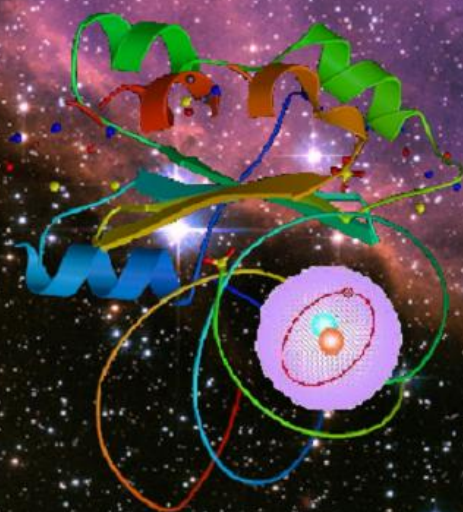


Biometaphysics

Raymond Bates

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A Theory of Biometaphysical
Genetic Transfer



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A theory of Biometaphysical genetic transference

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By Raymond Bates

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**Dedicated
To Ba'ba'**

Shrii Shrii Ánandamúrti

**Whose knowledge truly comes
from a place beyond,
all understanding**

**Ya'drshii bha'vana' yasya siddhir bhavati ta'drshii
"As one thinks, so one becomes."**

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Introduction

This work has been written specifically for the advanced student of Shrii Shrii Ānandamūrti's philosophy. It has been taken directly from the writings and discourses of Shrii Shrii Ānandamūrti. The original writings are usually in Bengali and Hindi, and then many terms were translated into the common English usage at the time. Consideration as to the scientific meaning was given little or no thought, mostly because the translators had little or no scientific training. Words like chromosomes were probably meant in a mental sense, whereas the common scientific usage was with the physical meaning.

In compiling this work in English, I have taken advantage of the advances in computer technology in the past twenty years. Words like ectoplasm and endoplasm were electronically searched through all Shrii Shrii Ānandamūrti's translated writing for all occurrences, at each occurrence (sometimes thousands) the usage was checked for continuity and concept. That means that each occurrence was compared to the other instances where Shrii Shrii Ānandamūrti used that word, and a compiled conceptual meaning was presented in this book's usage.

Such words as ectoplasm and endoplasm have very specific physical and biological meanings in scientific English. However, Shrii Shrii Ānandamūrti redefines them as mental structures mixing both the

Macrocosmic and microcosmic structural usages from one translated passage to another. We must also remember that Shrii Shrii Ánandamúrti saw the entire cosmos differently than ordinary people see it. When describing some aspects He would many times jump from a Macrocosmic viewpoint to a microcosmic explanation in the next breath.

This does not mean that the words were translated wrong. It simply means that there may have been many meanings or different Sam'skrta words in use, whereas there was only one English word available for translation. Now, sometimes sixty years after a discourse was given, the original tape (if there was any) and handwritten notes are no longer useable or available. So re-translating from notes and tapes becomes impossible, in many cases.

Shrii Shrii Ánandamúrti in His last four remaining years focused on the subject of Microvita and its impact in our world and society. We must remember His Macrocosmic and microcosmic viewpoint here. Microvita theory had never been discussed before. He gave lectures and demonstrations at seemingly random times. Sometimes this macrocosmic/microcosmic aspect was mixed in the paragraphs and meanings.

In any work of this nature, certain considerations must be taken into effect. On the theory of microvita, very little was given by Shrii Shrii Ánandamúrti in discourse (and later written down) and even less is understood. The discourses on microvita were all given in the last 3-4 years of His life. Most all of the discourses on microvita and much more of the preliminary discourses, were given in Bengali and Hindi, and of course lose much of the concepts in translation.

The beauty of Shrii Shrii Ánandamúrti's works is that it allows the student to utilize that portion of the mind that He found so important to teach, the intuition, along with the intellect. I am sure that almost all of His works are meant to bring the student along the path of increasing his intuition, not just intellect. His works are full of spaces that allow the intuitional student to attempt to fill in the gaps.

It was the life work of Shrii Shrii Ánandamúrti to teach the "science of intuition", as it is called. Much of the discourses leave large gaps in the specifics of microvita theory, especially in the applications of the theory to the scientific world around us. And I believe this is exactly what He wanted, for us, His followers and practitioners of the "science of intuition", to put into practice the spiritual teaching of scientific intuition in the understanding of microvita theory. This is exactly why much of this work takes 'giant leaps' in imagination (or I prefer to call intuitional liberties) with the small amount of direct writings on microvita.

Let me be specific. Nowhere in His talks and writings does He state the actual composition of the mind of microvita (what I define as

collective mind). He states that microvita are intelligent¹ and that their mind is approximately the opposite in functions and desires, than ours. Nor does He state anywhere that microvita works and affects organic and inorganic structures differently. He gives much discussion to the attractive energies in microvita and their use in the human psyche to modify psychic and (and as we saw from His personal demonstrations) physical structures². Much of this work is postulated on those premises. He specifically leaves much to the imagination (read intuition) of the practitioner.

In addition, to the uninitiated, allow me some personal observations. If I considered Shrii Shrii Ānandamūrti an ordinary being, this book would not have been written. His knowledge comes from a place that if I may use the Bibles words “from a place beyond all understanding”. He calls it *aparoks'a nubhu'ti* or direct spiritual knowledge. This term is discussed in the earlier book of this series called *The Internal Being* and generally means that the mind understands directly from the object, not through books or other acquired forms of knowledge. Note I said “mind” not through sense perceptions and the body. Normally we interpret all perceptions through our sense receptors.

Direct spiritual knowledge is more like an occult power called *Pra'pti*. Through which the spiritual aspirant can know the original substance or the essence of any object without having to go through books or resorting to some other medium³. In fact many of these so-called occult powers and spiritual powers are of mixed nature. Shrii Shrii Ānandamūrti demonstrated this ability on many instances. Especially on field walks, when He would stop and look at a rock (or other objects), then use this spiritual power to enter into the structure and then start to discuss the entire history of the object and area for many hundreds of thousands, even millions of years.

For some of the reasons above, I have tried to extensively footnote the passages that have inspired my creative descriptions. This leaves it up too (and easier for) the student to interpret his/her own meanings to the different works.

1 Vidya'dharas also have a kind of beauty due to their inherent intellectual faculty... They are a type of positive microvita. [Disembodied_Souls_and_Microvita_Section_B.html](#)

2 That is to say, the theory of microvita has immense potentialities in introducing numerous changes in human society. By changing microvita, ectoplasmic changes will come which in turn will bring about endoplasmic change, and thus the mind will be able to control the organism, the physical body, in a better way. [Microvita_and_Its_Possible_Effects_on_Society_Section_A.html](#)

3 Pra'pti: Through this siddhi the spiritual aspirant can visualise any factor of the psychic world within himself or herself. Such an individual can know the original substance or the essence of any factor without having to go through books or resorting to some other medium.

[Aekya_to_Aeksava_Discourse_13.html](#)

Lastly, let me point out that this theory of Microvita is not just a hashed over reductionist/materialist physics theory of “smaller and smaller” proposed by many theorists throughout the ages. The fundamental and monumental difference is that Shrii Shrii Ānandamūrti proposed mind, as we know it evolves out of what we consider as matter⁴. And that microvita in itself carries a different structured mind that can make either “good-positive” or “bad-negative” changes in developed mind structures, but mostly it is the fundamental cause of animated life as we call it, in our universe⁵.

It is with these premises in mind that I attempt to put forward some theories that may be partly acceptable to the current understandings of scientific minded persons.

June 05, 2007

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Note: ALL QUOTES are from: *Ānandamūrti, Shrii Shrii, Ananda Marga Publications*, 527, VIP Nagar, Tiljala, Calcutta, India. Electronic Edition 7.0 UNLESS otherwise noted. The format: *This_and_That.html* is the html file within EE 7.0 that the quote is taken. Newer versions of Electronic Editions are available from: <http://innersong.com/products/dharshan/ElectronicEdition.htm>

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R. Bates, 28 March 2016

4...each and every atom and molecule constantly moves through different stages of metamorphosis and transmutation and is transformed into unit life and unit [[citta, aham', mahat, etc.]].

[The_Influence_of_Maya_on_the_Human_Mind.html](#)

5 Of the three types of microvita, the crude type are instrumental in emanating life throughout the cosmos. They create a stir within a physical structure. [Crude_and_Subtle_Microvita.html](#)

CHAPTER ONE

Matter and Energy systems

Some ontological considerations

“Ontology unbridled can lead to dogmatic belief. Science must be a balance between the two, allowing the ontological abstract to provide subjective horizons for practical epistemological solutions.”⁶

If we accept the premise that chaos is not the system⁷ and we state that mind is in everything⁸, this leads to the ontological conclusion that : One unit atomic particles mind added in an infinite series of units will total the sum mental unit of all known and unknown manifestations of that Cosmic mind or God. That would place humanity in the untenable position of being right in the center of a “Borg-like” construct where were mental resistance is really *futile*. Every atom in our unit being rebels at this type of mental thought. Then this Cosmic Mind would be in control of every object thing in this in these universes, of which we are just a mechanistic small part.

That difference we as human beings feel is that we are a part of this great cosmological system, but we are somehow separate from that very system. The difference that Shrii Shrii Ānandamūrti explains is that we (as mental beings) have emerged from that material system⁹, developed will power and can take charge of our own mental destiny (and somewhat in accordance with our innate capacity) our physical destiny.

Our method of emergence is not one of mental being from mental being. It is one of mental being (not ectoplasmic physical mind) of an Atman like being, emerging from matter. The

6 Bates, Raymond, The Internal Being, Reincarnational and Intuitive Psychology, Writers Club Press, (out of print), 2000, turiya@gmail.com, Revised E-edition, 2016

7 You know there is nothing disorderly in this Universe. Everything moves as per certain rules. Spiritual_Discourses.html

8 Each structure of carbonic origin in this universe, whether animate or inanimate, has a mind. That is, a mind is associated with every structure either in manifested form or in dormant form. The_NeoEthics_of_MultiLateral_Salvation.html [English]

9 And the direct effect of matter is mind. So when materialists observe that mind comes out of matter, they are right. But remember, matter itself comes out of Macrocosmic Mind: both are composed of the same stuff. Struggle_and_Progress.html

mechanics of this innovative concept has been explained in full in previous works. For the purpose of this work we want to recognize that there are greater controlling systems at work in the unit human consciousness. These systems follow cosmic universal system laws and can be partially controlled by our human mental capabilities.

When we introduce the concept of microvita into the changes of our physical (and mental) world, we must understand that these entities (microvita) have one could even say a “Borg-like” mechanistic mentality in some ways, but that they can be controlled by the human will. Microvita follow the Cosmic mind’s universal laws, but are also utilized by us to modify and make changes in the human species.

Some Material Implications

In any consideration of what is matter and energy, we must first recognize certain implications in the discussion. Both matter and energy are parts of our objective phenomenal world. As such, they are coming from somewhere and going to some place. They are all only parts of a larger system. Our physical senses limit our ability to understand the entire system when the scale is beyond our comprehension. The entire system has been covered at length the previous work entitled *Macrogenesis*¹⁰ and comes from my limited understanding of Shrii Shrii Ánandamúrti’s cosmologically vast philosophy. Here we will only research how energy and matter systems change our physical phenomenal world around us. Both in the system of human developed consciousness and sub atomic world of dormant matter.

In order to do this we must review some implied considerations and start from there. To discover what are the secrets of matter and energy, we must view them from both the Macrocosmic viewpoint and through our limited sense impressions. Let’s start with the obvious. Matter has structure. No matter how we define matter, we must agree that it has a basic (and later complicated) structure or form. This is different from energy. Energy has neither form nor structure.

10 Bates, Raymond, *Macrogenesis, A New Paradigm in Consciousness*, Deluxe Ed., Baguio, Philippines, ZigZag Pubs (out of print), 2005, turiya@gmail.com, Revised E-edition, 2016

The implications of structure are numerous and not insignificant. Having form or structure implies that there must be some thing or substance that gives those forms or shapes or structures to those actional expressions to that which we call matter, to our senses. Having structure implies that some control of that structure must exist. This in turn implies some type of intelligence or cognition, behind that control¹¹. Now whenever we have control and intelligence we must have movement of something... even if, of the particles of that intelligent mind? Movement implies action. Action implies energy¹². Energy in the phenomenal world is only the physical manifestation of force within the scope of our senses¹³.

In summary, we will attempt to discuss energy and its properties, intelligence and control structures that affect both energy and matter and the components of matter. Later we will see how microvita fits into all this.

Energy

These are many implications from a very simple expression of substance. Let us examine each of the various components individually from the different aspects and in the content, that Shrii Shrii Ánandamúrti presents it to us. We will start with the first and foremost implication, energy. Most critical is what we call and understand as energy. Therefore, this is an entire chapter to a different understanding of energy and its place in the cosmic and microcosmic structure. Energy has been previously discussed at some length in *Macrogenesis*, but for the purpose of this work allow a small digression for a moment, with this brief description of where and what it comes from. In any discussion of this type, we need to understand and define some critical terms.

11 And within the scope of human expression of any living entity there are physical atoms, physical cells--and along with the physical cells, for movement and for actional expressions there must be the support of cognition. [Everything_Comes_From_Something.html](#)

12 Energy is the actional state within a material structure. This energy by itself is a blind force and for its activation intellect must exist: a driver is required to direct this blind force. The support of the intellect is a prime necessity for the operation of energy in this material world. [Cardinal_Spirit_Action_and_the_Supreme_Stance_of_Devotion.html](#)

13 When force functions within the scope of matter, that force is called energy. [The_Supreme_Cognition.html](#)

To understand the relative order of cosmological and relative phenomenal objects, here is a chronological list of the nomenclature. Please note that only from the items cosmic citta down does the phenomenal world of time, place and person come into being. Note: Microvita has a variable wavelength.

Macrogenesis nomenclature of relative order/size

(In order of wavelength, long to short)

cosmic mahattattva

cosmic aham'tattva

cosmic citta¹⁴

positive microvita¹⁵

endoplasm¹⁶

citta'n'u¹⁷

ectoplasm¹⁸

neutral microvita

negative microvita¹⁹

tanma'tras²⁰

microcosmic citta²¹

five rudimental factors²²

matter²³- electron²⁴

14 The mind, or better still the citta and Ahamtattva are far more subtle than the tanma'tras, for they define the existence of these inferences. [The_Chariot_and_the_Charioteer.html](#)

15 And similarly, in the psychic sphere there may be entities subtler than ectoplasm or its extra-psychic coverage, endoplasm. [Microvita_the_Mysterious_Emanation_of_Cosmic_Factor.html](#) .As a microvita is a singular entity, it has no structure. By nature it is more energy than matter... [Questions_and_Answers_on_Microvita_Section_B.html](#) (Q11)

16 Endoplasm is the outer coverage of ectoplasm. [Questions_and_Answers_on_Psychology.html](#) (Q3)

17 The individual parts of ectoplasmic cells are called citta'n'u. [The_Macrocosm_and_the_Microcosm_1.html](#) .If the manifestation of energy be too great in the object-body, some portion of the crude entity gets pulverized as the result of excessive friction in the object-body and gets metamorphosed into citta'n'u [mind-stuff], which is subtler than ether. [Chapter_1.html](#)

18Positive microvita is pro-ectoplasmic -- it is more ectoplasmic than matter. [Questions_and_Answers_on_Microvita_Section_B.html](#) (Q12) ..,as the propelling energy, converts some portion of those quinquemental factors into a subtler object. That subtler object is the ectoplasm. [The_Supreme_Cognition.html](#)

19 So far as physicality is concerned, the position of these [Negative] microvita is just between ectoplasm and electron, but they are neither ectoplasm nor electron. [Microvita_the_Mysterious_Emanation_of_Cosmic_Factor.html](#) .Negative microvita is pro-materialistic -- it is more matter than mind, than ectoplasm. [Questions_and_Answers_on_Microvita_Section_B.html](#) (Q12)

20 The microscopic fraction of a wave radiated from an object and received by the indriyas is called tanma'tra or inference. [What_Is_Dharma.html](#)

21 When citta emerges from matter as a result of internal clash... [The_Ascent_of_the_Mind.html](#)

22..,as the propelling energy, converts some portion of those quinquemental factors into a subtler object. That subtler object is the ectoplasm. [The_Supreme_Cognition.html](#)

23 Identified by containing tanma'tra. [Ekendriya_4.html](#) .An object which has less inter-atomic and inter-molecular space is what we call matter. [Matter_and_Abstract.html](#) [English]

Shrii Shrii Ānandamūrti saw things differently than we see them. He did not see things in this material phenomenal world as we do. His viewpoint was far more expansive (Macrocosmic or at times very microcosmic). In the previous book *Macrogenesis*, we learned that in the first phase of macrocosmic creation (Saincara), idea becomes energy then energy becomes matter²⁵. Later in the second phase of macrocosmic creation (Pratisaincara), matter becomes mind²⁶. Cosmic mind either can then proceed on the crude path towards matter or can dissipate into the cosmos.²⁷ Under certain conditions mind and matter combines with other factors to produce life²⁸. The energy that was cosmic was transmuted into matter's binding forces and then back into unit mind. Eventually unit mind returns back to Cosmic Mind. A complete cycle but closed only in the philosophical sense. All this is only in some small attempt to place mind in the realm of matter, where it certainly belongs. Microcosmic mind (our mind) is a construct from matter and not a construct from Macrocosmic waves²⁹. When the ectoplasmic stuff of our mind fails to receive the necessary vital energy it returns from where it came³⁰, or as the colloquial saying goes: "dust unto dust". Its vibrations return to the next order, just higher than matter.

To define energy and say that energy is what we see or sense the results of, on our plane of existence, comes from current physics lack of insight. It must be recognized that there are other

24 So far as physicality is concerned, the position of these [Negative] microvita is just between ectoplasm and electron, but they are neither ectoplasm nor electron.

[Microvitaum_the_Mysterious_Emanation_of_Cosmic_Factor.html](#)

25 The fundamental essence of matter may be called by any name - molecule or atom but the basic cause of matter is nothing but energy, matter is nothing but bottled-up energy. It is the condensed state of the particles of energy that we call matter. It is by no means correct to consider matter as an original substance. [Matter_and_Spirit.html](#)

26 The human mind did not come directly from the Macrocosm; it came from matter.

[The_Supreme_Cognition.html](#)

27 A stage comes when the centripetal and centrifugal forces are evenly balanced. That is the nadir point of crudification.... But where mind cannot evolve from matter, matter undergoes further crudification and finally explodes in the process of Jadasphota. [Struggle_and_Progress.html](#)

28 Inanimate objects will become animate, carbon atoms [carbon based structure] sleeping in an inanimate body will get life, will get the stir of vitality in them, and that vitality is slowly to be transmuted into a gigantic living structure like a human being. [about positive microvita]

[Mobility_and_Movement_of_Microvita.html](#) [English]

29 The unit mind ... is not the direct creation of Macrocosm, i.e., it has not been created directly by the Macrocosmic mind. It is the creation of the quinquemental universe, the creation of matter, and matter is the creation of the Supreme Mind. [Triangle_of_Forces_and_the_Supreme_Entity.html](#)

30 Physical death brings about dissociation of the nerve cells, hence the ectoplasmic structure stops functioning. [Kurvanneveha_Karmmani.html](#)

forms of energy that those that we currently observe. One of the purposes of this work is to recognize some of these psychic and spiritual energies and place them alongside the energy structures that we currently observe.

Energy and force

(Excerpts from Macrogenesis³¹)

The energy a scientist normally thinks of is a physically perceivable energy. This energy is calculated as actions through a distance and translated into common denominators for conversion into the different perceivable energies, like electrical, light, magnetic and other perceivable forces. What we don't normally consider is that there are other subtle forms of energy, that have inconceivable amounts of so called energy, latent in them. Our calculations and definitions fall far short of these types of energies.

In 1944, there existed formulas for electro-magnetic force (emf), electrical, steam, and so many common conversions between energies crude forms. What happened when the calculations were required for the new forces to be released in the binding energies in the first atom bomb in 1945? No one knew what would happen when the first atomic explosion was released, in terms of energy. We don't understand energy. We don't understand the levels of energy. We don't understand that subtle energy forms carry *more* latent force (potential energy) than crude physical energy forms. We think in terms of what we see and feel on the physical plane, converted from one type energy form to another perceivable energy form. That this is the way it is, for all energies on all planes. The energies we perceive on the physical level are the last gasp of a dying vibration, stemming from an inconceivably more powerful latent energy (until it is manifested in the physical universe) with longer wavelength, originating from the five rudimental factors/bhútas³² themselves.

The current disarray in modern day physics (both astrophysics and quantum physics) can be traced directly to the inability of both schools to apply (or fail to apply) the same set of

³¹ Bates, Macrogenesis, p32

³² The five fundamental factors -- ethereal, aerial, luminous, liquid and solid -- are the sequential metamorphoses of these energy particles. Vibration_Form_and_Colour.html

so called immutable "Laws" of physics in both the Macrocosmic and microcosmic environments. Their mathematics of description will not work, in both the Macrocosmic and microcosmic applications. The application of classical Newtonian physics laws to the microcosmic quantum world leads to processes that are reversible in Newtonian physics and irreversible in particle physics. The "decay" of certain particles and the reversibility of "entropy" are two prime examples. It is not in the nature or intent of this work to try to describe in detail these problems. Let's us say that modern physics has worked for more than seventy years to try to marry these two schools. The mathematics has become more and more complicated and technical in describing the inconsistencies they find in the two schools. Always there appears the reversibility of the mathematics and the non-application to reality. Some quick examples are:

- 1.) Energy should have a positive amount for a negative time. This leads to negative time?
- 2.) Entropy (ratio of unavailable energy to temperature) should be reversible. Leading to matter appearing from nothing?
- 3.) Particle decay should be mathematically reversible. Decay means material death. Death leads to a math/material solution of life?
- 4.) Friction and resistance are irreversible.

It's not the physical laws observed that are the problem. These sensible observances have led to conclusions of great technical advances. These advances have worked in a practical phenomenal way to allow us to make progress from traveling in space to the control of microorganisms. It's the so-called laws that *are not* observed by the senses that have led to some false mechanistic conclusions.

As another example, energy and force are currently defined in terms of kinetic energy in motion and energy in position or rest. A proper definition of energy and force will lead to a conclusion of which of those processes that are reversible and those that are irreversible. This is the basis of a new light in viewing both classical Newton and quantum physics. Energy is neither of these definitions. Energy is completely reversible, within its crude or

subtle level. However, sometimes one must take the macrocosmic viewpoint to see where the energy is/was reversed. Where energy appears irreversible from our limited viewpoint, on the macrocosmic cycle it later becomes recycled, back into the cosmos.

Energy structures

When the subject of energy structure is referred too, it is meant in the context of the use of the energy by a control or intelligence. All energy is in itself a crude, blind³³ material force. It must be controlled and converted to other forms to cause change. So generally, for this reason, energy structures can be placed in two general categories.

Those that directly affect or change structures and those that indirectly affect structures. Only microvita and its energy structures have intelligence (collective) connected directly with the structure, and therefore only microvita fall under the category of directly affecting change in species or any structure. All other energies are blind energy and fall under the category of indirectly controlled forces that can effect change in a body or structure. Microvita has a direct effect on change in the characteristics of the species, and is therefore separately covered in a later chapters.

The name "energy structure" is not the same as energy form. Energy does not have a form inherent in itself; it merely takes the nearest shelter³⁴. However, there are some requirements to that taking. What we commonly call energy means "observable" energy. This is because we are only able to observe the structures of energy that appear to our senses as other forms. That is, energy that actually manifests in the material world of our senses. Actually, energy not only exists outside of the world of our observable senses; but outside the world of the five rudimental factors or outside of the universe that we know and consider³⁵.

33 Energy, the blind force, cannot do anything in a systematic order unless and until it is supported by intellect. [One_Should_Know_Everything.html](#)

34 Energy always requires a material shelter -- a container. After the destruction of the container, the immense released energy moves very fast with tremendous speed in all directions in search of some or other material shelter. [Microvita_and_Cosmology.html](#)

35 When form remains in the abstract realm it is called energy; when it comes into the material realm it is called matter. Energy is not one of the fundamental factors, but a stage prior to the

Nevertheless, for purpose of our discussion, we must consider only those energies that fall within our relative phenomenal world of the rudimental five factors.

Energy requires a container

Energy itself does not have a structure. It is without form and takes the shape of the container³⁶. A container requires a structure³⁷. When energy breaks out of the subtle context of waveform (upon material manifestation on the physical plane) it requires a material shelter. When the bottled up energy contained in the structure of say an atom is broken by dissociative vibrations, it (energy) immediately (and sometimes explosively) simply seeks another material shelter or container³⁸. When this secret (and Shrii Shrii Anandamurtiji does call it a secret³⁹) is understood by our physical scientists, then they will realize that energy can be controlled in ways they never considered. If one provides a better shelter and then breaks the old shelter, energy is controlled.

Energy always seeks the nearest shelter or structure. That energy is inter-transmutable and interchangeable, but matter is not inter-transmutable or interchangeable⁴⁰. Matter can be converted (or broken down) into energy that immediately takes the nearest structure or shelter, but energy cannot be made to form matter. Matter is convertible in only one direction, energy is inter-transmutable and interchangeable. In the fusion of two atomic nuclei (matter) into one new element, some energy is released and

metamorphosis of the Cosmic Citta into the five fundamental factors.

[Shakti_and_Its_Proper_Application.html](#)

36 The energy remains and maintains the structural solidarity of each and every entity of this universe by taking the form of its container according to the structural solidarity of the different entities. [Bhavambodhipotam.html](#)

³⁷ Bates, [Macrogenesis](#), p31

38 Energy always requires a material shelter -- a container. After the destruction of the container, the immense released energy moves very fast with tremendous speed in all directions in search of some or other material shelter. [Microvita_and_Cosmology.html](#)

39 Matter needs a shelter, and the shelter of matter is the earth. This is the secret. [Microvita_and_Cosmology.html](#)

40 Now, energy is inter-transmutable and interchangeable, but matter is not inter-transmutable or interchangeable. It undergoes metamorphosis, metamorphosis once, but not always; that is, one way but not vice versa. [Matter_and_Abstract.html](#) [English] And you know, energies are inter-transmutable. Light energy may be converted into sound energy; and the vital energy of human beings may be converted into spiritual energy, into electrical energy, into light energy, or into sound energy. When you speak, you convert your vital energy into sound energy. [Onmkara_and_Ista_Mantra.html](#)

then explosively finds a new shelter. There is no conversion of energy into matter. The conversion is of matter to different form structures (containers) and release of some energy into another container.

Energy is a function of the macrocosmic rudimental factors. Energy in our world comes directly from the second rudimental aerial factor and cannot manifest a form of its own (as it has no form tanma'tras inherent in its characteristics, see Cakra – Tanma'tra Chart in [Psychic Energy Systems](#) chapter). That factor (2nd) does not include the reflection of the form or cruder tanma'tras. Specifically it does not allow manifestation of the form or luminous 3rd factor. Energy must use another form or container to become identifiable in our universe. This is why it appears in so many ways to our senses. We cannot see energy.

We only witness the effect that it has on the systems around us. Our concept of energy is limited to our relative sensual description of its movement in space from object to object. Physical science describes the results of the movement energy from phenomenal object to another phenomenal object. Energy goes from one physical shelter to another physical shelter. If we look at energy in a philosophical manner then the abstract form of energy is form and the phenomenal manifestation is matter⁴¹. This means in the phenomenal relative world, matter is bottled up energy. Energy in a shelter of matter. Energy is not the construct of matter nor does it construct matter, as energy doesn't have intelligence. We call it blind energy.

In terms of factors, energy is composed of the 2nd rudimental aerial factor and higher⁴² because it has no form. Matter is only the fifth rudimental factor⁴³. The fifth rudimental factor is capable of reflecting the form tanma'tras and can be divided⁴⁴. The fifth

41 When form remains in the abstract realm it is called energy; when it comes into the material realm it is called matter. Energy is not one of the fundamental factors, but a stage prior to the metamorphosis of the Cosmic Citta into the five fundamental factors.

[Shakti_and_Its_Proper_Application.html](#)

42 The five internal va'yus (vital energies) which sustain the sensory organs and give them the power of expression are the objective expressions of A'tman - the aerial manifestation of A'tman. [The_Supreme_Question_1.html](#)

43 In the process of centrifugal movement in saincara, the material body composed of five fundamental factors comes into being. [Saincara_and_Pranah.html](#)

44 Sagun'a Brahma had to assume a crude form so that It could divide Itself into innumerable units. It exists as units only in ks'ititattva (solid factor), as It cannot divide Itself into units in any other form. [What_Is_This_World.html](#)

rudimental factor is solid and therefore has structure. Energy seeks a shelter or matter. If you break the shelter (like fission) then energy is released and explosively finds a new shelter. If you create a new matter shelter (like fusion) then energy will seek the newly created shelter. So, it's not energy that forms matter, it's the form of the container in which energy finds its shelter.

Force is not energy, but consists of the potential of energy to move from container to container⁴⁵. Therefore, we define force as unexpressed subtle energies that are latent on the physical/material level. If energy is defined as movement or action in the phenomenal sphere; then force is those latent unexpressed subtle energies⁴⁶.

Energy comes on different wavelengths. For purposes of discussion, we must divide those wavelengths into three very broad categories.

1. Spiritual or sentient waves
2. Psychic waves are those that contain mostly changeable or rajasic type energies
3. Static or tamasic energies those lie quiescent in a structure, rarely changing. These classifications are not strict quantifications that one could say build a mathematical model of energy on. These are categories of how energy appears to our limited senses. How energy manifests on our plane.

Energy Mind game

Does energy have waveform? No. Waveform contains energy. From the cosmic to microcosmic, waves carry or contain energy. That waveform passes through structures or containers. Longer waveforms pass through unhindered in higher frequency structures. This means that spiritual waves having very long frequency pass through unhindered in all physical structures that we can observe. Only when the frequency of the structure (like certain higher mind frequencies) is close or nearly parallel to the frequency of the spiritual wave, will there be any apparent psycho-

⁴⁵ When force functions within the scope of matter, that force is called energy.
The_Supreme_Cognition.html

⁴⁶ Bates, Macrogenesis p31

spiritual reaction on the observable level. Of course, energy input is there, only observation of that energy is limited to the structural change that we can observe.

Think in terms of a “mind game”. ‘What if’ these unimaginably long waves carrying cosmic energy were packed together so densely (like a laser beam of collated coherent light) together....and then passed through our phenomenal material universe and vibrated the fifth rudimental factor in every atom??? Could we see or sense them? No. Only the energy changes on the material observable level. The long spiritual waveform of cosmic citta passes through our entire universe unhindered and is the cause of the 1st rudimental ethereal factor vibrations that are the noumenal background cause of all material vibrations⁴⁷. Don’t think in terms of “How can a (one) long spiritual waveform vibrate an atom?” Remember we have neither method nor cognizance of *how* because the wave is *not* within our possible sense capabilities. There are *no* tanma’tas (see discussion below on tanmatric sense capabilities) coming from that wave that we can pick-up or sense. Why? Because we only pick up a small microscopically small fraction of the wave that is reflected or refracted back from the object. When that object is immaterial (or non-material to our senses), it simply means that the reflected waves are not within our sense capabilities, not that there are *no* waves.

Let’s continue our mind game to understand these phenomena. Energy travels on waves. Waves are not continuous⁴⁸. Therefore, energy only appears as continuous⁴⁹. Think of a very long wave with energy packets riding on top. The very long wave has definite breaks. Now take a smaller shorter (very short) wave and send it towards the long wave at an angle. Remember short waves bounce off the longer wave, but... only when there is *not* a pause or gap in the long wave. And what comes back? Only the portion that can get through the other pause in our human receiving apperceptive plate and only that microscopically small portion of the original reflected wave and only a wave that comes from a

47 The wind blows, the water flows, the stone rolls, the leaves flutter -- each of these inanimate objects has a unit mind, but only a dormant one. They cannot create vibrations by themselves; the Cosmic Mind creates vibrations for them. Bhava_Samadhi.html

48 Energy in motion is not continuous but flows in definite little jumps; thus the stream of energy has been called systaltic or pulsatory in the scriptures. The_Chariot_and_the_Charioteer.html

49 energy is systaltic. Shakti_and_Its_Proper_Application.html

solid factor (phenomenal-material) object within our phenomenal world. No wonder we cannot sense energy of spiritual or higher waveforms. No wonder we can only see the results of the action.

As crude example you can expend all the rajasic (see 3 general types of energy above) energy you want, by shouting, screaming etc. at a tamasic waveform structure (container) like a snake; but until you get a very static (tamasic) object like a stick to hit or move the snake, probably nothing observable will happen. This same waveform reaction occurs on the higher vibrational planes also. Spiritual and psychic energy of very long wavelength appears to pass unhindered through many dull witted or tamasic structured persons. Sometimes physical force is all that they will understand, to cause any observable results

Energy has system (philosophical theory)

Energy has a system. A macrocosmic - microcosmic transfer system. Without system, there is chaos. Spiritual energy has an entitative waveform carrying inherent energy (Shakti) along with its counterpart cognizance. This waveform is not recognizable with our senses and in our personal dimension of time. When the personal factor of the unit mind is established, then not only does energy become partially recognizable to our senses, but time as a temporal factor also becomes recognizable to our unit cognition through the individual a'tman (jiiva'tman). Unit witness (or a'tman) can only witness the movement of the reflective (tanmatric) waves from the cosmic waves through our semi-materialistic part of our psychic make-up called ectoplasm⁵⁰.

This is done in the manifested part of the congruent and parallel unit wave. In other words, the unit can only witness a certain fractional microscopically small part of the reflective inferential wave from the cosmic waveform. This portion can only be witnessed when the unit mind is in the "pause" state caused by the apperceptive plate vibrational function within the unit mind. It (unit mind) sees the small reflective portion of the greater wavelength because it is not capable of sensing the longer spiritual waveform. The witness of the small quantum unit waveform does

⁵⁰ When movement has the scope of being witnessed, there cannot be an acceleration or retardation in movement due to the self-involvement of unit ectoplasms. [The_Laws_of_Social_Dynamics.html](#)

not in itself "cause" a collapse of the wave, as modern physics tends to think. It is merely the fact that the unit cannot see the whole picture of the spiritual wave and therefore thinks that what it sees is the *only* wave. It (unit) sees merely the movement portion⁵¹ or manifested portion of the reflected spiritual wave and this through its "pause" feature in the apperceptive plate in the unit mind stuff.

Current Microbiology's understanding of energy

Generally, in the current studies of energy systems, we find energy studies broken into two systems. The study of living energy systems and cells, called bioenergetics and nuclear physics. These two studies differ in the approach that one studies living systems and the other studies so called dead systems. Because of this apparent difference, they each have developed their own nomenclature for energy changes. Physics refers to quantum jump/states, ground states and excitation of energy levels in the orbitals of electrons. Bioenergetics uses terms like Van der Waal forces, valance, bonds and ionic charges to define their science.

It is said that a chloroplast in a plant cell "accepts" photons in the 700nm range (P700, so named because it absorbs light in the red region of the spectrum at wavelengths of 700 manometers.) and that they absorb energy in different wavelengths through pigments. What is this energy? Are photons limited to certain wavelengths? Like why does colors of pigments accept one wavelength and not another? What are they accepting in terms of energy or in terms of wavelength? Is there some sort of sympathetic releasing resonance energy or vibrating energy reaction of partial wavelengths involved that causes an excitation of only that wavelength?

We have now re-defined the answers to these and similar related technical questions well within the realm of current science. But, the answers given simply re-define energy in terms of smaller and various forces. The structural and energy relationship between every part of every atom and associated molecule has been strictly

⁵¹ Unit consciousness, when it is self-dependent (it is dependent on others also), views the transposition of objects, and only that part of movement actually comes under the category of motion. The_Laws_of_Social_Dynamics.html

mathematically defined. Answers to the above chloroplast questions are re-defined in terms of smaller anaerobic and aerobic systems that have self-limiting feedback systems that control the energy requirements of the cell. This means they are self-limiting, self-controlling.... i.e. no need of any other control structure.

But, does defining energy in terms of the three types of observed movement (chemical, stored, or moving) really define what energy is and does?

At the turn of the 20th century, with the introduction of the laws of quantum mechanics, the marriage between physics and chemistry occurred. Now, biological and chemical changes in energy states could be explained on a more basic level, of quantum physics. But, the mechanistic approach to physics and chemistry has failed to explain or even take a look at the causes for the so-called quantum shifts in energy states. Even more basic, they have not even considered what really is the thing they so glibly refer to as energy. What is this unknown indefinable substance (energy) that so rapidly and without apparent reason just vibrates into higher states and causes these physical and chemical changes, that scientists are so carefully studying. Currently, reductionist physics has reduced the definition of energy down to the point of an unseen, indefinable particle/wave that they call Higgs boson, which mediates or carries energy. This is no different than was done 300 years ago with indefinable monad particles of Gottfried Leibniz. Now, it is just a more defined mechanistic reduction. The ultimate meaning is that something has to be there, because there has to be some explanation.

Energy Changes Forms

Energy changes forms by two different methods. Change in state. Change in containers. In both cases, energy is conserved. Total energy is not lost. Lighting is a good example of change in container. The charge of electrical energy passes from one cloud to another or from one cloud container into the ground container. Because of the ionization of the oxygen in the atmosphere when lighting occurs, the process can be clearly seen as a physical transfer of energy from one container to another. In addition, it can be clearly seen, the splitting of the energy flow as the lighting

breaks into different forks and goes different directions. The total energy remains the same, only the number of containers differs.

In change of state, we have a slightly different situation. Here the waveform has a change. Remember that not all energy is physical. Physical energy was defined as that energy that can be observed (even in amplified conditions) through any or all of the physical senses with machines. This observable physical energy is only a small part of the spectrum of wavelengths that energy occupies. How does the waveform change? The photon of energy we observe is an intrinsic component that rides on other longer waveforms. Change in waveform can be the cause of change in the state of the energy. In the case of a photon of light, we have an apparent particle (apparent because science has not defined whether a photon is a particle or a wave at this writing) traveling at the speed of light and stopping in a very short distance. However, what is stopping. Only the shorter wavelength photon particle carrying the very large intrinsic energy component. The longer wave continues unabated by material objects.

Using a physical example. When light waves are collated into a small circle against a black surface, they are nearly all completely absorbed by that surface. The result is the color we perceive as black and the surface shows a noticeable increase in temperature. When the waves are more focused through a lens, the change in temperature is even more noticeable. If we conceive of a photon as a particle heterodyned on a very much longer waveform, then the explanation of energy change becomes simpler.

First the longer wave form. It comes from a source (the sun) and simply passes through the black surface, just as longer waves pass through shorter waves practically unhindered. The very much smaller (and shorter wavelength) photon heterodyning on the longer waveform, dissipates its energy (thereby changing state from a physical viewpoint) as its shorter wavelength is absorbed in the black surface. We use black here because black absorbs almost the entire visible light spectrum. Here the physical attenuation of the overall photon wavelength causes a change in state from photon particle to observable heat energy. Photon is used because it carries a huge amount of energy component in relation to its amount of material structure.

We stated earlier that an axiom of energy transfer and/or change of state is that, it always travels from one container to another. Here the sun was the container that the energy came from and the black surface material the container the transferred energy traveled too. The long wave would be considered a transfer method; not container. Waves are systaltic and have pauses. Photons could travel within these pauses, heterodyned on the longer wave.

Energy/particle expansion

All energy is blind⁵². That is, all physical energies are blind. They have no intellectual or cognizance component. Energies are maneuvered and used by other intelligent or control elements. There are certain exceptions are in the range of the psycho-spiritual energies. Here, (example is microvita) the energies are carried by a varying component of intelligence. Getting back to the above examples, physical energy is blind. Its intrinsic vibration in its container (here waveform) is slowed down (in this example through physical attenuation). It changes vibrational state (here giving off physically observable heat) as it changes containers. Photon may be a variable sized particle. A particle that increases and decreases in relative size in accordance with the amount of energy it contains. In other words, a charged up particle (or photon) heterodyned and traveling at the speed of light from the sun, changing state and releasing its energy into the black surface, allowing the now very much smaller, discharged and now longer wave to continue on its way.

What we observe in the physical world does not appear to always support this theory. Look at white photon sunlight. It carries *all* the frequencies of the so-called spectrum. Now look at the chart below.

⁵² This energy by itself is a blind force and for its activation intellect must exist: a driver is required to direct this blind force. The support of the intellect is a prime necessity for the operation of energy in this material world. [Cardinal_Spirit_Action_and_the_Supreme_Stance_of_Devotion.html](#)

Visible Light	Column A	Column B
Wavelength λ_{max} (nm)	Spectrum absorbed by compound	New color observed
380-420	Violet	green-yellow
420-440	violet-blue	yellow
440-470	Blue	orange
470-500	blue-green	red
500-520	Green	purple
520-550	yellow-green	violet
550-580	yellow	violet-blue
580-620	orange	blue
620-680	red	purple
680-780	purple	green

This is a crude example on the physical level of waveform absorption and energy dissipation. Here are the wavelengths of visible white light carried by photons. When the visible blue wavelength photon (column A) is completely absorbed in a physical compound (here leaf), the new color (column B) is observed. According to our theory, a longer wavelength and smaller discharged particle should be the result in column B. However, this does not always appear the case, the blue vibration absorbed in the leaf appears as orange to our senses. This is because of the complicated amount of vibrations, particles and reactions involved in even the simplest transfer of energies in just simple photosynthesis.

Where does this idea come from? It comes from the study of intelligent particles (microvita) of the psycho-spiritual realms. In the psycho-spiritual arena, microvita are actually guided by a type of collective intelligence and perform very necessary functions especially on physical systems. They take on more and more energy (actually they increase in relative size) as their speed is diminished. The relative size becomes so large (in the specific cases of collective negative microvita) that it impacts the very basic cellular structures, causing such reactions as physical decay

of the cell. Microvita actually decreases in speed as they pass through the various so-called planes of inferences. The difference is that microvita starts out at faster than light (FTL) speeds and increases the energy component as they function at less than light speeds. They are psycho-spiritual and have an intelligent component and therefore duties. Photons are physical. Travel at the speed of light and have no intelligence component. Nevertheless, both particles have the ability to expand when they take on energy.

Let's use a very simple example of physical energy systems, to amplify the idea of particle expansion with the addition of an energy component. Most of the energy-consuming reactions in cells are powered by the conversion of Adenosine TriPhosphate (ATP), to ADP (Adenosine DiPhosphate). This includes the transmission of nerve signals, the movement of muscles, the synthesis of protein, and cell division. It is commonly understood that the stomach, through the process of carbohydrate digestion, converts sugars into glycogen that is stored in the liver. This glycogen is available at all times and is converted to glucose and released into the bloodstream as required by the body. Glucose is known as a liquid storehouse of the energies that are easily converted by various and sundry muscles, nerves and organs into physical action. When the ATP component takes on liquid form (glycogen) it has taken on additional volume and is temporarily stored in the liver, before passing on to the various end users. Didn't the energy component take on greater physical size when it became attached to the ATP – glucose molecule? With any increase in relative energy, the system or object will increase in relative size and decrease in overall wavelength.

Conversion of energy

Common physical forms of energy conversion are well known and documented. Such as conversion of light into heat and electricity and vice versa. What is not commonly known is that the certain (vital) physical energies in the human body can be converted into light, electricity and magnetism⁵³. Shrii Shrii

53 And you know, energies are inter-transmutable. Light energy may be converted into sound energy; and the vital energy of human beings may be converted into spiritual energy, into electrical energy, into light energy, or into sound energy. When you speak, you convert your vital energy into sound energy. Onmkara_and_Ista_Mantra.html

Ánandamúrti did some demonstrations in 1969 where He used a subject (person) to convert body vital energy into electricity⁵⁴. Not just as a capacitor of electrical energy as when you get a static electricity shock, but as a generator of electricity. The subject was insulated by a woolen blanket and tested by various advanced students. Shrii Shrii Ánandamúrti then revived the subject and explained that this procedure would cause death of the physical body, if continued.

Psychophysical conversion of energy occurs when we convert idea into action. The human vital airs (*Chapter Three*) are used constantly when we convert our psychic energy conceptions into the verbal sounds of spoken thoughts or actions. Spiritual and psychic conversion occurs constantly, when higher energies are controlled and utilized through the psychophysical plexus or cakra system of ours bodies (*Chapter Four*) and other structures. This is explained in brief detail under vital energies. The precise conversion of these energies is much too detailed and comprehensive to be discussed at length in this work. A previous work *The Internal Being* discusses a portion of this subject concerning the relation of cakras and the intrinsic attached human desires. Therefore, only a general discussion of cakra and vital air interaction is attempted to familiarize the reader with these structures when the discussion of microvita and how it affects the body is discussed later.

Some Material Considerations

Under the above sub-headings, we saw that there were some material implications to be considered on the recognition of matter. Energy is not material and falls under movement. Here they are in logical outline form:

- 1.) matter has structure**
- 2.) structure implies control**
- 3.) movement implies energy**
- 4.) control implies cognition**
- 5.) cognition implies mind**
- 6.) mind implies individuality**
- 7.) mind implies witness**

54 conversion demonstration of vital energy to electric. [Conversion_of_Energy.html](#)

We will discuss them all, but not necessarily in this order.

A Concept of matter

In understanding Shrii Shrii Ānandamūrti's concept of matter, we must first realize that matter is a construct of energy⁵⁵, idea (mind)⁵⁶, the five rudimental factors⁵⁷ and microvita. In the end they are all One. They all come from the One and all go back to the One. It is a mind boggling concept. But, we must understand where we are in this conceptualization. We are a construct of microcosmic mind and matter⁵⁸ in only a small section of the overall picture. The difference is that our mind is a special case of matter. In other words our mind comes from matter. One could almost say a sub-order of matter. But here we must put the proper nomenclature. Our mind is a microcosmic type or unit mind stuff evolved out of macrocosmic mind, energy and five rudimental factors.

So, when we discuss matter, we must think what and how we are viewing those macrocosmic concepts. Can an ant view the moon? Does microcosmic evolved mind stuff have the capacity to see macrocosmic constructs? And this is the inherent problem. We can only view certain limited aspects of the macrocosmic creation with our limited microcosmic minds and the inherent senses we have to work with.

Matter is a macrocosmic construct. It is created out of macrocosmic energy with macrocosmic idea and the macrocosmic five rudimental factors⁵⁹. We can only view in our microcosmic minds, those aspects that our senses have the capacity to witness.

55 The fundamental essence of matter may be called by any name - molecule or atom but the basic cause of matter is nothing but energy, matter is nothing but bottled-up energy. It is the condensed state of the particles of energy that we call matter. It is by no means correct to consider matter as an original substance. [Matter_and_Spirit.html](#)

56 Crude matter is the condensed form of Macrocosmic mind-stuff.
[The_Macrocosm_and_the_Microcosm_1.html](#)

57 The subtle Cosmic Mind-stuff is metamorphosed into the material particles of the relative world.
[Cosmic_Attraction_and_Spiritual_Cult.html](#)

58 The unit mind is a metamorphosed form of matter, and matter is a metamorphosed form of Cosmic Mind. In the process of evolution, the Cosmic Mind takes the form of matter.

[Cognitive_Faculty_and_the_Supreme_Desideratum.html](#)

59 In the process of centrifugal movement in sañcara, the material body composed of five fundamental factors comes into being [Sañcara_and_Praṇa.html](#).

We witness through sensing tanma'tras (small microscopic reflected fractions of the entire macrocosmic wave construct). We cannot witness the original macrocosmic inference.⁶⁰

Sometimes, Shrii Shrii Ánandamúrti would impart temporary awareness of these macrocosmic creations to certain devotees, in samádhi. *Always* when the devotee returned to normal consciousness, he could find no ability to describe those macrocosmic wonders, with his microcosmic mind stuff.

To understand matter we must first understand what it is composed of and where it comes from. It comes from a macrocosmic evolutionary progress. In this process matter is composed of energy and energy comes from idea. Ideas evolve from the Macrocosmic Mind⁶¹. All this can be considered an attenuation of the Macrocosmic Mind wave composed of two macrocosmic principles. Cosmic energy and cosmic cognition. This is discussed completely in *Macrogenesis*.

All this implies action. Action further implies movement. That is movement of an object from point A (in space) to point B (in space). Further, when we say movement of object in space, there must be some observer or witness⁶² to these phenomenal objective movements⁶³.

Here we have jumped from the macrocosmic world of mind and matter to our microcosmic phenomenal world in almost one sentence. We must remember that to us in this relative phenomenal world, we witness matter through a concept of what we call time⁶⁴.

60 When the original inferences come in contact with the plane of the universe, they are either reflected or refracted. The unit cannot have the original inference. Microvita_and_Cosmology.html

61 Materialists accept this perceivable creation as the absolute reality, and deny everything beyond the scope of the senses. This betrays their deep ignorance. They do not want to understand that matter is absolutely dependent on time, space, and person for its existence. Matter comes out of energy and energy comes out of Idea. Unity_in_Diversity.html

62 The A'tman is not only present as a component and witness in the energy-created forms[atoms]; He is also present as the all-witnessing Entity outside them as well. Matter_and_Spirit.html [Prota aspect]

63 Any systaltic or pulsative movement within the realm of the relative factors starts from one point and terminates in another point within the domain of space. The intervening space between the two points is measured by the time factor and substantiated and sustained by the personal factor. Vashiikara_1.html

64 First of all, take the case of the tempus, the Tempus Eternal. What is it? It is a psychic measurement of the motivity of action. Microcosm_and_Its_Object_of_Ideation.html

Part of the difference in macro-microcosmic is the witness of time⁶⁵.

Both macrocosmic and microcosmic phenomenal worlds have time, only they are witnessed differently. We see time (and therefore matter) through our microcosmic minds that have been constructed (evolved) from macrocosmic matter. This seems almost oxymoronic. Matter evolved unit mind (us) creates its own time (in that matter evolved mind) to view matter? Never-the-less, that's how it happens.

Macrocosmic connects to both aspects through its ota-prota multilateral mind⁶⁶. We can connect to only our microcosmic phenomenal universe through our matter evolved unilateral minds. The mental stuff we have (ectoplasm) is microcosmic and evolved from the macrocosmic mind. It can only witness time and therefore matter in a microcosmic way.

Back to movement and action. So, movement and action of an object can occur in a macrocosmic environment and have a macrocosmic witness...only⁶⁷. This is called Protah or macrocosmic witness. We view (experience) action and movement of objects through our limited microcosmic mind stuff and own individually created (jivátman) witness. We can view only relative movements in relative times and universes.

A Discussion on witnesship

At some point those scientists whom are intellectually oriented, will sit back and say, "Wait a minute?" It appeared that this is just another sophisticated substitute for God centered theory. God being the controller of all. Sort of "Man predisposes and God disposes" theory?

To answer the query, look at the time line drawing called Macrogenesis, in the book *Macrogenesis*. Matter has two types or phases. When microcosmic mind evolves from matter at the end of

65 The change of place of an object is called gait or motivity ; and the mental measurement of this motivity is called ka'la or time. Motivity is the cause of spatial and temporal change within the periphery of object entities. [Cognitive_Force_and_Psychic_Practice.html](#)

66 He has got a direct relationship with each and every entity and He has got a collective relationship with this collective world. That is why it has been said that He is multilateral in action. [Triangle_of_Forces_and_the_Supreme_Entity.html](#)

67 Where there is no mind, the material body is directly guided by the Cosmic Mind ; otherwise, it is guided by its own small unit mind. [Cognitive_Faculty_and_the_Supreme_Desideratum.html](#)

Saincara, at that time the witness ship becomes duel. Crude matter has (up unto this point) been controlled by cosmic mind and cosmic mind is both the only witness and the controller to the action. From a God centered theory viewpoint, then one could suppose that God is the all-powerful answer...up to this point. But... up to this point (in the cosmic time line) we as cognizant beings do not exist.

We (our mental being cognizant of our individual or unit existence) exist only as products (ectoplasmic products) of matter. Matter in itself is crudified cosmic mind stuff and cosmic energy. It is truly controlled by the omnipresent and omnipotent Cosmic Mind by His protah witness ship. We as microcosmic constructs from matter, have no *direct* knowledge or cognizance of this function.

Only in Pratisaincara (by the cosmic time line) do we find individual unit existence and cognizance of the fact that we (the unit I of I am) exists (and we know that we exist). At that same moment (in that same Cosmic time line), we establish our individual witness-ship (and our basic sense of time). We as individuals, witness the five rudimental factors (and therefore matter) in our own right and we as individuals have the power to modify those same five rudimental factors in with our own mental power (of course, normally we cannot yet utilize these powers).

Back to matter. Therefore, matter exists parallel with our mental mind stuff and concurrent to our mental cognizant understanding. It is composed of the same cosmic five rudimental factors matter and microvita. We as individuals are also composed of matter of those five rudimental factors; but we as individuals exist and are mentally composed of *non-* matter or mental mind stuff, also. The matter portion (and ectoplasm falls into this class) returns to the material world and is recycled (at our death). The mental portion is the only portion (as a bundle of karma'shaya – unrequited sam'ska'ras) that carries forward, on that cosmic time line on the area called Pratisaincara. The material matter portion remains in the Saincara portion of our so-called cosmic time line and therefore under the protah witness-ship and purview (and direct mental control) of the Cosmic Controller.

What does this mean in a practical manner? Each and everything and particle in this manifested universe has an ultimate

controlling witness-ship in that Cosmic Nucleus. This includes us and every material particle in us. The evolved mental being portion of us has evolved its own mental witness⁶⁸. Simply, this jiiva'tman portion is the part of our mental being that allows us to know that "we know that we exist". However, this has evolved *not* from the cosmic mind stuff but from matter. We consist of part A and B, mind and matter, separately. Part A (mind) continues in mental evolution of Pratisaincara. Part B (matter) remains and is recycled in the material worlds. When this microcosmic evolved mind is associated with matter (as in our phenomenal world), it brings along with it its own separate witness or jiiva'tman. This is what allows us the feeling of existence in the material world.

Therefore, we as human being have two witnesses. Why don't plants and other undeveloped things also have two witnesses? Microcosmic witness-ship is not something that is bestowed upon a material substance by some God-Like beings. It evolves, in fact coagulates. Plants and other undeveloped things do not have this second witness because they have not evolved sufficient mental ectoplasm within their mental make-up to attract/evolve the higher types of mind stuff that is required for this second witness to function. Remember, it is only when the mahat portion of mind stuff exceeds the aham portion of mind stuff that the feeling of "I know that I exist" can come into being. Only then do we require a direct witness to substantiate that feeling of existence.

How does this happen in a practical manner? How can a mental being (our mind) that is so fine that it is beyond our senses, collect around a material object like us? In *Macrogenesis* the chapter on *Ectoplasmic expansion* (and contraction), we discussed how mind coagulates around matter. A brief review might be in order here.

Formation of evolved mind and second witness

The scenario of cloud forming in the sky was given there (in *Macrogenesis*). A small particle of dust (ectoplasm in the

68 FAC-3.FAC ; only a microscopic portion of the mind remains as the witnessing entity...The mind is divided into two chambers: the objective chamber which is formed from almost all the ectoplasmic stuff, and the subjective chamber formed from that portion which is the knowing self.

mental scenario) attracts high humidity water vapor (aham in the mental scenario) to form around it in an atmosphere made of many mental gasses. Mahat mind stuff both evolves from this environment and coagulates around the ectoplasm and aham mind stuff in the proper physical environment. The complexity of the organism defines the mental needs of the unit. Human has the most complex needs and therefore the highest mental complexity requirements. Therefore, humans form their own minds in accordance with their complex physical requirements. This is why we end up with two witnesses. If we were plants and had very limited physical functional needs, we would *not* have a compacted complicated mind structure that included a separate unit-witnessing portion.

Implications of Cognition

Individuality and discernibility

(Partially excerpted from *Macrogenesis*)

Yes, every effect has a cause. For every objectively defined concept or object, there is a subjective approach or explanation. Both objectivity and subjectivity are relative to the observer. But, science (and specifically physics) fails to recognize that which is beyond their senses. For a hundred years, science has made very little progress in the theoretical studies of the energy systems around them. They recognize only what they can sense and they what they can re-identify. Around 1926 –1928, in Copenhagen, there was a series of conventions and conferences in which the founders of modern day physics defined and set the limits to knowledge (and therefore understanding) to the arena of the senses. Generally, they state that physics must follow certain rules to be admissible as so-called factual evidence regarding physical evidence.

- It must have permanent properties that can be virtually observed through re-verifiable experiments.
- It must be re-identifiable at another time.
- It must have “individuality”.

Many persons have discussed these points at great length. Here we will just put down some of the problems with this way of thinking. Therefore, we can avoid the same mistakes in our own discussion.

- They limit theory (and research) to what is observable (re-identifiable and re-verifiable) to the senses (or their extensions).
- They fail to recognize and therefore leave out the entire unseen universe as a possible explanation to physical events or objects.

Unfortunately, for atomic physics, this “knock on wood” type of definition of verifiable objectivity, does not allow metaphysics to define material theory. The physics definition of re-verifiable and re-identifiable refers to sense re-verifiable and sense re-identifiable identification (or extensions thereof) of the object. Current physics leaves very little scope for the cause/subjectivity of cause-effect theory to define material objectivity. If we must relate to metaphysics to define material theory then we must use individual characteristics that are beyond the gross senses.

Particles have individuality. Humans, cats and particles have a sense of existence. Albeit in particles, it is certainly undeveloped (dormant relative to human mind development). In quantum physics individuality is defined in terms of its discernible “properties”. The senses of the definer are the determining factor in a strictly sense related materialistic definition of physical characteristics. Here quantum physics defines individuality of the unit using a variable, based on the definer and using senses that cannot possibly even see all the wavelengths emanating from a object (particle/wave in this case). What Schrödinger was trying to point out in his classic three rules for a particle, was that every object (particle) has individuality, re-identifiable and has virtually permanent properties.

Schrödinger’s three rules of discernibility stem from the history of philosophy that all bodies are “individualized” by a complete and distinct set of so-called properties. This in turn comes from Leibniz’s principle of the identity of indiscernibles. That being, that if two bodies have exactly the same properties, and if the only feature that individualizes them is their properties, then they must be considered “identical”. Hundreds of years ago,

this may have been a logical conclusion. Then all suns (stars) were indiscernible in composition. Today modern spectrum-analysis and computers can rapidly determine the individuality of each star. From an overall viewpoint, objects seem to be indiscernible. When we have closer and more subtle analysis available, the individuality comes to light.

Indiscernibility of one particle/objective matter from another, may ascribe the same properties to the other so-called particle/objective matter, that in itself it does not constitute a priori logical proof that they are identical. Identity is individuality.

Individuality comes from the basic precept of consciousness and the feeling of existence in the unit. This "I" differentiates itself from the other "I's, also positing in the same time continuum and approximate space. Humans are all different. We can agree.

Atoms are all different; each has its sense of individuality. We as scientists may not agree, here, only because we do not have the equipment or understanding to differentiate properly, not because the statement "atoms are all different", is not true. Each particle, atom, galaxy has its individuality. However, each system must be viewed from its own specific Macrocosmic and microcosmic perspective. The individuality of each atom of hydrogen is there, it only appears to us as distant viewers to be all the same, indiscernible. Is this "indiscernibility" a logical reason to build a science of physics?

In conclusion, Schrödinger's "constitutive features" of particles/wavicles having "re-identifiable through time" properties must be expanded to include time, place (apparatus) and person (observer). Virtually permanent properties must include more subtle and yet un-identifiable characteristics of microvita type and microvita quantity. Individualization on an atomic particle/wavicle level must include the macro and microcosmic considerations of substantiation⁶⁹.

In order to define individuality we must determine the parts of the individual unit and their coordination with both the macrocosmic and microcosmic. This is the reality of the Wholeness, around us. From a macrocosmic viewpoint,

⁶⁹ Bates, Macrogenesis P71

Schrödinger's particle has a posited relationship with every other particle in the universe. We as other units may not be able to discern this relationship, but the relationship exists to the particle, as it exists to the viewer. To the cosmic viewer the relationship (protah) is one of say the lecturers speaking to the audience of particles. When they all respond in unison, that is a collective response; but when one responds individually, then the relationship is unit-I to Cosmic-I and vice versa. This is not saying that the particle can respond to Cosmic-I on the same level as human thought! Of course, the mind of the particle is undeveloped and dormant, BUT the relationship of positing is there and posits the existence of that particle with the whole. See ota/protah relationships in *Macrogenesis*.

Individuality must be re-defined in terms of the unit I-feeling or so called sense of existence, be it unit particle or unit human being. The basic unit of the individual is the unit "I" and the strength of the unit "I" is a factor of the material making up the controlling structure of that unit, atom, matter or human being. Just as in the human, the structure is the mind and the material forming the controlling structure is the ectoplasm, aham and mahat. In the atom, microvitic mind forms the structure of the particles mind. Certainly, the atom does not have the intelligence (aham & mahat mind stuff in proper proportions) to form an intelligent reflecting mind like the human. In other words the atom does not "know that it exists" or cannot say to itself (as humans can) "I am therefore "I" exist".

As Michel Bitbol points out in his article "Are their particles and quantum jumps?" in *Mind, Matter and Mystery*⁷⁰ that

"elementary particles can also be ascribed a form... But said form can but define a species; it does not help to single out each one of them and to identify each through time. Instead, one must revert to other criterion in order to ascertain the individuality of each particle."

The viewpoint here is broken down in two ideas. One of form and the other of individuality. However, we know that the classical viewpoint of quantum physics is that if a particle is ascribed any trajectory then the ultimate criterion of permanent

70 Nair, Ranjit Mind, Matter and mystery , Scientia, 2001p.57

individuality will collapse. This was pointed out by Boltzmann in as far back as 1897⁷¹ and Schrödinger in 1955⁷² that using discontinuity theories removes the unequivocal identification of particles.

This leads us to alternate path that form may more closely help us identify the particle by species, but not necessarily to an exact re-verifiable discernibility.

This is precisely the attitude of microvita identification. That: “elementary particles can also be ascribed a form... and said form can but define a species...”

What do we mean by this in microvita physics and how is this accomplished in a practical way?

- The question of microvitic form is accomplished from the viewpoint that so-called neutral microvita are collective and coagulate around the solid (ks'ititattva) rudimental factor in elementary particles. Form is discernable when the collective solid object reflects or refracts tanma'tras having sufficient composite density to activate the discerning (sense) receptors.
- Species is but a collection of common form.

All particles (or portions thereof) have different mental characteristics because; all microvita have mental characteristics. They (microvita) then group by collective mental characteristics. This is the opposite of our individualistic unit type of mind stuff that is formed through ectoplasm from the powdering down of matter.

Diversity, not identity, is the law of nature.⁷³ Microvitum (individual microvita) have diverse individuality; but group for common purpose through their collective mind to provide form. Unequivocal permanent individuality is an oxymoron.

71 Boltzmann, L. Theoretical physics and philosophical problems, B. McaGuinness, ed, Reidel. 1974 P.230-231.

72 Schrodinger, E. to Margenau, H. April 12, 1955, AHQP, microfilm 37, section 9.

73 Vaecitryam' pra'krtadharmah sama'nam' na bhavis'yati. [Diversity, not identity, is the law of nature.] Purport: Diversity, not identity, is the innate characteristic of the Supreme Operative Principle. No two objects in the universe are identical, nor two bodies, two minds, two molecules or two atoms. Chapter_5.html

Requirements for phenomenal particles structural existence

These are some additional things that must be taken into consideration in the realization of (or definition of) virtual atoms:

- Even the smallest so-called particle has mental characteristics. **“No two objects in the universe are identical, nor two bodies, two minds, two molecules or two atoms”** (Chapter_5.html)
- All particles (or portions thereof) have the different mental characteristics of their collective or individualistic inherent mind type.
- Inherent mental characteristic implies that phenomenal particles must have their witnessing counter-portion, to be functional in the phenomenal relative universe. This in turn can be broken down into Ota or Protah control witness relationships, depending on how the phenomenal particles are grouped into evolved developed (or undeveloped) mind usage. Here we are limiting discussion to undeveloped mind or Protah witness in the phenomenal relative particles. Phenomenal relative particles have Ota control relationship with Cosmic Nucleus mind only.
- To be functional (have movement by definition) also implies that a component of energy must be present. (waveform)
- For energy to manifest (or exist in the phenomenal universe) implies that shelter for energy must be present. For all energy seeks the nearest shelter.
- Rudimental factors act as shelter for energy as they manifest on different levels of observance. The crudest (shortest waveform) 5th factor (solid factor) acts as shelter of phenomenal particles. Therefore, solid factor is present in all phenomenal particles⁷⁴.
- All phenomenal particles contain microvita⁷⁵.

74 The energy remains and maintains the structural solidarity of each and every entity of this universe by taking the form of its container according to the structural solidarity of the different entities. Bhavambodhipotam.html

75 To him or her a carbon atom [carbon based structure] is nothing but billions of microvita getting solidified. Microvita_and_Its_Possible_Effects_on_Society_Section_A.html

Everything is solid factor

What is solid factor in microvitic terms? The ability of any phenomenal object to be divided without the separate use of another container⁷⁶. A solid holds a rigid shape without a container. This by definition means that the container being divided contains energy. When the container is destroyed, the energy rushes to another container. The container may in- itself be converted to what we observe as energy dissipation or call release of energy. This is what we observe in hi-energy nuclear particle collisions. The energy is only an observable energy...not all energy. What we observe is only the particle being split into smaller short life particles giving off observable energy. The split particles decay or decompose into smaller more stable particles. This is the sequence of observable events.

What do we mean “Everything is solid factor”⁷⁷? The solid factor is a combination of all the five rudimental factors⁷⁸. There are five general states of physical matter. (Solid factor elements) .We just don’t recognize them. They are five energy states of the same solid element. The crudest most condensed energy state is seen as solid, better yet crystalline (form) matter. Second is the liquid energy state of solid factor. The third is the gaseous or luminous energy state of solid matter. The forth state of ks’ititattva is the aerial plasma energy state of solid matter. It contains a higher proportion of the aerial tanma’tas and almost no amount of the actual solid tanma’tas. It is still solid factor, only we cannot recognize it because the amounts of the lower tanma’tas are not sufficient to activate any of our sense mechanisms. Our sense receptors are geared towards the most dense solid factor forms. The more crude vibration cannot define or outline the subtler vibration. Light waves are longer than protons, neutrons or microvita. They cannot outline or define protons, neutrons or microvita. They will simply pass around or by the smaller structure.

76 It is only earth or ks’ititattva, the crudest rudimental factor, which can be divided properly into desired distinct units. (multiplicity) [What_Is_This_World.html](#)

77 Sagun’a Brahma had to assume a crude form so that It could divide Itself into innumerable units. It exists as units only in ks’ititattva (solid factor), as It cannot divide Itself into units in any other form. [What_Is_This_World.html](#)

78 In the process of centrifugal movement in saincara, the material body composed of five fundamental factors comes into being. [Saincara_and_Pranah.html](#)

We must remember that all tanma'tras are reflected by the solid factor. This means that the solid factor carries imbedded intrinsically within it the ability to reflect all the five tanma'tras⁷⁹. It is only that we cannot recognize other factors in their other states. What we recognize is a microscopic fraction of the original wave. That is the definition of tanmátra. If for example if it appears as fire, then it means that the luminous factor energy (form tanma'tra) is dominant (due to pressure, temperature or other environmental constraints) in amount and that the other four factors are there but lessor in amount. Still all five are there and it has to by definition be called solid factor element. Liquid state is still solid factor elements, just with the liquid tanma'tras being more manifest or observant in amount and to our senses. The energy bonds are less in the liquid state of ks'ititattva than the first more crystalline solid state.

Summary of the components of elemental matter

- Contains solid factor (all 5 rudimental factors)
- Contains energy with structure
- Has mental control structure
- Has witness
- Contains microvita
- Identified by tanma'tra

⁷⁹ If the solid can transmit the five fundamental perceptions of sound, touch, form, taste and smell with equal intensity, it does not mean that each and every perception of this solid tanma'tra will have the same intensity of sound waves transmitted by the ethereal body. Bhutatattva_Tanmatratattva_and_Indriyatattva.html

Comparison chart of Matter, Energy & Microvita

Characteristics	Energy	Matter	Microvita
Form	No form tanma'tra	Reflects form tanma'tra	Point-like form
Intelligence	no	progressively	yes
Controlled by	mind	mind	mind
Macrocosmic	yes	no	yes
microcosmic	yes	yes	yes
Comes from	Idea/2nd rudimental factor	Cosmic citta/5th rudimental factor	cosmic nucleus
Tends towards	seeks container	crudeness	collective will
Wavelength	longest	shortest	variable

CHAPTER TWO

Sensory Energy Transduction

Introduction

Energy transduction occurs on all dimensions around us continuously. This area has been the subject of intense research and numerous Nobel Prizes in the last few years. This provides a wealth of scientific facts that we can use to show the integration of the better-understood physical world with the little understood metaphysical psychic world around us.

Transduction refers to the change of impulses or energies in many different fields. In psychology, it refers to the change of a stimulus to one form of result or another. In engineering it refers to the change of energy from one type to another and is called a transducer. In biophysics, it refers to conveyance of energy from one electron (a donor) to another (a receptor) as the class of energy changes. In biochemistry, it means the transference of viral DNA into the bacteria and the modification of the host DNA. This portion will be limited to energy transduction impulses in the physical body.

Sensory energy transduction

A study of sensory transduction⁸⁰ involves the different nervous systems, the afferent and efferent organs and physical and psychic transduction organs and pathways. On a physical level it is accomplished by through sensory receptors.

Sensory receptors function as the first component in a sensory system and are generally classified by their functions. For simplicity, most of the receptors are listed below under the sensory

⁸⁰ [https://en.wikipedia.org/wiki/Transduction_\(physiology\)](https://en.wikipedia.org/wiki/Transduction_(physiology))

transducer chart and classified by the general physical organ system involved. Many receptors are multimodal and multipurpose. That is they serve many functions and are used to respond to many imputes. One general function can be served by many different imputes.

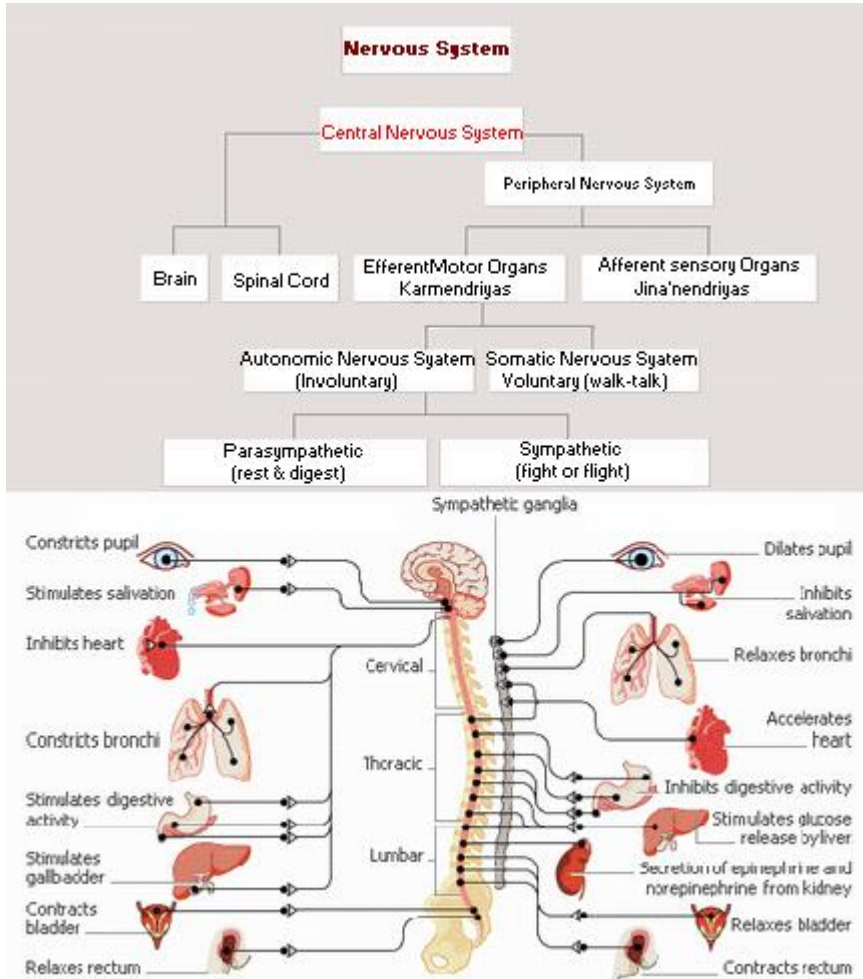
Generally, afferent (incoming) receptors are designed to create a small electrical response called action potential that acts through synapses (nerve endings) that are directed toward the [central nervous system](#) through the spinal cord then to the [thalamus](#) and the [somatosensory cortex](#) in [cerebral cortex](#) of the brain. The senses of vision, audition and touch are served by the primary [visual cortex](#), primary [auditory cortex](#) and primary [somatosensory cortex](#) and are directed through the thalamus. All sensory systems are mediated by the thalamus (but not olfactory) function, which acts as a relay center for sensory information. All termini of the receptors end in the thalamus area then travel into the central nervous system⁸¹. This thalamus area is exactly in the center if the sixth psychic cakra. Olfactory receptors (smell) are routed through the hypothalamus.

An easy way to remember the different nervous system functions is that afferent organs receive [nerve impulses](#) from receptors or sense organs. They are sensory or receptor organs. **A**fferent connection **a**rrives and an **E**fferent connection **e**xits. Below is a drawing of the various nervous systems. The word *indriya*⁸² is used in Sam'skrta to describe the entire system of either a sensory or motor organ, This means the gateway to the concerned organ, the nerves and neural pathways, the various transduction mechanisms, the organs that mediate the signals, the psychic organs that compare the vibrations and the various organs in the brain that utilize this information. It is sometimes convenient to refer to the entire individual system (indriya) when discussing say the common energy and psychic organs that motivates the indriyas. A medical description of the entire physical pathways their various organs and nerve impulses is beyond the scope of this work. Here is a simplified and slightly modified schematic drawing showing the various physical nervous systems and their relationships.

81 www.Wikipedia.org ref. Olfactor receptors

82 Each sense organ can only receive a certain type of inference (tanma'tra): the ears cannot receive the form inference, the eyes cannot receive the sound inference: the indriyas can only remain actively associated with their respective objects. [The_Supreme_Question_1.html](#)

Nervous systems modified schematic



Sensory organs of the afferent nervous system

Sensory organs (jina'ndriyas) are five in number - (1) caks'uh (eye), (2) karn'a (ear), (3) na'sika' (nose), (4) jihva' (tongue) and (5) tvak (skin). Their functions are - darshana (to see), shravan'a (to hear), a'ghra'n'a (to smell), a'sva'dana (to taste), and sparshana (to touch), respectively. Shrii Shrii Ánandamúrti uses a special word indriya to describe the entire complex of a

sensory or motor organ. An indriya is a sensory or motor organ, together with its respective nerves, nerve fluid, and site in the brain. This includes all the nerves, synapses, organs external and internal, in the path to the brain. He states that the controller of all the indriyas is the psychic energy of the mind⁸³. Later in the section on *vital energy systems*, we will see that vital energy or va'yus are the force that controls the mind.

The general process of afferent sensory transduction and efferent motor sensory transduction is very similar in the use of electrical signal known as an action potential and is used by both systems. In the incoming sensory transduction system, a chemical or physical [stimulus](#) is transduced by [sensory receptors](#) into an electrical signal. Whereas in the efferent motor system, the efferent nervous [action potential](#) signal from the brain is converted into a [chemical](#) one via the release of [neurotransmitters](#). This again is routed through the hypothalamus (or thalamus) and then the pituitary gland for the proper hormonal response. Things are not quite that simple. There are many feedback systems and branching of nerve impulses involved. The science of exploration of the various neural pathways is just in its infancy. Very little is understood of even the neuronal routes involved. Almost nothing is even hypothesized as to how this is done.

Here is a sensory transduction chart of the afferent and efferent sensory organs with some of the routings and functions of each.

Sensory transduction chart

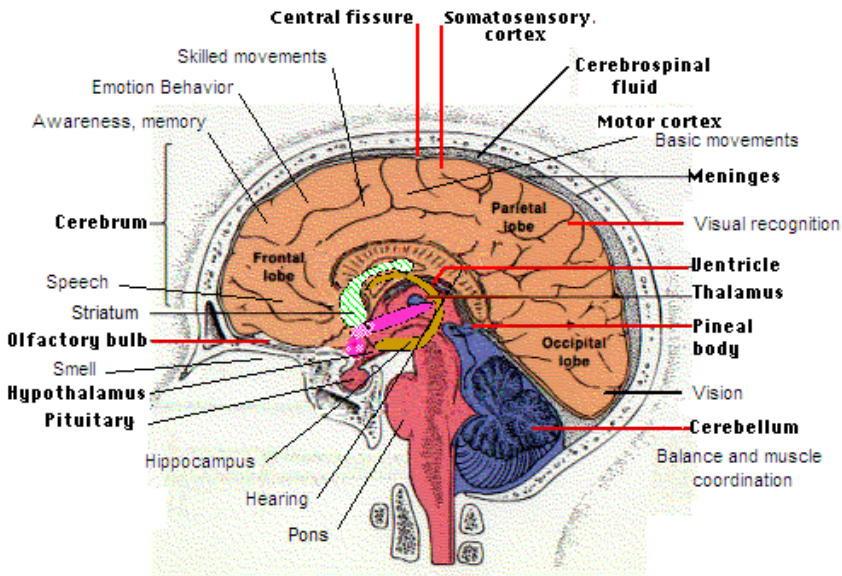
System	Target	Passes through	Receptors	Transmitter	Function
Afferent sensory organs		(sam'jina' na'd'ii)			
Vision (caks'uh)	primary visual cortex	Thalamus	Photo receptor	rhodopsin	light into electrical
Auditory (karn'a)	primary auditory cortex	Thalamus	hair cells	K+ pitch-selective neurons	vibration to electrical
	inner ear		sensory epithelium	mechanically-gated ion channels	angular acceleration of the head

83 The controller of the indriyas is the mind, and the controllers of the mind are the va'yus.
Tantra_and_Sadhana.html

Olfaction (na'sika')	paleopallium	Hypothalamus	Chemoreceptors	sodium ion channels (GPCR)	chemical to electrical
Taste (jihva')	primary gustatory cortex	Thalamus	Chemoreceptors	sodium ion channels (GPCR)	chemical to electrical
Touch (tvak')	primary somatosensory cortex	Thalamus	Mechanoreceptors	sodium ion channels (GPCR)	mechanical to electrical
			Pacinian corpuscle	Aδ fibers	fast gross somatosensations
			Meissner's corpuscle	Aδ fibers	fast fine somatosensations
			Merkel's disk	C fibers	Slow fine somatosensations
			Ruffini's ending	C fibers	Slow gross somatosensations
			polymodal	sodium ion channels (GPCR)	chemical, thermal, or mechanical
			Thermoreceptors	sodium ion channels (GPCR)	above 45°C and below 5°C
			Nociceptors	sodium ion channels (GPCR)	muscle, joint, bladder and gut.
			silent nociceptors	sodium ion channels (GPCR)	inflammation
Efferent Sensory Organs		(a'jina' na'd'ii)			
vocal cord (va'k)	Primary motor cortex	Thalamus			To speak
hand (pa'n'i)	Primary motor cortex	Thalamus			To work
leg (pa'da)	Primary motor cortex	Thalamus			To move
anus (pa'yu)	Primary motor cortex	Thalamus			Waste out
genitary upastha)	Primary motor cortex	Thalamus			Give birth
Proprioceptors		TRF		information on body position.	
	feedback	Thalamus	Osmoreceptors		fluid osmolarity
	feedback	Thalamus	Hydrosensors		humidity

	muscles	Thalamus	stretch spindles receptors	mechanical ly-gated ion channels	rate of stretch
	tendons	Thalamus	Golgi tendon	mechanical ly-gated ion channels	measuring tension
	Inner ear	Thalamus	Baroreceptors		respond to pressure

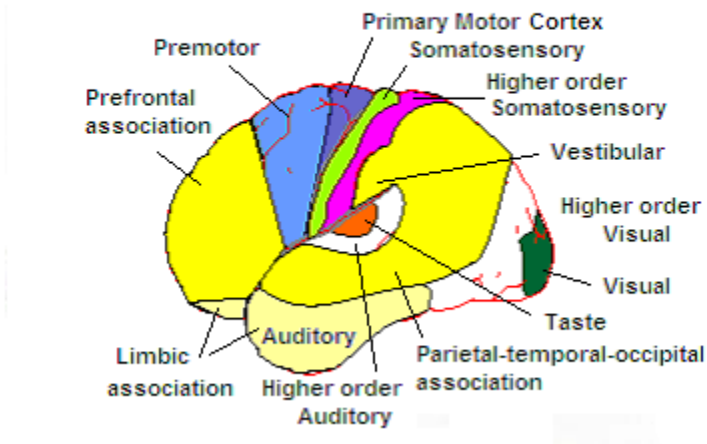
This is a cutaway drawing of the brain showing most of the important physical organs and the associated sensory functions.



Cutaway drawing with associated sensory

Here is a pictorial map of the physical brain with known associated areas mapped

Pictorial Brain Map



Pictorial Brain Map

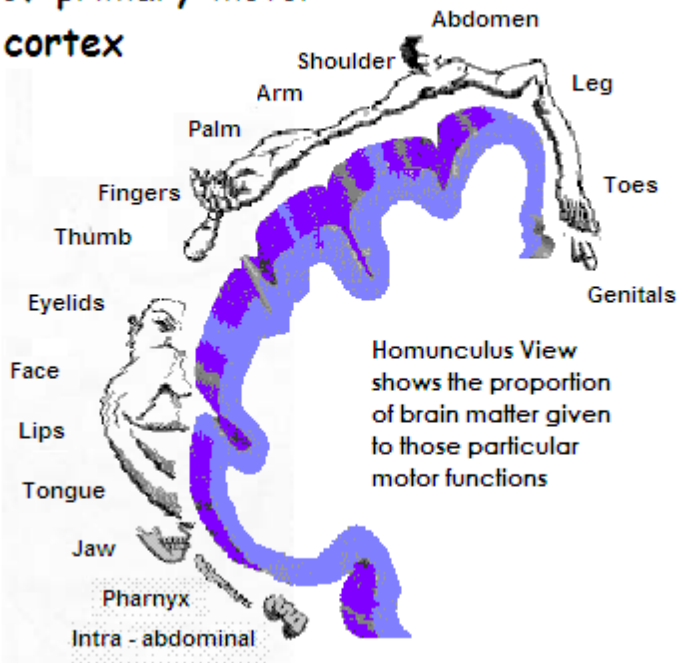
Motor organs of the efferent nervous system

The motor organs (karmendriyas) are also five in number. They are (1) va'k (vocal cord), (2) pa'n'i (hand), (3) páda (feet), (4) pa'yu (anus) and (5) upastha (genitary organ). Their functions are - kathana (to speak), shilpana (to work), caran'a (to move), varjana (to let out waste) and janana (to give birth), respectively. Here neuronal or synaptic signals are relayed to the various efferent (outgoing) motor organs also, through a transduction process in the [nervous system](#) involving the primary motor cortex. [Action potentials](#) (small electrical signals) are converted into [chemical](#) ones via the release of [neurotransmitters](#).

This somatotopic map shows that parts of the body are mapped onto adjacent corresponding parts of the primary motor cortex. We can see from the illustration that an inappropriately large amount of cortex is devoted to the fingers and to parts of the face like the mouth.

Somatotopic map primary motor cortex

Homunculus view of primary motor cortex



Modified from : <http://nawrot.psych.ndsu.nodak.edu/Courses/Psych465.S.02/Movement/Fig.%208-4.jpg>

Recent work in the field of primary motor cortex in monkeys, done by Georgopolous⁸⁴ indicates that one primary motor neuron does not correlate on a one to one relation with a particular motor spindle. They can cause contraction to more than one muscle. It is well known that just thinking about an object can cause a motor reaction.

An example would be thinking about a certain food would cause salivation in the mouth. The primary motor cortex has only a relay function in getting directions from the thalamus, hypothalamus and higher order areas of the mind. Currently the dorsolateral prefrontal cortex is the area of the brain thought to decide which voluntary movements to make according to higher-order instructions, rules, and self-generated thoughts.

84 http://en.wikipedia.org/wiki/Motor_cortex

Tanma'tra review

Before going into microbiological responses and transmission details of tanma'tras and how they are used and connected in the various systems, we should review "what are tanma'tras". Remember the definition of tanma'tras involved the small (very small) minute (microscopic) fraction of the inferential wave⁸⁵. An inferential wave is a macrocosmic wave that provides movement (energy) and gives definition (i.e. shape, form, movement etc.) to a phenomenal object. Eventually this passes through our senses. It does so by vibrating the object/matter and giving it relative motion in the phenomenal universe. The phenomenal universe is the entire spectrum of the universe whether or not it is accessible to our sensual resources (or extensions thereof; like electron tunneling microscopes etc.) in time. Millions or billions of different tanma'tras are reflected from an object and pass through each of the respective physical organs in accordance with their respective wavelength capacities. When the senses pick up those microscopic tanma'tras that are reflected or refracted, the objects come within our scope of sensation, perception⁸⁶ and conception⁸⁷.

Tanma'tras are also associated with the psychic centers and psychic system of the human body. See the accompanying [Cakra – Tanma'tra Table](#) in the *Psychic Energy* chapter. Although Tanma'tras are wave-like, they are not continuous. That is, they flow with pauses⁸⁸. Tanma'tras are microcosmic in origin and are carried on macrocosmic inferential waves that are utilized in the physical objective phenomenal world around us. Next we will correlate some observed facts of the physical sensory organs and compare them with tanmatric theory.

85 The microscopic fraction of a wave radiated from an object and received by the indriyas is called tanma'tra or inference. [What_Is_Dharma.html](#)

86 When an object permits the passage of a wave, it does not come within the scope of sensory nerves, but when the wave does not get such a passage, that is, it is reflected back, under such circumstance only is there a perception of its existence by our sensory nerves. [Bhutattva_Tanmatratattva_and_Indriyatattva.html](#)

87 Whenever the out-going tanma'tras carrying mental force get reflected, the objects come within our scope of sensation, perception and conception. [Kosa.html](#)

88 In order to effect breaks in the waves they have to be pulsative [indryias] and the stream of waves [tanma'tras] also has to be interrupted by pauses. [The_Chariot_and_the_Charioteer.html](#)

Tanmatric Sensory Comparisons

Vision transduction & tanma'tras

The area of optical wavelengths and vision has been observed and studied for hundreds of years and is very specifically defined. We know that when Macrocosmic tanmatric inferential waves vibrate the hydrogen molecule it gives off its characteristic photon with a wavelength of 450-500 nm. This our visual photoreceptor system (eyes) translates into mental signals. It does this through the photons in the blue range impinging on the cone cells in our retina. The blue light causes a conformational change in a protein called rhodopsin setting up an actional potential across the cell gradient.

So in actuality, the channelrhodopsin-2 retinal complex of the photoreceptor system allows the tanma'tra of wavelength 450 nm (in this example called photon) to be transduced (energy changed) to an electrical voltage potential signal (of about 45 mV) that in turn can fire a neuron response across a small space (maybe 10 nm) and send a very small electrical signal along the neuron synapses through the sensory afferent neurons to the peripheral nervous system to the central nervous system and eventually to the thalamus (gray matter) in cerebral cortex of the brain.

We also know from previous tanmatric studies that the visual arena falls into what is described as the luminous factor. So, we can deduce that the wavelengths of 380 nm to 780 nm (violet to purple light) correlates to at least part of the luminous factor wavelength as seen by the eyes.

Form, also falls here in the luminous factor. Rod cell photoreceptors, about 3000 nm across, see volumetric/density changes in photon volume/density. This appears as light and dark form areas. Peripheral rods cells through bipolar, amacrine and ganglion cells integrate spatial information from a large area of retina about (3 deg) with low acuity. Large spacing of the rod cells over the peripheral of the retina results in low visual acuity. This is why we can distinguish forms in low light level situations.

Foveal cone cells are located in a high-density small area of retina. Three basic color types of cone cells can differentiate into 200 different hues, 20 levels of saturation and 500 brightness

levels. Remarkably with only three cones types we can see $500 \times 200 \times 20 = 2,000,000$ gradations of color. Cone cells are situated to give hi-resolution visual acuity to resolve fine details.

Both types of cells fire neurons to the thalamus and then to the primary visual cortex where there are thin sheets of striate cortex in various layers and types of cells. These various layers are thought to provide orientation and color. It is felt that hue corresponds to the spectrum (wavelength) of light. Intensity of wavelength corresponds to brightness. Color saturation corresponds to the purity of wavelength. Except for physical mapping and computer type programming analysis, actual theory of how a book (for example) appears to the mind, is lacking.

Correlation with tanma'tra theory is felt to occur when high-density high energy tactual - touch tanma'tras caused to impact on the high-density cone area and providing the eventual color visual display. The luminous factor carries rod cell activating form tanma'tras in addition to the touch tanma'tras. Form tanmatriic waves may affect what we call rod cells. Subtle ethereal or sound tanma'tras are also present but felt to be as a background vibration at this level of sensitivity to physical organs.

We also must consider what we are viewing with our senses. These are tanma'tras, minute/microscopic portions of a reflected/refracted wave. The wave intensity varies as a function of the exponential power of the distance from the object. The sense organs are triggered on intensity and specific wavelength. When the object is too small (or too far from the sensing organ) then the sense organ cannot reach the threshold intensity for neuronal reaction, and the object will not be sensed. This occurs in cases of vibratory reflection/refraction only. So what we are sensing in the eyes is the luminous (3rd) factor carrying the three tanma'tras (form, tactual and sound), of which a small microscopic portion is transduced through the rod/cone cells into electrical impulses.

The original tanma'tra has been converted both chemically and electrically into different vibrational responses. Some cells (cone cells) convert color waves. Some cells (rod cells) convert form signals. Spatial coordination is induced into thalamic vibrational response through the position of various color and form receptors in the eye. These in turn fire in intensity and pattern in the Brodmann area 17 (primary visual cortex) area of the calcarine

fissur. When it arrives at the thalamus, it is not simply a form or tactual tanma'tra that is being directly conveyed to the brain and causing a vibrational response that induces a "form-color-shape" to appear in a portion of the brain. What finally arrives at the endpoint of transmission is only a transduced signal of the original tanma'tra. Not the original tanmatric vibration, only an electrical responsive imitation of the original tanma'tra in the occipital lobe and this in turn is transmitted back to the thalamus to be coordinated into further motor responses.

From the above walk-through, we see that in the visual system, (and other receptor systems are similar) that more understanding is needed to provide a complete picture. What provides the display we see when we close our eyes? Are we simply a sophisticated computer display?

Touch transduction & tanma'tras

In the case of touch there are four main types of mechanoreceptors. They are most sensitive in detecting gross pressure changes and vibrations in the range 5 to 15 Hz. This is a very very long wave, in fact about 10,000 Km long. The gross deformation of the muscle corpuscle causes the action potential and firing of the neuron synapse using these long waves. Tactual sense is one of our most subtle senses. All areas of our body carry these mechanoreceptors in some form or another. A glance at the chart above of sense receptors will show the many functions of tactual touch receptors.

What we call proprioceptors give vital feedback information to the entire nervous system. They include thermoreceptors, nociceptors, osmoreceptor, stretch spindles receptors, baroreceptors, hydroreceptors, tension receptors, polymodal receptors and many more being recognized every day. All these are routed and re-routed through the thalamus.

The 3D ability to perceive the form of an object by using the sense of touch is called stereognosis by medical science. Somatosensory information along with tactile spatial acuity, vibration perception, texture discrimination and proprioception, are sent to area 5 in the parietal association cortex and are mediated by the dorsal column-medial lemniscal system of the central nervous

system. This is considered a higher cerebral associative cortical function but no palatable theory of how this occurs in our mind has been synthesized by physical science.

Where these long waves are coming from? What is actually touching the corpuscle/cell being activated? We are talking now in microbiological ranges and distances. Does any ATOM actually touch any other atom, in this touch sensing? No atoms do not touch each other. After the touch is over, the atoms are not different chemically nor modified in any way. There is no chemical bonding or modification that is at all apparent that causes and chemical triggered action potential in touch transduction. So, what actually happens at this microbiological level?

This is where Shrii Shrii Ānandamūrti's tactual va'yutattva tanma'tra using energy from the 2nd aerial factor comes in to play. It is subtler (longer wavelength) than luminous factor. This is exactly why he calls it sparsha (tactual) factor. And 10,000 Km is certainly longer wave than 460 nm wavelength sensed by the eyes.

What we actually have happening, on a very small micro-atomic level is the muscles are deforming the solid factor phenomenal atoms molecules carrying the subtle 2nd aerial factor energy. They actually come in close enough relative vicinity to each other that the 2nd aerial factor energy between atoms is disturbed and a very long wavelength tanmatriic signal causes the corpuscles to trigger the action potential in the tactual sense range. This is not the way physical science see it. There, a hammer hits your arm and a mechanoreceptor triggers a pain response.

Olfactory transduction & tanma'tras

Scientists have estimated that humans can sense over ten thousand different types of smells and that their detection can influence mood, memory, emotions, mate choices, and the immune and endocrine systems.

Olfaction begins with the extremely sensitive detection of odor molecules by one or more of the 12 million receptor cells that line the nasal cavity. The sensory path is: odor molecules bind to structures on olfactory receptor neurons in mitral cells and activate an attached G protein. Mitral cells of olfactory bulb to piriform and entorhinal cortex

(primary olfactory cortex) and amygdala. Amygdala to medial dorsal thalamus to the olfactory cortex.

The mechanism by which the odor receptor cells interact with odor-causing molecules is still unknown, but studies of odors and the structure of the odor-causing molecules have revealed some correlations. With each breath we take, air is swept over the olfactory sensors. These sensors are covered with a coating of mucous. Molecules from the air dissolve in this mucous and interact with filaments of the olfactory cells. Because odors are sensed only when gaseous molecules dissolve, all odor-causing materials must produce vapors. Materials that release virtually no vapor, such as ionic salts, are odorless. Only volatile materials that are soluble in the mucous and that interact with the olfactory cells produce odors.⁸⁹

Smell is remote chemoreception, for we can sense the odor of an object at a distance. However, it is known that olfactory cells are not specific to a particular primary odor, unlike the cells of the retina that respond to only one of the primary colors. A single olfactory cell responds to molecules in several of the primary odor categories. However, there is no smell scale, since odorant molecules vary widely in chemical composition and three-dimensional shape.

Current theories of physical sensory receptor mechanisms (olfaction theories) revolve around two mechanical theories. Either the theory of the shape of the molecule (lock and key theory) or Odotope theory (Weak-Shape Theory).

Weak-Shape Theory says that a combination of odor receptors determines the sense perception. This is different from the lock and key theory, that two molecules have two different shapes and when they “dock” or combine a potential ion chain is formed that creates an action potential through the nervous system to the olfactory cortex. Both current theories have been proven to have many exceptions and generally not to be complete.⁹⁰ Scientists have come up with the “docking” theory and Weak-Shape Theory of olfaction because they are desperate to marry the newly found genetic discoveries with some type of olfaction theory. Why?

Recent discoveries from the human genome project have found that of the about 30,000 different human genes, olfactory receptors may make up as much as 3% of the genome. Actually more than 1000

89 <http://scifun.chem.wisc.edu/CHEMWEEK/Odors/chemorec.html>

90 http://en.wikipedia.org/wiki/Vibration_theory_of_olfaction

genes⁹¹ have been associated with olfactory system but only 347 of these potential genes form functional odor receptors. This is a huge percent of our human genome devoted to just the olfactory sense. Think about it. Everything about you has a associated gene. Color hair. Shape of hair. Balding tendency etc. Even they are trying to associate mental traits with genes. This is where genome theory starts to fall apart. How can *all* the possible combinations of human characteristics and traits be controlled by *only* 30,000 different genes? As it has been said many times **"We simply do not have enough genes for this idea of biological determinism to be right,"**⁹² and yet here in the olfactory system, current theories are dedicating the greatest percentage of all known genes to the category to smell? No wonder that scientists are trying to marry genes with olfaction theories.

There are some differences that might help us understand how smell and taste fit into the *cakra – tanma'tra chart*. Here Shrii Shrii Anandamurtiji clearly places smell and taste under the influence of fluid and solid factors and associated tanma'tras.

Both physical theories above, involve molecules and vibrations. Molecules definitely fall under the realm of the solid factor and when they are brought close together (like in compressed air or solid volumes) they respond with a vibration characteristically associated with heat or friction. If we look at the rudimental physical elements, we note that each (most) have a characteristic smell. Like sulfur smells like rotten eggs. Science will tell you this is just the characteristic smell of sulfur. Shrii Shrii Ánandamúrti tells us that it is actually the solid factor within the element sulfur carrying the characteristic smell, like chlorine smell. Therefore, the thing that impinges on our olfactory receptors and triggers a response is different solid factor tanmatriic waves of a very short (crude) vibratory wavelength not the "docking" of various shaped molecules. *There are fundamentally different vibrations within each phenomenal object, be it gas or what we call solid, like a sulfur atom.*

Both physical theories state that the sensory transduction process depend on a vibrational frequency energy difference to produce an electrical impute for neuron response. Both say atoms combine to form characteristic elements. These elements combine to form different odor molecules. Each molecule reflects different tanmatriic vibrations that cause the same vibratory response in neuron channels. Most odor

91 <http://www.gene.ucl.ac.uk/cgi-bin/nomenclature/searchgenes.pl>

92 <http://www.Genome\NOVA Online Cracking the Code of Life Nature vs Nurture Revisited.htm>

molecules activate more than one type of odor receptor. These receptors are combined in almost limitless numbers to provide for the identification of all smells and many new combinations.

The answer to “why is so many genes are dedicated to the olfactory senses in the human genome, is simply that *all* atoms (and therefore molecules) contain solid factor and solid factor reflected tanma’tas are the *exclusive realm of the smell sense*. Our nose (olfactory system) is only capable of receiving certain vibrations. Just as our eyes can only receive light wavelength vibrations. Nevertheless, the vibrations olfactory receptors are designed for are the solid factor vibrations. Most all the phenomenal world around us is made of solid factor. As we saw above only volatile air soluble solid factor molecules are the ones that affect the olfactory system. These are *all* solid factor molecules that have been dissolved in the mucous membrane of the olfactory lining.

Taste transduction & tanma’tas

Taste is called contact chemoreception, because to experience the flavor of something, we must come into contact with it. Psychophysicists have long suggested the existence of four taste 'primaries', referred to as the basic tastes: sweetness, sourness, bitterness, and saltiness. We now recognize a fifth described below. Here are the five types of tastes are commonly recognized by humans⁹³:

Taste receptor chart

Taste Type	Description	Receptor family
Sweet	indicates energy rich nutrients	T1R2+3 small gene family
Umami (Savory)	the taste of amino acids (e.g. meat broth or aged cheese)	possibly mediated by both mGluR4 and T1R1+3 receptors ⁹⁴
Salty	allows modulating diet for electrolyte balance	ENaC (Epithelial Sodium (Na) channel)
Sour	typically the taste of acids	H+ blocks K+ channels

93 http://en.wikipedia.org/wiki/Basic_taste#Savouriness
94 <http://biology.plosjournals.org/perlserv/?request=get-document&doi=10.1371/journal.pbio.0020064>

Bitter	allows sensing of diverse natural toxins	T2R gene family
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Taste buds are a collection of 30-100 individual elongated receptor neuroepithelial cells⁹⁵ (50-60 microns in height, 30-70 microns in width). The number of taste buds on the tongue is about 4600. Receptor cells are connected by receptor neurons to the lateral hypothalamus and ventral posteromedial thalamus then eventually to the primary gustatory cortex. The majority of taste buds on the tongue sit on raised protrusions of the tongue surface called *papillae*. There are four types of papillae present in the human tongue. Altogether there are about 10,000 different tastes. They are thought to come from different theoretical neuron models. Most support a cross-fiber model of taste coding that gives a large combination to these very few basic receptors.

Taste is mainly smell. What we call flavor is mostly a combination of taste and olfaction (smell). When your nose is blocked by a cold, most foods seem bland or tasteless. Sometimes what we often call taste is in fact flavor. Hold your nose, close your eyes, and try to tell the difference between **coffee** or **tea**, **red** or **white** wine, **brandy** or **whisky**. With your nose blocked, you can't tell the difference between grated apple and grated onion. Flavor is a combination of taste, smell, texture (touch sensation) and other physical features (e.g. temperature).

Olfactory and taste are both types of chemoreception. Taste is called contact chemoreception, because to experience the flavor of something, we must be exposed to it. Interestingly enough, taste appears to be a sub-function of smell because smell is primary in detecting flavor. Basic tastes are very few about 10,000 compared limitless numbers of smell combinations. There are only four basic types of cells that cross code to give the five tastes and 10,000 taste combinations.

Shrii Shrii Ānandamūrti associates taste with the liquid factor tanma'tras. In actuality the range of taste tanma'tras are very small and limited. Most of what we call liquid taste is actually solid factor particles in a liquid suspension. Just as smells are not aerial factor particles being carried by the air currents, but solid factor tanma'tras radiating from solid volatile soluble molecules carried in the air to the olfactory receptors.

95 <http://www.cardiff.ac.uk/biosi/staff/jacob/teaching/sensory/taste.html>

Auditory transduction & tanma'tras

Current auditory theory has physical compression of air molecules causing a wave front of compressed molecules that vibrates the tympanic membrane or anvil in the ear setting up a sympathetic vibration in the inferior colliculus where G-protein-coupled receptors send transduced electrical signals to the thalamus and the primary auditory cortex. Current audible frequency research has nearly all been in the observed frequency range of 20 to 20,000 Hz. What exactly is this range and is there any possibility that hearing involves other ranges of frequencies? In this range, say when a book is dropped on the floor, you hear a sound, depending of the distance from the object. That is, the same book being dropped at say a mile away is not audible because the sound dissipates in transmission.

The complete auditory signal system is much more complicated than that and involves numerous electrical synapse transductions of signals that display anatomically onto the auditory cortex, much like a frequency map. Similar to the type of display that the visual cortex receives, but to different input frequencies. The purpose of this frequency map (known as a tonotopic map) is unknown but probably has something to do with the fact that the sensory epithelium of the auditory system, the cochlea, is arranged according to sound frequency.

Much research has been done in this area. Other research indicates that neurons themselves in the auditory cortex are organized and respond according to different frequencies. Some research shows that there are other than direct physical vibrations that cause the vibration and direct response in the auditory cortex. The actual type of response and firing strength can be either tonic or burst mode of firing and may cause a type of spatio-temporal receptive field (STRF) of neuron stimuli⁹⁶. Work in this area of auditory transduction is really just in the infancy phase, even though hearing has been mechanically studied for hundreds of years.

Recent auditory research has indicated that it may not be only the shear on the hairs that opens ion channels, leading to neural, electrical signaling to the auditory cortex. The cochlea has highly specialized structures that respond to fluid-borne vibrations. Here small bones structures vibrate within the liquid and in turn vibrate against the

96 http://www.scholarpedia.org/article/Thalamus#Thalamic_circuitry

tympanic membrane and other structures. There may be many different combinations of vibrations that lead to hearing. Here, for example, more subtle vibrations may cause the liquid portion to react and in turn cause a physical vibration of the tympanic membrane.

Hearing is much more than just a simple vibratory response on the 20 to 20,000 Hz level. In the auditory cortex, there are thin sheets of striate cortex in various layers that may give spatial orientation to complex auditory signals. Tonic or burst mode firing modes may also be combined with complex wave form to provide what we hear as tonal response. Not just amplitude (intensity) volume and frequency may be the determining factors in auditory transduction. Complexity of the wave may provide new avenues of research.

The tanmatric vibratory ranges of Shrii Shrii Ānandamūrti's shabda (sound) tanma'tra do not readily convert directly to we know as the audible hearing range. The correct application of tanma'tras and auditory transduction requires a little imagination. The vibratory range of the co-related ethereal rudimental factor is in the sub-audible range of very long wavelengths and very low frequencies. Much longer in wavelength than the 20 to 20,000 Hz frequency range of the standard accepted audible hearing range.

We can look on the problem from a couple of ways. Shrii Shrii Ānandamūrti gives us a hint to the solution.

He states that **"The ethereal factor carries only the sound tanma'tra."**⁹⁷ And **"... it is not perceptible to the indriyas."**⁹⁸

Then in the same discourse he explains about the cruder aerial factors tanma'tras: **"...the aerial factor can carry two tanma'tras, sound and touch. However, the sound tanma'tra it carries is not as subtle as the sound tanma'tra carried by the ethereal body."**⁹⁹

And goes on to explain, **"The aerial body's sound tanma'tra can also be heard by the ears."**¹⁰⁰

97 The ethereal factor carries only the sound tanma'tra. When it is transformed into the aerial factor it acquires the capacity to carry a greater variety of tanma'tras (but not a greater quantity of tanma'tras). [The_Expansion_of_the_Microcosm.html](#)

98 The ethereal factor is the most expansive and subtlest of all the five fundamental factors. That's why it is not perceptible to the indriyas. [The_Expansion_of_the_Microcosm.html](#)

99 The ethereal factor carries only the sound tanma'tra. When it is transformed into the aerial factor it acquires the capacity to carry a greater variety of tanma'tras (but not a greater quantity of tanma'tras). Thus the aerial factor can carry two tanma'tras, sound and touch. However, the sound tanma'tra it carries is not as subtle as the sound tanma'tra carried by the ethereal body.

[The_Expansion_of_the_Microcosm.html](#)

100 The aerial body's sound tanma'tra can also be heard by the ears.

[The_Expansion_of_the_Microcosm.html](#)

So, we see from the *cakra – tanma'tra chart* that the sound tanma'tra is associated with *all* levels of the phenomenal word. But, the vibratory range of the sound tanma'tra is different depending on which objective medium it is emanating from. In other words, it is probably a different harmonic of the ethereal factors sound tanma'tra carried in the solid factor objective world (along with the other four tanmatric vibrations) that is naturally cruder (shorter wavelength) and can vibrate at a range "heard by the ears". We can consider that the audible sound tanma'tras are probably sub-sets or harmonics of the actual ethereal sound tanma'tras.

Transduction and hypothalamus

Generally the hypothalamus links the nervous system to the endocrine system via the anterior pituitary gland also known as the "master gland," by synthesizing and secreting neurohormones called releasing hormones. The hypothalamus (ventral part), controls autonomic nervous system¹⁰¹ via hormone production. It affects and regulates blood pressure, heart rate, hunger, thirst, sexual arousal. It regulates the sleep/wake circadian cycles through the hypothalamic suprachiasmatic nucleus (SCN), a small, paired nucleus embedded in the dorsal surface of the optic chiasm. It coordinates thermoregulatory information from thermoreceptors in the skin and spinal cord that controls core body temperatures utilizing the autonomic nervous system and neuroendocrine responses. It is thought to control gastric reflexes, maternal behavior and immune responses.

The hypothalamus is a very complex organ having many afferent and efferent feedback loop systems. In tanmatric theory it has the primary control over the tanmatric impulses that are incoming and outgoing to the higher mind. It does this through having a special vibratory capacity that creates a sympathetic vibration¹⁰² that is in harmonic with the higher level apperceptive plate. See [*Psychic Energy*](#)

101 <http://www.Genome\Anderson> The Hypothalamic connections of the Autonomic Nervous System have an impact on consciousness and therefore, on thought and perception. Beyond Genome5.htm

102 The innumerable nerve cells and nerve fibres in the human body can be divided into two types: one connecting the brain to the spinal cord [the central nervous system], and the other from the spinal cord to the skin and going within the body [the peripheral nervous system]. There is also a collection of nerve cells in the cranium that is made up of fat [that is, the hypothalamus], which has a special power, an inborn power or a vibrational speciality, which is sometimes synthetic [sympathetic] and sometimes apathetic [parasympathetic]. Glands_and_Subglands.html

[*apperceptive plate*](#) chapter. Medically it is the thalamus (or maybe Hypocampus, see below) not the hypothalamus that has been thought by current science to have the function of connecting the sensory impute to higher order thalamic nuclei¹⁰³ possibly through spatio-temporal receptive fields (STRF).

Transduction and thalamus

In physical science, the thalamus is given the primary job of receiving and re-transmitting almost all the afferent and efferent sensory information to and from the cortex. The primary sensory areas are the main cerebral areas that receive sensory information from thalamic nerve projections. These are the senses of auditory, somatic, visceral, gustatory, visual systems and primary somatosensory cortex¹⁰⁴.

For example, visual information from the retina is not sent directly to visual cortex but instead is relayed through the lateral geniculate nucleus of the thalamus. In general, the two hemispheres receive the information from the opposite sides of the body. The right primary somatosensory cortex receives information from the left limbs and the right visual cortex receives information from the left visual field. Current science believes that all sensory information (except olfactory senses) pass through and are mediated by the thalamus. Some researchers have found olfactory sense links to the thalamus, also.

Thalamic nuclei have strong reciprocal connections with the cerebral cortex, forming thalamo-cortico-thalamic circuits that are believed to be involved with consciousness.¹⁰⁵ Thalamic nuclei have the rather rare property of having no initial axonal collaterals, which implies that one emitting thalamocortical neuron does not send information to its neighbor.

The thalamus plays a major role in regulating arousal, the level of awareness and activity. A major portion of the thalamus contains gray matter known be involved with information processing verses the white matter which is involved in information transmission.

103 <http://www.scholarpedia.org/article/Thalamus>

104 <http://en.wikipedia.org/wiki/Mechanoreceptor>

105 <http://en.wikipedia.org/wiki/Consciousness>

Transduction and hippocampus

The hippocampus is a part of the brain located inside the temporal lobe (humans have two hippocampi, one in each side of the brain). Some evidence implicates the hippocampus (not hypothalamus) in storing and processing spatial navigation information. The hippocampus might act as some sort of a cognitive map. Psychologists and neuroscientists dispute the precise role of the hippocampus, but in general, it is agreed that hippocampus has an essential role in the formation of new memories about experienced events (episodic or autobiographical memory and long term memories). It is the only cortical area that continuously generates new neurons. Not like other cortical areas.

Current science knows that the hippocampus (specifically the parahippocampal gyrus) plays a role in the formation of spatial memory. It has associative “place” cells that associate position/location from other senses. As with the hypothalamus, it is not known where the information is stored. Working memory is funneled through the hippocampus and compared with long term memory of the object. It is currently believed that long term memory recall involves structural changes in the synapses brought about by physical changes in the expression of genes and synthesis of proteins¹⁰⁶.

Proprioception and psychophysical organs

Proprioceptors mentioned above under sensory receptors are sometime improperly referred to as a sixth proprioceptive sense. Proprioception is not a type of sense. It should not be confused with the five-exteroception senses of sight, taste, smell, touch, and hearing. Proprioception is a feedback system by which we get feedback from the outside world, solely from the body internally. It is a feedback system that indicates whether the body is moving with required effort, as well as where the various parts of the body are located in relation to each other.

It is believed to be composed of information from sensory neurons located in the inner ear (motion and orientation) and in the stretch receptors of joints and muscles (stance). Efferent feedback proprioceptors in the muscles and joints include the golgi tendons and

106 <http://www.physpharm.fmd.uwo.ca/undergrad/sensesweb/L12Memory/L12Memory.swf>

muscle spindles. The vestibular system, or balance system, is the sensory feedback system that provides the dominant input about our movement and orientation in space. Balance is determined by the level of fluid properly called endolymph in the labyrinth - a complex set of tubing in the inner ear. This includes angular acceleration (turning) and gravity sense of up and down. Reflexes in this system cause the eyes to remain stable when the head is moved. Together with the cochlea, the auditory organ, it is situated in the vestibulum in the inner ear.

Current science is trying to tie proprioceptive feedback with spatial orientation with so-called “tiled sets of selective spatiotemporal filters” to theoretically carry out neuronal processing of spatial frequency, orientation, motion, direction, speed (thus temporal frequency), and many other spatiotemporal features directly on the brain. Thereby trying to show the brain works like a giant computer and display. This, in trying to cut out the need for higher order psychophysical organs to connect feedback to the mind. Later in [Vital Energy Systems](#) chapter we learn how the psychophysical organ pra’n’endriya accomplishes this function by taking feedback from these proprioceptors.

Energy Transduction Summary

It can be seen from the above descriptions that sense perception is considered by medical/physical science to be strictly a physical related electrical response phenomena. No correlation or coordination with higher mind functions is considered. Psychology of the self, in learning and recall is physically associated with “response” areas of the physical brain. The current hypothesis involving three dimensional recall and coordination of shapes, form and color consists of only slightly educated guesses about striated spatio temporal receptive fields (STRF). We understand so little about the actual transduction of tanmatric signals that as of now even a prototype working theory cannot be put forward. Whether the afferent tanmatric wave is physically transduced in its entirety to neuronal electrical impulses or if part of that incoming wave is heterodyned on top of the transduced information, is only a guess.

The idea of intelligence in mind and matter must be understood on the psychic level. That feeling in every one of us that says, “we know that we exist” is substantiated at every moment by the objective

world through our sense receptors¹⁰⁷. However, understanding cannot stop at the physical electrical/synapse level. That particular vibration that takes the nerve cells to the critical ectoplasmic citta level works two ways. Memory has the ability to re-vibrate those same nerve cells and stimulate the physical electrical/synapse response system to motor action¹⁰⁸, by only a single thought. Chapter Three will provide the power. Chapter Four provides the intelligent control.

107 The 'I-feeling' that exists in the mind finds its substantiation only through a particular vibration emanating from the nerve-cells. [Matter_and_Spirit.html](#)

108 The motor organs carry the idea from the sthirabhu'mi of the citta or ectoplasm with the help of the nerves and finally give it an action-form. [The_Chariot_and_the_Charioteer.html](#)

CHAPTER THREE

Vital Energy Systems

Let us discuss the general nature of vital energy before we get into the specific functions of each energy. Vital energy is a crude or blind energy¹⁰⁹. That is, it must be controlled by a psychic force to be utilized effectively (see pra'n'endriya below). Nevertheless, it is a crude energy just as electricity is on a physical level. Any crude force must be controlled by intelligence in order to be useful. When not controlled it becomes harmful to anyone around it. This is precisely the case with the vital energies. They must be controlled by intelligence to be useful; otherwise, they are destructive to the human corporal. In fact, they are the immediate cause of physical death, when mental control by the sub-conscious psychic power of the mind is lost¹¹⁰. This occurs typically in the case of natural death of the human corpora. Vital energy can be controlled through conscious mind; but this method is beyond the scope of this work.

Vital energies (sometimes called collectively prana) are higher energies manifesting from the aerial factor¹¹¹ through higher cosmic inferences onto the phenomenal world around us. They are crude higher energies. Their sole purpose in the human corpora is to vitalize or animate structures under the control of the psychic mind¹¹². In other words to provide the force that allows the object to eventually be visualized in the higher portion of the mind through the physical efferent/afferent nervous system and also to

109 Likewise, if the vital energy remains largely intact but the psychic power is considerably weakened, then it will not be possible to control the vital energy of the body because the vital energy is a material force -- a blind force. [Smell_and_Microvita_Section_G.html](#)

This vital energy is a blind force: blind in the sense that it is devoid of intellect, its prime cause being the static force. [Pratisaincara_and_Manah.html](#)

110 But in death due to disturbance of the ten Vayus, the life force leaves the body and the causal or unconscious mind is compelled to cease functioning. [The_Intuitionial_Science_of_the_Vedas_4.html](#)

111 As the va'yus themselves are included in the list of the five fundamental factors (as aerial) [The_Supreme_Question_1.html](#)

112 The five internal va'yus which sustain the sensory organs and give them the power of expression are the objective expressions of A'tman - the aerial manifestation of A'tman. [The_Supreme_Question_1.html](#)

provide the energy that allows the physical efferent nervous system to react to the higher minds coordination. But as with all energies, they are transformed (transduced) into different energies as they are used and needed.

Since vital energy is from the aerial factor, it can appear as more than just a crude energy. It is capable of being defined to our senses by aerial factor tanma'tras. Aerial factor tanma'tras are capable of carrying only the higher tanma'tras of sound and tactual energies only. See [Cakra-Tanma'tra chart](#) Chapter Four. They emanate no form or color tanma'tras nor do they have intelligence. As such, they carry no form or luminous (color), smell or taste tanma'tras with them. So as a result we cannot sense vital energy with sight or lower vibrational organs, only feel their results directly as energy transducers.

Vital energy has the higher energy power to energize idea, thought and emotions¹¹³. We know that all energy is inter-transmutable. That is it can be converted from one form to another. We do not create it, simply utilize it and convert it to higher and lower forms. For example, vital energy can be converted to physical energy, spiritual energy, light, sound¹¹⁴ or even electrical energy¹¹⁵ or magnetic energy¹¹⁶. In 1969¹¹⁷ Shrii Shrii Ánandamúrti gave physical demonstrations of conversion of vital energies into electrical energy. We get vital energy from the external world by conversion of the aerial factor into physical energies¹¹⁸. This is commonly done in cell chemistry with the conversion of Adenosine Triphosphate (ATP), to ADP (adenosine diphosphate).

We should not confuse simple transduction of physical energies with vital energy itself. Transduction of energy occurs at

113 Ideas in the psychic world gain momentum with the addition of vital energy.

[The_Acoustic_Roots_of_the_IndoAryan_Alphabet.html](#)

114 You convert the external energy derived from food, light, water and soil into vital energy. You cannot create any energy, you can simply convert it into other forms. You convert sound energy, magnetic energy, etc., into vital energy. You then reconvert that vital energy into other forms of energy. While working, you convert your vital energy into mechanical energy. While speaking, you convert your vital energy into sound energy. [Mysticism_and_Spirituality.html](#)

115 And you know, energies are inter-transmutable. Light energy may be converted into sound energy; and the vital energy of human beings may be converted into spiritual energy, into electrical energy, into light energy, or into sound energy. When you speak, you convert your vital energy into sound energy. [Onmkara_and_Ista_Mantra.html](#)

116 vital energy is the transmuted form of different physical energies.

[Parthasarathi_Krsna_and_Vishuddha_Advaetavada_1.html](#)

[117_Conversion_of_Energy.html](#)

118 As the va'yus themselves are included in the list of the five fundamental factors (aerial factor) [The_Supreme_Question_1.html](#)

specific locations, on the retina or ATP to ADP inside a cell. Vital energy occurs over the whole range of the system. Its wavelength is an aerial factor transmission wavelength. Not the shorter physical energy transduction wavelength found in cell energy transduction.

Vital energy provides the material physical force that allows physical and higher psychic systems to function. Vital energy systems are interconnected with other energy systems. Although they react physically, they are controlled by another psychophysical organ called pra'n'endriya, which is covered more thoroughly below.

Vital energies (Va'yus)

Are energies really physical? Can you see energy? Can you see light photons? Not really. We just feel the effects of light photons impinging on our body. As it is with va'yus. They are not physical in themselves. They only provide the vibratory energies on different levels or wavelengths to motivate or cause change in physical systems. For example. Uda'na va'yu is an energy that controls the power of speech. It is not the motor energy that is stored in the area of the vocal cords that causes the muscles there to contract and expand at a certain time and rate. It is not the motor energy that causes the lungs to contract and put air across the vocal cords. Nor is it even the neuronal stimulus energy that comes from the motor area of the brain to cause these reactions. It is the psychic stimulating energy that a dying man lacks when he wants to speak, but cannot utter even one word. When only tears form in his eyes, because he cannot form those unspoken words. He is still physically alive and breathing. His vocal cords are not tired or worn out from over use. Still, he cannot speak when the uda'na va'yu vital energy is failing and death is near.

Currently medical science divides these areas referred to as the vital energies into physical categories based on physical points of apparent nerve stimulation. Like the autonomic nervous system is divided into the sympathetic and parasympathetic nervous systems. Autonomic is the involuntary nervous system. This method of division is entirely synthetic and physical based. It does not take into consideration the coordination system of these

different energy requirements of each system to stimulate each of these areas.

Most local energy consuming reactions in cells are powered by the conversion of Adenosine Triphosphate (ATP), to ADP (adenosine diphosphate). But, this is only a storehouse function with conversion at point of need. Stored energy, like all energy, is a material force a blind force without intelligence. The actual types of energy needs are different, like the transmission of nerve signals, the movement of muscles, the synthesis of protein, and cell division. Each of these local energy requirements uses local transduction of energies at the point of need.

In the va'yu system, different types of energies are classified generally by the various areas they encompass. The va'yu system divides these energies into groups by usage and by wavelength transmission requirements. Each usage is controlled at different psychophysical centers. The energy to throw or jump (na'ga va'yu) is different from the vital energy power that constricts bronchi in lungs (ku'rma va'yu) and controlled from different locations.

Vital energy is considered a separate physical force that is converted, like all energy, at the point of need, at the direction of a subconscious psychic body. But, in the va'yu system, it is the psychic energy of the mind (through what is called the pra'n'endriya) that sends signals through this very autonomic nervous system down the sympathetic and parasympathetic nerves using the synapse and neurons to stimulate these vital higher level psychic controlled vital energies. In the va'yu, system there is a demarcation between the controller (pra'n'endriya), the nerves, neurons and synapses, and the material vital force that does the work. For these reasons, the va'yu system does not correspond completely with the current physical medical system. It is the non-sensible (non-sensory) energy in the system, not any specific physical part of the system itself.

The controller of these vital energy systems called the pra'n'endriya is a psychophysical organ and is located in the ana'hata cakra. It is an intermediary state between the sensory

organs and motor organs¹¹⁹. It is discussed fully later in this chapter.

The ten vital energies can move directly in and out of the physical copra, that is...when in the human corpora, it is vitalized or alive, then they are present and when they are out it is considered dead. The psychophysical organ pra'n'endriya is both the connection and controller of these physical energies.

The five basic internal vital energies are the controlling energy of the human body. When they malfunction (even one), the human corpora will die. The way these five basic internal vital energies cause death is discussed below, with a drawing. (See Death and the Vital Energies, below) For these reasons the other five *dependent* vital energies are not shown on the drawings.

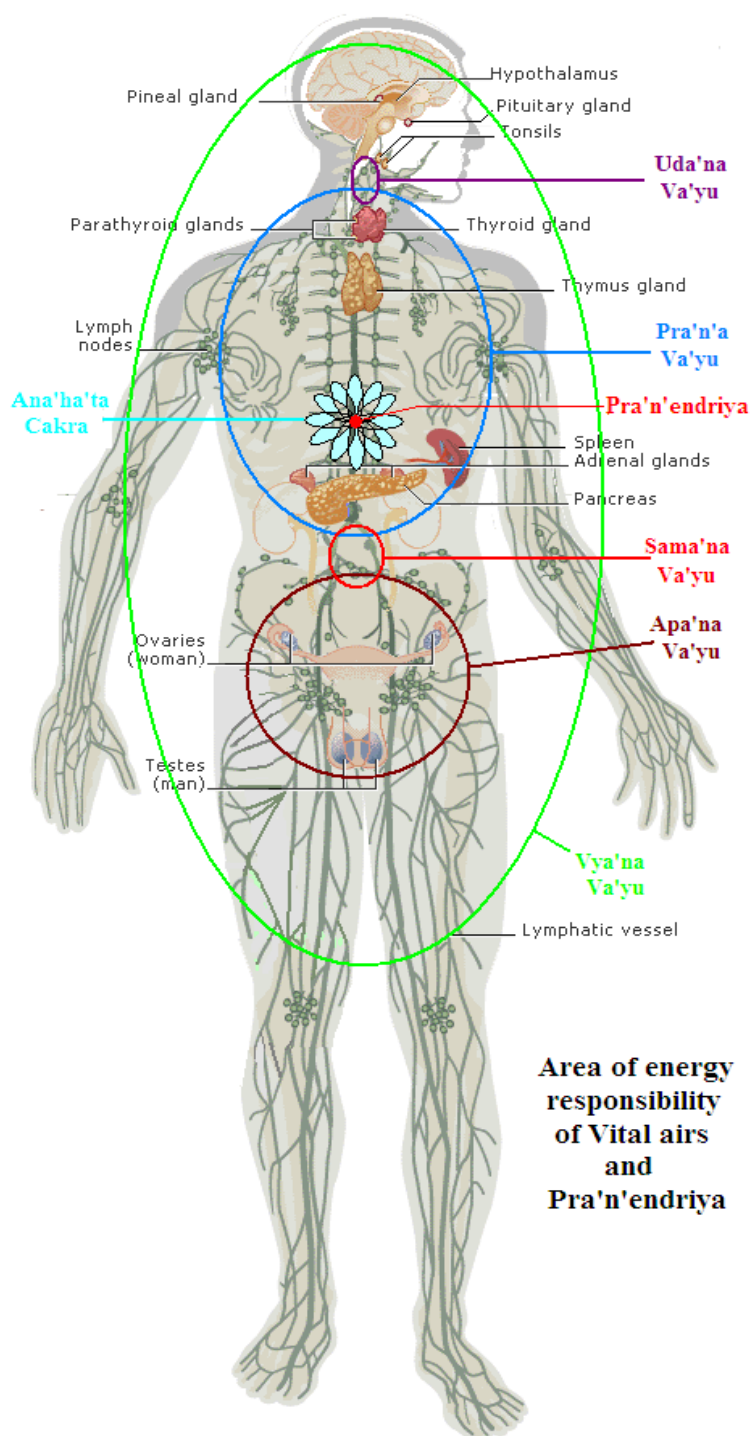
Vital Energies coordination and relation to cakras

Vital energies are also centered on different cakras. See the accompanying drawing for these locations and physical areas of influence of the vital energies. The exception is the vya'na va'yu that provides vital energy throughout the entire body.

The names of the va'yus, approximate areas of influence and coordinated organs are shown in this drawing. The pra'n'endriya is the coordinator of all the vital energies. The va'yus work through the five organs of sense (internally) and through the five organs of movement (externally). This means that they supply the psychophysical energy that operates the ten indriyas (organs). Pra'n'endriya is located in the center of the yogic heart (ana'hata cakra). Not the physical heart. The transduction of physical energies in the physical sensory and motor organs has been covered in the chapter on *Energy Transduction*.

Here is an overlay drawing of the five basic control areas of the vital energy systems, overlaid onto the major physical organs of the human body.

119 Suprqu1.S06 pra'n'endriya - an intermediary state between the sensory organs and motor organs.



Vital Systems Overlay Schematic

Five basic internal vital energies (va'yus)

Pra'n'a: The pra'n'a va'yu is situated in the area from the navel to the throat¹²⁰. It helps with the respiratory functions of the lungs¹²¹. It circulates of vital energy using blood and the heart through the liver, kidney, spleen, pancreas and upper gastrointestinal tract¹²². It uses the autonomic nervous system and possibly functions through the vagus nerve.

Apa'na: This va'yu functions in the area from the navel down. It is concerned with sex and in the movement and excretion of urine and stool¹²³. It is the vital energy controlling the lower abdominal organs¹²⁴.

Sama'na: Sama'na va'yu is situated at the navel region and maintains equilibrium between the pra'n'a and apa'n'a va'yus¹²⁵.

Uda'na: The uda'na va'yu is situated in the throat. It helps in vocalization and expression of thought energy to vocal energy. Controls the vocal chords and voice (power of speech)¹²⁶. Possibly uses the hypoglossal nerve.

Vya'na: The vya'na va'yu permeates and functions throughout the entire body. It helps in the circulation of vital fluids like lymph and blood, and in the perception and non-perception of experience through the energizing of the afferent and efferent nerves¹²⁷. With the help of these nerve fibers brings the sensory and motor organs into contact with the knowable i.e. the objects to

120 The jurisdiction of pra'n'a is between the navel point and the vocal cord, and its function is inhalation and exhalation. [Life_Death_and_Samskara.html](#)

121 It helps with the respiratory functions and the circulation of vital energy.

[Aunka_to_Aksa_Discourse_3.html](#)

122 Pra'n'a, situated between the navel and the throat controls the functions of lungs, heart etc. [The_Intuitional_Science_of_the_Vedas_4.html](#)

123 Apa'na, situated below the navel (i.e., between the navel and the anus) controls the excretion of stool, urine etc. [The_Intuitional_Science_of_the_Vedas_4.html](#)

124 When, under pressure of the Apa'na Va'yu (vital energy controlling the lower abdominal organs), blood starts oozing out of the developed piles, they are called 'bleeding piles'.

[Haemorrhoids_Piles.html](#)

125 Sama'na, situated within the navel, maintains the equilibrium between Pra'n'a and Apa'na. [The_Intuitional_Science_of_the_Vedas_4.html](#)

126 Uda'na, situated in the throat, controls the vocal chord and voice (power of speech) [The_Intuitional_Science_of_the_Vedas_4.html](#)

127 Vya'na regulates blood circulation and physical function of the afferent and efferent nerves. [Life_Death_and_Samskara.html](#). The vya'na va'yu functions throughout the body. It helps in the circulation of vital fluids and blood, and in the perception and non-perception of experience.

[Aunka_to_Aksa_Discourse_3.html](#)

mentally dealt with in the mental reflecting plate¹²⁸. It energizes the nerve fibers and nerve cells.

Five dependent or external vital energies (va'yus)

Five dependent vital energies. It should be specifically noted that the five so-called "external" vital energies are listed as "dependent" vital energies. This is because they are dependent and subservient to the function of the five primary internal vital energies for their energy of action. Without the five primary internal vital energy sources the dependent vital energies could not function independently.

Let's look at them. Each is a somatic nervous response from the efferent motor system. This means that they normally have a direct conscious stimulus from the voluntary walk-talk somatic nervous system. They utilize the major vital air energy source for their action. They in themselves are not the direct energy source of the movement system involved. Their action is stimulated by the pressure on the nerve receptors and then causes autonomic reaction on a subliminal level. That is on a subconscious mind level. They act according to pressure nerve stimulus and not according to conscious will.

Some will say the energy to jump and contract is conscious. Yes of course, almost all body functions can be initiated by the conscious mind. You can even slow your heart rate and many other functions with the conscious mind. However, their primary response activation is a reflective response from the subconscious mind. Medical science places these responses under the somatic nervous system as a conscious response.

Na'ga - Controls the energy to jump or to extend the body and to throw an object. Its energy resides in the joints¹²⁹. It is associated with the somatic nervous system using golgi tendons and spindle stretch receptors for feedback. In other words our voluntary walk – talk nervous system. However, it also can take

128 Vya'na, permeating the entire body, controls the circulation of the blood, vital secretions etc., and, with the help of the nerve fibres brings the sensory and motor organs into contact with the knowable i.e. the objects to mentally dealt with. The vibration necessary for the faculty of contemplation is also supplied by Vya'na Va'yu. [The_Intuitional_Science_of_the_Vedas_4.html](#)
129 Na'ga, It resides in the joints. This na'ga va'yu helps with jumping and extending the body. [Aunka_to_Aksa_Discourse_3.html](#) „,also to throw an object. [Death_and_Samskara.html](#)

commands from the central nervous system through the peripheral nervous system and the voluntary somatic nervous system using the efferent nervous motor system. Medical science mixes both the parasympathetic and sympathetic nervous systems in this grouping. It provides stimulation energy for things like dilating the pupils, relaxing bronchi in lungs, accelerating heart rate, relaxing bladder, relaxing rectum, releasing glucose from the liver, secreting certain enzymes from the kidney are all initiated from this system.

Ku'rma - Helps with the action of contraction also using golgi tendons and spindle stretch receptors for feedback. It is found in the different glands of the body¹³⁰. It provides stimulation energy to constrict pupils, constrict the bronchi in lungs, contract the bladder, contract the rectum and slow the heart rate. This is associated with what we call the involuntary or autonomic nervous system. Medical science mixes both the parasympathetic and sympathetic nervous systems in this grouping.

Krkara - Is scattered throughout the body, helps in yawning and hiccups¹³¹. It may be associated with baroreceptors for feedback.

Devadatta – Is responsible for thirst and hunger. Its action is based on the increased or decreased pressure of food and water in the stomach¹³². It stimulates and inhibits digestive activity, stimulates the gallbladder. It is associated with osmoreceptors and hydroreceptors for feedback.

Dhanainjaya – It causes drowsiness or sleep so the body can get rest from mental or physical labor¹³³.

The patellar reflex below is an example of how the involuntary autonomic nervous system can work in conjunction

130 Ku'rma, It is found in the different glands of the body. Ku'rma va'yu helps with the action of contraction. The way a turtle contracts by withdrawing its limbs into its body is called ku'rmabha'va. Since this va'yu helps in effecting ku'rmabha'va, it is called ku'rma va'yu.

[Aunka_to_Aksa_Discourse_3.html](#)

131 Krkara, va'yu is scattered throughout the body. It expresses itself in the increase or decrease of air pressure. Krkara va'yu helps in yawning and stretching. Ordinarily, yawning happens right before falling asleep, and stretching, right after waking up. [Aunka_to_Aksa_Discourse_3.html](#)

132 Devadatta The devadatta va'yu bases its action on the increased or decreased pressure of food and water in the stomach. Devadatta va'yu rouses thirst and hunger.

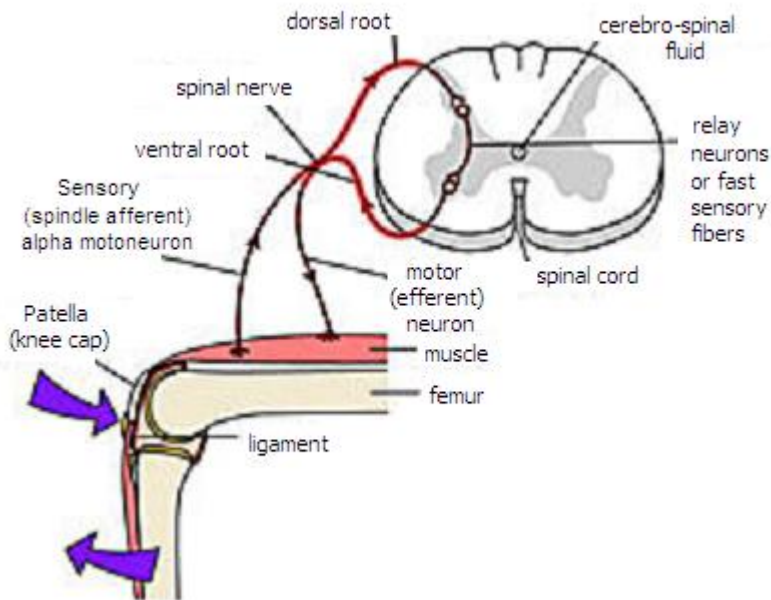
[Aunka_to_Aksa_Discourse_3.html](#)

133 Dhanainjaya, As a result of internal or external labour, the body feels the need for sleep. The feeling of sleep or drowsiness comes from this dhanainjaya va'yu which pervades the body, and so the living being drowns or falls asleep. Only the dhanainjaya va'yu remains in the body.

[Aunka_to_Aksa_Discourse_3.html](#)

with both na'ga and ku'rma energies. When the leg is tapped just below the knee, the patellar reflex is affected and the foot kicks forward. The tap stimulates an impulse in the sensory neuron in the leg, which travels to the spinal cord, through the relay neurons or fast sensory fibers, and into the motor neuron where it stimulates the leg muscle to contract. This reflex to a stimulus is almost simultaneous, as the reflex arc doesn't involve the brain at all. Here is a typical drawing of the involuntary autonomic afferent/efferent neuron systems using motor reflex.

Patellar motor reflex drawing



http://wikipedia.org/wiki/Reflex_arc

To see more clearly, how the va'yus work through the peripheral nervous system we must see how tanma'tras are coordinated through the psychic organs (indriyas) of mind and then back through the central nervous system. This is done in the chapter on *Psychic Energy Systems*.

Pra'n'endriya control of ten vital energies

Now we have vital energies that are responsible for many physical processes through the ten vital airs (va'yus). But, what other functions does this energy have? It provides the energy that energizes the psychic systems of the human body. For example, the citta and apperceptive plate in the chapter of [Psychic Energy Systems](#) are powered by this vital energy. Usually, it is simply referred to as prana (energy).

The power that causes the reflex in any muscle is just physical. It has a corresponding control center. Both the efferent motor autonomic (involuntary) nervous system and in the somatic (voluntary walk-talk) nervous system use physical energies with psychic control centers. Vital energies are physical energy and are controlled independently from the physical organ concerned. Just as with physical energy, it too is completely independent from the organs concerned.

The overall control of the vital energies is from a single controller psychophysical organ called pra'n'endriya¹³⁴. That literally translates as the psychic organ that controls the prana or vital energies. This psychophysical organ is not one of the cakras, because it does not have vrttis attached to it. It is not one of the vital energies, although it works with and controls all ten vital energies. It is also not a separate function of the mind (like the a'tman or citta). It is solely for the coordination of the ten vital energies and to communicate some vital functions to the mind. It literally conjoins the sensory and motor organs to the mind¹³⁵. It does this through a process called objectification, discussed below. Its physical location is in the ana'hata cakra, the yogic heart¹³⁶. (See drawing above)

Certain vital energies accept physical stimulus through standard proprioceptive feedback systems. As we saw above,

134 The pra'n'endriya is an indriya which is not included in the list of the sensory and motor organs, yet with the help of all the indriyas it assists in the process of subjectivisation (its objects are called dha'rya or subjectivised). The expression of the pra'n'endriya takes place through the five internal va'yus and five external va'yus. [The_Supreme_Question_1.html](#)

135 the function of the pra'n'endriya [vital forces] is to conjoin the objectivity with the mind-stuff, [Chapter_2.html](#)

136 The position of pra'n'endriya is in the heart -- not in the mechanical heart which palpitates but in the yogic centre of heart, that is, in the middle point of the ana'hata cakra. [Mind_Pranendriya_and_Vrtti.html](#)

proprioception uses proprioceptors in a feedback system that (among other things) indicates whether the body is moving with required effort, as well as where the various parts of the body are located in relation to each other.

Like for example, the dependent vital air devadatta uses the atmospheric pressure changes in the concerned area of the stomach to determine hunger and thirst¹³⁷. The pra'n'endriya objectifies this information and passes this information on to the mind in the form of hunger and thirst requirements. What does objectify mean in this sense. Simply, tanma'tras radiating from material objects pass through the different sense receptors then through the afferent nervous system and eventually to a portion of the mind that actually take the shape of the object. The pra'n'endriya objectifies these neuron vibrations and passes them to the dynamic psychic citta (sthirabhu'mi) to take a form that can be understood as form and shape. This means that the pra'n'endriya is in the tanmatric transduction path. The pra'n'endriya is not shown in any medical/scientific books.

The pra'n'endriya has some limitations. It can pass or reflect in the citta only one sensory and motor organs tanma'tras at one time¹³⁸. It controls the vital airs one at a time, through its pause feature¹³⁹.

Shrii Shrii Ānandamūrti explains here in condensed format about pra'n'endriya and its psychophysical process of objectification:

“Pra'n'endriya is pulsative -- contracting and expanding (sam'koca-vika'shii). The auxiliary waves of the pra'n'endriya flow in a pulsative manner, that is, there is an arrangement of alternative motions and pauses in their flows. It is during the state of pause and potentiality that the citta is able to receive the tanma'tras that pra'n'endriya presents and citta takes the form of shapes represented by those tanma'tras. Unless citta takes the form of incoming tanma'tras no perception is possible, because the ego can

137 Devadatta Sc1-3.C01 The devadatta va'yu bases its action on the increased or decreased pressure of food and water in the stomach. Devadatta va'yu rouses thirst and hunger.

138 CHARIOT.S04 ...it is impossible for the pra'n'ah to simultaneously hold or reflect on the citta all the objects which are collectively apprehended by more than one sense or motor organ.

139 Chariot.S04 It is not possible for one singular vital force to be present at two places at the same time and perform two different functions; so it has to both receive the sound waves as well as visualize the letters of the alphabet separately.

work only when the citta adopts a form.”

Mind_Pranendriya_and_Vrtti.html

“(These facts of this psychic process) become evident by analyzing a very common experience. Even if the tanma'tra-discharging objects be present and the afferent nerves working quite all right, there may not be any perception if the citta does not receive the tanma'tras. If one eats something while walking or running, one is not able to enjoy the taste fully. This is due to the citta not being able to receive the tanma'tras under such a circumstance. One is not able to receive and understand an bha'va (idea) simultaneously with some other physical and mental activity. The secret is with the pra'n'endriya.” Mind_Pranendriya_and_Vrtti.html

“Pra'n'endriya has the capacity to let all the nerves flow in the pattern in which it itself is flowing. This means that if pra'n'endriya is in the expansive stage and not in the contracting stage, every nerve, along with citta itself, is in the expansive stage flowing in the same wavelength. The result is that in-coming tanma'tras face hindrance and cannot activate the citta. Thus either there is difficulty in perception or there is no perception. Therefore, even if all the other factors responsible for perception are working quite satisfactorily, the pra'n'endriya in its expansive stage will cause the citta and nerves to vibrate sympathetically and thereby hamper the movement of the in-coming tanma'tras. But if the pra'n'endriya be in the controlling position or at a pause, it creates such a calmness throughout the psycho-physical structure that the correct perception if possible. So actually pra'n'endriya plays a vital part in helping the organs indirectly to receive the tanma'tras, in assisting the citta to perceive them correctly, and thus in letting the ego -(I) have a cognition (of the object) in that connection.”

Mind_Pranendriya_and_Vrtti.html

“The special function of pra'n'endriya is to recognize the objectives from different experienced sense perceptions and innate psychic projections. Pra'n'endriya also works as an auxiliary force in some of the internal mental activities, and with the help of this pra'n'endriya one feels that a particular person is very kind and affectionate, or a particular person is unkind and antipathetic. (Such an experience is based more on a subjective feeling than on any outer objective correlation.)” Mind_Pranendriya_and_Vrtti.html

As Shrii Shrii Ānandamūrti further explains:

“Material science is unable to explain why pra'n'endriya is engaged in the process of subjectivisation. Likewise, science can explain how a person speaks, but fails to explain from which source the vocal chord derives its capacity to utter sound.” The_Supreme_Question_1.html

Other similar physical responses cause other feelings to emanate from the pra'n'endriya, like the feeling of soft and hard, melodious and harsh, warmth or coldness, lightness and heaviness. Of course, such subjectual feelings are possibly based on other more direct inferences like tactual or sparsha inferences. For example, the skin sensory organ will feel their hotness or coldness through the physical thermoreceptors and the pra'n'endriya will experience the hardness of the gold and the softness of the cotton¹⁴⁰. The secondary capacity of the pra'n'endriya is to hold feelings. These auxiliary vibrations, have a special name and are called pra'n'abodha or vital sense¹⁴¹. It is much different than the simple physical feedback system involved with physical proprioceptors. See the *Sensory Energy Transduction* chapter.

Summary of pra'n'endriya functions:

- Acts as choke point for all tanmatric impulses from all indriyas (only one at a time)
- objectifies tanmatric impulses
- source of auxiliary feelings or vital senses
- synchronizing filter of tanma'tras to citta

Death and the Vital Energies

Each of these vital energies controls a system of glands and sub-glands and importantly, at death they each leave the unit corpora at a specific time and in a specific order.

Let us talk a little about the order of departure of each of the vital energies from the human corpora at the "time of death". Why is this in quotations? Because the time of death is not a specific time or exact second. One of the last physical signs of death is the stopping of breath. This is why many times the physician will check and assign the exact "time of death" at the

140 similarly you know their hardness and softness through pra'n'a. Suppose there is cotton and gold of equal temperature. The eye sensory organ will see them, the skin sensory organ will feel their hotness or coldness and the pra'n'a will feel the hardness of the gold and the softness of the cotton. The ear sensory organ will hear the song and the pra'n'a will appreciate its melody. The ears will hear the scandal and the pra'n'a will receive its harshness and severity.

[The_Chariot_and_the_Charioteer.html](#)

141 This capacity of the pra'n'a to hold feelings we call the vital core or marma.

[The_Chariot_and_the_Charioteer.html](#)

time he notes the stoppage of breathing. Of course, he/she will then check the heart pulse to see if the patient's heart has stopped. Time of death varies as each of the vital energies leave at different times. Sometimes hundreds or even thousands of years after the so-called death of the body.

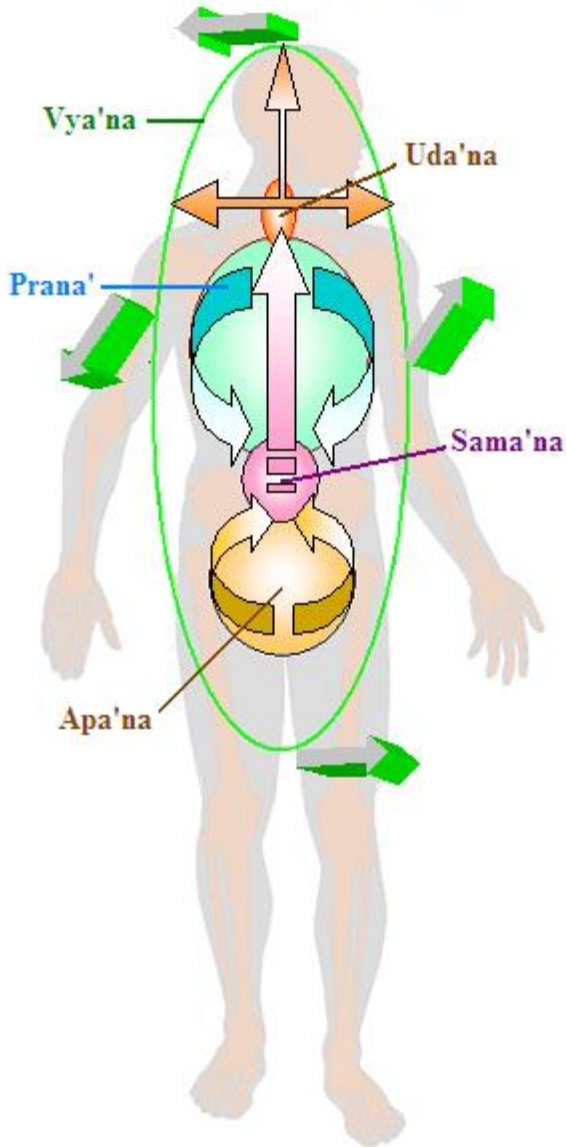
The order of departure from the human corpora is approximately from the lowest cakra to the highest. (Except in traumatic death circumstances.) When the physical system becomes defective, it means that one of the vital energies is defective. This causes an unbalance in physical energies. If for example, say one of the organs in the area of responsibility of the prana' vital energy (like the liver, kidney, spleen, and pancreas) became functionally defective. This would cause a major unbalance on the sama'na vital energy area (stomach area)¹⁴². Since the major function of the sama'na vital air is to maintain equilibrium between the pra'n'a and apa'n'a va'yus, it cannot do its job (as the prana vital energy is defective). Sama'na va'yu then causes the three vital energies to rush to the throat cakra, striking the uda'na vital air. This sometimes causes what is characteristically called the death rattle. From here, the nervous system is affected through the vya'na vital air leaving and after which the nervous synapses have no reactive capability. The heart will stop at this time. Typically, the body gives a nervous twitch at this time. When the (now) corpse has no ability to generate nerve or cellular vibrations to connect to the higher (unconscious citta through the sthirabhu'mi) mind¹⁴³, then the karma'shaya (bundle of sam'ska'ras) departs.

Here is a schematic drawing showing the order of departure in 'normal' physical death where the physical cause starts from the apa'n'a or prana' va'yus.

142 The igneous plexus that maintains the balance of the physical structure. [Microvita_and_Micropsychic_Macropsychic_Corporal_Structures.html](#) [English]

143 But in death due to disturbance of the ten Vayus, the life force leaves the body and the causal or unconscious mind is compelled to cease functioning. [The_Intuitional_Science_of_the_Vedas_4.html](#)

Va'yus at Death



Va'yus at Death

Death of the human corpora is physical. Nevertheless, death like all other things has a higher cause. In this case, it is a

psychic function causing the control of the physical energies to stop. It is the telepathic capacity of the unconscious mind that determines whether a being is dead or not¹⁴⁴.

Of course when the vital energies or vitalizing energies of human corpora leave the body, then physical disintegration of the body will occur. But still there is one of the ten vital energies attached to the corpora. Yes, medical science considers that death has occurred, but still vital energies are physical, can and are controlled by psychic power. Animation of a corpse can occur by psychically forcing the physical vitalizing energies to re-enter the "dead" body. Technically speaking, when the last vital air (dhanainjaya) has departed the corpse, then psychic death has occurred¹⁴⁵.

The fastest method for dhanainjaya va'yu to depart is usually though physical burning and physical disintegration of the third cakra. Natural deterioration through burial can cause lingering of the psychophysical structure. Psychic death is a function of disassociation of the ego -I centered a'tman (jiiva'tman) from the psychophysical structure composed of mental ectoplasm¹⁴⁶. This can only completely occur when the psychophysical structure (ectoplasm) has disintegrated completely and the karma'shaya carrying the attached spiritual sam'ska'ras is allowed to continue in its spiritual evolution.

Vital energies are the apparent cause of the physical energies in the human corpora and in turn, they are the apparent cause of death¹⁴⁷. Here we will mention that this is the apparent cause because the actual cause of death is the controller of the vital energies, pra'n'endriya. This psychophysical organ actually coordinates and controls these physical energies.

144 Often, due to the improper functioning of the vital airs of the body, the nerve-fibres temporarily stop controlling the body. At that stage the nerve-fibres do not become completely inactive and as a result the mind remains intact in its causal state. In the presence of the causal or unconscious mind (ka'ran'a-mana) the telepathic bearing of the a'tman (soul) also remains active as before. A medical examination might declare such a man dead. [Matter_and_Spirit.html](#)

145 The body being in a state of permanent repose, dhanainjaya va'yu remains. After cremation, or when the dead body completely decomposes in the grave, dhanainjaya enters the maha'bhu'ta [five fundamental factors] and merges into the aerial factor. [Aunka_to_Aksa_Discourse_3.html](#)

146 Physical death brings about dissociation of the nerve cells, hence the ectoplasmic structure stops functioning. [Kurvanneveha_Karmmani.html](#)

147 But in death due to disturbance of the ten Vayus, the life force leaves the body and the causal or unconscious mind is compelled to cease functioning. [The_Intuition_Science_of_the_Vedas_4.html](#)

Death of the structure occurs in different ways. Nevertheless, change in the species will be the end result. So far, only change we have seen has been individually based. That is, the change has been made from an individual locus or standpoint. Each change in the system has been an individual change based on individual wants or reflections and driven by individual associated energies. For any change in the species to occur, it must be based on collective desires and collectively oriented. The systems studied up to this point do not reflect any collective desires, wants or needs for collective change in the species.

CHAPTER FOUR

Psychic Energy systems

Introduction

We have discussed physical energy systems and their associated transductive receptors allowing physical (and some mental/chemical) reactions within the physical corpora. Transduced physical tanma'tras into action potential impulses that imprint on some higher level brain cells is not the substantiation of sense perception. Sense perceptions remain unsubstantiated in the open eyes of a dead man¹⁴⁸. The psychic process of assimilation of that vibrational tanma'tra into consciousness and knowledge¹⁴⁹ must include our psychic existential "I" feeling¹⁵⁰. Without a psychic witness, a dead man's tanma'tras cannot be substantiated as knowledge. These parts of our internal psychic and spiritual being have been covered at some length in both previous works called, *The Internal Being* and *Macrogenesis*. Here, the intention is simply to integrate these functional parts of our being into the overall picture of change in the world around us. This includes both the physical corpora and the world of the microcosmic and sub-atomic.

In order to accomplish this integration of human psychic world into the physical responses of neurons and hormones we will proceed with a description of the pattern of physical path of tanma'tras and how and why they affect the different psychic and physical organs. Here we will attempt the integration of the

148 Any knowledge acquired by hearing has to be first substantiated by consciousness before it can be assimilated by the mind... Similarly, when the form tanma'tras of an object are reflected on the eyes it does not necessarily mean that one will perceive the object. They eye-balls and optical nerves of a dead man may continue to function, but he will not be able to see anything, for he lacks the witnessing faculty. [The_Supreme_Question_1.html](#)

149 What is the knowing faculty? Knowing means subjectification of external objectivity, ... [Supramundane_Heritage_and_Supramundane_Desideratum.html](#)

150...word, a touch, or anything else with which we come in contact in the outer world, and it in our psychic existential "I" feeling. This is the process of knowing -- it is something related to the psychic sphere. So, knowledge has two aspects -- first, the aspect of reflections and refractions, and secondly, the psychic aspect; that is, the process of attaining knowledge in the psychic sphere. [The_Faculty_of_Knowledge_1.html](#)

physical tanma'tras into the psychic system and the various reactions to the physical corpora. For we know that psychic change brings about corresponding changes in the physical¹⁵¹. Later in the *Microvita Theory* chapter we will see how microvita can also have a very profound effect on the entire human¹⁵² and microcosmic and sub-atomic worlds, because microvita also rides on tanmatri vibrations and utilizes these psychospiritual organs.

The mental-psychic function of each cakra and the attached fifty-two vrttis was covered at some length and detail in *The Internal Being*¹⁵³ and will not be repeated here. Cakras act as psychic filters that accept vibrations according to wavelength. Cruder vibrations are handled in the lower cakras. Psychic vrttis are attached to each cakra and serve to cause psychophysical amplification responses, corrected for previously acquired sam'ska'ras. Vrttis work by activating the different neuronal-hormone responses through the physical neurotransmitter-receptor system normally the hypothalamus. Since vrttis are psychic, they go through the psychic controlling center the pituitary plexus¹⁵⁴. From the *Cakra - Tanma'tra chart* below, it can be seen that this is in the area of the pineal¹⁵⁵ gland.

Up until now, we have been studying how the physical systems of control-responses work from a semi-medical viewpoint. However, every action-response system has a control. We know that nothing happens by chance, everything has a cause. Muscles do not just function independently with their own power source and minds. They are coordinated through a central mental mind control.

Probably the best way to present a complicated subject is to present a simple drawing and add the complications. Here is a simplified breakdown, analysis, or walk-through of how

151 So the change in the psychic sphere brings about a corresponding change in the physical sphere as well. [Biological_Transformation_Psychic_Metamorphosis_Vice_Versa.html](#)

152 The glands and sub-glands also are directly affected by negative or positive microvita, which in this way influence the hormone secretions as well as the nerve cells or nerve fibres.

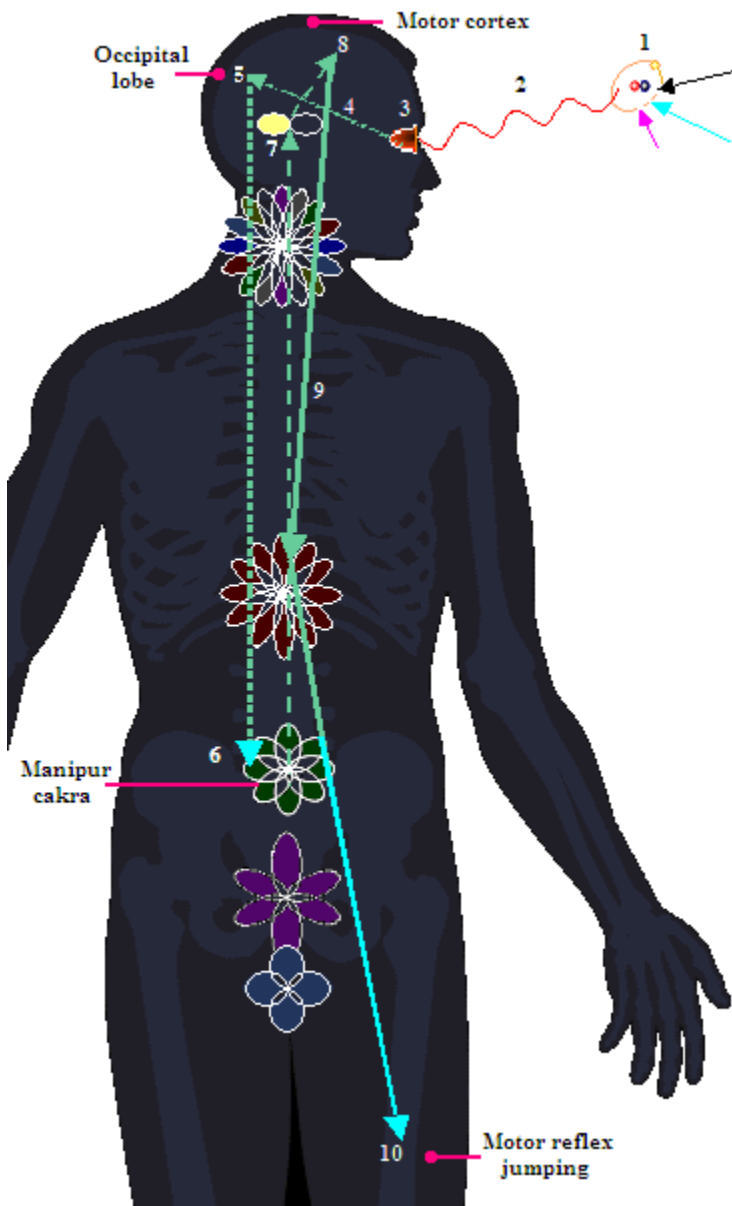
[Questions_and_Answers_on_Microvita_Section_B.html](#) (Q13)

153 Op cit

154 Psychic waves, whether good or bad, first create vibrations in the pituitary plexus. According to the nature of these vibrations a particular hormone is secreted by the pituitary gland. The lower glands of the body are influenced by this hormone, which ultimately brings about a great change in the physical body. [Shakti_and_Its_Proper_Application.html](#)

155 The pineal as a structure controls all these fifty vrttis taken internally and externally by all ten indriyas. [Mind_Pranendriya_and_Vrtti.html](#)

transduced tanma'tras cause psychophysical and physical response in the human structure. The numbers refer to the detailed location on the accompanying drawing *tanma'tra – psychophysical response*. Dotted lines are purely psychic connections. Solid lines are neuron-receptor connections. Here the material tanmatric wave (2) has been reflected from the object (1) into the eye (3) where the optic nerve sensory neurons using the afferent nervous system (4) pass the electrical responses along to the occipital lobe (5) in the brain for incoming processing. The actual processing becomes more complicated from here. The bhaya vrtti (fear complex) attached to the manipur 3rd cakra, (6) processes the incoming transduced signal as similar to another fear situation previously encountered. This provides a psychophysical stimulus to the concerned physical organ probably the thalamus (7). Then neurotransmitter hormones from the motor cortex (8) relay fear responses to the general body through efferent nerves and motor reflexes causing jumping back in fear response (9) to the legs.



Drawing tanma'tra – psychophysical response

We have seen how the reflected-refracted tanma'tras interact with the psychic organs and how the psychic organs are filtered and amplified by the emotions and vrttis and how the

psychic cakras and vrttis interact to send messages to the central nervous system and how that in turn causes physical motor responses in the physical body. It can be clearly seen from this description that although the physical nerves and brain portions are used and found in the medical books, the psychic interconnection of the energy structures to actually process and execute the physical signals are not at all understood by medical science.

In other words, the human being first recognizes the sensory perception through the afferent nervous system, and takes corresponding actions through coordinated responses of the mind and other parts of the being. But each cakra has additional functions and physiological responses to coordinate. These are also based on those limits of the vibrations that each specific cakra can handle. Below is a cakra to rudimental factor schematic drawing. The associated rudimental factor causes the cakra to act like a psychic filter. Limiting each cakra to those wavelengths associated with each rudimental factor.

The three principal psychic energy channels¹⁵⁶ are called na'diis and the id'a' and piungala' are represented in dotted blue and pink as running through the cakras curving left and right.

Please note that the signal splits (represented here near the occipital lobe). Part proceeds to the psychic cakra-vrtti filter and emotional response system and part has been given a higher responsive vibration and elevated to the higher subconscious mind. Here the past-acquired sam'ska'ras are held. Higher mind has the additional comparison function of comparing the reflected incoming transduced tanmatric vibrations with the past vibrations held in the subconscious sam'ska'ras. Technically, psychologically, the ego –I (aham) can only do its duty and compare or substantiate the objects found in the citta if a witness¹⁵⁷ (jiiva'tman) is present to witness, "I know that I exist".

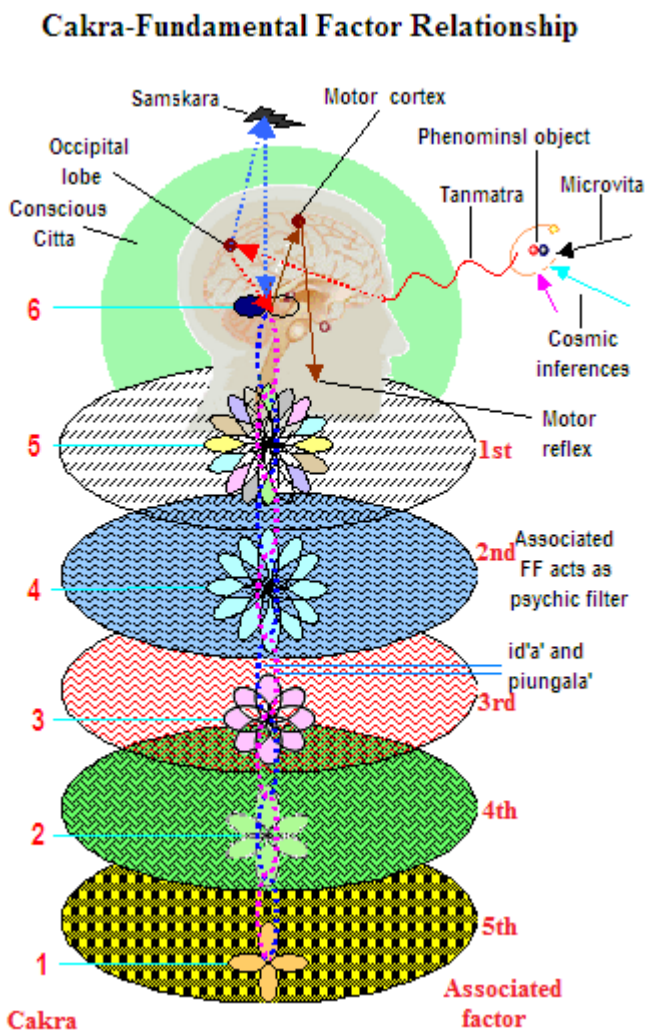
The other chart below (*cakra- rudimental relationship chart*), provides an interesting summery of where tanma'tras are processed and the cakras concerned. It is not always obvious by using only our ordinary senses to determine the tanma'tras

156 Among the three principal nad'iis [psychic-energy channels], the sus'umna' is straight while the two on either side of it, the id'a' and the piungala', curve right and left.

Aekya_to_Aeksava_Discourse_11.html

157 It is because of this omni-telepathic A'tman that the existences of all mundane objects, visible or invisible, large or small, find their factual substantiation and recognition, Chapter_1.html

involved with which cakra. You can clearly see that what we call cakras are in reverse numerical order (1 to 6) from the associated rudimental factors (5 to 1). Seeing it in chart form makes it much clearer.



Cakra- Rudimental relationship Chart

Vital energy originates from the aerial 2nd rudimental factor vibrational level. If you look at the accompanying *cakra-tanma'tra chart* below, of the characteristics of the cakra system, you will notice that the aerial factor does not have the physical tanmtric capability of form. In other words, it cannot be directly seen in the phenomenal world except as for its results (which we normally see as energy-movement). Its crudest vibration that can be utilized by the aerial factor is tactual vibration. It does not have the capability to carry solid, liquid or luminous tanma'tras; it can only utilize the subtle tactual ability like 'feeling' hot or cold and does so through the psychophysical pra'n'endriya organ.

A more specific tanma'tra example may in order here. If for example, the incoming tanma'tra is say from a fire. Then it has as its highest vibration tanma'tra, a luminous factor tanma'tra. This means that it will be carrying a form tanma'tra and a sound and touch tanma'tra. Therefore, we can see fire (form), feel fire (tactually) and it carries the subtlest ethereal tanma'tra called sound tanma'tra. However, we cannot taste fire or smell fire (wood smell is carbon residue, solid factor)¹⁵⁸. The reason luminous associated cakra (manipur cakra) cannot process the other two tanma'tras is because they are not being radiated from the luminous (fire) object on a level we can process with our sense receptor indriyas. If the object was say a solid phenomenal object (that which is capable of being divided-without container) then the tanma'tras of smell and taste would be transmitted along with the other three tanma'tras and they in turn would be processed in the respective lower cakras. The lower cakras with the stronger shorter wavelength capacities, can make a stronger sense related reaction in our mind and to the related neuron-hormonal responses. This is why cruder objects have the strongest response to the indriya transduction system.

158 Fire can be seen and so it can be said to have a shape or form. It contains ru'pa tanma'tra (the vibration due to ideation producing an image or form), otherwise we would not be able to see it. Fire can also be felt on touch. It has, therefore, both sparsha and shabda tanma'tras. There are three tanma'tras -- ru'pa, sparsha and shabda -- in the luminous factor. As it has three tanma'tras it is cruder than va'yu and was created after va'yu, the aerial factor. [What_Is_This_World.html](#)

Cakra – Tanma'tra Chart

Cakra Name number	Associated Rudimental Factor	Plexus Name	Associated Tanma'tra Name	Tanma'tras recognized-carried	Associated Sense Gland	Major Hormonal influence	Physical location
Mu'la'dha'ra First	Solid 5 th	Terrarian	ks'ititattva	Solid Liquid Form (image) Tactual Sound	a'ghra'n'a smell-nose		Base of spine
Sva'dhis't'ha'na second	Liquid 4 th	Fluidal	jalatattva	Liquid Form (image) Tactual Sound	ashva'dana taste tongue	Genitals	sex organ
Manipur third	Luminous 3 rd	Igneous	tejastattva or agnitattva	Form (image) Tactual Sound	darshana (vision) sight eyes	Pancreas Adrenal prostrate	Navel
Ana'hatra forth	Aerial 2 nd	Solar	maruttattva or va'yutattva	Tactual Sound	sparshana tactual (feeling by touch)	Pituitary, Thyroid Parathyroid Thymus	Heart
Vishuddha fifth	Ethereal 1 st	Siderear	vyomatattva or a'ka'shatattva	Sound	shravan'a ears hearing	Thyroid Parathyroid pituitary	Throat
A'jina sixth		Lunar pituitary				Pineal hypothalami c	Pituitary
Sahasra'ra seventh							ten fingers above the pineal gland

The apperceptive plate (Sthirabhu'mi)

Excerpted and revised from *The Internal Being*

Sthirabhu'mi is the Sanskrit name of this very subtle apperceptive reflecting plate. It is so subtle that even very fine (small wavelength) vibrations of the incoming (and outgoing) afferent sensory tanma'tras are reflected against it, this allows our relative (in time oriented sense) mind to see the movie of life on its reflecting screen. This apperceptive plate is different from the movie screen, more like the TV screen, in that it allows the movie to be seen from both the incoming and outgoing side of the screen.

In the TV tube the electron gun focuses the beam of electrons on the phosphorous screen and we view the results from the outside as the TV picture. The minds' apperceptive plate allows both the incoming afferent sensory tanmatric/inferential waves and the internally generated waves from the imagination, to be created in the citta.

The important point here, which is missed by most, is that the citta has the ability to accept only one afferent sensory inferential vibration at a time, that is ultimately converted to ectoplasmic shape, form etc.¹⁵⁹. The controller for these actions is the pra'n'endriya discussed in *Chapter Three*.

This means that the apperceptive plate forms afferent sensory sense perceptions (sound, smell, shape and form, etc.) in a definite order. The order of acceptance of the afferent sensory inferential waves appears on the human level can be individually modified by the individuals' psychic ability to control the vital energy (*pranah*) of the apperceptive plate and the individually acquired sam'ska'ras. This occurs subconsciously in humans, i.e., when someone reads a book silently and fails to hear (or sense) something that occurred around him. This can be due to many factors such as a student's habit of reading aloud, may cause the sound inferential vibrations to be giving priority over say the form vibrations, in which case that sound he hears is given more important retentive place in the citta than the sight of an occurrence around him.

Everything in this perceptive world is pulsative in nature. The apperceptive plate has a pulsative function that allows waves to flow through it¹⁶⁰, between pulses. (like a high speed shutter on a camera). When the frequency of the pauses in the apperceptive plate are relatively longer, then the vibrations stored on a higher level are allowed to pass into the citta and take form there. An example would be when the mind is relatively quiet, as when a small baby (child before about 5 years) sleeps or during certain meditative moods. The past life memories from the past sam'ska'ric subconscious mind are still active and can pass into the

159 The citta [ectoplasm, mind-stuff] is responsive to material waves.

[What_Is_the_Primary_Cause_of_the_Universe.html](#)

160 This applies equally to all inferential (tanma'tric) flows, and these currents are received during their phase of contraction in sthirabhu'mi or the citta with the help of the pra'n'a.

[The_Chariot_and_the_Charioteer.html](#).

citta of the sleeping child easily. The child re-lives many memories, wakes up in many moods. Newborn children do not have a current source (in this life) for memories to provide such a vivid “real like” animation to their dreams, as most all new mothers can attest. When the mind and vital airs (*pranah*) are in a hyperactive or restless state, the frequencies of the pauses are shorter. This allows only materialistically oriented shorter wavelengths object to materialize or take the shape in the citta.

Just as this apperceptive plate allows transmission of stored memories in the higher mind, to form in the active citta (a lower function of mind), it also allows the incoming afferent sensory tanmatric/inferential waves (from the senses) to pass through it and lodge in the non-cerebral portion of that higher mind. This causes everything that happens in this life to be imprinted in this non-cerebral mind. Physical science says that all memories are lastingly recorded on different parts of the brain. To do this the brain would have to be very large and new nerve cells would have to be continually created. The brain is not the permanent abode of memories¹⁶¹. We know that only a small portion of the brain has a neuron recreation ability to refresh old vibrations. Most of the nerve cells cannot be rebuilt.

The normal function of the incoming tanmatric/inferential waves is, to cause the citta to take form, but these vibrations are temporary¹⁶², a function of the power of the nerve fibers and brain cells. Memory is the re-creation of things already perceived¹⁶³. The mind has the power to re-vibrate its sam’ska’ras in the subconscious portion of the citta as many times as it likes and is what we call memory¹⁶⁴.

161 It is not proper to say that every human feeling is lastingly recorded or outlined in one or the other parts of the brain. If this were true, the brain would have to be very large and new cells would have to be continually created in order to cope with the progressive demands of feelings and sensibilities every moment. So it has to be admitted that the lasting abode of feelings is the mind, not the brain. [Matter_and_Spirit.html](#)

162 Thus the base of memory is not in the brain but in the citta . Vibrations of a perceived object remain imprinted in the nerve fibres for a few days and then gradually fade.

[Some_Questions_and_Answers_on_Ananda_Marga_Philosophy_B.html](#) (Q 55)

163 Memory is the re-creation of things already perceived. Once the citta has perceived an object, a certain vibration corresponding to that perceived object is imprinted in the nerve fibers. That experience remains in the citta in the form of seed. By re-creating a congenial vibration in the nerve cells, and thus by invoking the same feeling in the citta, one experiences the process of memory.

[Some_Questions_and_Answers_on_Ananda_Marga_Philosophy_B.html](#) (Q 55)

164 Even in the absence of impressions in the nerve-cells, the mind can revibrate its accumulated sam’ska’ras in the nerve-cells at will as many times as it likes, by means of its own force, and can also create similar impressions in them. [Matter_and_Spirit.html](#)

In *The Internal Being*, we saw that there are different types of memories. The so-called conscious memories are temporary and short lived. The information in the Manomaya Kos'a portion of the mind is a permanent type of memory and a part of the subconscious mind. We have no conscious awareness of its functioning. The compared sam'ska'ras are in this portion of the mind and not consciously available. Short-term conscious memories are vibrated more directly by our psychic force (and therefore may be stronger) and will provide a stronger reference for the comparison. Conscious memories normally take precedence in our decisions.

Tanma'tras and mind

In the section on *Tanma'tras and the cakras*, we walked through a diagram on how the tanma'tras are carried through the nervous systems and the cakras. In the accompanying diagram below (*Tanma'tra – sam'ska'ra schematic*) the same process occurs, except here we have added all of the sensory organs, the apperceptive plate, sam'ska'ras and the different layers of the mind to the drawing.

Cosmic inferential waves pervade the entire universes causing reflected-refracted microscopic tanmatric waves to radiate from phenomenal objects in our relative universe along the entire spectrum of wavelengths. Each sense organ's gateway can only accommodate specific wavelengths. The gateway (in this example the eyes) receives the incoming tanmatric vibrations of only specific wavelengths that stimulate the optic nerve through the rod and cone cells. Gateways take a certain volume or strength of waves to activate the gateway. For example, what a fly smells or sees may not activate human gateways.

Optic nerve sensory neurons using the afferent nervous system pass the electrical responses along to the occipital lobe in the brain for incoming processing. These vibrations produce a simultaneous and sympathetic similar vibration in the nerve cells¹⁶⁵ of mental mind stuff citta and the higher mind, at the same time.

165 Memory remains in the mind (citta) as a potential reaction (sam'ska'ra), and is expressed only when the imaginative power works through the medium of the cerebral nerve-cells.
Matter_and_Spirit.html

Conscious citta may cause conscious recall/conscious memory of the phenomenal object in question¹⁶⁶. A sympathetic vibration passes into the higher subconscious mind area where the acquired and past lives sam'ska'ras reside¹⁶⁷. Conscious comparison and subconscious memory recall may occur. This in turn is compared with the conscious vibrations vibrated in the nerve cells of the thalamic area of the brain.

What this means is that the nerve cells vibrate and cause the mental citta to take form and shape in accordance with the incoming tanmatric signal and wavelength. All this passes through the pra'n'endriya and apperceptive plate. Once the citta takes the shape and form, then the mind can recognize the incoming signal. Vital airs provide the psychophysical energy to the nerve structure in the psychic mind.

At the same time, these vibrations are stimulating the citta; they are also being processed by the mental apperceptive plate (sthira'bhumi). Suffice it to say here that the apperceptive psychic plate or structure vibrates at a frequency that allows the stored vibrations in the higher mind to come through during the vibrational pause and be compared with the vibrations just formed in the citta. Now a comparison must take place between the incoming sympathetic vibrations perceived in the citta¹⁶⁸ from the physical neuron vibrated structure and the returning vibration received from the higher subconscious mind structure. If a parallel comparison occurs then the object concerned is said to have perception in the mind. We know that one of the major functions of the mind is to compare relative objects.

The seats of the psychic organs or cakras locations are actually in the brain¹⁶⁹ not in the physical locations indicated in the accompanying drawings of psychic organs. These locations are

166 Memory is the re-creation of things already perceived. Once the citta has perceived an object, a certain vibration corresponding to that perceived object is imprinted in the nerve fibers. That experience remains in the citta in the form of seed. By re-creating a congenial vibration in the nerve cells, and thus by invoking the same feeling in the citta, one experiences the process of memory.

Some_Questions_and_Answers_on_Ananda_Marga_Philosophy_B.html (Q 55)

167 Memory remains in the mind (citta) as a potential reaction (sam'ska'ra), and is expressed only when the imaginative power works through the medium of the cerebral nerve-cells.

Matter_and_Spirit.html

168 Thus the base of memory is not in the brain but in the citta. Vibrations of a perceived object remain imprinted in the nerve fibres for a few days and then gradually fade.

Some_Questions_and_Answers_on_Ananda_Marga_Philosophy_B.html (Q 55)

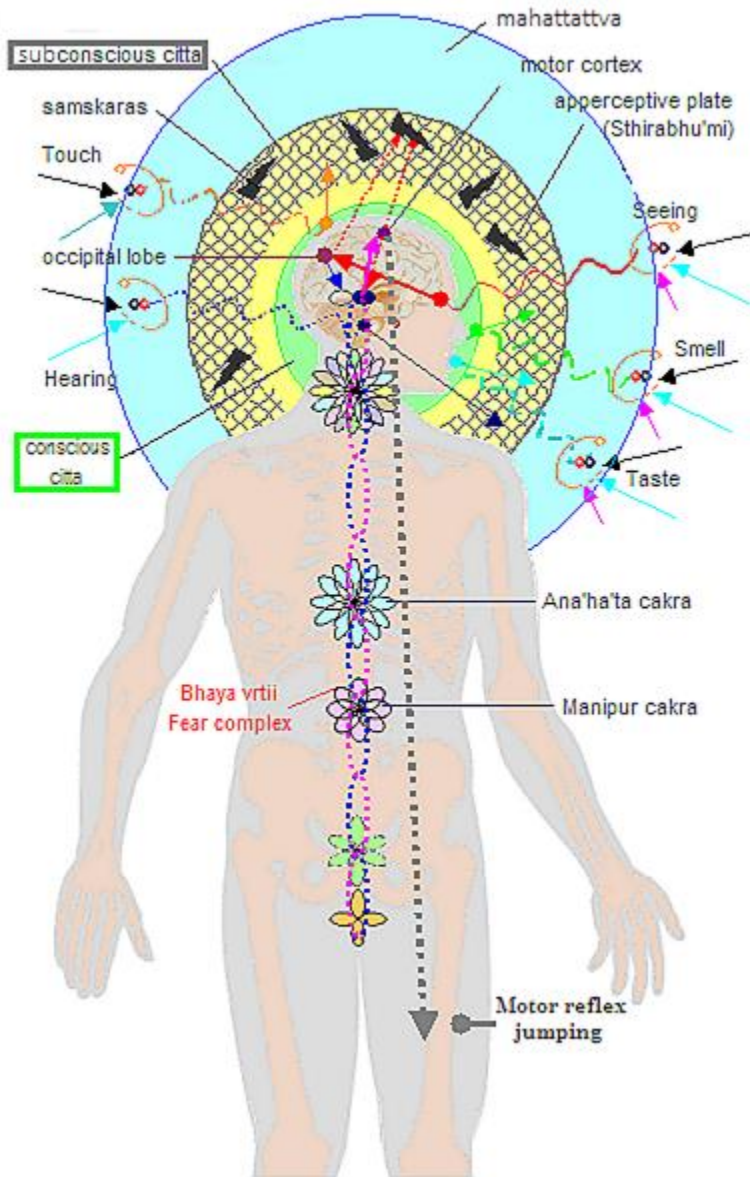
169 piit'has (seats) of the organs (in the brain). Chapter_2.html

only the apparent locations due to the influence of the psychic centers over these areas of responsibility. Tanma'tras are inherently and intimately linked to the cakras through their wavelength vibration associated with the rudimental factor also associated with each tanma'tra. The cakras act as psychic filters depending on the frequency of the associated rudimental factor. Cakras have vrttis attached that cause a psychic reaction and associated hormonal responses depending on the individuals different attached desires. The actual hormonal responses are psychically stimulated through various physical glands and are partially covered in other areas of this work.

Let's take a specific example to make it simpler and see how these processes are coordinated. Take for example a snake being seen by the eyes. When the higher mind passes it (the snake tanmátras) back to the citta, (through the apperceptive plate) the information that confirms to the aham'tattva (or egotistical portion of the brain that is responsible for actions) that this is in fact a parallel vibration to a previously perceived snake vibration, the cakras will filter this information and attach a psychic response like a feeling of great fear (or any other combination of vrtti responses) to the vibration perceived as a snake. Now, the ego –I (a'tman)¹⁷⁰ working through the pra'n'endriya and the thalamus creates a reaction through the central nervous system to the motor cortex of the somatic nervous system causing the efferent nerves to convey the signal to motor organ (say the legs) to jump backward from the snake in fear.

170 The 'I-feeling' that exists in the mind finds its substantiation only through a particular vibration emanating from the nerve-cells. Matter_and_Spirit.html

Tanmatra-samskara schematic



Tanma'tra – sam'ska'ra schematic

Here we used the same visual tanmatric impute (example used is seeing), passing the information to the occipital lobe region

through the optic nerves sensory neurons and the afferent nervous system. But in this diagram, special mind nerve cells (in the mid-brain hypothalamic area) set up a vibration that is accepted during the pause in the apperceptive plate, allowing the vibration to find a parallel vibration from the sam'ska'ras present in the higher subconscious aham'tattva portion of the mind.

In this schematic drawing, the tanma'tras are transduced into neuronal stimulated distinct pulses (or as they are called action potentials) at the individual mechanical and chemical receptors concerned. This neuronal transduction causes a resulting pulsative synapse signal to pass along the neuronal synapse to the soma (cell) end of the neuronal synapse. Most of these neuronal synapses end up in the thalamus. The thalamus (and hypothalamus) physically located in the mid – brain have the special ability to re-vibrate the encoded tanmatric vibrations onto a synchronous wavelength¹⁷¹ that can be compared with the sam'ska'ras located in a higher portion of the subconscious mind. Where it can be compared against the inherent sam'ska'ras and then redirected through the mental nervous system. This is schematic only; the actual movements of mental waves do not travel in a straight line.

Apperceptive plate

In the diagram, note that only the vision tanma'tra is passed through the apperceptive plate to the area of the sam'ska'ras located in the subconscious aham mental area. This is because, although multiple sense perceptions arrive at the same time to form an object, the apperceptive plate has the ability to pass only one set of sympathetic vibrations at one time into the subconscious aham area of the higher mind. Of course, it may seem to us that we are comparing many (or all) sense perceptions at the same time. This is because the mind (apperceptive plate here) works very fast (in accordance with its frequency of vibration), but still handles only one perception at a time.

The order in which the apperceptive plate accepts the sympathetic vibrations is in accordance with the strength of the

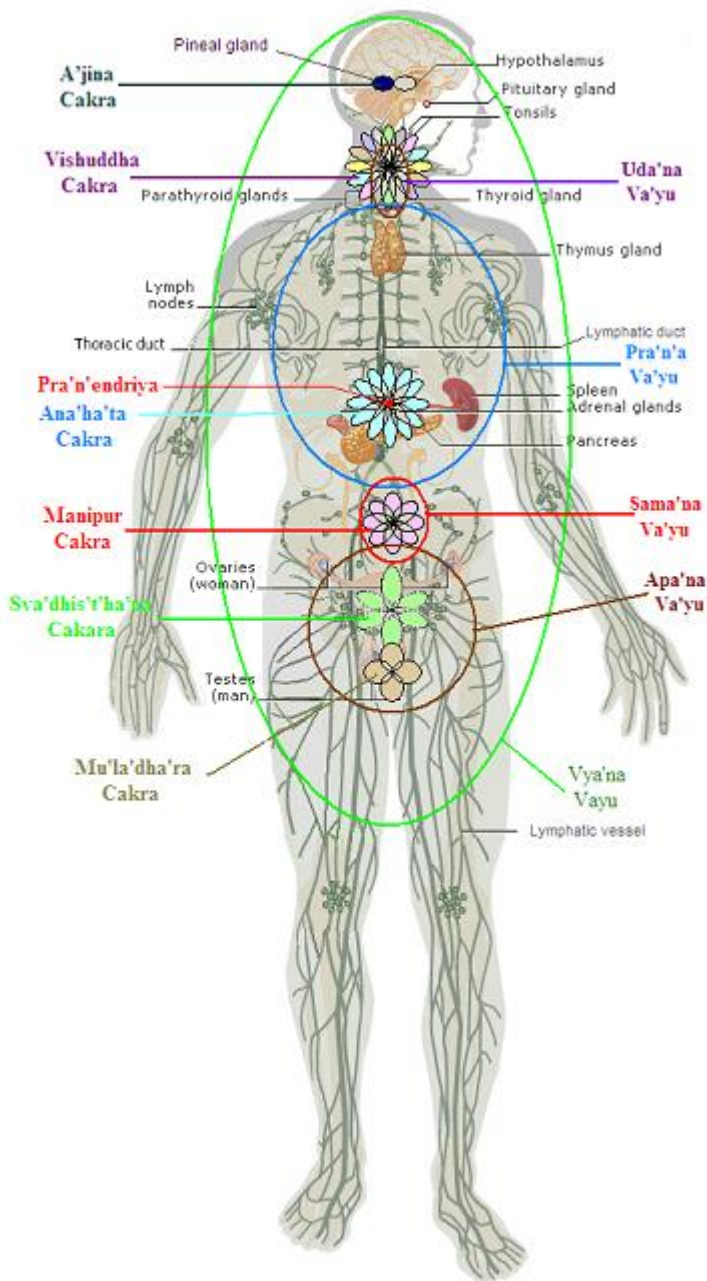
¹⁷¹ There is also a collection of nerve cells in the cranium that is made up of fat [that is, the hypothalamus], which has a special power, an inborn power or a vibrational speciality, which is sometimes synthetic [sympathetic] and sometimes apathetic [parasymphathetic].
Glands_and_Subglands.html

psychic force attached¹⁷². This comes about by our own power of concentration. That sense vibration that we happen to be primarily concentrating our psychic energy on, will be the one accepted by the apperceptive plate first. The tanma'tras carrying the most rudimental factor inferences (in other words the tanma'tra carrying the solid factor inference) has the most effect on the sense perception (and therefore the psychic force perceived by the apperceptive plate) in a biological system. After these all-important comparisons are made, the central nervous system can process the information and give the proper signal to the efferent motor nervous system. We should note that the apperceptive plate has other functions in addition to the movie screen feature. It also has a pulsative function that allows certain waves to pass in both directions. The waves that pass upward (toward the higher subconscious mind) are the cause of permanent (beyond the relative reach of time) non-cerebral memory and the seed cause of the non-reacted (unrequited) reactions in potential (*sam'ska'ras*) that are brought forward in each life. The different types and sources of sam'ska'ras are found in *The Internal Being*, but the apperceptive plate is the focal point of all sam'ska'ras.

Cakras and Vital Energies combined

The wavelength of each major energy center of the human corpora is intimately associated with a rudimental factor. A summation of the tanma'tra functions in the various cakras appears above in the *Tanma'tra-cakra chart*. These major psychic energy centers control nearly all functions of the body. Here is a combined drawing of the individual vital airs and the major organs that they are responsible to control, overlaid with cakras and pra'n'endriya. Microvita also utilizes this system, but in accordance with the perimeters discussed in Chapter Five on *Basic Microvita Theory*.

172 The greater the control a person has over the pra'n'ah, the stronger and more expanded will be the citta's sthirabhu'mi, and the greater its power of reaction. [The_Chariot_and_the_Charioteer.html](#)



Vital aires & organs schematic

Here is a brief summary of important terms and their function and location both physical and psychic.

Summary of important terms

Item	Location	Function
aham'tattva	mahattattva	ego feels - "I am seeing
apperceptive plate (sthirabhū'mi)	subconscious citta	reflects/regulates
atom	phenomenal world	reflects tanma'tras
Bhu'tatattva	Cosmic citta	cosmic vibrations
conscious citta	Kāmamaya kos'a	compares objects
ectoplasm (cittabhū'mi)	conscious citta	takes the shape of sense object
neuron path	brain	carries action potentials
outgoing tanma'tra	motor cortex	neuron response
sam'ska'ras	subconscious citta	contains seed of past actions
sense organ	brain	sensory transduction
subconscious citta	aham'tattva	controls autonomic nervous system
unconscious citta	mahattattva	contains ectoplasm

The following summary shows frequencies that might be used in brainwave synchronization and the related brain waves and mind states. They indicate the collective Hz associated with various cortex gray matter.

Neuronal cell response chart

Name	Frequency response	Apparent function
Delta	0.2 - 3Hz	deep sleep
Theta 1	3 - 5Hz	Hypnogogic state, self-hypnosis
Theta 2	5 - 8Hz	paranormal/spiritual experience
Schumann resonance	7.83 Hz	hypnogogic state, Earth ELF
Alpha	8 - 12Hz	meditation, creative dreaming, REM
Beta-SMR	12-15Hz	relaxed focus, improved attention
Beta 1	15-20Hz	increased mental abilities, IQ
Beta 2	20-38Hz	anxiousness and heightened sense of alertness
Gamma	26-80 Hz	higher mental activity, ESP

Ectoplasm Dies

Ectoplasm is mind stuff. To say that ectoplasm dies is a misleading statement. Anything in this material relative world only lives or dies in relation to its animational characteristics. That is, about ectoplasm, yes, it dies with the physical body's death; but it does not cease to exist. It only ceases to be active in the plane of bodily existence¹⁷³. Ectoplasm is powdered down or pulverized material substance. Therefore, it is more subtle or of a finer consistency than phenomenal matter. That means in a physical sense it is subtler than the material body made of its five rudimental factors and atoms. Therefore, when the material body returns to the state of death, the mind (consisting of ectoplasmic

¹⁷³ Physical death brings about dissociation of the nerve cells, hence the ectoplasmic structure stops functioning. Kurvanneveha_Karmani.html

cells or units) merely ceases to function actively, as we know mind. Why? Because it is no longer attached to the afferent nerves and eventually to the citta of the mind stuff. In other words, sensual feeling cannot exist without the system of nerves, mental organs and cells being complete¹⁷⁴.

Let us look further at these statements. Here we must start to speak about life and its activation on our plane of existence. We must remember that there are two distinct types of structures of mind. These were discussed at some length in the previous work entitled *Macrogenesis*. They are briefly the ectoplasmic-based mind unit or simply unit mind. We use and discuss this type of mind structure in psychology today. The other type of mind structure is a collective (verses unit) type mind structure. It is called endoplasmic mind structure. Its basis is microvita and microvita's associated mentality. As mentioned in previous discussions microvita penetrates and pervades the entire cosmos, traveling without limitations of relativity and animating ectoplasmic structures in our relative world. It has what we would consider almost unlimited potentialities. In the human and in complicated mind structures, microvita can work directly through the psychic plexi to modify the structures of the physical body¹⁷⁵. It also has innumerable indirect functions such as coordinating mind structures for most all bodily cells and organs. See new work *Microvitalogy*.

With the physical death of any animated object, ectoplasm becomes inactive, dormant. Because it's basic energy is static tamogun'a. It is unable to be connected to the physical structure through the associated nerves and mind cells. It cannot be vibrated to activate the cittic portion of the physical structures psychic mind. If the structure was a complicated one, say of developed mind type like human, then the ectoplasm will have accumulated vibrations of a relatively permanent type. We call these permanent types of accumulated seed like vibrations, sam'ska'ras. These also

174 The stuff of which the mind is composed cannot function once it is detached from the body, because the mind-stuff functions only when the brain is active and the nerve cells are active. [The_Real_Culprit.html](#)

175 Positive or negative microvita can affect the protoplasmic cells of a structure directly, and even bring about a change in the genetic structure.

[Questions_and_Answers_on_Microvita_Section_B.html](#) (Q13)

have been discussed in more detail in *The Internal Being*, a previous work by this author.

Sam'ska'ras, or more correctly the accumulated bundle of sam'ska'ras called karma'shaya, will be carried forward in a timeless limbo of waiting for the next appropriate psychophysical union that will produce the proper circumstances for rebirth and further spiritual progress. Mind of the undeveloped nature, or mind that does not have the capacity to create its own sam'ska'ras, has the Cosmic Nucleus and forces is its controller.

CHAPTER FIVE

Basic Microvita theory

Certain macrocosmic ontological considerations were considered in *Macrogenesis* and in the opening chapter. Namely, for the purpose of this work, that there are other types of intelligence around us. That intelligence has a different type of mental system than our unit understandings. It is called microvita. Also pointed out that is my understanding of Shrii Shrii Ánandamúrti's concept of microvita. That microvita has a collective intelligence and how that intelligence differs from our unit mental being. That comes into special importance in this work on the micro-genetic aspects of consciousness and how that is the basis for change in the entire phenomenal world, as we see and know it. Not only the macrocosmic system, but also in the very microcosmic and inner atomic system that has recently been brought so vividly to the world of our fingertips.

To try and assimilate the concept of collective intelligence, we must try and answer the questions of how this microvitic force is possible and what is its driving power. Since we cannot even see or sense it, we must judge our understanding by the effects it has around us. This is what I hope to do, point out how and where microvita affects our lives and the phenomenal universe around us.

At this point it may appear that all this is just some sort of hashed over materialistic reductionist theory of smaller and smaller. But, there are some major differences in Shrii Shrii Ánandamúrti's theory, different than any before presented. Shrii Shrii Ánandamúrti points out that mind comes from matter (covered at some length in *Macrogenesis*). He further delineates that animation of matter into life is a function of microvita and collected unit mind stuff or ectoplasmic particles collect around basic complicated molecular structures. This referred to as the microvita theory of complex development. To date, all reductionist theories have lacked a causal aspect. They assume an efficient causation. Shrii Shrii Ánandamúrti's causation is more

understandable in that it uses the basic needs and desires of the individual unit structure to determine the effect or outcome of all change in complicated or developed structures. In undeveloped structures the collective mind of microvita and other factors discussed below have the leading role. For this reason the work is divided into two basic aspects, based on the type of mind inherent within the structure¹⁷⁶, not on the sole basis of animation such as; organic and inorganic mind.

Some relative sizes

Here is a list of the nomenclature of important terms and items placed in order of their relative wavelength from longest to shortest. A more detailed discussion of all these items appears in *Macrogenesis*.

Macrogenesis nomenclature relative order/size

(In order of wavelength, long to short)

cosmic mahattattva

cosmic aham'tattva

cosmic citta¹⁷⁷

positive microvita¹⁷⁸

endoplasm¹⁷⁹

citta'n'u¹⁸⁰

ectoplasm¹⁸¹

neutral microvita

negative microvita¹⁸²

tanma'tras¹⁸³

176, what is to be done or what should not be done, this sort of conscience is lacking in energy. But microvita are not like that; that is, they are not blind forces. They have the support of conscience behind them. [Matter_and_Abstract.html](#) [English]

177 The mind, or better still the citta and Ahamtattva are far more subtle than the tanma'tras, for they define the existence of these inferences. [The_Chariot_and_the_Charioteer.html](#)

178 And similarly, in the psychic sphere there may be entities subtler than ectoplasm or its extra-psychic coverage, endoplasm. [Microvitum_the_Mysterious_Emanation_of_Cosmic_Factor.html](#) As a microvitum is a singular entity, it has no structure. By nature it is more energy than matter... [Questions_and_Answers_on_Microvita_Section_B.html](#) (Q11)

179 Endoplasm is the outer coverage of ectoplasm. [Questions_and_Answers_on_Psychology.html](#) (Q3)

180 The individual parts of ectoplasmic cells are called citta'n'u.

[The_Macrocosm_and_the_Microcosm_1.html](#) ...citta'n'u [mind-stuff], which is subtler than ether. [Chapter_1.html](#)

181 Positive microvitum is pro-ectoplasmic -- it is more ectoplasmic than matter.

[Questions_and_Answers_on_Microvita_Section_B.html](#) (Q12)

182 So far as physicality is concerned, the position of these [Negative] microvita is just between ectoplasm and electron, but they are neither ectoplasm nor electron.

[Microvitum_the_Mysterious_Emanation_of_Cosmic_Factor.html](#) Negative microvitum is pro-materialistic -- it is more matter than mind, than ectoplasm

[Questions_and_Answers_on_Microvita_Section_B.html](#) (Q12)

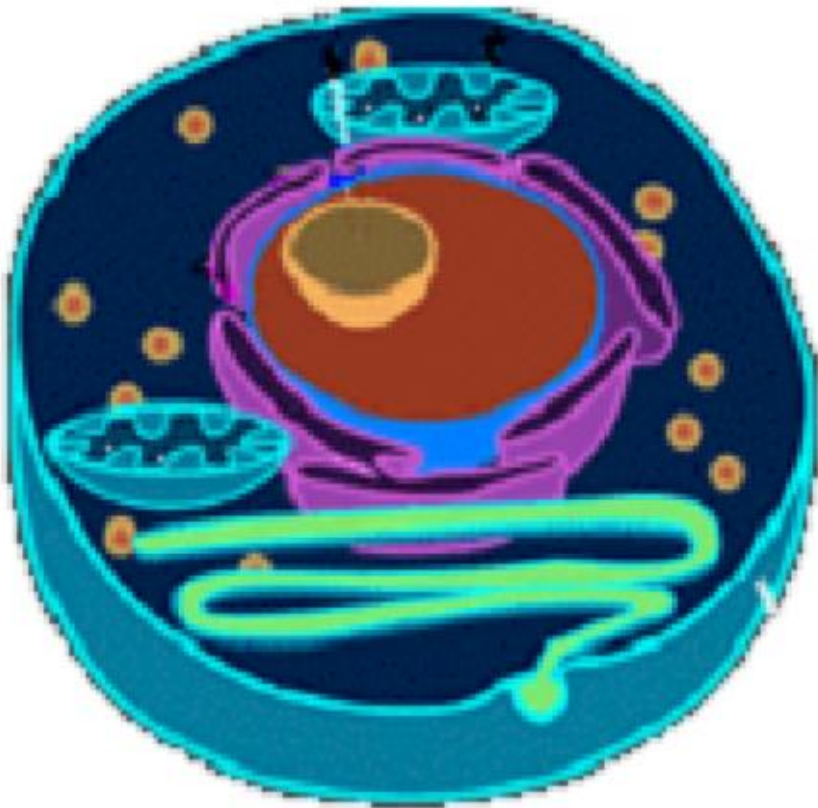
matter (5 rudimental factors)¹⁸⁴ - electron

On the scale above it can be clearly seen that ectoplasmic (mind stuff) particles are much smaller than the smallest matter. Microvita varies in physical size depending on attributes discussed below.

Cell-microvita comparison drawings

If a typical Eukaryotic animal cell of about 25,000 nm were enlarged 5400 times, it might look something like this,

Typical Eukaryotic cell



183 The microscopic fraction of a wave radiated from an object and received by the indriyas is called tanma'tra or inference. [What_Is_Dharma.html](#)

184 Identified by containing tanma'tra. [Ekendriya_4.html](#) An object which has less inter-atomic and inter-molecular space is what we call matter. [Matter_and_Abstract.html](#) [English]

Compared to the cell above

Then a typical bacteria type of prokaryotic cell of 2500 nm would appear about this size.



A 450 nm long violet light wave would appear about this big.



Then a typical 30 nm HIV virus



would appear about .16 mm or the thickness of a piece of paper or one of these dots.



That would make a nucleosome the (center of DNA) about 100 times smaller than the dot above



and an average atom about 30,000 times smaller than the dot above



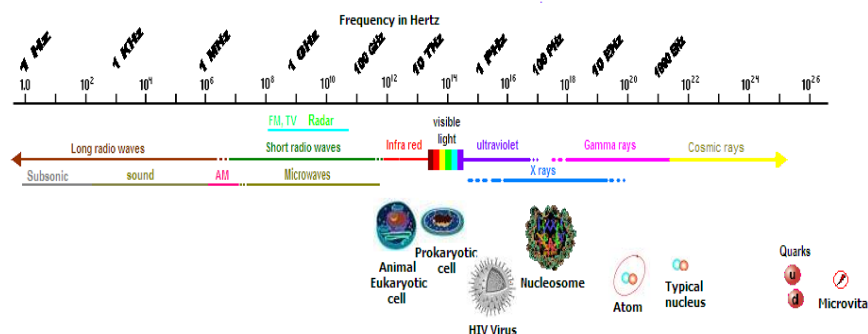
and microvita about 3,000,000,000 (three billion) times smaller than the dot above



At this point, we must consider some relative sizes. Looking closely at the below frequency versus size drawing it should be noted that the scale factor is logarithmic. That means, for example, you see the area of around AM/FM radio wavelengths are about one meter long. The next graduation is ten times smaller and the next is ten times smaller than the last. Three graduations down the scale (from one meter) represent 10^{-3} meters or one thousandth of one meter. One nanometer is one billionth of a meter and is at 10^{-10} on this scale. It is probably the smallest representative sized object that we can view through electron tunneling microscopes at the time of this writing.

Microvita appears at the very end of the chart. Most probably smaller than 10^{-28} meters. DNA/RNA viral replication in a nucleosome involves amino acids; these in turn are composed of proteins. Proteins are composed of billions of molecules and molecules are composed of combinations of atoms. Atoms are composed of protons, neutrons, electrons, quarks, etc.¹⁸⁵. Which are composed among other thing of billions of neutral microvita. This would make microvita hundreds of billions of times smaller than a viral DNA/RNA nucleosome.

Here is a chart comparing the relative size of microvita with the DNA/RNA nucleosome and other sub-microscopic items.



Microvita –wave comparison drawing

A viral structure has a unit mind structure. That means that it must work with the collected mind stuff that surrounds the unit structure. This is mostly citta mind stuff for plants, ahm and mahat mind stuff for complicated structures. Therefore, viral DNA/RNA nucleosome works with a physical unit mind structure to create physical structures based on the theorem of “diversity is the law of nature”. Although the individual atoms contain neutral microvita in their construction, the DNA/RNA nucleosome is controlled by *unit* mind. Microvita that affect the changes in the different cells and species are *not* unit structures but collective mind and structures. They collect as point like energies carrying

¹⁸⁵ Even within inanimate objects as minute as the atom and smaller particles, there are still smaller particles that maintain their structural unity and struggle against their internal and external fissiparous tendencies. [The_Status_of_Inanimation_in_the_Philosophy_of_Neohumanism.html](#)

the mental characteristics of both existential and knowing faculty, but no physical base (they are point like in relative size).

In other words, microvita collects for a specific purpose to provide collective mental structure and energy to a phenomenal object. Microvita are not the unit mind structure of the object or atom, or millions of times larger a virus. They travel into our phenomenal universe, increasing their energies and following the collective desires and needs of their groupings. We will discuss these points further, below.

Some comparisons microvita and virus

Physically the size of virus range from 10nm to 300 nm (nanometers or billionths of a meter). Microvita has a tremendous range of sizes. From point like (a conglomerate of negative microvita) to possibly about the size of a virus. Shrii Shrii Ánandamúrti stated that microvita are composed more of energy than matter¹⁸⁶. This author proposed in *Macrogenesis* that microvita carry their own energy requirements and take on or increase their energy as they decrease in speed and increase their frequency in our phenomenal world. Negative microvitum are virus¹⁸⁷. This is specifically stated many times in Shrii Shrii Ánandamúrti's works that negative microvita are what we presently refer to as virus. He mentions in at least four discourses that negative microvita are what we call virus¹⁸⁸.

In the last decade, physical viral research has advanced tremendously. Many laboratories are receiving grants and funding for HIV (Human Immune Virus) and other viral research projects, especially into the RNA viral structures. Never before has money or equipment been available for so much viral research. What are they finding?

What we know about virus is that it carries its own DNA/RNA intact inside its microscopic structure. RNA in a virus

186 As a microvitum is a singular entity, it has no structure. By nature it is more energy than matter, Questions_and_Answers_on_Microvita_Section_B.html (Q11)

187 Regarding these microvita of crude order which may come within the scope of a microscope, people give them the name "virus". They say, "This disease is of virus origin." But virus is a vague term. The better term will be microvitum, and not virus. Smell_and_Microvita_Section_G.html

188 Smell_and_Microvita_Section_G.html, Questions_and_Answers_on_Microvita_Section_B.html, Microvitum_the_Mysterious_Emanation_of_Cosmic_Factor.html, Disembodied_Souls_and_Microvita_Section_B.html

is self-contained. Needs no outside energy or food for its survival. It has survived the coldest, hottest and longest (billions of years). It is thought to be the precursor of modern day eukaryotic cells. (Nucleated cells used in all complex cell structures). Virus also has no capacity to manufacture energy packets as does mitochondrial structures in biological cells. Viral DNA/RNA has pronounced effects on cellular structures. It produces these effects by using the host cells to provide its energy requirements and then modifies the DNA/RNA of the host cell by replication. Virus replicate at a very fast rate. By doing this they normally disrupt the normal cycle of cell metabolism. In fact, virus usually destroys the host cell in the process. For these reasons, it turns out that most viruses are detrimental to the human structure. Of the thousands of cataloged virus, very few are helpful to human biology. See *Virus Chart* at end of chapter.

Let us take some time to look into these findings and compare them with what Shrii Shrii Ánandamúrti wrote a decade before these researchers made their discoveries.

How can microvita be compared to virus and other small molecular structures? Viruses are inert. That means they do not activate, until the host structure or body gives them energy. Microvita are similar in some respects. Microvita contain knowledge or one can say an intelligent component. Just like the intelligent component a DNA/RNA viral structure has. Microvita move throughout the universe (at FTL speeds) in a practically inert condition. Until they are attracted to a situation (collectively), when their speed component slows down and their energy component increases. Then like virus, they activate within a structure they are attracted too.

Construction of the life affecting Microvita

Actually, we know very little about the physical construction of microvita. Shrii Shrii Ánandamúrti's descriptions give us very few instances where microvita falls into the physical realm. When this does happen, microvita fall into a physical size category smaller than or near too, virus¹⁸⁹ of which scientists are

189 The word "virus" is somewhat defective. Instead, the term "negative microvitum" should be used. Smell_and_Microvita_Section_G.html

just learning to study. We do know that structures the size of virus have a very definite effect on the human and other systems. Therefore, it follows that when microvita attains the size of say virus, it too can have a very pronounced effect on physical systems. This is exactly what Shrii Shrii Ānandamūrti states.

We know from *Macrogenesis* that microvita has intelligence, energy and is “point like” in physical aspect¹⁹⁰. There, the theory was put forward there, that it traveled faster than light (FTL)¹⁹¹ throughout the universe¹⁹² and when it slowed down or was attenuated in speed, it absorbed or took on energy. At least the energy aspect of microvita increased as the speed decreased¹⁹³. As a point like structure of very long wavelength, it attenuated or slowed down in speed upon entering this relative phenomenal universe, making it decrease or shorten in wavelength. It is a well-known fact in physics that energy increases as wavelength decreases. This is consistent with microvita theory. It was proposed, that in order to do this, the point like structure must slowly increase in relative size, decrease in wavelength and takes on (or exhibit) energy.

Remember, from a mental construction outlook, microvita consists of collective mind exhibiting the mental characteristics of both existential¹⁹⁴ and knowing¹⁹⁵ faculty, but no physical base (point-like).

We know that microvita also exist as the endoplasmic coverage of the unit mental and physical structure. Microvita has existence and knowing faculty, we just don't know that the

190 As a microvita is a singular entity, it has no structure. By nature it is more energy than matter... Questions_and_Answers_on_Microvita_Section_B.html (Q11)

191 Microvita also move and they recognise no inter-planetary, no inter-spatial, no celestial hindrance, impediment or barrier. Microvita move; they recognize no impediment, no barrier, physical or supra-physical; but as their media are of inferential nature, so the movement has something to do with the physical world. Mobility_and_Movement_of_Microvita.html [English]

192 They not only move on the planet Earth, but they also travel freely from one plant to another. Smell_and_Microvita_Section_G.html

193... of angular nature; and where the speed is less -- that is, the speed is not the dominating factor - - it is a bit circular. ... Otherwise it is angular. The greater the speed, the less will be the angle created by it. Mobility_and_Movement_of_Microvita.html [English] [microvita change speed in Time, Place and Person]

194 Like other psychic and psycho-physical beings, they have also got basic characteristics -- such as existing, multiplying and dying. {microvita}

Microvita_the_Mysterious_Emanation_of_Cosmic_Factor.html

195 Vidya'dharas also have a kind of beauty due to their inherent intellectual faculty. Vidya'dhara microvita assist those who seek intellectual attainment. As vidya'dharas are devayoniis, they do not harm anybody. They are a type of positive microvita.

Disembodied_Souls_and_Microvita_Section_B.html

existential and knowing faculty on the unit mind are the same as microvitic mind. Most probably, they are not the same. Microvita has the support of a collective type of conscience¹⁹⁶ and intelligence, but it has a collective intelligence and collective type of existence.

We saw in *Macrogenesis*:

“Collected, the knowing faculty portion of the metazoic mind has increased capacities compared to the protozoic mind. However, the expanded endoplasmic structure in the metazoic mind allows for the additional faculties of intellect, reasoning, discrimination and eventually intuition to develop.”

Collective microvita travels by attraction

We have seen above that microvita heterodyne on tanmatriic and cosmic inferential waves. We also have considered that microvita travels in both the macrocosmic and microcosmic spheres. Microvita when traveling in the macrocosmic sphere needs not be concerned with the person and time aspects of relativity¹⁹⁷. This means that microvita travel unhindered throughout macrocosmic space on macrocosmic inferential waves. The macrocosmic waves pervade all the known and unknown universes.

In the special case where microvita travels in the microcosmic phenomenal inferential world, then microvita are under the influence of the three relativities of time, place and person. In this case, they use the tanmatriic inferences of material objects to travel. Here they specifically travel by the force of attraction in accordance with their innate or microvitic equivalent of sam'ska'ras or identifiable traits¹⁹⁸. Please, do not construe this to mean that microvita have sam'ska'ras. They may have what we can consider as identifiable traits; that is, traits that they are attracted too by identification. Their mind is collective, they do not identify individually, as we with individual unit minds do.

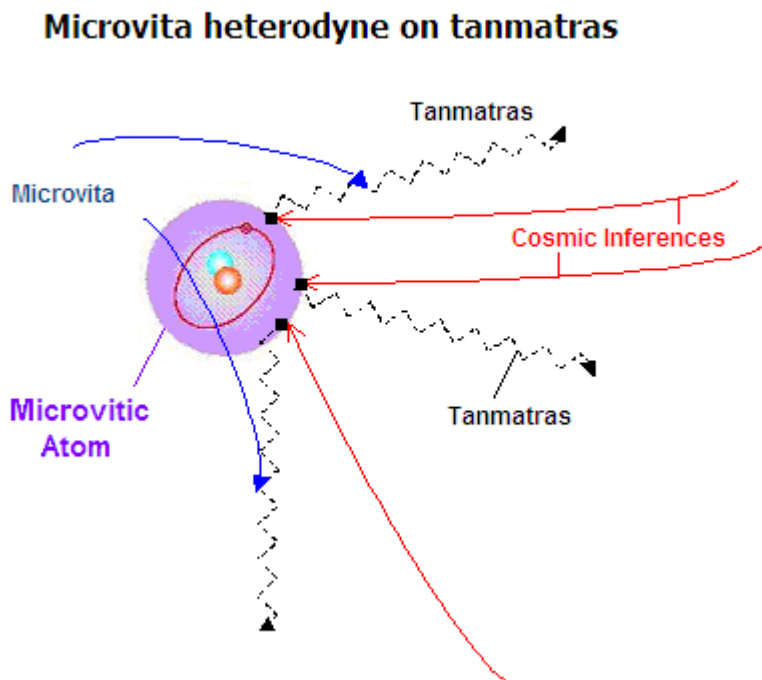
196 But microvita are not like that; that is, they are not blind forces. They have the support of conscience behind them. [Matter_and_Abstract.html](#) [English]

197 Microvita come from outer space, from the extended universe and the universal planes, [Microvita_and_Cosmology.html](#)

198 The pervasive, stinking smell which results from the decomposition and disintegration of rotting animal or plant bodies attracts negative microvita. [Smell_and_Microvita_Section_G.html](#)

Here is a simple drawing showing the interaction of microvita and tanma'tras in the material atom.

Schematic microvita on tanma'tras



Microvita and the cakras

In the above chapters on tanma'tras, microvita was purposely left out. Not because microvita is not there, no because the above description is already too cluttered and complicated to try to introduce microvita.

In the drawing above, notice that microvita is entering along with the tanma'tra vibrations. Are microvita vibrations? No, they are more like particles. Of course, every object in the phenomenal world around us has its own intrinsic vibration. Here the microvita is very small compared to the wavelength of the tanma'tra, and they simply heterodyne on top of the relatively long

tanmatric wave. The important thing is that they pass unhindered and unchanged through the afferent nervous system. *This means that they do not undergo the transduction that the ordinary tanmatric wave does.*

Later in this chapter on microvita theory, there is a discussion on microvita flow and direction. The first point of their effect of the human corpora is felt by the longest wavelength of positive microvita when they cause slight inference at the a'jina' (6th) cakra level. Shorter wavelengths have their first effect at the ana'hata (5th) cakra. Since microvita flow by attraction, they normally flow downward from these basic entry points. This is covered in more detail later in this chapter on microvita theory.

Do they have any direct effect on the cakras and attached vrttis? Where this becomes important is when microvitic vibrations pass through the cakras. Microvita are then directed in accordance with the direction of the vital energy (pranah) of the tanma'tra that the microvita be attracted too. This is discussed at length in the subsequent chapter of *Transgenerational Changes*. The energy inherent in these short wavelength particles can amplify and motivate the psychic centers and the vrttis attached. The vrttis are the cause of hormonal release in all biological systems. Hormones can cause structural change in all biological systems all the way down to the cellular level. Again, this is discussed in detail in the chapter on *Transgenerational Changes*.

Please note that microvita travel to the phenomenal atomic structure on cosmic waves or inferences, then away from the phenomenal atomic structure on tanmatric inferences to impinge on the sense capabilities of the observer. These same cosmic inferences are the noumenal cause of the vibrational energy in the phenomenal atomic structure.

When tanmatric inferences are radiating from a material object, those vibrations are radiating on many spectrums. However, it is only the precise wavelengths that can be perceived by the humans five organs of sense that are the wavelengths we notice. The individual atoms tanmatric wavelengths may only be fractional or sequential harmonic portions of the actual/apparent wavelength of the atom in question.

Some important points to be considered in discussing the travel of microvita in the microcosmic phenomenal world.

- Microvita can travel both too and from material objects. They can travel on many different types of inferences; tanma'tras and cosmic inferences are only two of the many methods.
- Observable tanmatric inferential waves are the waves that travel from material objects. Non – observable macrocosmic inferential waves travel *too* material objects and vibrate the material phenomenal object.
- That the material structure of objects consists of microvita and the five rudimental factors in requisite proportions. The portion of the five rudimental factors that exists or that we can sense in the relativistic material phenomenal world, consists of compacted waves that have been threaded (braided) into material objects by the process of atom creation though standard implosion theory discussed in *Macrogenesis*.
- Microvita enter physical corpora via cakras. Tanma'tras enter via indriyas (sense organ receptors).
- Microvita are not modified by receptor transduction.

Microvita collective needs of unit minds

In *Macrogenesis*, we discussed the mental endoplasmic and ectoplasmic structures at length. Here we will review the structures briefly. Ectoplasm is a unit mind structure found in the developed (normally human) type individualistic mind¹⁹⁹. When collected together it has maximum “I” feeling. Ectoplasm is not a type of or function of, microvita. It is a function of the emergence of individualistic ectoplasmic mind from matter. It exhibits the characteristics of “diversity is the law of nature” throughout the phenomenal universe. From this type of mind structure we (as humans) get our individualistic “I” feeling. Our individualistic feeling have wants and desires. Our unit individuality. We as complex mental being have individualistic mental characteristics of both existential and knowing faculty. In other words, we have intelligence and knowledge of our self-existence. As controlling

¹⁹⁹ Ectoplasm is of unit nature and endoplasm is of collective nature. Questions_and Answers_on_Psychology.html (Q4)

(and coordinating and many other functions) of this complicated mental and (therefore physical) ectoplasmic mind stuff, we have endoplasm.

Endoplasmic structures are composed of microvita with the collective type²⁰⁰ mental characteristics. They also carry the mental characteristics of both existential and knowing faculty, but collectively. This means that they collectively have an “I” existence; but not a unit individualistic “I” existence (that carries with it the fissiparous mental characteristics that we call unit existence). Their knowing is a collective knowing of a minimum “I” existence²⁰¹, guided by the ubiquitous Protas aspect of the Cosmic Nucleus not the ota aspect that we as units minds, enjoy.

Microvita exists for the benefit of the unit phenomenal structure that they inhabit. Not for themselves as an individual microvita. In other words, they do not follow the rules of our phenomenal universe of “diversity is the law of nature”. Their rules are ‘collectivity is the law of their nature’. Their existence is of collective good and they follow the needs of the collective desires they may incur. Although microvita is collective in mind type, they do have attractions by group (species) need. Their tendencies are to group together by attractive needs and then provide the collective mind to accomplish the overall task. For this they work for the collective good or need.

Now, collective need or collective ‘good’ covers a large territory. Let us break it down into a more palatable portion. As we see microvita, they generally affect two basic types of structures. The developed mind structure and the undeveloped mind structures. The developed mind structure through endoplasmic modifications and the ectoplasmic mind structure in undeveloped structures. In other words, both endoplasm and ectoplasm can be modified and changed by different types of microvita²⁰². Both are covered more thoroughly below, as they affect different types of changes to the types of mental structures (and therefore physical structures). Let us take the developed mind structure, first.

200...microvita also move from imperfection towards perfection in circumferential style. Those microvita, or say the collective form of microvita, with the coverage of endoplasm, move in the same style. [Questions_and_Answers_on_Microvita_Section_B.html](#) (Q9)

201 Endoplasmic structure has minimum “I” feeling. It is of collective nature -- it is a collective structure. [Questions_and_Answers_on_Psychology.html](#) (Q4)

202...ectoplasmic entity and endoplasmic coverage are both influenced by microvita. [Sidereal_Year.html](#)

Microvita collective needs in structures

The collective need or ‘good’ of the developed mind structure is different from the undeveloped mind structure. Developed means first, metazoic complicated cellular structures. It also means complicated structures (like human) that have developed individualistic “I” feelings with the accompanying characteristics of existential knowledge of their own self and inherent individual type intelligence. This type of developed mental structure can *only* have what is termed microvitic endoplasmic coverage that utilizes the accompanying collective “I” feeling of collective oriented microvitic mind. So, here we have a situation of a collective oriented type of mind structure (microvita) involved with the overall coverage and eventual modification of the underlying unit type individualistic mind and accompanying metazoic physical complicated cellular structures.

In short, microvitic collective mind provides the covering mental facility that allows the coordination of the physical cells, organs and functions of the complex metazoic physical human structure. It (microvitic subtle mentality) does this (selflessly) with the ‘good’ and to the benefit of the underlying structure (physical human corpora) in mind.

How does it do it? It does it indirectly through the feedback system outlined in Chapter Seven the *Macro-micro feedback system*. All systems have control. It too has control and coordination that of the macrocosmic connotation through the ubiquitous protah²⁰³ (all encompassing) aspect of the multilateral Macrocosmic mind. In other words, it (microvitic endoplasm) just does its job with as little inference from the unit individualistic being as possible. Nevertheless, in the case of the human mind as we will see below, we as individuals have the capacity to modify or actually direct, these microcosmic entities of microvita, to the detriment or benefit of the individual human corpora. Human complex mind has and utilizes the inherent psychic cakra system to modify its desires. Mental desires attract different types of

203 He has got a direct relationship with each and every entity and He has got a collective relationship with this collective world. That is why it has been said that He is multilateral in action. [Triangle_of_Forces_and_the_Supreme_Entity.html](#)

microvita in accordance with the innate characteristics in the microvita. By modifying our desires and the control of our mental propensities, we as developed mental beings have the capacity to direct these microvita in a positive or mental direction within our physical and mental being.

We may enumerate the direction of the travel of these microvita as either positive or negative microvita, but in actuality the microvita are neither. They just follow their common collective desire or need and go in such a direction as per the attraction within their own mental collective propensities. The effect of such travel within the human corpora can be felt by the individual as either relatively positive or negative. Therefore, we in turn name them positive and negative microvita.

Collective needs in dormant mind structures

Dormant mental structures are not so easy to understand. They are what we must refer to as undeveloped protozoic and dormant mental structures, down to and including inert or dormant atomic and subatomic mental structures. Collective need for undeveloped mental structures means energy modification of basic unicellular structures by microvita as per the will of the ubiquitous protah aspect of Cosmic Mind. Collective need for basic phenomenal atomic structures means, when the cosmic wave carrying cosmic microvita attenuates into the phenomenal world through standard implosion theory, then neutral microvita bind together to be used as the collective mind and invoking the laws and energies in atomic binding of microvitic basic protium. Other more positive (and also negative) types of microvita proceed into the phenomenal relative word and carry out developed and undeveloped mental structural modifications and changes as per their collective needs. In the case of undeveloped mental structures, this type of modification is very slow. In the case of atomic structures energy attenuation happens over billions of years that may slightly modify the basic atomic structure.

Microvitic collective traits

Maybe a few examples of unit individualistic traits being carried forward in the human ectoplasmic mind verses some collective microvitic endoplasmic traits, would be in order? A simplistic example in unit individualistic life would be the example of greed being carried forward. This typical individualistic trait is carried forward from life to life as a vrtti. (See example in *The Internal Being*) This sam'ska'ra for greed involves wanting more and more and cannot be satisfied on the material plane. It is typically an individualistic sam'ska'ra carried forward by individuals *until* it is extinguished (burned out). For example, say the individual could possibly be reborn in a situation where he/she could not manifest the greed sam'ska'ra. Maybe they were born a street urchin or beggar situation and could not be involved in building a need for a more and more situation. Here the endoplasmic microvita coverage would not be needed to carry forward the collective sam'ska'ra to the next generation, because the individual vrtti would take care of the individual need.

An example of a collective trait carried forward by collective microvitic endoplasmic coverage would be development of a new vrtti attached to the human cakra systems of the species, in the psychic realm. In the physical world, it could be any needed modification of the physical body carried forward over an extended period of time, from generation to generation. Like larger cranium size to hold evolved mind abilities. Alternatively, it could be different limb sizes or shapes because of modification in the external environmental changes, like outer space living. This type of trait modification would be of help to the entire species²⁰⁴. It would be slowly introduced in the microvitic collective cosmic mind through the entire species endoplasmic coverage, as needed. It then would introduce microvitic intelligent energy changes into the genetic makeup of the individual karma'shaya (and therefore the reborn individual) at the next rebirth.

204 And in the case of collective structures, regarding these psycho-physical longings, if it is seen that the collective body of a particular nature of living being or expression does not like it, then the controlling faculty creates a sort of change and metamorphosis in the physical structure, and as a result the nature of the longings also changes. [Four_Dimensions_of_Micropsychic_Longing.html](#)

Comparison of tanma'tras, microvita and energies

All the changes that vital energies can cause are limited to physical energy changes, whereas microvita has a far greater range of psychospiritual capabilities for change. The physical system affected by the vital airs energies are very similar to the areas of influence of microvita. Here are some specific comparisons:

- **Entrance** - Tanma'tras are limited to the gateways of the organs (motor and sense) involved where they are directly transduced into neuronal/electrical/wave transmissions. These in turn pass through the psychophysical cakra/vrtti system. Microvita carries energy, enters directly through the higher cakras, and utilizes internal tanma'tras and other inferential vibrations for travel.
- **Intelligence** - Microvita are more than just pure energy. They carry an intelligence component that has the capability to produce a different range of changes in the human corpora. These are covered later under different direct and indirect genetic and inorganic changes in a later chapter on *Transgenerational Changes*. Tanma'tras are complex wave/energy vibrations with no intelligence component.
- **Energy** - Microvita energies come from an external source. That is from a dimension outside the phenomenal world²⁰⁵ and are carried on the cosmic and tanmatric inferential planes. Tanmatric energy has to be amplified by vital energy through the sense organs.
- **Travel** - Microvita do not manifest nor carry tanma'tras. They are so small that they actually travel on these tanmatric inferences and utilize them in their work. Tanma'tras travel from object to sense organ as waveform.

205 Microvita come from outer space, from the extended universe and the universal planes, [Microvita_and_Cosmology.html](#)

- **Scope** - The various psychophysical systems mentioned (tanma'tras, vital energies and microvita) all utilize the same cakra/ vritti system. Both microvita and the vital airs influence nearly the same physical organ systems.

Here is a chart that compares microvita characteristics with tanma'tras and energy:

Chart of Energy, Tanma'tras & Microvita

Characteristics	ENERGY	MATTER	MICROVITA
Form	No form tanma'tra	<i>Reflects form tanma'tra</i>	Point-like
Intelligence	no	progressively	collective
Controlled by	mind	mind	mind
Macrocosmic	yes	no	yes
microcosmic	yes	yes	yes
Comes from	Idea/2rd rudimental factor	Cosmic citta/5th rudimental factor	cosmic nucleus
Tends towards	seeks container	crudeness	collective will
Wavelength	longest	shortest	variable

In any system, one must consider “what comes out (the effect) is a logical result of what goes in (the cause)”. When we apply this to a system like the human nervous system, then we must consider “what is it that goes into the system that then produces the efferent autonomic nervous system responses”? This question becomes doubly important when we consider the drawing of microvitic flow below showing the entry of both positive and negative Microvita. (See *Microvitic Flow schematic* below)

Inferential tanmatric vibrations enter the physical sensory perception-receptors gateways (indriyas) into the physical body. Microvita enters the psychic cakra gateways of the fifth and sixth cakras.

Microvitic flow in developed human structure

Microvitic flow is different from what we normally consider flow. We must remember that microvita is collective. That is, microvita has a collective mind from its inception, as it emanates from the Cosmic Nucleus²⁰⁶ and has the tendency to collect as groups. Each group of microvita has its specialized purpose. Therefore, its flow is specialized. Not specialized in our unit sense or for our own individualistic desires, but specialized in the sense of attraction. That sounds unusual, except when we remember the fact that microvita flows by attraction. That is, it is attracted²⁰⁷ along certain paths and in accordance with certain group tendencies. Why is this? Because microvita has intelligence. Not intelligence in the common held view, but collective intelligence.

Their attraction is collective, in the sense that if there is a need or desire, then they collectively are attracted to fulfill that need. Here, maybe a practical example is needed. Let's take small groups of collected microvita that are *attracted* to dead or decaying matter. They travel on the smell tanmatric inference. For microvita, that tanmatric inference is very short wavelength and is associated with crude matter. Here large nearly virus size grouped collective negative microvita enters directly the cellular structure and breaks down the metabolic structure. Microvita enters and breaks down the mitochondrial DNA cell and releases its energy. Maybe they act as a catalyst like a RNA ribosome. If we observe the facts on cellular decomposition, we find that cells give off energy when they decompose. If they do not give off energy, then they do not decompose. Like in cold or frozen cell situations.

The term inference generally means a generated wavelength. Specialized in the area of human conception-perception, it means those limited wavelengths that are propagated in the specific wave range of the senses. In other words, the wavelengths of smell, taste, seeing, feeling and hearing. These are

206 The spiritual level, the spiritual space, is not for microvita because they are something created by the cosmic mind. Questions_and_Answers_on_Microvita_Section_B.html (Q5)

207 During the First World War the decaying bodies of dead soldiers attracted negative microvita from other stars and thus the influenza disease originated. Questions_and_Answers_on_Microvita_Section_B.html (Q15)

the paths that microvita utilizes for travel, along these wavelengths²⁰⁸, in small groups, for a specific purpose.

Where does that energy come from that microvita bring to the mitochondrial structure? Remember in *Macrogenesis* we came upon the fact that microvita were “energy transducers”. That is they take on and give off energy. Here we have a case of giving off energy. They are coming into the decomposing matter on very crude material wavelengths, carrying relatively large quantities of energy. Especially when they are collected together, the total energy component is sufficient to give off the large amounts of energy required to breakdown the relatively large physical cell structures. We say this is negative microvita because is relatively crude in size carrying the large amount of energy and in addition, it is acting in a negative manner on the unit structure that is destroying it.

Undeveloped mind microvita usage

Why do we say that negative microvita enters the cells directly and not through the cakras? Because many dead structures have no psychophysical cakras. Cakras form around complicated developed mind centers. Many dead and decomposing structures have no collective endoplasmic or complicated unit ectoplasmic mind structures. That is generally speaking.

The exception is in complicated developed mind structures, just as the complicated structure starts to decompose, then collective endoplasmic mind has not entirely left and (in most cases) the organ structures collective endoplasmic microvita mind will try to attempt to adapt to the new host body. Mentally speaking, if the collected mental metazoic ectoplasm of the organ has been too heavily imprinted, that is, if the individual cells genes DNA are “imprinted” too heavily as to (what is ours or individual) unit, then the organ will not adapt and continue to decompose. The transplant will fail. A physical example of this “imprinting” process could be the “T” cell structure of gene imprinting done in

208 It has already been stated that microvita move through tanma'tra's, that is, the inferences of sound, touch, form, taste and smell. These five inferences are the carriers of these microvita. [Disembodied_Souls_and_Microvita_Section_B.html](#)

the immune system.²⁰⁹ Discussed later in chapter seven on *Transgenerational Changes*.

Microvita of different types are attracted to the physical areas they then affect. For example, many negative types of microvita are carried on the incoming smell tanma'tras that are predominant in the first or mu'la'dha'ra cakra. These smell attracted microvita affect organs that are under the influence of that mu'la'dha'ra cakra. The important point here is that the psychic organs (indriyas) are only directional channels, not controllers of these two types of energies. Microvita has their own type of collective intelligence, with their own inherent intelligence controls.

Developed mind microvita usage

The cakra system has the specific function of re-directing or guiding microvita to its destination. It doesn't do this without guidance. It does it through the guiding psychic of subconscious higher mind. In the unit structure (human in our example), it uses the power supplied by the vital energies and guiding psychic power of the mental mind of the individual.

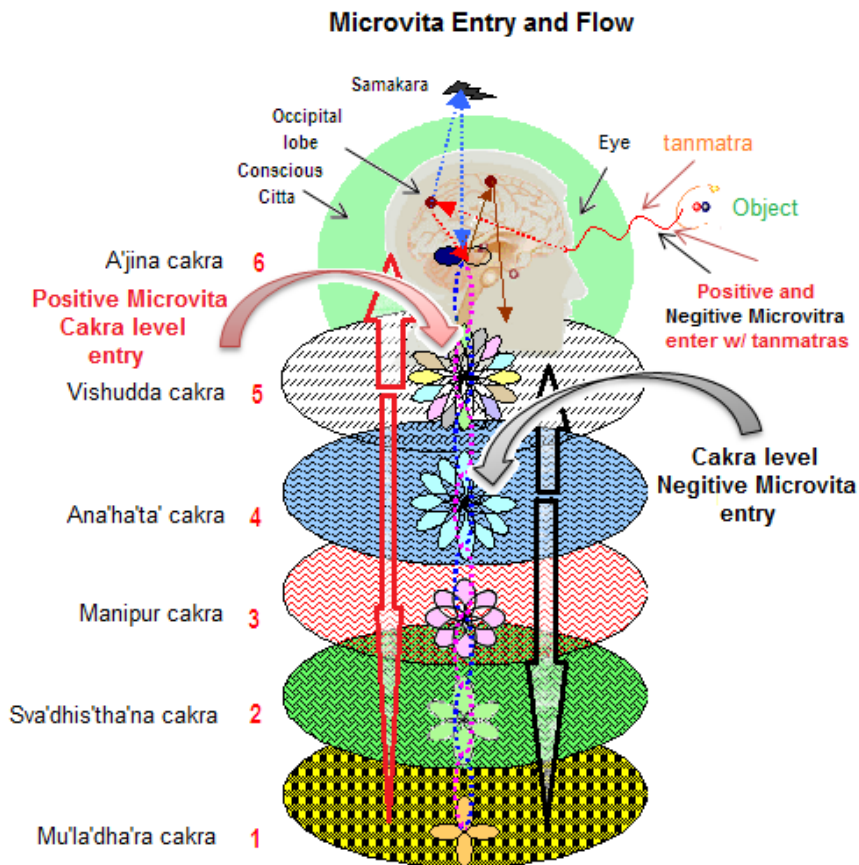
Therefore, microvita traveling on say smell inferences can be re-directed by the appropriate cakra. For smell, it would be the lowest or mu'la'dha'ra cakra. But, we also know that it doesn't enter directly there, as it would in dead structures, it enters through the 4th Anáhata cakra²¹⁰ and flows in a negative or "downward" direction through the human corpora.

This means that it (negative microvita) will pass through the other lower plexi before its energy is completely dissipated in the lowest cakra. This is why so many different emotions can be affected in a negative way by negatively flowing microvita, in humans. That negative microvita is utilized to reinforce sentiments (expressed through those cakras and attached vrttis in what we call

209 <http://www.egnu.org/thelema> The heart cakra, Anahata, is related to love, equilibrium, and well-being. It is related to the [thymus](#), located in the chest. This organ is part of the [immune system](#), as well as being part of the endocrine system. It produces [T cells](#) responsible for fighting off disease, and is adversely affected by [stress](#).

210 From below the left ear to the lower point of the right ear is the sidereal plexus -- the naks'attra man'd'ala. The controlling point of the naks'attra man'd'ala is just in the centre. Generally positive microvita come in contact with the human body through this plexus. [Vishuddha cakra]
Plexi_and_Microvita.html

a negative manner as it flows downward. Here is a schematic drawing of those flows. Note, positive as red color can flow up or down on the schematic. Black as negative microvita enters the 4th cakra flow up or down on the schematic but only up to Vishuddha cakra.



Why doesn't negative microvita travel upward past the 5th Vishuddha cakra? (negative microvita enters Ana'hata cakra) Three reasons. The negative predisposition of the negative microvitic minds tend toward more material cruder vibrations. Secondly, its relatively heavy structure carrying large quantities of

energy will cause it to drift towards cruder heavier structures. Lastly, we must remember that microvita travels by attraction and “negative” means attracted to heavier material vibrations.

Not only the mental predisposition of microvita itself as mentioned above, but also the ectoplasmic mind of the unit structure itself is always moving from place to place in the structure. In other words, unit conscious mind is continually roaming from cakra to cakra. We learned in *The Internal Being* that mind is always in motion and never remains in one specific place or on any specific desire for any length of time. When the unit mind is concentrated in say the lower cakra (mu’la’dha’ra) on say sensual or sexual desires, then the negative microvita will be easily attracted in that direction.

If the negative microvita enters the 4th Anáhata cakra and the units mental mind is predisposed (located) on say the vishuddha (fifth cakra located in the area of the Adam’s apple) then the same negative microvita will be attracted in that direction. Since it cannot physically move above the 5th vishuddha cakra²¹¹, it will disperse its energies and they will essentially be re-directed in higher more spiritual directions or pursuits. This is why control of the psychophysical minds actions and desires is so important. When mind is continually attracted to crude and base objects of pleasure, then automatically, negative microvita will travel to the lower plexus and affect the body in a negative manner. It will reinforce negative emotions and affect the physical body in a negative manner.

Here we are talking about negative microvita and disease. However, positive microvita also is re-directed, like negative microvita. As per the drawing above, you can see positive microvita usually enter the Vishuddha 5th cakra²¹². They also can travel the direction of the general disposition of the consciousness directs. If the mind is directed towards higher pursuits then the positive microvita will have an uplifting spiritual effect of the mental and physical characteristics of the individual. Positive

211 Negative microvita can function directly at the physico-psyche plexus (at the Vishuddha Cakra) but they cannot move upwards to the occult plexus

Questions_and_Answers_on_Microvita_Section_B.html (Q14)

212 Only positive microvita can touch the lunar plexus and be elevated up to the occult plexus.

They start their journey in the lunar plexus, and as they move upwards they increase their speed and bring about acceleration in spiritual progress.

Questions_and_Answers_on_Microvita_Section_B.html (Q14)

microvita cannot travel above the 6th lunar plexus, except by the special powers of an elevated spiritual personality.

Microvita flow and age

Increasing complexity of the living unit structure causes more complex mind to coagulate around the structure. As the human complex embryo grows, more complex mind structures are needed. Newborn baby has only two relatively undeveloped psychophysical plexi or cakras. We saw in *The Internal Being* that the third cakra (which controls the ego development) develops around 4-5 years of age. This is followed by the development of the forth ana'hata cakra. Feelings of love and possessiveness associated with this cakra is noticed developing in the older child. Specifically, the child does not have a fully developed vishuddha cakra to focus the microvita until he/she is an adult.

Microvita does not have the same effects on children of these ages as it does adults. Infants and children in the lower age brackets have mortality rates, but these are not necessarily increased by negative microvita application through the cakras. They are mostly caused by defective gene traits at birth and negative microvita that is attached to the food and air that the infant ingests. Negative microvita are considered virus for this discussion. Childhood diseases and other mortality influences are mostly contributed to virus and virus is passed through touch, food, liquid and air.

Microvitic transmission and disease

Negative microvita is carried mostly on the tanmatric inferences of smell, but also by the other inferences of sound, touch, form and taste²¹³. See the drawing above (*Schematic microvita on tanma'tras*) to see how microvita are carried or heterodyned on the tanmatric inferential waves of molecular matter.

Here we must make a differentiation between transmission of disease and transmission of microvita. Why? Disease is not the

213 SMELL&MV.MV Although the negative microvita that cause small pox and influenza are carried by all kinds of inferences, they are mostly transmitted by taste, colour and smell.

same as microvita. Microvita are attracted to diseased and decomposing matter²¹⁴; and are carried on these inferences of sound²¹⁵, touch, form and taste and smell.²¹⁶ The diseases being molecular and viral are themselves transmitted through solid (smell)²¹⁷, liquids (taste)²¹⁸ and some are transmitted through sight²¹⁹.

Microvita is not viral. It is much smaller. Microvita can be carried on tanma'tras. Virus cannot be carried on tanma'tras²²⁰. Although microvita may be the monumental cause of certain diseases, they are not in themselves the disease nor the carrier of the disease. Microvita are attracted to the "smell" of dying or decaying bodies. That is the internal nature of negative microvita to be attracted²²¹. Since they are more energy than matter, they carry increasing amounts of energy to those diseased parts causing an increase in the decay and decomposition of the diseased part²²².

Negative microvita are negative because of their negative mental desires to be attracted to dead and decaying bodies and the fact that they give energy to those functions.

Let us look at this a little further. Certain protein enzymes are specifically used to speed up the decomposition of dying or rotting matter. These molecular bodies contain negative microvita

214 The pervasive, stinking smell which results from the decomposition and disintegration of rotting animal or plant bodies attracts negative microvita. [Smell_and_Microvita_Section_G.html](#)

215 These microvita also move through several media. They move through sound. The so-called virus of a diseased person moves through his or her sound. They may move through tactuality. They may move through forms or figures. In the case of some of the diseases, the disease spreads through the smell of the disease, and in the case of subtler microvita, they may move through ideas.

[Microvitum_the_Mysterious_Emanation_of_Cosmic_Factor.html](#)

216 Although the negative microvita that cause small pox and influenza are carried by all kinds of inferences, they are mostly transmitted by taste, colour and smell.

[Smell_and_Microvita_Section_G.html](#)

217 The negative microvita of various diseases which are carried by smell also spread disease.

[Smell_and_Microvita_Section_G.html](#)

218 Although the negative microvita that cause small pox and influenza are carried by all kinds of inferences, they are mostly transmitted by taste, colour and smell.

[Smell_and_Microvita_Section_G.html](#)

219 Some diseases of this type are spread through vision. Some ocular diseases are contracted by looking at the infected eyes of a diseased person,... [Smell_and_Microvita_Section_G.html](#)

220 As a microvitum is a singular entity, it has no structure. By nature it is more energy than matter, so it travels and moves through inferences, whereas other entities cannot move through inferences.

[Questions_and_Answers_on_Microvita_Section_B.html](#) (Q11)

221 This odour encourages certain propensities and discourages others.

[Microvita_and_Cosmology.html](#)

222 From country to country, from planet to planet, and from the far distant frontiers of the universe, these negative microvita carry the seeds of destructive diseases. [Microvita_and_Cosmology.html](#)

in addition to their cellular composition²²³. They are of solid composition, meaning composed of mostly solid factor. The nose (smell) is the organ that can sense these solid particles²²⁴. These solid particles float in the air and are carried to the nostrils just as solid incense is carried to the nostrils through the air. They may be entrapped in a liquid, like particles are entrapped in perfume and then released into the air, but in both cases they are solid factor.

Negative microvita are attracted to the smells given off by the molecules. Every atom is different²²⁵ and has a different characteristic attractive smell. Therefore, the conglomerate molecule also has a different smell. Our noses are not able to perceive the wavelength (frequency) or the different qualities of most smells of an individual molecule.

Microvita have intelligence combined with their energy structures. Microvita are attracted to these minute conglomerate molecules wavelength vibrations. Microvita being mostly energy are transmitted on inferences to these molecules. Molecular structures give off tanmtric inferences. Diseases are molecules transmitted by mostly solid factor composed particles, some liquid factor particles. The differentiation being that liquid factor particles are defined as *not* being able to be separated in to parts (without using another container).

So, in the case of diseased, dead or dying objects, microvita travel towards the object, carrying large amounts of energy that acts as a catalyst to speed up or help speed up the activity in the affected cells. Microvita does not in-itself transmit the disease. It moves through the tanmtric (mostly smell) vibrations of the diseased molecules and speeds up the reactions within the disease.

Some scholars of Shrii Shrii Ānandamūrti will quote this statement and say that negative microvita transmits disease.

“From country to country, from planet to planet, and from the far distant frontiers of the universe, these negative microvita carry the seeds of destructive diseases.” Microvita_and_Cosmology.html

223 The subtle entities which are created to consume the rotting objects and are carried by the medium of smell are negative microvita. Smell_and_Microvita_Section_G.html

224 The smell particles enter the nostrils, and after they move through the smell carrying afferent nerves by producing a sympathetic vibration in the nerve fibres, which in turn creates a similar vibration in the nerve cells, one perceives the foul smell. Smell_and_Microvita_Section_G.html

225 No two objects in the universe are identical, nor two bodies, two minds, two molecules or two atoms. Chapter_5.html

However, please note that He states “seeds” of disease. Microvita have an intelligent component like the “intelligent” component in DNA/RNA structures. This is explained below, combined with inherent microvitic energy they cause somewhere life to spread and grow throughout the universe. With life comes change and therefore, disease.

Virus are attracted to different molecules and not attracted to others molecules, through the same mechanism of what we would call smell. Current theories in molecular microbiology use what are known as a system of “docking” to explain how certain virus are attracted only to certain places within molecules and only to certain other molecules. In this theory, we use the word “smell” to describe the differentiation of the docking of different molecules, because “smell” only applies to the solid factor mechanism.

Transmission of disease affecting microvita is mostly though solid, liquid and form tanma'tras. Here we are talking about microvita energy packets with microvita collective intelligence. Transmission of disease is through molecules and cannot be carried on tanma'tras. Tanma'tras are too small to carry molecules. Microvita are carried on tanma'tras. Disease molecules are a combination of all rudimental factors, but mostly solid and liquid factors, therefore transmission is normally through direct contact of these molecules. Solid factor is only the mechanism for smell attraction for the protein folding modifications within a disease. Microvita is attracted to these smells and speeds up the process. Microvita does not in-itself carry the disease. Specific microvita are attracted to specific types of disease. Just as specific virus are thought to be attracted to dock in different locations on cell DNA to modify the cell and eventually cause disease or viral havoc.

Here is a chart of some common known viral diseases; the way science says what are their transmission method, and their modern medical causes. Please note that most all are transmitted by solid and liquid factor direct transference. We know that from Shrii Shrii Ānandamūrti's talks, that many are transmitted (better word attracted) through smell. An example is cholera²²⁶. Other

226...while some other diseases are transmitted by the smell of the particular disease -- like cholera, for instance. Smell_and_Microvita_Section_G.html

examples given are ocular diseases through sight²²⁷ and small pox and influenza through taste, color and smell²²⁸. Not many are currently assigned smell transfer, by the medical profession, at this time.

	Viruses That Cause Human Disease		
Virus	Family	Disease	Cause
	Adenovirus	Common cold	airborne droplets of mucus or saliva
Norwalk	Calicivirus	Gastroenteritis (diarrhea, vomiting)	gastrointestinal tract
Corona	Coronavirus	Common cold	gastrointestinal tract
Ebola	Filovirus	Hemorrhagic fever	infected blood products
Herpes simplex type 1		Cold sores	direct contact, Sexually transmitted
Herpes simplex type 2		Genital lesions	direct contact, Sexually transmitted
Human herpesvirus 8 (HHV8)		Kaposi's sarcoma	visual contact
Varicella-zoster		Chicken pox, shingles	airborne droplets of mucus or saliva
Influenza types A and B	Orthomyxovirus	Flu	airborne droplets of mucus or saliva
Human papillomavirus (HPV)	Papovavirus	Warts, cervical carcinoma	Sexually transmitted
Coxsackie virus	Picornavirus	Myocarditis (heart muscle infection)	visual contact
Echovirus		Meningitis	visual contact
Hepatitis A		Infectious hepatitis	gastrointestinal tract
Poliovirus		Poliomyelitis	gastrointestinal tract

227 Some diseases of this type are spread through vision. Some ocular diseases are contracted by looking at the infected eyes of a diseased person,... Smell_and_Microvita_Section_G.html

228 Some ocular diseases are contracted by looking at the infected eyes of a diseased person, while some other diseases are transmitted by the smell of the particular disease -- like cholera, for instance. Although the negative microvita that cause small pox and influenza are carried by all kinds of inferences, they are mostly transmitted by taste, colour and smell. Smell_and_Microvita_Section_G.html

Rhinovirus		Common cold	airborne droplets of mucus or saliva
Measles	Paramyxovirus	Measles	airborne droplets of mucus or saliva
Mumps		Mumps	airborne droplets of mucus or saliva
Parainfluenza	Adenovirus	Common cold, ear infections	airborne droplets of mucus or saliva
Orthopoxvirus	Poxvirus	Smallpox (eradicated)	direct contact
Rotavirus	Reovirus	Diarrhea	gastrointestinal tract
Human immunodeficiency virus (HIV)	Retrovirus	Acquired immunodeficiency syndrome (AIDS)	Sexually transmitted
Rabies	Rhabdovirus	Rabies	direct contact

Virus Chart

CHAPTER SIX

Changes to the Species

Some Darwinian considerations of change

We are at a turning point in the mental evolution of mankind. The advent of the Human Genome Project research, computers and the internet has brought about a mental explosion. Not only in the area of quantities of information that is available at the touch of the finger tips, but the quality of understanding has increased exponentially. Let's look briefly at some of the most profound understandings that have undergone radical shifts in concept.

Darwin revisited

In *Macrogenesis* it was pointed out some Darwinian physical considerations to evolutionary change and how the theory of spiritual based mental evolution was the cause of all physical changes. Whether change is considered to be evolutionary or revolutionary, it all has a mental cause. We must understand the underlying basis for that mental cause, if we are to face the future without dogma and with knowledge as our shield.

The concepts and definitive evidence that Darwin presented had some very profound effects on theological mental concepts, both then and now. The underlying premise was and still is that progressively (complicated) change could bring about progressively complicated structures. Therefore, the unstated implication could be that there may be no need for a divine intelligence to be the cause of the ultimately complicated structure, man. Rather than try and wade through the succeeding nearly 160 years of religious fervor and debates, allow me just to present some more recent and I hope more revealing findings on this subject.

Recently DNA has been adequately described as:

”...incredible micro, digital, error-correcting, redundant, self-duplicating, information storage and retrieval system, with its own inherent language convention, that has the potential to develop any organism from raw biological material.” ²²⁹

“I guess a fertilized human egg at the moment of conception looks like a simple, single-celled blob no bigger than a pinhead. However, we now know that amorphous blob contains information equivalent to 6 billion "chemical letters" -- enough complex code to fill 1,000 books, 500 pages thick with print so small that it would take a microscope to read it.” ²³⁰

Brought up to modern technological terms, Darwin's implications would be that when random genetic mutations occur within an organism's genetic DNA code, the beneficial mutations are preserved because they aid survival -- in a process known as "natural selection." These mutations are passed on to the succeeding generations and this is the cause of an entirely different creature or organism.

Later in this work, it is shown that random is not necessarily beneficial and what is beneficial to one cell (or creature) may not be better for the whole. There has to be some overall control structure. Physically oriented theories do not allow for this factor.

It can be shown that the implied theory of evolutionary abiogenesis (life coming from non-life chemicals or spontaneous generation) has been shown to be materially defective. Recent studies of the possible chemical combinations and mathematical considerations involved to make this life-coming-from-matter theory plausible have shown just the opposite.

Here are some authoritative quotes on those possibilities:

In fact, evolutionary scientists themselves started looking at the odds that a free-living, single-celled organism (a bacterium, for example) could result from a chance combining of life building blocks (amino acids, for example). Harold Morowitz, a renowned physicist from Yale University

²²⁹ <http://www.allaboutthejourney.org/dna-molecule.htm>

²³⁰ Wilder-Smith, A. E., The Natural Sciences Know Nothing of Evolution, T.W.F.T. Publishers, 1981, 82.

and author of *Origin of Cellular Life* (1993), declared that the odds for any kind of spontaneous generation were one chance in $10^{100,000,000,000}$.²³¹

Or put another way:

Sir Fred Hoyle, a popular agnostic who wrote *Evolution from Space* (1981)

"the same as the probability that a tornado sweeping through a junkyard could assemble a 747".²³²

Here are some more recent Darwinian paleontological considerations.

Some authoritative quotes:

"Now, after over 120 years of the most extensive and painstaking geological exploration of every continent and ocean bottom, the picture is infinitely more vivid and complete than it was in 1859. Formations have been discovered containing hundreds of billions of fossils and our museums are filled with over 100 million fossils of 250,000 different species."²³³

"Our museums now contain hundreds of millions of fossil specimens (40 million alone are contained in the Smithsonian Natural History Museum). If Darwin's theory were true, we should see at least tens of millions of unquestionable transitional forms. We see none."²³⁴

"The availability of this profusion of hard scientific data should permit objective investigators to determine if Darwin was on the right track. What is the picture which the fossils have given us?... The gaps between major groups of organisms have been growing even wider and more undeniable. They can no longer be ignored or rationalized away with appeals to imperfection of the fossil record."²³⁵

Even the late Stephen Jay Gould, Professor of Geology and Paleontology at Harvard University and the leading spokesman for evolutionary theory prior to his recent death, confessed:

231 Marowitz, Harold, Energy Flow in Biology, Academic Press, 1968.

232 Hoyle, Sir Fred, Nature, vol. 294:105, November 12, 1981

233 <http://www.allaboutthejourney.org/evolution-and-the-fossil-record.htm>

234 <http://www.allaboutthejourney.org/fossil-record.htm>

235 Sutherland, Luther D., Darwin's Enigma: Fossils and Other Problems, 4th edition, Master Books, 1988, 9.

"the extreme rarity of transitional forms in the fossil record persists as the trade secret of paleontology." ²³⁶

From a paleontological viewpoint, it looks like Darwin's smooth transition from one species to another cannot be proven now that we have amassed such a large data bank of fossil records.

Here is Charles B. Thaxton, Ph.D. in Chemistry and Postdoctoral Fellow at Harvard University discussing that DNA molecules found in every living cell on earth has "intelligent source":

"...an intelligible communication via radio signal from some distant galaxy would be widely hailed as evidence of an intelligent source. Why then doesn't the message sequence on the DNA molecule also constitute prima facie evidence for an intelligent source? After all, DNA information is not just analogous to a message sequence such as Morse code, it is such a message sequence."²³⁷

Fortunately or unfortunately, God centered religious interests have interpreted the obvious "intelligent source" of DNA to their own self-interests. Usually *intelligent source* ends up in the form of *intelligent design* and then further modified to *divine intelligence*.

Further Darwinian considerations

Without being an expert on Darwinian biology, here are some major points of differences in the outlook towards changes in any species or biological unit.

Some have interpreted Darwin's famous phrase of "survival of the fittest" to mean survival of the strongest or at least the most dominant characteristics due to a physical response to the change in the environment. These changes are currently thought to be instigated from a physical genetic variation (usually mutation) within a certain population. Strength or dominance can be interpreted to mean the best ability to adapt to new changes in the environment that affect their survival, food or reproductive

236 *Natural History* 86(5), 1977, 14.

237 Thaxton, Charles B., *The Mystery of Life's Origin: Reassessing Current Theories*, Philosophical Library, 1984.

success. When it is noted that organisms do not change their basic characteristics in response to a given environment, it simply means that they do not directly (obviously physically) change immediately from a physical environmental viewpoint.

It must be given that *all* species and even cells change. Everything in our relative world is based on change. The basic difference in theory is in the mental approach. Does Darwinian change come from physical mutations causing dominant and therefore more survivable traits, which in turn lead to new and better individuals with more complex and better habits and minds? This type of theory makes in some very basic assumptions:

1. That God (or some other divine intelligence) is the overall planner or coordinator of all mutations and therefore directs the positive physical destination of everything.

2. That change will always lead towards the better, more survivable or more dominant physical (and we must assume), mental traits.

3. This in turn is based on another assumption that all that exists now (or has survived) is a better mutation or change than that which preceded it.

4. These all in turn come from other assumptions that what you see (or more correctly sense) is all there is to our existence and therefore the cause of all change must come from the physical world. (Or maybe more correctly the world that physics knows?) This comes from a physical mechanistic approach of “What you see is what you get and there is nothing else that can fit into the game plan.”

Other assumptions include the assumption that starting from a simple protozoic mitochondrial RNA mixture 4 billion years ago and proceeding to a complex metazoic structured human being now, is a positive physical progress. Then you must disallow the possibility that the same complex human being may at any moment cause a catalytic event to occur that will wipe even his own existence and the existence of the entire planet off the galactic map, and consider this as a positive physical event.

Just looking at number one above, we sense the obvious defect when we look at the physical insights that modern science has had on the knowledge of biological systems that are being uncovered today. Look at the most simple mitochondrial cell. Does

simple desire for food, reproduction and survival account for the combined coordination that occurs in every cell in the body? Here are completely minute systems within systems that work for the good of the whole. Some cells even commit suicide for the betterment of the surviving cells. Yes, that is how cancer is normally fought against by all biological organisms. Here are organisms and even organs working only for the other members of a higher and more complex organism. Does this appear to a reasonable man as a system based on chaotic random mutations within a population leading to survivable and dominant traits? Where is the logical physical coordinator in this complex physical chaos?

Here is a rather obvious axiom:

Chaos without system leads to destruction. Alternatively, energy without intelligence leads to explosion.

The opposite would be:

System brings construction from chaos. Moreover, intelligence, controlling energy leads to system.

Would not a more reasonable scenario be of intelligence behind the changes in biology? That which appears to be chaotic and random is only because we do not see the systematic control behind the seemingly random or chaotic events. That random mutation is only a small part of an overall controlled event.

Would not it appear more logical and palatable if there was an overall controlling intelligence coordinating the interactions of each ordinate of each organism and inter-organic activity? We just assume that this is not the case, because we assume that our type of unit individually oriented intelligence is the only type that exists. That is not the case. Microvitic intelligence does exist and functions in every living cell of our body. Microvitic intelligence is a collective intelligence that *does* work for the good of the whole microvitic organism or the collective organisms mind.

We cannot conceive of a collective mind working on such a small microbiological level because we with large complex individualistically oriented minds cannot even work in combined coordination with each other. Yet, we fail to look at the very

colony of ants that coordinates their every move and dismiss them as automaton with simpleminded intelligence. Enough on pointing out the obvious defective thinking that has brought us to the biological and mental assumptions that are part of our everyday lives. Let us look at some fresh concepts. Some that may appear a little backwards at first, until the wholeness of the system becomes self-evident.

Biometaphysical genetic transference

“We now understand that there are approximately 35,000 genes in each human DNA molecule, comprised of approximately 3 billion chemical bases arranged in precise sequence. Even the DNA molecule for the single-celled bacterium, *E. coli*, contains enough information to fill all the books in any of the world's largest libraries.”²³⁸

In traditional biology, evolution is a physical description of changes in the heritable traits of physical structures over periods, usually called generations. Genetic differences between individuals are generally held to come about from random mutations. Genetic differences come about because of nucleotide base sequence changes in the DNA of the individuals. Most biologists have held for nearly a hundred years, that these variations are attributed to “survival of the fittest” or more recently, due to random selections and environmental influences, like weather changes or radiation, to modify the base sequence of the DNA. These DNA modifications are then passed on physically to the offspring.

In other words, current evolution theories are based on random physical changes in environment to determine how selections of new species survive and how these survival characteristics are physically passed on to descendants. Traditional biology has seen the process of change or changes to be purely physical. This comes from a traditionally oriented reductionism or mechanist background based on a theory of efficient causation.

No importance is given to a higher organizational ability or to the actual or subjective cause of these chance objective modifications. All changes are due to random external influences. For example, in none of their theories does a cell itself, reprogram its DNA to produce genes that increase its ability to survive in a

238 <http://www.allaboutpopularissues.org/human-genome-project.htm>

given environment. Because it cannot be shown *how* a cell can reprogram itself, unless it is more intelligent than our current programmers?

Not all changes are beneficial. Only a few, out of thousands of known viral modifications to DNA/RNA are beneficial to life. Bacteria may reproduce thousands of times an hour or complex metazoic cells may reproduce even on weekly cycles, but logically before random chaotic chance can bring about a *positive* objective modification for a given set of physical circumstances, most probably, a species will be extinct.

Physical organic biologists are hesitant to bring any possibility of God or even higher mental attributes to be the cause of change in a physical structure. Instead of looking into overall controlling structures, they are looking into smaller and smaller organisms and to feedback loops in inorganic materials to provide such intelligent changes or modifications. Knowledge in this area of genomics, chromosomes, genes and viral DNA/RNA is becoming so technical that only a trained specialist can understand what they are trying to say, no less where they are headed.

In the human genome arena, physical evolution theories of biological or genetic determinism utilizing gene research abound. Here, all human biological characteristics (even mental behavior) are inherited from genes. The opposite physical theory that environmental variables are all important in the determination of appearance, behavior and functionality is called the Standard Social Science Model.

Craig Venter, president of Celera Genomics says:

"We simply do not have enough genes for this idea of biological determinism to be right,"²³⁹

The actual combinations and permutations of all our genes could not possibly provide for all the variance in character and desires we see around us. No less the knowledge that many of our genes are shared with the lesser developed life kingdoms. Now, when you have to consider a limited number of genes to include all the species and variations of physical and mental characteristics

239 <http://www.Genome\NOVA Online Cracking the Code of Life Nature vs Nurture Revisited.htm>

evident around us, the impossibility of both gene and social determinism being viable theories is evident.

It is commonly reported that humans share most all our genes with chimpanzees. Are we to allow that the genetic distance of chimpanzees and human beings is only 1.6% (they are about 98.4% identical) in the human genome accounts for all the physical and mental trait differences? We must open our mental arena to other possibilities of evolution.

CHAPTER SEVEN

Transgenerational changes

Transgenerational changes takes in a large field of changes. In our phenomenal world, this can be organic, inorganic, protozoic, metazoic, developed, undeveloped and underdeveloped or even inert physical and mental structures. In order to discuss the cause and source of the change we must look into the underlying physical and mental structures. Fortunately, previously much of this work has been done for us. Mental structures of psychic ectoplasmic and microvitic endoplasmic minds have been discussed in *Macrogenesis*.

Here is an attempt at a brief description of the types of change and how they occur in the different physical and mental structures. Changes occur both individually and as a species. The method of change and the type of change are different in the individual and the species. This generally speaking, is because of the different types of minds that inhabit the two types of mental structures. Ectoplasmic or unit mind and endoplasmic or collective microvitic mind. Each works in different phenomenal structures and each works differently. Both types of mind types use psychic imprinting and feedback systems. Those will be discussed separately. Microvita is at its basis, a very psychic force and affects different mental and physical structures differently. It will be discussed separately with the structure involved. Microvita as a collective structure can cause endoplasmic change in a species²⁴⁰ and individual modifications to a unit individual developed mental being (human) or even to a single protoplasmic cell.

Evolutionary change is a two way street. We continually think of the evolution of structures as a one-way street; that is from unicellular body to complex beings. However, progress is a two

240 Microvita may affect the glands and sub-glands or the nuclei of the nerve cells, and even the transformation of species and the transformation of sex may occur.

Questions_and_Answers_on_Microvita_Section_B.html (Q18)

way street. We see the so-called evolutionary physical street; but fail to give recognition to the unseen mental causal street. This is because the mechanism of mental to physical change is not understood by common man. It is not obvious. Every objective effect has its subjective cause.

There is a mental evolutionary process from the complex mind back to the smallest cell. It only depends primarily, on the complexity of the mental structure that accompanies the biological structure. If the structure is of very complex metazoic biological nature like human structure, then the associated mind (for the mental evolutionary process) is also complex and therefore has a powerful collective endoplasmic accompanying mental structure. All biological structures have some sort of mental control structure associated with them. Normally plants only have unit mind ectoplasmic structures that allow the four basic instinctive mind functions to occur. There is not a sufficient complex metazoic structure to allow endoplasmic coverage. This is why (due to no endoplasmic coverage) that plant evolution is relatively slow compared to developed animal-human complex metazoic structures. The difference between these two types of mental structures is called developed mental structures and undeveloped mental structures.

Individual vs. collective changes

At present, there is not much difference in theories of evolution. Whether the characteristics are acquired or inherited, and how this is done. Darwin just described the differences and proposed a theory. Lamarck in his theory of evolution gave physical acquired characteristics more importance. Physical acquired characteristics are only the beginning. Differentiation between acquired or inherited must be made. Modification occurs differently between developed mental structures and undeveloped mental structures.

Are *all* cells susceptible to inherited modifications? Yes, but inherited modifications fall into two basic types of modification depending on the type of cell. Cells that are under the purview of complex mental structures (like human) and have the accompanying psychic structures use those very structures to direct

microvita for the cellular modifications. Protoplasmic cells of simple protozoic mental construction, (those without complicated mind structures), also can have inherited modifications. These are very slow and depend on mainly natural environmental selection.

When we talk of evolution, we must always remember and think that evolution does not occur in a single unit structure, but through the death of many in a series of structures. Physical and mental changes do occur on the individual complex human level, in one individual structure. It is only the *tendencies of change* that are passed on to the next individual structure through endoplasmic coverage. These are evolutionary in nature.

Individual mental sam'ska'ras are carried forward because of the desires of the individual human mind. These can bring about changes in the individual. For example a mental desire brought about by excessive desires and greed to have a fatter physical structure may cause the mental sam'ska'ra to develop in this life, for a different rebirth with the desired physical fatter structure, in the next life. This is example of transmitted mental desire for fatter tendency physical structure (or environmental possibilities of obtaining that structure) in the next life. This is an example of one-unit beings mental desires, being reincarnated to the next fatter physically oriented structure. (Or the possibility to get that structures in that the next life). These individual changes into the next individual life structure should not be confused with evolutionary changes brought about through the collective endoplasmic mind. These are individual changes brought about by individual desires and individual sam'ska'ras through individual unit complex mind. These are carried forward through the individuals unit minds mental characteristics, or karma'shaya to the individuals next life.

Transmission and therefore later modifications of mental characteristics in humans are transmitted as sam'ska'ras (collected as karma'shaya) from one life to the next. Modifications of mental characteristics are a product of old sam'ska'ras mixing with new circumstances. Each complex mind structure (i.e. human) starts out with a clean mental plate. Sam'ska'ras are only seed like in the ectoplasm of the new mind. Environmental circumstances through action and influences modify the old and produce new sam'ska'ras. This is individual spiritual evolution; not physical evolution.

Mental characteristics include the 52 vrttis discussed in *The Internal Being*. Although all vrttis are of mental nature, some are expressed in a more physical manner than others.

Species changes are collective (not unit individual) and carried forward through the collective microvitic mind structure, not individually.

Trans-generational transference

A mental cause to physical evolutionary change is a rather uncommon path. This is not mental evolution. Mental evolution is a spiritual path of change that only a developed mental body (human) takes. It can be either positive towards the Cosmic Nucleus or negative towards cruder mental and physical paths in accordance with human self-determination (human will).

Biometaphysical genetic transference comes about through a complete psycho- physical biological system, but is only the developed organic aspect of a greater system. In order to discuss how physical evolutionary change occurs generally from a mental aspect, we can break it down into what current science calls inorganic and organic systems. Organic meaning generally weak carbon based bonds that we find in organic structures (human – animal - organisms) using developed and undeveloped mental structures. Inorganic physical change, means how and why changes can occur (not normally called evolutionary) in atoms and sub-atomic structures.

Mental cause to physical organic evolutionary changes is again divided into two basic types. Highly developed mind structural oriented changes and undeveloped mind. Highly developed mind structural oriented changes are changes in structures like human and some underdeveloped animals utilizing specifically complex metazoic mind cells. Undeveloped mental units like plants and other protozoic unit structures have evolutionary change, but at a slower rate brought about by the differences in mental structure and other factors. This is not because they utilize different types of unit mind stuff, for only the percentage of concentration of the same basic types of mind stuff varies between developed and undeveloped mind. This is because of the influence that microvita has on the different psychic structures and how microvita works in the different mental structures.

As stated in the opening premise, physical (evolutionary) change always follows mental change. Microvita are the key to structural changes in both the developed and undeveloped unit structures as they are also the key to inorganic changes.

However, microvita works differently to bring on physical changes and at different relative speeds, depending on the characteristics of the underlying mental structures. Therefore, change in each of these systems will be handled separately. Previously we have discussed microvita theory and mental structures. It is expected that the serious reader will have familiarized him/herself with the details of collective microvitic mind from the previous work entitled *Macrogenesis*. Other words specific to this work, like ectoplasm and endoplasm are only briefly described as they occur. Such words as ectoplasm, protoplasm and endoplasm have very specific physical and biological meanings in scientific English, but Shrii Shrii Ānandamūrti redefines them specifically from a mental aspect, not using the common physical biological meaning.

When Shrii Shrii Ānandamūrti specifically uses protoplasmic, He does so in counterpoint to metazoic, a term that he specifically uses in reference to developed mind. The one thing that developed mind structures have differently (among others) is a developed I-feeling. This specifically allows the feeling of mental time. This means to our discussion that metazoic or developed mind structures (including humans) belongs in a relative phenomenal world structure, versus the macrocosmic non-relative world. In discussing biometaphysical genetic transference we must look in detail at some of the sub-systems involved in particular the transgenerational changes in organic systems and the modification of inorganic systems.

Note: endoplasmic coverage has been discussed at length in *Macrogenesis* by this author. Briefly, it is the outer collective microvitic mental coverage of the unit individual ectoplasmic mind stuff.

Genomic imprinting and inherited physical change

Physical Mendellian inheritance traits and characteristics are a well-studied and understood field for hundreds of years. We saw in chapter Six *Changes to the Species*, with the recent studies

to the human genome, there simply are not enough genes to express all the varied characteristics that we find in nature. Here, we will cover some those differences in physical and mental inheritance traits.

Microbiology knows that there are exceptions to the physical re-sequencing of genes. Expressed traits (alleles) are dependent on the parental origin. In the human genome, alleles are currently thought to be a small amount (less than 1%), where the information is brought forward epigenetically. In other words, sometimes traits are brought forward without the information having been coded on the nucleotide sequence of the gene. The process is called gene imprinting. There are thought to be two major methods to causes imprinting of genes, these are the DNA methylation and histone modifications. Why and how this occurs is a subject of intense microbiological study and not well understood. According to internet online Wikipedia:

“Nucleosomes also appear to be major carriers of epigenetically inherited information.”

In biometaphysical genetic transference theory, physical gene defects are carried forward as recessive traits until they are expressed by a matching of recessive physical traits or matching of recessive mutations with sam'ska'ric mental traits and circumstances.

Resaid: When a physical weakness or defect in the physical mental portion of the genome is introduced by a physical mutation of a gene **and** then in the case that a mental defect has been brought forward in the individual mental sam'ska'ras into their mental ectoplasm **and** with the proper environmental circumstances, a combination of all may cause a mental defect to become dominant or to express in this lifetime of an individual.

Below, we are shown that epigenetic forwarding of traits is a function of the cell type and attached mind type. Imprinting is not a physical process, but a psychic process common to all developed complex metazoic structures. Before we go into the two types of psychic imprinting and their control structures, we must discuss the psychology of the two basic types of physical cells found in our phenomenal world.

Cell psychology

Psychology is an observational science. We use our observational facilities, rational mind and discrimination abilities, when we can. Many times the results are only observed, the process is not observed. Then the logic of our answer must be in our intuitional abilities. Cell psychology is no different, except here many times the processes are too small to be observed; only the results are available. Nevertheless, the psychology is there. It is necessary to understand why the cells do what they do. Not just in understanding, the individual role they play, but in understanding which appears to be collective verses unit functions.

For example, why and when an individual cell (where the mind is typically simple cistic mind stuff and the cell has individual unit protozoic psychology) will commit suicide (apoptosis) or programmed cell death? Here individually, the mind is very simple, not complicated like with thoughts of manic depression, to set in and cause suicide. Why do cells commit suicide by the billions in every person every day?

The answer is in the individual psychology of the cell and how the individual cell characteristics are controlled. When we understand the two basic types of physical cells; then we will see that they not only have different mental psychologies, but their control is handled differently.

Below we will discuss the cell psychology of the two basic physical cell types, prokaryote and eukaryote cell structures and their groupings together to provide the base for physical and mental modifications to the different mind and unit structures. The two basic types of cells that we find in our entire phenomenal world are as different mentally as they are physically. It is the mental differences in the two types of cells that cause different physical reactions to externally applied modifications. The mental differences also allow different mental cell structures to bring on the physical modifications. Let's look at each separately.

The two basic types of cell structures found in use in our biological systems today are non-nucleated (or prokaryote) cells and nucleated (or eukaryote) cells. Let us take the two different physical cell types and compare them to their two different mental structures. Why is this difference so important? Different mind structures cause

change in the individual unit cells in different ways depending of their innate mental abilities and the different mind capabilities of the overall controlling structure. Knowing the psychology on the two basic cell types will help make both physical and mental changes more rapidly and easier understood. Doctors in the future will be able to utilize this type of knowledge to better serve all animate and inanimate structures²⁴¹. There are very basic differences in the way the cell structures are modified and therefore how microvita affects each type of structure associated with the cell system. The effect microvita has on each cell type, depends on the type of mind structure that they (microvita) are working with.

Direct Ectoplasmic imprinting

“The same subconscious force that causes psychic imprinting from the subconscious nerve cells to the citta also causes imprinting on the DNA physical structure.” *The Internal Being, 2000*

Shrii Shrii Ānandamūrti states right from the beginning that mental change is the basis for all physical modification²⁴². Evolution is always seen as a physical modification brought about by mental controlling changes. Change of any relative structure in our phenomenal cosmos is always the result of a firstly mental change.

We must remember here that mind flows in two directions. Both from the direction of created ideas and mental pictures or memory (formed by the citta taking the shape²⁴³) then these causing physical reactions (usually hormonal through subsidiary glands). In addition, mind flows from a tanmatric impute from the senses causing the mental mind cells to vibrate and then the citta again takes the form of the perceived object. This last type is a re-creational imprinting in our cittic mind stuff we call downward

241 In the course of their study, doctors should try to find out the coincidence between the characteristics of metazoic cells and multicellular protozoic cells in both the physical and psychic realms. This will greatly help doctors in finding out the medicines for many diseases.

Some_Guidelines_for_Commencing_Microvita_Research_Section_B.html

242 By changing microvita, ectoplasmic changes will come which in turn will bring about endoplasmic change, and thus the mind will be able to control the organism, the physical body, in a better way. Microvita_and_Its_Possible_Effects_on_Society_Section_A.html

243 Thus the base of memory is not in the brain but in the citta . Vibrations of a perceived object remain imprinted in the nerve fibres for a few days and then gradually fade.

Some_Questions_and_Answers_on_Ananda_Marga_Philosophy_B.html (Q 55)

ectoplasmic imprinting. That is, from the sam'ska'ric higher memories to creation/formation of the cittic mind stuff in our mind. The opposite also happens, when the external tanmatric impulses are re-created through the synapses²⁴⁴ and upward onto that same cittic mind stuff. This is an upward movement or upward type of imprinting. Here, the word upward imprinting is used, to differentiate the two types. Upward imprinting can only occur with highly developed unit mental structures that have a preponderance of aham and mahat mind stuff in their structures.

Protoplasmic prokaryote cells do not have this type of mind stuff. Their mind on the cellular level is strictly a crude mind. It functions to allow cellular response not memory, by reactive-repetitive response process. Their mind is predominately cittic mind stuff and their actions are limited to instinctual reactive-repetitive mind functions. Response to their four basic instinctual needs is not mental imprinting. Protoplasmic prokaryote cells simply recognize the object or threat and react accordingly. *There is no learning process.*

Eukaryote cells fall under the classification of metazoic ectoplasmic mind structures because of their increasing complexity and variety of functions. They have some aham and less mahat mind stuff. Here the imprinting can be done to a limited amount where each cell can distinguish itself from the foreign or alien cells. These are two different responses from two different types of mind. One is a reactive-repetitive instinctual response from the protoplasmic prokaryote cells; the other from complicated eukaryote metazoic cells is a conditioned or observed learning process of imprinting.

On a physical DNA level, metazoic cells simply use this comparison process where every cell knows to accept or reject any other entity into or from itself. It is known in biology as cellular memory. Cellular immune response falls within this group. Here microbiology uses the terms B & T memory cells. These cells have the increased ability of an observed or observational response reaction. These complicated metazoic individual cells have an imprinted or remembering ability that remembers the imprint of

244 Due to changes in the nerve cells, a change in the ectoplasmic cells also occurs, [Microvita_and_Its_Possible_Effects_on_Society_Section_A.html](#)

the invading virus or bacteria, and reacts accordingly with a response.

Biologists say they are “almost mind like” not knowing that they are mind like, but not what they would call –physical conscious mind like. Their reaction and knowledge storing ability comes from a unit minds increased knowing faculty in every complex eukaryote cell. What they don’t understand is that these types of complex cells have in the human corporal structure, an endoplasmic microvitic coverage that coordinates the different levels of cell and organ response. This cellular immune response happens because the complex coverage of the collective microvitic endoplasmic “I” is a collective mind and can eject any *unit* protoplasmic²⁴⁵ (or in this case metazoic) cell. Here, it should be pointed out that the use of protoplasmic, by Shrii Shrii Anandamurtiji, is as an uncomplicated, simple mind type.

Humans are composed of both types of cells and due to their (human) very complex structures; they attract microvita as endoplasmic coverage. The imprinting process in the endoplasmic mind is the same, only the paraphernalia change.

We have spent a lot of time leaning about tanma’tas and psychophysical neuron-transfer mechanisms in the human corpora. Tanmatric neuron-response is a psychophysical imprinting of physical tanmatric waves onto the nerve cells that vibrate the psychic citta to take the shape. Psychophysical imprinting has a continued tanmatric imprinting on the reflecting plate and will (over time) build up sam’ska’ra (a reaction in potential) in psychic/mental and spiritual storage. The difference is not in the process of imprinting; it is in the location of the psychic retained so-called memory cells. Long-term memory is a function of the aham (subconscious) mind stuff stored in the apperceptive plate as sam’ska’ras. It can be psychically re-vibrated²⁴⁶ as many times as necessary to cause remembering to occur, to the lower cittic mind stuff. The remembered object causes a continued response through our psychic cakra and glandular systems. We see this imprinting and response reaction from higher mind around us all the time.

245 The collective “I” feeling can eject any unit protoplasmic cells. Questions_and Answers_on_Psychology.html (Q2)

246 Even in the absence of impressions in the nerve-cells, the mind can revibrate its accumulated sam’ska’ras in the nerve-cells at will as many times as it likes, by means of its own force, and can also create similar impressions in them. Matter_and_Spirit.html

This includes short and long term residual memory retention. This is why it is called direct imprinting. Endoplasmic imprinting is called indirect imprinting and is a psychic form of the direct psychophysical ectoplasmic imprinting.

Indirect Endoplasmic imprinting

Now, how does this collective endoplasmic coverage of human structure relay the information required to modify the genetic material to produce change (however so slight) in the next physical structure of the species? We mentioned above that evolution was a two way street. Physical changes of a progressive nature are obvious and appear as a one-way occurrence. From cell to a more complex structure. The other direction of this two way street is invisible. From collective microvitic mind to the individual cell chromosomes.

Psychic imprinting occurs at the collective endoplasmic microvitic mind level. The difference between the endoplasmic psychic imprinting process and direct psychophysical ectoplasmic imprinting is that the imprinting process is to the collective microvitic endoplasmic mind. Not to our unit type of mind structure.

Indirect endoplasmic imprinting works through the microvitic collective endoplasm and through many micro-psychic (or units ectoplasmic) longings or desires. From one generation's desires to the next generation's changes²⁴⁷. The unit micro-psychic desires are psychically imprinted on the collective endoplasmic microvitic mental facility²⁴⁸. If the species change is in general agreement with cosmic flow then the change will slowly be introduced in the coming generations²⁴⁹. This means that the psychic desire is imprinted or acquired in the coming generations collective endoplasmic microvitic mind as a type of collective sam'ska'ra. All complicated structures have endoplasmic coverage. Species are complicated structures. Planets are complicated

247 *Macrogenesis*, 2005 The overall collective-I endoplasmic structure is responsible to pass forward evolutionary traits to the next generation.

248 The collective body of microvita is the collective 'I' feeling maintaining a relationship with the physical body. [Questions_and_Answers_on_Microvita_Section_B.html](#) (Q10)

249 And in a collective body, the collective controlling faculty may create a sort of change in the physical structures if such a change is supported by Macrocosmic conation, otherwise not. [Four_Dimensions_of_Micropsychic_Longing.html](#)

structures. Gaia is another name for the endoplasmic complicated structure of our Earth. Some call it ecosystem biopsychology. Fritjof Capra in his fourth book *The Web of Life*²⁵⁰ has used Gaia theory to explain the complications and interconnections in the web of life.

New changes may for example be needed for the survival of the species. Such is the case of the developed unit ectoplasmic minds in the species when they micro-psychically imprint onto the endoplasmic macrocosmic collective mind the desired needful changes. The newly developing unit ectoplasmic mind stuff of the coming generation takes on this newly formed (one could almost say) endoplasmic (sam'ska'ra) coverage and incorporates it into the characteristics that the new unit ectoplasmic minds shapes. The imprinted needs of the species are felt directly by the collective endoplasmic coverage mind and the action of the directed microvita are felt and controlled directly by the protah facility of the cosmic nucleus. Protah structure only controls the microvitic flow in the *general* case to all phenomenal creations through its multilateral mind facility. Protah is not an individual flow.

Collective endoplasmic mind is a microvitic indirect coverage of the individual unit complex human minds that has the ability to carry forward changes to the collective species, for *the need of the species*...not for the need of the individual unit being. This is change is brought about by collective desires and needs, (actually collective endoplasmic –I feeling) to the collective macrocosmic endoplasmic microvitic mind, into the next generation of the physical species. Completely independent of the ectoplasmic mind (with its individual sam'ska'ras) structure of the individual. Why? Because the structures are of different natures. Ectoplasmic structure is associated with individual human egotistical unit “I” mind and of a more materialistic nature. Microvitic endoplasmic coverage is a collective microvitic type of mind structure that has its own functions independent of the individualistic unit oriented human mind. There is “no unit egotistical” I feeling in a collective mind. See [*Macro-micro feedback system schematic*](#).

250 Fritjof Capra, *The Web of Life*, Anchor Books, 1996

Endoplasmic Imprinting control structures

Microvita is of a collective nature. That means for our discussion, that microvitic collective mind is of collective nature and its endoplasmic structure tends to collect or group ideas together in accordance with attractions of the collective. Generally, these tend to be for the betterment of the species. Endoplasmic imprinting takes on only collective ideas that have been imputed from the various individual micro-psychic longings or needs. Here is a brief summary of some of the points on microcosmic microvitic endoplasmic mind discussed in *Macrogenesis* Chapter Six.

- **“Endoplasmic coverage allows the form of the “I” expression to take on a more complicated setting, that of sentiments and emotions²⁵¹.” [in the unit structure]**
- **“The collective collects the general feeling of the unit(s), but passes on only the wont’s and traits that are beneficial to the whole collective²⁵².” [to the collective endoplasmic microvitic mind]**
- **“This also means that the collective-I structure can reject any individual unit-I that may not benefit the whole²⁵³.” [collective endoplasmic]**

Endoplasmic coverage has collective communication with the whole structure through the protah function of cosmic mind. This means a method of collective communication, that of the collective with the whole²⁵⁴. A simple analogy would be of the speaker to the audience, where all are in direct communication

251 The effect of endoplasmic coverage is to register the reflection of the expression of human sentiments, so endoplasmic coverage allows the human mind to be more subtle and more receptive. Questions_and Answers_on_Psychology.html (Q5)

252 And in the case of collective structures, regarding these psycho-physical longings, if it is seen that the collective body of a particular nature of living being or expression does not like it, then the controlling faculty creates a sort of change and metamorphosis in the physical structure, and as a result the nature of the longings also changes. Four_Dimensions_of_Micropsychic_Longing.html

253 The collective "I" feeling can eject any unit protoplasmic cells. The "I" feeling of the collective protoplasmic cells is affected by feelings of pleasure and pain of the unit protoplasmic cells. Questions_and Answers_on_Psychology.html (Q2)

254 The reflection of Parama Purus'a on the entire universe is known as 'protā-yoga', and His reflection on the individual mind, on the small mirrors, is called 'otā-yoga'. Dont_Be_Misguided.html

through hearing the speaker. This protah yoga connection is more completely discussed in *Macrogenesis* by this author. The actual transfer of collective desires (or needs of the species) is affected through Macrocosmic-microcosmic physico-physical feedback mechanisms. This microcosmic physico-physical feedback system is discussed with drawings, below.

Ota control is a specific case of the general protah control. Why? Because unit mind evolves from phenomenal matter. Unit mind develops the ability to directly control its own limited destiny. This direct control extends to the control of microvita within its own purview. In other words the human mental structure can control and direct microvita using its guiding psychic mental facilities. Strictly speaking, ota/protah control is unilateral omnitelepathic or one-way function of the Cosmic Nucleus. Although we as unit minds may have some control of microvita on a unit level (which I referred generally to as ota control), we do not have a direct communication with the Cosmic Nucleus. The Cosmic Nucleus has one-way multilateral omnitelepathic communication with all parts of its own created structures.

The other type is endoplasmic imprinting through the ota structure. As explained above this means, Cosmic Nucleus directed microvita being re-directed (re-controlled) by and within the developed unit human mind. If the unit structured mind (here human) should desire to attract negative microvita, then that incoming microvita will function to the will of the developed individual mind. In other words, it will go to the parts of the unit (human) psychophysical structure as per its ability and direction of the unit consciousness. It travels on tanmatric inferences like smell and sight, through the lower psychic centers and resides in those cells that it feels an affinity or attraction too. The drawing and discussion on Microvitic flow in the human structure in Chapter Five above describes these flows. The drawing under *Macro-micro Psychic feedback mechanisms* showing protah control and unit micro-psychic imprinting is discussed below. It is an example of this type of endoplasmic indirect imprinting.

Cell physical differences

The physical differences in eukaryote and prokaryote cell structures are important because it allows us to see the physical differences and observe some of the different responses in the basic cells types. The common differences of each type are well published in many sources. The below chart was compiled from www.wikipedia.com and is available from many other sources.

Comparison of prokaryotic and eukaryotic cells		
	Prokaryotes	Eukaryotes
Typical organisms	bacteria, archaea	protists, fungi, plants, animals
Typical size	~ 1-10 μm	~ 10-100 μm
Type of nucleus	nucleoid region; no real nucleus	real nucleus with double membrane
DNA	circular (usually)	linear molecules (chromosomes) with histone proteins
RNA-/protein-synthesis	coupled in cytoplasm	RNA-synthesis inside the nucleus
		protein synthesis in cytoplasm
Ribosomes	50S+30S	60S+40S
Cytoplasmatic structure	very few structures	highly structured by endomembranes and a cytoskeleton
Cell movement	flagella made of flagellin	flagella and cilia made of tubulin
Mitochondrial	none	one to several dozen (Ribosome 70S)
Chloroplasts	none	in algae and plants
Organization	usually single cells	single cells, colonies, higher multicellular organisms with specialized cells
Cell division	Binary fission (simple division)	Mitosis (fission or budding)
		Meiosis

The most important features (differences) are in the use of organelles by the eukaryote (nucleated) cells. This shows that combined control is needed for as many as eleven different sub-organized structures within a single complicated metazoic eukaryote cell. The basic mind stuff of the two types is the same. Just the proportion of the aham mind stuff is higher in the complicated eukaryote cell. This in itself does not give the added ability to respond, control all the varied programming and control functions needed in the eukaryote cell. This is where the needed microvitic endoplasmic coverage with its accompanying microvitic mind, is required.

Both cell types have an area for DNA/RNA replication and modification. Both have ribosomes. Both can reproduce and modify by mitosis. Eukaryotes can reproduce and modify by meiosis. Both have mitochondrial RNA in their structures. Both cell types have what microbiologists call chemotaxis, that allows the cells to make movements and semi- programmed responses to outside influence of say food or chemical threat. It's this very typical chemotactic response such as *choosing* directional movements that cause microbiologists and scientists to say that this function resembles the decision-making abilities of higher life forms with brains that process sensory data. Maybe these small cells have "mind like abilities"?

Importantly for cell psychology, is the fact that prokaryote cells are independent and nearly always unicellular. They do not group. Even bacterial colonies will act independently of each other. Typically, there is no continuity or communication between the cells. This shows the most basic unit individualistic cittic mind response. Both types of cells have unit minds; only eukaryote (nucleated) cells are directly controlled and coordinated by their endoplasmic microvitic coverage. Prokaryote cells are much cruder (and older 4 billion years, verses 2 billion years) and do not have the ability to sustain their metabolism through their own efforts. Eukaryote (nucleated) cells use their mitochondria organelles to generate energy for cell metabolism. Prokaryote cells must rely on chloroplasts to convert light energy from the sun into ATP through a process called photosynthesis. Some prokaryote cells can convert outside obtained inorganic bonds to energy.

Eukaryote (nucleated) cells in turn, are communal and much more complex. They generate their own power requirements (do not rely on outside sources) through mitochondrial organelles. In each of the approximately 100,000,000,000,000 (10^{14}) cells in an adult human, the entire hereditary information is encoded within the DNA. Biologists say that there are three basic categories of cells that make up the mammalian genome. These are germ cells, somatic cells, and stem cells. These physical cells have the power of *differentiation*. In other words, three cell types have the power to divide *into* all the different millions of cells found in the human body, all by their self, without any outside help. How they do this is not discussed by biologists, nor presently understood.

Mental characteristics of prokaryote cell

“Protozoic minds knowing capacities are limited to stimulus-response and patterning functions” *The Internal Being*, 2000

The psychology of prokaryote cells and prokaryote mind is much different from the nucleated (or eukaryote) cells. This means in both the physical mind (knowing faculty) of the cells and in the Existential faculty or psychic mind of the different basic types of cells are different and react differently in physical and mental situations.

We learned from *Macrogenesis* that the physicality and the reactions of the two basic cell types are different. The prokaryote (protoplasmic) cell has a mind made of citta only with no development of aham' [tattva] or mahat [tattva]. Protozoic minds of this type of cell consists of citta mind stuff in greater proportion than either aham or mahat type of mind stuff. The knowledge the protozoic cellular type of mind displays is instinctive, using the physical level of reactive control. This allows it the stimulus-response functions associated simple mind reactions.

The protozoic mind, being a physical mind, is impervious to knowledge. It cannot learn and adapt to new situations. It can only recognize a situation (objects) and take reactive action²⁵⁵. It has little or no learning capacity. Its learning capacity is limited to

255 It consists in the recognition of some objective matter and action done accordingly. Such knowledge, in practice is born out of a clash of instincts. Knowledge_and_Human_Progress.html

a citta mind stuff that allows only the four basic instinctual needs to be met. Needs here are the four instinctual needs of the most basic consciousness unit. I.e. sleep (rest), reproduction, eating (assimilating for growth) and maintaining the structure (self-preservation). All this is done instinctively with no knowledge of why. The reason why it reacts is *unknown* to the individual cell²⁵⁶. There is little or no individual “I” feeling associated with each protozoic cell²⁵⁷. “I” feeling is associated with the higher concentrations of aham mind stuff.

Its reproductive tendencies are very individualistic. It has an inner fissiparous tendency for a self-dividing processes – prokaryote reproduces by fission. The mother cells simply polarize and divide. Modification of the protoplasmic cells usually comes about from outside sources. Extrachromosomal fragments of DNA called plasmids are present in some bacteria and can transfer their genes to other protoplasmic prokaryote cells. This is the major way that antibiotics are produced.

Mental coverage of prokaryote cell

Of course, neither type of cell has any knowledge of its own existence. An earthworm or plant does not know that it exists. This function only comes about when complex structures of both type cells develop together and attract the collective microvitic endoplasmic structure that allows self-determination to come into use. Existential differences in the two basic cells come from the difference in the type of cells mental coverage used.

Protoplasmic cells acting as individuals in a collected (not microvitic collective) situation, such as yeast molds and protoplasmic cell groups, do not have collective microvitic endoplasmic mind coverage. This is because higher functional endoplasmic mental coverage is attracted to complex metazoic

256 protozoic mind is citta only, Ingesting food, supporting offspring -- this is all done instinctively, according to their svabha'va [spontaneously], the reasons being quite unknown to those creatures. The earthworm does not know that it is an earthworm. It moves instinctively, spontaneously, according to its undeveloped mind. The protozoic minds and the protozoic microcosm can be said to be the physical mind. A protozoic creature has only physical mind. The collection of protozoic minds in the human can be said to be the physical mind of the human, known as the [ka'mamaya kos'a]. It is guided by instinct, there is no discrimination. [Knowledge_and_Progress.html](#)

257 In various living beings with ordinary protoplasmic structures, there is life and movement, but all their actions are goaded by instinct; there is little or no "I" feeling.

[The_Mind_Grows_in_Magnitude.html](#)

structures. Prokaryote cell mental coverage is of the type of the individual unit mental coverage and it has an overall protah relation aspect to the cosmic collective mind.

Change in the prokaryote cell

Let's look more closely at how the transgenerational and generational changes can occur in the most basic non-nucleated mitochondrial oriented cell structures. We have discussed above in general microvita theory the effects that microvita can have on a cellular structures and how it comes to that structure through tanmatriic travel. Modifications of simple non-nucleated mitochondrial DNA structured cells appear on two basic levels for this type of cell structure. Those are changes indirectly due to physical needs, through genetic recombination and bacterial transportation and those types of changes caused by direct microvita modifications.

Changes due to DNA genetic re-combination and bacterial transportation are discussed at length in many other physical biological studies and will not be attempted here. These are physical genetic determinism change theories utilizing gene research and involve random chance verses directed change. Strict biological determination theories are generally discounted and modern biological evolutionary theories involve elements of environmental modification. Let us proceed to other modifications of mitochondrial DNA.

In the case of protozoic structures with no microvita endoplasmic coverage, as simple non-nucleated mitochondrial DNA structured cells, microvita provides another function. The function of providing the method for change or modification of the structure. Protozoic structures housing simple instinctive cittic minds do not have microvitic endoplasmic control structures to carry changes forward to the next generation. Their structural changes are much slower as their physical needs and longings are passed through the macrocosmic protah witness relationship.

Cosmic Controller under the protah function of the Cosmic Mind can bring about changes slowly to the prokaryote cell, but in accordance with collective desires of the species on a necessary for the survival of the species basis.

Adaptation of the fittest to the environment for their survival is the basis of their change. Change is one can say more of an indirect process, compared to complex metazoic mind structures that have more direct rapid microvitic endoplasmic feedback systems.

Physical control of undeveloped mind type cells are rendered through simple Darwinian laws of survival of the fittest and physical over-supply feedback mechanisms. Here, by Darwinian laws of survival of the fittest is meant as the ability to adapt to the requirement of the environment verses survival of the strongest. Ultimate protah witnessing existential I functions are provided by the Cosmic Controller or Cosmic Nucleus.

Plants also have genetic evolutionary changes in the species. However, these are relatively slow because they do not have the mental capacity to attract the amount of negative mutating microvita and they do not have the strong mental ectoplasmic feedback systems that complex metazoic mental structures are associated with. The changes associated with plants (and all undeveloped mind structures) work through their undeveloped mental cittic structure and are under the direct protah control of the Cosmic Controller.

All unit structure has existential I, to some limited extent. That very existential I limitation, limits the ability of the species to communicate with the Cosmic Controller. It limits the amount of feedback from the particular species, which in turn allows limited changes over very long periods of time. Here we are talking about very limited feedback of a collected unit I existential structure through the protah yoga function of the Cosmic Mind. Because it is just that, unit to collective feedback, it is very weak and slow relationship in protozoic evolutionary changes.

Immediately the question arises, "How are the inter and intra cell coordination problems handled if there is no overall coordination by microvitic collective endoplasmic mind?" In the prokaryote cells there are *physical* feedback loops and systems in place to control the inter and intra cell coordination problems. The

cells are relatively simple and provide for a relatively narrow range of the four basic functions mentioned of simple reactive-repetitive mind. These are independent type cells. They do not coordinate with other cells at the individual level. When they are combined in complex situations like in the human corpora, then prokaryote cells are *then* under the purview of the endoplasmic microvita coverage.

One way to think of this system is sort of the same as we think of our own bodies. We as the controlling unit minds have coordination and touch with all parts of our being. Consciously, like touch with our fingers and subconsciously like with our inner psychophysical organs. In all cases, we as unit guiding psychic have unilateral control. We can only concentrate on one aspect at one time. The macrocosmic protah aspect is multilateral. It can concentrate on *all* its parts or unit structures at *all* times. Normally, it does not concentrate on any single organism like a protoplasmic cell, at any single time. It (macrocosmic protah aspect of Cosmic Mind) allows the normal individual microcosmic cittic (in the case of protoplasmic) mind to do its reactive duties: but if it *did* concentrate on the microcosmic protoplasm, then it would be using the direct aspect of its macrocosmic protah mind which has a separate name, ota aspect.

Microvita emanate directly from the Macrocosmic Mind²⁵⁸. It directs microvita as per its cosmic connotations and desires or will. It can utilize microvita's energy aspect to cause direct change in the protoplasmic structure of a cell²⁵⁹. Direct modification of the DNA strand and attached genetic code is affected by direct collision of the large negative microvitic energy portion in particle to particle like attractions. The size of mitochondrial DNA in prokaryote cells is on the order of the size of virus. The size of negative microvita carrying relatively large amounts of energy is on the order of virus. In addition, direct microvita have a speed component just under the speed of light. These are not microvita following tanmatric paths.

258 Obviously, these microvita are emanations from the Supreme Entity.
Crude_and_Subtle_Microvita.html

259 Nuclei can also be affected by microvita, and protoplasm will be affected by bringing changes in the nucleus with the help of microvita. The displacement of the nucleus can be brought about with the help of microvita, which will bring qualitative change in the internal structure.
Microvita_and_Its_Possible_Effects_on_Society_Section_A.html

When a microvita particle is attracted and docks at a particular point in a rather stationary DNA/RNA gene structure, physical modification (folding) of the structure occurs. This is known in biological circles as mutation.

This mutation does not occur directly by the RNA chain; but occurs directly *in and on* the mitochondrial RNA chain. These large fast and energy filled negative microvita can affect the folding of the DNA/RNA chain structure. Remember: Positive microvita can provide modifications to mental structures and negative microvita make viral and physical DNA/RNA modifications. Negative microvita can perform modifications such as mitochondrial DNA/RNA modification in the viral cells of the living bodies²⁶⁰.

Mental characteristics of eukaryote cell

We saw above under comparisons of prokaryote and eukaryote cells and their psychology, that eukaryote cells have a slightly different mental composition of their mind stuff. Nucleated eukaryote (metazoic) cells have a wider range of physical capabilities based on the slightly higher concentration of the aham and mahat higher mind stuff present in their mental structures of each individual cell. This mind stuff allows some further mental traits of knowing²⁶¹ or knowledge by acquaintance to be utilized²⁶². These cells typically learn by a repetitive conditioned response, a learning process or imprinting where the action is physically observed with an observational response reaction. Physically, science calls it DNA imprinting and does not recognize the psychic part of imprinting. Protoplasmic cells only have a repetitive instinctual response-reaction with no conditioned response capabilities.

260 Microvita, when passing through different planes of inferences and also planes of propensities, can not only change the bodily temperature or temperatures of the mass, they can also create a radical change in the psychic wave, a change in wavelengths, a change in hormone secretion, and metamorphosis and transmutation in the mass and movement of hormones.

Matter_and_Abstract.html [English]

261 On the other hand the metazoic mind is the receptacle of knowledge because it is mostly physico-psychic and to a very little extent psycho-spiritual. Knowledge_and_Human_Progress.html

262 Protozoic minds move instinctively, whereas metazoic minds move with abhijina'ta' [acquaintance, experience]. Hence undeveloped and underdeveloped metazoic structures work with both acquaintance and experience. The Knowledge_and_Progress.html

“The same subconscious force that causes psychic imprinting from the subconscious nerve cells to the citta also causes imprinting on the DNA physical structure.” *The Internal Being, 2000*

The unit mind characteristics of the eukaryote cells allows for the unit “I” of the individual cell to develop to the point where it can differentiate between what is its own cell and what is not. We see direct evidence of the mental capacities of metazoic mind structure in the eukaryote memory “T” cells. Memory T cells are a specific type of infection-fighting T cell (also known as a T lymphocyte) that can recognize foreign invaders such as bacteria or viruses that were encountered during a prior infection or vaccination. These higher unit mental characteristics of metazoic eukaryote cells allow for the further scope of the collective microvitic endoplasmic coverage to some take action.

“The scope of the collected faculty increases to where the unit (usually cellular or organ) can reject-eject any individual defective unit.”²⁶³ This is done simply based on differentiating between what is “I” and what is not “I” or foreign to the unit.” *The Internal Being, 2000*

The physical collectivity and collective decisions by cells in coordination with other cells, comes about through the microvitic endoplasmic coverage working in coordination with the higher mental capacity of the individual cells. Since eukaryote cells are part of developed mind changes, those changes will be covered in that section.

Microvita and developed species changes

Direct change of any complex physical structure, whether it is human or protoplasmic cells in complex structures, does not occur directly by microvita acting on that physical structure of their own volition. Microvita are the method to provide change in complex structures through two different indirect ways. One can be called indirect endoplasmic change and the other indirect ectoplasmic change.

263 The collective "I" feeling can eject any unit protoplasmic cells... Questions_and Answers_on_Psychology.html (Q2)

Indirect Endoplasmic change

Scientists will look and look into the DNA/RNA physical structures of cells for the method that transfers the genetic traits to the *next generation*; but they will never find it there. Traits are passed to the collective body of microvitic endoplasm in the form of micro-psychophysical longings. These longings are then expressed through the unit individual (or on a group basis) by the units use of microvita and its dynamic energies.

In the very complex structured mind of human, there is overall endoplasmic collective microvitic mind structure. This structure will modify the desires of the *next* generation of complex mind structures to generally pass on the physically and mentally desirable traits. Things like larger cranium because of more mental and psychic demands and needs or even the example of sorter or smaller bodily structure due to decreasing use and needs. These desires as traits are passed on by common collective microvitic mind structure associated only with human complex structures and micro-psychophysical longings.

Human unit minds can also influence and modify this collective endoplasmic structure. That collective endoplasmic microvitic structure has intelligence also. However, not of the type of independent unit intelligence we are normally familiar with. That collective endoplasmic structure has only one option, which is to work for the collective whole (wholeness) under the purview of the Cosmic Nucleus and in coordination with the units mind structure. Remember that this indirect collective endoplasmic structure of change only occurs in highly developed mental structures utilizing complex metazoic cells.

All developed mind structures have microvitic endoplasmic coverage²⁶⁴, simply because the mind is considered expressed. This being a collective mental structure (covered at some length in other sections and works) that allows a progressively growing collective I- feeling²⁶⁵ to exist²⁶⁶. This I- feeling is not “what a unit wants”

264 Where the mind is not expressed there is no endoplasmic coverage, and where the mind is expressed, endoplasmic coverage shall be there. [The_NeoEthics_of_MultiLateral_Salvation.html](#) [English]

265 Endoplasmic structure has minimum "I" feeling. It is of collective nature -- it is a collective structure. [Questions_and Answers_on_Psychology.html](#) (Q4)

266 Ectoplasm gives mental faculty but endoplasm gives unit "I" feeling". [Questions_and Answers_on_Psychology.html](#) (Q3)

feeling but a need or sentiment for the collective whole or species as reflected through microvita. As complex developed beings, we have developed expressed complex feelings. Some are the results of the ectoplasmic portion of the developed unit mind; other feelings are from a complexity that arises out of the abilities of the collective microvitic endoplasmic mind²⁶⁷. This subtle microvitic mind allows a place for the sentiments to be collected²⁶⁸ and held for use in collective changes to the species. The collective whole of the species brings collective sentiments forward to the next generation through the collective microvitic endoplasmic mind of the species.

This is an example of upward endoplasmic imprinting with collective micro-psychophysical longings causing direct genetic changes to a new complex developed structure. This is a developed mind scenario utilizing microvita for species development and change. Microvita are of infinite types, meaning having infinite innate characteristics, traits or better called attractions. They work collectively without individual thought. When the collective endoplasmic microvitic mind contains upward imprinted collective sentiments (using only those desires necessary for genetic survival here as example) they (collective microvita) attach to the next generation collective sam'ska'ra (collective karma'shaya) and become one with the next complex mind structure that is created.

In other words, in physical structures, when physical DNA causes a physical human structure to start its physical existence, then the proper collective endoplasmic mind structure containing the new desired changes would attach to that new physical structure. The microvita (containing both energy and collective intelligence) will work through the developing embryo to bring about the desired changes. This may be through DNA codon microvita theory discussed below.

Change may appear as random or specific. It depends on our outlook towards physical or mental time. Sometimes the change appears immediately. Sometimes the mental or physical change appears far into the future. The seeds of change are there.

267 Ectoplasm is of unit nature and endoplasm is of collective nature. The "I" feeling of all developed beings is of a complex nature, and that complexity arises due to the collective "I" feeling. Questions_and Answers_on_Psychology.html (Q4)

268 The effect of endoplasmic coverage is to register the reflection of the expression of human sentiments, Questions_and Answers_on_Psychology.html (Q5)

For example in developed mind structures, if modification of the particular allele of the gene responsible for Parkinson disease occurs due to negative microvitic collision (or collection), then when the environmental circumstances are correct for Parkinson disease to develop, then it may occur. This could occur due to matching of recessive gene pairs during conception, or later in life due to environmental conditions (like age or nerve deterioration). Each variation can be different. Microvita provides the genetic variation; nature will select the ideal combination of traits that will survive in the unit according to the environmental conditions. The change may appear to us, as random or specific.

Remember that endoplasmic microvitic collective mind is associated with all metazoic type physical structures. Like those structures in a developing complicated human embryo. The changes in the complex metazoic mind species are relatively fast, compared to undeveloped mind type changes. Plants for example do not evolve quickly for two reasons. One, they do not have complicated metazoic cell structure to attract endoplasmic direct changes to their DNA codons. Two, they do not possess the sufficient ahm (developed mind stuff) to have individually associated cakras, vrtti and sam'ska'ras.

Mentally undeveloped plants and animals without psychic centers are modified over a longer period of relative time. Here, microvita provides a genetic variation; the collective macrocosmic endoplasmic mind will select the ideal combination of traits that will survive according to the environmental conditions. Those having the greatest reproduction success will pass the desirable physical traits on to their descendants. Therefore, in a manner of speaking here microvita provide a genetic variation. The changes in undeveloped species are brought about very indirectly. In *undeveloped* mental structures, modifications of the gene structure are random on a nucleosome and microvitic level. These undeveloped minds do not have the complex mind or the psychic centers to utilize endoplasmic coverage. Natural selection occurs with those modifications that are best fitted to the changing environmental circumstances.

Indirect Ectoplasmic change

The second way microvita provides change to the *complex human structure* is by indirect ectoplasmic change where both positive and negative microvita entering the human corpora, mostly through the psychic center of the vishuddha cakra²⁶⁹ and then passes both upward or downward, as the case may be, through psychic attractions. See above [*Microvitic flow schematic*](#). These psychic attractions are desires inherent in the individual's psychic vrttis and psychic plexi or cakras. This means that the complex metazoic mind of the developed unit being *can* control the microvita flow, as individual desires through its complex guiding psychic structure. Indirectly the changes come about through the then existing hormone transmission and distribution structure in the body. This is because developed species changes utilize cakras to direct (properly attract) microvita that have the collective characteristics that are needed for the necessary change. Developed complex minds (human in this case) have the potentialities to directly modify (in this life) their own mental (and therefore somewhat their own physical) structure in either a positive or a negative way through the proper use of microvita. Positive microvita performs modifications of a more mental nature. The changes brought about through the cakra system are completely discussed at length in Shrii Shrii Ánandamúrti book entitled *Biopsychology*.

In conclusion, changes occur in both undeveloped and developed highly complex mind structures. Microvita provides the stimulus for both. Modification for long-term changes in metazoic human mind occurs due to higher mind endoplasmic coverage. The most rapid change in human structure occurs through microvita passing through the psychic body of humans and then performing the modifications directly.

Possible genetic modifications

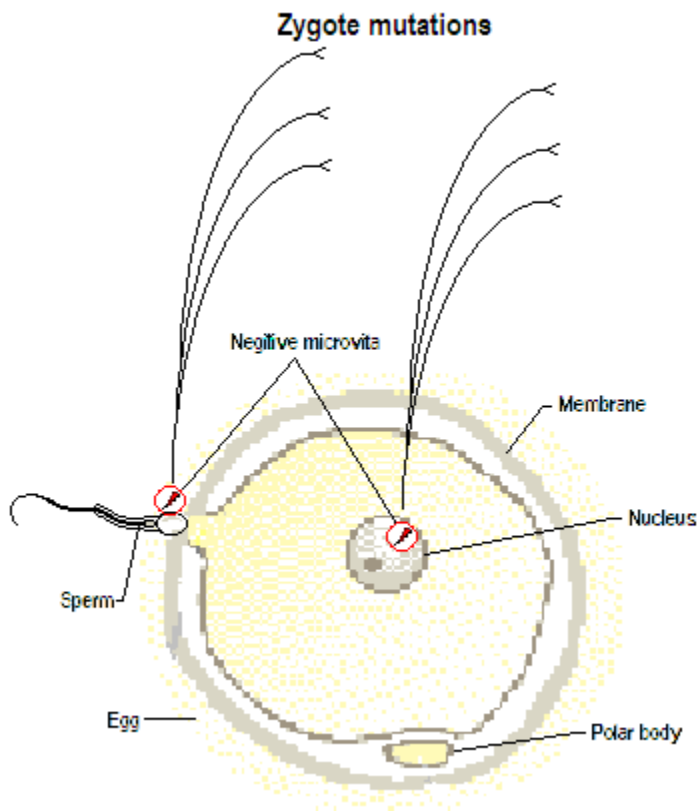
269 Negative microvita can function directly at the physico-psychic plexus (at the Vishuddha Cakra) but they cannot move upwards to the occult plexus.

Questions_and_Answers_on_Microvita_Section_B.html (Q14)

Eukaryote modifications

Transmission and therefore the later modifications of physical characteristics are transmitted as genes and chromosomes through physical union of egg and sperm in the zygote. At the moment of conception of the complex human DNA during the union of the ova with the sperm, modern genetic studies allow for a term called genetic recombination of a gamete cell. This is a form of genetic recombination or crossover of chromosomes, which takes place in meiosis of two gamete cells in human zygote fertilization that may produce allele modifications of the genes. There is always a possibility of an allele modification of a gene during this period of the egg or sperms life. Allele modification may produce mutations not accounted for by the normal statistical probabilities of normal Mendelian hereditary principles. This is where the gene carried forward from either parent is modified or mutated at the time of the union of the human sperm and egg. In other words, the result of union is not as expected from the dominant or recessive characteristics of either of the parents. Modern genome and genetic studies do not have a perusable explanation for this rare occurrence.

Let us look at a simple drawing of that moment of union.



Microvita- allele modification schematic

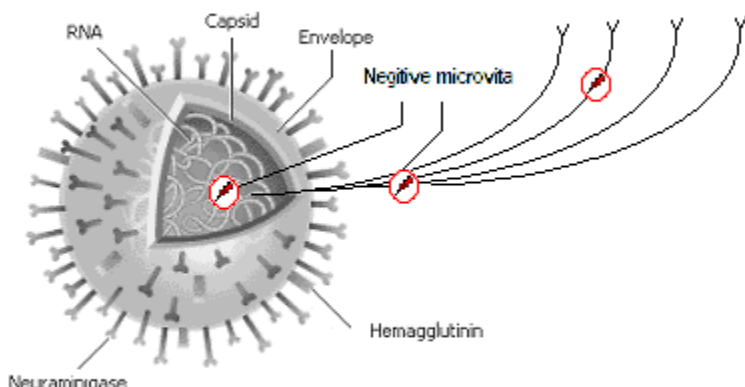
Here the mitochondrial DNA of the sperm (residing in the tail of the sperm) drops off at the moment of conception and only the head of the sperm joins the ova DNA in union. Microvita travel on tantrmic feelings of the senses, and at this time of union, senses are utilized to the maximum. Microvita are attracted by situational desires. What amounts of desires are present at this time and situation? So here, we have all the requirements for maximum amount of microvita to be attracted to a situation and produce momentary maximum impact and effect for modification and change in the genes.

It would appear that at this moment of conception of sperm and ova, the microvita are residing in the head of the sperm and the tail acts only as a mitochondrial DNA powerhouse to propel the organism, dropping off when its job is accomplished. At this

moment, the collective energies and intelligence of the microvita could produce these rare allele modifications of the genes.

Prokaryote modifications

Here is a drawing of the possible invasion of negative microvita into a HIV virus and the modification of the viral RNA by a type of genetic recombination of microvita with energy and possibly intelligent RNA like microvita components.



Microvita-virus recombination schematic

Micro-sam'ska'ra theory

According Shrii Shrii Ānandamūrti all material objects consist of two different wave types. The longer major controlling wave and the shorter tanmatric inferential waves. Microvita ride in these smaller tanmatric inferential waves in the phenomenal objective world. The tanmatric wave defines the object to the senses and mind. He further tells us that if there is a change in the major controlling wavelength²⁷⁰, the entire object, with all its

²⁷⁰ Microvita pervade both the ectoplasmic and endoplasmic worlds, and their presence creates various wavelengths. Waves are created when microvita move through the media of inferences. Inferences are the major waves, but sub-waves are created in them by moving microvita. The major

qualities, is transmuted. Like changing mercury to gold²⁷¹. In the same light, if there is a change in the minor waves caused by microvita riding on them, then some of the minor qualities are changed, like changing the smell, color or chemical affinity. He personally demonstrated the changing of microvita waves causing change in smell and other tanmatric inferences, to hundreds of persons during numerous recorded demonstrations. Some demonstrations are recorded in His writings. Tanmatric waves are only the resultant waves.

Waves that are reflected, so our sense receptors can catch or grasp these tanma'tric vibrations. Microvita waves are waves caused by the microvita particle moving through the other waves. So by changing the microvita wave (or possibly the energy component) the tanmatric inferential waves will change and then the object²⁷² will appear differently, to our senses.

Now what is the controlling wave? Longer waves are the mental control waves of the mind of the object, be the object inorganic inert mind or organic complex metazoic human mind. However, we have learned that there are two very different types of minds. Microvitic collective mind and unit (individualistic type) of mind. The very long controlling wave of a collective endoplasmic microvitic mental structure are completely different than the dormant mind of a physical element or even the protoplasmic simple undeveloped cittic mind of say a plant.

Therefore, what exactly does microvita affect that is common in all these different structures? Certainly not the reflecting tanmatric sense affected wave, then just the sense attributes would change, leaving the basic atom, molecule, organ or being...unaffected. We must assume that microvita can cause change in the major controlling wave. However so slight. How does it do this?

waves function as the controlling waves for the sub-waves. When there is a change in the wavelength of a controlling wave, the entire inference, with all its qualities, gets transmuted. However, if there is a change in the wavelengths of the sub-waves only, the qualities contained in the major wave -- that is, in the inference -- change.

[Questions_and_Answers_on_Microvita_Section_B.html](#) (Q21)

271 Mercury can be converted into gold very easily by removing the difference in the waves.

[Microcosm_and_Macrocosm_s18.html](#)

272 Just as transmutation can be done in the physical pabula externally, it can also be done internally by the application of microvita. [Ideation_and_Meditation.html](#)

Let us try to understand how such a point-like structured thing like microvita can carry intelligent change to a molecule or atom. Based on common knowledge of wave theory and combining a slightly heuristic approach we arrive at a theory of microvitic sam'ska'ras. We know that the smaller physically the waves get the more solid the object becomes to our sense capably type of recognition. This is because smaller wavelength objects have the physical capability of storing a larger energy component, relative to our psychological determination of time. We know that in the unit mind structure the apperceptive plate (sthirabhu'mi) holds the sam'ska'ras²⁷³. We know that the sam'ska'ras (both acquired and carried forward) are the basis (with microvita) of all changes in the developed unit structure. We find that Shrii Shrii Ánandamúrti tells that the higher the frequency (and therefore the smaller the structure) the more possible number of sam'ska'ras can be carried in that structure²⁷⁴. Since microvita has the smallest structure then it is plausible that *microvita can carry the most sam'ska'ras*. What does this mean to a structure as small as microvita and what are the microvitic equivalent of sam'ska'ras?

In the collective mind of microvita, sam'ska'ra may not have an exact equivalent expression to the unit mind. But if we simply use identifiable traits as what we might assume to be the microvitic equivalent of unit sam'ska'ras, then we see what could be the reason that Shrii Shrii Ánandamúrti tells us that microvita are infinite in variety. Any structure that is that small must carry an almost infinite combination of identifiable traits or to say it in a slightly different way for the collective mind of microvita, traits that different microvita can identify with in collective groups or collectivity. This is exactly what microvita do, they group or identify in accordance with inherent desires or attractions²⁷⁵. What is more inherent than desire or attraction that causes microvita to be attracted to their destinations?

So, when collective microvita arrive at say a molecule, they arrive with two basic needs fulfilled.

273 ... the sthirabhu'mi of the citta (the apperceptive plate), the site of the mind's sam'ska'ras (reactive momenta of deeds) [The_Chariot_and_the_Charioteer.html](#)

274 The higher the frequency of the wave, the more numerous the points of pause, the greater the number of sam'ska'ras, and the cruder the expression. [Shakti_and_Its_Proper_Application.html](#)

275 The pervasive, stinking smell which results from the decomposition and disintegration of rotting animal or plant bodies attracts negative microvita. [Smell_and_Microvita_Section_G.html](#)

- Energy that has increased as their wavelength slowed down and as they grouped together with collective identifiable traits.
- Intelligent direction or control through attraction and increased capacity to hold modifiable attributes through the increased number of micro-sam'ska'ras' that have an inherent higher frequency and smaller physical structure.

Now, with this in mind let's look at a possible hypothesis of DNA/RNA structural modification by microvita.

Microvita prion hypothesis

Collective endoplasmic microvitic structure has intelligence also. However, not of the type we are normally familiar. That collective microvitic endoplasmic structure has only one option, which is to work for the collective wholeness under the purview of the Cosmic Nucleus and in coordination with the units complicated mind structure. If the unit structured mind (here human) should desire to attract negative microvita, then that collected microvita will function to the will of the human developed mind. In other words, it will go to the parts of the unit (human) structure as per its ability. It travels on tanmatric inferences like smell and sight, through the lower psychic centers and resides in those cells that it feels an affinity too.

Then, comes the question "How can such small micro-organisms or even microvitic structures be so smart as to know which and when or what gene structure should be modified to provide the correct combination to effect the change that provides the desired effect?" We must approach this from *two* aspects. The ectoplasmic unit portion and the endoplasmic microvitic portion. Physical probability for individual change can be physically inherited through recessive or genetic tendencies.

Genomic-ectoplasmic changes

Under genomic imprinting section we stated, physical genes defects are carried forward as recessive traits until they are expressed by matching of recessive physical traits or matching of

recessive mutations with sam'ska'ric mental traits and circumstances. When a physical weakness or defect in the physical-mental portion of the genome is introduced by a physical mutation of a gene, then in that case a mental defect has been brought forward. Individual mental sam'ska'ras accompany all physical-mental ectoplasmic structures, and with the proper environmental circumstances, a combination of all may cause a mental defect to become dominant or to express in this lifetime. We view this aspect on a physical level. In other words, ectoplasmic mental sam'ska'ras express in physically generated structures suitable to the sam'ska'ra. If the physical structure has the recessive allele for a trait that needs to be mentally expressed (or exhausted-burned) then that new complex mind will attach and express to that physical structure. The chromosomes of the ectoplasmic mind (sam'ska'ras) control mental modification in the individual unit (complex human mind) *in this life only*.

Microvita-prion (folding) changes

The other aspect is microvitic endoplasmic change is when macrocosmic collective endoplasmic mind organizes and directs microvita collectively to provide the impetus for change in the unit and therefore generally and indirectly in the species. Collective endoplasmic mind follows micro-psychic sentiments generated by the individuals sam'ska'ras and expressed (upward imprinted) micro-psychic sentiments. That is those instincts and/or collective desires that have been ingrained in the macrocosmic collective mind of say a species. Here sentiment is unit emotional micro-psychic responses expressed as instinct²⁷⁶. Instinct is not expressed through any physical gene theory; it is instinct expressed through the macrocosmic endoplasmic mind and the next generation of associated unit minds. This endoplasmic change can occur in two ways.

Direct modification of unit DNA/ RNA at the nucleosome level by intelligent energy (microvita), changing the chromosomal

276 Some psychologists define "instinct" as "accumulated sentiment". By this they imply that instincts are later stages of sentiments, that is, that instincts are created when sentiments get themselves habituated. This is a theoretical definition. A sa'dhaka, who is a practical psychologist, realizes that instinct is a sentiment affecting the subsidiary glands.
Mind_Pranendriya_and_Vrtti.html

structure. Here microvita are attracted to the specific codons. Just like different insects are attracted to different smells, so are different microvita attracted to different DNA/RNA codons²⁷⁷. This works by attraction. That is to say, microvita are attracted to the particular codons in the DNA/RNA structures to cause the genetic mutation to occur²⁷⁸. Microvita's impact to these different selected codons gives vitality or energy to that particular codon to make a particular DNA/RNA structural modifications or folding in the gene. Maybe microvita are actually changing the minor wavelength of the DNA/RNA structure and thereby causing a prion type folding mutation or change in the DNA. It is well known that different folding of the DNA structure causes different configurations in the physical structure. Genes in turn control physical structural changes. This direct modification of unit DNA/RNA at the nucleosome level by intelligent energy (microvita) is under the purview the protah aspect of macrocosmic mind.

The other aspect of endoplasmic change is directed not necessarily to the species as a whole, but to the individual as a unit. This is done through the individuals developed mental structure and the physical modifications are to this lifetime only. This was covered above under individual verses collective change and indirect endoplasmic and ectoplasmic changes in developed structures.

Macro-micro Psychic feedback mechanisms

Feedback works something like a household thermostat. When the heat in a house falls, the thermostat responds by switching the furnace on, and when the temperature is too warm, the thermostat switches the furnace off. Our entire physical human system has numerous basic feedback loops (systems) that utilize hormones, neurotransmitters and the endocrine gland system. They work on various hormone levels, viscosity of fluids and many more principles to regulate such things as body temperature

277 Here codons are mean to include all the currently investigated RNA, mRNA, tRNA, rRNA, and double stranded RNA, non-coding RNA, ribozymes, miRNAs, snoRNAs, and siRNAs

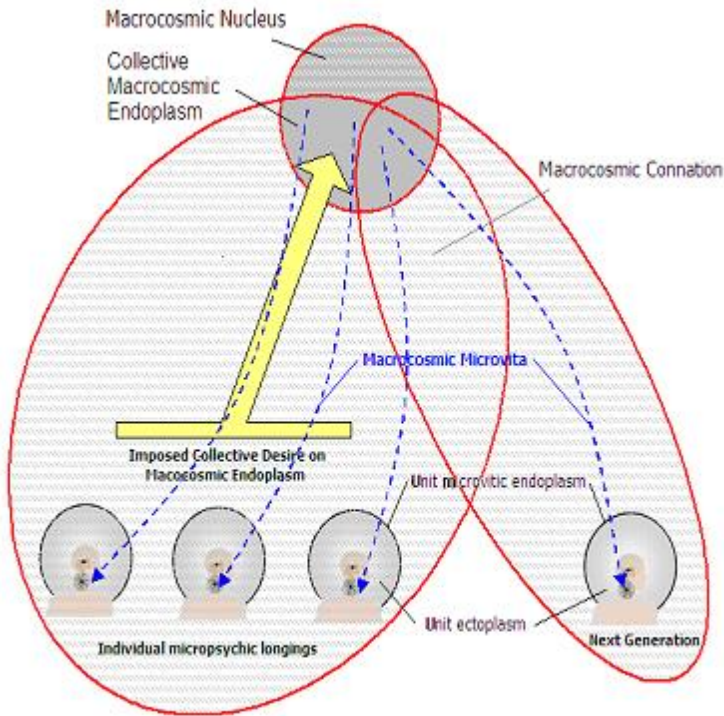
278 Not only human beings, but all living beings are goaded by this primordial nature of longing, that is, psycho-physical longing for physical pabulum. We say it is a natural instinct for each and every object -- even in the case of non-living elements we find this type of longing -- in the case of both animate and inanimate objects. [Four_Dimensions_of_Micropsyche_Longing.html](#)

to growth. All systems must have feedback mechanisms to control the levels of growth and metabolism.

Psychophysical feedback systems have the same purpose. They are just not readily visible or understood. Even microvita have feedback control and systems, but that is beyond the scope of this work. Here we will outline the basic psycho-spiritual feedback systems (loops) involving the use of microvita and endoplasmic mind.

Physico-physical feedback mechanisms, is not a simple discussion. Maybe a drawing is worth a thousand words.

Macro-micro feedback system schematic



Macro-Micro psychic feedback system

Individual micro-psyhic longings stemming from the developed individual units ectoplasms, are collectively felt and

held by the collective microcosmic endoplasm²⁷⁹. The microcosmic collective microvitic endoplasm has a direct protah relationship with the Cosmic Nucleus. This collective-I functioning subtle microvitic mind imposes these collective micro-psychic desires on the macrocosmic endoplasmic mind directly through the macrocosmic protah mind function. Macrocosmic mind has both an indirect mental substantiation function as Supreme witnessing Entity²⁸⁰ and initiates direct mobility through cosmic microvita. These microvita pervade the entire cosmos²⁸¹. They bring a combination energy and intelligence directly to the manifested phenomenal world. Their energy component functions are explained previously as they attenuate their wavelength and the increase their energy component. Macrocosmic mind provides a direct mobility that allows them to use their intelligence component in modification of the RNA in the nucleus. This is only the upper half of the feedback loop, from the individual to the cosmic and back to the next generation of the individual.

Microvita flows into the individual in two ways²⁸². It flows through the psychic organs of the individual (in this generation). Secondly, it can *directly* modify and bring about changes in the internal cellular structure²⁸³ of the individual or unit. In both cases, the microvita feedback comes back through the nerve and then mental structure of the individual or unit²⁸⁴. Nerve cell changes bring about changes in the ectoplasm of the unit²⁸⁵. This is due to the increased complexity of the cellular structure and the increased needs of the complex functions of those cells and organs. Change in the physical and ectoplasmic structure is much more rapid in

279 ..., ectoplasmic changes will come which in turn will bring about endoplasmic change,...
[Microvita_and_Its_Possible_Effects_on_Society_Section_A.html](#)

280 Evidently Purus'ottama is the collective entity of the universe as well as witness of the collective mind. This association of His with the collectivity is called prota yoga [the yoga of pervasive association] [Chapter_2.html](#)

281 Of the three types of microvita, the crude type are instrumental in emanating life throughout the cosmos. They create a stir within a physical structure. [Crude_and_Subtle_Microvita.html](#)

282, but they can affect both the physical and psychic structures.
[Questions_and_Answers_on_Microvita_Section_B.html](#) (Q5)

283 Nuclei can also be affected by microvita, and protoplasm will be affected by bringing changes in the nucleus with the help of microvita. The displacement of the nucleus can be brought about with the help of microvita, which will bring qualitative change in the internal structure.

[Microvita_and_Its_Possible_Effects_on_Society_Section_A.html](#)

284; it will occur in the collective psychic mind, in the collective ectoplasm of all humanity.
[Neohumanism_Is_the_Ultimate_Shelter_Discourse_11.html](#)

285 Due to changes in the nerve cells, a change in the ectoplasmic cells also occurs,
[Microvita_and_Its_Possible_Effects_on_Society_Section_A.html](#)

human and developed animals, due to the increased ability of the psychic organs to assimilate and use the microvitic energies²⁸⁶. Endoplasmic unit micro-psychic longings are then imposed on the macrocosmic endoplasmic collective mind and the cycle of feedback for change to the species is completed as per above drawing and explanation. This is referred to as the indirect cycle of change to the species.

Life²⁸⁷

“One of the central questions about life is how it originated. The generally accepted theory is that early in the history of the earth some system of replication powered by external sources of energy must have been formed.” 2003 Encarta Microsoft Corporation

So far, we have discussed ectoplasmic “death” and re-animation of complicated structures. What about, animation or the life processes in undeveloped structures say plants or even stone? Of course, the first requirement for life animation is a congenial environment²⁸⁸. By this, we mean that the temperature, atmosphere, and conditions of environment must be suitable for the growth and sustenance of this very life. Then animation of carbon-based structures can be brought about. Here microvita plays the dominant role²⁸⁹. Remember, microvita has collective intelligence and mind. Animation is occurring in the unit type material structures that are specifically carbon based. This is because the carbon-based structures are congenial to the formation of carbon-linked chains, the Krebs energy cycle that almost all energy systems and biological cells in our environment are using. These energy chains are the provider of all energy requirements of animated life in our

286 Microvita develop, invigorate, increase or decrease the hormone secretions of these glands and sub-glands, therefore developed beings -- physically and psychologically complex beings -- have greater scope to progress through the aid of microvita than undeveloped creatures.

Questions_and_Answers_on_Microvita_Section_B.html (Q20)

287 A precise definition of life is difficult, but, in a rough sense, an organism is considered alive if both metabolism and reproduction are active. © 1993-2003 Encarta Microsoft Corporation.

288 For the manifestation of life, therefore, a congenial atmosphere is a fundamental necessity.

Hence it may be concluded that the resultant internal force expressing itself into life under a congenial environment is what is known as pra'n'a'h or vital energy. Saincara_and_Pranah.html [pre microvita]

289 Inanimate objects will become animate, carbon atoms [carbon based structure] sleeping in an inanimate body will get life, will get the stir of vitality in them, and that vitality is slowly to be transmuted into a gigantic living structure like a human being.

Mobility_and_Movement_of_Microvita.html [English] [about Positive microvita]

system. This is not to say that microvita cannot animate other types of energy systems. Of course it can, it is only that carbon based systems are the dominant system that we are familiar with. There could be ammonia, methane or other based systems of animated life on other worlds²⁹⁰ that have those as a working chemicals and a congenial environment.

In animation or the life processes, some other factors should be taken into consideration. First. The construction of microvita and how it affects the applicable chemicals of this primordial cosmic soup of animation. Secondly. The vital energy or life sustaining structures that is required to maintain these structures. These were discussed under the vital energy chapter above and generally under the energy requirements of undeveloped structures. Many persons consider life to only exist at the formation of human egg and sperm. All other animated structures are to them, not considered life. We consider human life as a special case of general life, involving developed mind.

All structures, even stone and atoms have mind, even though dormant. Therefore, it follows that all structures are capable of life; it is only a question of animation of structure and maintenance of energy requirements. Life has more requirements than just physical union of sperm and egg or energy requirements. Life must have sustaining and controlling structures. In complicated structures like human, vital energy is controlled by complicated mental structures. Mind is controlled by microvitic endoplasmic and psychic organs. Less complicated structures like plants and even atoms have dormant or undeveloped mind...and they do not have psychic organs. Here microvita can directly effect and modify the DNA structures and their over-all-control is though the over-all Cosmic Nucleus centered protah coverage that all mental structures enjoy. Collective microvitic mind works for the collective good of the organism and its accompanying structures. The witness and final control of all undeveloped structures are always with the Cosmic Nucleus and it uses cosmic forces like microvita to do the task.

290 I would say in reply that up till now the concept of physical science was that carbon atoms [carbon based structure] are indispensable for the origin of life. After people are acquainted with the theory of microvita, they will no longer subscribe to the old concepts. People will be introduced to higher and subtler formulae than the present ones regarding the internal structure of objects.
Microvita_and_Its_Possible_Effects_on_Society_Section_A.html

When carbonic atoms come together (as happens on some carbon based worlds, like ours) in correct proportion under proper ranges of temperature and atmospheric conditions²⁹¹ life can be expressed. Microvita stirs the cosmic soup with energy. Life slowly emerges as a not too intelligent structure only having the inherent instinctive characteristics of undeveloped mind. It is microvita over the entire universe, which stirs the cosmic soup into life.²⁹²

Current Life theories

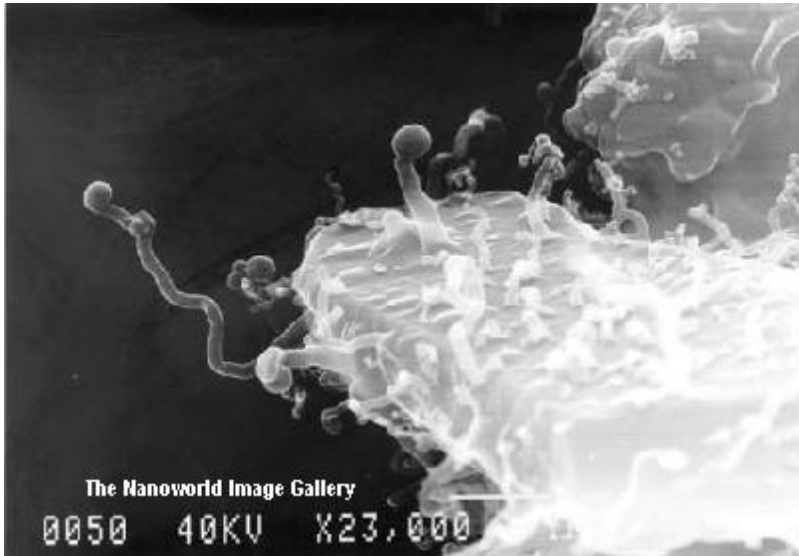
Many current physical life theories abound and are always being proposed.

In 1996 NASA scientists announced the finding of nanofossils in a Martian meteorite ALH84001. Three different DNA analyses of them gave positive results. Structures found inside are similar to what scientists today call nanobes. Nanobes are 6-20 nm in length, which biological conventional wisdom assumes is too small to contain the basic elements for an organism to exist (DNA, plasmids, etc.), suggesting that they may reproduce via some unconventional means, like RNA instead of DNA. This purported find of DNA in nanobe samples may prove otherwise. These finding combine to suggest that life may have been carried across the universe in these type of fossils and possibly landed here on Earth. The first simple cells, called prokaryotes, originated an estimated 3.5 billion years before present. The enzyme ribonuclease-P, which exists in all organisms, is made of protein and is a form of RNA that has enzymatic activity. Based on this evidence, some scientists suspect that the RNA portion of ribonuclease-P may be the modern equivalent of the earliest

291 For the manifestation of life, therefore, a congenial atmosphere is a fundamental necessity. Hence it may be concluded that the resultant internal force expressing itself into life under a congenial environment is what is known as pra'n'a'h or vital energy. Saincara_and_Pranah.html [pre microvita]

292 Now, what is the root cause of this universe? Which is the starting point of life or vitality? These microvita are the carriers of life in different stars, planets and satellites -- not carbon atoms or carbon molecules. These living creatures with their mysterious movement create minds and bodies, living bodies in different celestial bodies, and they also destroy minds and physical bodies, or developed or undeveloped corpor, in any corner of this universe. So the root cause of life is not the unicellular protozoa or unit protoplasmic cell, but this unit microvitum. Microvitum_the_Mysterious_Emanation_of_Cosmic_Factor.html

genetic molecule, the molecule that first enabled replication to occur in primitive cells. Here is a photo of nanobes.



[Image:Nanobe.gif - Wikipedia, the free encyclopedia](#)

Nanobe photo

Walter Gilbert suggested in his *RNA World Hypothesis* of the origin of life that RNA may have acted alone in the past as a hereditary molecule as both the genetic material and the structural and catalytic molecule, rather than dividing these functions between DNA and protein as they are today.

Today scientists are investigating prion theory. Prions have the ability to re-structure the protein in molecules by re-folding the DNA/RNA structure. They have been found to be resistant to heat and even radiation. Radiation itself is well known to be able to affect and modify the genetic structure; although this modification is random and generally destructive to the organism.

Microvita and nanobes

In January 1987 Shrii Shrii Ánandamúrti talked about a micro-organism similar to these nanobes called “krimis”. He says:

“These are the creatures of the primordial stage of creation in this expressed world.... Due to adverse temperatures and barometric

conditions, no creatures can go to other planets under normal conditions. Unicellular creatures, however, have some advantages in this regard. Depending upon their shapes and sizes, krimis can live in stones or any other solid matter, but they normally remain in water and other subtle rudimental factors.“

[Some_Examples_of_Microvita_in_Daily_Life_Section_A.html](#)

But, He also says: **“It is worth mentioning that microvita do not belong to the category of krimi.”** This is because krimis (possibly nanobes) are carbon based life forms and of a completely different size order than microvita.

He also says in other passages that microvita are the carriers of life throughout the universe (not krimis²⁹³). This becomes logical when we think of the (unthinkable) huge distances involved for something physically the size of krimis (nanobes) to travel these distances and the time limits involved using the probable slow meteor type of travel. Nanobes must travel in ordinary space. Microvita do not have to travel in ordinary space. He tells us that microvita move through the cosmic waves or inferences, not through phenomenal space²⁹⁴. Microvita can do this because they are many magnitudes of order smaller and NOT composed of carbon-based structures.

If these ideas are taken to the logical physical limit; then we just get a “smaller and smaller” mechanistic theory. Remember microvita are *not* matter. They are more idea than matter. They travel on macrocosmic inferences across the universe. Mechanistic theories will never work with microvita. Microvita travel (ride, are carried on) cosmic inferences of idea. Idea is *much* smaller than matter.

Taken to the idealistic limit; then a single microvita with some smaller mental RNA type strand, travels on cosmic inferences throughout the universe²⁹⁵, increases in physical volume and energy as it enters phenomenal space of time, place and

293 But the jurisdiction of microvita is far greater than that -- they are not subjected to barometric conditions. Krimis live, grow and decay within the scope of the five fundamental factors, whereas the cruder variety of microvita function within the realm of the five inferences.

[Some_Examples_of_Microvita_in_Daily_Life_Section_A.html](#)

294 In cosmic space, both positive and negative microvita move through the inferences of the cosmic mind -- the internal inferences of the cosmic mind.

[Neohumanism_Is_the_Ultimate_Shelter_Discourse_11.html](#)

295 Now, these microvita move throughout the entire universe, from one celestial body to another. They move everywhere, crossing the boundaries of nebulae, piercing through milkyways, galaxies, stars, satellites, planets and meteors.

[Microvita_the_Mysterious_Emanation_of_Cosmic_Factor.html](#)

person. This could affect the cosmic primordial soup and stir it into life.

Microvita and the Primordial Soup

Certainly there must be a beginning for relative life to start? In other words, mitochondrial DNA did not just appear from nowhere. We know for example, that mitochondrial DNA existed for about 4 billion years. That is, from just after the planet emerged from the molten stages. This is the first point of “congenial environment”, mentioned above. But, how did the process of DNA formation come about from stone and chemicals²⁹⁶?

Allow me to paint a scenario this way. Microvita traveling throughout the cosmos impacted a crude ribonuclease-P molecule. Here microvita act as energizing and activating sources for the initial energizing a primitive ribonuclease-P molecule. These microvita units can travel though space and hostile conditions and impact on the proper cosmic soup of larger molecules, such as amino acids and nucleotides—the building blocks of proteins and nucleic acids with sufficient energy to activate the carbon cycle of life. Molecules are in themselves composed of billions of inactive or neutral minded microvita²⁹⁷. Each atom in itself is composed of billions of neutral microvita in addition to the rudimental factors in requisite proportion. Eventually, as the requirements of complexity and need increased due to changing environments, slowly the nucleated or eukaryotic cell structure developed.

At this point the generally accepted symbiotic theory takes over and accounts for the growth of the mitochondrial type of cell into the nucleus oriented complicated cell structure. Keep in mind that the microvitic collective mind of the cell grows in relation to the collective needs of the organized and more complex unit organism. Here we have a case of microvita impacting molecules

296 The enzyme ribonuclease-P, which exists in all organisms, is made of protein and a form of RNA that has enzymatic activity. Based on this evidence, some scientists suspect that the RNA portion of ribonuclease-P may be the modern equivalent of the earliest genetic molecule, the molecule that first enabled replication to occur in primitive cells. © 1993-2003 Microsoft Corporation.

297...but in the microvita age the biologist will say that the protoplasmic cells are not made of carbon atoms, rather they are the collective solidified form of innumerable microvita.
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and then the overall macrocosmic endoplasmic cosmic mind through its ubiquitous protah aspect being responsible for the abet relative slow growth of a simple structure. This is the opposite of saying that random chaotic mutation of the RNA structure through “survival of the fittest” caused the eventual complex structure. This is the very basic difference between mechanistic Darwinism and the microvita theory of complex development. Here desires or needs of the basic instincts of the cell (and there are only four) cause the microvitic mind structure to cause or make the very slow modifications. Here collective microvitic intelligence combined with overall protah control, not spontaneous generation having one chance in $10^{100,000,000,000\ 298}$, provides the necessary impetus to the primordial soup of life.

Death and Changes in the Species

When we talk about changes in the species, we talk about death. Change includes a very wide spectrum of arenas, from the unit human consciousness to the smallest mitochondrial cell. All die. All allow for the provision of change. Although the result is always changing, the method for that change varies in accordance with the complexity of the structure. Death provides an opportunity for change...Not the cause of the change.

Summary

Microvita theory is the basis for a new generation of biophysics. Shrii Shrii Ánandamúrti saw the microcosmic and macrocosmic worlds directly. His description, although what some may consider rather incomplete, leads us directly onto the path of intuitive understanding of the wholeness of physics. The protah aspect of consciousness that links every particle and atom of the relative phenomenal world together must be understood, at least on our unilateral consciousness level, before us as a whole can make progress in other than our material aspects of existence.

The fundamental concept of our unit mind and therefore consciousness, evolving out of what we presently consider matter, is what places Shrii Shrii Ánandamúrti's complete philosophy far

298 Marowitz, Harold, Energy Flow in Biology, Academic Press, 1968.

in advance of its time. This combined with microvita theory of complex development, allows us to view worlds of understanding never before considered.

Here microvita has been presented as a differently structured collective consciousness, allowing us to start to understand the fundamental cause of not only what we view as animated life, but also allows us to put some general answers to what has been evading us for so many centuries. The microvitic reasons that our unconscious mind functions collectively with all our body parts, without any conscious effort by us.

Lastly, we have looked into the microvitic method that allows collective genetic transference to occur both in the individual and in the species.

Master Saṁskṛta Glossary

abhimána	inflated ego
ácárya m. or ácáryá f.	spiritual teacher qualified to teach all lessons of meditation
adharma	that which goes against dharma
adhruva	changing, transitory
advaita	non-duality
aeshvaryas	eight occult powers: ańimá, to become small (small enough to enter any physical particle or any crevice of another's mind); mahimá, to become large (an expanded mind is omniscient, and feels love for the universe); laghimá, to become light (a light body can fly through air, a light mind can study the minds of others); prápti, to obtain any desired object; iishitva, to control (this supreme control may be used to guide others' minds); vashitva, to psychically dominate others; prakámya, to materialize the desired outcome of events; and antaryámitva, to know the inner thought-wave and the inner need of any entity. these powers are also called "vibhúti". (note that though some of the powers may be used for similar ends, the ends are achieved by different methods)
ágama and nigama	"nigama" means questions on spiritual topics; or the theoretical side of Tantra. "ágama" means answers to the questions; or the practical, applied side of Tantra
agryábuddhi	pointed intellect
aham, ahańtattva	doer "I", ego, second mental subjectivity
ahańkára	false ego, pride
ájñá cakra	see cakra
akhańda kiirtana	continuous kiirtana
amávasyá	new moon

anáhata cakra fourth psychic-nerve plexus, located at the mid-point of the chest; the “yogic heart”.

ánanda divine bliss

Ananda Marga path of divine bliss; Ánanda Marga Pracárika
Saṁgha (Ananda Marga organization)

anitya transient

annamaya kośa the physical body, composed of the five rudimental factors

anucchúnyá unmanifested

anuloma and pratiloma the circumstance of a man marrying below or above his station, respectively, according to caste hierarchy

apara objective; controlled. see also para

aparábhakti attraction to Apra Brahma, the expressed aspect of Brahma. see also parábhakti

aparájiṇána mundane, or worldly, knowledge

aparávidyá knowledge of the mundane

aparokśa ánubhúti direct experience

árádhana irresistible urge for the Lord; forgetting oneself in the pursuit of the Lord

artha anything (especially wealth) that gives temporary relief from suffering

ásana the third limb of aśtámga (eight-limbed) yoga. ásanas: postures for curing physical problems, especially those that interfere with sádhana

ásana shuddhi meditation process to withdraw the mind from body awareness and concentrate it at one point

asat untruth, opposite of Sat

aśtapásha eight fetters of the mind

Asura an Assyrian tribe. among the Indo-Aryans, the term took on in addition the derogatory meaning “monsters”, and came to be applied by them in this sense to certain non-Aryan peoples

átmá, átman soul, consciousness, Puruśa, pure cognition. the átman of the Cosmos is Paramátman, and that of the unit is the jivátman

átmajiṇána self-knowledge

átma-sukha tattva the principle of selfish pleasure

avadhúta m. or avadhútiká f. literally, “one who is thoroughly cleansed mentally and spiritually”; a monk or nun of an order close to the tradition of Shaeva Tantra

Avidyámáyá centrifugal, or extroversal force; aspect of the Cosmic Operative Principle which guides movements from the subtle to the crude. see also Vidyámáyá

ayurveda the Vedic system of medicine

bhaga is a collection of six attributes: aeshvarya; viirya -- valour, command; yasha -- fame, reputation; shríi charm; jiṇána -- knowledge, especially self-knowledge; and vaerágya -- renunciation

Bhagaván the owner of bhaga, one who has fully imbibed the six qualities; Lord

Bhágavata dharma the dharma to attain the Supreme
 bala energy
 bhajana devotional song
 bhakta devotee
 bhakti devotion
 bhakti yoga devotional form of spiritual practice
 bhaktitattva the cult of devotion. see also Indian philosophies
 bhava the expressed universe
 bháva idea, ideation, mental flow
 bháva sádhaná spiritual practice of auto-suggestion
 bhúta, bhútatatva, mahábhúta rudimental, or rudimental, factor of
 matter. the five bhútas are the ethereal, the aerial, the luminous, the liquid and
 the solid; and they carry, respectively, the tanmátras of sound, touch, form, taste
 and smell
 bija mantra acoustic root; particular sound vibration from
 which a particular type of action stems
 Brahma Supreme Entity, comprising both Puruśa, or Shiva, and
 Prakṛti, or Shakti
 Brahma Cakra The Cosmic Cycle -- the cycle of creation out of
 Consciousness, and dissolution back into Consciousness, through sañcara and
 pratisañcara
 Bráhmaṇa (Brahman) The uppermost social group in India, who
 traditionally perform priestly functions or live by intellectual labour
 Brahmatva Brahma-hood, supreme stance
 Brahmaváda philosophical system of which Brahma is the essence
 bodhi intuition
 buddhi, buddhitattva intellect
 cakra cycle or circle; psycho-spiritual centre, or plexus. the cakras
 in the human body are all located along the susumná canal which passes through
 the length of the spinal column and extends up to the crown of the head. some
 cakras, however, are associated with external concentration points. the
 concentration points: (1) for the múládhára cakra, the base of the spine, above
 the perineum; (2) for the svádhishthána, the genital organ; (3) for the mañipura,
 the navel; (4) for the anáhata, the midpoint of the chest; (5) for the vishuddha,
 the throat; (6) for the ájñá, between the eyebrows; and (7) for the sahasrára, the
 crown of the head
 Citishakti Cognitive Principle, Puruśa, Pure Consciousness
 citta done "I", objective "I", objective mind, mind-stuff
 dádá literally, "elder brother"; may refer to an ácárya of Ananda
 Marga
 Dakṣiñácára Tantra A school of Tantra that attempts to control
 Máya through propitiation or appeasement
 dásya bháva the devotional attitude of looking upon oneself as the
 servant of the Lord
 deva mythologically, a god, a deity; philosophically, any vibration,
 or expression, emanating from the Cosmic Nucleus

devatá mythologically, a god or goddess; philosophically, a minor expression of a deva, controlled and supervised by the deva (deva and devatá are sometimes used interchangeably)

devii a goddess, a female deity

dhāraṇā the sixth limb of aṣṭāṅga (eight-limbed) yoga: restricting the flow of mind to particular points in the body; conception. (Tattva dhāraṇā means restricting the flow of mind to, or conception of, the rudimental factors.)

dharma characteristic property; spirituality; the path of righteousness in social affairs

dharma rājya literally, “reign of dharma”; rule of moralism

dharmacakra collective meditation; Buddha’s “wheel of dharma”

dharmakṣetra the battlefield of the Mahābhārata war; the physical body (as the only venue in which dharma sādhanā can be performed)

dhārmika adjective of dharma

dhyāna the seventh limb of aṣṭāṅga (eight-limbed) yoga: meditation in which the psyche is directed towards Consciousness

dhyāna mantra Sanskrit verse listing the attributes of a deity, to be used for visualizing that deity in meditation

didi literally, “elder sister”; may refer to an ācāryā of Ananda

Marga

dvaeta duality

dvaetādvāeta dualistic non-duality

Dvāpara Yuga see yugas

ekādashī “eleventh” day after the new moon or full moon, days on which fasting is especially advantageous

gati mobility, movement

giita song

gopa m. or gopī f. village cowherd boy or girl; devotees of the Lord

guṇa binding factor or principle; attribute; quality. Prakṛti, the Cosmic Operative Principle, is composed of: sattvaguṇa, the sentient principle; rajoguṇa, the mutative principle; and tamoguṇa, the static principle

guru mantra “important” mantra, learned as a lesson of Ananda

Marga sādhanā

hiraṇmaya kośa the subtlest of the kośas

hlādinī shakti, Rādhikā shakti an expression of vidyā shakti, or Vidyāmāyā, which one experiences as a desire to do something practical towards spiritual attainment

Iśhvara the Cosmic Controller; literally, “the Controller of all controllers”

jagat world, universe

Janya Iśhvara Sāṃkhya concept of a Cosmic entity instrumental for creation

jīva an individual being

jīvabhāva finite subjectivity, feeling of the unit state, sense of the unit identity, microcosmic bearing

jīvātmā, jīvātman see ātmā

jñāna knowledge; understanding

jñána yoga a form of spiritual practice which emphasizes discrimination or intellectual understanding
 jñánii a sádha who follows the path of knowledge or discrimination
 kalá flow with curvature, in a stage of the Cosmic Cycle dominated by the mutative principle
 kaola one who practises kula sádhana and is adept at raising one's own kuṇḍalinii
 Kaoravas sons of king Dhritarastra, the adharmik forces in the Mahábhárata war
 kapálaka sádhana a form of spiritual practice which causes the aspirant to confront and overcome all the inherent fetters and enemies of the human mind
 kapha see váyu, pitta, kapha and rakta
 karma action; sometimes, positive or negative action which produces saṁskáras
 karma yoga a form of spiritual practice which emphasizes selfless action
 karmii a sádha who follows the path of action or work
 kiirtana collective singing of the name of the Lord, sometimes combined with a dance that expresses the spirit of surrender
 kośa "level" or "layer" of the mind (either Macrocosmic Mind or microcosmic mind) in terms of its degree of subtlety or crudeness
 krpá spiritual grace
 Kṛṣṇasundaram Kṛṣṇa the Beautiful
 kṣátriya a person whose mentality is to dominate over matter; written as "Kṣátriya", a member of the second-highest caste in India
 kuṇḍalinii, kulakuṇḍalinii literally, "coiled serpentine"; sleeping divinity; the force dormant in the kula (lowest vertebra) of the body, which, when awakened, rises up the spinal column to develop all one's spiritual potentialities
 Kurukṣetra the battlefield of the Mahábhárata war; the world (since it is as if the world is always saying,
 lilá divine sport
 loka a "level", or "layer", or "sphere" of the Macrocosmic Mind
 Mahábhárata "Great India"; the name of a military campaign guided by Lord Kṛṣṇa around 1500 BCE to unify India; the epic poem written by Maharshi Vyasa about this campaign
 Mahákaola a Tantric guru who can raise not only his own kuṇḍalinii, but those of others also; in Buddhist Tantra, Mahákaola is sometimes symbolic of Parama Puruṣa
 Mahápuruṣa a person highly evolved psychically and spiritually, especially one who has consequently developed a charisma felt by other people
 Mahásambhúti when Táraka Brahma utilizes the five rudimental factors to express Himself through a body, this is known as His Mahásambhúti
 mahat, mahattattva "I" ("I am," "I exist") feeling, existential
 "I"

mantra a sound or collection of sounds which, when meditated upon, will lead to spiritual liberation. a mantra is incantative, pulsative, and ideative
mantra caetanya the awakening of a mantra; conceptual understanding of and psychic association with a mantra

márga path

Margi a member of Ananda Marga

Máyá Creative Principle, Prakrti in Her phase of creation. also, the power of the Creative Principle to cause the illusion that the finite created objects are the ultimate truth

Máyáváda doctrine of illusion. see also Indian philosophies

metazoic mind complex type mind using acquaintance, experience and microvitic endoplasmic coverage

mithyá false, unreal

mokśa spiritual emancipation, non-qualified liberation

mudrá meaningful gesture; a yogic exercise similar to an ásana but incorporating more ideation

mukti spiritual liberation

múládhára cakra lowest, or basal, psychic-spiritual centre, or plexus, located just above the base of the spine. see also cakra

muni a saintly person devoted to intellectual pursuits

náda flow without curvature in a stage of Brahma Cakra dominated by the sentient principle

nádii psychic-energy channel; nerve

namah salutations

Naráyaṇa the Supreme Entity; literally, “the Lord of Nára (Prakrti)”

niiti morality

Nirguṇa Brahma Brahma unaffected by the guṇas; non-qualified Brahma

onm, oṃkára the sound of the first vibration of creation; the bijja mantra (acoustic root) of the expressed universe. oṃkára literally means “the sound onm”

ota yoga the association of Puruśottama with each unit creation individually in pratisaincara

painca bhútas five rudimental or rudimental factors -- ethereal, aerial, luminous, liquid and solid

Pandavas the sons of king Pandu, the dharmic forces in the Mahábhárata war

pápa sin

pápii sinner

para subjective; controlling. see also apara

parábhakti highest devotion to the Supreme; devotion to Para Brahma, the unexpressed aspect of Brahma. see also aparábhakti

parájiṇána spiritual knowledge

Paramá Prakrti Supreme Operative Principle

Parama Puruśa Supreme Consciousness

Paramashiva see Puruśottama

Paramátmá, Paramátman Supreme Consciousness in the role of witness of His own macropsychic conation. Paramátman comprises: (1) Puruśottama, the Macrocosmic Nucleus; (2) Puruśottamá's association with all creation in His extroversal movement (protá yoga); and (3) Puruśottamá's association with each unit creation individually (otá yoga) and (4) with all collectively (protá yoga) in His introversal movement

paráshakti introversive pervasive force

parávidyá spiritual knowledge, knowledge of the Great

parokśa ánu bhúti indirect knowledge or experience

Párthasárathi literally, "Arjuna's charioteer"; Kṛṣṇa in the role of a king

pátaka sin. there are two kinds: pápa, sin of commission, and pratyaváya, sin of omission

pitta see váyu, pitta, kapha and rakta

Prabháta Samgiita a collection of 5018 spiritual and psychospiritual songs composed by Prabhat Ranjan Sarkar (Shrii Shrii Ánandamúrti)

Prakṛti, Paramá Prakṛti Cosmic Operative Principle

Prakṛtitattva essence of Prakṛti

práña energy; vital energy

práñáh vital energy

práñasha dissolution, total annihilation

práñáyama the fourth limb of ástámga (eight-limbed) yoga:

process of controlling vital energy by controlling the breath. a lesson of Ananda Marga sáadhaná

prapatti "whatever is taking place in the universe is all due to the cosmic will".

pratisaincara in the Cosmic Cycle, the step-by-step introversion and subtilization of consciousness from the state of solid matter to the Nucleus Consciousness. ("prati" means "counter" and "saincara" means "movement")

pratyáhára the fifth limb of ástámga (eight-limbed) yoga: withdrawing the mind from absorption in the physical senses

protá yoga the association of Puruśottama with all creation in His extroversive movement and with all the unit creations collectively in His introversive movement

purána mythological story with a moral import; educative fiction

purashcaraña upward movement of the kulakuṇḍalinii from múládhára cakra to sahasrára cakra, including the phases of mantrágháta and mantra caetanya

Puruśa Consciousness. Supreme Consciousness, the consciousness of the Cosmos, is Parama Puruśa, and a unit consciousness is an ánu puruśa

Puruśadeha the entire created substance, causal, subtle and crude, of the Macrocosm; Cosmic "I" + Cosmic doer "I" + Cosmic done "I"

protozoic mind citta type physical mind guided by instinct only and unit existential I

Puruṣottama Paramashiva the Nucleus Consciousness, the witness of saincara (extroversion from the Nucleus) and pratisaincara (introversion to the Nucleus)

quinquelemental composed of the ethereal, aerial, luminous, liquid and solid factors, or elements

Rádha bháva, madhura bháva “Rádha bháva” means literally the devotional attitude which Rádha held as the beloved of Kṛṣṇa. “madhura bháva” means literally the “sweet”, or “honey”, devotional attitude

rajoguṇa see guṇas

rakta see váyu, pitta, kapha and rakta

Rámáyāna an epic poem of India. it is the story of king Rama, or Ramchandra

Rárh the territory, mostly in Bengal, stretching from the west bank of the Bhagirathi River to the Parasnath Hills

rasa cosmic flow; taste

rásaliilá “Parama Puruṣa has created an endless network of waves from the Cosmic Nucleus according to his own sweet will . . . each of these waves is a deva, but the fundament upon which these waves have been created is called rasa . . . the divine sport of these innumerable waves is called the rásaliilá”

rśi sage; one who, by inventing new things, broadens the path of progress of human society

rúpa tanmátra inferential waves conveying vision, i.e., the sense of form. see also tanmátra

Sadāshiva Shiva (literally, “eternal Shiva”)

sádha spiritual practitioner

sádhana literally, “sustained effort”; spiritual practice; meditation

sádhu virtuous person, spiritual aspirant. see also sádha

sadrsha parináma homogenesis, a sequence of similarity of curvatures in the phase of creation dominated by rajoguṇa

sadvipra spiritual revolutionary

Saguṇa Brahma Brahma affected by the guṇas ; qualified Brahma

sahasrára cakra highest, or pineal, psychic nerve plexus, located at the crown of the head

saincara in the Cosmic Cycle, the step-by-step extroversion and crudification of consciousness from the Nucleus Consciousness to the state of solid matter. (saincara literally means “movement”)

samádhi “absorption” of the unit mind into the Cosmic Mind (savikalpa samádhi) or into the átman (nirvikalpa samádhi); there are also various kinds of samádhi that involve only partial absorption and have their own distinguishing characteristics, according to the technique of spiritual practice followed

samāja society

samāja cakra social cycle

sama-samāja tattva the principle of social equality

saṁsára	the world as a dimension of relentless, unceasing movement
saṁskára	mental reactive momentum, potential
mental reaction	
samvit shakti	an expression of vidyá shakti, or Vidyámáyá, which one experiences as the realization that life has a higher purpose
sannyásii m. or sannyásinii f.	literally, “one who has surrendered one’s everything to the Cosmic will” or “one who ensconces oneself in Sat, the unchangeable entity”; a renunciant
sārathi	charioteer
Sat, Satya, Satyam	“that which undergoes no change”;
Absolute Reality	
satsaunga	good company
sattvaguṇa	see guṇas
shabda	sound
Shaeva Dharma	Shaivism; the theoretical or philosophical side of spirituality as taught by Shiva
Shaeva Tantra	Shiva Tantra; the applied, or practical side of spirituality as taught by Shiva
shákta	a follower of Sháktácára, the Shakti Cult; hence, any aspirant who embodies the characteristics of Sháktácára, especially the judicious application of power
Shakti	Prakrti; energy; a deification of Prakrti
Shambhúliunga	fundamental positivity
shástra	scripture
Shiva	a great Tantric guru of 5000 BCE who guided society while His mind was absorbed in Consciousness; hence, Infinite Consciousness, Puruśa
Shivabháva	the stance, or bearing, of Infinite Consciousness
Shiva-liunga	originally a phallic symbol, later given philosophical significance as “the entity from which all things originate”
shloka	a Sanskrit couplet expressing one idea
shúdra	Written as “shúdra”, a person with a mentality of physical enjoyment only, a member of the labourer social class; written as “Shúdra”, a member of the lowest caste in India.
siddha mantra	a mantra “perfected” by the guru
siddhi	Self-realization; spiritual attainment
svarúpa parińáma	homomorphic evolution, a state before creation in which all the guṇas are in equipoise
Svayambhúliunga	ultimate point of negativity, or crudity, in the human body
tamoguṇa	see guṇas
tándava	a vigorous dance for male spiritual aspirants, originally formulated by Shiva. it develops the glands in a way that enhances courage and fearlessness. when Shiva Himself does this dance (Shiva Nańarája), the dance becomes a metaphor in which Supreme Consciousness sends

tanmātra literally, “minutest fraction of that,” i.e., of a given rudimental factor of matter. also translated “generic essence” or “inferential wave”. the various types of tanmātras convey the senses of hearing, touch, form (vision), taste and smell

Táraka Brahma	Supreme Consciousness in Its liberating aspect
upadharmanas	secondary dharmanas
upádhi and padavii	the special and ordinary quality or
characteristic of anything	

vaeshya a person of acquisitive mentality, a member of the capitalist social class; written as “Vaeshya”, a member of the second-lowest caste in India

vāyu, pitta, kapha and rakta vāyu comprises (1) the ten basic energy flows in the body, performing specific functions; (2) the gas that is created in the digestive tract when the energy flows become distorted. pitta is the expression of the luminous (fire) factor in the human body, responsible for digestion and preservation of body heat. Examples of pitta are the liver bile and pancreatic juice. kapha denotes mucus, phlegm, and all physical factors (such as some factors of the blood) which tend to create mucus. rakta is blood

Vidyámáyá centripetal, or introversal force; force of attraction to the Nucleus Consciousness; aspect of the Cosmic Operative Principle which guides movements from the crude to the subtle. see also Avidyámáyá

vikṣepa śakti an expression of avidyā śakti, or Avidyāmāyā, which one experiences as the delusion that if one remains aloof from the Supreme, the Supreme will not be in a position to control his or her destiny

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vipra a person who controls others by his wits, a member of the intellectual social class; written as “Vipra”, a member of the highest caste in India.

viveka conscience, power of discrimination between good and evil

vraja the spirit of joyful movement
Vrajagopála Vraja Kṛṣṇa as “that entity who takes people forward through joy, amidst various expressions of bliss”

vr̥tti mental propensity

Yama and Niyama moral codes

yoga spiritual practice leading to unification of the unit
ātman with Paramātmān

yugas the mythological four ages (Satya Yuga, or Golden Age, Treta Yuga, or Silver Age, Dvāpara Yuga, or Copper Age, and Kali Yuga, or Iron Age), representing the step-by-step decline of morality and spirituality

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