I live in. Needless to say, this state of mind is characterised by and works in the framework of extreme selfishness, with no awareness of or consideration for other living beings and works only in relation to its own pleasure and pain irrespective of the consequences of its actions on others. Hence if someone behaves in this way, their level of conscious awareness is said to be functioning at the lowest level possible to human beings, and corresponds to the lowest portion of the nervous system.

Swadhsthana :

This lotus represents the nerves supplying the organ of generation (genitalia). Applying the same framework as before, the function of these

nerves require interaction with the opposite sex of the same species. Compared to the previous centre, where the conscious awareness of the being was limited to pleasure and pain experiences of one's own body alone, this set of nerves and their function expands the framework to include other members of the opposite sex. In this sense, all the thought, emotion and activities of an organism which relate to reproduction and propagation of the species is represented by the function of this centre. This represents a slight expansion of the conscious awareness, from being limited to one's own body alone to include other members of the species, albeit related only through selfish attachments. Thus, an awareness or a mindset which is limited to one's own sensations, and connects and interacts to other members of the species through a physical relationship is said to function at the level of the two lower nervous centres.

Manipura :

This is the centre at the level of the navel. These nerves would obtain visceral sensory information from and regulate the functions of the gut or the gastrointestinal system. All the functions of the human organism which relate to the acquisition of food for survival will represent the function of this centre. This expands the conscious awareness some more, needing to interact with the environment for procuring food, feeding oneself and one's family, as also the need for collaborating with other members of the 'community' for a stable process of survival. In short, the spectrum of consciousness at this stage involves all the range of thought, emotion and activity needed for survival, reproduction and awareness of and reaction to one's own sensations.(the lower three centres)

If this interpretation is correct, then we see that the concept of neurologic organisation in this approach calls for a gradation of conscious awareness in relation to each anatomical portion

of the nervous system. It may be said that the body is evolved and anatomically organised in a way that incorporates stages of evolution and development of the human psyche in an anatomically meaningful manner.

Now let us take into consideration the concepts involved with the lotuses top down and their neurologic correlates.

Ajna :

The first consideration is that since the lotuses and their corresponding neurologic counterparts represent lower states of consciousness lower down, and higher states higher up, it stands that the 6th centre representing the two cerebral hemispheres of the brain, called as the *Ajna*, is associated with the highest state of consciousness while still retaining an ego. The 7th centre, *Sahasrara* or the thousand petalled lotus is beyond material and is the seat of *Shiva*, the Absolute Truth. This experience of *nirvikalpa samadhi* is characterised by the absence of the ego (Non-duality).

Hence, one should presume that the point of contact of *Sat-Chit-Ananda* to the individual soul should be in the brain. In the philosophical sense of the term, this is the first reflection of the Undivided Consciousness in the human being. The scripture affirms this as we find in the *Aitareya* upanishad that the supreme being enters the human body through the crown of the head.

स ईक्षत कथं न्विदं मदुते स्यादिति स ईक्षत कतरेण प्रपन्ना इति । स ईक्षत यदि वाचाऽभिव्याहृतं यदि प्राणेनाभिप्राणितं यदि चक्षुषा दृष्टं यदि श्रोत्रेण श्रुतं यदि त्वचा स्पृष्टं यदि मनसा ध्यातं यद्यपानेनाभ्यपानितं यदि शिश्नेन विसृष्टमथ कोऽहमिति ॥११॥

स एतमेव सीमानं विदार्यतया द्वारा प्रापद्यत । सैषा विद्वतिर्नाम द्वास्तदेतन्नान्दनम् । तस्य त्रय आवसथास्त्रयः स्वप्ना अयमावसथोज्यमावसथोज्यमावसथ इति ॥१२॥

He (the Creator) bethought Himself: “How could

this (aggregate of body and organs) exist without Me?” Then He said to Himself : Which way shall I enter it? He said to Himself further: “If speech is uttered by the organ of speech, if smelling is done by the breath (prana), seeing by the eyes, hearing by the ears, touching by the skin, thinking by the mind etc, then who am I? After thinking thus, Atman asked Himself how He should enter the body. This can be done either through the toes or through the crown of the head. Which of the ways should He choose? Atman said to Himself, that He would certainly not enter through the toes, which were the door of entrance of His servant the Prana, who obeyed His orders, but He would enter by the crown of the head. So, piercing the end, the Lord entered through that door. That door is known as the *vidriti*, the cleft. This is the place of bliss. Atman (thus embodied) has three abodes, three conditions of sleep. This is one abode, this is another, this is the third^[16].”

Now, we all know that neurologically, the higher centres of the brain are the areas involved in the processing of thought and emotion. In the current consideration, if the focus of consciousness has reached the brain after detaching from all the lower centres, the thought (awareness) and emotion is free from all material considerations, meaning it is pure and has only one goal – perception of Truth. Hence anyone who has reached this stage of development, the focus is only toward the Truth and completely withdrawn from all else. In this model, this translates to the first reflection of Consciousness or the ego which is ripe – as we discussed before, is perceiving only its source, i.e., *Sat-Chit-Ananda* or the Infinite Consciousness. In this context the suggestion may be that the *Sat-Chit-Ananda*, which has entered into the human being through the crown of the head, that Undivided Consciousness is first reflected in the centre working at the level of the two cerebral

hemispheres (6th and 7th centre). As the ego is still present in this scenario, the experience is still not one of complete non duality as described by Sri Ramakrishna.

"Then comes the sixth plane, corresponding to the centre known as Ajna. This centre is located between the eyebrows (*same level as the two hemispheres of the brain*) and it has a lotus with two petals (*corresponding to the two cerebral hemispheres*). When the Kundalini reaches it, the aspirant sees the form of God. But still there remains a slight barrier between the devotee and God. It is like a light inside a lantern. You may think you have touched the light, but in reality you cannot because of the barrier of glass^[3]." [italics not part of the original quote]

As perception is still through the prism of the ego, the Ultimate Reality may either appear as the *Jyothi* (Blissful Light) of the *Sat-Chit-Ananda* or the same as embodied in a form. (*Bhava Samadhi*). One may note that the centre controlling the breathing and the heart beat in the brain, is present in an area called the brainstem, which is below the cerebral hemispheres. Based on the assumption that the withdrawal of the mind from a certain part of the nervous system should lead to cessation of the functions of that part of the nervous system, while in the centre of *Ajna*, it should also be that the body should cease to breathe and not have a heartbeat in this state of samadhi (complete absorption). Indeed, that is how the experience is described.

"Sri Ramakrishna was standing still, surrounded by a few devotees, and Narendra was singing. M. had never heard anyone except the Master sing so sweetly. When he looked at Sri Ramakrishna he was struck with wonder; for the Master stood motionless, with eyes transfixed. He seemed not even to breathe. A devotee told M. that the Master was in samadhi. M. had never before seen or heard of such a thing. Silent with

wonder, he thought :

"Is it possible for a man to be so oblivious of the outer world in the consciousness of God? How deep his faith and devotion must be to bring about such a state!["^[17]"]

"Sometimes again the body would become stiff with no sign of life. I (Sri Ramakrishna) used to meditate and people would say birds would sit on my head mistaking it for lifeless matter. I had no idea of the world and things of that sort["^[18]"]."

"Once during the Master's (Sri Ramakrishna's) samadhi a doctor put a stethoscope on His chest and could not find a heartbeat. On another occasion a doctor touched His, the Master's eyeball with his finger to see if His eyelid would blink, and he was convinced that there was no sign of life in His body["^[19]"]."

With the above considerations, it is easier for us to now look at the experiences connected with the remaining two centres – the heart (*Anahata*) and the throat (*Vishuddha*) centres.

Anahata :

The understanding from above considerations is that, the most fundamental state of consciousness of the human being is what is experienced in the *Ajna* centre as described above. If there is a deviation away from focus toward God, then the focus of the consciousness comes down to the lower centres. Greater the deviation, more limited the awareness and lower the neurologic centre in which the mind dwells. As we saw previously, the lowest three centres represent the activities of pleasure, reproduction and survival. As the mind detaches from the activities representing the lower centres and withdraws from them, the awareness that is felt moves closer to the awareness of the final state of consciousness. In this awareness, the limitations leading to the states of consciousness of the centres that have been detached from are

absent. For example, if the mind has to reach the *Anahata* or the heart centre, then that mindset should be free from all attachments to the sensations of the lower three centres. The awareness must be free from the thoughts and emotions which characterise them – meaning that such a person should be free from attachment to his/her own comfort or discomfort in the physical sense of the term, free from lust and free from selfish attachment toward activities asserting a physical identity. And tend more toward a state of awareness of oneself as an entity higher than the physical. We find that as beings move forward in their spiritual life, the level of austerity goes up as well naturally, not from a forced process, as they find spontaneous joy and content in a higher mode of being. Unselfish thoughts, emotions and actions, an intellect which dwells in the nature of higher truths, emotions which relate to God are characteristic.

This should not however, mean that if a person reaches this centre of consciousness, they will cease to procure their physical sustenance or desist entirely from making themselves comfortable or move away from discomfort, or even engage in family life. The specific manner in which these actions would be expressed or refrained from would be individualistic, depending on the specific attitude, intensity of focus toward the goal and the personally defined purpose of life and existence. People can move up and down the centres of consciousness as they choose, of course depending on the access and intent. One should also note, that it is entirely possible to be seen as engaged in physical activity, but nevertheless purely being an unaffected observer without the least attachment of the consciousness toward the activity. There are very many illustrations of this *asangatva* (non-attachment) among religious personalities even while being engaged in activities. A famous

example would be found in the life of Sri Krishna, as a perfect illustration of complete non-attachment in the midst of intense activity.

The most common experience described in the heart centre, is the experience of a non-physical light. This is a reflection of the Light of *Sat-Chit-Ananda* and is characterised by a greater awareness and a spontaneous bliss. However, this experience of light is free from the blemish of physical light, where with a brighter perception of light there is correspondingly a greater sense of heat. Rather the opposite. It feels lighter and freer and cools the feverish mind.

Whereas, the thought, emotion, and activity of the centres of evacuation, generation and digestion are associated with intense voluntary physical actions, neurologically, the nerves in the heart region take sensory information from and regulate mostly involuntary function – heart and lungs. These nerves also supply the skin and other tissues in the chest and upper part of the abdomen. However, as discussed before, in each of the segments of the spinal cord the main sensations for our current consideration that incite voluntary reaction, thought, emotion and activity are visceral. Regulation of breathing and heart function is mostly involuntary though they may be modulated voluntarily partially as well. This is in keeping with the state of awareness in this centre, focussing unconsciously or involuntarily on the body and more consciously in a spiritual direction. This is again in contrast with the lower three centres where the visceral sensations perceived associate with intense physical reactions and wilful participation, whereas at this level the neurologic responses slip away into the involuntary domain.

Vishuddha :

As said before, the mind is characterised by patterns and is of the nature of impressions produced by actions. While in the *Anahata*, these patterns and impressions tend away from

assertions of physical identity, and toward unselfish or spiritual directions. Eventually, these patterns dissolve away into their source even as waves die out in calm water. No more attachment to external stimuli. A forceful movement toward higher states of consciousness, and an equally forceful adverse reaction against going toward materialistic directions characterise this state. The thoughts representing egoistic action and reaction in the mind calm down and dissolve away leaving a perception of a calm psychological space.

The nerves in this region are concerned with the supply of upper limbs and chest (somatic). As far as visceral sensations are concerned, only the nerve which supplies the diaphragm muscle involved in breathing emerges from this set. As pointed out before, the main inciter of reactions leading to attachment to the physical would be visceral sensations. Which are absent in this region for the most part. Hence, the focus of consciousness is significantly away from the material and toward the spiritual. It is interesting to note that anatomically, the neck mainly serves as a conduit for structures to go to and fro from the head to the rest of the body. In keeping with this nature, the focus of consciousness as well, when it ascends to the throat centre, has transcended the identification of oneself as an individualistic doer of actions and experiences itself as an instrument of the Highest Truth, being a mere conduit of the expression of that Truth.

Overall, this theorisation of the integration of philosophical principles with the neurological organisation is summarised as follows : Undivided Consciousness, which is the ultimate reality of all existence, both animate and inanimate has become this universe as its source and its living beings as their Self. The possibility of realizing this relationship and attaining to the highest Truth is maximised in the human being. Reality is perceived in various

layers and aspects in relation to the nature and attitude of the ego, which acts as a prism in accordance to which Reality is perceived differently. Whereas, in the experience of the Absolute Truth, the ego is characteristically absent. Each layer of macrocosmic reality corresponds to a similar layer in the microcosmic human organism. In the physical human being, it is the nervous system which acts as the instrument of perception and reflection of different layers of Self experience. The anatomic organisation of the nervous system is designed to represent lower to higher layers of Self experience as one goes anatomically from lower to higher levels of the spinal cord and the brain. In the background of Absolute Consciousness experienced at the *Sahasrara*— center at the crown of the head, its reflection, the ego or the focus of consciousness hops about different centres of nervous action, having different experiences, good and bad in these centres. Through learning from experience (perhaps more from bitter than sweet) or from discrimination between the Real and unreal, this ego eventually realises that it is merely a reflection of the Highest, of the nature of Peace and Bliss. Then, in a tremendous struggle to free itself from the myriad identifications with relative aspects of reality, it withdraws step by step from the lower identifications – lower centres and gains higher and closer reflections of the Undivided consciousness in its awareness. Penultimately, it reaches a point where its only identity is in relation with the Absolute Truth. Finally the reflection ceases, the experience of two gives away to the experience of Non-dual. As we envision a basis of Infinite Consciousness, unattached and reflected as the individual soul, which in the context of the physical body, moves up and down in different planes of awareness corresponding to differing levels of the nervous system and goes through various pleasant and unpleasant experiences, ultimately turning its

gaze upwards toward the calm and majestic state of Unconditioned awareness, one is reminded of this beautiful allegory from the *Upanishad*.

द्वा सुपर्णा सयुजा सखाया
समानं वृक्षं परिषस्वजाते ।
तयोरन्यः पिप्पलं स्वाद्वत्त्य-
नश्नन्नन्यो अभिचाकशीति ॥१॥
समाने वृक्षे पुरुषो निमग्नोऽ-
नीशया शोचति मुह्यमानः ।
जुष्टं यदा पश्यत्यन्यमीश-
मस्य महिमानमिति वीतशोकः ॥२॥
यदा पश्यः पश्यते रुक्मवर्णं
कर्तारमीशं पुरुषं ब्रह्मयोनिम् ।
तदा विद्वान्पुण्यपापे विधूय
निरञ्जनः परमं साम्यमुपैति ॥३॥

Mundaka Upanishad, Third Mundaka, Canto I^[20]

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Two birds that are ever associated and have similar natures, cling to the same tree. Of these, the one eats the fruit of divergent tastes, and the other looks on without eating.

On the same tree, the individual soul remains (i.e., stuck); as it were; and so it moans, being worried by its impotence. When it sees thus the other, the adored Lord, and His glory, then it becomes liberated from sorrow.

When the seer sees the Purusha — the golden hued, creator, Lord, and the source of the inferior Brahman — then the illumined one completely shakes off both virtue and vice, becomes taintless, and attains absolute equality.

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