

ॐ



AKHAND SUTRA

Integrating Thread of Nature

Dr. Shiv Bhushan Sharma

AKHAND SUTRA
Integrating Thread of Nature

Dr. Shiv Bhushan Sharma
Akhand Vidyashram

Akhand Vidyashram
AKHAND SUTRA
Integrating Thread of Nature

Copyright © 2018
Dr. Shiv Bhushan Sharma

ISBN: 978-93-5311-003-1
Copyright (Government of India): L-76105/2018.

Email: akhandsutra@gmail.com
Email: akhandvidya@yahoo.co.in
Website: www.akhandvidyashram.com

All rights reserved.

No part of the publication may be reproduced in any form
without the prior written permission of the publishers.

Concept, Compilation, Tabulation, Graphics, Designs, Editing:
Dr. Shiv Bhushan Sharma

Published by:
Akhand Vidyashram,
Villa - 248-249,
Villa Green Vista,
21, Kayar Village, Kolathur Forest,
Chennai - 603 110, India

Printed by:
Print Needs, Triplicane, Chennai-600 005

Layout by: Beackon Medias, Chennai - 600 005
Date: Vijaydashmi Day, 19.10.2018
Price: Rs. 300.00

Dedicated to

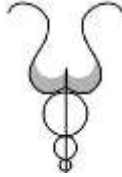
MAITRI

The Symbol of Trust, Loyalty,
Love, Friendship and Understanding

CONTENTS

1. INTRODUCTION	1
2. AKHAND VIDYA	13
3. THE GOLDEN RATIO	19
4. ANCIENT INDIAN WISDOM	25
5. DIVYANK	31
6. THE BASIC CHEMISTRY	39
7. THE FUNCTIONAL ANATOMY	51
8. AHAM BRAHMASMI	91
9. TRAIT PARA VIDYA	101
10. TANTRA VIDYA	105
11. MANTRA VIDYA	119
12. YANTRA VIDYA	137
13. AYURVEDA	153
14. SCIENCE OF AKHAND YOGA	161
15. THE SCIENTIFIC EVALUATION	181
16. SARANSH	193

ONE



INTRODUCTION

The fundamental objective of every living human being is perfect health, wealth, wisdom, comforts and eternally blissful long life.

Does anyone deny these achievable objectives of life? No.

We can add enlightenment, Self-Realization and Moksha to the list.

It is very unfortunate that, in reality, we fail to achieve even the basic objective of disease free healthy life itself. Why?

There are many reasons but the main reason is our ignorance and the lack of right knowledge of our innate nature and the divine Nature.

The prime objective of Akhand Sutra is to explore and cognize the ultimate design of Nature with which the perfect objects of Nature including the perfect human beings are created. It is a difficult task but I am certain that we can easily find the ultimate divine design.

Let us start with few known and enlightening spiritual statements.

We are the greatest and most evolved creation of the God.

We are made in the Image of God, the Creator.

We are “The Guardians” of the World and the Divine Nature.

We are microcosmic reflection of the macrocosmic universe.

We are born with human Soul, which originates from the God.

Soul is an immortal bridge between human body and the God.

We have evolved from minerals via plants and animals.

●ShivBhushan Sharma

Every aspect of Nature is represented within the human body.

The ancient Indian Sages cognized the secrets of Nature directly.

The secrets were hidden in the ancient Indian stories and verses.

At the outset, let me admit that Akhand Sutra is primarily based on my intuitive dialogue with my indwelling Soul (*Antaratma*).

Now, let us first comprehend the real meaning of the perfect health.

PERFECT HEALTH

Perfect health does not mean the absence of diseases only.

It includes the physical, emotional, mental, social, religious and spiritual aspects of health and well being. It has an holistic approach.

Wealth: Health is wealth. We should also add the right education, intellect, wisdom, blissful mind, enlightenment and empowerment as everlasting and imperishable sources of eternal wealth.

Integral Approach: We need to formulate an integrated system of the medical education, research, diagnosis and management, which can help us curtail the ageing process and prevent the common diseases.

THE REAL PROBLEM

It is generally believed that most of our real problems relate to our fluctuating relationship with the external world, which is constantly changing and our inner world of Soul, which is stable and blissful.

Is this dichotomy, the sole reason for our sufferings?

Is our external world separate from our internal world?

Is the external world constantly changing in real terms?

Do we really cognize the true nature of our mind?

Do we comprehend the reality of the Universal Consciousness?

Let us explore and find the underlying Truth and Wisdom.

For spiritual persons, the subtle spiritual world of heaven is the real world while the gross existential world is just a myth.

For modern scientists, the gross existential world of matter is the reality while the subtle spiritual world is just a myth.

For philosophers, the external and internal worlds have different connotations and they have not come to any conclusion even after thousands of years of discussions and deliberations etc.

For psychologists, the uncontrolled fluctuating emotions and mind of an individual is the root cause of his/her problems.

For physiologists, extra cellular fluid (E. C. F.) forms the external world and intra cellular fluid (I. C. F.) forms the internal world.

The constant maintenance of homeostasis between E. C. F./I. C. F. leads to disease free healthy life. The disturbances in homeostasis leads to the creation of different diseases of the body and the mind.

The External World: For most of us, the world is highly relative.

The confusion is primarily due to our relative thoughts and actions, which are driven by the fluctuating external factors. Hence, the real problem is multi-dimensional but the solution is very easy.

AN EASY SOLUTION

Whenever we are in dire need or state of distress, we invariably look towards the sky/cosmos/heaven/universe/God. Why?

There is an eternal harmony and peace in the cosmos/heaven.

We need to comprehend the real meaning and concept of God.

Let us first comprehend the real meaning of Akhand Sutra.

AKHAND

Akhand is derived from Sanskrit word, *Akhandam*, which means the flawless, perfect, indivisible, complete, impeccable, indestructible, inexhaustible, inextinguishable, ultimate, infinite and absolute etc.

Akhand also means integration. Sutra means aphorism and thread.

Hence, Akhand Sutra is that integrating thread with which the Gems of the ancient Indian wisdom and the modern sciences are woven.

THE GRADUAL UNFOLDING

I would have loved to author my autobiography, but since, the prime objective of Akhand Sutra is to lay foundation for genuine Spiritual Science, I have decided to compile a classified document, which can be easily read, studied, understood and applied by every person.

I also realize that without the help of few major turning points of my life, it may not be easy to comprehend the real beauty of this book.

Now, let me share the highlight of few turning events of present life.

My life can be divided into four phases of 22 years each.

The Student Phase.

The Professional Phase.

The Spiritual Unfolding Phase.

The Integration and Explanation Phase.

The Student Phase: 1952

It is said that the Soul can choose the place-time of birth, parents, associates, profession and even the spiritual path before the birth.

I was born at Katra, at the feet of Trikuta Mountain, the abode of Shri Mata Vaishno Devi, Jammu, India, on 29, March, 1952.

I suppose, I chose Katra to grow and evolve at the feet of the Divine Mother. She is my chosen deity, shield, protector and guide etc. I am certain that I chose my parents, Shri Hiralal Sadhotra and Shrimati Uma Devi, for their loving, caring and magnanimous nature. They also taught me the value of Self-Surrender to the Almighty.

Early childhood: My father had a nomadic food catering business.

The summer was spent in Srinagar and the winter was spent at Katra.

As a result, I was not exposed to any formal training. The perfect and most beautiful objects and subjects of Nature were my teachers.

I loved to draw the multi-dimensional pictures of Nature. I am glad that I got admission in Government High School, Katra, at the age of

seven years only. As a result, my brain was allowed to develop an integrated nervous system and inquisitive mind and consciousness.

Now, I am more in tune with the Nature and my intellectual strength lies in my multilateral artistic, intuitive mind and the mathematical brain. As a child, I wanted to do research in abstract mathematics but I realize that the Almighty God had different plans for me.

It is said that the man proposes and the God disposes. July, 1964, my father suffered from paralytic stroke and he did not recover fully due to lack of adequate medical facilities and financial constraints etc. Unfortunately, he could not continue with his business too. At the young age of just twelve years, I decided to pursue medical studies to serve the poor and needy suffering humanity for life.

This was my first inner call and the turning point of spiritual life.

SOUL CONSCIOUSNESS

I also felt that to get admission in an excellent medical college with merit scholarship and other advantages, I have to leave home and study in a better school. In 1965, I joined SRML Higher Secondary School, Jammu. The school is considered one of the best schools of Jammu and Kashmir state. The school is known for Golden section and special training program for good students, who want to excel in academics. After one year (1965-66) in 9A Golden section, I opted out of 10K and 11C Golden sections. I am convinced that a good student can excel in any class provided he is a genuine seeker of wisdom and can make optimum use of every good teacher. The God always helps seekers of Truth. I am glad that I got to master the fundamental wisdom of mathematics, physics, chemistry, biology and other arts and science subjects in Katra and Jammu schools.

In 1967, I topped the Core (10) examination of Jammu and Kashmir Board of Secondary Education, Srinagar, with a huge margin of 5% marks between me and the second rank. It may be a rare record? In 1968, I topped in Elective (11) examination (Medical) of the Board.

As a result of my consistent academic performance and conduct, I received “The Exemplary Conduct and Character Certificate” from the school. I suppose, it is a rare reward and honor at school level.

●ShivBhushan Sharma

Nothing succeeds like success. Once you taste success then success takes over. Exemplary success laid a strong foundation to build on.

In 1968, I got direct nomination for one of the two medical seats reserved for Jammu and Kashmir state students in Tamilnadu. I also received the prestigious National Merit Scholarship. Because of the financial constraints, I took educational loan from the Government of Jammu and Kashmir. The loan was repaid after starting medical practice. The loan taught me the art of budgeting and the optimum utilization of every available resource for the benefit of everyone.

In 1968-69, I studied in Loyola College, a premier Science College.

1969, I joined Madras Medical College, Madras, one of the oldest and leading medical colleges of India. I am glad that my academic performance in both the colleges was equally exemplary. I am also glad that I was trained as clinician and I could give the perfect final diagnosis of almost every disease within few minutes without the aid of any investigation. I also got to master the depth knowledge of every medical subject from the best and renowned international books and the best medical teachers, doctors and scholars of India.

The college had an excellent library and I could also take part in few extra-curricular activities. These helped me to widen my vision and develop a big circle of friends and associates. The final examination was held in December, 1973. I passed all the examinations of the college in first attempt with good grades, which included distinction and double distinction too. This was considered a rare achievement. I am glad that my first phase of life was very successful and a strong foundation was also laid for genuine spiritual science unfolding.

The Professional Phase: 1974

In 1974, I had to go through an intense internship of one year. I got practical training to diagnose and manage almost every medical and surgical emergency with ease in Government General Hospital and other affiliated reputed medical institutions. I feel truly blessed.

In 1975, I started Uma Clinic, a private family medical practice in Triplicane, Chennai. Meantime, I got trained in General Surgery, ENT Surgery and Plastic Surgery to enhance my surgical skills.

Being an artist, surgery was easy but within few years of surgical practice I realized that I was focusing on limited aspects of human body and not the complete human being. I decided to concentrate on general family medical practice and the psycho-somatic disorders. To help my poor patients I started medicine dispensing counter in the clinic. Meantime, I also found that the good quality medicines were not easily available for dispensing purposes. Hence, in 1980, I started Akhand Pharma to manufacture excellent quality medicines at most economical rates for the benefit of poor and needy patients. With due humility, I admit that despite all my sincere intentions and efforts, I was not able to give full relief to all my patients. Hence, I decided to master alternative methods, like Ayurveda, Homeopathy, Naturopathy, Yoga and Healing etc, to compliment the allopathic system. These systems made me recognize the subtle aspects of the adult human anatomy, physiology, biochemistry and psychology. It is said that when student is ready, the teacher (*Guru*) comes and reveals the secret of inner life. The time had come for the unfolding of the deeper layers of human mind, consciousness, the Soul and the absolute wisdom, knowing which everything else is known.

THE REAL TURNING POINT

1991, I was initiated into Kundalini Yoga by Maharishi Vethathiri. It was an amazing experience. During the initiation, I experienced the movement of a mysterious force, Kundalini, via a subtle channel (Nadi) from the middle of upper abdomen (Manipura Chakra) to the forehead (Ajna Chakra). It resulted in heaviness of the head and no medicine could relieve it. Interestingly, a healer relieved it with his hands within few minutes. I was astonished. For a physician, the art of natural healing was a boon. I decided to learn the theory of Yoga, Kundalini, Chakras, Nadis, Tantra and healing techniques etc. After careful study, I found that most of the commentaries on the above subjects were different and contrary to my experiences. I got confused. Hence, I decided to study the original Sanskrit scriptures. I am glad that I found the original scriptures perfect, beautiful and easy to study and understand. We should study the original works

●ShivBhushan Sharma

after comprehending their core concept, theme and message. The literal translation of even the most beautiful and perfect scripture can be highly confusing and misleading. It should be avoided.

In 1993, on the advise of Prof. A. Namasivayam, my college teacher and Guide, I decided to do research on Psycho-physiology of Yoga and registered for PhD with the University of Madras. I designed a new research method and became “The Main Subject” of research.

The theme of research was to find the objective basis of subjective experiences of Yoga. To start with, I recorded the findings of every vital biophysical parameter of my body. The main emphasis was the recording of electro-encephalgram (EEG). Somehow, I did not find any significant change in most of the vital biophysical parameters even after two years of regular and conscientious practice of Yoga.

Fortunately, in 1995, I found that I could reproduce alpha rhythm in the occipital region of my brain after opening the eyes. This was an unusual and unexpected finding. Normally, after opening the eyes, the slow alpha rhythm is replaced by the fast beta rhythm. This is normal physiological phenomenon called the alpha block or de-synchronization. It means that with Kundalini Yoga I was able to synchronize the electrical activity of brain after opening the eyes. This was a highly significant and new research finding. Fortunately, it opened Pandora's Box to be explored and to gain the insight of the deeper layers of brain, senses, mind, consciousness and Soul etc.

In 1995, I recorded electro-encephalgrams of many control subjects, who were doing regular meditation or Yoga for many years. To my surprise, I found that no one could reproduce predominant alpha rhythm after opening the eyes and I could not find any logical reason for their failure. I still believe that every normal healthy adult, who is free from the fluctuations of mind, can easily do it.

I prayed to Mata Vaishno Devi, my chosen deity, for an answer.

Immediately, I heard “The Voice of Silence” from within saying, “Welcome, you have come back home. Just follow the Voice and everything will be revealed to you in due course”. I trusted the Voice

of Silence/Intuition/Soul and decided to flow with it.

The first instruction was to start a Charitable Trust. On Vijaydashmi, 3rd October, 1995, I founded Akhand Foundation in Chennai.

Next, I was asked to design a symbol for Akhand Foundation.

Acknowledgment: At the outset, I admit that I was literally guided by “the Voice of Silence” to design a symbol in nine simple and easy steps. At the end of ninth step, I was asked to stop. I was surprised. The symbol was very simple but when I was told that the symbol is a graphic representation of Gayatri Mantra, I could not believe. No one had ever succeeded in converting Gayatri Mantra into a picture.

Big Question? How can a symbol represent the Greatest Mantra?

The next day, I bought ten books on Gayatri Mantra. After studying the books, I realized that the essence of every book could be easily explained with the symbol. I called the symbol, “Gayatri”.

The Spiritual Unfolding Phase: 1996

In 1996, I designed a Greeting card to explain the Gayatri Mantra.

Next, I was asked to improvise Gayatri symbol with certain visions seen during earlier sessions of meditation. The new symbol made me understand and appreciate the beauty and significance of the pictures of Sri Dattatreya and Sri Gayatri. I called it “Datta-Gayatri”. Thereafter, every new emerging symbol became the focus of my meditation. I am glad that I was able to add new Gems of spiritual wisdom to the existing symbol without changing the original design.

Meantime, I continued with the studies of the Vedas, Upanishads, Tantra, Gita, Puranas, Indian Epics and scriptures. The improvised symbols made me realize the real beauty of ancient Indian scriptures.

My real understanding of “The Science of Yoga” came only after reading Patanjali Yogasutras and Sat-Chakra-Nirupana. Both are highly classified documents and these helped me to formulate the principles of Akhand Yoga, an integrated system of Yoga.

In 1998, I could reproduce predominant alpha rhythm throughout

●ShivBhushan Sharma

the brain after opening the eyes. Meantime, I realized that for quantitative power spectrum analysis of EEG, we need to convert the qualitative analog signals into the digital signals. I am grateful to Dr. A. C. Gangadhar for helping me to do power spectrum analysis. Incidentally, this research work is first of its kind in Yogic Sciences. In 2000, my first son, Avinash, left for America for higher education.

In 2001, I was awarded PhD. I am glad that my PhD work was called “Highly Commendable”, unusual, timely, unique, original and path breaking by the American and Indian examiners and others.

In 2002, the new improvised symbol was called “Akhand”. It made me comprehend the deeper aspects of ancient Indian wisdom in the light of modern sciences. “Akhand” adorns the front page of my first book, “AKHAND An essence of Universal Consciousness”. It is my first sincere attempt to bridge the gap between the ancient Indian wisdom and the modern sciences. The book is worth reading.

In 2004, my second son, Dhruv, left for America for higher studies.

I am glad that my sons had the privilege of learning from the great teachers of the renowned schools, colleges and universities of India, America and Canada. I am proud of them and their achievements.

ANOTHER TURNING POINT

I am convinced that the God is playing and enjoying the Supreme drama of life through his creations and we are only his instruments.

In 2005, due to unavoidable circumstances, I had to close Akhand Pharma and Uma Clinic and leave for Bangalore after settling every one connected with my profession, business or life. Later, I joined Shri Mata Vaishno Devi University, Katra, as visiting Associate Professor. I was recognized as Spiritual Scientist and served as the Dean of Students, the Editor and the first Chairman of the University Publications. An unexpected honor and opportunity! I am glad that I could redesign the university Annual Report and Prospectus etc.

I am delighted that SMVD Publication archive start with my works.

I am certain that I was called back to my home town, Katra, by Mata

Vaishno Devi, to meditate and evolve under her guidance. My two books, *The Living Divine Mother* and *Mata Vaishno Devi*, show and prove that Mata Vaishno Devi is an incarnation of Goddess Durga with unflinching material evidence. The books are true revelations.

2006, I had to come back to Chennai for unavoidable reasons.

Later, I joined Chettinad Hospital and Research Institute, Chennai.

In 2009, I was recognized as PhD Guide of Chettinad Academy of Research and Education (CARE), a new deemed university. I had the golden opportunity of guiding Dr. Prasunpriya Nayak, the first successful PhD candidate. We authored nine original articles. The first article was cited for more than 20 times even before Public Viva Voce. This may be a record for any new university in the world.

In 2011, I was asked to design and execute M. Sc. Health and Yoga course. This was another golden opportunity to translate and explain ten core subjects of Health and Yoga in the light of modern sciences. During the course, I realized that there are ten major Chakras and ten levels of consciousness and not seven as described by Sat-Chakra-Nirupana and Tantra and their association with ten major endocrine glands and ten major ganglia of the autonomic nervous system.

In 2013, with the addition of three more Chakras, the symbol, “Akhand” was further improvised and called as “Sri Akhand”.

Meantime, I was asked to teach the basic medical science subjects to the medical, dental, nursing and allied health science students and also contribute towards the medical research and publications etc.

A NEW AWARENESS

Coming back to medical college for second innings was a big boon.

After joining medical college to teach medical subjects, I realized that, in the name of evidence based medicine, the medical education, research and profession are primarily focused on the diagnosis and treatment of diseases. No one is trying to find and teach the perfect adult human anatomy, physiology and biochemistry. No one talks of single and most reliable value of every vital biophysical parameter of human body and prevention of common preventable diseases etc. This is highly confusing and

●ShivBhushan Sharma

misleading. We need to change this.

In 2015, with the help of Dr. S. Govindrajulu, I calculated the five digits of Divyank, the Divine Constant, with which the perfect and most beautiful objects of Nature are designed and created.

As a result, I could improvise the original mathematical design I had proposed in Akhand An Essence of Universal Consciousness. My last book, Divyank, the Divine Constant, was published in 2015.

Divyank brings forth Divyank Ratio and Divyank Sequence, with which the single and most reliable value for every vital biophysical parameter of perfect adult human body can be easily calculated.

I am certain that if all the vital biophysical parameters of the body are maintained for entire life, we can easily curtail the usual ageing process and prevent the most common preventable diseases.

AN HONEST STATEMENT

I acknowledge that by strictly following the fundamental principles of ancient Indian wisdom, Ayurveda, Akhand Yoga and the modern sciences, I have been successful in attaining and maintaining the ideal values of almost every vital biophysical parameter of the body. In fact, the values have improved with age rather than deteriorate.

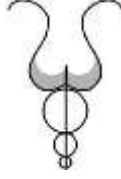
The Integration and Explanation Phase: 2018

Let me start this phase with an ancient Indian Vedic Prayer. *Tamso-ma-Jyotir-gamaya* (Lead us from darkness to Light). *Asado-ma-Satya-gamaya* (Lead us from untruth to Truth). *Mriyur-ma-Amrutam-gamaya* (Lead us from death to Immortality) Let me add another enlightening element to this profound prayer. *Khando-ma-Akhand-gamaya* (Lead us from duality to Unity/Yoga).

Akhand Sutra is specially compiled for every human being. I am certain that every willing human being can benefit from it. I am fully convinced that only healthy, educated, enlightened and empowered human beings in tune with the Universal Consciousness and Nature can lay foundation for the World Peace, the need of present Nuclear Era. Let us all work towards that goal and be eternally blissful.

Now, let us start with the ten stages of Akhand Vidya.

TWO



AKHAND VIDYA

*“Vidya-dadati-Vinayam, Vinayat Jati-patratam!
Patartam cha danam, cha-dharam, cha-sukham!!”*

This ancient Indian Sanskrit verse means that the right knowledge (*Vidya*) leads (*dadati*) to humility (*Vinayam*).

Humility (*vinayat*) leads to unity (*patratam*) and ability among the different castes (*jati*) and creates a casteless society.

When a united and capable casteless society works as a team, it leads (*cha*) to creation of abundance of wealth and prosperity (*Danam*), righteousness (*Dharam*), happiness, comforts (*Sukham*) and eternal blissfulness (*Anandam*) for every living being of the universe.

The secret of perfect integrated health, wealth, wisdom, happiness and comforts of the entire human race lies in the right education, humility, dignity of labor, team-work, contentment, self-esteem, self-sufficiency, self-realization, non-stealing and righteousness.

Akhand Vidya is an integrated system of learning.

It is based on the ancient Indian Gurukul educational system.

The first step of Akhand Vidya is the collection of unexplored and disintegrated raw data (*Agyan*) and irrelevant information etc.

The irrelevant data and information is then filtered to bring forth the relevant philosophy and the basic knowledge (*Gyan*).

This, in turn, is tested with the established Laws of Nature to discover the related verifiable and scientific knowledge (*Vigyan*).

●ShivBhushan Sharma

The next step is to transform the time tested knowledge into absolute wisdom (*Pragyan*), which is visible in every aspect of the Nature. The last step is to unfold the basic mathematical design of Nature. The concept can be represented as Avidya, Vidya and Para-Vidya. *Agyan (Avidya)* is the foundation of “Pyramid of Akhand Vidya”. *Gyan (Vidya)* forms the two middle two floors or layers of building. *Vigyan (Vidya)* represents the topmost floor or layer of Pyramid. *Pragyan (Para-Vidya)* represents the revolving light of the Pyramid.

Now, let us enumerate the ten steps of Akhand Vidya.

Read: The first most important step in perfect learning is to read the contents of the article, chapter or the book at a stretch. At the end of the first non stop reading, we can only grasp the central theme or the concept of the subject.

There are at least 22 different forms of Arts and Sciences.

The prime objective of the school education should be to gather and grasp the fundamental knowledge of every subject and object.

Re-Read/Study: The next step is to study and understand each word in context with the concept of the subject.

Every language of the world is embedded with three deficiencies; inadequacy, inaccuracy and ambiguity.

The languages have limited letters and words and every word has many meanings and there are many words for the same expression.

Even with the complete command over the written language, it is very difficult to comprehend the absolute wisdom of the subject.

Unfortunately, even the precise and concise wisdom of the perfect and most beautiful scripture of the world when translated into another language appears distorted, confusing and misleading.

Hence, reading, re-reading and studying in context with the concept is absolutely essential. It can lead to better understanding, which in turn can enlighten and empower the reader. This step is very vital.

An attempt should be made to study the original documents.

3. **Expand/Master:** No book is complete and exhaustive.

To master a subject, we need to look for every available source of data, information and knowledge on the given subject.

We need to gather all the related Gems of knowledge and then thread them into an integrated and absolute wisdom.

An effort should be made to store the essence in the brain and not in the notebooks. There are hundred billion neurons in our brain and every neuron can form twenty thousand memory synapses.

Imagine the power of human brain! We use only a fraction of human potentials. Both, the misuse and disuse of the brain and mind, can lead to the atrophy of brain. The prime function of human nervous system is “Master control and networking system”. A perfectly healthy and integrated nervous system leads to preservation of homeostasis, perfect health and prevention of diseases. It helps to curtail the premature ageing process, disintegration and death too.

4. **Research:** The next step is to critically analyze the knowledge.

Invariably, when we try to thread the data and information of a subject-object into an integrated form, we find that there are missing links. We need to find the missing links and fill in the gaps.

A conscientious research is bound to unfold the hidden facts. It is advisable to explore new and unexplored areas rather than finding a small missing link in an established area. There are few single case studies, which have thrown beautiful light on rare phenomenon of Nature, but could not be taken to conclusive level due to lack of subjects or other reasons. An effort should be made to prove and establish some rare phenomenon. The PhD work of author is one such example. I, as Single-Subject, have shown that I can reproduce abundance of predominant coherent alpha rhythm (8.0 Hz.) with much higher amplitude throughout the brain after opening the eyes.

I have shown that the electrical activity of brain can be synchronized by improving the blood supply to the brain with Akhand Yoga. It can facilitate the faculty of direct intuitive learning and then we can

easily tap the secrets of Nature from ionosphere layer (Akash-Kosh).

Sharing-Teach: After achieving academic excellence with the first four steps of learning, the scholar should share the knowledge with others.

It is much easier to have a great idea in the head but it is extremely difficult to articulate the flow of words. The art of perfection lies in regular practice. The art of improvisation with audio-visual aids has an important role but to master the art of Akhand Vidya, an effort should be made to store the full spectrum of wisdom in the brain and give it verbal form without the aid of any instrument.

An ex-tempo and articulate speech from the memory cells of brain in the form of story is an interesting, enlightening and empowering teaching and sharing format. Please try it.

Write/Author: It is easier to explain even the most difficult concepts with speech etc. A speaker gets many chances to clear the doubts of audience but the precise/concise writing is not that easy.

An author does not get any chance to clear the doubts of the readers. Each and every word used in the written material has to be the most appropriate and in tune with the concept of the subject-object. An author should learn the art of compilation, tabulation and editing.

A professional help may be useful but it is very difficult for an editor to comprehend the essence of intuitive wisdom and put it in the most appropriate words unless and until, the editor has the eagle's eye view of the entire spectrum of the concept. It is not that easy.

The most beautiful and enlightening aspect of the ancient Indian wisdom is the use of the precise and concise aphorisms (sutras).

Flow Chart/Abstract: It is much easier to compile a big document to explain a new concept but it is challenging to represent the concept in one page. If we can do that without losing the concept we are pretty close to the perfection. Creating a perfect flow chart of various facets of the subject-object can help understand and appreciate the underlying absolute wisdom too.

Symbol/Art-Design: The ancient Indian Sages are known for the “Science of Symbols”. The Sages devised animate, semi-animate and inanimate symbols to explain the difficult concepts of Nature.

The symbols of Nature are the best. They descend from above and can not be artificially made. We can learn far more from the symbols than words. Almost every aspect of Akhand Sutra is represented in “Sri Akhand”, the symbol, which adorns the front page of this book.

Note: Please look at “Sri Akhand” very carefully and write down your initial impressions on a piece of paper and preserve it.

After studying and understanding the contents of Akhand Sutra please review and see the difference. Akhand Sutra represents only ten percent of the hidden wisdom of “Sri Akhand”, the symbol.

Mathematical Design: “The Language of God, the Nature” and “The Mother of Sciences” is mathematics. Every object of Nature is designed and created with the principles of mathematics. When we learn to cognize and appreciate the real beauty of the precise and concise mathematical design of the perfect objects of Nature, we are bound to rise to the higher levels of Universal Consciousness.

The ancient Indian Sages, who were in tune with the Nature, had cognized the mathematical designs of Nature but chose to hide the wisdom in the form of stories. The mathematical design of the most beautiful and perfect objects of Nature is called Divyank, the Divine Constant. The three parts of Divyank were conceived after decoding the hidden wisdom of the ancient Indian stories and Upanishads.

Akhand Sutra is an earnest attempt to decode the hidden mysteries of Vedas, Upanishads, Puranas, Tantra Vidya, Yantra Vidya, Mantra Vidya and other ancient Indian scriptures and documents.

Integration/Way of Life: It is seen that most of the successful people concentrate on a single subject or object and build a huge column on that subject-object. In the process, they use five percent of their neurons and potential. The rest of the neurons of the nervous system go through the disuse and misuse atrophy of brain.

●ShivBhushan Sharma

It is a criminal waste of the human body, brain, mind, consciousness and immense potentials of the golden opportunity of human birth.

There are at least twenty two Arts and Sciences subjects.

INTEGRATION

Horizontal Integration: When every subject and object forms an integral part of the X-axis, it is called horizontal integration.

It consists of diversification/widening of the field of subject-object.

Vertical Integration: When we learn and master every aspect of the given subject and object, we increase the height of Y-axis. It leads to the heightening of vertical column and the vertical integration.

OPTIMIZATION

With horizontal and vertical integration, we can make optimum use of every aspect of human body, breath, mind, consciousness and Soul and we can easily achieve every objective of life.

THE ULTIMATE WAY OF LIFE

An attempt should be made to apply the wisdom in daily life. Once, the absolute wisdom becomes “The Way of Life”, it gets ingrained in all the hundred billion neuron cells of the brain and it can make an exponent of Akhand Vidya, a walking-talking encyclopedia.

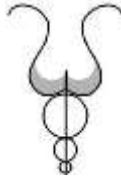
AKHAND VIDYASHRAM

The prime objective of Akhand Sutra and Akhand Vidyashram is to redesign and promote an integrated *Gurukul* educational system and to lay a strong foundation for genuine spiritual science research.

Now, let us apply the ten stages of Akhand Vidya to cognize every aspect of Nature from the ancient Indian wisdom and then explain the same in the light of modern sciences, which every human being can easily understand and apply in his/her daily life.

Now, let us start with an established concept of the Golden Ratio.

THREE



THE GOLDEN RATIO

The perfect and most beautiful objects of the universe are designed with the Golden Ratio, the most economical algorithm of Nature.

To understand and appreciate the real beauty of the Golden Ratio, let us first study and understand the Fibonacci sequence.

The Fibonacci Sequence

“1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89 and 144 and so on”.

“The third number is the sum of the preceding two numbers”.

The Fibonacci sequence was perceived by the ancient Indian Sages and the mathematicians long ago. It is first attributed to Pingala (450 BC) and later associated with Virabanka (700 AD), Gopala (1135 AD) and Hemachandra (1150 AD).

Like the ancient Indian Sages, Pingala used the cryptic language.

He gave the cryptic formula, “*misrau cha*”, which means that the two numbers are mixed. A better picture arises in the works of Virabanka, “Variations of two earlier meters”.

An explicit example was given by Leonardo of Pisa (Fibonacci) in the book *Liber Abaci* in 1202 AD. He gives the example of idealized rabbit population.

The real beauty of the Fibonacci sequence is that the Golden Ratio is hidden in it. An approximate value of the Golden Ratio surfaces between 9th-10th sequence, 34-55 and 10th-11th sequence, 55-89.

●ShivBhushan Sharma

Explanation: 55/34 and 89/55 are pretty close to 1.61818.

Other Examples: An idealized example of the family tree of honey bees is preferred by some known scholars. The branches of tree, the arrangement of leaves, flowers and seeds, fruits of pineapple, pine cone etc follow the Fibonacci sequence.

There are many beautiful examples in the human body too.

Fibonacci sequence is a gross representation of the Golden Ratio.

The Golden Ratio (ö -Phi)

The well known descriptions of the Golden Ratio are,

“When a line is divided into 2 parts, the longer part divided by the smaller part is equal to the whole length divided by the longer line.”

“Two quantities are in the Golden ratio if their ratio is the same as the ratio of their sum to the larger of the two quantities”.

“A straight line is said to have been cut in extreme and mean ratio when, as the whole line is to the greater segment, so is the greater to the lesser.”

The above descriptions are too abstract for a common man.

The descriptions also center on two simple dimensions. To explain the simple design of the most beautiful objects of the universe, the mathematicians created the following formula.

Phi: $1 + \text{square root of } 5 / \text{divided by } 2 = 1.618033988749895\dots$

“Golden ratio appears in the basic structures of equilateral triangle, square and pentagon placed inside a circle and in few complex three dimensional solids”.

The Golden Ratio is called Divine Proportions but it is not as perfect as the divine creations. It needs further reflection and improvement.

The First Deficiency

The known Golden Ratio (1.618033988749895...) is an irrational number with never ending infinite number of digits. This is highly confusing and misleading for intelligent minds and scholars.

The First Hypothesis

The ever expanding universe may be infinite but the perfect objects of Nature are limited in shape and sizes.

Hence, there should be limited number of digits of the Golden Ratio.

The Second Deficiency

The Golden Ratio is a linear number while the objects of Nature are multi-dimensional. There has to be a multi-dimensional design with which the Golden Ratio is designed and created. What is it?

THE CREATIVE DESIGN OF NATURE

It is well established that every created object of Nature is formed in three stages; namely, creation, development and maturation.

The Third Deficiency

Are there three stages in the formation of Golden Ratio too?

Unfortunately, there is no available information on the subject.

The First Deficiency and Exploration

To find the most approximate decimal value of Golden Ratio, let us first understand the two dimensional design of Nature.

THE GOLDEN RECTANGLE

The Golden Rectangle is two-dimensional design of the perfect and most beautiful objects of universe and Nature.

It can be designed with the basic principles of Pythagorean Theorem.

According to Pythagorean Theorem,

“In right angled triangle, square of the long side (the hypotenuse) is equal to the sum of the square of the two shorter sides”.

The Golden Rectangle

Now, let us create Golden Rectangle using Pythagorean Theorem.

Let us first draw a square of 100 units as shown in the Art-Desifgn-1.

●ShivBhushan Sharma

Now, divide the square into two equal parts as shown.

Now, draw a line joining the right upper angle of the square with the middle bottom part of the square.

The Result: This results in the formation of a right angled triangle with two shorter sides of 50 and 100 units.

Hypotenuse: The long side of the triangle is called hypotenuse.

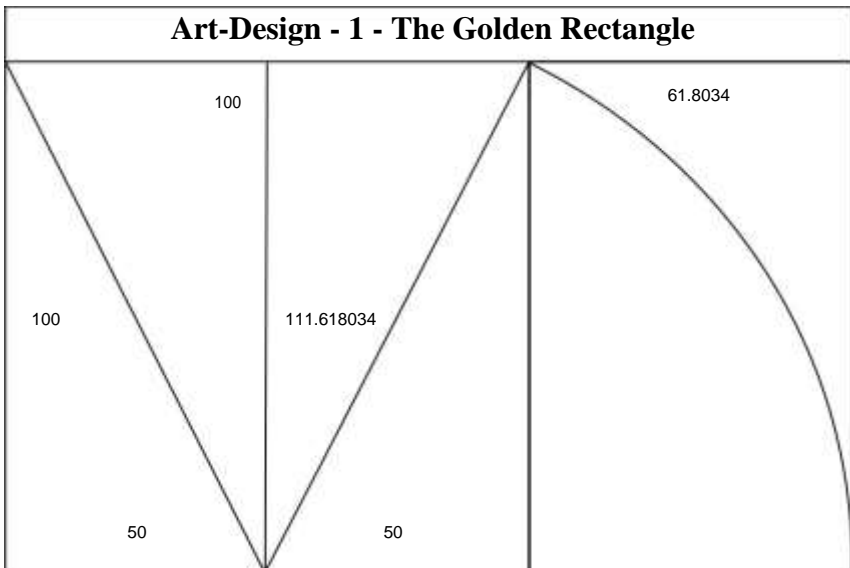
Based on the principles of Pythagorean Theorem, the length of the long side of triangle will be 111.618034.

Home Work: Please calculate and confirm the above value.

Now, draw a semicircle of 111.618034 units from the mid-point of square as shown in the Art-Design-1.

Extend the bottom line to meet the lower end of the semicircle.

Now, complete the Golden Rectangle as shown below.



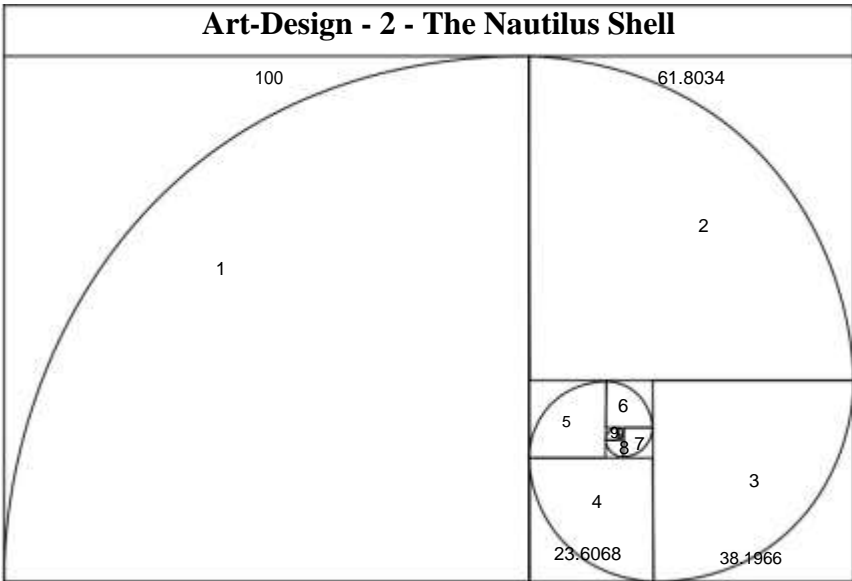
The Conclusion: The Most Approximate Decimal Value.

The most approximate decimal value of Golden Ratio is 1.618034.

The value was first suggested by Michael Maestlinus in 1597.
Unfortunately, the value was not explored further and concluded.

THE NAUTILUS SHELL

Now, let us create Nautilus Shell using the Golden rectangle.



Let us first draw the Golden Rectangle of 100x161.8034.

Now, draw a semicircle in the square (100x100).

Then draw another semicircle equal to its length (61.8034) in the adjoining rectangle.

Then, draw another semicircle equal to 38.1966 as shown.

Repeat the same and create the shape of Nautilus Shell.

Note: There are only 10 visible semicircles in the Art-Design.

Other Examples: As Above As Below

The Cosmos: The picture of Spiral Galaxy of our Milky Way.

The Ocean: The picture of Whirlpool.

●ShivBhushan Sharma

The Essence

The Spiral Galaxy and Whirlpool are invariably given as examples to indicate that the Ultimate Design of Nature may be identical.

The First Important Discovery - 10 Stages of Development

From the above picture of Art-Design-2, we find that there are ten stages of development in the formation of perfect objects of Nature.

The Fourth Deficiency

What are the exact numerical values of the three critical stages of creation, development and maturation of the Golden Ratio?

Not Known. No written information is available till date.

I suppose, the possibility of three stages of formation of the Golden Ratio has not been thought about by the modern scholars.

An Intuitive Idea - An Exploration

I am fully convinced that the ancient Indian Sages had cognized and conceived the three stages of creation, development and maturation of the perfect and most beautiful objects of Nature.

I am also convinced that the ancient Indian Sages had known the exact numerical value of the three stages of creation, development and maturation of the Golden Ratio too.

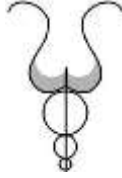
It is also known that the ancient Indian Sages had devised the unique system of hiding the wisdom in cryptic form of stories. Why?

I believe that the Sages did not want the wisdom to be misused by the people, who were not in love with the Nature and humanity etc.

To find the ultimate Design of Nature, we will have to decode the hidden wisdom of few more ancient Indian stories. Unfortunately, it is not easy to decode the hidden wisdom of ancient Indian stories. I am certain that we can decode the old stories provided we are in tune with the Universal Consciousness and the ancient Indian Sages.

Now, let us comprehend the real beauty of ancient Indian wisdom.

FOUR



ANCIENT INDIAN WISDOM

The foundation of ancient Indian wisdom, called Sanatana Dharma, was laid about ten thousands years ago by the ancient Indian Sages. The Sages were in tune with the Universal Consciousness and they cognized the different aspects of Nature directly without the aid of any instrument and presented the hidden secrets of Nature primarily in form of stories in Vedas, Upanishads, Tantra and other books. It is also true that it is difficult to decode the real message of the stories.

Sanatana means eternal, everlasting, enduring and immortal.

Dharma has many meanings; righteousness, religion, actions, duty, faith and deep belief in Nature etc.

Sanatana Dharma is not a religion. It is “Spiritual Way of Life” and it encourages and entertains every new idea and new interpretation of the existing knowledge and wisdom. It believes in the omniscient, omnipotent and omnipresent nature of the Ultimate Godhood.

Now, let us start with the Core Message of Sanatana Dharma.

INEXHAUSTIBLE UNIVERSE

Brhad-aranyaka Upanishad (V.1.1),

*“Purnam adah, purnam idam, purnai purnam udacyate,
Purnasya purnam addaya purnam evavasisyate”*

That is full; this is full, from fullness proceeds fullness. If we take away fullness from fullness, fullness still remains.

It means that every manifestation of Nature is indestructible, inexhaustible, irreducible, perfect, vast, complete and integrated.

●ShivBhushan Sharma

It also means that the sum of everything in the universe is constant.
Purnam and Akhand mean the same and are contemporary in nature.

IDENTICAL WORLD

According to the following statement of Vedas and Upanishads,
“*Tat-tvam-asi*”

The source (*Tat*) of every (*tvam*) manifestation of the Nature is same or identical (*asi*) in nature. It means that everything in the Universe is complete, perfect and identical.

It also means that every germ seed or cell is identical in nature.

MANIFESTATIONS

“*Eko-ham-bahusayam*”

According to this verse from the Vedas, “I (*ham*- God) am one (*eko*) and I shall become many (*bahusayam*)”.

It means that everything in the universe or every object of the Nature has come from one Primordial common source, the God.

“*Aham-Brahmasmi*”

According to this verse from the Upanishads, “I (*aham*) am like (*asi*) *Brahman*, the Ultimate God.

THE SOLAR SYSTEM

Brhad-aranyaka Upanishad (I.5.16),

“*Atha trayo vaha lokah, manusya-lokah, pitr-lokah, deva-lokah iti*”

“Let there be three worlds, the world of humans (earth), the world of ancestors (intermediate sphere), and the world of gods (heaven)”.

It means that our Solar system is made of three major parts, the earth, the atmosphere and the planets.

It could also mean that the created objects of Nature are made of three major, distinct, and inseparable components.

The Scientific Proof:

Let us prove this concept in the light of modern sciences.

The Three Parts of the Germ-Seed/Cell

Under the compound microscope, we notice only three parts of the cell; the cell membrane, cytoplasm and the nucleus.

Creation of Biological Life

From the review of available literature of modern sciences, we find that every created object of the Nature is formed in three critical and important stages of creation, development and maturation.

The Big Question?

Do we know the exact numerical values of the three stages?

Somehow, answer to this profound question is not found any where.

Now, let us explore and find their exact numerical values.

21 Parts of Solar System and Beyond

Chandogya Upanishad (II.10.5-6),

“Eka-vimsaty adityam apnoti, eka-vimso va ito'sav adityo, dva-vimsena param adityaj jayate; tan nakam, tad visokam”.

The twenty one (*Eka-vimsaty*) stages of the Solar system can be measured with twenty one steps.

With twenty second (*dva-vimsena*) step one conquers the world beyond the Sun, where there is absolute bliss without any sorrow.

“Apnoti hadityasya jayam, paro hasyaditya-jayati jayo bhavat, ya etad evam vidvan atma-sammitam ati-mrityu sapta-vidham samopaste, sampaste”.

Knowing this, the wise and enlightened Soul obtains an eternal victory over the Sun, the presiding deity of our Solar system.

He obtains still higher victory over death (*ati-mrityu*) when he meditates on the sevenfold (*sapta*) knowledge (*vidham*).

It means that our Solar system is also made of 3x7 or 21 parts.

●ShivBhushan Sharma

These are further divided into three parts, the earth, the intermediate space, and the heaven.

It means that the earth, intermediate atmosphere and the heaven are made of the seven independent and inseparable parts each.

21 Parts of the Germ Seed-Cell - The Scientific Proof

When viewed under the electron microscope, we notice that the cell membrane, the cytoplasm and the nucleus are made of the seven independent parts each.

INDIAN TRINITY

Indian Trinity is made of three aspects; Brahma, Vishnu and Shiva.

Brahma is “The Lord of Creation”.

Vishnu is “The Lord of Sustenance”.

Shiva is “The Lord of Dissolution and Regeneration”.

They represent the three respective rulers of three critical stages of creation (Brahma), development (Vishnu) and maturation (Shiva).

The First Stage of Creation - Brahma

From the above ancient Indian wisdom, we gather that to go beyond the 21 levels of consciousness or for creation of a new life or cell, 21 parts of the cell have to become 22 parts.

It means that the first stage of creation is equal to 1/21.

Now, let us explore this mystery further.

Chandogya Upanishad (VIII.7.1),

“Ya atma apahata-papma vijaro vimrtyur visoko vijighasto'pipasah satya-kamah satya-samkalpa, so'nvestavyah, so vijijnanasi-tavyah sa sarvams ca lokan apnoti sarvams ca Kaman, yas tam atmanam anuvidya vijnati; iti ha prajapatir uvaca”.

“Self, which is free from evil, free from old age, free from death, free from grief, free from hunger and thirst, whose desire is real, whose thought is real, he should be sought. Him one should desire to understand. He, who knows and understands that self, obtains all worlds and all desires”. According to Chandogya Upanishad, this is the essence or preaching of Prajapati (The Lord of Public-Brahma).

Indra, the King of Gods, *Devas/Suras* and Virochana, the King of Demons, *Asuras*, were impressed with the discourse of Prajapati.

They were curious and wanted to learn more about the Self.

Hence, they approached Prajapati.

Prajapati asked them to become his students and stay in his hermit (*ashram*) as celibates (*Brahmacharis*) for thirty-two years.

At the end, he explained to them about the importance of physical body and the waking (*Jagrat*) worldly and external consciousness.

Both were impressed and happily left for their respective abodes.

Virochana was fully satisfied. He in turn explained the beauty and importance of gross physical body consciousness to the demons.

Indra doubted the eternal beauty of perishable body, and came back.

Indra was asked to stay in hermit for another thirty-two years.

He was then taught about the dreaming (*Swapna*) consciousness.

He was impressed and went away but before reaching heaven, he realized the futility of dreaming consciousness too. He returned.

Indra was asked to stay for another thirty-two years.

He was then taught about the deep-sleep (*Sisuptah*) consciousness.

Indra went with tranquil heart and mind, but shortly realized that in this state he is not aware of “His True Self”. He came back again.

Then Prajapati asked him to live with him for just five years.

Before the end of this period, Prajapati explained the nature of Soul, which is beyond dualities and death, and reaches the highest state of enlightenment in his own True form, the Supreme consciousness, called *Turiya*, which is eternally in tune with the Ultimate Soul/Self.

What is the hidden Wisdom?

The total time spent by Indra is 101 years.

If we consider that thirty-two years are equal to seven parts.

Then, one part will be equal to 4.57 ($32/7=4.57$) years.

I suppose, 4.57 years were expressed as 5 years, for convenience.

●ShivBhushan Sharma

The Essence:

The three phases of thirty-two years each represent 21 (3x7) parts.

The last phase of 5 years represents the twenty-second part.

The concept of 22/21 is beautifully hidden in the discourse.

The Conclusion - 22/21

The First Stage of Creation (Brahma) is equal to 22/21.

The Scientific Proof - 21 Parts to 22 Parts

Before nuclear division or the first stage of creation, the centrosome divides into two centrioles, which move to the opposite side.

This results in 22 parts (21+1) of the cell.

The Second Stage of Development - Vishnu - 10 Stages

According to Vishnu Purana, there are ten incarnations of Vishnu.

They represent ten levels or stages of development/consciousness.

An identical concept is seen in ten arms of the Goddess Gayatri, ten sisters of Surya and ten rays of Sun, which spread in ten directions.

The Scientific Proof - Construction of Nautilus Shell

In the Art-Design-4, we notice ten visible semi-circles only.

There are ten spirals in the Nautilus Shell too.

The Spiral Galaxy also consists of ten Suns or ten visible objects.

Every perfect object of Nature is made of ten aspects or parts.

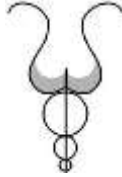
The Third Stage of Maturation - Shiva

The concluding or maturation stage is extremely important.

Let us first calculate the sum value of first two stages of creation and development. $(22/21)^{10} = 1.59233287253\dots$ The value is less than the projected value of the Golden Ratio (1.618033988749895...).

Now, let us explore and find the ultimate divine design.

FIVE



DIVYANK

Divya means the divine. Ank means the number or the constant.

Divyank means the divine constant. Like, the Golden Ratio, it is the most economical algorithm of Nature, with which the perfect and most beautiful objects of Nature are designed and created. It was conceived and formulated by me but the real credit should go to the ancient Indian Sages, my indwelling Soul and the modern scientists, who have given us the legacy of detailed knowledge of Nature.

From the preceding chapters, we find that the first stage of creation and the second stage of development are $22/21$ and 10 respectively.

The exact numerical value of last stage of maturation is not known.

I am fully convinced that the ancient Indian Sages, who meditated on Shiva, had cognized the exact value of last stage of maturation and hid the same in some hidden form in the ancient Indian wisdom.

Let us explore and find the concluding digits of Divyank.

From the Art-Design-1 (the Golden Rectangle), we derive that the most approximate decimal value of the Golden Ratio is 1.618034 .

The sum of creation ($22/21$) and development (10) is 1.592332 .

The difference from the Golden Ratio value is 0.025702 .

Now, we can easily calculate the most approximate digital value of last stage of maturation. Let us proceed and find the exact number.

●ShivBhushan Sharma

The Golden Rectangle and Divyank - Art-Design - 3

Let us first construct a perfect Golden Rectangle (1x1.618034).

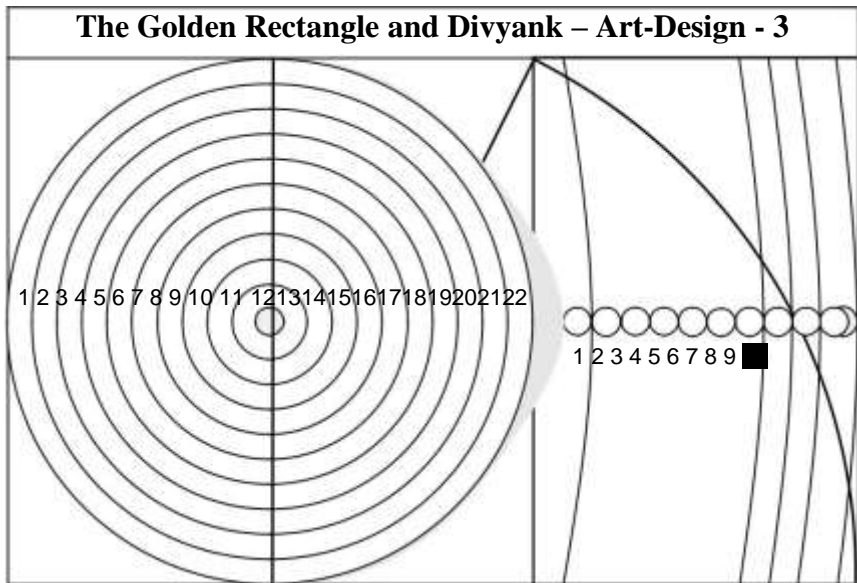
Now, draw a big circle with 21 equal small circles in the square and then add a semi-circle equal to 1 small circle to the big circle in the adjoining rectangular portion as shown in the Art-Design.

The new elliptical design resembles an eye (22/21 ratio).

Now, draw a curved line joining the protruding part of eye with two ends of the right side of square portion as shown in the Art-Design.

Now, draw a parallel curved line equal to 1/21 parts after the first curved line and place a small circle (1/21 size) in it.

Now, repeat the same till the Golden Rectangle is almost fully covered as shown in the Art-Design - 3.



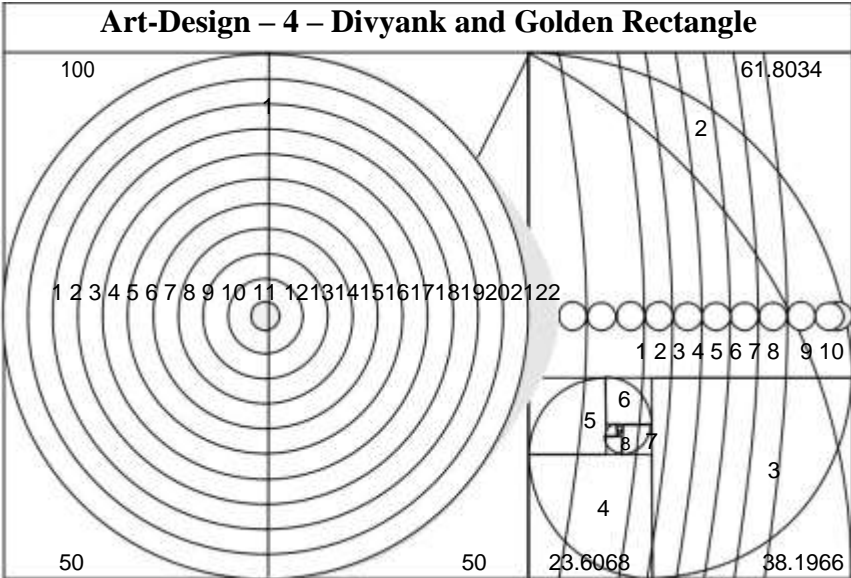
Observation and The Emerging Knowledge:

From the Art-Design-3, we notice that there are ten equal distance lines and ten small circles (1/21) in the Golden Rectangle, and plus one line, which is almost equal to 1/3rd of the small circle (1/21).

The Conclusion:

The value of first two stages of creation and development are equal to $22/21$ and 10 respectively.

Let us superimpose the Art-Design-3 on the original Art-Design-1 of the Golden Rectangle. Kindly observe the resemblance.



The Observation:

From the above Art-Design-4, we find that the approximate decimal value of last stage of maturation is around $0.344\dots$

To find the digits of Divyank, let us explore Shiva consciousness.

SHIVA CONSCIOUSNESS

Shiva is called “The Lord of Dissolution and Regeneration”.

He represents the end (death) and beginning (new life).

He is represented with the five heads. The five heads represent *Panch-Bhutas*, the five basic elements of Nature.

●ShivBhushan Sharma

Every object is created from the five basic elements.

Finally it dissolves into the five basic elements after the death.

The original Shiva mantra is called *Panch-Akshari* mantra. Shiva mantra consists of the following five letters (*aksharas*), “*Na-mo-si-va-yah*”.

The perfect *Rudraksh*, the symbol of Shiva, is made of five petals.

A NEW CONCEPT

There should five digits of the last stage of maturation.

Confirmation:

With the help of IBM-SPSS version 21, the decimal value of the last stage of maturation was calculated as five digits of 0.34419.

An Interesting Coincidence

Numerology: It is interesting to note that the five digits, (0.34419), of last stage of maturation add up to 21, the parts of cell/seed etc. The number, 21, proves that Shiva represents Dissolution (the end) and Regeneration (the beginning, cell/seed) at the same time. Now, let us represent the exact numerical value of Divyank.

DIVYANK

Divyank is represented as $(22/21)^{10.34419} = 1.618034$.

The most approximate value of the Golden Ratio is 1.618034.

The Proof and Essence

The perfect objects of Nature are formed in three stages.

I am convinced that a perfect human being can manifest the basic nature of Brahma, Vishnu and Shiva Consciousness in real life.

FIRST MANIFESTATION

The first manifestation of Universal Consciousness is Brahman and it consists of two complimentary parts, Shakta and Shakti.

Shakta - Male Consciousness:

The Core/Source of Brahman is made of three parts, Brahma, Vishnu and Shiva, also called Trinity-Trimurti.

Shakti - Female Consciousness:

The dynamic female form of Brahman is made of the five basic aspects and elements, Prithvi (Bhur-Earth), Saraswati (Water), Lakshmi (Fire), Parvati (Bhuvar-Air) and Akash-Bhuta (Suvaha-Ether-Heaven-Quintessence).

Every perfect object of Nature is made of both, Shakta and Shakti. They are complimentary and inseparable parts of each other.

Note: Kindly note the Divyank Ratio: Shakta (3) and Shakti (5).

SECOND MANIFESTATION

The perfect created objects of Nature are designed and created with Divyank, Divyank Ratio and Divyank Sequence.

Divyank Ratio: 38.1966% and 61.8034%.

It is seen in every vital structure and function of the human body.

Divyank Ratio is perfect and gives rise to consistent results.

It is much better than the one projected by the known Golden Ratio.

Now, let us understand the real beauty of Divyank Ratio - 1.618034.

DIVYANK RATIO

“The square of the first part (61.8034%) is hundred times the value of the second part (38.1966%)”. Let us calculate and see.

The square of 61.8034, $(61.8034)^2 = 3819.66025\dots$

Is it a mere coincidence or the consistent divine design of Nature?

When these values are added they sum up as perfect 100.

$61.8034 + 38.1966 = 100$.

Note: Do we find such a precise value in the known Golden Ratio?

●ShivBhushan Sharma

The Essence:

I am certain that Divyank, Divyank Ratio and Divyank Sequence can resolve many mysteries of the universe and Nature.

The Significance of Divyank Ratio

Shakti, the dynamic component, of Divyank is equal to 61.8034%.

Shakta, the static source, is equal to 38.1966%.

Water:

The first Shakti, for the creation, maintenance and survival of the biological life on the earth, in the body and the cells is pure water. The percentage of water on the earth is 61.8034%.

The ideal percentage of water in the body and cells is also 61.8034%.

Solid Matter:

The first Shakta, the source, is 38.1966% of the solid matter.

An Example of Divyank Ratio

The Double Helix

According to the most scientists, the Double Helix is 20 angstroms wide and 34 angstroms long and there are ten strands.

According to the author, the width of perfect Double Helix is 21 angstroms and the height is 33.978714 angstroms.

The length and breadth of Double Helix is perfect Divyank Ratio.

There are 10.34419 strands.

Each strand has an inclined groove, which is 22 angstroms long.

Kindly note these details in the next Art-Design-5 and enjoy.

It is also true that the amino acid is attached to the carbon-3 or the carbon-5 of the sugar (deoxyribose) phosphate group backbone. Is this attachment to carbon 3 or carbon 5, a mere coincidence or the proof of the meticulous divine design of vital objects of Nature?

Art-Design – 5 – Divyank and Double Helix	
	Last Strand = 0.34419
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	21 Angstroms

The mean values of various biophysical parameters of human body as promoted by the modern scholars are confusing and misleading.

Note: With Divyank Ratio, we can easily calculate a single and most reliable value of every vital biophysical parameter of the body.

A NEW CONCEPT

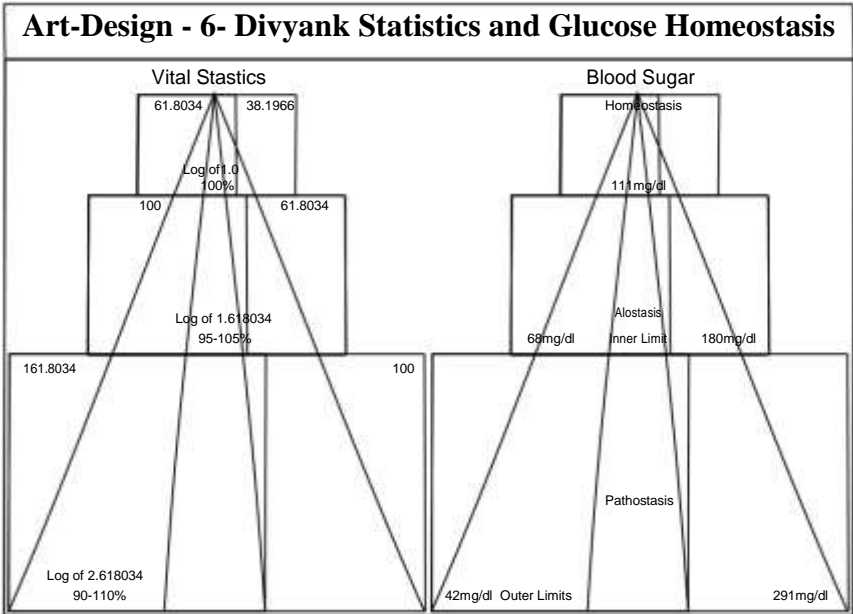
Let us comprehend the beauty of the following concepts.

Homeostasis: The top rectangle of Art-Design-6 represents the absolute value of perfect glucose homeostasis.

Alostasis: The second rectangle represents the other altered state. It is still within the stretchable limits of perfect homeostasis.

Pathostasis: The third rectangle represents the diseased state.

Now, let us calculate the different values of Blood Glucose.



What is the ideal blood sugar level for perfect health?

The ideal value for perfect homeostasis is 111 mg/dl-100ml.

The renal threshold value for blood sugar is 180mg/dl.

The blood sugar more than 180 mg/dl leads to sugar in the urine.

The upper and lower limits of an altered state of homeostasis called Alostasis or other state, are 180mg/dl and 68mg/dl respectively.

The blood sugar less than 68mg/dl or more than 180mg/dl is not conducive for an integrated and perfect state of health.

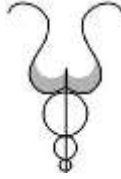
The blood sugar more than 180mg/dl leads to Diabetes Mellitus.

The blood sugar less than 68mg/dl puts the sympathetic nervous system into active mode to save the individual person.

The blood sugar levels less than 42mg/dl and more than 291mg/dl lead to disintegration, disharmony, disease and finally the death.

Note: Now, we can easily calculate the ideal values of homeostasis, the range of alostasis and diseased state of every vital parameter.

SIX



THE BASIC CHEMISTRY

A human body can be called a bunch of atoms, elements or cells. It has evolved from the minerals through plants and animals. It is also a specialized chemical factory in which poison and immortal nectar (*Amrit*) can be manufactured. It is microcosmic representation of the microcosmic universe and every aspect of natural chemistry can be easily experienced and conceived within the human body.

To study and comprehend the natural beauty of basic chemistry let us start from the beginning of time and space.

The Inert Primordial Space (Akash)

Brhad-aranyaka Upanishad (I.2.1),

“Naivecha kimcanagra asit, mrityunaivedam avrtam asit!”

There was nothing in the Primordial Space in the beginning. It was indeed covered by the death (*mrityu*).

It does not mean that there was nothing in the Primordial Space.

Nothing can come out of nothing. This is the “Law of Nature”.

The ancient Indian Sages agree and concur that the Primordial space was covered with death (*mrityu*) or darkness (*andhkar*) and different objects were in the state of inertia (*tamas*) and inactivity etc.

This is the core message of Vedas and Upanishads etc.

Now, let us understand the above verse and its deeper meaning.

●ShivBhushan Sharma

The Neon - The Backbone of Divyank

I am convinced that the Primordial Space was filled with isomers of Neon (Ne^{21}) and nothing else.

The Neon (Ne^{21}).contains 10 protons, 11 neutrons and 10 electrons.

The electrons are fully focused towards the center.

As a result there is light within the nucleus and darkness outside.

With the help of cubicle structure of Neon we can easily explain the phenomenon of darkness of the Primordial Space.

Conclusion: It is fair to believe that the darkness in the Primordial Space was due to the presence of Neon (Ne^{21}) isomers.

The Creation of Universe - The Big Bang

I am also convinced that during the Big Bang, Neon (Ne^{21}) isomers collided and produced Neon (Ne^{22}).

This resulted in the formation of the **Brilliant Effulgence**. It was also called The Light-alone (*Prakash-matra*).

After losing the heat, the light got transformed into Neon (Ne^{20}).

Even today, the respective ratio of Neon, (Ne^{20}), (Ne^{21}), and (Ne^{22}) is 90%, 1% and 9% in the universe. Is this a mere coincidence?

My Strong Intuition and Conviction

I am convinced that the Ultimate Soul, *Paramatma*, is Neon atom while the indwelling human Soul, *Antaratma*, is Helium atom.

According to the ancient Indian Sages, *Atma* is immortal and can not be cut, burnt or destroyed.

The description of inert noble gases or atoms, like Helium and Neon, by the modern scientists resembles the attributes and characteristics of *Atma*, as described by the ancient Indian Sages.

Is it a mere coincidence, faith or the Ultimate Divine Design?

If we truly believe in the elemental nature of *Atma*, we can see it.

First (22/21) and second (10) parts of Divyank are reflected in Neon. The secret of five digits (0.34419) of Divyank is reflected in the five basic elements, the first manifestation of the Brilliant Effulgence.

The Essence:

The seeds of Divyank were present in the Primordial Space. They are still present in the Universal Consciousness. They can be tapped by any person, who is in tune with the God, and the indwelling Soul. Now, let us understand the concept of matter and energy.

Matter:

According to the modern science, the matter is found in three states; the solids, liquids and gases. Matter is the solid stuff, which has mass and occupies the space and chemistry is the study of structures and functions of matter and it can be physically and chemically. The physical changes do not alter the basic nature of a substance while the chemical changes alter the composition of the substance.

According to the ancient Indian Sages, there are five states of matter, Ether, Air, Fire, Water and Solids. These states are inter-convertible and can be heard, felt, seen, tasted and smelt by hearing (ears), touch (skin), sight (eyes), tongue and nose.

Now, let us comprehend this fundamental concept fully.

Energy:

It is massless and does not take up space. Its can be measured by its effects of the matter. It is defined as the ability to do work. When it is active, it is called **kinetic energy**. When it is inactive, it is called **potential energy**. There are five forms of energies, chemical, electrical, mechanical, radiant and psychic and each form exhibits kinetic and potential work capabilities. Hence, there are ten forms of basic and essential energies.

Inter-convertible States:

The five states of matter are inter-convertible. For example, the solid form of water is called ice. With the addition of heat, ice is converted into liquid form. On further heating, water is converted into steam (Fire) and it can burn. On further heating it is converted into vapor form (Air) and it flies. On further heating (1600°C), it is converted into plasmatic state (*Akash-Bhuta*) of matter/energy. The reverse is achieved with the removal of the innate energy or the heat.

●ShivBhushan Sharma

Now, let us comprehend an ancient Indian concept of matter/energy.

The Creation of Panch-Bhutas

Taittiriya Upanishad (II.1.1),

“*Tasmad va etasmad atmana akasas sambhutah, akasad vayuh, vayor agnih, anger apah, adbhyah prthivi!*”

From that Immortal Self (Brilliant Effulgence) came Akash/Ether, from Akash came Vayu/Air, from Vayu came Agni/Fire, from Agni came Apa/Water, from Apa came Prithvi/Earth.

The Devolution of Brilliant Effulgence

The Brilliant Effulgence went through the five stages of devolution from Akash-Bhuta, Vayu, Agni, Apa to Prithvi and resulted in the production of hydrogen, the lightest and smallest atom and element. The other atoms were formed with the union of hydrogen atoms.

The Atomic Consciousness

The orbital shape of an unstable atom resembles an ovoid and every atom has a unique mind and individual consciousness. The atoms unite with the like minded atoms to form molecules, compounds, cells, tissues, organs, organ systems and the body.

The cumulative consciousness of hundred trillion cells of the human body is called *Jivatma* by the author. When all the cells of the body work in unison with each other, we attain and experience perfect integrated health.

The Revolution and Evolution of Soul Consciousness

The Indwelling Soul (*Antaratma*) helps integrate various aspects of human anatomy, physiology, biochemistry and psychology. It also leads to activation, awakening, ascension and evolution of human mind and consciousness and its union with the divine consciousness.

Now, let us study the essential and most vital elements of body.

The Natural Rule of Ten

A. The First Vital Elements - 4

The Hydrogen (H)

The mono-atomic form of the lightest element, hydrogen, is the most abundant in the universe. It consists of 75% of all the baryonic mass. It is the basic unit and readily forms co-valent compounds with most non-metallic elements. Most of it exists in molecular form and plays an important role in the acid-base reactions (pH).

The Oxygen (O)

It is highly reactive non-metal element and oxidizing agent that readily forms compounds with most elements. It is the third most abundant element in the universe after hydrogen and helium. Most of the mass of the living organism is oxygen. It is a part of water, the best solvent of Nature. Diatomic oxygen (O₂) constitutes 20.8% of the volume of air. Oxygen forms more than 40% of the molecular mass of ATP molecule as phosphate group PO₃₄.

The Carbon (C)

It is the sixth element of Nature. This inert tetra-valent non metal element is composed of six protons, neutrons and electrons each. It is fourth most abundant element by mass in the universe after hydrogen, helium and oxygen. Its atomic number is 6. In the human body it is the second most abundant by mass (18.5%) after oxygen. The organic life is not possible without the carbon atoms.

The Nitrogen (N)

It forms 78% of Earth's atmosphere. It was formed with the fusion of carbon and hydrogen atoms. It is an essential part of proteins and plays very important role in the building blocks of the human body.

Note: The first four elements are essential for formation of the three basic bio-molecules, namely, carbohydrates, lipids and proteins.

The Second Vital Elements: 6

The Calcium (Ca)

Calcium forms 1.6% of the mass of the human body. It is present as calcium salt in the bones and teeth. It is useful in ionic form for muscle contraction, neural transmission and blood clotting. It is vital part of the muscle-bone system. The percentage of diffusible calcium in plasma is 61.8% and non-diffusible calcium 38.2%.

●ShivBhushan Sharma

Phosphorus (P)

Phosphorus forms 1% of the mass of the human body. It is present as calcium phosphate in combination with calcium in bones and teeth. It forms three forms of the high energy compounds of adenosine phosphates (AMP, ADP and ATP), the source of energy. The percentage of calcium in body is 61.8% while phosphorus is 38.2%. If given in this ratio, the absorption and assimilation of both, the calcium and phosphate will be optimal.

The Sulphur (S)

It forms 0.3% of the mass of the human body. It is present as sulphate (SO_4) in the cells and is also present as component of some proteins, particularly, the contractile proteins.

The Sodium (Na^+)

Sodium ion is an important part of extra-cellular fluid (ECF). It helps transport the various forms of essential ingredients across the cell membrane for perfect health. Its atomic number is 11.

The Chloride (Cl^-)

Chloride and sodium help maintain the isomolarity of extra-cellular fluid. Its atomic number is 17. The ratio of $17/11 = ?$

The Potassium (K^+)

This intracellular element plays an important role in maintaining the health of cells. Its atomic number is 19.

Note: The above ten elements are the core group of elements.

Other Vital Elements for Tertiary Functions

Magnesium (Mg^+)

Magnesium forms 0.1% of the mass of the body. It is a vital co-factor for enzyme activity in many metabolic reactions.

2. Iron (Fe^+)

Iron forms 0.1% of the mass of the body. It is an important part of hemoglobin. It is also part of the enzymes.

Iodine (I-)

Iodine forms 0.1% of mass of the body. It is required for the of formation of heat producing (Thermogenic) thyroid hormones.

The Molecules and Compounds

Molecules are formed with the chemical union of two or more atoms. When two or more atoms of the same element bond together a molecule of that element is formed. For example, when two atoms of hydrogen bond a molecule of hydrogen gas is produced. When two or more different atoms bind together they form compound. For example, four hydrogen atoms and one carbon atom combine to form methane (CH₄), a compound.

The Most Important First Molecules

The Carbon Dioxide: 22 Protons

The fusion of carbon and oxygen atoms produces carbon dioxide (CO₂) with 22 protons (6+2x8), first part of Divyank. The first gas to be produced by Nature to initiate the process of biological life on the earth was carbon dioxide. The inferior solid planets, Mars, Mercury and Venus are surrounded by an atmosphere filled with 97% carbon dioxide. The earth atmosphere was also filled with 97% carbon dioxide gas before the creation of life on the earth. Is the presence of carbon dioxide around inner planets a mere coincidence?

The Water Molecules: 10 Protons

Water is the most abundant inorganic compound. It accounts for 61.8% of the earth and the body weight. Water (H₂O) molecules are made of loose bond of 2 hydrogen protons and 8 oxygen protons.

Note: It has the power of 10 (1x2+8), the second part of Divyank.

Ten Unique Qualities of Pure Water:

Most Abundant: 61.8% on the earth, body and cells.

Only substance, which can exist as solid, liquid and gas.

●ShivBhushan Sharma

Crystal clear, tasteless, odorless, soothing and free of impurities.

Polarity: Because of its polarity, water is called “The Excellent Universal Solvent” and “The Solvent of Life”.

High Heat Capacity: It can absorb and release large quantities of heat before the body temperature changes during the intense heat of summer or the chilling winter.

Chemical Reactivity: Water is an important reactant and helps in performing various chemical reactions of body. This quality is called hydrolysis. Small reactive chemicals like salts, acids and bases dissolve easily in water and become evenly distributed in the body. Molecules can not react chemically if they are not in solution form. The chemical reactions of the body fully depend upon the presence of water.

Carrier: The nutrients, oxygen, carbon dioxide gases and waste products of body do not dissolve in water but they are carried by water (blood plasma) from one part of the body to another part.

High Surface Tension: Because of the combined strength of its hydrogen bonds and polarity, it produces high surface tension. This in turn allows a water strider to walk on a pond without breaking the surface. This aspect plays vital role in normal pulmonary functions.

Lubrication and Cushion: Almost every lubricant function of the body is executed in the presence of water. Water protects the brain from external trauma with the help of cerebro-spinal fluid (CSF).

Both, the acids with H^+ ions (cations) and bases with OH^- ions (anions), are in reality integral parts of water. It is logical to believe that water (H-O-H) plays an important role in acid-base balance.

Divyank Ratio: Everything is made of 2 complimentary parts.

Shakta: The core or smaller component is equal to 38.1966%.

Shakti: The dynamic or bigger component is equal to 61.8034%.

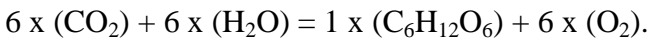
THE DESCENT OF SHAKTI

After the creation of the earth, the atmospheric carbon dioxide came down with the rain water for the creation of biological life on earth.

Three Fundamental Bio-molecules

Carbohydrates

The first bio-molecules produced by Nature are carbohydrates with the basic atomic formula of $(C_6H_{12}O_6)_n$. It is formed as follows.



Is the formula, $6 \times 22 + 6 \times 10 = 1 \times 96 + 6 \times 16$, a mere coincidence?

Lipids

The second bio-molecule produced by Nature is lipid. The formula of lipids and carbohydrates is identical except that the oxygen atoms are lesser in lipid than carbohydrate. Why?

Lipids are designed to produce 2.25 times more ATP energy than the carbohydrates and proteins. How? Let us understand the concept.

Oxygen atoms are first removed from the carbohydrate formula and then added to the lipid formula during beta-oxidation process in the mitochondria to produce energy for metabolic functions of the cells.

Proteins

The third bio-molecule produced by Nature is protein. It is produced with the addition of nitrogen atoms to hydrogen, carbon and oxygen atoms. They act as building blocks of the body.

The Start of Biological Life in the Primordial Ocean

It started as unicellular organism in warm waters of the Primordial Ocean and its vital processes took place in a single cell.

The warm water of ocean constituted its external environment. The nutrients required for the normal functions of the cell came from ocean waters and the end products of metabolism were excreted into the ocean. These organisms had to deal with external environment only and the biological and metabolic cycles were very simple and self-sufficient.

●ShivBhushan Sharma

Note: Despite tremendous evolution in the anatomy and physiology of human cells, one thing has not changed since the creation of life. The cells still need an external environment, which resembles the dilute saline medium of the Primordial Ocean, for its nutrition and expulsion of waste products. Since the cells can not go to the ocean, the ocean is brought to the body in the form of extracellular fluid.

The external environment of the unicellular organisms has become the internal environment of the multicellular organisms now.

Now, we, the multi-cellular organisms, have to deal with the internal and the external environments, which are constantly changing.

Now, let us study and comprehend another ancient Indian story.

CHURNING OF OCEAN

According to Puranas, the ancient Epic stories, the gods (*devas*) and demons (*asuras*) decided to get the nectar of immortality (*amrit*) from the Primordial Ocean to become eternal and immortal.

For once, they decided to plan and work together as a team.

They tied the celestial snake, *Vasuki*, around the Meru mountain of the Primordial Ocean and started churning the ocean water with the help of the snake.

The gods formed one team holding one side of the snake. The demons formed another team holding the other side.

During the process of churning, many valuable Gems and precious metals emerged from the ocean water. After a while, the blue black vapors emerged from the ocean and started killing the living beings.

Both, gods and demons, got scared. They approached and requested Lord Shiva to drink the poison and save the living beings.

Shiva obliged and drank the blue black poison. As he was drinking the poison, Parvati, his consort, tied a snake around his neck so that the poison does not go down the throat and kills him. As a result, the throat of Lord Shiva became blue and he is now called Neel-kanth,

The Real Message of Story

Every element of Periodic Table came from the Primordial Ocean.

The iodine vapors on being heated are colored blue-black. Iodine is used even today as an antiseptic to kill microorganisms. Iodide is trapped in the thyroid gland (Neck) to produce thyroxine. Thyroxine is used by mitochondria to produce heat to maintain 37°C temperature. Thyroid hormone primarily convert triglycerides and protein break down products into heat rather than ATP in mitochondria.

Now, let us understand the chemistry of nucleic acids.

Nucleic Acids:

They make up the genes, which provide the basic blueprint of life. They determine the type of organism, dictate protein synthesis and direct its growth, development and structure. They are composed of carbon, oxygen, hydrogen, nitrogen and phosphorus atoms and are the largest biological molecules in the body. Their building blocks, the nucleotides are quite complex and consist of three basic parts;

A nitrogen-containing base.

A pentose (5-carbon) sugar.

A phosphate group.

Five Types of Nucleotides:

Adenine (A). It contains adenine nucleotides.

Guanine (G). It contains guanine nucleotides.

Cytosine (C). It contains cytosine nucleotides.

Thymine (T). It contains thymine nucleotides.

Uracil (U). It contains uracil nucleotides.

Two Kinds of Nucleic Acids:

Deoxyribonucleic acid (DNA) - Genetic material of cell.

Ribonucleic acid (RNA) Molecular slave of DNA. DNA

is inside the nucleus and has two fundamental roles,

It replicates itself exactly before a cell divides. It ensures that the genetic information in every cell is identical.

●ShivBhushan Sharma

2. It provides the instructions for building every protein in the body.

DNA is a long double chain of nucleotides. Its bases are, A, G, T and C, and its sugar is deoxyribose. Its two nucleotide chains are held together by hydrogen bonds between the bases and it produces a ladderlike shape. Alternating sugar and phosphate molecules form the backbone of ladder and each rung is formed by two joined bases. Binding of bases is very specific. A always binds with T, and G always binds with C. Hence, A - T, and C - G, are complimentary bases. A base sequence of ATGA on one nucleotide chain would necessarily be bonded to the complimentary bases sequence TACT on the other nucleotide strand. The whole molecule is then coiled into a spiral-stair case like structure called a *Double Helix*.

RNA is present outside the nucleus. It carries out the orders from DNA for protein synthesis. RNA molecules are single nucleotide strands. RNA bases are A, G, C and U and its sugar is ribose.

Messenger RNA: They carry the information for building the protein from the DNA genes to the ribosomes.

Transfer RNA: They carry amino acids to the ribosomes.

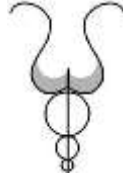
Ribosomal RNA: It forms part of ribosomes and it oversees the translation of genetic message and the binding together of amino acids to form the proteins.

Adenosine Triphosphate (ATP):

The synthesis of ATP is very important because it provides chemical energy to be used by the body cells. Without ATP, molecules can be made or broken down, cells cannot maintain their boundaries and all life processes grind to a halt. The chemical energy contained in the glucose bonds can not be used directly to power cellular work without the help of ATP molecules.

Now, let us study the perfect adult human functional anatomy.

SEVEN



THE FUNCTIONAL ANATOMY

To achieve the fundamental objectives of human birth and life and to make optimum use of our body, mind, consciousness and potentials, we need to study, understand and appreciate every aspect of perfect adult human anatomy, physiology, biochemistry and psychology etc. This holistic study can be called the integrated functional anatomy. Since this subject is vast and beyond the scope of this book, let us focus on the core and bring forth a single and most reliable value of every vital biophysical parameter of the perfect adult human being with the help of Divyank, Divyank Ratio and Divyank Sequence.

Let us restart with the study of the cell, the fundamental unit of life.

The Cell/Seed - 21 parts

Under the compound microscope, we observe three parts of the cell; the cell membrane, cytoplasm and the nucleus.

Under the electron microscope, we find that these parts are in turn made of seven parts each and the total number of parts of cell are 21. The adult human body is made of hundred trillion cells and there are 200 different types of cells in the body. The cells which can create new cells by dividing and multiplying are called living cells.

DIVYANK

The Biological Design of Creation and 3 Stages

It is established that every object of Nature is created in three critical stages; namely, the creation, development and maturation.

●ShivBhushan Sharma

The Three Stages of Divyank: $(22/21)^{10.34419} = 1.618034$.

The first stage - (22/21)

During the first stage, one centrosome of the cell gets divided into 2 centrioles leading to the formation of 22 parts of the dividing cell.

The second stage - 10

This stage of development consists of 10 stages.

The third stage - 0.34419

The third stage of maturation is equal to 0.34419.

THE SCIENTIFIC PROOF

Erythrocytes or Red Blood Cells (RBC)

Erythrocytes are specially designed to maintain homeostasis, health and life. They carry oxygen for the vital functions of body cells. We will be dead and gone without the essential oxygen. The formation of erythrocytes is executed in three stages of creation, development and maturation as seen in the following detailed knowledge. They are produced in abundance and can be easily studied in detail.

The size of pluripotent RBC stem cells - 21 microns.

During the first stage of creation, the size of the stem cell increases from 21microns to 22microns, before the nucleus divides.

The second stage of development consists of ten stages.

Each stem cell gives rise to 10,000 mature red blood cells.

The size of cells reduces gradually from 21microns to 7 microns.

The mature erythrocytes are formed in 21 days.

The stem cells, which are irregular and spherical in shape.

They get transformed into a beautiful biconcave shape.

The volume of a stem cell is 900 (21x21x21) cubic-microns.

The volume of an erythrocyte is 90 (7x7x1.8) cubic-microns.

Is the ten times reduction in volume a mere coincidence?

Tabulation - 1- The Summary of Erythropoiesis				
Serial number and Stages	Shape & Size	Cytoplasm color	Nucleus & Hemoglobin	Special Features
1. Pluripotent stem cells	21 micron - Irregular	Basophilic	Large Nucleus	Proliferation
2. Committed Progenitor	22 micron - Irregular	Basophilic	12 mm Nucleus	Volume - 900 cubic -microns
3. Burst Forming – E	20 micron	Basophilic	Active Mitosis	Erythropoietin
4. Colony Forming – E	18 micron	Basophilic	Active Mitosis	B12, Folic acid
5. Pronormoblast	16 micron	Basophilic	Active Mitosis	Differ
6. Basophilic Early Normoblast	14 micron	Basophilic due to RNA	Active Mitosis No Nucleoli	Ribosome synthesis
7. Polychromatic Intermediate Normoblast	12 micron	Multiple colors	Cell division stops	Iron, copper, Haemoglobin
8. Orthochromatic Late Normoblast	10 micron	Red color	Extrusion of Nucleus	Maximum Haemoglobin
9 Reticulocyte	8 micron	More Red	Fine Reticulum	In circulation
10. Erythrocyte	7 micron	Red Biconcave	Maturation	Volume - 90 cubic -microns

●ShivBhushan Sharma

The Essence:

The second stage of development consists of ten stages.

The size of cells reduces gradually from 21 microns to 7 microns.

The mature erythrocytes are formed in 21 days.

The pluripotent stem cells, which are irregular and spherical in shape, get transformed into a beautiful biconcave shape.

The volume of a stem cell is 900 (21x21x21) cubic-microns.

The Volume of mature erythrocyte is 90 (7x7x1.8) cubic-microns.

THE RULE OF TEN

10 Nutritional Factors

Protein, iron, copper, zinc, cobalt, Vitamin B₁₂, folic acid, Vitamin B₆, B₁ and Vitamin C.

10 Hormones and Factors

Testosterone, thyroxine, adrenal hormones, pituitary hormones, erythropoietin, intrinsic factor from stomach, growth stimulating factors and interleukins etc.

Few Interesting Questions?

Is erythrocyte a living cell?

Mature erythrocyte is not a living cell as it does not contain nucleus.

It can not multiply and perform this function of a living cell.

Totipotent and pluripotent germ cells of erythrocytes are living cells.

Why is the nucleus sacrificed in erythrocyte?

According to Divyank Ratio, most of the functional cells consist of 38.2% solid matter and 61.8% water. Since, hemoglobin occupies 35% of 38.2% space, there is no space for the nucleus in the cell.

Why do erythrocytes live for 120 days only?

No endoplasmic reticulum and protein synthesis in erythrocytes.

Why is the mitochondria sacrificed?

Mitochondria use glucose and oxygen to produce energy molecule ATP. Erythrocytes are specially designed cells to carry oxygen from the lungs to the cells and remove carbon dioxide from the cells.

Imagine! If erythrocytes start using oxygen for their personal need, then, what will be the fate of other cells of the body?

What is the advantage of biconcave shape of erythrocyte?

Erythrocytes are plastic and not elastic. They can fold but can not be stretched or elongated. We know that water is highly permeable and can enter the cells. Because of the biconcave shape of erythrocytes, when water enters the cells become spherical first and do not break.

Scientific Proof: Effect of various concentrations of saline on RBC.

In normal saline (0.9%), the erythrocytes remain biconcave.

In hypertonic saline of 1.2%, the intracellular water comes out and the erythrocytes shrink and become smaller in size.

In hypotonic saline of 0.6%, water enters the cells and they become spherical in shape. They do not become swollen.

Only when erythrocytes are exposed to a highly hypotonic saline of less than 0.35%, the erythrocytes get swollen and this leads to breakdown of the cell membrane and hemolysis.

$0.35/38.2\% = 0.9\%$. Is it a mystery or proof of the Divyank Ratio?

Message: Due to biconcave shape, healthy person can survive under different states of hydration (ingestion of water). **A Great Boon!**

THE CORE ANATOMY

The adult human body is made of 100 trillion cells and there are 200 hundred types of cells, which perform different functions of body.

100 trillion cells form hundreds of tissues and organs, which in turn form 10 organ systems and one integrated healthy functional body.

10 Vital Systems of Human Anatomy

They are specially designed to take care of vital functions of body.

THE CORE PHYSIOLOGY

The study of normal functions of the body is called physiology.

If we want to lead a perfectly healthy, wealthy, wise and happy long life, we need to understand and take care of homeostasis all the time.

Homeostasis: The constant maintenance of internal environment of the body within the physiological limits is called homeostasis.

Note: Internal environment comprises of both, the extra-cellular fluid (ECF) and the intra-cellular fluid (ICF) compartments of cells. An equilibrium between ECF and ICF is essential for perfect health.

The Ultimate Rule of Ten

Ideal values of 10 vital variables of Homeostasis.

The water content - 61.8% and blood volume - 5 Litres.

Blood glucose concentration - 111mg/dl or 100ml of blood.

Serum electrolyte (Na⁺, K⁺, Ca⁺) concentration and balance.

Blood pH - 7.4.

Mean Arterial Blood Pressure - 93mmHg.

Blood Hormones concentration.

Oxygen and carbon dioxide partial pressure.

Acid Base Balance.

The elimination of waste products by the kidneys.

The core body temperature of 37°C.

Homeostasis- The Role of 10 Systems of Body

1. The Muscles and Bones System:

It protects the physical body from the external world.

2. The Digestive System:

The prime objective of this system is the continuous supply of vital nutrients, water, electrolytes and other essential ingredients for cells.

3. The Blood:

It is “The Seat of Life and Carrier” of various needs of the body cells.

4. The Heart and Vascular System:

It forms “The Effective Transport System” along with the blood.

5. The Respiratory System:

The prime objective of this system is the absorption of oxygen gas from atmosphere for metabolic functions of cells and the expulsion of the excess and harmful carbon-dioxide from the body.

6. The Immune System:

This system along with the blood is primarily designed to protect the physical body from the problems created by external and internal harmful invaders and their attacks. It helps in attaining and maintaining homeostasis and its failure invariably leads to diseases.

7. The Excretory System:

The kidneys and skin play an extremely important role to eliminate the harmful and waste products of the body.

8. The Endocrine System:

The hormones, the chemical messengers, produced by endocrine glands assist in performing various chemical reactions of the body.

9. The Reproductive System:

It assists in procreation and the preservation of the human race.

10. The Nervous System:

The central nervous system integrates the different organs and organ systems of the body. It is “Master control and networking system”. It works with the reflex arch of sensory, integrating and motor neurons.

Neuro-endocrine reflex: The autonomic and endocrine systems take care of the vital functions of the body without any conscious control.

BODY FLUID COMPARTMENTS

The essential nutrients, electrolytes and other substances are present in fluid form in the body. The ideal percentage of water and solids in the body is 61.8% and 38.2%. The ratio of intra-cellular fluid and extra-cellular fluid is also 61.8% and 38.2%.

The extra-cellular fluid is transported in the circulating blood to the interstitial fluid with the passive process of diffusion through the pores of capillary walls and then into intra-cellular fluid of the cell.

Divine Message: Three Types of Muscles: Why did Nature create three types of muscles; the skeletal, smooth and cardiac muscles?

The voluntary skeletal muscles of legs are used to go to market and fetch the essential nutrients, water and electrolytes etc.

The skeletal muscles of arms and hands assist in cooking and eating.

The smooth muscles of digestive system execute the involuntary function of ingestion, digestion, absorption and elimination.

The assimilated essential nutrients from the liver are carried in the blood to the heart for circulation.

The involuntary cardiac muscles of the heart pump, transport and distribute the contents of blood to the cells to maintain homeostasis for perfect and integrated health.

The Muscular Power and Divyank Sequence

The voluntary skeletal muscles made of striated muscle fibers are designed for movement. They can cause damage. Hence, they are given the least power (say, 1.0 unit) with the help of TCA cycle.

The involuntary spindle shaped smooth muscles are given 1.618 times more power than the skeletal muscles.

The involuntary cardiac muscles with striations have to work hard to supply the requirements of body cells all the time. They need the maximum power, 2.618 times more power than the skeletal muscles.

Note: Please note the Divyank Sequence of 1.0, 1.618 and 2.618.

REGULATING MECHANISMS

The Negative Feed Back Mechanism:

In this system, the cause and effect are in the opposite direction.

For example, when arterial blood pressure increases, it is reduced to the normal level with reflex action of the central nervous system. All the vital variables of homeostasis can be rectified with the negative feed back mechanism provided all the perfect set points of variables of homeostasis, calculated with Divyank Ratio, are maintained all the time. For crystal clear understanding of the negative feed back mechanism, please study a standard book of physiology.

The Positive Feed Back Mechanism:

In this system, the cause and effect are in the same direction.

Let us comprehend this important, complex and difficult concept.

When a stimulus of threshold value is applied, it causes an effect and this effect becomes the cause for the next effect. This cycle goes on till the required result is achieved. The ideal example is parturition or the delivery of baby. This will be dealt later under procreation.

TRANSPORT PROCESSES

The Passive Process: The Law of Nature

The movement of ingredient required for the cell through the cell membrane from the area of higher concentration to the area of lower concentration without the use of any energy. The movement of molecules is along the chemical or electrical gradient and the main examples are osmosis and simple and facilitated diffusion.

The Active Process: Against the Law of Nature

The movement of ingredient from the area of lower concentration to the higher concentration against the concentration gradient with the help of energy.

a. The Primary Active Process:

The energy is derived from ATP (Adenosine Tri-phosphate).

For example, the Sodium-Potassium-ATPase Pump.

b. The Secondary Active Process:

The energy is primarily derived from sodium ions. The examples are co-transport (symporter) and counter-transport (anti-porter) systems. The movement is unilateral (one sided) or bilateral (both sided).

Exocytosis: The movement of substances from inside of the cell to the outside of the cell.

Endocytosis: The movement of substances from outside of the cell to the inside of the cell.

Now, let us understand the core aspects of blood, the carrier.

THE BLOOD

The blood is a highly specialized red colored heterogeneous fluid. It is a unique type of connective tissue in which inter-cellular fluid is an aqueous solution of colloid and electrolyte crystals and different forms of blood cells are free to swim around in it and it circulates in the cardiac and vascular system. It transports nutrients, hormones, electrolytes, oxygen, water and other substances to the cells and removes the waste products from the cells of the entire body. The ubiquitous presence of blood throughout the body and its unique chemical characteristics make it “The Seat of Life”.

The Composition of Blood - Divyank Ratio

A healthy adult male of 70 kilogram weight has 5 liters of blood and it consists of 3.09 liters of water and 1.91 kilograms of solid matter.

The Rule of Ten - Plasma

Plasma is composed of 10 major components; water, ions, glucose, amino acids, proteins, lipids, nitrogenous wastes, trace elements and dissolved oxygen and carbon dioxide.

Plasma consists of ten proteins; albumin, globulins, fibrinogen, glycoproteins, lipoproteins, haptoglobins, ceruplasmins, angiotensinogen, iron transporting transferrins and the factors for coagulation.

The albumin (1.618) and globulin (1.0) are in Divyank Ratio.

The Perfect Hen Egg: These eggs contain, white albumin - 61.8% and core yellow - 38.2 %. Their length and breadth of a perfect egg are in Divyank Ratio and it takes exactly 21 days to hatch these eggs. An Amazing Concept of consistency!

The Calcium Homeostasis

Calcium is one of the most important minerals in the body.

The amount of active-diffusible calcium is 61.8% and the amount of passive non-diffusible protein bound calcium is 38.2%.

The ratio of calcium and phosphorus is also 61.8% and 38.2%. In case of calcium phosphate deficiency, a mixture of calcium and phosphate in the above ratio will be efficient and more effective.

The ideal ratio of LDL and HDL cholesterol is in Divyank Ratio too.

THE IMMUNE SYSTEM

The immune system is beautifully designed to protect the body from viruses, bacteria, fungi, protozoa, and other disease causing entities like dust, allergens, antigens and carcinogens etc. This subject is vast but have to comprehends its unique design to protect ourselves.

TEN STAGES OF NATURAL IMMUNITY

Let us study the common cold and understand the internal defense.

First Cause: When an object like, virus, bacteria, fungus or allergen enters the nose and touches its cilia the object creates a stimulus.

Interpretation: A message that an object has invaded the nose is sent to the integrating centers of the brain through the sensory nerves.

First Effect: Integrating neurons order the motor nerves to uproot the enemy with the powerful wind energy, the sneezing reflex.

This is the first physiological immune response.

Second Effect: When sneezing reflex fails, the object enters and stimulates the interstitial fluid. This leads to production of saline water and running nose tries to flush the object.

Third Effect: When this physiological response fails the facial nerve increases blood perfusion of the mucus membrane of the nose

●ShivBhushan Sharma

through para-sympathetic activity. The nasal goblet cells produce mucus to engulf the object and separate it from the nasal cells.

Fourth Effect: The presence of nasal mucus cause cough reflex.

Fifth Effect: When cough reflex fails, the thermogenic hormones increase the body temperature and the resultant increased heat tries to burn the invading object.

Sixth Effect: The body produces 61.8% neutrophils to kill invaders.

Seventh Effect: When the invader is big, large monocytes take over.

Eighth Effect: In allergic cases, the eosinophil come in large number.

Ninth Effect: In hypersensitive cases, the basophil cells (mast cells) come in large number to give relief.

Tenth Effect: Meantime, 2 types of lymphocyte cells, T (Thymus) and B (Bone marrow), produce the cell mediated immunity and the humoral immunity to save the person from every possible attack.

Note: The ratio of Neutrophil, Lymphocyte, Monocyte, Eosinophil, and Basophil cells in normal blood are 60%, 30%, 6%, 3% and 1%.

Natural Healing: The natural immune response can be augmented with the help of Ayurvedic techniques and diet modifications etc.

The Second Line of Defense: By the endocrine system.

THE ENDOCRINE SYSTEM

The endocrine glands produce hormones, the chemical messenger for maintenance of homeostasis. The hormones travel via the blood stream to the target cells, which have receptor for the hormone.

The three types of hormones are; Peptides, Amines and Steroids.

10 Endocrine Glands - 10 Chakras - Centers of Consciousness

The ten endocrine glands are associated with ten segments of central nervous system, ten autonomic ganglia and ten major Chakras, the centers of consciousness. Now, let us correlate and prove them.

Pineal Gland: This highest endocrine gland is associated with the endorphin hormone, blissfulness, Pragyana Chakra and Saturn.

Hypothalamus - This integrating center of endocrine system and autonomic nervous system is associated with abstract mind, Vigyan Chakra, Jupiter and cognition and it regulates perfect homeostasis. It is located on top of brainstem, where vital centers of self-survival, like cardiovascular, respiration and digestive system are located.

Anterior Pituitary Gland - It is associated with hypothalamus, reticular formation of brainstem, Agyan Chakra and Asteroid Belt.

Posterior Pituitary Gland: It is also associated with hypothalamus.

Thyroid and Parathyroid Gland - These are associated with the cervical plexus, throat, Visudhi Chakra and Mars.

Thymus - It is associated with the cardiac plexus, heart, Anahata Chakra and the Sun. It plays an important role in immune responses.

Pancreas - It is associated with the solar plexus, upper abdomen, Manipura Chakra and the Sun. It produces insulin and glucagon for glucose homeostasis and their ideal ratio is 61.8% and 38.2%.

Adrenal Cortex - Associated with Nabhi Chakra and Mercury.

Adrenal Medulla - Associated with Nabhi Chakra and Mercury.

Reproductive Glands - Associated with Swadhisthana Chakra and Venus.

THE EMERGENCY GLAND

Now, let us comprehend the wisdom of another ancient Indian story. According to Ramayan, an ancient Indian Epic, during the last phase of intense fight between Rama, King of Ayodhya, and Ravana, King of Lanka, Rama was unable to kill Ravana. Whenever Ravana was attacked and wounded by Rama, he would recover and start fighting again. It is said that Ravana escaped death nine times. At that juncture, Vibhishan, the younger brother of Ravana, asked Rama to attack Ravana in the navel (Nabhi Chakra). Rama pierced the navel with an arrow. Ravana could not recover and he died.

What is the Message?

The nerve and blood supply to the adrenal glands, which are located behind the navel, was cut off. As a result, the adrenal gland failed to

rescue Ravana. Let us take this golden opportunity to understand the real structural and functional beauty of the adrenal gland. Adrenal glands are located on top of both the kidneys. The blood supply is from the renal artery and it enters through the capsule of the adrenal gland. There are three layers of adrenal cortex and the fourth inner layer is adrenal medulla.

The Unique Nature of Adrenal Glands

Layer-1: In Zona Glomerulosa, adrenocorticotrophic hormone (ACTH) acts on cholesterol and converts it into pregnilone and then into progesterone. 21-hydroxylase converts progesterone into 11-deoxycorticosterone and corticosterone. Angiotensin-II acts on corticosterone and converts it into 18-Hydroxy-corticosterone, which with aldosterone synthase is converted into aldosterone.

Note: Aldosterone helps in the absorption of sodium ions and water and the excretion of potassium ions by the kidneys.

The Essence: The first layer of adrenal cortex helps in maintaining blood volume, ECF, homeostasis and life and prevents death.

Layer2: Pregnilone and progesterone travel in the blood from Zona Glomerulosa to the next layer, Zona Fasciculata. Pregnilone is converted into 17- $\acute{\text{O}}$ H pregnilone and progesterone into 17- $\acute{\text{O}}$ H progesterone. 21-hydroxylase acts on 17- $\acute{\text{O}}$ H progesterone and converts it into 11-deoxycortisone and glucocorticoid (cortisol).

The Essence: Cortisol increases blood glucose levels and helps in maintaining homeostasis. It effects fat and protein metabolism too.

Layer-3: 17- $\acute{\text{O}}$ H pregnilone and 17- $\acute{\text{O}}$ H progesterone from Zona Fasciculata travels to third layer, Zona Reticularis. In this layer, 17- $\acute{\text{O}}$ H pregnilone is converted into dehydroepiandrosterone (DHEA). 17- $\acute{\text{O}}$ H progesterone in turn is converted into androstenedione.

It is converted into testosterone and oestrogen, Ojas/Tejas energy.

Layer-4- Adrenal Medulla: The blood with cortisol hormone then travel to the innermost layer, the adrenal medulla, which in turn produces catecholamines with the help of amino acid tyrosine.

The Essence: Catecholamines are designed for the final survival.

Tabulation – 2 - The Summary of The Endocrine System			
S.No. & Name	Type	Hormone	Action
1. Pineal Gland	Gland	Melatonin, Endorphin	Sleep cycle, Reproduction
2. Hypothalamus	Nerve Cells	Releasing Hormones; GRH, GHIH, CRH, TRH. ADH & Oxytocin.	On Pituitary Gland, Kidney and Uterus
3. Anterior Pituitary	Gland	Stimulating Hormones GH, ACTH, TSH, FSH & LH, Prolactin	Growth, Cortisols, Thyroid hormone s, Sperm, Ovum, Breast and Milk
4. Posterior Pituitary	Nerve fibers	ADH, Oxytocin stored and secreted by the posterior pituitary	Body water balance and Parturition etc
5. Thyroid & Parathyroid	Glands	Thyroxine (T3 and T4), Calcitonin and Parathyroid	Heat, Metabolic rate , Bone and Serum Calcium phosphate levels
6. Thymus	Gland	Immune Factors	Immunity
7. Pancreas	Gland	Insulin, Glucagon	Carbohydrate metabolism
8. Adrenal Cortex	Gland	Mineralocorticoids, Glucocorticoids and Androgens	Emergency hormones for self survival
9. Adrenal Medulla	Neuro endocrine	Catecholamines	Emergency hormones
10. Reproductive Organs	Gland	Male and Female Sex hormones	Procreation and Ojas for Spiritual Evolution (Tejas)

●ShivBhushan Sharma

Note: A person, who maintains the perfect health of adrenal glands with right diet, exercises and meditation etc, can make optimum use of the human birth, life, mind, consciousness and potentials.

THE NERVOUS SYSTEM

The Prime Function:

“The Master Control” by the central nervous system (Brain and Spinal cord) and “Efficient Networking” by the in coming afferent sensory nerves and the out going efferent motor (voluntary or involuntary) nerves of the peripheral nervous system.

NEURONS

The Structural and Functional Nervous System

10 Vital Components of Neurons:

Receptor Dendrites, Body, Nucleus, Mitochondria, Nissl bodies, Axon hillock, Axon, Myelin sheath, Node of Ranvier and Terminals.

An Enlightening Question and Answer!

Neurons have nucleus but they do not divide and multiply. Why?
Nature removed centrosome from nucleus to avoid multiplication!

Homeostasis:

For constant maintenance of perfect homeostasis and integrated health, the neurons play an extremely important role.

The Fundamental Functional and Executive Mechanism

Reflex- Definition: Spontaneous involuntary muscular response to a threshold sensory stimulus. We need to understand every aspect of the seven parts of reflex action to comprehend the nervous system.

The Reflex Arch: Sensory-Interneuron-Motor - 3 components.

Gyan Indriya: Sensory nerves carry signals and impulses from the external and internal environment to the central nervous system.

Buddhi: The central evaluating-integrating inter-neuron cells.

Karma-Indriya: Motor nerves carry signals and impulses from the central nervous system to execute the necessary motor response.

RESTING MEMBRANE POTENTIAL

The combined action potential of transport of ions across the cell membrane in a resting cell results in a state of equilibrium is called resting membrane potential.

It maintains osmolarity and prevents changes in cell volume. In resting state, the electrical charge inside the cell is negative and positive electrical charge outside the cell.

ACTION POTENTIAL

Both, nerves and muscles, are excitable cells and they generate and propagate electrical signals in the form of action potential.

The Molecular Basis of Membrane Potential

The cell membranes contain ion channels that provide selective ion permeability. Hence, there is stable ion diffusion gradient across the cell membrane and the membrane potential.

The Resting Membrane Potential of Neurons: -70mV.

The resting membrane potential of neuron cells is due to healthy balance between the intra-cellular fluid and the extra-cellular fluid.

The intra-cellular fluid is rich in Potassium (K⁺) ions and the extra-cellular fluid is rich in Sodium (Na⁺) ions and Chloride (Cl⁻) ions.

The Causes of Negative Resting Membrane Potential

The positive sodium ions present in the interstitial fluid are not permeable through the cell membrane and can not enter the neurons easily. Hence, there is relative negative charge inside the neurons.

The intra-cellular potassium ions are almost hundred times more permeable than the extra-cellular sodium ions. They come out of the neurons easily and increase the negative charge inside the neurons.

Sodium-Potassium-ATPase pump (Na⁺-K⁺-ATPase pump) pumps out 3 ions of sodium from the cells in exchange for 2 ions of potassium. This increases the negative charge inside the cell.

The negatively charged intracellular proteins do not move out of the cells and hence, they add to the negative charge of the neuron.

LOCAL POTENTIAL

In response to a sub-threshold stimulus, the cell membrane shows some localized alteration in the membrane potential. This develops sharply and decays exponentially. These non-propagatory graded changes are called local potentials. In normal physiological system, a number of local potentials, like, the receptor-generator potential, post synaptic potential and the end plate potential etc are seen.

Now, let us understand few important terms.

Polarization: The opposite membrane potential across cell.

Depolarization: When the intra-cellular membrane potential also becomes positive, the process is called depolarization.

Re-polarization: The process of restoration of negative intra-cellular membrane potential is called re-polarization.

Hyper-polarization: When intra-cellular membrane potential is more negative than the resting membrane potential.

ACTION POTENTIAL IN NEURONS

I would like every reader to carefully study this section.

The resting membrane potential (RMP) of neuron is -70mV .

When a threshold stimulus is applied to the neuron, the sodium ions move in to the cell through the open channels and create a slow slope.

When the charge reaches the threshold value of -55mV , the voltage gated channels open and the sodium ions rush in immediately to produce depolarization and the action potential.

After reaching saturation point ($+34\text{mV}$), the sodium entry stops.

The sodium channels close.

The potassium channels open and there is efflux of potassium ions.

It leads to re-polarization.

To complete re-polarization, $\text{Na}^+-\text{K}^+-\text{ATPase}$ pump pumps out 3 Na^+ ions from the cell against the entry of 2 K^+ ions.

It brings down the charge leading to hyper-polarization.

Hyper-polarized state becomes a stimulus. The sodium ions move into the cells to restore the resting membrane potential of -70mV.

Note: There are few related questions, which we should consider.

Why 3 Na⁺ ions for 2 K⁺ ions? In Na⁺-K⁺-ATPase pump, ATP provides energy to transport Na⁺ and K⁺ against their chemical and electrical gradients. I am certain that this concept is over simplified.

DIVYANK PERSPECTIVE

I am convinced that the natural ratio is 34 Na⁺ ions to 21 K⁺ ions.

Proof: The atomic weights of 21 K⁺ (798) and 34 Na⁺ (748) are in ratio of 22/21. This ratio of 22/21 creates a beautiful fulcrum effect and it helps in easy exchange of ions across the cell membrane.

Similarly, if resting membrane potential of nerve is -55mV, then the highest electrical potential should be +34mV instead of 30 or 35mV.

The Equilibrium Potential - Nernst Equation.

The equilibrium potential is a function of ion concentration gradient and is calculated using Nernst equation.

$$E_x = \frac{-61 \log \left[\frac{[X]_i}{[X]_o} \right]}{Z}$$

E_x = Equilibrium potential for ion x.

Z = Ion valence.

$[X]_i$ = Intracellular concentration of X.

$[X]_o$ = Extracellular concentration of X.

In Nernst Equation, a log of -61 is used. Why? Unfortunately, the answer is not explained in the standard books.

Note: I am convinced that the log of -61 represents the water content of the ionic solution. The ideal ratio of water is 61.8% and not 61%.

A Worthwhile Suggestion

The log of -61.8 will lead to the exact equilibrium potential value.

LOCAL GRADED POTENTIAL

The non-exciable cells are also affected by their membrane potentials because of the ion transport. They produce graded potential for local action and not action potential.

Few Enlightening Questions?

Sodium ions are almost impermeable through the cell membrane, then why the electrical conductance of the sodium ions is more than the potassium ions during the action potential?

To find an interesting answer, let us understand the Periodic Table.

First Period: Hydrogen ions are electrically very powerful. There is one electron and one proton in hydrogen atom. Hydrogen can easily form useful compound with most of the like minded atoms. Hence, hydrogen atoms are fairly useful for structures and functions of cells.

Second Period: Lithium and Fluoride ions are highly reactive and can damage cells and life. Hence, they were not used by the Nature.

Third Period: Sodium and Chloride ions are fairly impermeable through the cell membrane but are electrically fairly powerful and can enter the cell through the cell membrane on stimulation. Hence, they were chosen for extra-cellular fluid compartment.

Fourth Period: Potassium ions are hundred times more permeable than sodium ions but electrically they are less powerful. They are used as intra-cellular ions. Bromide was not used as it can inhibit.

The Hidden Wisdom

Both, Sodium and Potassium ions are cations. They have one free electron in the outer orbit, which can be shared with other atom to become a stable compound. Stability is the mantra of the Nature.

There are 11 protons in sodium atom and 19 protons in potassium atom. As a result, the sodium ions have more electrical conductance than the potassium ions.

It is said that the neurotransmitter, Acetyl choline, is primarily excitatory in nature but can be inhibitory in some places. How?

I am convinced that Nature does not play a game of dice and does not do two opposing things in natural order of actions. Let us explore.

It is known that Acetyl choline produces excitatory post synaptic potential (EPSP) and not inhibitory post synaptic potential (IPSP).

Confusion: The inhibitory effect produced by the Vagus nerve on SA node for cardiac impulse or on beta cells of pancreas to produce insulin have been confused as inhibitory actions. In reality, Acetyl choline is producing excitatory post synaptic potential (EPSP) only.

Essence: I fail to understand the cause of confusion.

Strength-Duration Curve: This excitatory curve is the graph that demonstrates the exact relationship between the strength and the duration of a stimulus.

Chronexie is the minimum time required for rheobasic strength of threshold stimulus to excite the muscle.

The rectangular shape produced by Chronexie is in Divyank Ratio.

An Un-explored Real Beauty of Central Nervous System - CNS

Posterior half of CNS is associated with sensory nervous system.

Anterior half of CNS is associated with motor nervous system.

Middle part of CNS is associated with autonomic nervous system.

RULE OF TEN

10 Lobes of the Cerebral Cortex of Brain

There are two cerebral hemispheres. The medical books talk of four lobes; frontal, parietal, temporal and occipital, in each hemisphere.

The frontal lobe is motor while posterior lobes are sensory in nature.

Fifth lobe, Insular cortex, is associated with the central autonomic networking system and it regulates the autonomic functions of body.

10 Segments of Central Nervous System - 10 Chakras

Four fused coccyx bones - Muladhar Chakra.

Triangular sacrum - 6 foramens - Svadhisthana Chakra.

●ShivBhushan Sharma

Five lumbar vertebrae 10 nerves - Nabhi Chakra.

Six lower thorax vertebrae - Manipura Chakra.

Six upper thorax vertebrae - 12 nerves- Anahata Chakra.

7 cervical vertebrae and 8 nerves - Visudhi Chakra.

Brainstem - Medulla, Pons & Mid Brain - Agyan Chakra.

Hypothalamus - Vigyan Chakra.

Cerebral Cortex - Pragyana Chakra.

Neo-Cortex - Sahasrara Chakra.

Divyank Ratio: The first 6 segments are associated with spinal cord.

The last 4 segments are associated with the brain.

10 Major Components of Autonomic Nervous System

Ganglion-Impar - Sympathetic nervous system end part.

Sacral Parasympathetic nervous system (S-2, S-3 and S-4).

Superior Mesenteric - Sympathetic nervous system.

Coeliac Ganglion - Sympathetic nervous system.

Cardiac Plexus - Sympathetic nervous system.

Cervical Plexus - Sympathetic nervous system.

Cranial Parasympathetic system (Cranial nerves; 3,7,9 and 10).

Hypothalamus - Head, Integration of Autonomic nervous system.

Cerebral Cortex - Central Autonomic Networking.

Neo-Cortex - Super-conscious state - Intuition and Cognition.

They are associated with 10 corresponding Chakras.

A healthy balance between the sympathetic and para-sympathetic branches of the nervous system is essential for homeostasis.

10 Connections of Cerebellar Circuit

Cerebellum coordinates the functions of nervous system with 10 important circuits; Purkinje cell, Granule cell, Basket cell, Golgi

cell, stellate cell, Climbing fiber, Mossy fiber, Parallel fiber, Inferior olivary nucleus and deep cerebellar nuclei.

10 Rexed Laminae of Spinal Cord

There are 10 pairs of laminae in the spinal cord.

The posterior laminae are associated with the dorsal ganglion, the sensory nerves and the sensory nervous system.

The anterior laminae are associated with the anterior horn cells, the motor nerves and motor nervous system.

The lateral horn cells of the spinal cord (T-1 to L-2) and (S-2 to S-4) give rise to pre-ganglionic fibers of the autonomic nervous system.

10 Layers of Retina

Are 10 vital layers of the retina a mere coincidence?

An Eagle's Eye - 22/21

It is said that the most evolved human being, who is in tune with the Universal Consciousness, is bestowed with “An Eagle's Eye”.

Interestingly, the anterior posterior diameter of adult eye is 24 mm, the transverse diameter is 23 mm and the vertical diameter is 23 mm.

The ratio between the anterior posterior diameter and the transverse or the vertical diameter is 22/21.

Divyank Ratio - The Sympathetic Nervous System

Sympathetic nervous system is specially designed for homeostasis and the ultimate survival of life. It has an Amazing Divine design!

The pre-ganglionic fibers of sympathetic nervous system arise from 14 vertebrae, namely, first thoracic (T-1) to second lumbar (L-2).

There are 14 pairs or 28 pre-ganglionic sympathetic nerves.

They lead to formation of left and right sympathetic chains.

Each chain is composed of 22 pairs of para-vertebral ganglia.

The terminal fibers unite at bottom to form the Ganglion-Impar.

28 pre-ganglionic fibers lead to the formation of 45 ganglia.

The Divine Wonder - Divyank Ratio: $45/28 = 1.618034$.

THE HEART and VASCULAR SYSTEM

The heart and vascular system plays an extremely important role in maintaining the most of the variables of homeostasis and the vital functions of body. It is immensely influenced by the mechanical, electrical, chemical and psychological signals from the external and the internal environments and it needs to be protected all the time.

No wonder, it is beautifully caged in the thoracic cavity.

It is also primarily regulated by the autonomic nervous system.

Its vital aspects are meticulously designed with Divyank Ratio.

Now, let us study and understand the special features of the heart.

Divyank Ratio

Heart resembles the clenched fist.

Length and breadth of heart are in the ratio of 5 and 3.

There are 2 cusps of the mitral valve (left side of heart) and 3 cusps of the tricuspid valve (right side of heart). 2/3.

The Conducting System of Heart - 10 Parts

It consists of ten parts; Sino-atrial (SA) node, anterior inter nodal fibers, middle inter nodal fibers, posterior inter nodal fibers, atrio-ventricular (AV) node, bundle of His, right bundle branch, right purkinje fibers, left bundle branch and left purkinje fibers.

Electrocardiogram - ECG - 10 Parts

ECG is recording of the electrical activity of the heart, one of three most vital parts of the body. Interestingly, ECG also consists of total ten parts; namely, 4 plateaus, 4 peaks and 2 valleys.

CARDIAC CYCLE

It is the series of events which take place in the heart every heart beat.

The Phases - 2

Systole: The contraction phase.

Diastole: The relaxation phase.

Duration: In case of normal heart rate of 75 beats, the duration of normal cardiac cycle will be 0.8 seconds ($60/75=0.8$).

The Atrial Cycle - The Collection Center

The prime function of the atrium is collection of blood. Hence, it functions like earth, the store house. The atrial systole lasts for 0.1 second and the atrial diastole lasts for 0.7 seconds. The ratio is 1:7. There are 7 sub-divisions of the earth, atmosphere and the heaven.

The Ventricular Cycle - Divyank Ratio

The most important function of heart is to pump blood to every cell of the body and it is executed with the help of left ventricle of heart.

Duration: Ratio of ventricular systole (0.3 seconds) and ventricular diastole (0.5 seconds) is as expected, exact Divyank Ratio.

3 Phases of Ventricular Systole: These are; iso-volumetric phase, rapid ejection phase, and slow ejection phase.

5 Phases of Ventricular Diastole: These are; proto-diastole phase, iso-volumetric relaxation phase, rapid filling phase, rapid passive filling phase, and slow filling phase. The same Divyank Ratio.

A Question and Right Answer of Coronary Circulation:

It is written that the heart receives its blood supply during diastole.

It is not true. The left ventricle receives blood supply during diastole. During systole, the left coronary artery supplying blood to the left ventricle gets obliterated due to increased blood pressure in the left ventricle. Hence, only muscles of left ventricle receive blood supply during diastole and not during systole. The rest of heart receives its blood supply during systole only. Unfortunately, when heart rate increases, systolic phase of ventricles remains same but the duration of diastolic phase of ventricles reduces considerably.

Application: Hence, in case of heart attack, the heart rate should be maintained at normal level to avoid myocardial infarction and death.

CARDIAC OUTPUT

The amount of blood pumped out by the heart per minute is called the cardiac output. It is extremely vital for integrated health.

Now, let us comprehend the following very important terms.

1. **End Diastolic Volume (EDV)**: Amount of blood in ventricles at the end of diastolic (relaxation) phase. The ideal amount is 120ml.

Stroke Volume (SV): Amount of blood pumped by the ventricles per heart beat. The ideal amount should be 74ml.

End Stroke Volume (ESV): Amount of blood in ventricles after the heart beat. The ideal amount should be 46ml.

Ejection Fraction (EF): The percentage of blood pumped out by ventricles per heart beat. It is calculated by dividing EDV by SV. The ideal ejection fraction (120/74 ml) is 61.8% - Divyank Ratio.

Cardiac output (CO) is calculated by multiplying stroke volume (SV) with heart rate (HR). $CO = SV \times HR = 74 \text{ml} \times 75 = 5480 \text{ml}$.

BLOOD PRESSURE

The pressure exerted by the free flowing blood stream on the lateral walls of the blood vessels is called blood pressure.

Systolic Blood Pressure (SDB): The maximum blood pressure. The ideal value is 120mmHg.

Diastolic Blood Pressure (DBP): The minimum blood pressure. The ideal value is 74mmHg.

Pulse Pressure (PP): Difference between systolic and diastolic blood pressures. The ideal value is 46mmHg.

Mean Arterial Blood Pressure (MABP): It is extremely vital. It defines the perfusion pressure of vital organs of body. It is uniform for all the vital organs and should be 93mmHg for integrated health.

Note: It is normally calculated by adding 1/3rd of pulse pressure to diastolic blood pressure. In reality, it should be calculated by adding 38.2% (Divyank Ratio) of pulse pressure to diastolic pressure. Why?

Ventricular systole lasts for 0.3 seconds of 0.8 seconds of the cardiac cycle. This phase is responsible for the pulse pressure. $\frac{3}{8}=38.2\%$.

Note: It is said that the brain, heart and kidneys can regulate their own perfusion pressure (MABP) between 60mmHg to 150mmHg. Divyank Sequence: The Ideal - 57mmHg - 93mmHg - 150mmHg.

THE RESPIRATORY SYSTEM

FUNCTIONAL ANATOMY

The Upper Respiratory Tract - 7 parts

It consists of 7 vital parts; nose, nasal cavity, nasopharynx, mouth, oropharynx, pharynx and larynx.

The Lower Respiratory Tract - 22 parts

It consists of the following parts; trachea, two primary bronchi, their branches, bronchioles and alveoli. Is it not interesting to note that the primary bronchus divides dichotomously for 22 times?

Dead Space: The 7 parts of upper respiratory tract and the 15 upper divisions of the lower respiratory tract form the conducting zone. It is called the dead space and there is no gas exchange in this zone.

DEEPER CONTEMPLATION

The prime objective of Akhand Sutra is contemplative meditation.

It is said that the function of respiratory system is exchange of gases or the absorption of oxygen from atmosphere and the expulsion of carbon dioxide from the body. Are these definitions right? No

Ideal Definition: The absorption of oxygen from the atmosphere for the metabolic functions of cells and the expulsion of **excess** and **harmful** carbon dioxide from the body. Why?

Reason: Carbon dioxide is essential for pH of blood and acid base balance of the body for perfect state of homeostasis and integrated health. Hence, carbon dioxide can not be expelled completely.

Proof: When we try to expel carbon dioxide from the body with hyper-ventilation or forced increase in inspiration and expiration rate, we experience dizziness and many other signs and symptoms.

●ShivBhushan Sharma

Hyper-ventilation is also used as a test to diagnose latent tetany. Let us minimize/eliminate the confusing and misleading definitions.

ABSORPTION ZONE

7 divisions of lower respiratory tract form the gas absorption zone.

The Lungs: There are 2 lobes in the left lung and 3 lobes in the right lung. The ratio of 2/3 also represents the Divyank Ratio.

The Reducing Diameters of Tracheo-Bronchial Tree - Divyank

The diameter of Tracheo-Bronchial Tree decreases gradually from 2.5 centimeters in trachea to 1.5 centimeters in bronchus to 0.9 mm in bronchiole to 0.5 mm of respiratory zone bronchiole to 300 μm and then to 200 μm in the alveoli. Kindly note the Divyank Sequence.

The Respiration: It is composed of the following **ten** vital steps.

Inspiration: Intake of air from atmosphere into the lungs.

The intake of oxygen (O_2) from lungs to the blood.

The transport of oxygen in the blood.

Exchange of oxygen from blood to extra-cellular fluid (ECF).

Exchange of oxygen from extra-cellular fluid to the cells.

Intracellular Respiration: Reaction between oxygen and bio-molecules produces carbon dioxide, water and ATP etc.

Carbon dioxide from the cells moves to the extracellular fluid.

Exchange of carbon dioxide from extracellular fluid to the blood.

The exchange of carbon dioxide from the blood to the lungs.

Expiration: The expulsion of excess and harmful carbon dioxide from the lungs to the external atmosphere.

THE DIVINE PLAY

Perfect Breathing Cycle - 12 per minute - Lasts for 5 seconds.

Each breathing cycles is composed of two complimentary parts.

Inspiration: This is an active process and it lasts for 1.91 seconds.

2. **Expiration:** This is a passive process and it lasts for 3.01 second.

The Neural Regulation of Respiration

The inspiratory neurons in the brainstem gradually increase the stimulation of the inspiratory muscles for 1.91 seconds.

At the end of 1.91 seconds, the inspiratory neurons stop firing and the respiratory muscles start relaxing gradually.

With the elastic recoil of inspiratory muscles and the elastic lung tissue, the passive process of expiration lasts for 3.01 seconds only.

DIVYANK SEQUENCE

Atmospheric Pressure of Air - Sea level - 760 mmHg.

Partial Pressure of Oxygen:

Sea level: 160 mmHg. Calculated by $21\% \times 760$ mmHg.

Alveolar level (Lungs): 100 mmHg.

Arterial blood: 61.8 mmHg.

Venous blood: 38.2 mmHg.

Few Important Questions and Answers

1. Which is the strongest stimulus for inspiration?

Hydrogen ions produce stronger stimulus than carbon dioxide.

2. The Natural Stimulus for SA Node, the pace maker of heart?

I am convinced that the stimulus for SA Node is the mechanical pressure exerted by the moving stream of returning venous blood.

No wonder, Nature placed SA node at the opening of vena cava in the right atrium for that purpose. The autonomic nervous system has a secondary role in maintaining the cardiac functions.

3. Why “The Kiss of Life” fails to revive the cardiac arrest patient?

In the absence of moving dynamic venous blood, “Mouth to Mouth Breathing” can not restart the conducting system of the heart.

4. Effective Cardiac Pulmonary Resuscitation (CPR):

A conscious effort should be made to bring dynamism to the venous

●ShivBhushan Sharma

return first with the regulated compression of the thoracic cage.

With an increase in venous pressure, the heart starts pumping again!

THE DIGESTIVE SYSTEM

Prime Function: Continuous supply of vital nutrients, electrolytes, water and other essential substances for sustenance of health and life.

Executive Function: Ingestion, digestion, absorption, assimilation and excretion of undigested food and other harmful products.

The Functional Anatomy - The Law of Gut

The lips, mouth, teeth, tongue, salivary glands, buccal cavity, palate, tonsils, oropharynx, pharynx, oesophagus, stomach, duodenum, small intestines, large intestines, colon, rectum and the anus. The liver, gall bladder and pancreas are subsidiary organs of this system.

Enteric Nervous System: A large neural network, which is located within the walls of stomach and intestines and it regulates the functions of digestive system. It is made of the myenteric plexus, which controls circular and longitudinal muscles and gut movement and the sub-mucosal plexus, which coordinates the secretions and intestinal absorption of nutrients, water and electrolytes etc.

Neurotransmitter: Acetyl choline is the primary neurotransmitter involved in stimulation (excitation) of secretions and motility.

ATP and nitric oxide function as inhibitory neurotransmitters.

The gut-brain peptides stimulate the intestinal fluid and electrolyte secretion but inhibit the gut motility.

Few Interesting Questions and Answers:

1. Why did Nature choose alpha amylase enzyme for saliva?

According to Ayurveda, for long healthy life, we should eat when in a state of hypoglycemia/hunger and start with pure sweet Satvic diet.

If we consume complex diet in a state of hypoglycemia, the blood is diverted towards the digestive system for digestion and the brain is

deprived of glucose. To avoid this, Nature chose alpha amylase to hydrolyze and digest cooked starch diet into maltose, which in turn is converted into glucose plus glucose, for immediate absorption.

2. Why did Nature choose highly acidic medium in stomach?

To kill harmful micro-organisms consumed with the food and to break down protein chains for protein digestion and other functions.

Should we block hydrochloric acid production in stomach? No.

It is against the divine design. Treat the cause of hyper-acidity.

Why is specific dynamic action (SDA) of protein diet higher?

The specific dynamic action of food is the amount of energy used to digest the food. SDA is highest for protein for the following actions. Proteins are broken down into amino acid with fission in stomach and then amino acids are fused in cells to form proteins once again.

THE RENAL SYSTEM

Prime Function: Urine formation and the elimination of harmful and wasteful substances from the body. Kidneys are intelligent organs as they can easily sense every minute change and maintain homeostasis by controlling the excretion of water, electrolytes, other hydrophilic molecules and harmful products. Kidneys play the most important role in long term regulation of blood pressure through its control of extracellular volume with renin-angiotension-aldosterone, which helps in reabsorption of water and sodium and excretion of potassium, calcium, magnesium and metabolic acids.

Shape and Size of Kidney is also in Divyank Ratio.

Executive Function: It is performed in four stages; glomerular filtration, reabsorption, tubular secretion and excretion.

Glomerular Filtration Rate: 125ml/minute or 180 liters/day.

Reabsorption: 99% of the ultra filtrate is reabsorbed.

Few Interesting Questions and Answers

What is the need for so much reabsorption and tubular secretion?
micron size pores of glomerulus allow the filtration of substances

●ShivBhushan Sharma

up to 4 micron size with the passive process of diffusion from the area of higher concentration to the area of lower concentration. The filtered products, like, water, glucose, amino acids and electrolytes etc are needed for homeostasis and are reabsorbed fully or partially.

Larger than 4 micron size harmful substances are secreted against the gradient with the help of primary or secondary active processes.

2. Why is the limiting pH of urine - 4.5?

It is said that the maximum concentration of H^+ which is secreted in urine is 1000 times the concentration of H^+ in the blood. The ratio of limiting urine pH of 4.5 divided by ideal blood pH of 7.4 is 61.8%.

THE PROCREATION

Every born human being has to die one day and has to be replaced with one young human being to avoid the extinction of human race.

According to ancient Indian Sages, every human being should perform the following three debts of human life for evolution and to be born as an enlightened Soul, *Siddha Purush*, in the next life.

The Three Debts of Human Birth and Life

The Debt of Mother Earth: We get everything from the Mother Earth. The first debt is fulfilled by planting plants and trees and taking care of every living and non living being of the Mother Earth.

The Debt of Ancestors: We are born because of the love of our dear ancestors. This debt is fulfilled by an honest act of procreation.

The Debt of Gods: Gods are the enlightened human Souls. They were in tune with the Universal Consciousness. They had cognized the secrets of Nature and left behind the legacy of absolute wisdom for the love of humanity. We should also make an earnest attempt to comprehend the innate wisdom of ancient scriptures and explain the same in the light of modern sciences and languages, which even a common human being can easily study, understand and apply in life. Let us start this section with a baffling unexplained question.

The Spontaneous Creation of Human Beings?

It is generally believed that the human creation was spontaneous.

I am convinced that we have evolved from the fish over a period.

Note: The incarnation of Vishnu starts with fish and re-incarnations represent the evolution of nervous system and its relationship with ten endocrine glands and ten centers of consciousness (Chakras).

Such a precise and close association can not be a mere coincidence?

Aitareya Upanishad is often quoted in support of this view point.

Now, let us demystify a mystery which has not been resolved even by the greatest translators/commentators of ancient Indian wisdom.

The Essence of Aitareya Upanishad (Chapter 1):

In the beginning, there was only self (Atma) and nothing else.

Self created three worlds; the heaven, atmosphere and the earth.

From water, the Self drew forth *Lok-palan*, the guardian of world.

He carved the mouth, nostrils, eyes, ears, skin, heart, navel and the reproductive organ in the cosmic person.

Then, Self created food for the person from the ocean water.

Then, the cosmic person was subjected to the hunger and thirst.

The cosmic person sought the food with speech (mouth), breath (nostrils), sight (eyes), hearing (ears), touch (skin), mind (heart) and then with the reproductive organ respectively.

He was unable to catch the food with these seven organs and eat.

Note: There is absolutely no confusion up to this stage of the story.

Aitareya Upanishad (I.3.10),

“Tad apanenajighrksat, tad avayat!”

Then, the cosmic person sought to seize it (the food) by the apana, the out-breath/the out-let and he was successful in getting the food.

It means that the food was received through *Apana*, an out-let.

Now, let us comprehend the real meaning of *Apana*, the out-let.

PANCH - PRANAS

Prana-Prana: It is associated with the chest, inspiration, intake of oxygen and expiration, the expulsion of carbon dioxide gas.

Samana-Prana: It is associated with the ingestion, digestion, absorption and assimilation of nutrients, water and electrolytes etc.

Udana-Prana: It is associated with the supply of oxygenated blood to the head, neck and the brain for intellectual purposes.

Vyana-Prana: It is associated with the skin and bio-plasmic body (Aura) around the physical body. It is responsible integrated health.

Apana-Prana: It is associated with the expulsion of sperms, menstrual flow, delivery, babies, gases, fecal matter and urine etc. Now, let us decode the underlying question and eliminate confusion.

Question? - How can an **outlet** become an **inlet** and seize the food?

I am convinced that the translators thought that the Sage Aitreya was talking about the spontaneous creation of the first human being.

In reality, the Sage is talking of a growing fetus in mother's womb.

Let us change the perspective and see a new picture.

NEW PERSPECTIVE

Where there is Will, there is a Way. I am always guided by my Soul.

The sea becomes amniotic fluid and the cosmic person a fetus.

For fetus, the food and other essential requirements comes from the mother through the umbilical cord attached to the navel of fetus.

The expulsion and elimination of the waste products of the fetus is also through the same umbilical cord.

Both, inlet/artery and outlet/vein are present in the umbilical cord.

Note: Let us learn the Art of coding and decoding of Indian stories.

NAR-NARI

According to the ancient Indian Sages, the human beings are made of 2 complimentary halves, the male (*Nar*) and the female (*Nari*).

Is this concept a pure myth or a scientific Truth?

Let us explore and understand this mysterious concept.

The Essence of Brahd-aranyaka Upanishad (I.4.1-4) is,

There was only a Self (cosmic person) in the world to start with.

He was afraid. The person, who is alone, is often afraid.

He had no delight.

He desired a second for company and joy.

He divided self into two, the male and the female, counterparts.

The Scientific Evidence and Proof:

A human fetus can grow into a male or female body.

First choice of selection lies with testosterone, male sex hormone.

If it fails, the body can get transformed into a female or trans-gender.

REPRODUCTIVE HORMONES

According to the ancient Indian Sages, the reproductive hormones are an enlightening force (*Ojas*) and it should be transformed and transmuted into *Tejas* for higher intelligence, intuition, cognition, spiritual evolution, enlightenment and Self-Realization etc.

10 Reproductive Hormones: Gonadotrophin releasing hormone (GnRH), Follicular stimulating hormone (FSH), Leutinizing hormone (LH), Pregnilone, de-hydro-epi-androsterone (DHEA), Estrogen, Progesterone, Inhibin, Relaxin, and Oxytocin. The Sages were against the misuse and disuse of reproductive hormones.

FORMATION OF SPERMS

Sperms, the male sex germ cells, are formed in ten important stages of creation, development and maturation. The five stages of mitosis are prophase, prometaphase, metaphase, anaphase and telophase. The stages of first and second meiotic divisions (meiosis) are five.

Each spermatogonium (Germ-cell) gives rise to mature 512 sperms.

Note: 10 dichotomous divisions lead to the formation of sperm.

Size of Head of Sperm: Divyank Ratio of 3×5 is seen here too.

FORMATION OF OVUM

The ovum, the female sex germ cell, is also formed in 10 stages.

Size of Ideal Mature Follicle: 21 to 22 mm.

The Reducing Number of Oocyte Cells:

In new born female, there are 4,000,000 primary oocyte cells.

At puberty, there are 40,000 primary oocyte cells.

Only 400 become the secondary oocyte cells for pregnancy.

Is the graded reduction (100 times) in oocyte cells a coincidence?

THE PERFECT MENSTRUAL CYCLE

According to every leading book of human physiology, the human menstrual cycle has three phases; the bleeding phase for 5 days, the proliferation phase for 8 days and the secretion phase for 13 days.

Note: Bleeding - 5 days, Proliferation - 8 days, Secretion- 13 days.

This Fibonacci sequence of $5+8+13$ is equal to 26 days.

Confusion: The above human menstrual cycle is highly confusing.

Reason: There is no concurrence on the starting point of the cycle.

My Intuition: We have missed the divine design? Let us explore.

THE LUNAR MONTH

Menstrual cycle derives its name from the lunar month.

Note: The lunar month/cycle lasts for an average of 29.52 days.

The projected human menstrual cycle last for 26 days (5+8+ 13).

If this is true, then we have missed events which last for 3.52 days.

According to Divyank Sequence, the sequence could be 3-5-8-13.

Now, let us redesign the human menstrual cycle as follow.

Pre-Menstrual/First Follicular Phase - 3 days.

If fertilization does not take place, the corpus luteum dies in 8 days.

It results in fall of blood progesterone, estrogen and inhibin levels.

After 13 days of secretion phase, the sharp fall in the above hormone levels leads to production and release of GnRH from hypothalamus.

It leads to production and release of follicular stimulating hormone (FSH) and Luteinizing hormone (LH) by the anterior pituitary.

Now, let us study the effect of FSH and LH on the following organs.

Ovary: Under the influence of FSH, a new cohort of 10 primary follicles start developing in the ovaries during this starting phase.

Endometrium: Layer Basalis of endometrium proliferates and it cuts off the blood supply to Layer Functionalis of endometrium. It leads to the necrosis of Layer Functionalis and results in following.

The Signs and Symptoms: Most women experience pre-menstrual tension, stress, anxiety, neurosis and abdominal discomforts etc.

A Big Question?

Why declining hormone levels, cohort of new follicles, formation of Layer Basalis and associated pre-menstrual tension and complaints are not given their due importance?

The Essence: Let this extremely important phase be the first phase.

Second Follicular Phase/Bleeding Phase - 5 days.

In this, the degenerated endometrium of the uterus is shed fully.

●ShivBhushan Sharma

There is no confusion with this well known and recognized phase.

Third Follicular Phase/Proliferation Phase - 8 days.

During this phase, FSH stimulates the production of estrogen and inhibin from granulosa cells of the ovary. The granulosa cells rely on the supply of androgen from thecal cells of ovary for the production of estrogen. During this phase, FSH secretion is suppressed and it prevents the recruitment of new follicles. One follicle which is highly sensitive to FSH dominates and it continues to develop and produce estrogen despite the low levels of circulating FSH. The other less dominant follicles undergo atresia and die. LH stimulates the production of progesterone from endometrial glands of uterus.

4. **Ovulation:** 0.52 day or 12 hours.

An Intuitive Question?

The human menstrual cycle is not estrous (heat producing) cycle.

I am not convinced with the above well accepted statement.

Let us explore the real Truth.

During the follicular phases, oestrogen and LH are produced.

Just before ovulation, there is increase in LH production, which in turn increases oestrogen production. With LH surge, the primary oocyte completes first meiotic division to form a larger secondary oocyte. It results in ovulation, the expulsion of ovum from follicle.

The positive feed back mechanism of oestrogen and LH surge leads to increase in body temperature during ovulation. What do you say?

One of the tests for ovulation is the increase in body temperature.

First Secretary Phase - Corpus Luteum - 8 days.

After ovulation, under the influence of LH, the active follicle enlarges and gets transformed into the corpus luteum.

If fertilization does not take place and the zygote is not implanted in the endometrium in 8 days, a signal is sent to hypothalamus to stop production of GnRH and it results in fall of FSH and corpus luteum gradually degenerates.

Second Secretory Phase - Corpus Albican - 5 days

During this phase of 5 days, corpus luteum becomes corpus albicans.

In this phase, there is gradual decline in estrogen and progesterone levels in the blood and the corpus albicans becomes scar tissue.

THE ULTIMATE CYCLE

3-5-8-0.5-8-5-3 resembles waxing-waning phases of moon.

It proves that the perfect human menstrual cycle is associated with the lunar month and the waxing-waning phases of moon.

DIVIYANK RATIO

I am pleasantly surprised that the size of antral and follicle and the corresponding increase in various reproductive hormones during the perfect normal menstrual cycle strictly follow Divyank Ratio.

Note: I could have added this angle too but I want the interested medical students to explore the underlying truth by themselves.

FERTILIZATION

The union of nucleus of sperm with ovum is called fertilization.

ANCIENT INDIAN MYSTERY

After the creation of universe, Brahma took rest for one and half year. After fertilization, the zygote remain inactive for one and half day. Let us explore and find the underlying beauty of above statements.

THE COSMIC EGG

According to Chandogya Upanishad, (III.19.1),

“..., *tasyopavyakhyanam; asad evedam agra asit, tat sad asti, tat samabhavat, tad andam niravartata,....., tan nirabhidhyata, te andakapale rajatam ca suvarnam cabhavatam!*”.

Before the creation, there was nothing existent in the universe. After the creation, when it became existent, it grew and turned into an egg and laid silent for one and half year.

●ShivBhushan Sharma

Then, it burst open the head of egg and two parts, one silver (white yoke-Earth) and one gold (yellow-Sky), came out of it.

I suppose, one and half day has been translated as one and half year.

PREGNANCY/GESTATION

When pregnancy takes place, the corpus luteum grows and occupies one third of the ovarian size as the corpus luteum of pregnancy and also continues to produce progesterone for sustaining the pregnancy.

The growth is promoted by the Human Chorionic Gonado Trophin hormone (HCGH) produced the by trophoblastic cells of embryo.

This process continues up to 12 weeks of pregnancy.

PLACENTA

After 12 weeks of pregnancy, mother's placenta is formed and it produces enough progesterone to maintain the pregnancy.

By 10 weeks, the fetal gonads can be distinguished as male/female.

By 21 weeks, the different organs of fetus are formed.

By 22 weeks, the fetus is ready for further growth.

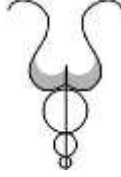
ENTRY OF SOUL

Aitareya Upanishad (I.3.12), “*Sa etam eva simanam vidaryaitaya dvara prapadyata!*” “After opening the end of head (anterior fontanel), the Soul enters through that door”.

IDEAL TIME OF ENTRY

If Soul enters the fetus at 22 weeks, it can design the physical body to achieve the objectives of human birth and life. This may be true.

EIGHT



AHAM-BRAHMASMI

Aham-Brahmasmi means that “I (*Aham*) am like (*asmi*) Brahman.

This profound ancient Indian statement has been explained in detail by the leading commentators of ancient Indian wisdom. I do not feel the need to repeat the same here but I would love to show and prove that “We, the human beings, are the microcosmic representation of the macrocosmic universe, the Solar system (Brahman)”.

In reality, this chapter can be called Brahmand or the Solar System.

It is said that the real characteristics of every aspect of universe are embedded in their Sanskrit names. Let us explore and find the truth.

According to Chandogya Upanishad, (III.19.1),

“*Aditya brahmety adesah...!*”

Aditya, the Sun, is Brahman. This is the ancient teaching. Sanskrit name for the Solar System is *Brahmandam*. It means that Aditya, the Sun, is the presiding deity or the God of Solar system. It also means that *Brahman*, the Solar system, resembles an egg (*anda or andam*).

An Ovoid Egg: The Solar system like every living being is always in a dynamic state. It is breathing-in and breathing-out all the time. As a result of this act of in-breath and out-breath, the shape of the Solar system looks like an ovoid or elliptical egg in the ratio of 22/21.

●ShivBhushan Sharma

I am glad that the views of the modern scientists and the ancient Indian Sages concur on the functional egg shape of the Solar system. Now, let us study the Sun or Helio Centric Solar system.

THE HELIO CENTRIC SOLAR SYSTEM

In this system, the Sun forms the center.

The Sun is surrounded by Mercury, Venus, Earth, Mars, Asteroid Belt, Jupiter, Saturn, Uranus, Neptune, and Pluto.

The Solar System is 15 trillion kilometers in diameter and it is surrounded by the sphere shaped region called the Oort cloud.

The Planetary Orbits

It is established that the planets of Solar system are revolving around the Sun in elliptical or ovoid orbits, not circular.

The Inner Planets

The planets closest to the Sun, the Mercury, the Venus, the Earth and the Mars are called the inner planets. These are the solid planets.

The Outer Planets

The Jupiter, the Saturn, the Uranus, the Neptune and the Pluto are the outer planets. These are gaseous planets.

The Asteroid Belt

Asteroids, comets, and meteorites form the body of Asteroid Belt.

It separates the inner and outer planets.

Now, let us study and understand another ancient Indian story.

NAVA-GRAHAS

Nava means nine and *Graha* means planet. According to the ancient Indian Sages, our Solar system consists of nine important planets, Moon, Venus, Mercury, Sun, Jupiter, Saturn, Mars, Rahu and Ketu. They influence the biological life on the earth.

According to Vishnu-Purana, an ancient Indian scripture,

1. Rahu symbolizes the head of Svarabhanu, a demon.

2. Ketu symbolizes the body of Svarabhanu.

Rahu and Ketu are also considered “Polarities or opposite Poles”.

Lunar Eclipse: According to Vishnu Purana, a lunar eclipse is caused by the demon Rahu's attempt to swallow the moon.

Rahu-Ketu Mystery?

The head of Rahu represents the planet Earth. Let us demystify it.

Lunar Eclipse: When Earth comes in between the Sun and Moon.

When the light of Sun does not fall on the moon, the moon becomes invisible leading to Lunar eclipse.

It can be said that the earth has swallowed the moon. So Simple!

Essence: Head of Rahu represents the Earth, the eighth planet.

The Body of Ketu - Asteroid Belt:

The Asteroid Belt, which lies between Mars and Jupiter, is made of comets, asteroids, and meteorites. It occupies an important spot in the Solar system as will be shown and proven later in the chapter.

I am convinced that the ancient Indian Sages considered the parts of Asteroid Belt as Body of Ketu. Let us consider it as ninth planet.

It is also called *Trishanku Loka*, the abode of King Trishanku.

Divyank and 10 Planets

Now, let us study the Solar system to recognize the ten planets.

The Geo-Centric Solar System

In this system, “The Earth is The Center”.

Since, we live on the Earth; let us study the Geo-centric system first.

The Earth - Prithvi - Bhumi - Bhu - Bhur

The diameter of earth is 13000 kilometers. The diameter of earth is 108 times (spiritual number) smaller than the diameter of the Sun.

According to the ancient Indian Sages, there are 7 layers of the earth.

The characters of the seven layers as perceived by the scientists and the corresponding Sanskrit names are astonishingly very similar.

●ShivBhushan Sharma

Patala: The inner core. This contains solid, burning yellow white iron alloy. *Patan* means the neither world, fall or the involution.

Mahatala: The outer core of great solid yellow iron alloy.

Rasatala: The lower mantle of liquid orange iron alloy.

Talatala: The next, transitional red color zone.

Sutala: The upper mantle, which is more red and stable.

Vitala: The asthenosphere, full of convection currents.

Atala: The lithosphere, a protective upper crust of earth.

EARTH ATMOSPHERE

This is the body of air or gases that protects the earth and enables life.

Air is retained by the gravity of the earth. It absorbs the ultra violet rays and warms the surface through green-house effect.

The atmosphere around the earth is composed of seven layers. This has been confirmed by the modern science too, as described below.

Troposphere: It is closest to the earth and weather changes take place in this sphere. It extends from 7 to 18 kilometers from the earth and its temperature reduces with the increasing height.

Stratosphere: It is 50 to 60 kilometers above the earth. The temperature increases here but is below the freezing point.

Mesosphere: It is 60 to 80 kilometers above the earth. Air is thin and the air molecules are far apart. The temperature is high.

Thermosphere: It is 80 to 640 kilometers above the earth. The temperature increases with height up to 3600°C.

The air feels cold as the molecules of air are very far apart.

Exosphere: It is 5600 to 10000 kilometers above the earth.

Ozone Layer: This corresponds to the third layer.

Ionosphere Layer: “This region of atmosphere is ionized by the solar radiation and is responsible for Auroras”. During the day time, it spans from 80 to 160 kilometers and is present in the mesosphere,

thermosphere and part of exosphere. Ionization in the mesosphere ceases during night. The ionosphere forms the inner edge of the magnetosphere. It influences radio propagation on the earth.

Akash-Kosh: The ionosphere layer, which stores the events of past, present and future in the ionic form, is called Akash-Kosh.

MOON

Moon is an axial part of the Mother Earth.

It is 3475 kilometers in diameter and 3,84,000 kilometers from the earth.

$3,84,000/3,475 = 108$ Amazing!

It proves that the ancient Indian Sages were truly divine creatures.

The Venus

It is the third brightest object in the sky after the Sun and the moon.

When Venus is closest to the earth, the shape produced by Venus is like an orange Crescent. The clouds above the atmosphere of Venus scatter the sunlight and this produces the orange color. The average distance of Venus is about 105 million kilometers from the Sun.

The Mercury

The first planet from the Sun is the smallest inner terrestrial planet.

The side facing the Sun can be seen from the earth. The other side is dark and cold. This makes life impossible on Mercury. 3/4th of the inner core of Mercury made of iron produces a very strong magnetic field. Its mean distance from the Sun is around 60 million kilometers.

The Sun - Surya - Aditya

The core of Sun is burning all the time with gases; hydrogen and helium. The diameter of Sun is 1,392,000 kilometers.

The mean distance from earth is 150 million kilometers. The Sun, which looks stationary, is revolving around galaxies, in an orbit.

●ShivBhushan Sharma

Because of centripetal force of Sun, other planets are attracted towards it. The Sun is called “The Teacher of ancients” and “The Presiding Deity of our Solar System”.

The Mars

This most beautiful red planet has several points common with the earth. It is slightly bigger than half of the earth. It is about 240 million Kilometers from the Sun. Unlike the earth, the sunrise and sunset on the Mars produces a beautiful blood red color. As a result, Mars is called the red planet.

The Asteroid Belt

This is also called planetoid or minor planet. Between Mars and Jupiter there is empty space with 30,000 asteroids. Of these about 3000 asteroids have been watched very carefully.

The asteroids revolve around the Sun, like other planets, and the Jupiter controls their movements. The mean distance of Asteroid Belt from the Sun is about 420 million kilometers.

The Jupiter

This biggest planet is the liveliest. It rotates very fast around its axis. It is about 12 times bigger and 300 times heavier than the earth, and has 16 satellites. The mean distance from the Sun is about 780 million kilometers. Jupiter has a strong magnetic field (Magnetosphere). This produces very strong electric current and has strong effect on the human mind.

Jupiter is called Guru, the Giver of knowledge and intelligence (Buddhi) and is responsible for evolution of higher consciousness.

The Saturn

This most beautiful planet has matchless grace of 960 rings. The mean distance from the Sun is about 1500 million kilometers. There are about 20 satellites around the Saturn.

The Uranus

It is the first Planet to be discovered through a telescope.

It is too faint to be seen with the naked eye and it does not have much affect on the subjects of the earth.

The mean distance from the Sun is about 2880 million kilometers. Uranus is covered with clouds of methane gas, which makes the planet look blue-green.

The Neptune

The Neptune, the most distant of the four giant planets in the Solar system is 30 times farther from the Sun than the earth and is similar to Uranus. The mean distance from the Sun is around 4320 million kilometers.

The planet is full of hydrogen, helium and methane and these gases make the planet look blue.

The gravity of Neptune is more than that of Uranus and it pulls Uranus towards Neptune.

The Pluto

The Pluto is the smallest and most distant planet from the Sun.

The average distance from the Sun is about 5900 million kilometers.

The surface gravity is quite low.

THE COSMIC EGG

The outer edge of the Solar system from the Sun is around 15000 million kilometers.

OORT CLOUD

Billions of kilometers away from the Sun and the planets of Solar system, there is an immense cloud of comets, called the Oort cloud.

This is responsible for the blue color around the Solar system.

Most of the comets are between the planets and Oort cloud.

SAPTA-RISHI-LOKA

Sapta means seven. *Rishi* means Sage. *Loka* means the abode or the residence. I am convinced that the seven ancient Great Indian Sages live in the area, which is outside the Solar system, and is considered the twenty second step to the ultimate state of Bliss.

THE DIVINE MATHEMATICS

Now, let us understand and appreciate the following concepts.

TITIUS-BODE LAW

“German astronomer, Johann Titius (1729-1796) discovered a mathematical series that appeared to predict the relative distances of the known planets of Solar system from the Sun. In 1772, Johann Bode (1747-1826), another German astronomer, came across this series. He used it in an introductory astronomy book, and promoted it as a valid scientific law”. This series is called “Titius-Bode law”.

“Titius-Bode Law” is based on the division of distance of various planets of Solar system from the Sun, by 149.6 million-kilometers, a distance between the Sun and earth.

This unit is called the Astronomical Unit (A.U.).

Titius-Bode Law is represented as the following sequence.

0.39 - 0.72 - 1.0 - 1.6 - 2.8 - 5.2 - 9.6 - 19.2 - 30.1 - 39.5.

Note: This remarkable sequence has been compared with number of petals of Chakras as described by Sat-Chakra-Nirupana, an ancient Indian book. The interesting correlation is found in Tabulation - 4.

AKHAND SEQUENCE

Now, let us comprehend the real beauty of Akhand Sequence. The mean distance between the Sun and earth is 150 million kilometers.

According to Divyank, the distance of 150 million kilometers can be divided into the inner Aura of Sun of 60 million kilometers and the outer Aura of Sun is 90 million kilometers.

If we minus 60 million kilometers from the distance of different planets from the Sun and divide the same with 15 million kilometers, we find a new sequence; 0-3-6-12-24-48-96-192-386 and so forth.

The Language of Nature or God: The similarity between Titius-Bode Law, Petals of Chakra and Akhand Sequence proves that “The Language of God or Nature” is simple mathematics.

Tabulation – 3 – Titius Bode Law and Akhand Sequence				
Orbits/ Belts/ Planet s	Distance from the Sun in MKms	Titius - Bode Law	Expected Distance in MKms	Akhand Sequence
AC +79 3888	150,000,000	-	150,000,000	(AU- 10) ⁶
? -Centauri	15,000,000	-	15,000,000	(AU-10) ⁵
Oort cloud	1,500,000	-	1,500,000	(AU-10) ⁴
Interstellar	150,000	-	150,000	(AU-10) ³
Heliopause	15 ,000	-	15 ,000	(AU-10) ²
11. Pluto	5902	39.5	5760	384 (4x96)
10. Neptune	4498	30.1	4320	288 (3x96)
9. Uranus	2870	19.2	2880	192 (2x96)
8. Saturn	500 (AU 10)- ¹	9.6	1440	(100) 96
7. Jupiter	780	5.2	720	(52) 48
6. Asteroid Belt	420	2.8	360	(28) 24
5. Mars	240	1.6	180	(16) 12
4. Earth	150 (AU-1)	1.0	90	(10) 6
3. Venus	105	0.72	45	(7) 3
2. Mer cury	60	0.39	0	(4) 0
1. Sun	0	0	0	(1) 0

Is the sequence of 0-3-6-12-24-48-96-192 and 384 a beautiful divine drama, play, design or a mere coincidence?

●ShivBhushan Sharma

The Divine Cosmic Drama and Dance of Ten

The distance between the Sun and earth – AU-1.

The distance between the Sun and Saturn – AU-(10)¹.

The distance between the Sun and Heliopause - AU-(10)².

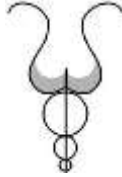
The distance between the Sun and Interstellar – AU-(10)³.

The distance between the Sun and Oort cloud – AU-(10)⁴.

Tabulation – 4 – The Solar System and Human Anatomy			
Orbit/Belt/ Planets and Chakras	Bones/ Nuclei/Nerves	Endocrine Nuclei/Glands	Parts of Nervous System
Heliopause/ Kuiper Belt-Sahasarara - 1000	Head, Brain, 100 billion neurons	---	Neo-Cortex/100 billion neuron cells
Saturn-Pragyan-100	Hairline-100	Pineal Gland	Alocortex- Cortex
Jupiter-Vigyan-52	Forehead -52	Hypothalamus	Hypothalamus
Asteroid-Agyan-28	Eye Brows-28	Pituitary	Brainstem
Mars-Visudhi-16	Cervical-8x2	Thyroid & Parathyroid	Cervical Sympathetic
Sun (+)–Anahata-12	Chest-12	Thymus	Cardiac Plexus
Sun-Manipura-10	Abdomen-10	Pancreas	Coeliac Plexus
Mercury-Nabhi-10	Lumbar-5x2	Adrenal	Suprior Mesenteric
Venus - Svadhisthana - 6	Sacrum-6	Gonads	Sacral Para Sympathetic
Earth - Muladhar - 4	Coccyx-4	Perineum Glands	Ganglion Impar

The Essence: Please compare the above picture with the ten major Chakras and see an amazing and fascinating picture. It proves that Nature uses only a single mathematical design.

NINE



TRAIT PARA VIDYA

Trait means three. *Para* means beyond. *Vidya* means knowledge.

Trait Para Vidya means beyond knowledge or absolute wisdom.

There are three chief manifestations of Soul; *Paramatma*, the God, *Antaratma*, the indwelling human Soul and *Jivatma*, the hundred trillion cells of human body and its cumulative consciousness.

The union of three chief manifestations of Primordial Soul, namely, *Paramatma-Antaratma-Jivatma*, is the basis of *Trait Para Vidya*.

ANCIENT INDIAN PHILOSOPHIES

The ancient Indian Sages have given the world two philosophies, namely, *Dwait* (polytheism) and *Adwait* (monotheism).

These are the Core Philosophies of Sanatana Dharma.

DWAIT PHILOSOPHY - DUALITY

According to Dwait philosophy, the Ultimate Soul (*Paramatma*) or the God is different from the human being (*Jivatma*). This duality of innate consciousness is the central theme of Vedas. For spiritual evolution, a religious person is advised to pray to the chosen deity or the Ultimate God, *Paramatma* and seek blessings and grace etc.

The two chief pillars of Dwait Philosophy are,

Karam-Yoga (Yoga of Actions).

Bhakti-Yoga (Yoga of Devotion).

ADWAIT PHILOSOPHY - MONOTHEISM

“*Aham-Brahmasmi*, I am like God”, is the central theme of Adwait Philosophy and Upanishads.

For spiritual evolution, the person is advised to follow the path of Gyan-Yoga (Yoga of Knowledge).

Siddha-Yoga (Yoga of Self-Realization).

The Advantage of Dwait Philosophy

Visiting temples, offering prayers, chanting of mantras, performing penance and austerities (*yajna*), self-surrender to God and study of Vedas and listening to the stories of Puranas and ancient Epics are the chief pillars of Adwait Philosophy.

The Disadvantage of Dwait Philosophy

The separation between *Jivatma*, the human body, and *Paramatma*, the God, remains the stumbling block on the path of spiritual union with the God, the main objective of Science of Yoga or Akhand Yoga.

The Advantage of Adwait Philosophy

A spiritual person can create a human like image of God and other divine entities and feel one with them within the Self.

The Disadvantage of Adwait Philosophy

We, with the limited size, space, energies and potentials, can not withstand the immense energy of Universal Consciousness of God.

The actual process of the union of *Jivatma* with *Paramatma* is not explicit and has also been explained by Adwait Philosophy.

TRAIT PARA VIDYA

The Advantage of Trait Para Vidya

Trait Para Vidya is not a new philosophy. It is based on my personal experience of union of *Jivatma-Antaratma* and *Paramatma* within my physical body. The glimpses of Trait Para Vidya are fairly visible in many of the ancient religious and spiritual statements.

For example:

Lord Krishna (Gita-XV.18),

“I transcend the perishable human body (*Jivatma*). I am higher than the imperishable indwelling Soul (*Antaratma*). I am Purushottama, the highest Purusha (*Paramatma*).

The Upanishads state that the human beings are born with the Soul.

Katha Upanishad talks of two birds (Souls) in the human body.

Tantra says “Kundalini is a divine spark, the female power (Shakti) of the God (Shiva).”

It can be raised to unite with Shiva for Liberation (*Moksha*).

Brahma Sutras state that the indwelling human Soul is an immortal bridge (*Amritya-setu*) between the human being and the God.

Jesus Christ talked of the indwelling Soul in every human being.

Islam states that on the Day of Judgment, the *Rooh* (*Antaratma*) of mortal man (*Jivatma*) will rise from the grave to *Allah* (the God).

Almost identical statements are made by other Prophets too.

The Essence

It is fairly clear that the human Soul comes from the God.

The Soul is a bridge between the human body and the God.

The Soul can help in cognition of the Universal Consciousness.

The real process of union of *Jivatma*, *Antaratma* and *Paramatma* is not clearly visible in the above statements.

Now, let us try to demystify the hidden wisdom of Trait Para Vidya in the light of Science of Yoga and Spiritual Sciences.

Yoga: The word, Yoga, is derived from Sanskrit root, 'Yuj', which means to unite, join, anchor, bind, integrate or yoke.

According to Vedanta, “the union of *Jivatma* with *Paramatma* is called Yoga and the person is called Yukta, the united”.

FORMS OF YOGA

Karma-Yoga, The Yoga of Actions. This is the foundation. Every spiritual person has to choose his course of work and perform right and appropriate actions in the name of God to unite with the God.

Bhakti-Yoga, The Yoga of Devotion. The devotion and Self-surrender to God are the chief pre-requisites for union with the God.

Gyan-Yoga, The Yoga of Knowledge. The eyes see what the mind knows. Equipping the mind with the right knowledge and the absolute wisdom is essential to cognize the ultimate divine Truth.

Siddha-Yoga, The Yoga of Actualization/Self-Realization. Here, *Jivatma* (cognizer-seer-object), *Paramatma* (cognized-scene-subject) and Antaratma (cognition-sight-subjectivity) become one.

5. Akhand-Yoga, The Yoga of Integration.

When all the forms of Yoga are followed in one life, then we can easily experience every aspects of the Universal Consciousness.

The Essence: Akhand Yoga is the Ultimate form of Yoga.

A MYSTERY STATEMENT

Let us analyze and comprehend another ancient Indian statement.

Katha Upanishad (I.2.23),

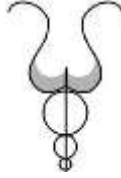
“Nayam atma pravacanena labhyo, na medhaya, na bahuna srutena; yamevaisa vrnute, tena labhyas tasyaisa atma vivrnute tanum svam!”

The verse means that *Atma* cannot be attained by instructions or by intellectual power or even through hearing. *Atma* is attained only by person whom *Atma* chooses. To such person *Atma* reveals itself.

I am convinced that *Atma* reveals the secrets of all the actions and achievements of previous births, which are stored in the causal body (*karana-sarira*) of *Atma*, to every person but most of us do not want to listen the bitter truth and the genuine guidance of Soul. This could be the real meaning of the profound statement of above verse.

Now, let us explore the ancient Indian concept of Tantra Vidya.

TEN



TANTRA VIDYA

Tan mean body. Tantra Vidya is the subtle wisdom of adult human anatomy and psychology. It shows and proves that human beings are the microcosmic representation of the macrocosmic universe. The original Tantra was expounded by Shiva and explained to Parvati, his consort, in Amarnath cave in Jammu and Kashmir, India.

The core theme of original Tantra is the subtle structure and function of Chakras, Nadis and Kundalini and the Art of freedom (*Moksha*) from the constraints and the restraints of the existential life etc. I am certain that any person, who adheres to the fundamental principles of Tantra, can easily tap the secrets of the Universal Consciousness.

MISCONCEPTION

It is said that Chakras and Nadis have no physical connections.

In reality, every experience is perceived through the physical body.

The original Tantra had 108 verses and most of these verses are lost.

Akhand Sutra tries to gather the essence of Tantra from Sat-Chakra-Nirupana, Upanishads and other related ancient Indian documents.

Acknowledgment: I admit with humility that this version of Tantra is purely based on my personal experiences and my understanding of the ancient Indian wisdom in the light of modern sciences.

An Honest Statement: Kundalini, Chakras and Nadis are integral parts of the human anatomy, physiology and psychology.

Let me explain my personal experiences and their conviction.

TWO SOULS

Mundaka Upanishad (III.1.1),

“*Dva suparna sayuja sakhaya samanam vrksam parisasvajathe tayor anyah pippalam svadv atty anasnann anyo'bhicakasiti!*”

Two birds, bound to each other in close friendship, cling to the self-same tree. Of these two, one eats and relishes the fruits of the tree, while the other looks on without eating.

Seated on the same tree, one of them, the personal self-sunk in ignorance, grieves on account of his helplessness. When he sees the other, the Self, who is worshipful and great, he too becomes free from the sorrow.

The Essence: The personal-self, which is subject to helplessness and sorrow, is *Jivatma* (the physical body). The other Self, which is free from every sorrow, is *Antaratma*, the indwelling Human Soul.

ADITIR - ADITYA - ADITI

Katha Upanishad (II.1.7),

“*Ya pranena sambhavaty aditir devatamayi, guham pravisya tisthanti, ya bhutebhir vyajayata; etad vai tat.*”

She, who arises with the life, *Aditir*, the soul of the gods, who stands, having entered the secret place of a cave, was born with the beings. This, verily, is that.

The verse means that every human being is born with a divine spark Soul, which resides in a cave (*Guhayam*) and comes from the Sun .

Note: Aditi is called the mother of Aditya, the Sun. Interestingly, the daughter of Aditya is also called Aditi.

The Hidden Message: The Elemental Helium

I am convinced that the *Aditis*, the mother and daughter, are Helium.

Let me explain this new concept in the light of nuclear physics.

NUCLEAR REACTION IN THE CORE OF SUN

Proton-Proton Chain:

It has been observed that, in the Sun, nuclear reaction occurs in three stages,

1. (${}^1\text{H} + {}^1\text{H} \rightarrow {}^2\text{D} + e^+ + \nu$): 2 protons of hydrogen fuse to form 1 Deuterium nucleus (${}^2\text{D}$), which in turn is composed of 1 proton and 1 neutron, 1 positron (e^+), and a neutrino (ν).

(${}^2\text{D} + {}^1\text{H} \rightarrow {}^3\text{He} + \gamma$): 1 more proton of hydrogen is fused to the Deuterium nucleus to form helium-3 (${}^3\text{He}$), which in turn contains 2 protons and 1 neutron.

A high-energy photon, or a gamma ray (γ), is also produced in this reaction, which escapes from the Sun.

3. (${}^3\text{He} + {}^3\text{He} \rightarrow {}^4\text{He} + {}^1\text{H} + {}^1\text{H}$):

Next, 2 nuclei of helium-3 (${}^3\text{He}$) are fused together to give rise to Helium-4 (${}^4\text{He}$).

4. Helium-4 (${}^4\text{He}$) is composed of 2 protons and 2 neutrons.

This set of reactions is part of the proton-proton chain occurring inside the core of Sun. These nuclear reactions generate kinetic energy, which is produced in the second step, in the form of ${}^3\text{He}$ nucleus. This is transferred to the nearby nuclei through collisions.

The kinetic energy provided by the nuclear reactions keeps the Sun's interior hot. For every 1000 grams of hydrogen involved in the proton-proton chain, only 993 grams of ${}^4\text{He}$ are produced. Most of the missing 7 grams of ${}^4\text{He}$ get converted into kinetic energy and a little into gamma (γ) rays.

Essence: The helium released by the Sun becomes the human Soul.

Helium is again converted into hydrogen and the reaction goes on.

Conclusion: Helium, the mother, gives rise to hydrogen, which in turn gives rise to Helium, the daughter, which becomes human Soul.

ENTRANCE OF SOUL

Aitreya Upanishad (I.3.12),

“*Sa etam eva samanam vidaryaitaya dvara prapadyata*”

After opening the door (*dvara*), known as *Vidrti* (anterior fontanel) on top of head, the Soul enters (*prapadyata*).

It is also written that this entry is pleasing and blissful (*nanandam*).

IDEAL TIME OF ENTRY

I am convinced that the Soul of an enlightened human being, enters at 22 weeks of pregnancy, when the body of fetus is fairly developed.

Objective: The Soul can develop an ideal body and nervous system to achieve the fundamental objectives of the human birth and life.

KUNDALINI

Tantra calls *Antaratma*, the indwelling Soul, as Kundalini.

Brahm-Sutra calls the Soul as *Amritya-setu*, the immortal bridge.

Resting Place of Kundalini

According to Sat-Chakra-Nirupana, Kundalini sleeps in Muladhar Chakra, in Coccygeal ganglion (Ganglion-Impar), in the pelvis.

Shape & Size of Kundalini

Sat-Chakra-Nirupana (verse 10),

“*Sankhavarta nibha navina capalamata vilasapada sputa-sarpasama svopari lasat sardha-trivrttakritih!*”

Like the new spirals of conch-shell, her shining snake-like form goes three plus times (*trivrttakrit*). Sleeping Kundalini is compared with Shankh, the Conch or the Nautilus Shell.

Note: Rising Kundalini is compared with a shining snake, which goes up in a spiral of three plus turns. It is interesting to note that the three plus turns resemble Pie, $22/7$, a mathematical constant.

Hidden Message: $22/21$, the first part of Divyank, is $1/3$ rd of $22/7$.

CHAKRAS

According to Sat-Chakra-Nirupana, Self-realization and Bliss are possible with the movement of Kundalini through six Chakras.

The movement of Kundalini is the first shoot after the germination of the seed of spiritual journey. It means that awakening, activation, and ascension of Kundalini from Muladhar Chakra, the basic center in the pelvis, through six major Chakras to Sahasarara Chakra, the highest center in the brain, is essential for spiritual evolution.

Shape of Chakras

Chakra means a vibrating power center or wheel. It resembles a bell, a whirlpool, a flower, or a saucer with depressions.

Qualities of Chakras

Color, texture, size, shape and power of Chakra depend upon the level of consciousness. If the person is pure, loving and selfless, the energy produced by Chakras is smooth, gentle, positive and bright. The purity of Chakras is absolutely essential for spiritual evolution.

Association and Functions of Chakras

Chakras are closely associated with,

The autonomic nervous system.

The endocrine system.

Rotation of Chakras

Clockwise for the absorption of energy.

Anti-clockwise for the expulsion of the excess energy.

The balance rotation of Chakras is essential for homeostasis.

The integration of Chakras is absolutely essential for the physical, emotional, mental, religious and spiritual health of an individual.

Functional Anatomy of Chakras

Chakras functions with the fundamental principles of reflex arch.

The Reflex Arch - 3 Components

●ShivBhushan Sharma

The sensory nerves, dorsal root ganglion and the posterior part of spinal cord form the sensory component of the reflex arch.

The grey inter-neuron cells of central nervous system integrate the sensory and motor functions of body.

The motor nerves, which arise from the anterior horn cells of spinal cord, form the motor component.

Note: The autonomic nervous system is an important part of the involuntary motor nervous system and it consists of pre-ganglionic and post-ganglionic fibers. Pre-ganglionic fibers of sympathetic (T-1 to L-2) and sacral parasympathetic (S-2 to S-4) arise from the lateral horn cells of the spinal cord.

CLASSIFICATION OF MAJOR CHAKRAS

Lower Chakras - Primarily, the Sacral Parasympathetic System.

Muladhar Chakra.

Svadhithana Chakra.

Middle Chakras - Primarily, the Sympathetic Nervous System.

Nabhi Chakra.

Manipura Chakra.

Anahata Chakra.

Visudhi Chakra.

Upper Chakras - Primarily, the Cranial Parasympathetic System.

Agyan Chakra.

Vigyan Chakra.

Pragyan Chakra.

Highest Chakra - Beyond the Autonomic Nervous Systems.

10. Sahasrara Chakra.

Note: The above classification is based on my personal experiences.

Sat-Chakra-Nirupana talks of only seven major Chakras.

Let us try to understand the ten major Chakras.

MULADHAR CHAKRA

Muladhar Chakra is the first major Chakra. Kundalini sleeps here. This root or basic chakra energizes and balances the physical body.

Location: It is placed between the genitals and anus and is attached to the mouth of Sushumna-Nadi (the vertebral column).

Autonomic Ganglion: The left and right sympathetic chains meet here to form the coccygeal ganglion or Ganglion-Impar.

Endocrine Gland: It consists of small bunch of endocrine glands in the perineum, which produce distinct odor in the person.

Ruling Planet: Prithvi (Earth)

Sense organ: Nose (Smell).

Petals: 4 petals represent four fused bones of coccyx.

Bija mantra: LAM.

Sapta-svara: Sa.

Shape of Yantra: Square.

First Knot or Block - The Brahma-Granthi

There is a physical block or knot (*Granthi*) between the Muladhar Chakra and the Sushumna Nadi. This block comes in the way of free flow of Kundalini energy from Muladhar Chakra to the central canal of spinal cord. The central canal was called *Guhayam* by the Sages.

Remedy: It has to be broken for the Spiritual journey and evolution.

SVADHISTHANA CHAKRA

Sat-Chakra-Nirupana,

“*Sindura-purarucirarunapadmamanayat,*

Sausumnamadhyaghatitam dhvajamuladesa;”

There is another Lotus, made of a beautiful vermilion color, placed inside the Sushumna Nadi at the root level.

Svadhi means own. *Sthana* means place. Although Kundalini sleeps in Muladhar Chakra but the dwelling place is Svadhithana Chakra.

●ShivBhushan Sharma

On waking from sleep, Kundalini goes to this Chakra first.

Location: Genitals.

Functional Anatomy: The sacral parasympathetic nervous system and the lower sympathetic parts of the autonomic nervous system.

Petals: Six. They represent six nerves arising from the sacrum bone.

Bija mantra: VAM.

Sapta-svara: Re.

Endocrine Glands: The reproductive system or the gonads.

Ruling planet: Venus.

Shape of Yantra: Crescent.

NABHI CHAKRA

This Chakra is the junior counterpart of Manipura Chakra.

Location: Navel.

Functional Anatomy: The superior mesenteric ganglion.

Petals: Ten. They represent ten nerves from Lumbar region.

Endocrine Gland: Adrenal glands.

Bija mantra: RAM.

Sapta-svara: Ga.

Ruling planet: Mercury.

MANIPURA CHAKRA

This Chakra is associated with Nabhi Chakra.

Location: Upper abdomen.

Functional Anatomy: Coeliac ganglion (sympathetic N.S.)

Endocrine Gland: Pancrease.

Petals: Ten. They represent ten nerves from Lumbar region.

Bija mantra: RAM.

Sapta-svara: Ga.

Ruling planet: Mercury.

ANAHATA CHAKRA

Location: Heart.

Sat-Chakra-Nirupana,

“Above Manipura, in the heart, is the charming Lotus, of the shining color of Bandhuka flower. There are twelve letters beginning with Ka written in vermilion color within it.

It is known by its name of Anahata, and is like the celestial wishing-tree, bestowing more than desired by the person. There is a six-cornered yantra of Vayu, with smoke color, within this region.

Functional Anatomy: Cardiac plexus (Sympathetic N.S.).

Petals: Twelve. They represent twelve bones of chest.

Endocrine Gland: Thymus.

Bija mantra: YAM.

Sapta-svara: Ma.

Ruling planet: Sun.

Shape of Yantra: Hexagonal.

Second Knot or Block - Vishnu-Granthi

The diaphragm between abdomen and chest creates a physical block between the heart and the abdomen.

VISUDHI CHAKRA

Location: Throat

Sat-Chakra-Nirupana,

In the throat is the Lotus called Visudha, which is pure and smoky purple hue. All the sixteen shining vowels on its sixteen petals, of crimson hue, are distinctly visible to him whose mind is illumined.

Note: 16 vowels in 16 petals of Visudhi Chakra.

Functional Anatomy: Cervical plexus (Sympathetic N.S.).

●ShivBhushan Sharma

Endocrine Glands: Thyroid and Parathyroid.

Petals: Sixteen.

Bija mantra: OM.

Sapta-svara: Pa.

Ruling planet: Mars.

AGYAN CHAKRA (Ajna Chakra)

Sat-Chakra-Nirupana,

“The Lotus Ajna is like the moon. It shines with the glory of Dhyana. The first Bija of the Vedas, which reveals the knowledge of Brahma-Sutra, lies here”.

This Chakra is the store house of foundation data and information, which needs to be filtered for better knowledge by the next Chakra.

Functional Anatomy: Brain-stem. The nuclei for self survival are located in the midbrain, pons and medulla oblongata.

Endocrine Gland: Pituitary Gland.

Petals: Ancient Two. Akhand - 24

Bija mantra: OM.

Sapta-svara: Da.

Ruling planet: Asteroid Belt.

Third Knot or Block - Rudra Granthi

There is a major block between the spinal cord and brainstem and the rest of the cortical and neo-cortical brain.

It is the biggest block on the path of spiritual evolution.

VIGYAN CHAKRA (Vignya Chakra) This

Chakra is the higher controlling center of Ajna Chakra. This Chakra brings forth the real knowledge of different subjects.

Special Feature: Third Eye of Intuition or Shiva.

Functional Anatomy: Hypothalamus.

Endocrine: Hypothalamus.

Petals: Akhand - 48

Bija mantra: OM.

Sapta-svara: Ni.

Ruling planet: Jupiter.

PRAGYAN CHAKRA (Prajna Chakra)

It is also called Bindu or Soma Chakra.

This Chakra is primarily meant to bring forth the absolute wisdom.

Location: The cerebral cortex.

Endocrine gland: Pineal Gland - (Soma - Nectar)

Petals: Akhand - 96.

SAHASRARA CHAKRA

Location: 3 outer layers of Neo-cortex of the brain.

Petals: 1000.

AKASH-KOSH

The three outer layers of Neo-cortex of Brain act as an antenna to the Akash-Kosh, which stores the events of past, present and future.

Jewel on Crown, which brings forth the hidden secrets of Nature, is located within the Sahasarara Chakra.

NADIS

Sanskrit word, 'Nadi' comes from the root '*Nad*', which means motion or movement, and the subtle channel.

The vital life force of Prana and Kundalini flows from Muladhar Chakra to other Chakras through these subtle channels.

There are about 72,000 Nadis, which connect different parts of the physical body with different Chakras.

MAJOR NADIS

The following Nadis are major and very important.

IDA AND PINGALA NADIS

Sat-Chakra-Nirupana,

“*Merorbahyapradese sasi mihira-sire savyadakse nisanne*”,

In the space outside the *Meru* (the vertebral column) placed on the left and the right sides, are the two nadis, *Sasi* and *Mihir*.

They are also known as Ida/Lunar, and Pingala/Solar, respectively.

Origin: They originate from Muladhara Chakra, the basic Chakra.

Pathway: They twine around the Sushumna nadi.

Termination:

Ida Nadi terminates in the left nostril.

Pingala Nadi terminates in the right nostrils.

ANCIENT MEDICAL SYMBOL

It is interesting to note that the ancient medical symbol is depicted with a central staff, which is intertwined with two snakes, which are united at the bottom but free on top resemble Ida and Pingala Nadis.

SUSHUMANA NADI

Location: It extends from the pelvis to the head and resembles the vertebral column which houses the spinal cord. The vertebral column has three protective sheaths, dura mater, arachnoid and pia mater and they are separated from each other by fluid containing spaces, the sub-dural and the sub-arachnoid spaces.

Components of Sushumna-Nadi:

1. **Vahini-Nadi:** Within Sushumna-Nadi is Vahini-nadi.

Sat-Chakra-Nirupana, “The shining energy (*Ojas*) flows from the *Medhra* (Reproductive organs) to the head through this channel. *Vahini* means flowing”.

It resembles and represents the sub-arachnoid space.

2. **Surya-Nadi:** It is within Vahini-Nadi.

It resembles the white matter of the ascending and descending tracts of the spinal cord. It carries the sensory signals from the physical body and the motor signals from the central nervous system.

3. **Chandran-Nadi:** It is within Surya-Nadi.

It can be compared with the grey matter of the spinal cord.

4. **Brahma-Nadi:** It is within Chandran-Nadi.

It resembles a cave (*Guhayam*) and it can be easily compared with the central canal of the spinal cord and the ventricles of the brain.

DWELLING PLACE OF ATMA

According to Taittiriya Upanishad, the dwelling place of Atma is within the blissful sheath of *Anandamaya-kosha*.

He, who can realize Self residing in cave within, realizes the God. *Antaratma*, the indwelling Soul, after entering the ventricles of the brain can activate and integrate the entire nervous system.

It proves that the residing place of the indwelling Soul is a cave, the ventricles of the brain (*Guhayam*) and not the heart (*Hridaya*).

IDEAL ROUTE OF ASCENSION OF KUNDALINI

The rising of Atma through the external extensions of five sheaths of the body will result in fall of consciousness in due course of time.

For ultimate freedom (*Moksha*) from the constraints and restraints of existential world, Kundalini or *Antaratma* has to enter Brahm-Nadi within Sushumana Nadi after breaking the first knot, *Brahma-Granthi*, and then rise within the Brahm-Nadi to the ventricles of brain. The ventricles of brain were called *Vaikuntha* by the ancient Indian Sages. After this, the spiritual person is enlightened for life and he never falls thereafter. This is the ultimate spiritual evolution.

Tabulation – 5 – Planets- Nerves - Chakras - Petals			
Planets and Orbits	Spinal Nerves	Sat Chakra Chakras – Petals	Akhand Chakras – Petals
A-Centauri	---	---	1,000,000 - (A.U.) ⁶
Oort cloud	---	---	100,000 - (A.U.) ⁵
Interstellar Space	---	---	10,000 - (A.U.) ⁴
Kuiper Belt	Top of Head	Sahasara – 1000	1,000 - (A.U.) ³
Saturn	Hairline	Pragyan – NA	100 - (A.U.) ²
Jupiter	Forehead	Vigyan – NA	52
Asteroid Belt	Eye Brows	Agyan – 2	28
Mars	Cervical – 16	Visudhi – 16	16
Sun + Aura	Chest – 12	Anahata – 12	12
Sun	Abdomen – 10	Manipura – 10	10 (A.U.) ¹
Mercury	Lumbar – 10	Nabhi – 10	10
Venus	Sacrum – 6	Svadhithana – 6	6
From: Earth	Coccyx – 4	Muladhar – 4	4

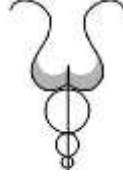
The Conclusion: From the above tabulation, we can conclude that there is a close relationship between the mean distances of different planets of the Solar System from the Sun, the bones of the vertebral column, the number of spinal nerves, Sat-Chakra Nirupana and the petals of Akhand Chakras etc.

The Essence

The tabulations also show and prove that the Creator used a distinct mathematical design to create the perfect objects of Nature.

As a result, there is consistency and harmony in the universe.

ELEVEN



MANTRA VIDYA

Sanskrit words, Man and Manah mean the mind. Mannana means repetition and Vidya means the study and knowledge.

The letters and words, which are constantly chanted to influence the mind and its functions are called mantras.

The definition of Mantra Vidya is not that simple. To comprehend the real meaning of Mantra Vidya let us study the following.

Katha Upanishad (I.3.10-11),

“Indriyebhyah para hy artha, arthebhyas ca param manah, manasas ca para buddhir, buddher atma mahan parah.”

Beyond the sense (*Indriya*) is its meaning (*Artha*), beyond the sense experience (*Arthebhyas*) is the mind (*Manah*), beyond the mind is the intellect (*Buddhi*) and beyond the intellect is the intuition (*Mahat*) of the Great Soul (*Mahan Atma*).

“Mahatah param avyaktam, avyaktat purusah parah, purusan na param kincit: sa katha, sa para gatih.”

Beyond the manifested seed (*Sabija*) of the intuitive wisdom is the un-manifested seed (*Avyaktam-Nirbija*). Beyond the un-manifested is the Ultimate Soul (*Purusha-Paramatma*).

There is nothing beyond that. This is the end of spiritual journey.

This is the final goal. Go up to that! This is the ancient saying!

UNDIFFERENTIATED BRAHMAN

The ultimate integrating aspect of the Universal Consciousness is called the Un-manifested and Undifferentiated Brahman.

It is made of all the five basic elements, *Panch-Bhutas*.

AKASH - BHUTA

The first manifestation of the matter is called *Akash-Bhuta*.

It is associated with hearing and the ear.

A letter is called *akshar* and it is derived from the word, *Akash-Bhuta*. The symbol of *akshar* is called *Akshar-matra*.

The word, *sabda*, is made of letters. The sound is also called *Sabda*.

Mantras are designed and constructed with *aksharas* and *sabd*s.

The mantras have tremendous influence on the senses, sense organs, mind, consciousness, the Soul and the Universal Consciousness.

The study of *aksharas* and *sabd*s of mantras is called Mantra Vidya.

The ancient Indian Sages, who designed mantras, were in tune with the Universal Consciousness. They heard the sounds of universe directly through their inner ears with the help of clairaudience, the subtle hearing. The sounds were then converted into mantras. Vedas were compiled with the sounds of Universal Consciousness. Vedas are also called *Shruti*, directly heard. To experience the mantras or hymns of Vedas, the person has to be in tune with the Nature. It is not that easy. The essence of Vedas can not be easily recognized.

Now, let us study and understand musicology.

MUSICOLOGY

The study of music is a special branch of Mantra Vidya. Any mantra, which does not exhibit modulation of sound vibrations and can not be sung in rhythmic fashion, can not stimulate the emotional mind of the chanting person. According to the ancient Indian Sages, the mantras are also closely associated with the Chakras and Nadis.

ORIGIN OF SOUND

Primordial Sound is the first manifestation of Akash, the Primordial Space and the Universal Consciousness.

Stages of Sound

Para: It is the highest sound. It originates from *Antaratma*, which normally sleeps in Muladhar Chakra in most human beings. In an enlightened Soul, it originates from cave (*Guhayam*), the ventricles of brain (within the *Brahm-Nadi*). It is in an undifferentiated form. It is also the cause of other sounds.

Pasyanti: It originates from Nabhi Chakra and manifests in the emotional mind.

Madhyama: It originates from Anahata Chakra and is also called Anahata sound or un-struck sound. It is associated with the concrete mind and is the prime source of mantras and Mantra Vidya.

Vaikhari: It originates in Visudhi Chakra and is the grossest and last form of sound. It helps in articulation of words and expression of ideas and mind through the speech and vocal expressions.

For Example: The traditional African singers raise the sound from Muladhar Chakra. The Indian classical singers raise the sound from Nabhi Chakra. The Western singers sing from Visudhi Chakra. The Saints of Bhakti-Yoga (Yoga of Devotion) sing from the heart, Anahata Chakra. No wonder, these Saints can touch the hearts of devotees and transform them for life.

SAPTA - SVARAS

The Indian classical music recognizes seven musical notes. These are associated with the seven major Chakras. The chanting of each *svara* activates the corresponding Chakra or Chakras.

Let us enumerate them for clear understanding and application.

Sa: This *svara* is associated with Muladhar Chakra.

Re: It is associated with Svadhisthana Chakra.

Ga: It is associated with Nabhi and Manipura Chakras.

●ShivBhushan Sharma

Ma: This is associated with Anahata Chakra.

Pa: This is associated with Visudhi Chakra.

Dha: It is associated with Agyan and Vigyan Chakras.

Ni: This sound is associated with Bindu or Pragyana Chakra.

Sa: Sa repeated after Ni activates Sahasrara Chakra. This Chakra is also known as Muladhara Chakra of the divine kingdom.

VOWELS

A speech-sound produced by the relatively unimpeded passage of breath through the mouth is called vowel.

These are; a, e, i, o, u, ee, oa, au, etc. Sanskrit has sixteen vowels and these are also associated with the major Chakras.

A, Aa: These are the first sounds as well as the letters in almost all the languages of the world. It is no surprise that A and Aa are the parts of the first letters (Aamma) uttered by a growing infant. It is the first letter in AUM^o. A is associated with Muladhara Chakra as well as Sahasrara Chakra.

E, Ee: These vowels activate the area around the sacrum bone and are associated with Svadhishthana Chakra.

Ley, Leyee, Rey, Reyee: These sounds can not be termed pure vowels but these have been included in the list as they are related to the regular vowels. They are closely associated with Nabhi Chakra and Manipura Chakra respectively.

U, Uu: These sounds are closely associated with Anahata Chakra and chanting of these sounds vibrates the chest area. No wonder, "U" is the middle part of AUM^o.

Aye, Aye: These sounds activate the throat area and are closely associated with Visudhi Chakra.

O, Ou: These sounds, Soham and OM are associated with Agyana Chakra and Vigyan Chakra.

Aung, Aha: The spontaneous expression of Joy, Ecstasy or Bliss is “Aha”. These sound vibrations are closely associated with Bindu Chakra or Pragyana Chakra and Sahasrara Chakra.

Note: The ascending order of sounds and Chakras.

CONSONANTS

These are produced by completely or partially obstructing the air being breathed out through the mouth. A consonant is the letter, the alphabet, or the written symbol for such a sound. Consonant means consonance. To produce these sound throat plays an important role.

In Sanskrit there are 36 consonants.

CHANTING OF MANTRAS

The mantras should be chanted in unison and in musical tone to get the maximum benefits. The different forms of chanting are,

Loud: The loud chanting vibrates the physical body.

Silent: This vibrates the physical and bio-plasmic bodies.

Mental: This vibrates the physical, emotional and mental bodies.

Ajapa-Japa: In this form of silent chanting the essence of mantra is perceived without the actual chanting of the words of mantra.

The silent chanting of AUM^o with conscious awareness integrates the physical body, breath, mind and consciousness with the Soul.

CLASSIFICATION OF MANTRAS

Mantras can be classified into the following subdivisions.

Maha-Mantra - AUM^o

AUM^o is one of the greatest mantras. It is called the Maha-Mantra.

AUM is called “Pranava”, the *Prana-Vayu* (life-breath) mantra.

The inspiration (in-breath) produces sound “SO”. The expiration (out-breath) produces sound “HAM”. The subtle sound produced during each breath is “SO-HAM”, which is transformed into AUM^o.

●ShivBhushan Sharma

HAMSA is another variant of AUM^o. Soham, Hamsa and AUM^o are also called *Sahaja* (innate/own) and *Saral* (simple) mantras.

Bija Mantras

Bija means seed. Bija mantra is made of sounds which may or may not have any specific meaning but can activate a specific part of the body and the mind whenever it is chanted. They are consistent in functions and results. They are very powerful mantras and should be chanted with utmost care. The energy produced by the Bija mantras should be evenly distributed to every part of the body by chanting AUM^o before chanting the particular Bija or the seed mantra.

Bija (Seed) Mantras of Tantra Vidya

Lam: This Primordial Sound from Muladhar Chakra helps in awakening, activation and ascension of Kundalini.

Vam: This is the basic sound of Svadhisthana Chakra.

Ram: This is the basic sound of Nabhi and Manipura Chakras.

Yam: This is the basic sound of Anahata Chakra.

Ham: Hamsa is the basic sound of Visudhi Chakra.

Soham: The basic sound of Agyan and Vigyan Chakras.

AUM^o: The sound of Pragyana Chakra and Sahasrara Chakra.

Adoration Mantras

Adoration means praise and admiration. With these mantras, the spiritual aspirant adores the God and His manifestations. Invariably, it is *Ishta-devata/devi*, the chosen deity is the focus of meditation.

Prayer Mantras - Invocation Mantra

A Prayer is “the Solemn request to God, the object of worship”.

It is an easy and the most common form of Mantra Vidya.

Self-Surrender Mantras

Self-Surrender to “The Will of God” is needed for spiritual journey.

It removes ego and helps in developing a sense of gratitude, love, respect, regard and devotion etc.

It is also known as *Ishvara-Pranidhana* or *Purana-Saranagati*.

Illumination Mantras

Illumination means enlightenment. These specific prayer mantras are designed for the purpose of “*Divine Vision*”.

Yoga Mantras

Yoga means the union of *Jivatma* with *Paramatma*.

In Yoga mantras, the names of *Bhutas*, *Tanmatras*, *Tattvas* and Gods etc are repeated to feel one with the Universal Consciousness of God.

THE EVOLUTION OF MANTRA VIDYA

The seeds of Mantra Vidya were present in the Primordial Space but their real beauty was cognized and realized in stages in Vedas.

The First Realization

GAYATRI MANTRA

Gayatri Mantra is ten thousands years old. It was first perceived and conceived during Satya-Yug, the first Era of Truth and the Vedas.

It is the Best, Greatest, Safest and the most Revered mantra.

It should be chanted three times a day, 6 A. M., Noon, and 6 P. M.

During the Vedic Period, the young girls were also initiated into the chanting of Gayatri Mantra and the Sacred Thread Ceremony.

CORE MEANING OF GAYATRI

Chandogya Upanishad (3.12.1),

“*Gayatri va idam sarvam bhutam yad idam kim ca, vag vai gayatri, vag va idam sarvam bhutam gayati ca trayate ca.*”

The verse means that Gayatri is all the elements and the creatures. The speech is Gayatri. The chanting of Gayatri protects whatever is chanted or spoken of, by all the beings.

●ShivBhushan Sharma

“*Gayantam trayate iti gayatri*” means that the chanter (*gayantam*) of Gayatri Mantra is protected (*trayate*) by the Goddess Gayatri.

Essence: Gaystri Mantra is chanted for protection and guidance etc.

EVOLUTION OF GAYATRI MANTRA

Let us start with the original Gayatri Mantra found in the Rig-Veda.

“*Tat Savitur Varenyam, Bhargo Devasya Dhimahi, Dheo Yonah Prachodayat!*”

It is composed of three sets of three words. It has the power of nine.

Second Exploration: Objects of Nature are primarily composed of three core and most visible forms seen on first exploration.

The meaning of the nine words is,

Tat means that (Brahman). *Savitur* means the Sun. *Varenyam* means the effulgence. *Bhargo* means splendor. *Devasya* means the divine. *Dhimahi* means surrender. *Dheo* means seeking and *Yonah* means the specific wish. *Prachodayat* means given , graced or blessed.

Original Gayatri Mantra means,

“I adore that beautiful effulgence of Surya, the Sun-God. I surrender to that divine splendor. I seek and pray for Illumination. I am blessed with Illumination by the presiding deity, Surya.”

The Gayatri Mantra seems like a prayer mantra to the Sun-God for illumination. No doubt that this mantra is a prayer mantra to the presiding deity of our Solar system. We require the Sun energy for biological life on the earth. We should pray to the Sun God on behalf of all the living beings for our existential life and the survival.

Note: It proves that the Sun is called Brahman or “The Living God”.

Third Exploration: Sages meditated on Brahman, the formless God and realized that Brahman is made of 2 following parts.

Shakta: The core counterpart of formless God was converted to a male form with three heads of Sri Dattatreya by the Sages.

Shakti: The dynamic counterpart of formless God was converted into a female form with five heads and ten arms of Sri Gayatri.

Note: Gayatri Mantra is in praise of the Sun-God and Sri Gayatri.

Fourth Exploration: The Sages on further contemplation realized, Chandogya Upanishad (II.23.2),

“Praja-patir lokan abhyatapat; tebhyo abhitaptebhyas traya vidya samprasravat, tam abhyatapat, tasya abhitaptaya etany aksarani samprasravanta bhur, bhuvah svar iti”.

Praja-pati (Brahma) contemplated on the three worlds. From their thought and contemplation came the knowledge of the three Vedas.

Prajapati contemplated on the knowledge of three Vedas and from it came the three syllables, *Bhur*, *Bhuvah*, and *Suvah*.

First Improvisation of Gayatri Mantra: The Sages added *Bhur*, *Bhuva* and *Suvah* as three vyahritis (seed mantras) to the mantra.

“Bhur, Bhuva, Suvah, Tat Savitur Varenyam,

Bhargo Devasya Dhimahi, Dheo Yonah Prachodayat!”

This mantra means, “I adore the dynamic effulgence of Surya, the Sun, which energizes the three worlds of *Bhur*, *Bhuva* and *Suvah*.

I surrender to this divine splendor and pray for illumination. The illumination is bestowed by the Goddess Gayatri”.

Fifth Exploration:

Chandogya Upanishad (II.23.3),

“Tan abhyatapat, tebhyo'bhitatebhyas aumkarah”.

Then, Praja-pati contemplated on *Bhur*, *Bhuva* and *Suvah*. From them came forth the syllable, AUM^o, or aumkarah.

Essence: “*Tat*” represents the three worlds of the Solar system.

These three worlds are rightly represented in AUM^o.

Sixth Exploration:

The Sages realized that the phonetic sound of *Bhur* is “A”, the sound of *Bhuva* is “U”, and the sound of *Suvah* is “M”, and the chanting of AUM^o vibrates the three spheres of *Bhur*, *Bhuva* and *Suvah*.

●ShivBhushan Sharma

Seventh Exploration:

The Sages realized that the chanting of sound “A” vibrates abdomen. The chanting of sound “U” vibrates chest. The chanting of sound “M” vibrates head. The unison chanting of AUM^o vibrates every part of the body.

Eighth Exploration:

Chanting of “A” awakens the waking (*Jagrat*) consciousness.

Chanting of “U” awakens the dreaming (*Swapan*) consciousness.

Chanting of “M” awakens the deep sleep (*Susupati*) consciousness.

Between two successive chanting of AUM^o there is an empty state, which the Sages called *Turiya*, the Super-consciousness.

Essence: The essence of these is found in following verses,

Prasna Upanishad (V.5.1-6)

“Sa yady eka-matram abhidhyayita, sa tenaiva samveditas turnam eva jagatyam abhisampadyate; tam rco manusya-lokam upanayante!”

If person meditates on one element, “A” of AUM^o, he is physically strong but quickly returns to the earth after death.

The chanting of Rig-Veda verses lead him into the world of men.

“Atha yadi dvi-matreya manasi sampadyate, so'ntarisksam yajurbhir unniyate soma-lokam!”

By meditation on two elements, “AU”, he attains the mind.

He is mentally powerful with the knowledge of Yajur-veda.

He goes to the intermediate space, the world of moon.

“Yah punar etam tri-matrena aum ity etenaivaksarena param purusam abhidhyayita, sa tejasi surye sampannah!”

The Essence: The three elements each, leading to death, by itself.

If he meditates on the three elements of “AUM^o”, he becomes one with the light, the Sun.

“Tisro-matra mrtyumatyah prayukta anyonya-sakta anavi-prayuktah, kriyasu bahyabhyantara-madhyamasu samyak-prayuktasuna kampate jnah!”

If they (A-U-M) are chanted together in unison without any internal or external separation, the chanter does not waiver.

“Tam aumkarenaivayatanenanveti vidvan yat tac chantam, ajaram, amrtam, abhayam, param ca!”

The wise man with chanting of AUM^o attains that which is unaging, immortal, fearless and supreme. Hence, the Supreme is beyond the three worlds.

The *turiya* (super consciousness) state underlies the three states and it helps to transcend the three states. The chanting of AUM^o along with *Turiya* (°) leads to an eternal state of deathlessness, immortality and ultimate Bliss. This is the Truth and the final goal of spirituality. The ancient Sages also realized that the Sun-Light goes through three transition phases; the morning golden ultra-violet rays, the afternoon pure white light and the evening infra-red rays.

The Sages called them as,

Brahmani, the consort of Brahma.

Vaishnavi, the consort of Vishnu.

Rudrani, the consort of Rudra, the dissolver.

Second Improvisation: Hence, the Gayatri Mantra was redesigned.

The Well Known Gayatri Mantra

“AUM^o, Bhur Bhuva Suvah, Tat Savitur Varenyam! Bhargo Devasya Dhimahi, Dhio Yonah Prachodayat!”

Meaning: “I adore the dynamic effulgence of Surya, the Sun-God, who energizes the three worlds of *Bhur, Bhuva* and *Suvah*.

I surrender and meditate on this divine splendor and effulgence.

I pray for illumination.

●ShivBhushan Sharma

The illumination is granted by the grace of three Gayatris; Brahmani, Vaishnavi, and Rudrani”.

Gayatri mantra should be chanted at 6 a.m., Noon and 6 p.m., facing the Sun in the east, the north and the west directions.

Ninth Exploration: The Sages meditated and contemplated on the deeper aspects of the Solar system and the human body and found that there are seven components and not three alone.

Third Improvisation: As a result of awareness of seven levels of consciousness, the Gayatri Mantra was improvised as.

MAHA GAYATRI MANTRA

Maha Narayana Upanishad (Section 33),

“AUM^o - Bhur, AUM^o - Bhuvah, AUM^o - Suvah, AUM^o - Maha,
AUM^o - Jana, AUM^o -Tapah, AUM^o - Satyam!

*Tat Savitur Varenayam, Bhargo Devasya Dhimahi, Dhio Yo-nah
Prachodayath!!*

*AUM^o Apo, Jyoti, Raso'mritam, Brahma, Bhur, Bhuvah, Suvah
AUM^o!!!”*

The Maha Gayatri Mantra has seven Maha Vyahritis.

When chanted properly they can activate, awaken and integrate the seven centers (Chakras) of consciousness within the physical body.

AUM is repeated 10 times. There are three main parts of mantra.

The seven Vyahritis with AUM as prefix are called Maha Vyahritis.

The second line of the mantra is the actual Gayatri Mantra.

The third line with the names of seven elements (Bhutas).

AUM^o as prefix and suffix is called the Gayatri Sirah.

This version of Gayatri Mantra means,

With the chanting of AUM^o and 7 Maha-Vyahritis, we can activate, awaken and integrate the 7 centers (Chakras) of individual human consciousness and the Universal Consciousness.

Essence: The meaning of Maha Gayatri Mantra is,

With the chanting of AUM^o, we adore the effulgence of Surya which energizes the three worlds of *Bhur*, *Bhuva* and *Suvah*.

We surrender and meditate on the divine splendor and pray for an experience of Illumination.

We attain the state of enlightenment and illumination with the grace and blessings of three Gayatri; Brahmani, Vaishnavi and Rudrani.

We can also experience and cognize the beauty of Mother Earth (*Bhur*), water (*apo*), fire/light (*jyotir*), the essence (*raso*) and nectar (*amritam*), intermediate space (*Bhuva*) and the heaven (*Suvah*).

Tenth Exploration: For reasons unknown to me, I have been led by my *Antaratma* to experience 10 levels of consciousness (Chakras).

Fourth Improvisation of Gayatri Mantra:

AKHAND GAYATRI MANTRA

“AUM^o - *Bhur*, AUM^o - *Bhuvah*, AUM^o - *Suvah*, AUM^o - *Maha*,
AUM^o - *Jana*, AUM^o - *Tapah*, AUM^o - *Gyan*, AUM^o - *Vigyan*,
AUM^o - *Pragyan*, AUM^o - *Satyam*!

AUM^o, *Tat Savitur Varenayam, Bhargo Devasya Dhimahi, Dhio
Yo-nah Prachodayath!!*

AUM^o - *Bhur*, AUM^o - *Bhuvar*, AUM^o - *Jyotir*, AUM^o - *Vayur*,
AUM^o - *Amaruta*, AUM^o - *Paramatma*, AUM^o - *Ishvara*, AUM^o -
Surya, AUM^o - *Antaratma*, AUM^o - *Jivatma*, AUM^o!!!”

THE DIVINE DRAMA OF 10 AND 22

Akhand Gayatri Mantra has 10 Maha Vyahritis.

They activate, awaken and integrate 10 major centers (Chakras).

AUM^o is repeated 22 times.

Let us first understand few important aspects of this mantra.

Maha is associated with Manipura Chakra.

Janah is associated with Anahata Chakra. It means that we should

●ShivBhushan Sharma

love everyone (*Janah*) from the core of our hearts.

Tapah is associated with Visudhi Chakra and thyroid gland, which produces thyroxine, which in turn produces extra heat (*Tapas*) in the mitochondria of the cells to maintain the higher body temperature.

Bhuvar means whirlpool. It represents Golden Rectangle and Water.

Jyotir represents the Light (Fire) element.

Vayur represents the Air element.

In Maha Gayatri Mantra, mantra, “*raso-amritam*”, which represents the quintessence (*Akash-Bhuta*) state, has been used.

I have replaced it with “*Amaruta*” for the following reasons.

The first “A” represents the highest center, Sahasarara Chakra.

“M” represents the enlightening center, Vigyan Chakra.

The second “A” represents the lowest center, Muladhar Chakra.

The Three letters, A-M-A, represent “The Descent of Shakti”.

“R” represents Nabhi Chakra.

“U” represents the all loving heart center, Anahata Chakra.

“T” represents the throat center, Visudhi Chakra and *Tapas*.

The third “A” represents the highest center, Sahasarara Chakra, which is also known as Muladhar Chakra of Divine Kingdom.

The Five letters, A-R-U-T-A, represent “The Ascent of Shakti”.

Amaruta represents “The Descent and Ascent of Shakti”.

GROUNDING OF PRIMORDIAL ENERGY

The transformation of *Ojas* into *Tejas* is called grounding and it is absolutely essential for integrated health and spiritual evolution. I am happy to state that the chanting of mantra, *Amaruta*, helped me to activate Ida, Pingala and Sushumana Nadis and then integrate them with Muladhar Chakra and to ground *Ojas* into *Tejas*.

Amaruta and Mrityunjaya Mantra

Mrityunjaya Mantra is chanted for victory (*jaya*) over death (*mrityu*) and is attributed to Shiva. It is interesting to note that this profound mantra ends with “*Amamaruta*”, which means immortal state.

Ishvara - The Living God

Let us correlate the beauty of Ishvara with Tantra and Mantra Vidya.

The chanting of “I (ae)” activates Svadhisthana Chakra.

The chanting of “Sh” activates Muladhar Chakra.

The chanting of “Va” activates Svadhisthana Chakra (VAM).

The chanting of “R” activates Nabhi Chakra (RAM).

The chanting of “A” activates Sahasarara Chakra.

Unison chanting of *Ishvara* integrates the sympathetic, the sacral parasympathetic and the cranial parasympathetic nervous systems with the rest of nervous system and the hundred trillion cells of body. It can easily help maintain perfect homeostasis and integrated health.

Meaning of Akhand Gayatri Mantra

With the chanting of *AUM*^o, we adore the effulgence of Surya which energizes the three worlds of *Bhur*, *Bhuva* and *Suvah*.

We surrender and meditate on the divine splendor.

We pray for an experience of Illumination and Self-Realization.

We can attain the eternal state of enlightenment with the grace of three Gayatris; Brahmani, Vaishnavi and Rudrani.

We can experience the essence of,

The Earth element (*Bhur*),

The Water element (*Bhuvar*),

The Fire element (*Jyotir*),

The Air element (*Vayur*),

●ShivBhushan Sharma

The Quintessence (*Amaruta*),

The Ultimate Soul (*Paramatma*),

The Living-God of the Greater Universe (*Ishvara*),

The Sun-God (*Surya*), the Presiding Deity of the Solar

system. The Indwelling human Soul (*Antaratma*),

The cumulative consciousness of cells of the human body

(*Jivatma*).

For maximum benefits please follow the following procedure.

Do Surya Namaskar after doing the basic Yogasana exercises.

Sit comfortably in Padmasana or Sukhasana posture.

3.Do breath-balancing Pranayam to facilitate the flow of Ojas and Tejas through Sushumna-Nadi instead of Ida or Pingala Nadis.

Then focus on Muladhar Chakra and chant *AUM^o-Bhur*.

Focus on Svadhisthana Chakra and chant *AUM^o-Bhuva*.

Then focus on Nabhi Chakra and chant *AUM^o-Suvah*.

Then focus on Manipura Chakra and chant *AUM^o-Maha*.

Then focus on Anahata Chakra and chant *AUM^o-Janah*.

Then focus on Visudhi Chakra and chant *AUM^o-Tapah*.

Then focus on Agyan Chakra and chant *AUM^o-Gyan*.

Then focus on Vigyan Chakra and chant *AUM^o-Vigyan*.

Then focus on Pragyana Chakra and chant *AUM^o-Pragyana*.

Focus on Sahasarara Chakra and chant *AUM^o-Satyam*.

Note: The focus should be shifted gradually from Chakra to Chakra.

Then focus attention on top of the head.

Chant 10 mantras of main Gayatri Mantra without holding breath or losing the focus and concentration.

Then visualize the Earth element and chant *AUM^o-Bhur*.

Then visualize the Water element and chant *AUM^o-Bhuvar*.

Then visualize the Fire element and chant *AUM^o-Jyotir*.

Then visualize the Air element and chant *AUM^o-Vayur*.

Then visualize the Quintessence and chant *AUM^o-Amaruta*.

Then visualize the Ultimate Soul and chant *AUM^o-Paramatma*.

Then visualize the Living-God and chant *AUM^o-Ishvara*.

Then visualize the Sun-God and chant *AUM^o-Surya*.

Then visualize the Descent of Soul and chant *AUM^o-Antaratma*.

Then visualize the physical body and chant *AUM^o-Jivatma*.

Then chant the Maha-Mantra, *AUM^o*.

Pray for every living and non living being'

Lift both the hands after prayer and bless the Mother Earth.

MY MANTRAS

There are many mantras, which I have learnt and experimented with and benefitted tremendously but the following few mantras seem to be of some close connection with my previous lives and they come to my tongue automatically and unconsciously.

DURGA MANTRA

“*Sarva-mangal-manglaye-shive-sarvarth-saddhike-saranye-triambike-gauri-narayani-namo-satute*”.

Meaning: *Sarva* (everything), *mangal* (auspicious), *mangalaye* (ask for), *shive* (of Shiva), *sarvarth* (every aspect) *saddhike* (cognized), *triambike* (Three Divine Mothers), *gauri* (Saraswati and Parvati), *narayani* (Lakshmi), *namo-satute* (I salute).

●ShivBhushan Sharma

Durga Mantra means,

We salute, Saraswati, Lakshmi and Parvati, the three divine mothers, who have cognized every hidden aspect of Lord Shiva. We pray that everything auspicious and beneficial be bestowed on every one.

Goddess Durga represents Saraswati, Lakshmi and Parvati.

My Humble Acknowledgment:

I have been chanting Durga Mantra religiously since childhood but when in distress, I automatically start chanting the Gayatri Mantra.

I am made to understand that Shri Mata Vaishno Devi chants Gayatri Mantra for Her Spiritual Evolution.

I suppose, whenever I need protection and guidance, I start chanting Gayatri Mantra and everything becomes clear crystal and known.

AKHAND - DHWANI

Acknowledgment: I was guided by Soul to design and edit this Raga based instrumental music for healing and medical research.

Intuition: I am made to understand that when Shiva got angry and started doing Cosmic Dance, the cosmic equilibrium was disturbed.

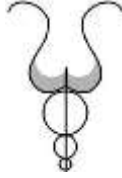
Then, Parvati, consort of Shiva, composed Raga Malkauns, which is also known as Raga Hindolam, to make Shiva calm down.

In this Raga, two notes, which activate the sympathetic nervous system are missing. The emphasis is on the activation of the sacral parasympathetic nervous system for *Ojas* and then transformation of *Ojas* into *Tejas* with the activation of the cranial parasympathetic nervous system. It helps balance the autonomic nervous system.

I am grateful to Pandit Janardhan Mitta for rendering the music on Sitar, an Indian string instrument. The results are truly phenomenal.

Now, let us study and comprehend another ancient Indian science.

TWELVE



YANTRA VIDYA

Yantra Vidya is the study and knowledge of the Art and Science of the symbols, images, signs, logos and emblems etc. The symbols are as old as the creation and every perfect object of Nature is designed and created with the precision of mathematics. The symbols of Nature are great assets for the human mind. The wisdom of even thousand words can be represented in a symbol. A systematic representation of the modern sciences would not be easy and possible without the aid of abbreviations and symbols. The images of natural symbols of different dimensions, shape, size, color and texture are stored in different associated parts of the brain. Hence, they can be easily remembered and recalled. The visual signals are much more powerful than the auditory signals.

It is much easier to focus the mind on a beautiful and meaningful Art-Design than contemplate on an abstract idea. This is Truth. The Yantras, like mantras, represent the various facets of Nature. Every new Age brings with it, a new element of evolution, a new set of symbols, and a new meaning of the existing symbols.

It is well known that the message of every religion is the universal love but our languages have failed to convey this message. Why?

Because, every language has three built-in deficiencies; inadequacy, inaccuracy and ambiguity. We need to eliminate or minimize them.

We need to revive “Ancient Indian Science of Symbols” for crystal clear understanding of every aspect of Nature and the human life etc.

THREE TYPES OF SYMBOLS

These are animate, semi-animate and inanimate symbols.

The Animate Symbols

The ancient Indian Sages devised a unique method of converting the multi-dimensional aspects of Nature into animate form of pictures of human and animals. Somehow, the real beauty of these animate pictures is not understood and appreciated by many people.

Now, let us study the pictures of Sri Dattatreya and Sri Gayatri and understand the real significance of “The Science of Symbols”.

SRI DATTATREYA

Once, Brahma, Vishnu and Shiva were describing the virtues of Anusuya, the wife of Sage Atri, to Saraswati, Lakshmi and Parvati, their respective consorts. The Goddesses refused to accept that the mortal human beings could be better than the immortal divinities.

They wanted a proof. Brahma, Vishnu and Shiva went to the hermit of Sage Atri, when he was not there. They requested Anusuya to cook food after bath and serve food without wearing her clothes.

Anusuya, hesitantly, asked them to become small babies and after serving the food, she united the three babies into one baby with three heads and six arms. The baby was named as Sri Dattatreya.

Dattatreya means “Surrendering (*datta*) to the Will of Atreya, the wife of Sage Atri”. *Treya* also means three, which means Brahma, Vishnu and Shiva, the Primordial Triune - Trinity.

PICTURE OF SRI DATTATREYA

Three heads, which represent Brahma, Vishnu and Shiva.

Six arms hold six instruments.

White bull, the vehicle of Shiva.

Four dogs, which represent the wisdom of four Vedas.

One body, which represents the united body or Trinity.

Art-Design – 7 – Sri Dattatreya



Art Design – 8 – Sri Gayatri



SRI GAYATRI

Sri Gayatri is also called “Veda Mata, The Mother of Vedas”.

Her name appears first in the first Veda, the Rig-Veda.

She is the first manifestation of the Universal Consciousness of God or the Nature.

She is the first Shakti of Brahman.

ANIMATE PICTURE

Blue Black Background

It represents the omnipotent, omniscient, omnipresent cumulative consciousness of the Universe or the Universal Consciousness.

Five Heads

These five heads represent the five basic elements, *Panch-Bhutas*.

Sun

Golden rays of light behind the five heads represent the Brilliant Effulgence of Sun, the presiding deity of our Solar system. The Sun is the father and mother of indwelling human Soul.

Ten Arms

Rig-Veda (9.71.5),

“*Bhurijo ahesat das svarsar adite upasathe.*”

The ten (*das*) sisters of Sun are sent out as ten arms from the Sun.

The ten arms denote the light of Sun going in ten directions; North, Northeast, East, East south, South, Southwest, West, West north, Up and Down. This is universally accepted phenomenon. The ten sisters or the ten rays of Sun also represent the ten stages of development of the formed objects of Nature.

Ten Hands

The eight hands hold eight objects; trident, disc, conch, lotus, bow-arrow, four Vedas, rosary, and vessel for nectar. One hand is turned towards the sky and one hand is turned towards the earth.

●ShivBhushan Sharma

Seat - Lotus Flower

Sri Gayatri rests on the Lotus flower, the symbol of purity.

Serene Lake

The serene lake symbolizes tranquility and equanimity of mind.

Crescent Moon

This represents time and the fluctuating concrete mind.

Third Eye of Intuition - Shiva

This represents the abstract, intuitive and intelligent mind.

10. **Pure White Swan** The Symbol of Discrimination.

The swan absorbs solids from the milk and leaves behind the water.

Significance of the hand held objects.

Vessel for Nectar - Karmadal

The vessel used for nectar (*Amrit*) of Bliss and

Immortality. 12. **Rosary - Japa Mala**

It is used to count mantras and for concentration of the mind.

Four Vedas

The four Vedas represent the foundation knowledge of Nature.

14. **Revolving Disc - Sudarshan Chakra**

The fast rotating and revolving disc of Vishnu is used to eliminate the negative traits and to restore Righteousness (Dharma).

15. **Trident - Trishool**

This symbol of Shiva represents the removal of ignorance, Self-Realization and the eternal state of Salvation (*Moksha*) etc.

16. **Conch - Shankh - Nautilus Shell - Divyank Ratio.**

It is the most beautiful and perfect creation and object of Nature.

Lotus - Kamal

One hand holds the Lotus flower.

Chandogya Upanishad (IV. 14.3),

“Just as water does not cling to the Lotus leaf, so also evil does not cling to the person, who knows Brahman”. It means that we should be detached and maintain distance from the fluctuating evil world.

Bow and Arrow - Dhanush-

Ban Mundaka Upanishad (II.2.3),

“Take the mighty weapon, the bow (*dhanur*), furnished by the Upanishads, fix on it the arrow (*ban*) sharpened by the constant meditation. Draw it with the mind engaged in contemplation of the Brahman and penetrate that mark, the Imperishable Brahman and unite (Yoga) with the God. This is the real meaning of verse”.

SEMI ANIMATE SYMBOLS

Semi animate symbols are designed without the use of animal forms.

SRI AKHAND

This semi-animate symbol, which adorns the front page, is a graphic representation of animate forms of Sri Dattatreya and Sri Gayatri.

Note: Every aspect of Nature can be explained with “Sri Akhand”.

Comparison: Now, let us compare “Sri Akhand” with “Sri Gayatri”.

The background color represents the Universal Consciousness.

The five parts of the central vertical design represent the five basic elements (*Panch-Bhutas*) and the five heads of Sri Gayatri.

They represent the head, neck, chest, abdomen and folded legs of a meditating Yogi, who is chanting Gayatri Mantra.

The central white circle represents the Sun, our presiding deity.

It also represents the serene lake, the abode of Sri Gayatri.

The ten golden rays represent the ten arms of Sri Gayatri.

The twelve petals represent “The Lotus, the seat of Sri Gayatri”.

●ShivBhushan Sharma

The ten golden petals of Lotus on top represent the Lotus flower in one of the hands of Sri Gayatri.

The Bow and Arrow are represented in the green color and are placed just below the top Lotus flower.

The Third Eye of Intuition is represented in the forehead.

The Trident is represented in dark blue in the neck area.

The Sudarshan Chakra (Disc) is represented in the center.

The four dark green leaves around center represent the 4 Vedas.

The central dark pink Crescent represents the concrete mind.

The yellow-orange abdomen is shaped like *Shankh* (Conch).

The blue base represents the vessel of Nectar of Immortality.

The ten beads of rosary are represented by the Manipura Chakra.

The swan is represented by the central white disc.

Brahmani Gayatri: The five golden rays on the left side of the symbol represent the ultra-violet rays of the morning rising Sun and Brahmani, the consort of Brahma. She is worshiped with the chanting of Gayatri Mantra at 6 a.m. facing the east.

Vaishnavi Gayatri: The central white disc of symbol represents the noon Sun and Vaishnavi, the consort of Vishnu. She is worshiped with the chanting of Gayatri Mantra at 12 noon facing the north.

Rudrani Gayatri: The five golden rays on the right side of the symbol represent the infra-red rays of evening setting Sun and Rudrani, the consort of Rudra (Red hot Shiva). She is worshiped with the chanting of Gayatri Mantra at 6 p.m. facing the west.

IN-ANIMATE SYMBOLS

In-animate symbols are designed without any animate form.

AKASH - THE SPACE

Circle: The two dimensional symbol of Akash is circle.

Sphere: The three dimensional symbol of Akash is sphere.

Now, let us understand **Bindu** (dot), the foundation of every symbol.

Dot - Seed - Bindu

A dot is the most perfect symbol. It represents the un-manifested and the undifferentiated aspect of the Universal Consciousness of God.

A dot has a circular shape, a key to the circle.

Each circle is composed of many circles.

No point, on or in the circle, is the first or the last one.

A circle is a perfect symbol of unity, integrity and infinity.

The core part of a dot or circle is called Shakta, the source.

The peripheral part is called Shakti, the dynamic force.

All other symbols arise out of a dot.

For example: The dots placed next to each other, in a row, give rise to a line. The lines, circular or straight, give rise to other forms, like zero, triangle, square, pentagon and hexagon etc.

A dot or circle represents Zero too. The greatest contribution of ancient Indian mathematicians to the world mathematics is cipher or zero. It has transformed “The World of Mathematics”.

The diagonal distance between two points on opposite sides of the circle, which pass through the central dot, is always equal.

The universe is infinite but for all practical purposes, the cosmos, universe or heaven looks round, circular or spherical.

PANCH - BHUTAS

Panch-Bhutas, the five basic elements of Nature, are the foundation of life.

Now, let us study and understand the ancient Indian Science of symbols with the help of inanimate symbols of Panch-Bhutas.

Prithvi-Bhuta - The Earth Element - The Square

The symbol of earth element is the Square.

The shape of earth was considered flat by the western philosophers

●ShivBhushan Sharma

but the ancient Indian Sages were aware that the earth is spherical. The secret lies in the ancient symbol of the Earth. Let us first study and understand the analytic approach of the ancient Indian Sages.

THE BASIC CONCEPT

The circle was reserved for *Akash*, the Space, and no symbol can be repeated without creating confusion.

Hence, the Sages felt the need to create another acceptable symbol for the earth, which resembles a circle or a sphere.

The Sages were aware that a circle has 360 degrees, and no point can be called the beginning or the end.

With these things in mind, the ancient Indian Sages evolved a new symbol, square, for the earth element.

Big Question? - How did the Indian Sages evolve the new symbol?

I am convinced that the Sages used the following technique.

A circle was drawn with four equidistance points on it.

These points were connected to form a square within the circle.

The four corners of the square have 90 degrees angles each, which collectively give rise to 360 degrees (4×90).

No point or angle can be called the first or the last.

A pin was fixed in the center of the square, and the square was made to rotate at a very high speed.

The rotating square created a visual image of a circle.

The choice of square as the symbol of the earth is rational.

Essence: A square is the closest perfect symbol of the circle.

Apa-Bhuta - The Water Element - The Crescent

The symbol of *Apa (Jal)* or the Water element is the Crescent.

On Earth, the water is found in ocean, rivers and ponds etc.

The lower layer of these reservoirs is concave in shape.

3. The upper layer of water is slightly concave.

This is due to the surface tension of water and the capillary action of water along the edge of the reservoir.

Imagine: The shape, created by the lower and the upper concave layers of water surface, resembles a crescent (new moon).

The Essence: The logical symbol of water is in deed, the Crescent.

Agni-Bhuta - The Fire Element - The Triangle

The symbol of Agni or the Fire element is the Triangle.

Imagine!

The flames of burning fire go up in the form of a triangle.

The triangle pointing-up is called the male (*Shakta*) triangle.

It is called “The Ascension of Consciousness or Evolution”.

The triangle pointing-down is called the female (*Shakti*) triangle.

It is called “The Descent of Shakti Consciousness or Involution”.

The two intersecting triangles form a hexagonal shape, called the *Shakta-Shakti* Triangle.

It represents the ultimate integration and unity in diversity.

5. The Descent of Shakti-Ascension of Shakta are complimentary.

The Essence: The logical symbol of the Fire element is the Triangle.

Vayu-Bhuta - The Air Element - The Hexagon

The symbol of Vayu or the Air element is the Hexagon or the ellipse.

Imagine!

A picture of earth surrounded by the hills encircling a valley.

It resembles a concave shaped saucer (the plate).

The outer layer of the atmosphere of earth resembles an inverted concave shaped saucer.

Air is present between the earth and the atmosphere.

●ShivBhushan Sharma

The shape, created by the two saucers with Air within the space, resembles a hexagon or ellipse.

The Essence:

The logical symbol of the Air (*Vayu*) had to be hexagon. It is also interesting to note that the symbol of Benzene is hexagonal too.

The Basis of Art-Design of Air (Vayu) Element

The Air element is created when fire is applied to solid/water.

The Fire element represented by Triangle - is the middle element.

The triangle pointing-up represents *Shakta*, the evolution.

The triangle pointing-down represents *Shakti*, the involution.

The two intersecting triangles create a six cornered symbol.

When the corners are connected a hexagon is formed.

The Essence: The logical symbol of the Air element is the Hexagon.

Akash-Bhuta - The Quintessence - Pentagon

Akash-Bhuta was not considered a separate element.

Hence, it was not given a separate symbol.

Akash-Bhuta is called Brilliant Effulgence. It is the subtle source of the energy for other four well defined states of the matter.

Let us explore this concept and design a new symbol.

A triangle is made of $3 \times 60 = 180$ degrees.

Triangle has the least space and the least power.

A circle and a square are made of $4 \times 90 = 360$ degrees.

Square has more space and more power than a triangle.

A pentagon is made of $5 \times 108 = 540$ degrees. Pentagon has more space and power than a triangle, square and circle. The number 108 is considered highly occult and spiritual number.

Hence, Akash-Bhuta also represents the spiritual evolution.

The Essence: The ideal symbol of Akash-Bhuta is Pentagon.

An Important Statement

I admit with humility that after the creation of semi-animate symbol, “Akhand”, I tested “Voice of Silence” with a challenging question. “If you are truly omniscient and can make me design an In-animate symbol of Sri Gayatri, I shall follow you for the rest of my life”. I am glad that I got to design the symbol of the Vigyan Chakra, the second symbol on the back page of this book.

VIGYAN CHAKRA

Now, let us re-construct the Art-Design of Vigyan Chakra.

Draw one perfect circle, the symbol of universe, divide it into nine equal parts and then number them from 1 to 9.

Draw a central dot, which symbolizes the Sun, the nucleus.

The Play of 7, an occult spiritual number

When we divide the number 1 by 7 ($1/7$), we get 0.142857.

Let us connect the point 1 on the circle with point 4, connect point with point 8, and connect point 5 with point 7.

Interconnect all the six points of circle. The points, 3, 6 and 9 are left untouched in the picture.

Please Note: The picture consists of 1-Pentagon, 2-Semi-circles, 3-Semi-circular Triangles and 4-Triangles. The total number is 10.

Now, draw an equilateral *Shakta* Triangle and place it on the points, 3, 6 and 9.

The picture resembles the ancient western symbol, the Enneagram.

Note: The new picture consists of 1-Septagon, 8-Semi-circular Triangles, 8-Triangles, 7-Tetragons, 1-Rectangle with Divyank Ratio at the base.

Total number is 25. It is equal to numerology number 7.

The ancient Indian Sages believe that there is no creation without the male (*Shakta*) and the female (*Shakti*) energies.

●ShivBhushan Sharma

Now, let us improvise the Enneagram with a female *Shakti* triangle.

10. Let us add an equilateral *Shakti* Triangle opposite the *Shakta* Triangle and bring forth another esoteric aspect of the Nature.

Note: Let us consider the central dot as 0-Sun, 1-Earth, 2-Venus, 3-Mercury, 4-Mars, 5-Jupiter, 6-Saturn, 7-Uranus, 8-Neptune, and 9-Pluto. There are 10 major planets/heavenly bodies in the picture.

This picture also reveals a few hidden aspects of our Solar system.

- a. The Moon: It is placed between 1-Earth and 2-Venus.
- b. The Asteroid Belt: It is placed between 4-Mars and 5-Jupiter.
- c. The Triton (Satellite of Neptune): It is placed between 8-Uranus and 9-Neptune. Triton is equal to the size of our Moon.

The Conclusion:

Every bit of animate picture of Sri Gayatri and semi-animate symbol of “Sri Akhand” is clearly visible in the symbol of Vigyan Chakra.

Kindly contemplate on every aspect of “Sri Gayatri and Sri Akhand” and widen the spectrum of your intuitive mind and consciousness.

Now, let us study and understand the symbol of Muladhar Chakra, the lowest Chakra represented on the back page of this book. I am glad to admit that almost every aspect of the animate form of Muladhar Chakra as described in Sat-Chakra-Nirupans has been represented in the in-animate symbol of Muladhar Chakra.

MULADHAR CHAKRA

The height and width of the outer egg is in the ratio of 22/21.

The protruded part of the egg is proected towards the earth.

It represents involution or grounding of consciousness.

The central transparent circle represents Shivlinga.

The red triangle pointing down represents Goddess Dakini.

The four red squares represent Swastik, the symbol of Earth.

The red triangle pointing down represents Kundalini.

The three darker red semi circles in the three squares represent the dynamic form of Kundalini or Pie, 22/7.

Three darker semicircles represent revolution of consciousness.

The dark red line attached to Kundalini represents the ascension.

ANAHATA CHAKRA

The second lower symbol on the back page of this book represents the mathematical design of the core mantras of Mantra Vidya.

Note: The beautiful play of 3, 6, 12, 24 and 48 petals in the symbol represent the mathematical structural design of mantras or meters.

THE JEWEL ON CROWN

The top most symbol on the back page of this book.

It is represented within Sahasarara Chakra of “Sri Akhand”.

It represents the design of Divyank, the Divine Constant.

The outer orbit of 22/21 represents the first stage of creation.

The light blue circle within the outer egg represents Akash,

The ten blue Pentagons represent the ten stages of development.

The ten inverted Pentagons represent the Descent of Shakti.

The five white four cornered shapes in the center represent the five digits (0.34419) of Divyank and the last stage of maturation.

The five blue colored four cornered shapes in the center represent five basic elements or Panch-Bhutas.

There are many more mysterious shapes in the symbol.

Please meditate, contemplate on their significance and evolve.

Special Note: A conscious attempt has been made to represent only ten percent of the wisdom of “Sri Akhand” in Akhand Sutra.

Art-Design – 9 – The Semi-animate and In-animate Symbols

Sahasrara Chakra - 1000

Ajna Chakra - 2

Vishuddhi Chakra - 16

Anahata Chakra - 12

Nabhi or Manipura Chakra - 10

Svadhishthana Chakra - 6

Muladhara Chakra - 4

Pentagon- Akash-Bhuta

Circle - Space

Hexagon - Air

Shakta - Shakti

Triangle - Fire

Crescent - Water

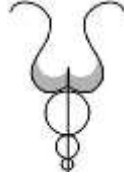
Square - Earth

Swastik

Involution

Evolution

THIRTEEN



AYURVEDA

Ayur means age. Veda means the knowledge. Ayurveda is an ancient Indian system of medical science, which deals with long healthy life and for fulfillment of the fundamental objectives of human life. It is a vast subject and beyond the scope of this comprehensive book. For detailed knowledge, please study standard books on the subject.

The central theme of this chapter is to unfold the wisdom of subtle aspects of the adult human anatomy, physiology and consciousness, which can help us curtail aging process, prevent the most common preventable diseases and lead a long blissful and enlightening life.

The Indian wisdom is known for precise presentation of the subject in the form of an aphorism (Sutra) in the opening verse itself.

The essence of Ayurveda is *Purusharth*, the basic objective (*arth*) of every living human being (*Purush*). Let us study this concept.

PURUSHARTH - Dharm-Arth-Kama-Moksha

Dharm means truth and righteousness.

Arth also means the economic means (*Arthic*).

Kama means the basic needs, desires and their fulfillment.

Moksh means the freedom, liberation, salvation or emancipation.

If every act of a human being, which includes the economic means and the fulfillment of genuine needs and desires of life etc, is based on the principle of righteousness, the person will have no constraints and restraints of daily life and will be Self-Realized and enlightened.

●ShivBhushan Sharma

A person, who faithfully applies the rules of Ayurveda and Akhand Yoga in real life, will have an eternal life of Bliss, “*Sat-Chit-Anand*”.

This is the Ultimate Truth and the objective of human consciousness.

Now, let us comprehend *Panch-Koshas*, the five sheaths of the body.

FIVE SHEATHS - PANCH-KOSHAS

They are represented inside and outside the physical body.

THE EXTERNAL EXTENSIONS

Annamaya-kosha: The visible physical body made of the food or the solid matter forms the innermost sheath.

Pranamaya-kosha: The second sheath made of bio-plasmatic matter. It forms the emotional body around the physical body.

Manomaya-kosha: This sheath is made of the concrete mind.

Vigyanmaya-kosha: This sheath is made of the abstract mind.

Anandamaya-kosha: This sheath is responsible for eternal Bliss.

Integration: When the five sheaths of body are fully integrated they produce a strong bio-plasmatic field (Aura) around the physical body. The shape of the Aura of an enlightened human being sitting in the Lotus Posture (*Padmasana*) resembles an eye in ratio of 22/21. When the eye of Aura is projected towards the sky it represents the ascension of mind and consciousness and the spiritual evolution. When the eye of Aura is projected towards the earth it represents the descent of mind and consciousness and the spiritual involution. A person, who knows the perfect Art of balancing and integration of Involution and Evolution, is a true Yogi or enlightened Soul. He is in full control of his body-breath-mind-consciousness-Soul.

THE EXTERNAL EXTENSIONS

Taittiriya Upanishad (II.2-6),

These verses talk of the matter and life, the life and mind, the mind and understanding, the understanding and bliss, and the Brahman.

The Essence: It can be presented as,

Annamaya-Kosha: The first sheath made of the food.

On the earth, all the living creatures are made from the food. They live by the food alone and in the end they pass into the food. The food is the eldest born living being and it is a purified remedy. Hence, the plants were born before the human beings to nourish the human beings. The human beings were designed as pure vegetarian. **Note:** The physical body from skin to vertebral column (*Sushumna-Nadi*) is associated with *Annamaya-kosha*, the first sheath of food.

Pranamaya-kosha: The second sheath of life breath.

Different from and within the essence of food, is the inner-life-breath force, *Pranamaya*.

Note: This sheath is called *Vahini-Nadi* within the *Sushumna-Nadi*. It is composed of the cerebro-spinal fluid (CSF) in the space around the spinal cord. *Vahini* means moving.

Manomaya-kosha: The third sheath made of Mind.

Different from and within that which consists of *Prana*, is the inner self-mind. This sheath represents the concrete mind.

Note: This sheath is called *Surya-Nadi* within the *Vahini-Nadi*.

It is composed of the white matter (myelinated tracts) of the spinal cord, which carry impulses to and from the central nervous system. It forms the sensory bridge (mind-*Manas*) between the sense organs (*Indriyas*) and the central evaluating nervous system (*Buddhi*).

Vigyanmaya-kosha: The fourth sheath of Intellect.

Different and within that which consists of the mind, is the inner self, made of intellect (*Buddhi*). It helps in discrimination (*Vivek*).

Note: It is called *Chandra Nadi* within the *Surya-Nadi*.

It is composed of the grey neuron cells of the spinal cord, which interpret the sensory signals and give appropriate remedial orders to be executed by the motor nerves.

Anandamaya-kosha: The fifth sheath of Bliss.

Different and within that which consists of intellect, is the inner self, eternally blissful, *Ananda-maya-kosha*.

Sat-Chit-Anand means that Truthful Conscious Mind is Blissful.

Note: It is called *Brahm Nadi* within the *Chandra Nadi*.

Anandamaya-kosha is associated with the central canal of the spinal cord, the ventricles of the brain, the pineal gland, and the indigenous pain relieving neuron cells of the nervous system.

PANCH - BHUTAS and CHAKRAS

Now, let us study the relationship of five elements (*Panch-Bhutas*), five sheaths (*Panch-Koshas*) and Chakras with the physical body.

THE EARTH ELEMENT

Earth Element - Prithvi Bhuta - The Solid matter - 38.2%

It is associated with *Annamaya-kosha* and Muladhar Chakra.

Seven forms of tissues (*Dhatu*):

Rasa (Plasma): The special fluid tissue.

Rakta (Blood): A specialized fluid connective tissue in which the blood cells are free to swim and move around.

Mamsa (Muscle): The red color connective tissue.

Medas (Fat): The white and yellow color fat adipose tissues.

Asthi (Bone): The white solid and strong tissues.

Majja (Neuron): White colored myelinated nerve tissue (Tracts or Nerves), the un-myelinated ends, the receptors (dendrites) and the terminal transmitters. It is electrically charged tissue.

Shukra: Semen, ovum and other reproductive tissues.

THE WATER ELEMENT

Water Element - Apa Bhuta - Fluid - Kapha - 61.8%.

It is associated with the earth, *Pranamaya-kosha*, Muladhar Chakra and Svadhisthana Chakra. Water is a vital constituent of every tissue and it is called *Kapha*.

Five forms of Kaphas.

Tarpaka Kapha: The cerebrospinal fluid (CSF) in the brain.

Sleshaka Kapha: The lubricating synovial fluid in the joints.

Kledaka Kapha: The gastro-intestinal fluids for digestion.

Bodhaka Kapha: The saliva in the mouth for taste perception.

Avalambaka Kapha: The pericardial and pleural fluids.

THE FIRE ELEMENT**Fire Element - Agni Bhuta - Heat - Pitta**

It is associated with *Manomaya-kosha*, Nabhi Chakra and Manipura Chakra.

Fire helps in digestion, visual perception, hunger, thirst, luster, complexion, intelligence and courage.

Five forms of Pittas:

Pachaka Pitta: It is found in the stomach, the small intestines and the liver and it helps in digestion.

Sadhaka Pitta: It is found in the brain and the heart and helps in discrimination, compassion and spiritual evolution etc.

Bhrajaka Pitta: It is found in the skin and helps in luster and complexion of the person.

Alochaka Pitta: Alochaka means analysis. It is found in the eyes of the beholder and it controls the visual perception.

Ranjaka Pitta: The fire in the blood, the liver, the spleen, the stomach and the intestines. It imparts yellow color to these organs.

THE AIR ELEMENT**Air Element - Vayu Bhuta - Evaporation - Vata**

The Air (*Vayu*) is connected with *Vigyanmaya-kosha*, Anahata Chakra and Visudhi Chakra. It causes Vata or dryness etc.

Five forms of Vatas.

Prana Vata: It is found in the chest. It controls the mind, senses, heart, lungs and consciousness.

●ShivBhushan Sharma

Apana Vata: It is found in the pelvis and is responsible for the expulsion of urine, fecal matter, the menstrual fluid and parturition.

Samana Vata: It is found in the stomach and intestines. It helps in digestion and balancing the emotional energy.

Udana Vata: It is found in the neck and head. It helps in speech, memory, intelligence and spiritual aspirations etc.

Vyana Vata: It is found inside and outside the body. It helps to maintain the equilibrium of all the Vatas.

Five subsidiary Vatas.

Naga: This manifests as hiccup.

Kurma: This results in opening and closing of eyes.

Grkara: This results in indigestion.

Devadatta: This results in yawning.

Dhananjaya: This is active even in dead body.

THE AKASH ELEMENT

Akash Element - Akash Bhuta - Integration - Nirgun

This fifth subtle state of the matter is associated with the four higher centers of consciousness; Ajna Chakra, Vigyan Chakra, Pragyan Chakra and Sahasarara Chakra. It plays an important and vital role in integration of senses, sense organs, mind, intelligence, nervous system, conscious awareness with the Soul. It prepares the physical body for final journey of spiritual evolution, enlightenment, direct cognition of Nature and the innate intuitive wisdom etc.

GUNAS and DOSHAS

Now, let us study and understand the qualities of elements (*Gunas*) and their corresponding defects (*Doshas*).

Tri-Gunas and Tri-Doshas

Satvic Guna: Pure spiritual quality. It is associated with the pure vegetarian and fruit diet and leads to *Kapha-dosha*.

Rajasic Guna: Dynamic quality. It is associated with the high energy non-vegetarian and protein diet and leads to *Pitta-dosha*.

Tamasic Guna: Inertia/Lethargy. It is associated with the sour and stale food items and leads to *Vata-dosha*.

Doshas - Defects

Kapha Dosha: Kapha (water) is wet, moist, cold, heavy, dull, sticky, and soft and firm. It leads to formation of excess mucous, cough and cold. It is the least problematic *dosha*.

It can be easily managed with intake of mild astringents.

Pitta Dosha: Pitta is oily, sharp, hot, light, moist and mobile. It leads to jaundice and other liver diseases.

It can be easily treated with the sweet fruits and bitter vegetables etc.

Vata Dosha: Vata (air) is dry, light, cold, rough, subtle and agitated. It leads to dryness of various lubricants of the body.

It can be easily relieved with the addition of pure satvic diet.

Nirgun and Nirdosh:

When the three *Gunas* are given their due importance and the person follows the principles of Ayurveda and Yoga he is free from *Gunas*.

He is *Nirgun* and does not suffer from any *dosha* (*Nirdosh*).

This ancient Indian wisdom of Ayurveda can lead to integration of the perfect physical, emotional, mental, social, religious and spiritual aspects of the health and overall well being of a person.

The Basic Principles of Yogic Diet

According to Akhand Yoga, the Ultimate state of Real Yoga is not possible for a person, who eats too much or too little.

It means that the mean blood glucose level of Yogi should be around 111mg/100 ml of blood almost all the time.

2. Drink the food and eat the liquids.

●ShivBhushan Sharma

The solid food should be slowly chewed, masticated, mixed with the saliva and then swallowed in pure liquid form.

The liquid food should be thoroughly mixed with the saliva before swallowing.

The cooked starch is digested by the alpha-amylase of saliva into maltose and then into two glucose molecules.

3. Ratio of Biomolecules.

The ratio of carbohydrates should be 61.8%.

The ratio of proteins should be 24%.

The ratio of lipids should be 14.2%.

With this diet, we can maintain homeostasis almost all the time.

We can curtail the usual ageing process and also prevent the most common preventable diseases.

4. Source of Food.

The emphasis should be on the consumption of locally produced grains, fresh fruits, vegetables and essential herbs etc.

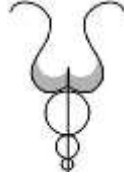
Early Breakfast and Dinner.

Early to Bed and early to Rise is Yogic Mantra.

AN HONEST STATEMENT

I admit with humility that only after adhering to the strict pure Satvic diet plan, I was able to log on to my *Antaratma*, Akash-Kosh, decode the ancient Indian wisdom, conceive Divyank, Divine Constant, Divyank Ratio and Divyank Sequence, design the symbol, Sri Akhand, and compile Akhand Sutra. This is my cognized Truth.

FOURTEEN



SCIENCE OF AKHAND YOGA

Psychosomatic disorders are very common and they lead to many physical and mental health problems for almost every human being. Unfortunately, it is not easy to find a long lasting solution for these problems without the psychiatric drugs, which lead to addiction and eternal suffering. The objective of Akhand Yoga is to find the causes, effects and solution for the most common psychosomatic disorders.

Let us first understand the mind, the foundation of psychology.

MIND

According to dictionary, “Mind is an ability to be aware (conscious) of things and to think and feel”. According to Taittiriya Upanishad, four of the five sheaths of the body are associated with the mind.

Pranamaya-kosha: The emotional mind (Feelings).

Manomaya-kosha: The concrete mind (Thinking).

Vigyanmaya-kosha: The abstract mind (Intellect).

Anandamaya-kosha: The Blissful Conscious Mind (Intuition). Katha Upanishad (I. 3.10-11),

“Indriyebhyah para hy artha, arthebhyat ca param manah, manasas ca para buddhir budhar atma maham parah! Mahatah param avyaktam, avyaktat purusah parah, purusan na param kincit; sa para gatih!” “Drasta drsimatrah suddho 'pi' pratyayanupasyah! Tadartha eva drsyayatma!”

Meaning:

Beyond the sensory organ (*indriya*) lies the nerve that carries the message (*artha*) of different sensations of the body.

Beyond the nerve lies the concrete mind (*manah*).

Beyond the mind lies intelligence and intellect (*buddhi*).

Beyond the intellect lies the Soul (*Atma*) and intuition (*Maham*).

Beyond the Soul lies the un-manifested (*avyaktam*).

Beyond the un-manifested is Paramatma (*purusa*).

There is nothing beyond purusha. Thou (*sa*) shall go (*gatih*) beyond (*para*) that. This is the Ultimate Goal, the union with God.

The Soul is the Real Seer.

Pure consciousness (*chetna*) always perceives the contents of the mind through the mind.

The real Seer is the indwelling Soul (*Antaratma*).

Amazing! Sequence of sight, sense, sense object, sensation, sense organ, sensory pathway, mind, awareness, consciousness, intellect, intuition, Soul and the beyond is beautifully enumerated in the verse.

Essence: The mind is an instrument of consciousness and the Soul.

Now, let us comprehend the real meaning of Yoga.

YOGA

According to Vedanta, Yoga means the union of *Jivatma*, the human being, with *Paramatma*, the Ultimate Universal Soul.

According to Gita, “When the mind, the intellect, and the self are under control, free from restless desires, the person becomes a *Yukta*, in communion with the God”. *Yukta* also means Yogi, the united.

According to Sat-Chakra-Nirupana, Kundalini sleeps in Muladhar Chakra in the pelvis. The rising of Kundalini to the highest center in the brain (Sahasrara Chakra), is called **Kundalini-Yoga**.

The awakening and integration of Chakras is called **Chakral-Yoga**.

According to Taittiriya Upanishad, the abode of *Antaratma* is within the innermost sheath of the body, called *Anandamaya-kosha*. The space within *Anandamaya-kosha* is called *Brahm-Nadi*.

The entry of *Antaratma* into the *Brahm-Nadi* is called **Antar-Yoga**.

Hatha Yoga is the Art of physical exercises and the body postures.

According to Brahm-Sutra, “The Soul (*Atma*) is an immortal bridge (*Amritya-setu*), between the human body and the God”. It means that the indwelling *Atma* unites *Jivatma* with *Paramatma*.

According to Trait Para Vidya, the union of *Jivatma-Antaratma-Paramatma* leads to an eternal state of Yoga, the union with the God.

Sankhya Yoga is an enumerated foundation of Patanjali Yogasutra.

According to Patanjali Yogasutra, “*Yogas Citta-vrtti-nirodhah*”, the stoppage of fluctuations of the mind is called Yoga.

The fluctuations of the mind can be easily stopped with drugs, herbs, medicines, alcohol, chemical imbalances, birth defects and many other altered states of consciousness etc. Is stoppage of fluctuations of mind a true form of Yoga? Let us explore and find the Truth.

AKHAND-YOGA

The integrated form of Yoga consists of the following components.

“*Atha-akhand-yog-anusasanam!*”.

The exposition (*anusasanam*) of Akhand Yoga starts now (*atha*).

“*Citta-vrtti-nirodhah-chetna-sat-upayog-iti-akhand-yoga*”.

The stoppage of fluctuations of the mind leads to the awareness of Soul consciousness (*Chetna*). This conscious awareness is the first shoot of conscientious journey of spiritual evolution. The optimum and truthful (*sat*) utilization (*upayog*) of the Soul consciousness for observation, cognition and perception of every manifestation of the Universal Consciousness is (*iti*) the real objective of Akhand Yoga.

“*Idam, Atma-darsanam*”.

This (*Idam*) is “the vision” (*darsanam*) of *Atma* or Self-Realization.

●ShivBhushan Sharma

“*Tatra, Moksham!*”.

Then (*tatra*), the person is eternally liberated from all the constraints and restraints of the existential life. This is the Ultimate Goal.

The Essence:

The cumulative consciousness of hundred trillion cells of the human body is called *Jivatma*. The integration of every aspect of *Jivatma* is the first pre-requisite for an eternal state of Yoga.

The activation, awakening and ascension of indwelling Soul, which leads to rising of consciousness, *Chetna*, are pre-requisites of Yoga.

The intellect (*Buddhi*), intuition (*Mahat*) and wisdom (*Pragyan*) are the rewards (*uplabdi*) of consciousness (*Chetna*).

Thereafter, Yogi can be in tune with the Universal Consciousness of God and can easily cognize and perceive every secret of the Nature.

Other States of the Mind

“*Vrtti-sarupyam itarata*”.

In other (*itarata*) states, the Soul is focused in dealing with the modifications, afflictions and distractions of the mind.

The Five Modifications of the Mind

“*Vrttayah pancatayyah klista aklista.*”

There are five types of modifications of the mind.

a. Pleasant Modifications (*aklista*) of the Mind. Joy, happiness and blissfulness are pleasant modifications.

b. Painful Modifications (*klista*) of the Mind. The fluctuating mind hankering after the perishable objects leads to the painful modifications of mind and the resultant sufferings (*kleshas*) etc.

“*Pramana-viparyaya-vikalpa-nidra-smrtayah.*”

The Five modifications of the Mind.

a. **Pramana:** The right knowledge based on the direct cognition.

b. **Viparyaya:** The false knowledge based on illusions (*mithya*).

c. **Vikalp:** The fanciful words without any substance or reality.

- d. **Nidra:** The absence of any content in the mind is like sleep.
 e. **Smrtayah:** The memory of an experienced painful object.

PSYCHOSOMATIC DISORDERS

KUNDALINI SYNDROME

The Causes of Miseries - Klesha

“*Agyan-gyan-anhkar-asmita-raga-dves-abhinivesah klesha*”

Ignorance, knowledge, ego, self-esteem, attraction, hatred, and the fear of death (*abhinivesah*), lead to miseries (*klesha*).

The Suppression of Modifications of the Mind

“*Abhyasa-vairagyabhyam tan-nirodhah.*”

The suppression of modifications of the mind is achieved by the persistent practice and detachment from the sense objects etc.

The Causes of Distractions of the Mind

“*Vyadhi-styana-samsaya-pramad-alasya-avirati-bhranti-darsan-alabdha-bhumi-katvanavasthitatvani citta-viksepas te 'antarayah.*”

Disease, fear, instability, doubt, carelessness, laziness, hankering after objects, delusion, distorted view, non-achievement of stage of Yoga, instability, stage of elements, mind and distractions of life etc.

The Symptoms of Distractions of the Mind

“*Duhkha-daur-manasy-angame-jayatva-svasa-prasvasa-viksepa-saha-bhuvah.*”

Suffering, delusion of mind, shaking of body, inspiration and expiration difficulties etc are the symptoms of distractions of mind.

The Essence:

The causes, symptoms and signs of physical and mental suffering are mostly the distractions of the sympathetic nervous system. They represent psycho-somatic disorders (Kundalini Syndrome).

PRE REQUISITES

“Sraddha-virya-smrti-samadhi-prajna-purvaka itaresam.”

To be in tune with the Soul, the Yogi must have faith, ojas energy, the memory, absolute wisdom and the equanimity of the mind. These are the remedies for most causes of distractions of the mind.

The Removal of Obstacles of the Mind

“Tat-pratisedhartham eka-tattvabhyasah.”

To remove these obstacles, constant practice of one element or one truth should be conscientiously and regularly followed in real life.

“Maitri-karuna-mudit-opeksanam-sukha-duhkha-punya-apunya-visayanam bhava-natas citta-prasadanam.”

Friendship, compassion, joy, indifference towards comfort, misery, virtues, vices and objects etc lead to the clarification of the mind and the fruitful rewards. **Note:** Only an empty mind without any content and fluctuation can decode or decipher the secrets of Nature.

SAMADHI

Even State of the Mind - Basic Requisite for Yoga

1. **Savitarka Samadhi** - Right Contemplation

“Tatra sabd-artha-jnana-vikalpaih sam-kirna-savitarka.”

When the real meaning and every aspect of the knowledge of words, through arguments and counter arguments on the given subject or object of meditation and contemplation are known and lead to the equanimity of the mind, it is called Savitarka Samadhi.

2. **Nirvitarka Samadhi** - Without Contemplation

“Smrti-parisuddhau svarupa-sunyevartha-matra-nirbhasa nirvitarka.”

When, after clarification of memory, the own form and the meaning of the essence of subject/object alone is known and when there is no need for further reasoning to know the real meaning of the subject or object, it is called Nirvitarka Samadhi.

Savicara Samadhi - With Right Thoughts

Nirvicara Samadhi - Without Thoughts

“Etayaiva savicara nirvicara ca suksma-visaya vyakhyata.”

Samadhi with right thoughts is called Savicara Samadhi.

Samadhi without any thought is called Nirvicara Samadhi.

Linga Samadhi - With Object.

Alinga Samadhi - Without Object.

“Suksma-visaya-tvam calinga-parya-vasanam”.

When the subtle subject-object form (*Linga*) is extended beyond the last stage of qualities, it is the formless or Alinga Samadhi.

Sabija Samadhi - With Seed.

“Ta eva sabijah samadhih.”

The even state of the mind with the seed of the subject-object only is called the Sabija Samadhi.

8. **Enlightenment** - The Light of Soul.

“Nirvicara-vais-aradye adhyatma-prasadah.”

After attaining the utmost purity of thoughtless Samadhi, the fruit of the Light of Soul (*Atma*) is gained.

Prajna/Pragyan - Beyond Knowledge - Absolute Wisdom.

“Rtambhara tatra prajna.”

After attaining the Light of *Atma* there is emergence of the absolute wisdom of the Ultimate Truth and Reality.

10. **Nirbija Samadhi** - Seedless Samadhi

“Tasyapi nirodhe sarva-nirodhan nirbijah samadhih.”

When every fluctuation of the mind is completely suppressed it leads to the ultimate state of the Seedless Nirbija Samadhi.

Essence:

There are 10 distinct stages of Samadhi.

There are 22 verses in Samadhi Pada.

SADHANA PADA

Kriya Yoga - The Preparatory Practices.

“Tapah-svadhyā-ishvara-pranidhanani-kriya-yogah”

Austerity, Self-study and Self-surrender to Ishvara form the three active and preparatory practices of Kriya Yoga.

The Relief From Miseries:

“Samadhi-bhavan-arthah klesa-tanukaran-arthas ca”.

Kriya-Yoga eliminates misereries and brings forth the feeling and understanding of the real meaning of Samadhi.

“Drastr-drsyayoh samyogo heya-hetuh”.

The union of Soul with the object-subject has to be avoided.

“Drasta drstimatrah suddho 'pi pratyayanupasyah”.

The real Seer is pure Soul consciousness.

Whatever is seen is seen through the senses and the mind, the instruments of Soul.

“Tadartha eva drsyayatma”.

It means that the real Seer (*drsya*) is always (*eva*) Atma.

“Tasya saptadha pranta-bhumih prajna”

The Soul reveals the secrets of seven (*sapta*) levels of the earth.

The wisdom of the seven levels of consciousness is found in many verses of the ancient Indian wisdom.

“Yoganganusthanad asuddhi-ksaye jnana-diptir a viveka-khyateh”.

With Kriya Yoga, the purification of impurities, the right knowledge, enlightenment and the power of discrimination etc arise.

TEN STAGES OF AKHAND YOGA

Yama-niyam-asana-pranayam-pratyahara-dharana-dhyana-samadhi-chakrallyoga-antaryoga dahangani!

The ten stages of Akhand Yoga are as follows.

YAMAH - The Five Virtues.

“*Satya-Ahimsa-Asteya-Brahmacharya-Aparigraha - yamah.*” A. **Satya - Truth**

Truth is the first and the highest virtue.

It is beyond duality and is associated with the highest center of the consciousness, the Sahasarara Chakra.

Maha Narayani Upanishad,

“Truthfulness is excellent”.

A Yogi, who unites with the Ultimate Soul with Truth, never falls.

Mundaka Upanishad,

“*Satya-mev-Jayate*, Truth always wins”.

“*Sat-Chit-Anand*, truth, conscious mind leads to eternal Bliss”.

“*Sat-Vigyanam-Anantam*”.

Truthful and Scientific Knowledge is never ending and Infinite.

“*Satyam-Shivam-Sundram*, Truthful Person is good-looking”.

“*Aum-Tat-Sat*, Aum is that Truth”.

B. **Ahimsa - Non-Violence**

The different types of violence are the physical, the emotional, the verbal, the mental, curses and the psychic.

The violence of every nature, committed, deferred or abetted, is to be condemned by everyone seeking the Universal Consciousness.

The violence can be easily eliminated by everyone with the single resolution of the non-violence.

The Benefit:

The violence does not take place in the presence of a non violent person. The outer Aura of genuine non-violent Souls is really big.

C. **Asteya - Honesty**

Asteya means the honesty, non-manipulation, non-stealing, non-covetousness and non-misappropriationness etc.

●ShivBhushan Sharma

The Benefit:

Every kind of Gem (*Siddhi*) is showered on a genuine Yogi.

The Essence: There is a price tag for everything and we have to pay for it directly or indirectly. Accept only the rewards of genuine work.

D. Brahmacharya - Incontinence

This is the most confusing concept. The energy of reproductive and other hormones (*Ojas*) is essential for health and spiritual evolution. *Ojas* should be converted into *Tejas* for illumination. The disuse and misuse of *Ojas* and *Tejas* lead to the decline of consciousness.

The proper understanding and optimum use of *Ojas* and *Tejas* is an asset for Akhand Yoga and the spiritual evolution.

The real meaning of *Brahmacharya* is Building of Great (*Brahma*) Character (*Achar*), Courage, Image and Divine Vision and Mission.

E. Apigraha - Non-Acquisitiveness

Apigraha means non-acquiring.

It does not mean that we should refrain from the material wealth.

We are “The Custodians of Wealth”.

If we use the wealth for the benefit of every living being without any attachment, we are bound to rise in consciousness and evolve.

The Essence:

Five Yamahs are the five virtues to be strictly followed.

The awakening of the indwelling Soul without the five Yamahs may not be any help on the path of spiritual evolution.

NIYAM - The Five Disciplines

“*Saucha-samtosha-tapah-svadhyaya-eshwarapranidhanani-niyamah.*”

A. Saucha - Purity

Sauch means pure and clean. The human body is the abode of Soul. The body has to be pure for the Soul to rise and guide it from within. From physical and mental purity arises the unflinching qualities of;

detachment, discrimination, control of senses, cheerful mind and one-pointed concentration of the mind.

B. Samtosh - Contentment

“Samtoshad anuttamah sukha-labhah”

Every one gets what he/she works for and deserves.

A content mind, which does not hanker after unnecessary objects, gets everything, which include eternal comforts and happiness etc.

C. Tapah - Austerity

“Kayendriya-siddhir asuddhi-ksayat tapasah.”

The destruction of impurities of body through spiritual heat (*tapah*) leads to perfection of senses, sense organs, mind and the body.

D. Svadhya - Self study

“Svadyayad ista-devata-samprayogah”.

It means that the study of self leads to the knowledge of elements, molecules, compounds, cells, tissues and the organs of the body.

E. Ishvarapranidhana - Self-Surrender to the God

“Samadhi-siddhir Ishvara-pranidhanat”.

Self-surrender to Ishvara (Living God) leads to eternal Samadhi.

The Conclusion:

Without the strong foundation of Yamahs and Niyamas, the temple of God cannot be created within the human body.

It is the central message of Upanishads, Tantra and Akhand Yoga.

ASANA - Physical Postures and Exercises

“Sthira-sukha asanam”.

“Prayatna-saithilyananta-samapattibhyam”.

Essence: With full effort a stable, steady and comfortable posture is gained for concentration, contemplation, Samadhi and Yoga.

“Tato dvamdvanabhighatah”.

Exercises should be gradual, slow, steady, contra lateral and

●ShivBhushan Sharma

synchronized with full awareness of the body, breath and mind. The prime focus should be on the back bone (vertebral column). For detailed knowledge please study Hatha Yoga Pradipika.

PRANAYAMAH - Breathing Modulation

“Tasmin sati svasa-prasvasayor gati-vicchedah pranayamah”.

After the steady comfortable physical exercises and postures, the movement of inspiration and expiration should be made tranquil. It means that after Yogasanas, the aspirant should balance the flow of air through both the nostrils before practicing breathing techniques.

Maitri Upanishad (II.2),

He, who, without stopping the respiration, goes upwards, moving about yet unmoving, dispels darkness, is the Self.

The serene one, who, rising up out of this body, reaches the highest light, and appears with his own form, is the Self.

That is immortal, the fearless, Brahman. It means that with stilling of breath and mind we can see the Self. It also means that the retention of breath is not advised by Maitri Upanishad.

“Tatah ksiyate prakasavaranam”.

From that the covering of light is dissolved. It means that with the cessation of breath flow, the causal body (*karana-sarira*) of Atma is dissolved and the Light of Soul (*Prakash*) shines.

“Dharanasa ca योगयात मनसाह”.

By stilling the breath, the mind becomes fit for concentration.

It means that the practice of Pranayamah prepares the mind for the practice of Dharana, Dhyana and Samadhi. The Body-breath-mind forms the three sides of a single functional triangle.

TEN VITAL PRANAS

Panch - Pranas - 5

Prana-Prana: It is associated with the exchange of vital gases.

Samana-Prana: It is associated with the digestive system.

Apana-Prana: It is associated with the process of excretion.

Udana-Prana: It is associated with the rising of consciousness.

Vyana-Prana: It is associated with physical health and the Aura.

Sub-Pranas - 5

Naga: It is associated with belching, eructation and hiccups.

Krikara: It is associated with hunger and thirst.

Kurma: It is associated with the opening of eyes.

Devadatta: It is associated with the process of yawning.

Dhananjaya: It is associated with the decomposition of body.

Yogic Breathing Exercises

Breath-balancing, Lion-breathing, Bhastrika, Kapalabhati, Ujaye, Sheetal and the circulation of Prana.

Note: These should be learnt from the experts only and should be practiced with utmost care and awareness.

PRATYAHARA - Withdrawal of Senses.

“Sva-visayasamprayoge citta-svarupanukara ivendriyanam pratyaharah.”

Pratyahara means the withdrawal of mind from the senses.

“Tatah parama vasyatendriyanam”.

After that, the great mastery over the senses is achieved.

Note: A Yogi should first withdraw senses from the external world and preserve the energy for Dharana-Dhyana-Samadhi.

DHARANA - Creating Shield.

“Desa-bandhas cittasya dharana”.

Confining the territory of mind and mental energy is Dharana.

Note: Most authors, who have translated Patanjali Yogasutras portray that the concentration for a short time is called Dharana and focus for a long time is called Dhyana. It is far from the real Truth.

Maharishi Patanjali was an accomplished Yogi. He would not have used two stages for a single concept of concentration. Let us reflect.

Now, let us contemplate on different stages of Yoga.

●ShivBhushan Sharma

Yamas are the five mandatory moral-ethical virtues.

Niyamas are the five fundamental disciplines of Yogic life.

Asanas strengthen the physical body for meditation etc.

Pranayama integrates the body with breath and mind.

Pratyahara, the withdrawal of senses from the external world, increases the mental energy of the senses and the mind.

Dharana: The next logical stage is to create a shield around the mental energy so that it is not get dissipated and lost.

Desa means country or territory. *Bandhas* means shield. *Cittasya* means the mental energy.

Essence: In reality, Dharana means, “Creating a shield or boundary around the area of mental energy of the mind” after the withdrawal of senses and the mind from the external world.

DHYANA - Uninterrupted Concentration.

“Tatra pratyayaikatanata dhyanam”.

After that the uninterrupted flow of the contents of the mind towards the subject-object of concentration is called Dhyana. Dhyana means the concentration, contemplation and meditation. The prime objective of Dhyana is to contemplate on every aspect of the subject and object of focus, concentration and meditation. Dhyana is the foundation of *Gyanyog*, the Yoga of Knowledge.

With Dhyana, we can cognize the secrets of the universe and Nature.

SAMADHI - Even State of Mind.

Tad evarthanamatra-nirbhasam svarupe-sunyam iva samadhih.

Pure awareness of the essence of mind and consciousness and not its own form (the subject and object of the mind) is called Samadhi.

After cognition and realization of the subject/object with meditation, Yogi should let go beyond the mind and be in tune with the pure Soul.

Essence: Only a perfect experience, cognition and understanding of every subject and object of meditation can lead to Samadhi.

SAMAYAM

Complete Integration of Dharana-Dhyana-Samadhi.

“Trayam ekatra samyamah”.

The three, Dharana, Dhyana and Samadhi, put together are called the integration (*Samyamah*).

Dharana creates a shield around the mental energy.

Dhyana increases the mental energy with concentration.

Samadhi uses the mental energy to go beyond the mind.

“Taj-jayat prajnalokah”.

By learning and mastering Samayam, the light of *Pragyan* (*Prajna*), the enlightenment and the absolute wisdom of Nature is gained fully.

“Tasya bhumisv viniyogah”.

The foundation of Pragyan lies in Vini-Yoga, the natural Yoga. It means that the Science of Yoga is innate (*Sahaj*), simple (*Sadharan*), transparent (*Pratyaksh*) and natural (*Viniyogah*).

“Trayam antarangam purvebhyah”.

The three, Dharana-Dhyana-Samadhi, are the internal parts in relation to the preceding five external and preparatory parts.

“Tat api bahirangam nirbijasya”.

Even Sabija Samadhi with seed is an external part in relation to the seedless Nirbija Samadhi.

It means that the Nirbija Samadhi is an ultimate state of Yoga.

TWO STATES OF SAMADHI

Samprajnata Samadhi: Sam means even.

Prajnata means wisdom. In Samprajnata Samadhi there is complete union of thought, reasoning, reflection, contemplation, cognition and absolute wisdom of every subject and object of meditation.

●ShivBhushan Sharma

Asamprajnata Samadhi:

The remnant impression left in the mind on dropping the contents of the mind after Samprajnata Samadhi is Asamprajnata Samadhi.

The Essence: The difference between with the full and empty state.

10 STAGES OF SAMADHI

Dharana-Dhyana-Samadhi: Integration of three stages.

Savitarka Samprajnata: Cognition with reasoning.

Nirvitarka Samprajnata: Cognition without reasoning.

Asamprajnata: Emptiness (Sunya) and transition.

Savichara Samprajnata: Cognition with right thought.

Nirvichara Samprajnata: Cognition without right thought.

Asamprajnata: Annihilation (Nirodhah) of even thoughts.

Sabija Samadhi: Samadhi with right seed.

Nirbija Samadhi: The seedless Samadhi.

Pragyan (Prajna): Direct cognition and resultant wisdom.

CHAKRAL-YOGA

THE ACTIVATION AND INTEGRATION

There are ten major centers of human consciousness (Chakras).

They are associated with both, the autonomic nervous system and the endocrine system.

The neuro-endocrine reflexes are the most powerful reflexes, which take care of almost every external or internal assault on the physical, emotional, mental and blissful bodies.

The Chakras are associated with Ida, Pingala and Sushumna Nadis, the three major channels.

Integration of Chakras and Nadis and the ascension of Kundalini through external channels are called **Chakral-Yoga**.

Important Characteristics of Chakras

Chakras have negative and positive traits.

The elimination of negative traits, purification and reinforcement with the positive traits form the foundation of Chakral-Yoga.

Yamahs and Niyamas play an extremely vital role in Akhand Yoga.

Kundalini Awakening, Activation and Ascension

The premature, accidental and/or forced awakening, activation and ascension of Kundalini lead to psychosomatic disorders.

Hence, it should be fully discouraged.

Conscientious practice of all the first eight stages of Yoga leading up to the even state of mind and Samadhi is absolutely essential for an experience of Chakral-Yoga.

Three Knots or Granthis

Brahm-Granthi between Muladhar Chakra and Brahm-Nadi.

Vishnu-Granthi at Anahata Chakra.

Rudra-Granthi at Agyan (Ajna) Chakra.

Note: These three natural physical and psychic knots should be fully eliminated before starting the practice of Antar-Yoga.

ANTAR-YOGA

THE INTERNALIZATION

The tenth and last stage of Antar-Yoga is absolutely important for the cognition of the Universal Consciousness of God and the Nature.

The right knowledge of Sushumna-Nadi, Vahini-Nadi, Surya-Nadi, Chandra-Nadi and Brahm-Nadi can facilitate the ultimate process of Antar-Yoga.

During this stage, the Antaratma enters the central canal of the spinal cord after breaking Brahma-Granthi.

It then rises to its abode, the ventricles of the brain, called *Guhayam*, the cave or the *Vaikuntha*.

The Essence:

Then *Antaratma* integrates every aspect of the body.

●ShivBhushan Sharma

It prepares the body-breath-mind-consciousness-Soul complex for the ultimate union with the Universal Consciousness of God.

A person, who is in always tune with the Universal Consciousness, and functions with pure intentions and love for every being of the universe, can get the following benefits of Akhand Yoga.

The Benefit:

“Visesa-darsina atma-bhava-bhavana-vinivrttih”.

After the special vision of *Atma* and *Paramatma*, the essence and feelings of the fluctuating mind cease and the mind become stable and natural self.

It leads to equanimity of the mind and consciousness.

“Tada hi viveka-nimnam kaivalya-pragbharam cittam”.

Then, the mind is inclined towards discrimination (*viveka*) and gravitates (*pragbharam*) towards **Kaivalya**, the ultimate state.

“Prasamkhyane 'py akusidasya sarvatha viveka-khyater dharmameghah-samadhih”.

A Yogi, who always maintains a constant state of detachment towards the highest form of enlightenment and exercises the highest discrimination, attains **Dharma-Megha-Samadhi**.

Dharma means the righteousness.

Megha means the rain or shower.

Samadhi means the even state of the mind.

The verse means the perfected and enlightened Yogi is protected by Truth, Dharma and Samadhi.

“Tatah klesa-karma-nivrttih”.

Then, there is complete freedom from every form of suffering and the constraints, restraints and actions of the existential life.

“Tada sarvavarana-malapetasya jnana-syanantyaj jneyam alpam”.

With the removal of every covering of defects and knowledge

known through the mind is minute compared to the infinite wisdom obtained during Dharma-Megha-Samadhi state.

“Tatha krtarthanam parinama-krama-samaptir gunanam”.

By fulfilling the objectives and resultant actions, the process of change of three attributes (*Tri-Gunas*) comes to an end.

Then the ultimate attribute free quality, Nirgun arises.

“Purusartha-sunyanam gunanam prati-prasavah kaivalyam svarupe-pratistha va citi-sakter iti”.

When the basic objectives of the person become nil.

The three qualities (*Tri-Gunas*) are balanced, the ultimate state is called Kaivalyam.

In this state, the own pure power of consciousness of the person is established.

This is the final desirable goal.

ACKNOWLEDGMENT

I acknowledge that the aphorisms (sutras) of Patanjali Yogasutras are highly classified and scientific pieces of enumeration. Without the guidance of these sutras and the verses of Sat-Chakra-Nirupana, I may not have succeeded in enumerating the ten stages of Akhand Yoga. The verses from the two books provided the right theoretical foundation knowledge for the safe and practical journey of Yoga.

THE CONCLUDING STATEMENT

I am convinced that *Antaratma* has to enter the inner most part of the human body, the ventricles of brain, integrates the hundred trillion cells of the body with the nervous system and then awakens and activates the three outer layers of neo-cortex of brain.

The outer three layers of neo-cortex of human brain act as antenna to Akash-Kosh, the Treasure House of the Universal Consciousness.

Every aspect of ten stages is an integral part of Akhand Yoga. It has to be adhered to completely and can not be compromised.

Follow Blindly and Be Enlightened

According to one of the most important verses of Bhagwat Gita, “Leave your dharma, leave your knowledge and come to Me with empty hands, I shall give you Liberation (*Moksham*)”.

This verse propagates utmost blind faith in the Almighty Brahman.

In the name of logical, rational and analytic science, the majority of people state, “You show me the results first, only then I shall follow”.

I have no problem with the above statement but I believe that every new research starts with a belief, faith, hypothesis or a blind idea.

I am convinced that the subject of spiritual science is very different.

Here, we need to start with utmost faith and let Soul guide from inside. In reality, most of us are not sure of the “Voice of Silence”.

They invariably confuse it with the fluctuating senses and the mind.

How to recognize the “Voice of Silence of Soul”?

Let us explore and find the acceptable way.

When ever, we are confronted by an ethical or moral issue, we start listening two opposing voices from within.

One takes us towards the Truth, which is eternal and problem free.

The second gives us fluctuating and fleeting ideas, which can lead to many issues, which include health, wealth, name, fame and legal etc.

The first voice always lead to a feeling of Joy and Bliss within.

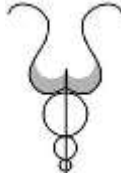
The second voice invariably leads to pain and suffering etc.

THE CONCLUSION

To make optimum use of Akhand Yoga, we need to follow the basic principles of Yamahs and Niyamas. They form the Foundation and without the strong foundation, the building of Yoga can be built.

FOLLOW THE VOICE OF SILENCE BLINDLY

FIFTEEN



THE SCIENTIFIC EVALUATION

The present Intellectual Era belongs to the Scientific Community.

Every human being wants an evidence based scientific knowledge and time tested wisdom, which can be easily replicated and applied for the benefit of every living being of the world. This is the Truth.

The prime objective of this chapter is to devise a research design, which can prove and establish that Akhand Yoga is a pure science subject and it can be used to achieve every objective of life and also to distinguish a true accomplished Yogi from other human beings.

Now, let us first review the available literature on Yoga.

EVOLUTION OF YOGA RESEARCH

The word, Yoga was conceived by the ancient Indian Sages almost ten thousands years ago and was promoted with the help of Vedas.

Subsequently, many forms of Yoga were conceived and promoted by the Indian Sages in the form of Upanishads and other scriptures.

The first classification of Yoga is found in Gita and Brahm-Sutra.

Later, Tantra brought forward the concept of Kundalini Yoga.

The first comprehensive and scientific document, Yogasutra, was compiled by Maharishi Patanjali about three thousand years ago.

It is still the best classified document on “The Science of Yoga”.

The modern research on Yoga started eighty years ago but we have failed to prove that Yoga is a reliable pure science subject. Why?

THE REASONS OF FAILURE

The focus of research is on the short term studies.

The focus is on effects of Yogasanas, Pranayama and Meditation on the biophysical and psychological parameters of the body only.

Yoga, the even state of the mind, can not be attained without the regular practice of eight stages of Patanjali Yogasutras.

It takes years of conscientious efforts and regular practice of Yoga to stop the fluctuations of the senses, mind and the consciousness etc.

SIMPLE SOLUTION

We should focus on the longitudinal research designs.

The ten stages of Akhand Yoga can produce consistent results.

Now, let us study and comprehend the real meaning of Yoga.

THE ULTIMATE OBJECTIVE OF YOGA

Yoga is derived from Sanskrit root, *yuj*, which means to unite, bind, integrate, yoke, union and communion etc.

Vedanta: The union of human body with the God is Yoga.

The above concept is abstract and difficult to understand. Why?

The word, the God, is highly abstract and beyond the human mind.

A Question: Is the concept of God a matter of an unflinching faith?

No. It is beyond the faith. It is the Ultimate Truth.

It is rooted in the human body, brain, mind, consciousness and Soul.

For example, when we are in dire distress, we unconsciously look towards the universe/cosmos/heaven/God. Why?

Because, every part of the cosmos is in tune with each other and there is perfect harmony and equanimity.

We are all seeking that eternal state of equanimity within the self and in the external world. This is our Inner Call.

The cosmos is a great source of wisdom, help and guidance.
 According to Tantra, the human Soul has come from the God.
 Is our Soul seeking the God, the Universal Consciousness?
 Let us explore the wisdom of the above spiritual statements.
 Let us first find the real meaning of the Universal Consciousness.

THE UNIVERSAL CONSCIOUSNESS

The modern science is constantly trying to understand the universe.
 In the process, it has formulated theories to explain the real forces
 responsible for the perfect harmony and stability of the universe.
 One of the theories is the **Unified Field Theory**.

According to this theory, the following forces are fully
 responsible for the equanimity and harmony of the universe.

Gravitational force: It attracts matter towards the planets.

Electromagnetic force: This force is spread throughout the
 universe and is composed of two complimentary forces, the
 electric force and the magnetic force.

Weak nuclear force: This force is responsible for electrons
 being fixed around the nucleus.

Strong nuclear force: This force is responsible for protons
 and neutrons being bound together.

The Essence:

I believe that the cumulative consciousness of the Unified Field
 forms the integrating force of the Universal Consciousness of God.
 Now, let us explore an established concept, which resembles the
 fundamental nature of the Universal Consciousness.

SCHUMANN RESONANCE FIELD

It is fully established that everything in the universe is vibrating
 and producing strong vibrations all the time.

●ShivBhushan Sharma

These vibrations are quite dangerous for biological life on the earth. Fortunately between the crust of earth and the ionosphere layer there is a cavity, which protects us from the ill effects of the vibrations of the universe. This cavity is called Schumann Resonance Field.

AKASH-KOSH

According to ancient Indian Sages, the records of the past, present and future events of Nature are stored in Akash-Kosh, the Treasure House of Akash, the Cosmic Space.

I am certain that the design, with which the most beautiful objects of the universe are designed and created, is recorded in Akash-Kosh.

Now, let us review some of the questions raised earlier.

Where is the Akash-Kosh located?

Is it located in the ionosphere layer of earth's atmosphere?

Is Schumann Resonance Field the reflection of Akash-Kosh?

Let us explore these questions and find the right answers.

Schumann Resonance Field and Alpha Rhythm

According to Schumann, the vibrations of the cavity between the earth and the outer atmosphere are between 3 and 60 Hertz.

The peak rhythm is from 7.83 to 12 Hertz, the alpha rhythm.

The ionosphere is full of dynamic ions and the ions can store data, information, knowledge, wisdom and the Truth.

A NEW HYPOTHESIS

I am fully convinced that the core vibrations of the ionosphere layer, called Akash-Kosh, are between 8 and 9 Hertz.

A person, who can reproduce coherent alpha rhythm of 8-9 Hertz throughout the brain after opening the eyes, can be in tune with the core and can tap the hidden secrets of the universe and Nature.

Let us explore this hypothesis further. I am also convinced that with Akhand Yoga, we can easily control the senses, mind and

consciousness and reproduce abundance of the predominant coherent alpha rhythm of 8-9 Hertz throughout the brain with open eyes and be in tune with the ionosphere layer.

Now, let us comprehend the results (Parinamas) of state of Samadhi.

SAMADHI PARINAMAS - RESULTS

Patanjali Yogasutra talks of following 3 transformations in the brain.

Nirodhah Parinama - The Intervening Void.

“Vyutthana-nirodha-samskarayor”.

The stoppage of the fluctuations of the mind leaves behind an impression (in the brain).

“Abhibha-va-pradurbhavau”.

The impression of the mind on the brain is slowly permeated by the stoppage of the mind.

“Nirodha-ksana-cittan-vayo nirodha-parinamah”.

A short emptiness intervenes between an impression in the brain which is disappearing and the one which is taking its place.

“Tasya prasanta-vahita samskarat”.

Then, the flow of the mind becomes even and tranquil by repeated impressions on the brain.

Samadhi Parinama - Gradual Ascent and Descent.

“Sarvarthataikagratayoh ksayodayau cittasya Samadhi-parinamah”.

When meaning of the subject becomes one-pointed after dissolving the fluctuations of the mind, it is called Samadhi Parinama.

Ekagrata Parinama - Coherence.

“Tatah punah santoditau tulya pratyayau cittasya aikagrata parinamah!

●ShivBhushan Sharma

Then, when the tranquil mind which rises again is similar compared to the previous impression of the mind.

It means that the object of the tranquil mind which subsides is exactly similar to the object which subsequently rises in its place.

SAMYAM

“Parinama-traya-samyavad atitanagata-jnanam”.

By performing Samyam (Dharana-Dhyana-Samadhi) on the three Parinamas; Nirodhah, Samadhi and Ekagrata, the knowledge of the past, present and future events are easily known.

The verse indicates the prospects of presence of Akash-Kosh.

The Essence:

The above verses state that every impression of the mind leaves behind an impression in the brain of the person.

The impression left behind by the Nirodhah Parinama is almost empty or has the least amount of latent power.

The impression left behind by the Samadhi Parinama has an ascending and descending phase and the power is very high.

The shape produced by the mind resembles an elliptical shape.

The impressions left behind by the Ekagarta Parinama are almost identical and their power is consistent and coherent.

Since the mind is associated with the brain, it should leave behind an impression in the electrical activity of the brain.

The impact of the mind on the brain electrical activity has two phases, the ascending and the descending phases.

The power or energy level is least at both the ends.

There is coherence in the brain activity.

The shape produced resembles the well formed alpha spindle. To comprehend the real beauty of the Samadhi Parinamas, let us now study and understand the electrical activity of the brain.

BRAIN ELECTRICAL ACTIVITY

The cumulated sum of the brain electrical activity produces four recognizable waves or rhythms; delta (0-4 Hertz), theta (4-8 Hertz), alpha (8-12 Hertz) and beta (12-30 Hertz).

ALPHA RHYTHM - ALPHA SPINDLE

According to the modern neurophysiology and neurosciences,

The alpha rhythm is the reflection of the calm and quiet mind.

It is the reflection of good blood perfusion of the brain.

The mean alpha rhythm of normal adults is 10.5 Hertz.

The alpha rhythm is used to evaluate the functions of brain.

The two ends of the alpha spindle have minimum power.

The central part of the alpha spindle has the maximum power.

The shape of almost every alpha spindle is identical.

According to the author, beta rhythm is reflection of fluctuating mind and the sympathetic nervous system.

Alpha rhythm is reflection of autonomic nervous system.

Theta rhythm is reflection of cranial parasympathetic system.

The Essence:

The coherent alpha spindles are the most beautiful forms.

The central part of the alpha spindle has the maximum power.

Both the ends of the alpha spindle have the least power.

Now, let us correlate alpha spindle with three Parinamas.

Nirodhah Parinama: The extreme ends of the alpha spindles with minimum power/amplitude reflect the Nirodhah Parinama.

Samadhi Parinama: The gradual ascend and descend of the alpha spindle reflects the Samadhi Parinama.

Ekagrata Parinama: The almost identical alpha spindles reflect an integrated and coherent state of the Ekagrata Parinama.

●ShivBhushan Sharma

Amazing! How did Maharishi Patanjali cognize the precise nature of the mental energy of the mind during various states of Samadhi?

Divank Ratio: The shape, length and width, duration and amplitude of the well formed alpha spindles are in the Divyank Ratio.

POWER OF ALPHA SPINDLES

The sum of power of hundred trillion cells projected to the brain is responsible for the brain electrical activity and the alpha spindles. Now, let us study the different forms of energies or powers (*Shaktis*) produced in the physical body during the practice of Akhand Yoga.

Anna-Shakti: The human body is created from nutrients or food. It is sustained by food and after death, it dissolves into food. The energy generated by the hundred trillion cells of the human body during different metabolic cycles is called Anna-Shakti.

Prana-Shakti: The energy produced by breathing and life-breath is called Prana-Shakti. It surrounds and shields the physical body.

Chit-Shakti: The energy of emotions and the concrete mind of Manomaya-kosha is Chit-Shakti. It is seen around the chest.

Buddhi-Shakti: The energy produced by intellect and the intelligent mind of Vigyanmaya-kosha is called Buddhi-Shakti. It is seen around the head and neck.

Mahat-Shakti: The energy produced by intuition and intuitive knowledge is seen as a brilliant Lamp (*Dipak*) on top of the head.

Ojas-Shakti: This energy produced by reproductive hormones is very vital and absolutely essential for perfect and integrated health.

Chakral-Shakti: Chakras are associated with the autonomic nervous system and the endocrine organs. Chakras rotate both ways to produce Chakral-Shakti and they strengthen the neuro-endocrine reflexes for perfect and integrated health and mental well being.

Tejas-Shakti: This transmuted energy of Ojas into higher form of energy for enlightenment and illumination is called Tejas-Shakti.

Chetna-Shakti: The energy produced by the Soul consciousness helps in integration of every aspect of the body.

Akhand-Shakti: The sum of the energy generated by different forms of energies is projected to the Neo-cortex of the brain. It can be easily recorded with the help of an electroencephalogram (EEG).

A NEW RESEARCH DESIGN

January, 1991, I was initiated into Kundalini-Yoga. It was amazing experience and has transformed my life for good. During initiation, I became aware of the presence of Kundalini, Chakras and Nadis in the physical body for the first time in life. Hence, I decided to study the theory and practice of Yoga, Chakras, Nadis and Tantra etc.

In 1993, I decided to study and find the scientific and objective basis of the subjective sensations of Kundalini Yoga. Since, I had a genuine experience to rely on I could devise a new research design.

To start with, I studied every vital biophysical parameter of my body but significant change was noticed only in the electrical activity of my brain as recorded with the help of electroencephalogram (EEG).

ELECTROENCEPHALOGRAM

It is graphic representation of the sum of electrical activity of the brain and the influence the sub-cortical structures have upon the cerebral cortex of brain. It is a record of the rhythmic fluctuations in the electrical potentials in the brain and is recorded from the scalp.

Power Spectrum Analysis

It is not easy to detect the subtle changes produced by Yoga with the analog EEG. Hence, I had to do Power Spectrum Analysis of EEGs.

NORMAL BRAIN WAVES

The delta waves (0-4 Hz) are seen during the deep sleep.

The theta waves (4- 8 Hz) are seen during the transition phase from the state of wakefulness to the sleep.

The alpha waves (8-12 Hz) are seen in the occipital region of brain when the eyes are closed and the mind is at rest.

The beta waves (12-30 Hz) are seen when eyes are open.

NORMAL EEG

The predominant alpha rhythm is observed in the occipital area of the brain, when eyes of the person are closed and the mind is at rest.

The rest of brain does not exhibit any predominant alpha rhythm.

When the person starts thinking, the alpha rhythm is replaced by the beta rhythm.

When the person opens the eyes alpha rhythm is fully replaced by the beta rhythm.

This phenomenon is called desynchronization or the alpha block.

It is considered the normal physiological response/phenomenon.

MY EEG FINDINGS

1993: EEG showed a normal pattern.

The alpha rhythm disappeared after opening the eyes.

1995: I could reproduce alpha rhythm after opening the eyes. The lag period of reappearance of alpha rhythm was less than a minute. The mean alpha rhythm was 10 Hertz.

1998: The lag period reduced gradually and finally became nil. This was an unusual finding.

A COMPARATIVE STUDY

In 1995, I recorded EEG of many willing control subjects, who were doing regular Yoga practices or doing meditation for many years. Somehow, no subject could reproduce alpha rhythm with open eyes. Hence, I decided to follow Single Subject Study Design.

A MODIFIED RESEARCH DESIGN

By keeping in mind the last three stages of Yogasutras, Dharana, Dhyana and Samadhi, I designed a new method of EEG recording.

1. With eyes closed for 2 minutes and then eyes open for 2 minutes.

EEG was recorded under identical conditions.

EEG was recorded in one sitting.

EEG was recorded in the following order.

Dharana: At rest and without any concentration.

Dhyana: With concentration on the pelvic region.

Samadhi: With concentration beyond the top of head.

SINGLE CASE STUDY

Now, let me reproduce some of the important findings of my EEGs.

Power Spectrum Analysis of EEG showed better results during the state of Samadhi compared to the states of Dharana and Dhyana.

Hence, subsequent EEGs were taken during the state of Samadhi.

1998: The alpha rhythm got reduced to 9.43 Hertz and there was slight improvement in the amplitude of the alpha rhythm.

2001: There was further increase in the amplitude and power and slight reduction in the rhythm. The coherence was much better too.

2018: The Salient Features - Art-Design-10 - With Focus on Head.

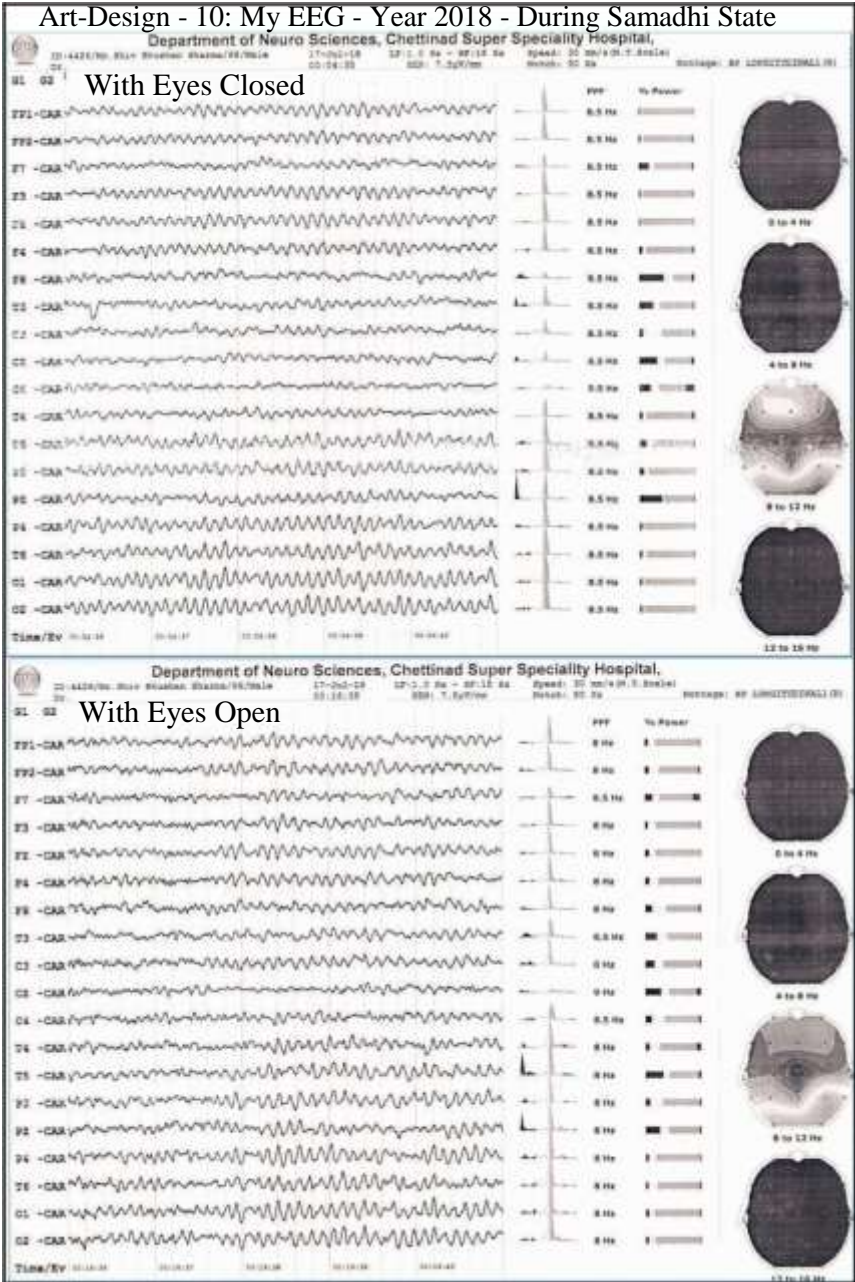
Alpha rhythm (8.5 Hertz) in most EEG leads with closed eyes.

Alpha rhythm (8 Hertz) in most EEG leads with open eyes.

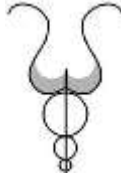
Higher amplitude of alpha rhythm with open eyes.

Uniform and better coherence of alpha rhythm with open eyes.

Higher amplitude and coherent alpha rhythm prove that Akhand Yoga increases cerebral blood supply, synchronizes brain electrical activity, improves concentration, comprehension and cognition etc.



SIXTEEN



SARANSH

Sara means the complete. *Ansh* means the part. Saransh means the complete essence, conclusion, abstract, summary or synopsis. The concluding part is an important limb of every scientific document.

The most important statement of Akhand Sutra and the fundamental objective of every living human being is the perfect health, wealth, wisdom, happiness, enlightenment, Self-Realization and Liberation.

In reality, we fail to achieve even the basic disease free health. Why?

The search for an amicable answer is the main objective of this book.

Akhand Sutra redefines the real meaning of perfect and integrated human health and brings forth the exact description of perfect adult human anatomy, physiology, biochemistry and psychology etc.

The emphasis is on finding the real causes, symptoms, signs and solution of the most common psychosomatic disorders etc.

It also explores the causes of most common preventable diseases and finds the dependable solutions from the ancient Indian wisdom.

Akhand Sutra makes an earnest attempt to explain the same in the light of our understanding of the modern sciences and languages.

An attempt has also been made to decode the hidden mysteries of the Vedas, Upanishads, Tantra and other ancient Indian scriptures.

●ShivBhushan Sharma

It is said that we, the human beings, are microcosmic representation of macrocosmic universe or the Solar system. An attempt has been made to correlate the anatomy of our Solar system with the gross and subtle aspects of adult human anatomy and physiology.

Now, let us represent the explored and revealed wisdom in simple language and lay strong foundation for genuine Spiritual Science.

Let us start from the beginning of time and creation.

THE UNIVERSAL CONSCIOUSNESS

The cumulative consciousness of the entire universe is known as the Universal Consciousness of God, *Paramatma* or *Brahman*.

The God is one united entity and everything has come from it.

It is also responsible for the perfect harmony of the entire universe.

FORMLESS - NIRGUN - NIRAKAR

According to the ancient Indian wisdom, Brahman, the Ultimate God, is formless (*Nirakar*) and free from attributes (*Nirgun*).

It is not easy to cognize, perceive and conceive the formless God. It is also not possible to perceive the form of manifestations of Nature.

WITH FORM - SAKAR

Hence, the ancient Indian Sages conceived the visible (*sakar*) forms of various manifestations of the Universal Consciousness of God.

They laid the foundation of Science of Yantra with the visible forms.

THE SCIENCE OF SYMBOLS

The visible forms of natural symbols/pictures can be easily studied, understood and appreciated as they do not need visualization.

Now, let us start from the beginning of time and space.

THE PRIMORDIAL SPACE

According to the Vedas, everything in the Primordial Space (*Akash*) was in a state of death, darkness and inertia before the creation. I am convinced that the Space was filled with the isomers of Neon²¹.

THE CREATION OF UNIVERSE

The Neon²¹ isomers collided to form the Neon²² isomers. This led to the formation of Brilliant Effulgence, the Primal Energy. Everything in the universe is the manifestation of the Primal Energy.

THE FIRST MANIFESTATION

The first manifestation of the Primal Energy is *Akash-Bhuta*.

PANCH-BHUTAS

With time, *Akash-Bhuta* lost heat and got converted into *Vayu* (Air), *Agni* (Fire), *Jal* (*Apa*-Water) and *Prithvi* (Earth) elements.

TEN MANIFESTATIONS OF NATURE

Every formed object of the Nature is made of the five basic elements and each element is made of two inseparable counterparts, the gross and subtle. As a result, there are ten built-in manifestations of Nature.

There are ten primary, ten secondary, and ten tertiary elements too. They play a vital role in the creation, development and maturation of the objects of Nature and for maintenance of homeostasis and health.

THE HUMAN CONSCIOUSNESS

We, the human beings, are the greatest creation of Nature.

We have evolved from the minerals through the plants and animals.

The imprint of every aspect of Nature is present within the human body, the microcosmic representation of the macrocosmic universe.

We can easily cognize every aspect of Nature and decode the secrets of universe directly without the help of any instrument.

THE DIVINE DESIGN OF NATURE

It is said that the most beautiful objects of the universe are designed with the **Golden Ratio**, the most economical algorithm of Nature.

It is represented with never ending confusing digits 1:1.618033978..

●ShivBhushan Sharma

Simple Doubt and Critical Question?

The universe may be unlimited but every object of Nature is limited. Hence, there should be limited digits of the Golden Ratio. The core theme of Akhand Sutra is to find the exact value of the Golden Ratio.

DIVYANK RATIO

This confusion is resolved with the Divyank Ratio of 1:1.618034.

THE CREATIVE DESIGN OF NATURE

It is established that every created object of Nature is designed with three critical stages of creation, development and maturation.

Important Lacuna: The exact value of three stages of formation of the Golden Ratio is not known. This issue was raised and resolved.

TRINITY

The ancient Indian Sages, who were in tune with the Nature, were aware of the exact value of three stages of formation of objects.

I am fully convinced that the ancient Indian Sages presented these stages in the form of Brahma, Vishnu and Shiva; Trimurti or Trinity.

Brahma, the Generator, represents the first stage of creation.

Vishnu, the Operator, represents the ten stages of development.

Shiva, the Dissolver, represents the third stage of maturation.

Collectively, they represent the **Generator, Operator and Dissolver.**

THE VEDIC MATHEMATICS

“Language of God” and “Mother of Sciences” is mathematics.

The perfect and most beautiful objects of Nature are designed and created with the precision of mathematics and the laws of geometry.

The search for the ultimate creative design of Nature has been the pursuit of almost every ancient Indian Sage and other Prophets.

For reasons known only to the ancient Indian Sages, the three parts of the ultimate design of Nature were presented in the form of stories.

I am glad that I was able to decode the stories, find the exact value of three stages and then conceive Divyank, the Divine Constant.

DIVYANK

Divyank, The Divine Constant, represents the three critical stages; the creation, development and maturation of the most beautiful and perfect objects of Nature.

Divyank is represented as $(22/21)^{10.34419} = 1.618034$.

The value of Brahma (22/21), Vishnu (10) and Shiva (0.34419).

An Amazing Proof: Formation of Red Blood Cells.

Let us enumerate and understand this process of formation of RBCs.

The size of circular pluripotent stem cell is 21 microns.

It grows to 22 microns during the first stage of creation.

There are 10 stages of development.

Last stage of maturation leads to formation of biconcave shape.

The process takes place in 21 days.

The volume of pluripotent cells and biconcave cells are 900 cubic microns and 90 cubic microns respectively.

Is one tenth reduction in size a mystery?

DIVYANK RATIO

According to the ancient Indian Sages, everything in Nature is made of two complimentary and inseparable counterparts,

Shakta: The source of everything. It is 38.1966% (38.2%).

Shakti: The dynamic force. It is 61.8034% (61.8%).

$61.8034 + 38.1966 = 100.00$.

Interestingly, $(61.8034)^2 = 3819.66\dots$

This unique concept is not seen in the known Golden Ratio.

The Major Examples:

1. **Spiral Galaxy** of Milky Way is its macroscopic form.

●ShivBhushan Sharma

Whirlpool shape is its microscopic representation.

Double Helix shape is its infinitesimal representation.

These prove the ancient saying, “**As above as below**”.

THE NEED FOR DIVYANK RATIO

Unfortunately, the medical system is promoting a wide range of values of various biophysical parameters. This is highly confusing.

We need a single most reliable value for every vital biophysical parameter of perfect human anatomy, physiology and biochemistry.

With Divyank Ratio, we can easily calculate a single most reliable perfect value of every vital parameter of the adult human body.

THE REAL APPLICATION

If any person, who can attain and maintain the perfect value of all the ten vital variables of homeostasis for life, the person can curtail the usual ageing process, prevent the most common diseases and make optimum of all the fundamental objectives and potentials of life.

DIVYANK SEQUENCE

38.1966, 61.8034 and 100.00... It scores over Fibonacci sequence.

Example: Human Menstrual Cycle

It is the most beautiful example of Divyank sequence.

I am surprised that its real beauty is not seen in our medical books.

I am glad that I was led to set right the deficiencies of this cycle.

ANCIENT INDIAN WISDOM

The foundation pillars of the ancient Indian wisdom are,

Science of Symbols (Yantras): “Sri Akhand”, which adorns the front page, is semi-animate symbol of the Universal Consciousness.

Almost every aspect of Nature can be explained with “Sri Akhand”.

Akhand Sutra also unfolds pure inanimate symbols for better clarity.

Akhand Sutra reveals only 10% of the wisdom of “Sri Akhand”. The remaining 90% has been deliberately withheld for next generation to unfold the other hidden secrets of Nature from “Sri Akhand”.

Science of Tantra: Akhand Sutra shows and proves that there are ten levels of consciousness (Chakras) and not seven as described by Sat-Chakra-Nirupana and other related books of Tantra.

An earnest attempt was also made to correlate the knowledge of ten Chakras with ten planets of our Solar system, ten major endocrine glands and ten chief ganglia of the autonomic nervous system.

The wisdom of Akhand Sutra can lead to a much better research.

Science of Mantras: The book explains the beauty of mantras with the help of Gayatri Mantra and its new version, Akhand Gayatri Mantra, with the inclusion of 10 Maha Vyahatis and 22 AUM^o. I am certain that this wisdom can also be experimented for better results.

OUR SOLAR SYSTEM

Akhand Sutra shows and proves that the subtle structure of our Solar system and the perfect adult body is ironically identical.

The Unified Field: It consists of the gravitational force, the electro-magnetic force, the weak nuclear force and the strong nuclear forces.

It is responsible for the integrity and harmony of our Solar system.

SCHUMANN RESONANCE FIELD

It is said that the events of past, present and future are recorded in *Akash-Kosh*. According to Akhand Sutra, the ionosphere layer of earth represents Schumann resonance field and Akash-Kosh.

UNIQUE HUMAN CONSCIOUSNESS

The cumulative and integrated consciousness of the hundred trillion cells of human body can be called *Jivatma*.

THE INDWELLING HUMAN SOUL

The Soul originates from the Sun and is made of the Helium atoms. It enters through anterior fontanel, the top of head (*Brahmandhra*). The ideal time of entry of Soul is twenty second week of pregnancy. A Soul can develop an ideal body for the fruitful journey of new life. *Antaratma* is an immortal bridge between *Jivatma* and *Paramatma*.

THE CAUSAL BODY

It has the passwords of previous lives and can be used to recognize the achievements of the previous births and build on it for future.

TRAIT PARA VIDYA

The union of “*Jivatama-Antaratma-Paramatma*” is the core theme of Trait Para Vidya. It can lead to Self-Realization and *Moksha*.

THE SCIENCE OF AKHAND YOGA

Akhand Sutra talks of ten stages of Akhand Yoga. I am certain that with the conscientious and regular practice of Yoga, we can easily attain the perfect physical, emotional, mental, social, religious and spiritual aspects of health and can make optimum use of human life.

THE SCIENTIFIC EVALUATION

I am certain that the original and the new research design of Akhand Yoga will be great value for any person, who wants to do scientific evaluation of the progress of his/her spiritual evolution.

THE NEUROPHYSIOLOGY RESEARCH

Although tremendous amount of research has been done in the field of Neurophysiology but I am the opinion that the real functions of the three outer layers of neo-cortex have not explored and realized.

With the regular practice of Akhand Yoga, the three outer layers of neo-cortex can be activated and integrated with rest of the nervous system and can be used to download wisdom from the Akash-Kosh.

It is unfortunate that our medical research institutes and authorities do not encourage medical research without the references. It is also true that even the international journals do not accept the original research articles without the due references etc. This should change.

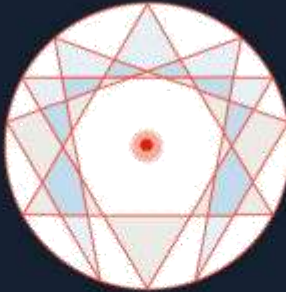
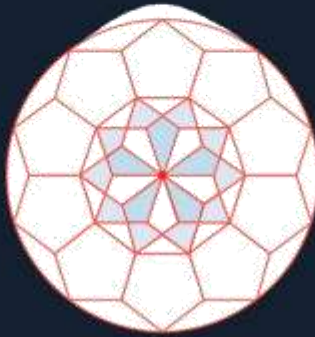
As a result of above constraints, the wisdom presented in this book does not find any place in any of the journals or reference books etc.

A HUMBLE REQUEST

For genuine research on spiritual science subject, please approach Akhand Vidyashram for assistance and guidance etc.

Divyank

$$(22/21)^{10.34419} = 1.618034$$



Divyank Ratio

61.8034%+38.1966%