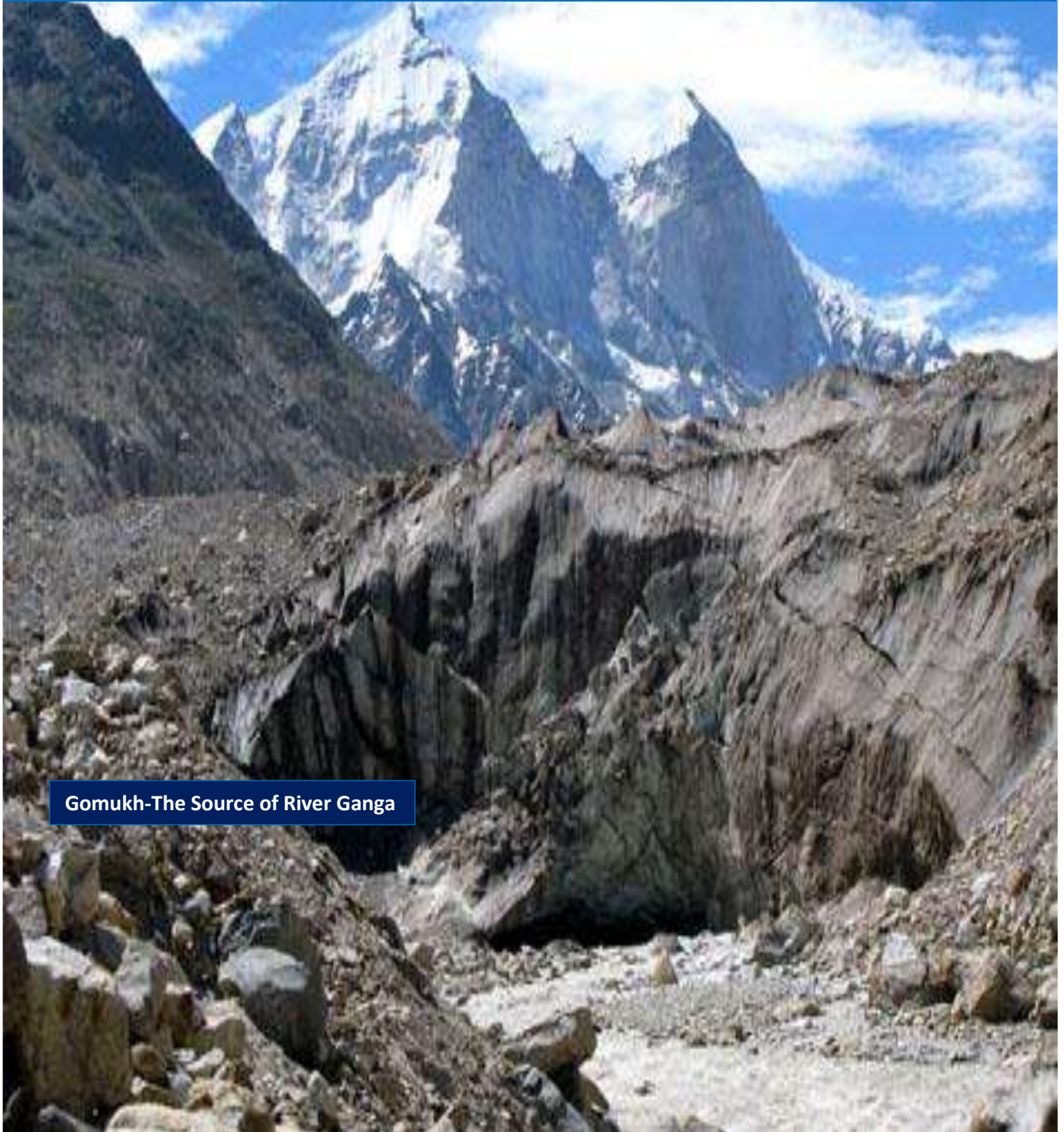


Life Stream

ANNUAL ISSUE- 2010



Gomukh-The Source of River Ganga

Those who dwell among the beauties and mysteries of the earth are never alone or weary of life—Rachel Carson



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If we could see the miracle of a single flower clearly, our whole world would change---
Buddha

WE PRESENT



Today we live in a world increasingly driven by individualism, consumerism, and greed. Ascendancy of technology has further exacerbated it. People unabashedly and unthinkingly compete with each other in acquiring material possessions and getting instant gratification. Such actions result in a feeling of acute deprivation, dissatisfaction and alienation. Self-interest completely subjugates public interest without a thought for the consequences. The sense of community spirit and humanity is perceived to be old-fashioned and incompatible with the private interest. Moreover, people are getting increasingly disconnected from nature. The exaltation of child-like awe and innocence about life and nature are getting lost. The higher purpose of life, which defines and distinguishes mankind from the rest, is nowhere to be seen.

Our conviction is that the stream of life ought to flow gently and compassionately with a reverence for all beings- sentient and non-sentient, recognizing the universal spirit that permeates all.

Our endeavour, accordingly, is to encourage you to pause and contemplate on the higher and nobler elements of existence that make life worth living.

We have compiled information on the subjects from the electronic and print media, reports, books, speeches and other sources so as to make it available all at one place, for your perusal. Your views and suggestions would be welcome for making Life Stream a perennial source of enlightenment and enjoyment.

We present you the first issue of Life Stream.

Life Stream Team

Nature uses only the longest threads to weave her patterns, so that each small piece of her fabric reveals the organisation of the entire tapestry----- Richard Feynman.

NATURE : LEARNING FROM NATURE

-Satish Kumar



Shri Satish Kumar is the editor of 'Resurgence', published from England. He has an unusual life-story. He left his home at the age of nine to join a group of wandering Jain monks and at the age of eighteen decided he could achieve more back in this world. He joined the 'Bhoodan Movement' under Acharya Vinoba Bhave, and, thereafter, worked for spreading Gandhiji's message of peace. Later, inspired by the example of Bertrand Russell, the renowned mathematician and philosopher, he embarked on an 8,000- mile peace pilgrimage, carrying no money and depending on the kindness and hospitality of strangers. He walked from India to America via Moscow, London and Paris, four of world's nuclear powers spreading the message of peace. In 1973, he settled in UK and took up the editorship of Resurgence, a position he has held ever since. During this time he has been the guiding spirit behind a number of now internationally respected ecological and educational ventures, including the Schumacher College, England, where he is still a visiting Fellow.

In 2001 he received an honorary doctorate in Literature from the University of Lancaster and in the same year was presented with the Jamnal Bajaj International award for Promoting Gandhian Values abroad. A 50-minute documentary on him, 'Earth Pilgrim' was presented by the BBC in 2008 as a part of its Natural World Series, which was

watched by over 3.8 million viewers. His autobiography 'No Destination', first published by Green Books in 1978 sold over 50,000 copies. He is also the author of -'You Are Therefore I Am', 'A Declaration of Independence', and, 'The Buddha and The Terrorist'.

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When human beings consider themselves to be the masters of the earth and have dominion over it they are more likely to abuse it and exploit it. Much of our conventional education is learning "about" nature. We study nature as something separate from us and as an object which is useful to us. We seem to consider ourselves either masters of nature or, if more enlightened, then stewards of nature. We study nature because we wish to know our servant or our protectorate in order to make best use of nature for a prolonged period.

When human beings consider themselves to be the masters of the earth and have dominion over it they are more likely to abuse it and exploit it. Therefore, the environmentalists take a step in the right direction by considering themselves as stewards of the earth. Stewardship entails responsibility. In such a view of the environment people are more likely to conserve and care. However, both these views are anthropocentric. According to Arne Naess human beings are a part and parcel of the natural world as any other species. No doubt human beings have their own outstanding faculties and qualities.





Naturally Beautiful

They have their own highly developed senses, intelligence, consciousness and ability to communicate. But then other species too have their own particular, specific and unique qualities, which humans do not possess. Each and every species upon this earth, humans and other than humans, contribute in their own specific way, for the totality of existence, which evolves, unfolds and maintains its continuity. Therefore, all life, human and non-human, irrespective of their particular qualification, have intrinsic value. As all humans are born equal, irrespective of their class, status, education and wealth and as they have the right to life irrespective of their usefulness to society; in the same way all species have intrinsic value irrespective of their usefulness to humankind. Arnie Naess calls it “deep ecology”.

From this perspective human beings are not masters or stewards of nature, but they are friends of nature. The word friendship can be used in two ways; firstly, we consider those whom we know, as friends because we are acquainted with them, we go out with them, we spend some time together and support each other in time of need. But then there is another meaning of friendship; when we feel unconditional empathy and offer our affection without expecting anything in return, then we are in a state of friendship. In this second meaning of the word friendship is a sense of mutuality and reciprocity. When we are able to identify ourselves with the other, without any sense of superiority or inferiority, then we create a condition of friendship. That was the vision of the founders of the environmental organisation Friends of the Earth.

Friendship is the purest and noblest kind of relationship. In Buddhist language it is called metta. The Buddha throughout his life advocated his disciples to practice metta, i.e. friendship, with all sentient beings. The Buddha himself was called Maitreya which means Friend; not master, not prophet, not guru, just Friend. Friendship is the foundation upon which Buddhism is built. Friendship underpins the notion of non-violence and compassion. We will never harm or exploit or damage or denigrate someone who is our friend. We will receive the gifts given to us by our friends with thanks and gratitude. We will return our own gifts to our friends. Everything we receive from nature is a gift; whether it is food, water, sunshine or anything else; everything is a gift. This is the symbiotic relationship which equips us with humility, wonder and reverence. Nature is not there to be plundered or exploited rather it is there to be cherished and celebrated. I call it “Reverential Ecology”.

The moment we accept that all life has intrinsic value, we begin to experience a profound feeling of reverence towards all life and begin to experience the beauty, the integrity, the exuberance, the generosity and the economy which holds the entire web of life together. In place of controlling, owning or possessing, we begin to participate in the process of the intricately woven web of life. We are no longer masters or stewards of the earth rather we are participants and co-creators of the earth. Of course, humans have their special place in the scheme of the universe, but so do the flowers, fruit, fungi, worms, butterflies, oceans, mountains and all micro and macro organisms.



A lake view (Sikkim)

When we view existence with such an expanded consciousness, then it is possible to open our eyes and learn “from” nature rather than learn “about” nature. Nature is the greatest teacher. The Buddha learnt the reality of interdependence from a tree. While sitting under a tree and observing how everything was dependent upon everything else he was enlightened. Fruit came from flower, flower from branches, branches and leaves grow from the trunk, the trunk from the soil, the soil is nourished by the rain, the rain is held by the clouds, clouds are formed out of the sea, the sea receives the waters of the rivers and is held by the earth, the sea nourishes the earth and earth the sea and so it goes on.

The Buddha’s realisation of interdependence was perhaps the beginning of deep ecology and reverential ecology.

We don’t need to go very far to learn from nature. Wherever we look with open eyes and a generous heart we will find nature as teacher. Look at the honeybee; we can learn the lessons of transformation from the humble bee. It takes a little nectar from here, a little nectar from there, but never too much from anywhere. Never ever has a flower complained that a honeybee has taken too much nectar away? In fact the flowers are grateful to the bee for helping them to pollinate. When the bee has taken nectar it does not waste; it transforms the nectar into sweet, delicious, healing honey. If human beings learnt to design their systems on the lines of the honeybee there would be no depletion, no waste and no pollution.

Science writer, Janine Benyus, calls it “bio- mimicry”, having observed the beauty, resilience and intricacy of spider silk and seashells she says, “Why don’t we humans observe nature and design our technology and tools like nature does?” **If we follow the patterns of nature there would be neither shortage, nor scarcity of anything, rather there will always be abundance.**

How wonderful it is to observe that the nature designed seed has so much potential. From a tiny apple pip comes out the seedling; from the seedling the plant, from the plant the tree, from the tree the apple fruit with many more pips within to produce many more trees for many more years.

The leaves of the tree fall on the ground decompose and become the nutrient to the tree and to the soil. Abundance is all around. Nature knows no scarcity, because it knows no waste. Such deep observation and deep experience is essential in order to get deep insights in the workings of nature. Here great science, great art and great spirituality converge. Scientists, artists, poets and mystics have found deep inspiration from close identification with nature. Nature identification is possible only when we are able to let go of our separation. To learn from nature we need to be in nature.



A tea garden in Siliguri, West Bengal (Photos by Vishakh)

Forget not that the earth delights to feel your bare feet and the wing longs to play with your hair---Khalil Gibran

INCREDIBLE INDIA IS ORGANIC INDIA

-Dr.Vandana Shiva



Dr.Vandana Shiva is a well-known social and environmental activist and eco-feminist. She has contributed immensely to diverse fields, including intellectual property rights, biodiversity, biotechnology, bioethics, and genetic engineering, both intellectually and through campaigns. Her crusade against bio- piracy and endo-sulfane is well known. She has fought for the rights of the farmers and for changes in the practice and paradigm of agriculture and food. She has also been advocating organic farming and sustainable agriculture. She is the Managing Trustee of Navdanya which leads India in Bio-diversity and Organic farming movements.

India is incredible because it is organic. Organic means whole, integrated, based on interrelationships. Organic characterizes us as a civilization.

Our indigenous world view is organic, our science, our philosophy is organic. It is therefore little wonder that the modern organic movement has spread

worldwide from Indian soil. In 1905, the British sent Albert Howard to India to “improve” Indian agriculture which meant the introduction of chemicals. When Howard came to Pusa in 1905 as the Imperial Economic Botanist to the Government of India, he found that crops grown by cultivators in the neighbourhood of Pusa were free of pests and needed no insecticides and fungicides.

‘I decided that I could not do better than watch the operations of these peasants and acquire their traditional knowledge as rapidly as possible. For the time being, therefore, I regarded them as my professors of agriculture. Another group of instructors were obviously the insects and fungi themselves. The methods of the cultivators, if followed, would result in crops practically free from disease, the insects and fungi would be useful for pointing out unsuitable varieties and methods of farming inappropriate to the locality “At the end of five years of tuition under his new ‘professors’ – the peasants and pests – Howard had learnt: ‘How to grow healthy crops, practically free from disease, without the slightest help from mycologists, entomologists, bacteriologists, agricultural chemists, statisticians, clearing-houses of information, artificial manures, spraying machines, insecticides, fungicides, germicides, and all the other expensive paraphernalia of the modern experiment station’. Howard could teach the world sustainable farming, because he had the humility to learn it first from practicing peasants and nature herself.

Fresh

Guava



(Freestock image site.com)

I have made an odd discovery. Every time I talk to savant I feel quite sure that happiness is no longer a possibility, yet when I talk with my gardener, I am convinced of the opposite---Bertrand Russell.

Howard believed that the cultivators of the East had a lot to teach the Western experts about disease and pest control and to get Western reductionism out of the vicious and violent circle of ‘discovering more and more new pests and devising more and more poison sprays to destroy them. As Howard noted half a century ago, ‘Nature has never found it necessary to design the equivalent of the spraying machine and the poison spray for the control of insect and fungus pests. It is true that all kinds of diseases are to be found here and there among the plants and animals of the forest, but these never assume large proportions. The principle followed is that plants and animals can very well protect themselves even when such things as parasites are to be found in their midst. Nature’s rule in these matters is to live and let live’.



Pineapples in Tripura

Howard’s classic, “The Agricultural Testament” is based on his learning from the bio-diverse organic systems of Indian agriculture. Contemporary India has experimented with the Green Revolutions and Genetic Engineering. We now face multiple challenges – climate chaos, an agrarian crisis and a serious hunger and malnutrition crisis. And it is our organic heritage that offers solutions to the multiple crises. As I have analysed in my book “Soil not Oil”, 40% of green-house gas emissions that cause climate instability are contributed by industrialized globalized agriculture. Organic agriculture contributes to both mitigation and adaptation to climate change. Every step in building a living agriculture sustained by a living soil is a step towards both mitigating and adapting to climate



Sabji Bazar

Over the past 20 years, I have built Navdanya, India’s biodiversity and organic farming movement. **We are increasingly realizing that there is a convergence between objectives of conservation of biodiversity, reduction of climate change impact and alleviation of poverty.** Bio-diverse, local, organic systems produce more food and higher farm incomes while they also reduce water use and risks of crop failure due to climate change. Increasing the biodiversity of farming systems can reduce vulnerability to drought. Millets, which are far more nutritious than rice and wheat, use only 200-300 mm water, compared to 2500 mm needed for Green Revolution rice farming. India could grow four times more food using millets. However, the global trade is pushing agriculture to GMO monocultures of corn, soya, canola and cotton, worsening climate vulnerability.

Organic Grapes

www.fotosearch.com



All things that come out into being and grow are earth and water---Xenophanes.

Biodiversity offers resilience to recover from climate disasters. After the Orissa Super Cyclone of 1998, and the Tsunami of 2004, Navdanya distributed seeds of saline resistant rice varieties as “Seeds of Hope” to rejuvenate agriculture in lands rendered saline by the sea. We are now creating seed banks of drought resistant, flood resistant and saline resistant seed varieties to respond to climate extremities. Climate chaos creates uncertainty. **Diversity offers a cushion against both climate extremes and climate uncertainty. We need to move from the myopic obsession with monocultures and centralization, to diversity and decentralization.**

Diversity and decentralization are the dual principles to build economies beyond oil and to deal with the climate vulnerability that is the residue of the age of oil. While reducing vulnerability and increasing resilience, bio-diverse organic farming also produces more food and higher incomes. As David Pimentel has pointed out: “Organic farming approaches for maize and beans in the U.S. not only use an average of 30% less fossil energy but also conserve more water in the soil, induce less erosion, maintain soil quality and conserve more biological resources than conventional farming does.” Organic farming is based on recycling of organic matter, unlike chemical agriculture, which is based on chemical fertilizers emitting nitrous oxides.



Organically grown Salad Leaves

Further, industrial agriculture leads to dispossession of small farmers and conversion of small farms to large holdings, which need mechanization, which also contributes to CO2 emissions. Small, bio-diverse, organic farms, especially in third World countries, are totally fossil fuel free. Energy for farming operations comes from animal energy. Soil fertility is built by feeding soil organisms by recycling organic matter. This reduces greenhouse gas emissions. Bio-diverse systems are also more resilient to draughts and floods because they have higher water holding capacity and hence contribute to adaption to climate change. Navdanya’s study on climate change and organic farming has indicated that organic farming increases carbon absorption by up to 55% and water holding capacity by 10% thus contributing to both mitigation and adaption to climate change.

Table showing fertility build ups in soils under arid agro-ecosystems due to organic farming*

Crops	% increase over control						
	Organic matter	Microbial activity	Microbial biomass	Water holding capacity	N	P	K
Pearl millet	28 - 55	4 - 25	2 - 10	2 - 3	0 - 2	0 - 1	8 - 15
Cluster bean	32 - 44	22 - 54	12 - 25	4 - 9	12 - 34	2 - 4	25 - 47
Moth bean	31 - 47	11 - 23	8 - 15	4 - 7	7 - 21	1 - 2	4 - 9
Mung bean	27 - 41	28 - 59	11 - 33	4 - 8	11 - 27	2 - 6	5 - 11

* Average of 10 farms. Results are consolidated from the farms, where four or more than four years of organic farming are practiced.

When I hear of the destruction of a species, I feel just as if all the works of some great writer has perished—Theodore Roosevelt



Organic Tea

The environmental advantages of small-scale bio-diverse organic farms are not a trade off with food security. Bio-diverse organic farms produce more food and higher incomes than industrial monocultures. Mitigating climate change, conserving biodiversity and increasing food security can thus go hand in hand. The conventional measures of productivity uses only labour as input, and ignore energy and resources inputs. This biased productivity pushes farmers off the land and replaces them with chemicals and machines, which in turn contribute to greenhouse gases and climate change.

Our study on “Biodiversity based organic farming: A new paradigm for Food Security and Food Safety” has established that small bio-diverse organic farms produce more food and provide higher incomes to farmers. There is an alternative. The alternative is lowering costs of production while increasing output. We have done this successfully on thousands of farmers and have created a fair, just **and sustainable economy. The epidemic of farmers’ suicides in India is concentrated in regions where chemical intensification has increased costs of production. Farmers have become dependent on non-renewable seeds and cash crop monocultures are facing a decline in prices and incomes due to globalization.** This is leading to debt and suicides. High costs of production are the most significant reason for rural indebtedness. High Cost Seeds + Chemicals = debt = suicides.

Further, output is focused on yield of single globally traded commodities. The focus on “yield” of individual commodities creates what I have called a “monoculture of

the mind”. The promotion of so-called “high yielding varieties” leads to the displacement of biodiversity. It also destroys the ecological functions of biodiversity. The loss of diverse outputs is never internalized in the one dimensional productivity calculus.

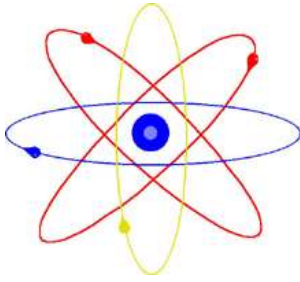
When biodiversity is taken into account, bio-diverse systems have higher output than monocultures. And organic farming is more beneficial for the farmers and the earth than chemical farming. When agro-forestry is included in farming systems, carbon absorption and carbon return increases dramatically. Neem and date palm increases the carbon density in the soil by 185 and 174 per cent respectively. In Navdanya, we have evolved a new indicator of “Health per Acre”, which measures the nutrition per acre, destroying the environment and killing our peasants.

Bio-diverse organic farming addresses all these problems of:

- Falling incomes for farmers
- Rising costs for consumers
- Increasing pollution of our food.
- Bio-diverse organic farming creates a debt free, suicide free, productive alternative to industrialized corporate agriculture.
- It leads to Increase in farm productivity and farm incomes, while lowering costs of production.
- Fair trade and just trade lowers costs to consumers.
- Pesticide and chemical free production and processing bring safe
- Healthy food to consumers.

We must protect the environment, farmers’ livelihoods and public health and people’s right to food. Incredible India can be an India without farmers’ suicides and without hunger and malnutrition. And the path to real prosperity and well-being is the time tested organic path.

SCIENCE:



THE NATURE OF REALITY (PART-1)

-Dr.K.P.Muralidharan

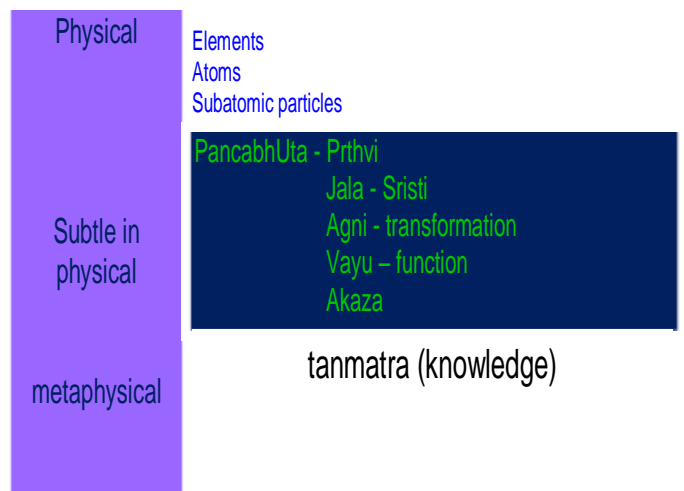
Here, in part-1 of his article, Dr. Muralidharan elucidates the nature of reality based on observations made by eminent scientists. He feels that modern science has inherent limitations in explaining reality and that one has to go much beyond modern science in truly perceiving it. Our Shastras provide such an alternative, with a holistic approach. Dr.Muralidharan is an erudite scholar and a revered teacher of Ayurveda.

Vagbhata, in his popular treatise Ashtanga Hridaya in the chapter “Dosha Bhedeeyam” gives the advice to vaidya “ With a mind devoid of afflictions, understand the doshas (vitiations in bodily functions) blowing out into infinity through permutations amongst themselves and with other associated factors in varying degrees”. Here mention of infinity or innumerability of factors to be considered and the state of mind to be acquired by the observer or vaidya are respectively indicative of the two underlying causes/factors on the subject- considering infinite or innumerable factors in reaching a specific inference, and, keeping a rather unattached but focussed mind to reach the fittest possibility, creating an impression of intuition. However, both these factors are considered irrelevant in modern Biology and Medicine. Let us first examine the modern science where the knowledge of a thing is obtained by its properties and functions. This, in fact, is the knowledge of its constituents. So, analytical knowledge basically depends upon reductionism. The English Biologist, Peter Medawar explains:--- Reductionism is the belief that a whole may be represented as a function [in the mathematical sense] of its constituent parts, the functions having to do with the spatial and temporal ordering of the parts and with the precise

way in which they interact.” --- Like any other matter/thing in the world, a biological unit also can be understood to have several planes of existence, viz. physical, chemical, atomic and so on. We do not have a biological science of atomic or subtler planes. [Homoeopathy claims and of course, exhibits some knowledge of interactions in atomic plane].

We have only general knowledge about the physical aspects; but at the same time have vast knowledge and capability in the form of a science regarding the chemical plane of a biological unit. Sciences of constituent subtle planes of a matter / thing [including the biological thing] are Physics and Mathematics. As we do not yet have profound or in some cases, clear knowledge about and mastery upon the entities like energy, function, transformation, force, life, mind and knowledge in terms of physics and mathematics, we cannot truly integrate physics and mathematics with the sciences of subtle planes- with biology. Because of this, **reductionism in biology is almost impractical and this branch of science remains rather like a collection of information than like a science with definite knowledge of the natural laws of its subjects.** That is why the above said “infinity” as well as “state of mind” are irrelevant in biological sciences, including medicine.

The Thing



I regard consciousness as fundamental and I regard matter as derivative from consciousness. We cannot get behind consciousness. Everything that we talk about, everything that we regard as existing postulates consciousness---Max Plank.



Sir Arthur Eddington Werner Heisenberg

In a system of knowledge where “the whole” is focused, the factors in consideration are innumerable [may be, unknowingly]. Here, gross, direct and specific inference is construed as wrong. Here we depend on a method to find the correct possibility and that gives the correct specific inference. Here, what matters is not whether “you can take the inference in your hands” but, whether the inference congruously fit in its own place in the given theory.

Remember Sir Arthur Eddington's famously paradoxical remark --- “Do not believe the results of experiments, until they are confirmed by theory”. --- As of now, modern biology and medicine do not fit in this category of knowledge system, as could be seen in the dilemma expressed in the renowned work, *La Medecin Retrouvee* [Medicine, Found Again] by Dr. Jean Elmiger : --- “Medical practitioners are the people who often confront the need to go beyond 'the physical / material'. But they never ask the scientists 'What is beyond this?' and the scientists are stagnant”. / “Life is one by essence and is indivisible. The student of medicine is trained in analysing and considering the fractions”. / “Chemist's medicine is insensitive”.

Further, let us examine the development of physics to understand how it fared in exploring the subtle realms. The book, “Evolution of Physics” was written by none other than Albert Einstein with his co-worker in research, Leopold Infeld. The very names of its chapters indicate the nature of development physics has acquired.

They are (1) The rise of the mechanical view (2) The decline of the mechanical view (3) Field, Relativity and (4) Quanta. These chapters proceed through the concepts – Matter / Matter and Energy / Kinetic theory of matter / Wave and Corpuscular theories / Field and Ether / Co-ordinate system / Ether and motion / Time – distance – relativity / Time – space – continuum / General relativity / Field and matter / Quanta / Probability waves.

Adding Heisenberg's 'Uncertainty Principle' with its 'Observer Effect', we clearly see that science, by entering deep realms of the physical phenomena, starts to become subtle, then abstract and in the end gnostic and philosophical and tends to point towards 'the metaphysical'.

For the early modern classical science, only what was perceived was true. Material truth was sure and certain. Knowledge would not have been there, if objects were not there. Space and time were not matter bound. They were attributed with the adjectives of the absolute; - immovable, filling the whole and continuous.

Energy was also another almost absolute entity; that being continuous. The sub-stratal atom was indestructible according to Democritus, solid according to Newton, and, indivisible by its definition. Considerable changes in the scientific notion about matter were caused by certain experiments passing electricity through gases. After a series of revolutionary findings, science started losing its classical nature with the idea that space is matter bound. [The only philosophy that proposed matter bound space before modern science is Kapila's Sankhya].

First, the Euclidean three dimensional spaces became elastic with Fresnel, mobile with Lorentz Transformation and then simply matter- bound by Einstein. Time also became matter bound in Minkowski four dimensional spaces. Nicola Tesla proved that emptiness is not so empty. Ilya Prigogine showed that time has different speeds. (My time is long when I am sad and is short when I am happy).

In the meantime, it has been mathematically proved that 'life', as of now, is out of reach for modern science. Prof. Richard L. Thompson, in his work 'Mechanistic and Non – Mechanistic Sciences', describes: --- “The laws of nature and the corresponding mathematical models of physical reality can all be described by a few simple equations and other mathematical expressions. This means that they possess low information content. In contrast, there is a good reason to suppose that the intricate and variegated forms of living organisms possess high information content.

It can be shown that the configurations of high information content cannot arise with substantial probabilities in models defined by mathematical expressions of low information content. It follows that 'life' could not rise by the action of natural laws of the kind considered in modern science”. A keen look into this statement will reveal that the real issue here is that we confront “infinity or innumerability” [aanantyam] of factors to be considered”. Prof. Thompson further observes: --- “The quantum field theory is plagued by a tendency for important calculations to diverge to infinity, when they should yield finite answers”.

Quantum physics further evolved to produce the Uncertainty Principle. Though Einstein, being critical of it, apprehended insufficiency of observation and insisted upon “Spinoza's God”; uncertainty was agreed upon as nothing other than the very nature of the nature itself. In fact, quantum physics is the natural precipitate of field and

relativity theories in the stride of physics towards the threshold of 'the metaphysical'.

The aspects significant here are (1) simultaneity of the opposites (2) mutual shift of spatial and temporal natures of the matter while its minuteness or subtlety tends to exceed the limit of its paradigm of existence (3) hypothetical reduction of matter into mind (4) hypothetical eternity of knowledge due to decreasing entropy in the electron. Simultaneity - and in fact, homogeneity also – [samavaya] of properties of matter is inherent in uncertainty theory.

The entity of black hole represents the reduction of the basic unit of the matter beyond the physical level. Compared with the unfolding of time in our universe, time in a black hole runs in the reverse. In a black hole space has a temporal nature and time has a spatial nature. This is the same with reduction of matter into mind. The Astronomer and physicist, Arthur Eddington who initiated research into the internal structure of stars wrote that --- “the matter of the world is the matter of the mind”. ---

The man of quantum physics, Max Plank says: --- “As a physicist, in other words as a man who throughout his life has served the rationale of sciences, namely the investigation of matter, I am surely free of the suspicion of being taken for a fanatic. So, I say this to you after my research into the atom



Dark energy-Wikipedia commons (Courtesy NASA)

I think the next century will be the century of complexity---Stephen W Hawking.

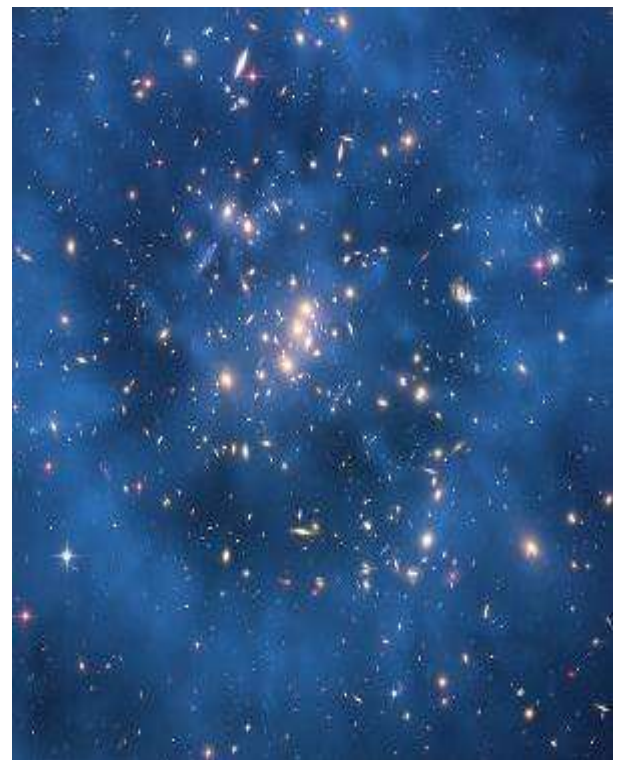
There is no matter as such! All matter originates and exist only through a force which sets the atomic particles oscillating and holds them together to form the minute solar system of the atom. But as there is neither an intelligent nor an infinite force in the whole universe, we must assume a conscious intelligent mind behind this force. This mind is the fundamental basis of all matter”. ---

Further, I quote the great physicist of Uncertainty Principle, Dr. Werner Heisenberg: --- “Kant had spoken of 'the thing in itself'. He was later often accused, even from the philosophical view point, of inconsistency in his concept of 'the thing in itself'. In the quantum theory this problem of the objective background of phenomena has arisen in a new and very surprising form”. --- Consequently he refers to Plato: - **“Therefore in Plato, at the lowest limit of the series of material structure, there is really no longer anything material but a mathematical form, if you like, an intellectual construct. The ultimate root from which the world can be uniformly understood is, in Plato, mathematical symmetry, the image, the idea “.**

Dr. Heisenberg proceeds - “Regardless of the ultimate decision it can even now be said that the final answer will be nearer to philosophical concepts expressed, for example, in the Thymaeus of Plato than to those of ancient materialists. Like the regular elementary bodies of Plato's philosophy, the elementary particles of modern physics are defined by the mathematical conditions of symmetry; they are not eternal and invariable and are therefore hardly what can be called 'real' in the true sense of the word.” Very much like reminding us the Sankhya concepts – Agni, Vayu, Akasha, Shabda, Tanmatra and Mahat tatva – Dr. Heisenberg further proceeds: --- “ Energy is not only the force that keeps the 'all' in continuous motion; it is also – as 'the Fire' in the philosophy of Heraclitus – the fundamental substance of which the world is made..... It becomes difficult to consider matter truly real....basically speaking, the same concept of 'truly real' has already been discredited by modern physics and the point of departure of materialistic philosophy

must be modified at the point... For modern natural science there is no longer in the beginning the material object but, form, mathematical symmetry.

And since mathematical structure is in the last analysis an intellectual content, we could say in the words of Goethe's Faust - In the beginning was the Word, the Logos ”.The Observer Effect in Uncertainty Principle revolutionised physics. Now, experiment is not only an object. It has no separate identity without the observer / his mind. According to the yet inaccessible theory of Electromagnetism and Gravitation proposed by Einstein, when a thing's time is changed, it happens to be in another space – time continuum. The continuum immediately subtler than that of Bhutas (the five elements- air, fire, space, earth and water) is that of thought according to Kapila. The modern supposition also is not another. There are competing psychological hypotheses in the field of the theory of electromagnetism and gravitation. Thus, the



Dark Matter -public domain- courtesy NASA

We see only what we know---Goethe



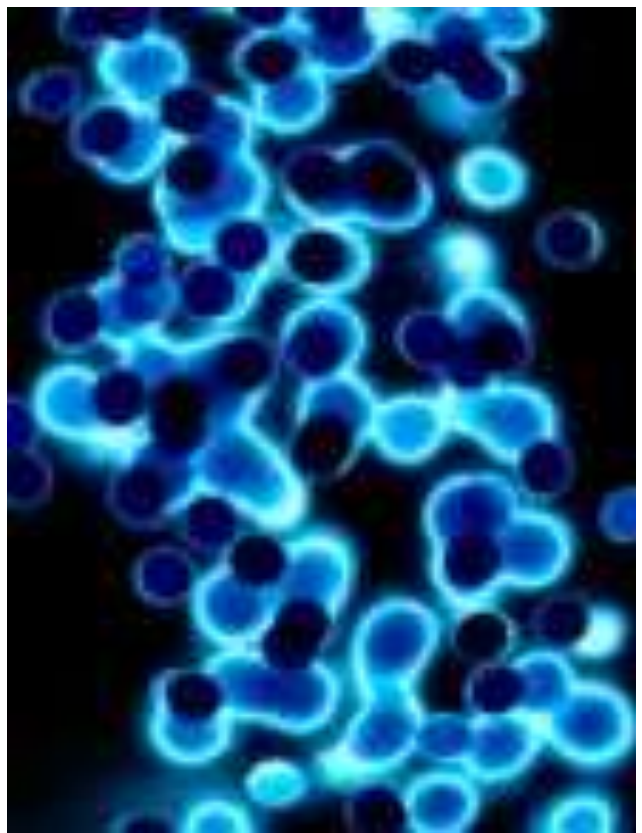
Abstract Fractal Background (Freestock image.co)

Earlier itself photons had been thought to be enigmatic. Later, electron by itself was explained to be capable of action, reflection, knowledge and love [L'esprit Cet Un Connu – the Unknown spirit – Jean E. Sharon; Mort, Voici ta de' faite – Death, Here Your Defeat]. Jean E. Sharon proved that the electron behaves like a black hole. In addition, from its enclosed space, it can connect with the enclosed spaces of other electrons. One more point to be considered here is that the processes within the electron continue with decreasing entropy, ie, with increasing order.

With this information let us listen to Rudolf Kippenhahn, Professor of Astronomy and Astrophysics at Göttingen: --- “The matter of the electron is immortal. Since it forgets nothing, took part and still takes part in past and present, knowledge and experience are also immortal”. --- Jean E.Sharon asserts: --- “This means that all matter, that took part in the building of a living or thinking structure and during the relatively short life time of that structure possessed the qualities of its consciousness, cannot simply return to its original diffuse minimal psyche after the death of that structure.

The information and the consciousness once acquired can never be lost. After the death of a complex organised structure, no power in the world can ever effect a retrograde development of the elementary particle's consciousness. Sir Arthur Eddington again observes: --- “A distinction is made between dead and living matter; a distinction which should not have really been made. Living or dead, it consists of atoms; protons and electrons”

A close up of molecules



(Freestock Image site.com)

PERSONALITIES : GANDHI AND TAGORE



Tagore-(7th May 1861 to 7th August 1941) with Mahatma Gandhi

Mahatma Gandhi and Rabindranath Tagore were two great men who discovered the soul of India. They both were contemporaries. While Gandhi was a karma yogi, Tagore was a visionary poet. They naturally had very different views on many issues including English education, non-cooperation and protest movements by burning foreign clothes, spinning Charkha etc. Nevertheless they shared a common vision of India.

In 2011 we celebrate the 150th birth anniversary of the great poet. Here we reprint a letter from him addressed to the Mahatma which was apparently written at that time when Gandhi had returned to India and was about to embark on his mission in leading India's Independence struggle.

Shanti Niketan,

April 12, 1919

Dear Mahatmaji,

Power in all its forms is irrational; - it is like the horse that drags the carriage blindfolded. The moral element in it is only represented in the man who drives the horse.

Passive resistance is a force which is not necessarily moral in itself; it can be used against truth as well as for it.

The danger inherent in all force grows stronger when it is likely to gain success, for then it becomes temptation.

I know your teaching is to fight against evil by the help of good. But such a fight is for heroes and not for men led by impulses of the moment. Evil on one side naturally begets evil on the other, injustice leading to violence and insult to vengefulness. Unfortunately, such a force has already been started, and either through panic or through wrath our authorities have shown us the claws, whose sure effect is to drive some of us into the secret path of resentment and others into utter demoralization. In this crisis you, as a great leader of men, have stood among us to proclaim your faith in the ideal which you know to be that of India, the ideal which is both against the cowardliness of hidden revenge and the cowed submissiveness of the terror-stricken. You have said, as Lord Buddha, has done in his time and for all the time to come, - 'Akkodhena jine kodham, asadhum sadhuna jine' - "Conquer anger by the power of non-anger and evil by power of good".

This power of good must prove its truth and strength by its fearlessness, by its refusal to accept any imposition which depends for its success upon its power to produce frightfulness, and, is not ashamed to use its machines of destruction to terrorize a population completely disarmed. We must know that moral conquest does not consist in success that failure does

Death is not extinguishing the light; it is only putting out the lamp because the dawn has come----Tagore

not deprive it of its dignity and worth. Those who believe in spiritual life know that to stand against wrong, which has overwhelming material power behind it is victory itself- it is the victory of the active faith in the ideal in the teeth of evident defeat.

I have always felt and said accordingly, that the great gift of freedom can never come to a people through charity. We must win it before we can own it. And India's opportunity for winning it will come to her when she can prove she is morally superior to the people who rule her by their right of conquest. She must willingly accept her penance of suffering- the suffering which is the crown of the great. Armed with her utter faith in the goodness, she must stand unabashed before the arrogance that scoffs at the power of spirit.

And you have come to your motherland in the time of her need to remind her of her mission, to lead her into the true path of conquest, to purge her present day politics of its feebleness which imagines that it has gained its purpose when it struts in the borrowed feathers of diplomatic dishonesty. This is why I pray most fervently that nothing tends to weaken our spiritual freedom may intrude into your marching line, that martyrdom for the cause of truth may never degenerate into fanaticism for mere verbal forms, descending into the self-deception that hides itself behind sacred names.



With these few words for an introduction allow me to offer the following as a poet's contribution to your noble work:

I) let me hold my head high in this faith that thou art our shelter, that all fear is mean distrust of these. Fear of man? But what man is there in this world, what king, King of kings, who is thy rival, who has hold of me for all time and in all time and in all truth?

What power is there in this world to rob me of my freedom? For do not thy arms reach the captive through the dungeon-walls, bringing unfettered release to the soul?

And must I cling to this body in fear if death, as a miser to his barren treasure/ has not this spirit of mine the eternal call to thy feast of everlasting life?

Let me know that all pain and death are shadows of the moment; that dark force which sweeps between me and thy truth is but the mist before the sunrise; that thou alone art mine forever and greater than all pride of strength that dares to mock my manhood with its menace.

II) Give me the supreme courage of love, this is my prayer- the courage to speak, to do, to suffer at thy will, to leave all things or be left alone. Give me the supreme faith of love, this is my prayer- the faith of life in death, of the victory in defeat, of the power hidden in the frailties of beauty, of the dignity of pain that accepts hurt, but disdains to return it.

Very Sincerely,

Sd/-

Rabindranath Tagore

To the mind that is still, the whole universe surrenders---Tagore

ECONOMICS: SMALL IS BEAUTIFUL

- S. Jalaja



F.F. Schumacher
(16-08- 1911 to 4 -9-77)

Smt. S. Jalaja is IAS officer of 1974 batch (Bihar Cadre) and retired as Secretary to Government of India.

Some years ago I bought a book called ‘Small is Beautiful’-a study of economics as if people mattered’ by E.F. Schumacher from Reader’s Corner, an old Book shop near the Dak Bungalow Chowk, Patna. I did not know at that time that Schumacher was an internationally influential thinker, statistician and a respected economist in Britain, who had worked with the likes of John Maynard Keynes and John Kenneth Galbraith.

In this wonderful little book he has described why he considers small is beautiful, looking at from the point of view of the wasteful economics practised in today’s world. When it was first published in the year 1973” there was no instant fanfare, no rave reviews for it .To begin with the sales were modest, but increased steadily, until the book and its enormously popular title were suddenly everywhere”. The Times Literary Supplement ranked it amongst the 100 most influential books published since the World War II. The New Republic wrote ‘His book is a most unusual economic treatise enormously broad in scope, pithily weaving together from Galbraith and Gandhi, capitalism and Buddhism, science and psychology’.

Next year his birth centenary will be celebrated. Schumacher was born in Bonn in Germany in the year 1911. His father was a professor of Political

Economy. He studied in Bonn and Berlin and moved to London in 1930 as a Rhodes Scholar at New College, Oxford, and, later at the age of 22 he taught economics at Colombia University, New York.

As he found theorising without practical experience unsatisfying, he then went to business, farming and journalism. He moved back to England before the World War 11, as he did not like to live in Nazi Germany. John Maynard Keynes was impressed with his work. He became a protégé of Keynes and, with his help, found a position in Oxford (it is generally thought that by the end of his life he went beyond Keynes, though only second to Adam Smith and was considered the most influential orthodox economist thereafter).

He became Economic Adviser to the National Coal Board from 1950-70, and also served as the President of the Soil Association (Britain’s largest organic farming organisation). In later years his advice on problems of rural development was sought by overseas governments. He served as Adviser to the Planning Commission of India. In 1977 he published “A Guide for the Perplexed”, a less well known book, as a critique of materialism. He was awarded Commander of The British Empire (CBE) in 1974. He died in 1977.

‘Small is Beautiful’ is a collection of essays and speeches by Schumacher which is divided into four parts; the Modern world, Resources, the Third world, and Ownership. It includes titles like Buddhist Economics, The Role of Economics, A Question of Size, and Technology with a Human Face, Development, and New Patterns of Ownership etc. The central theme of the book is that Man’s current pursuit of profit and progress, which promotes giant organisations and increased specialisations, has in fact resulted in gross economic inefficiency, environmental pollution, and inhuman working conditions.

Infinite growth of material consumption in a finite world is an impossibility—E.F. Schumacher

He opposes the tenets of neo-classical economics as he considers that single minded concentration on output and technology is dehumanising. **Natural resources are finite and priceless. Since they are not renewable they are subject to eventual depletion. He faults conventional economic thinking for failing to consider the most appropriate scale of an activity, ridicules the notions that growth is good, that bigger is better and questions the appropriateness of using mass production in developing countries, promoting instead production by masses.** Small appropriate technologies are believed to empower people more, in contrast with such as bigger is better. Production from local resources for local needs is the most rational way of economic life. Government's efforts should be concentrated on sustainable development.

Schumacher was influenced by Gandhi and called him 'people's economist'. In 1955 he travelled to Burma and developed a set of principles he called 'Buddhist Economics', with an emphasis on simplicity, nonviolence and a regard for nature's capital. He wrote "for an economist the marvel of the Buddhist way of life is that amazingly small means can lead to extraordinary results". Right Livelihood is one of the requirements of Buddha's noble Eight Fold Path. Buddhist Economics envisages development using technology appropriate for a sustainable world, simple, nonviolent, promoting health, beauty, permanence and enhancing skills.

The prefix Buddhist was a metaphor, of course, for a moral economy: one built on the firm foundation of ethical and spiritual values' writes Shri Suresh Kumar, the Editor of Resurgence magazine published from London. 'The essence of civilisation is not in the multiplication of wants, but in the purification of human character'. The publication of his book, a critique of western economics, coincided with the oil crisis, the emergence of globalisation, birth of environmentalism and the growth of ecological concerns. He became a hero to many in the environment movement. However, the world economy is continued to be based on the conventional western model. The birth centenary of Schumacher reminds us how far away we remain from his vision.

According to Schumacher, 'modern economics- - considers consumption to be the sole end

and purpose of all economic activity'. But it is argued by modern economists that consumerist growth model that dominated the world for past hundred years has led to the fastest improvement in living standards in history, not just for the rich, but also for the poor. Therefore, there is considerable resistance to any divergence from the well- established growth model. Moreover, it is said that 90% of the beneficiaries of the conventional economic model is politicians, big businessmen and all those who matter. (99% of the big business and corporations believe that big is beautiful). Therefore, there is considerable resistance to accepting the small is beautiful model.

However, it is gratifying to note that environmental concerns have found a place in public policies and have become global concerns today, due to the pioneering efforts of people like him. Schumacher was one of the first economists to question the appropriateness of using the GNP to measure human well- being, emphasising that 'the aim ought to be to obtain maximum well- being with minimum amount of consumption'. Today it is good to think that the conservative government in Britain is making a country-wide survey on the Happiness Index.

After reading the book I wondered whether the vision contained in it could be applied to a country like India. Almost 80% of our population is still engaged in farming and allied activities and the people have up to the present, followed the traditional Indian way of life, in tune with nature. However, in recent times, modernity and consumerism are fast spreading even to its interior areas, jolting its people from their traditional way of life. We need to decide whether we should embrace the consumerist model of economics or a more sustainable, ecological, ethical model advocated by Schumacher and others. Faced with global economic and ecological crisis, no other option appears to be left for us, as also for the whole world.

Although Schumacher was an atheist through his life, towards the end he is said to have embraced Catholicism, for, he became increasingly interested in the spiritual aspects of life. According to him there has never been a time, in any society, in any part of the world, without its sages and teachers to challenge materialism and plead for a different order of priorities. To that extent he was a prophet of his time and his vision of" Small is Beautiful "will remain true for all time to come.

ART & CULTURE: A DEBT TO DICKENS

-A Commentary by Neeta S Singh

Neeta S Singh is a lecturer at Sunway University, Malaysia. She has a BA (Hons) from the University of Malaya, MA from the University of Lucknow, India, LLB (Hons) from the University of London, and LLM from the University of Malaya. An academician of diverse interests, she has taught English Literature at various Institutions of higher learning in Malaysia, and upon being called to the Malaysian Bar, she practiced as a lawyer for several years before returning to academia. As a writer, she has published articles on such diverse topics as democracy and civil society movements, migration and displacement of human populations, and book reviews.

Anyone who has learned English in school would have definitely 'experienced' the novels written by Charles Dickens. In 2011 we celebrate the bicentenary of the birth of this great author. We reproduce here a short commentary on the piece written by the renowned author Pearl S Buck on her Debt to Dickens.

She also touches on the life and times of Dickens.



Charles Dickens
(7th February 1812-9th June 1870)

Pearl S Buck about her debt to Dickens

"I have long looked for an opportunity to pay a certain debt which I have owed since I was seven years old. Debts are usually burdens, but this is no ordinary debt, and it is no burden, except as the feeling of warm gratitude may ache in one until it is expressed. My debt is to a Charming Englishman, who long ago in China rendered an inestimable service to a small American child. That child was myself and that English man was Charles Dickens. I know no better way to meet my obligation than to write down what Charles Dickens did in China for an American child" wrote Pearl S Buck.

My remembrance of Charles Dickens, long relegated into the deep dark recesses of adolescent memories was suddenly dredged up when I chanced upon a little-known article, 'A Debt to Dickens' by Pearl S. Buck, prompting me to re-visit the great English writer.

In this piece, Pearl S. Buck describes her own lonely and isolated life as an American child living in a mission bungalow "in a remote Chinese countryside" not far away from the banks of the Yangtze River, exposed to the harsh reality and unkindness of people who ostracized her and called her a foreign devil because she looked different with her "yellow curls and unfortunate blue eyes, which they thought so ugly". Her isolation is not just from the external world but also within the walls of her own home, emphasized in the re-iteration that her parents were "very busy, very, very busy and when she had learned her lessons in the morning quickly, they were too busy to pay much heed to her.... ." And later in the piece, she reveals that when all were asleep in the household "all, except the indefatigable parents, and they were very, very busy."

Into this isolated child's imagination, the discovery of the novels of Charles Dickens and the world his characters inhabit must have been a welcome revelation, finding an echo in Pearl S. Buck's young and tortured existence. Engrossed in the strange worlds inhabited by Dickens' characters the young writer must have been deeply touched, especially as she herself inhabited a strange and unkind world. Perhaps, the young Pearl S. Buck identified with some of Dickens' grotesque as well as helpless characters and their plight because she was in the unfortunate position herself – a strange looking unnatural creature in the eyes of the Chinese.

- A loving heart is the truest wisdom----Charles Dickens

More importantly, Dickens' works were a window to the world of her own people, however dark and full of despair. Enthralled by the vicissitudes of life in *Oliver Twist* followed by *Hard Times* and *David Copperfield*, the young Pearl Buck entered into her "own heritage." *Oliver Twist* presented her with the "essential realism of his portrayal of life among the poor and the lower middle class of England."

As she grew up, Pearl S. Buck reveals that she continued reading and re-reading Dickens' works for about ten years, always having a Dickens book on hand "to dip into and feel myself at home again". She acknowledges her huge debt to Dickens because he opened her eyes to all sorts of people and taught her to treat everyone with love and respect, to despise hypocrisy and recognize kindness beneath gruff behaviour.

Pearl S. Buck is completely uncritical of Dickens' works, even defending him against the critics who regarded his characters as rather static and his portrayals as "sentimental and childish". In her estimation, his simplicity had its own virtue which was "a great zest for life". She values this quality in Dickens because it gave her "that zest, that immense joy in life and in people, and in their variety".

Pearl S. Buck's 'A Debt to Dickens' is a eulogy devoid of critical comment perhaps because of her own unhappy childhood upon which the proliferation of characters in the world created by Dickens left an indelible and lifelong imprint. Moreover, Dickens' sympathetic characterizations of a host of abandoned children like Florence Dombey, Oliver Twist, Little Nell, Pip, and Estella must have found a kindred spirit in the young Pearl S. Buck's heart. In contrast, however, a number of critical works and biographies reveal Dickens as a man of contradictions, and explore nuances of his character which paint a portrait of a very complex and tortured personality. It is undeniable that Dickens is one of the most famous writers of his time. His prolific body of work presents a picture of Victorian English life on a vast canvas, exposing the social realities of his time.

He is indeed the consummate social commentator, using fiction as a vehicle to expose and criticize rampant social ills such as child labour and the moral decadence of the Victorian age.

To a large extent, his deep commitment to social reform stemmed from his own traumatic experiences as a child. At the age of twelve he was forced to work in the blacking warehouse due to a drop in his family fortunes, as a result of which his father was sent to the debtors' prison. According to John Forster in the 'Life of Charles Dickens', Dickens felt completely degraded and never recovered from the despair he felt at the fall from a respectable middle-class family life to a state of penury, forcing him to work in such a lowly job. In fact, *David Copperfield* is regarded as autobiographical to some extent, adapting this phase in his life in the novel.

Some of the critical works on his life offer unexpected insights into Dickens' psyche. He was at once the champion of the lower classes, exposing the violence, hypocrisy and cruelty of the Victorian age but at the same time, in his own home, his mistreatment of his wife, Catherine is regarded by biographers like Robert Gottlieb in 'Who was Charles Dickens?' as an "inexcusable blot on his personal history and character as well as an indication of the powerful psychic derangement he was undergoing in mid-life." His relationships with the women in his life are translated in a rather exaggerated manner in the female characters that inhabit his novels. For example, from young his relationship with his mother was quite acrimonious because he never forgave her for sending him back to work in the blacking warehouse even after the family fortunes had improved considerably. Thus she is translated into his vitriolic epitomization as the "vain, ineffectual, verbally comic Mrs. Nickleby" in *Nicholas Nickleby*. In contrast, his ideal of the domesticated female persona is embodied in Catherine's sisters, Mary and Georgina, whose qualities of youthful innocence and selflessness are personified in his sympathetic portrayals of Rose Maylie in *Oliver Twist* and Little Nell among others.

Charles Dickens' appeal is timeless and his contribution to literature is inestimable. His novels had a moral purpose, and, through his searing social commentaries on the moral degradations of his times he hoped to reform the ills in society. The profound lessons inter-woven in Dickens' works are relevant even today. And the greatest truth about life is expressed in *A Tale of Two Cities*:

“The water of the fountain ran, the swift river ran, the day ran into evening, so much life in the city ran into death according to rule, time and tide waited for no man, the rats were sleeping close together in their dark holes again, the Fancy Ball was lighted up at supper, all things ran their course.”

It is impossible to capture the essence of Dickens’ works and contributions in such a short piece as this. Nevertheless, his is a lasting legacy as a prolific social commentator and critic of the social, economic and moral decadence of his time. Thus he is indeed ‘a man for all seasons’.

QUOTES FROM DICKENS

“Happy, happy Christmas, that can win us back to the delusions of our childhood days, recall to the old man the pleasures of his youth, and transport the traveller back to his own fireside and quiet home”.

“Have a heart that never hardens and a temper that never tries and a touch that never hurts”.

“Charity begins at home and justice begins next door”.

“There is wisdom in the head and wisdom of the heart”.

“There are books of which the back and covers are by far the best parts”.

“If there were no bad people, there would be no good lawyers”.



Pearl S Buck (1892-- 1973)

QUOTES FROM PEARL S BUCK

“I feel no need for any other faith than my faith in the kindness of human beings. I am so absorbed in the wonder of the earth and the life upon it that I cannot think of heaven and Angels”.

“All things are possible until they are proved impossible—and even the impossible may only be so as of now”.

“Every great mistake has a split second when it can be recalled or perhaps remedied”.

“Hunger makes a thief of any man”.

“Inside myself is a place where I live all alone and that is where I renew my springs that never dry up”.

“A man is educated and turned to work. But a woman is educated and turned out to grass”.

(Source: *Brainy Quotes*)

A wonderful fact to reflect upon, that every human creature is constituted to be that profound secret and mystery to every other---Charles Dickens

POEMS - Sudha Shrotria

Sudha Shrotria is a professional in Public Administration, Environmental Law and Human Rights. She has a Master's degree in Human Rights Law from the University of London and is currently pursuing doctoral research at the Centre for Regulatory and Policy Research, TERI University. She is a published poet. Her work has been widely appreciated in India and abroad, including the President of the Republic of Seychelles for her book 'Sojourn in Seychelles' in which her poems describe the unsurpassable beauty of the islands and her experience in a different culture. Sensitive to the cause of humanity, and inspired by nature, poetry comes to her naturally. She often takes off to different parts of the world in search of new cultures adding meaning and value to life.



What can you hold?

*Can you hold in your hand?
The earthy smell of the land;
The fleeting clouds in the sky,
Or the singing birds flying high;
Can you hold in your hand?
The sweet smile on a child's face,
Or the air filling your space;
The ripples in the river's flow
Or the gold of the sun's glow;
Can you hold in your hand?
The fragrance of a flower
Or the green of trees after a shower;
So why not let go-
Of the earthly 'yours' and 'mine'
And savour all moments divine;
Simply hold on to what your mind can see
Life's joys that come for free.*

Stranger in the Street**

*Do not ask me the name of the place where I come from,
Do not ask me the name of the place where I am going to,
Do not judge me by the colour of my hair,
Or by the clothes I wear,
Do not judge me by the shape of my face,
Or by my lack of grace;
Look beyond the narrow lines you have drawn around you with the passage of times;
For I may be rich or poor,
I may be strong or weak,
But if you endeavour to seek,
You will find something of me in you,
And you in me,
For you cry like me when you feel the pain,
And I laugh like you when I feel the joy,
Deep down we are much the same
For we care and we share
A bond greater than eternity;
It is the bond of humanity.*



**** Prize-winning poem: first published in Asian Age (2005)**

Beauty is not caused; it is-----Emily Dickinson

PLANET HEALTH MUSEUM

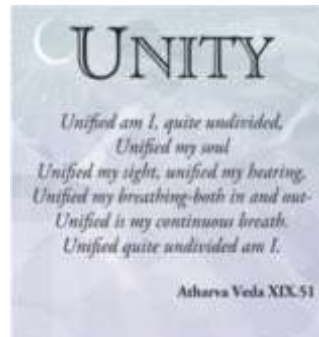
Capturing and Disseminating India's Cultural Health Heritage

-Ranjit Makkunni

Ranjit Makkunni is a multimedia researcher, designer and musician. He is the President of Sacred World Foundation, and the Director of the Sacred World Research Laboratory, where he leads a design and research think-tank pioneering new applications in culturally rooted computing. Prior to this, Makkunni spent nearly two decades at Xerox Palo Alto Research Center (PARC), where he carved out new spaces of multimedia computing interfaces and learning applications, starting from the visionary explorations of the small talk object-oriented programming language in the 1980s to body-friendly, touch-friendly and culture-friendly multi-media computing in the 2000s. Makkunni's projects go beyond just demonstrating futuristic technology. In his projects, Makkunni brings to life the authenticity of traditional ideals on primal ecology, learning, and healing that are simultaneously contemporary. His projects allow for the participation of diverse viewpoints of people whose skills face the threat of extinction. Proficiency in multimedia technology as well as traditional art allows Makkunni to bridge multiple worlds: between technology and art, the techno-man and traditional man, and between the developed and developing worlds.



Starting from the concept of health and alternative perspectives of the body, the project illustrates new visions and tools for a healthy society and planet. The project presents this vision across a spectrum of disciplines which include ancient sciences and modern computing media to communicate the vision.



Planet Health Museum explores cost effective, culturally- rooted health practices found in traditional writings on Green Philosophy and presents traditional practices leading to a sustainable future and enables to make these ubiquitously available to all.

Against the backdrop of the rapid rise of India as an economic power, (and in which the infrastructure has not correspondingly been planned or kept up with rapid growth), and against a backdrop of a growing number of people who cannot afford skyrocketing medical costs, and people who find themselves in stressful, poorly designed urban environments, Planet Health addresses the emerging challenge of providing immediate and direct access to cost effective medical alternatives so that Urban dwellers can 'retake' charge of their health.



A potential revolution in health care can emerge today based on ancient health traditions of India that flourished thousands of years ago. In this worldview healing is intimately linked to ecological awareness.

In the Ayurvedic and Yogic indigenous medical traditions, the body is a system of 'interconnected intelligences'. This model of health and well-being does not isolate mind, body and spirit into three separate compartments, but views it as one holistic unit which weaves, the physical, the psychological, the subconscious, and the super conscious states of being into one whole. In contrast, the modern materialistic view of medical science is based on a split between the mind and body.



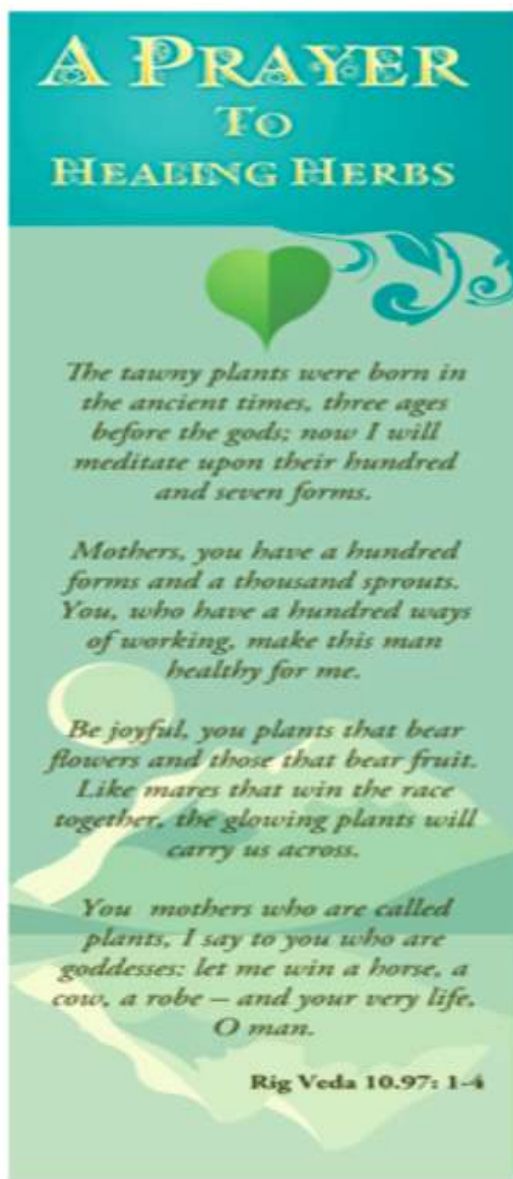
Planet Health combines video documentation of the traditional knowledge of Ayurveda and Yoga traditions, animation, modern interaction design, tactile computers, craft, and product design forms into one interactive experience. The aim of the project is to explore continuity between the media of film, art, design, and modern interface technology into a seamless whole, inviting the museum visitor to experience green consciousness, as interpreted by Ayurveda and Yoga traditions.



The project presents a view of 'health' as a state of harmony between the Individual and the Whole and presents a view of healing as a process of restoring the balance. This perspective shows an alternative, non-Cartesian, non- Western notion of a body seen as a meeting place of energy, ecology, interconnection, perfection, and the body also as an expression of biodiversity.

Planet Health shows a non-violent approach to Health, both in methodology and in the non-invasive practices found in Yoga and Ayurveda, and, in allowing Urban Man to re-recognize the intimate bond between Man and Plants.

The methodology of the project represents a deliberate and conscious 'stepping back' in order to reclaim the 'healthful bliss' that is due to every living being on the planet. Museum goers, by interacting with the exhibits, gain access to alternative therapies and knowledge of traditional healing and herbs that can be put to practice immediately, and therefore they can carry valuable 'learning' home from the museum visit.



Give me a museum and I will fill it---Picasso



Many of the hardware forms presented show new possibilities for culture based design, that is, through the use of wood and green materials. If implemented on a large scale this could provide and generate opportunities for traditional craftsmen, thereby creating sustainability of craftsmen, and ensuring commitments to complex traditional expertise, e.g., wood carving, lacquer work, crafts which are under threat of extinction.



This represents one of the first presentations honouring the value of traditional medicine, and will be valuable not just for Ayurveda and Yoga, but for all the indigenous systems of practice across the world.

Commissioned by the Department of AYUSH, Ministry of Health and Family Welfare, Government of India, New Delhi, the museum is at present, housed in the Morarji Desai National Institute of Yoga and Naturopathy, New Delhi.

For full credits see www.sacredworld.com

The Sacred World Research Laboratory has been exploring technologies and designs for Personal Freedom; and the attainment of Physical Health is one of the major enablers of Freedom, personal and spiritual.

The Laboratory has been exploring innovation created by building bridges between Traditional

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The moment you think you understand a great work of art, its' dead for you---Oscar Wild

FOOD & DIET: FOOD AND DIET IN AYURVEDA

- N. Srikanth & Ramesh Babu

Ayurveda is one of the oldest systems of knowledge in the world. Ayurveda deals with ways to attain perfect health and happiness in our daily life. This is evident as classical literatures of Ayurveda attribute prime importance to nutrition dynamics, nutrition discipline, prophylactic nutritional interventions(with numerous recipes), nutraceuticals with vast description, separate texts viz. Vaidya jeevanam ,Charu Carya,Bhava Prakash and dedicated chapters in major texts such as Charaka Samhita,Susruta Smahita, Astanga Samgraha and Kasyapasamhita etc.

Shri.Ramesh Babu, and Dr.N.Srikanth Director General and Assistant Directors General of the Central Council of Ayurveda and Siddha, New Delhi write about Food and diet in Ayurveda.

Though the science of nutrition in the present times evolved as an elaborate and organized subject of study, contemporary perspective mulls over gross components of diet like carbohydrates, fats, proteins, minerals, water etc., while Ayurveda – the science of life- emphasizes diversified aspects of dietetics and nutrition viz. quality, quantity, processing methods, rationale of combination of food articles, emotional aspects, nature of the consumer, geographical & environmental conditions etc. which are pivotal in preservation and promotion of health and prevention of disease.

Ayurveda being a holistic and comprehensive knowledge system lays stress on positive health, a blend of physical, mental, social, moral and spiritual welfare. It considers three important factors while dealing with the health and disease i.e. *oushadha* (drug & therapies), *ahara* (diet) and *vihara* (practices). As endorsed by major Ayurvedic literatures, ‘diet (ahara)’ plays key position among the three major pillars of health, other two being ‘proper sleep (nidra)’ and ‘celibacy (brahmacharya)’.

Pathya (or a proper diet advocacy) is defined as the ‘diet plan’, which is congenial to the functioning of the channels of the body and that keeps the individual healthy, maintains normal body functions, leads to proper functioning of the organs, nourishes the mind and intellect, prevents diseases and at the same time corrects the irregularities that may occur in the body from time to time.

The Sanskrit synonyms denoting human body (viz. *kaya*, *deha*, *sareera*) are indicative of nutrition dynamics & different metabolic aspects of nutrition such as the term ‘kaya’ represent growth and development by virtue of nutrition, ‘deha’ stands for anabolism while ‘sareera ‘ embody catabolism. *Sareera vichaya* or Ayurveda physiology clearly defines the theories of metabolism and attributes 13 factors (Agni, biochemical and genetic factors) responsible for digestion and metabolism of food.

Compare the Ayurveda Food Pyramid with the diet plan prescribed by the US Department of Agriculture. This diet plan has replaced USDA’s Food pyramid in June 2011.



(Source: AYUSH, Govt. of India)



Where diet is wrong medicine is of no use

When diet is correct medicine is of no need---Ayurveda

These contributing factors of nutrition dynamics or 'agni' act at different levels of organization viz. one *Jathragni* (transformation at Gastro Intestinal Tract level); seven *Dhatwagnies* (transportation, selection at tissue level) and five *Bhutagnis* (highly selective regulation of micro nutrition) at organ level. *Rasayanas* are the foods, therapies or practices that are conducive and beneficial to body tissues and its functions. Further, the unique *Rasayana* concept in Ayurveda emphasizes achieving optimum benefits of nutrition viz longevity, immunity and mental competence.

Ayurveda classifies food (ahara) in to 12 basic categories based on source, method of preparation and utility such as (1).Sukandhanya (corns with bristles) (2).Samidhanya (pulses) (3).Mamsa (meat) (4).Saka (vegetables) (5).Phala (fruits) (6).Arita (salads) (7).Madya (fermented drinks) (8).Ambu (water) (9).Gorasa (milk and milk products) (10).Iksuvikara (products of sugar-cane) (11).Krtanna (food preparations) (12).Aharayogi (accessory food articles). Also based on the convenience of consumption food articles are classified into four forms by Charaka such as Asita (eatable), Lidha (lickables), Pita (beverages) and Khadita (masticables).

Diet plays an important role in keeping our mind healthy and happy. Psycho-pharmacological effects of food led to classification of food in to following three categories. (1). Satvik diet: ideal diet containing vegetarian, non-oily, non-spicy articles which are congenial to the body and mind. (2). Rajasik diet: too spicy, hot, sour, salty which excites the mental faculties and (3). Tamasik diet: too oily, heavy food which reduces mental competence.

In Ayurveda most health problems are attributed to wrong eating habits and faulty cooking methods. Ayurveda deals with the *pathya vyavastha* (planning of diet: dietetics) in a scientific and holistic way, based on certain principles, with an emphasis on certain important aspects.

Apart from elemental constitution of food, Ayurveda prescribes important factors regarding the acceptability of wholesome diet (1). Matra -

Quantity (2) Kala-time or season (3).Kriya -mode of preparation or cooking 4. *Bhumi* -habitat or place/climate (5) Deha-Constitution of person(6) Desha-Body (microcosm) (7) Environment /Climate (macrocosm).

Any material in the universe, according to Ayurveda, is composed of five basic elements, the *Panchamahabhootas*, namely *prithvi* (earth), *apya* (water), *teja* (fire), *vayu*(air) and *akash* (space), including the human body and food. Planning and indulging in the diet and balancing these elements maintain the homoeostasis of body. The food contain six basic tastes viz. madhura (sweet), amla (sour),lavana (salt),katu (pungent), tikta(bitter), kashaya (astringent) and each taste has pre-dominance of particular elements of panchamahabhoota which exerts specific effect on bio-humours and tissue function (tridoshas & dhatus). (Astaanga Hridaya Sutrasthana 10/1).

The *tridoshas* (biological humors) i.e. vata, pitta & kapha that constitute the body is also made up of *Panchamahabutas*. Each food article either has *dosha* (vitiation) aggravating or pacifying or balancing action on human body and Ayurveda prescribes specific diet to sustain the balance of bio the doshas, disturbed due to various factors like season, age of the person etc. (table-1). Thus, Ayurvedic advocacy at all times emphasizes on enjoying all six tastes of food and forbid the excessive use of single tastes leading to illness. Moreover, different tastes also possess specific biological activity influencing physiology and nutritional impact.

Bio -- humours	Controlling / balancing tastes	Aggravating/ deranging tastes
Vata	Madhura (Sweet) Amla (Sour),Lavana (Salt)	Katu(Pungent) ,Tikta (Bitter), Kashaya (Astringent)
Pitta	Kashaya (Astringent), Tikta (Bitter), Madhura (Sweet)	Amla (Sour),Lavana (Salt), Katu(Pungent)
Kapha	Katu(Pungent) ,Tikta (Bitter), Kashaya (Astringent)	Madhura (Sweet), Amla(Sour),Lavana (Salt)

Table -2: Rules for food convention- General dietetic advocacy:

Do's
<ul style="list-style-type: none"> • The food should be tasty, warm, qualitative, unctuous, and easily digestible. • The food should be eaten only when hungry, after the last meal has been digested. • Should include all the tastes namely sweet, salt, sour, pungent, bitter and astringent in daily diet and to be consumed as prescribed for different seasons (table-3) • Should eat food which is nourishing and suitable to particular constitution, mental and emotional temperament. • It is best to focus on food while eating. • One should eat in comfortably sitting posture. • Food should be eaten in pleasant surroundings with utensils and preparation of individual's choice

Don'ts
<ul style="list-style-type: none"> • The food should not be contrary to each other in action such as fish and milk together, radish and milk together, honey and ghee in equal quantity. • Eating should not be in a hurry. • It should not be very slow either. • Should not eat when emotionally upset. • Too much use of any of 6 tastes namely sweet, salt, sour, pungent, bitter and astringent is not conducive for health.

Major classics of Ayurveda detail about the system of eating food covering physiological, qualitative, quantitative, social, spiritual, emotional and psychological, environmental aspects. Few of these rules comprise:

1. One should take food with full eating awareness i.e. "Tanmanabhunjita" (table-2). One should consider the type of food and quantity according to the habitat (desha satmya). 3. One must take wholesome food in right quantity and right time to maintain the homeostasis of all the three biological humours (doshas) 4. Eating before or after the usual timings of meals is unhealthy or 'swasthyavighataka' which causes physical and mental illness. 5. Shushruta advises intake of food which is easily digestible, energetic, soft, warm and to be taken in proper quantity only when one is hungry.



Turmeric used both as food & medicine

Table -3: Nutrition Advocacy for different Seasons

Season	Nutritional Advocacy
January-February (Sisira)	Salty, Nutritious diet
March-April (Vasanta)	Light and Dry food
Grisma (May-Jun)	Sweet, Light and Oily Seasonal fruits like <i>amra</i> (Mango)
July-August (Varsa)	Astringent, Sweet, Sour, Salty and Oily
September-October (Sarada)	Sweet, astringent, oily specially ghee, milk sweets, rice
November-December (Hemant)	Sweet and Sour

Ayurveda provides unique classification of human beings based on psychosomatic constitution of individuals, according to the domination of *tridoshas*. The *prakriti* approach is adopted for assessment of proneness of the disease, diagnosis and treatment to incorporate appropriate diet plan and regimen.

Rapid changes in diet and lifestyle have led to a major shift towards non-communicable diseases (NCDs) such as lifestyle related disorders (diabetes, obesity, arthritis, mental illness, cardiac diseases, cancer etc. and Ayurvedic principles certainly play an

important role in their prevention and management. Health-promoting regime (*pathya vyavastha*) is the hall mark of Ayurvedic therapeutics; specific diet and lifestyle guidelines are always prescribed along with the drugs and therapies to facilitate restoration of homoeostatic mechanisms (*dhatu-samyata*) and wellbeing. Therefore, emphasis on diet planning based Ayurveda principles would certainly help in health promotion, prevention of diseases and their management.

Table -4: Specific dietary advice for different constitutions

<i>Vata</i> constitution	<i>Pitta</i> constitution	<i>Kapha</i> constitution
<ul style="list-style-type: none"> ✓ Nutritive, strengthening ✓ Sweet, salty taste ✓ Fresh, warm moist and soothing. ✓ Frequent and regular meals ✓ Avoid fasting or dieting ✓ Creamy soups, hot cereals, bread, pasta with rich sauce containing butter or cream 	<ul style="list-style-type: none"> ✓ Sweet bitter and astringent ✓ Prefer cool foods and drinks ✓ Vegetarian diet ✓ Adequate intake of raw food and juices ✓ Avoid pickles, vinegar, chilies, vegetable oils, bakery product, canned foods, instant foods and hybrid grains etc. ✓ Avoid fasts. 	<ul style="list-style-type: none"> ✓ Light, with pungent, bitter and astringent taste ✓ Warm, light, dry and with hot spices. ✓ Low fat, high carbohydrate diets ✓ Occasional fasting ✓ Avoid frequent eating ✓ Avoid cold water and frozen edibles



Amla used both as food and medicine

BIO DIVERSITY: THE FORBIDDEN RICE

-Meenakshi Negi

Meenakshi Negi is an officer of the Indian Forest service. She has handled different assignments like Forest and Wild Life Protection and raising plantations of forestry species in the state of Karnataka. She was selected as the nodal officer for the DFID funded watershed development programme in Bellary district. The first ever elephant census for the South Asian region as a whole was conducted successfully in one of the main elephant corridors of South India under her leadership. She was posted as Executive Director, Jungle Lodge & Resorts, a premier Government of Karnataka undertaking for promoting ecotourism in the state. She also functioned as Director (AYUSH) in the Ministry of Health and Family welfare. Presently she is posted in the National Medicinal Plants Board, helping in evolving a work plan for the conservation and cultivation of Medicinal Plants in the country.



Black Rice

Historically about 300 varieties of rice were found in Manipur, cultivation of which was spread over the hills and valleys of the state. This rich diversity has dwindled down to about 50 as of today and is likely to further decrease, with changing lifestyles and food habits.

One of the most interesting rice varieties of Manipur is “black rice”, so called for its colour, which is black at a cursory glance, but, at a closer look, is actually a deep purple-black. It is also called “forbidden rice” because in the past only royalty had access to it and others were forbidden to use it as it was believed to have life prolonging properties and other health benefits fit for royalty alone. Fortunately, we live in times where such rules no longer apply and are free to choose the food we desire to eat. Incidentally, black rice is also grown in other countries like Japonica black rice, Chinese black rice, Indonesian black rice and Thai black rice.

The health benefits of black rice have been well documented. Its black colour comes from a high percentage of anthocyanins, apart from iron, vitamin E and high fibre content. Its antioxidant properties are akin to that of blueberries which are one of the most potent antioxidants known to mankind. It is clear that the kings of the past were not wrong in believing that eating this rice would extend their lives. All this has caused a renewed interest in this rice from people worldwide so much so that it is being called, most aptly, as “super food”.



Rice field in Manipur

Uniformity is not nature's way; diversity is nature's way—Vandana Siva



Rice pudding/Kheer

Health Benefits

- Prevention of diabetes
- Prevention of heart disease
- Prevention of Alzheimer's disease.
- Prevention of Heart Attack

The rice is eaten in different forms in Manipur, simply boiled with daal, as desserts with milk and sugar or as garnishing to decorate different dishes. The rice becomes sticky on boiling for which reason it is also sometimes called “sticky rice”.

A. Black rice salad (taken from the internet)

- 1/2 cup black rice
- 1 carrot shredded
- 1/3 green bell pepper
- 1/2 half pint grape tomatoes
- 1/4 cup dried cranberries, chopped
- 1/4 cup slivered almonds

B. Black Rice Pudding/kheer/payas

This is an all-time favourite recipe made out of black rice. The rice needs to be soaked in water for about an hour. This makes it tender and easier to cook as otherwise it takes much longer to cook than ordinary white rice.

Ingredients

About 200 – 250 grams of rice

400ml of Milk

Sugar-as per taste

Soaked rice is taken and cooked in an equal quantity of water for about 15 minutes. The natural sticky texture of the rice gives it a paste like consistency with constant stirring. 400 ml of milk is then added to the cooked rice along with sugar to taste. The mixture is stirred for another 20 minutes so that the milk reduces to about half its volume. The dish can then be removed from the flame and eaten either hot or cold. This is popular among young children for both the taste and its deep purple colour.

Different variations on the basic recipe can be tried, for instance by using coconut milk instead of normal milk, jaggery instead of sugar, some nuts and raisins to add to the nutritional value etc.

C. Sauce

- 1 tsp grated ginger
- 1 tbsp soy sauce
- 2 tbsp honey
- 1 tbsp light sesame oil
- 1/2 tsp black pepper

Boil black rice in 2 cups of water until softened, adding additional water as necessary. Remove from heat and let it completely cool off. Add the sauce and all other ingredients to a bowl and marinate for 15 min or longer. Add cooked rice to mixture, toss and serve.

TRAVEL: GOMUKH - Kala Variyar

For some a spiritual trip, while for others a dose of adventure, the trek to Gomukh is a sublime one. A famed trek of the Utrkhand region of impeccable natural scenery and wilderness, where civilisation is not possible and the trails are dramatic (ref: www.tourmyindia.com)



Gangotri Glacier (en.wikipedia.org)

Ms. Kala Variyar is presently working as Director (Foreign Languages and Publication) in the Bureau of Indian Standards, Government of India. Her interests are multifarious, ranging from travel to learning and teaching languages, art & culture and community work. Here she writes about her memorable visit to Gomukh, the source of the Ganga (Ganges).

Close to the origin (Gomukh) of the River Ganga, Gangotri is one of the pilgrim spots that an Indian would like to visit before he leaves this world or moves into his next birth. The other places being Yamunotri- the origin of the River Yamuna, Kedarnath and Badrinath, all situated in the high altitudes of the Himalayan mountain ranges. Covered in snow for most part of the year, the access to Gangotri opens in May -June and late September/early October, every year.

From New Delhi we travelled to Rishikesh via Haridwar by train and thereafter, covered a distance of 244 kms from Rishikesh to Gangotri by Road, via Uttarkashi. It takes about 4 hours from Uttarkashi to Gangotri by road. Being the youngest of the mountain ranges there is a constant risk of avalanche and debris falling from above and the well-trodden road giving away beneath the wheels of the four wheel drive vehicles, plying up and down the treacherous route.

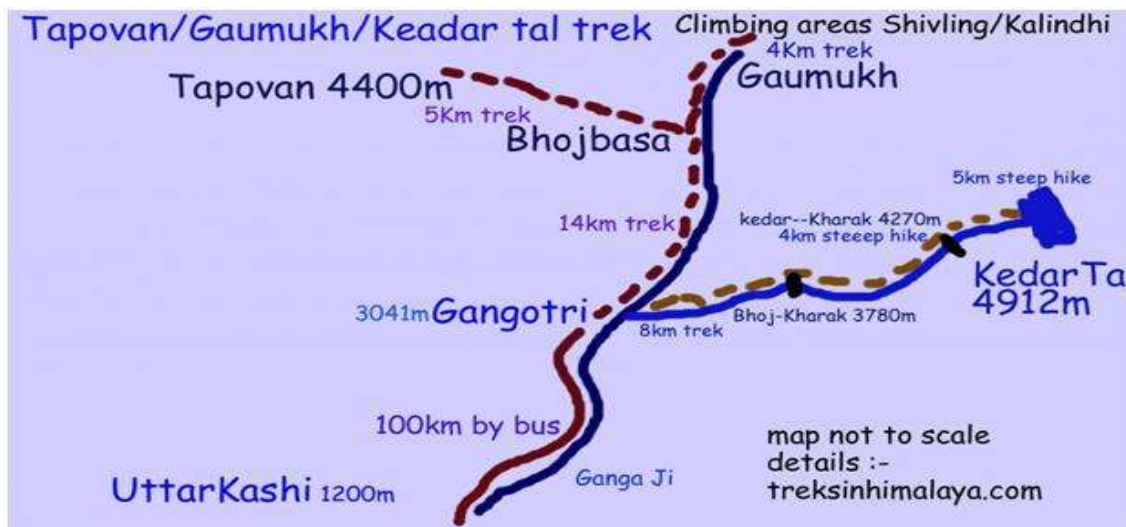


Ganga Devi

Temple, Gangotri (wikipedia) En route we had to halt at several places due to landslides and traffic jams.

After reaching Gangotri late in the afternoon we visited the famous Ganga Devi temple, which is situated at a high altitude (9100 ft.). The original Gangotri Temple was built by the Nepalese general Amar Singh Thapa in early 18th century. With the sacred Ganges (Bhagirathi) roaring in close vicinity, it is quite an experience to visit this temple. According to popular Hindu legend, it was here that Goddess Ganga descended when Lord Shiva released the mighty river from the locks of his hair.

“River is time in water; as it came, still so it flows, yet never is the same.” – Barten Holyday



The trekking route map- Gomukh/Tapovan (Credit: treksinhimalayas.com)

Inside the temple one could see the **Bhagirath Shila** believed to be the holy rock where King Bhagirath prayed to Lord Shiva. In Gangotri national park, plants and animals endemic to the area can be seen.

Gomukh is about 18 km from Gangotri. It is the source of Bhagirathi river, a tributary of the Ganges. To reach there one has to trek or travel on pony back. One can take rest at Chirbasa and Bhojbasas on the way. The trek goes through rugged terrains along the Bhagirathi River. The long and arduous journey for most is in itself a destination rarely achieved. Here the path to Gomukh lies bereft of snow and ice, exposing its sharp and stark contours. After the blistering heat of the Summer coupled with the monsoon rains, the large boulders and rocks are soon exposed to the four elements for a short period. The saying that the trek from Gangotri to Gomukh is strenuous is to under-state the obvious. Gingerly stepping over the boulders, taking care not to look over the side of the narrow **Below Chirbasa (UT)**



path into the gorges awaiting a fall with open arms one may miss the beautiful bounty spread around in the sky, the trees and the mountains.

En route Gomukh the first halt is at **Chirbasa**, at mid-point between Gangotri and Gomukh, located about 9 km ahead of Gangotri, at an altitude of 3,580 metres above sea level. It is a dense thicket of lofty blue pine or chir trees. It makes an ideal campsite for the trekkers heading to Gaumukh-Tapovan. One could rest here for some time while riding a pony or walking on foot towards Gomukh which is about 5kms from here.



Bhojbasas (photo credit: Uttarakhand Tourism) On the way to Gomukh, the last camping site is at Bhojbasas after 14 kms trek that starts from Gangotri. Bhojbasas is a scenic spot on the rugged terrains, situated at an altitude of 3,775 mts (12,450 ft) above sea level. Gomukh glacier is 4kms away from here.

“If there is magic on this planet, it is contained in water.” – Loren Eiseley

Riding on a pony through the narrow paths is not easy. The up-down jerking motions of the pony make one really uncomfortable. The sudden jerks by the pony while moving on steep paths to get a taste of grass makes one lose the balance. The vegetation gets sparser once we move towards Bhojbasa. Besides the sunlight is sharp and blistering. Somehow we reached Bhojbasa. Here we could get only badly made Maggie noodles for lunch.

After a tiring pony ride some of our group members decided to stay back. Only three of us decided to trek towards Gomukh. The sun was scorching and the hard rocks below our feet were burning hot. We tried to follow the trail towards the glacier. But walking along the side of the Bhagirathi River, hopping over large boulders, negotiating steep gradients were indeed strenuous. To our surprise we could spot a Bharal (blue sheep) and some species of birds which are endemic to the locality.

All through the trek, Gomukh was visible at a distance, beckoning us towards it. Straight ahead the magnificent Bhagirathi peaks too were visible, so also the Shivaling, Sudarshan, Meru, Kharchkund and other peaks. In fact, the Bhagirathi massif lords over the Gomukh trail.

Bhagirathi is the most important tributary of Ganga. Gomukh glacier is the source of Bhagirathi. Bhagirathi is named Ganga after it joins Alknanda at Devprayag. It is indeed very unusual to see a glacier on a trek. Gomukh is the snout of the glacier and it looked exactly like the cow's mouth. Gomukh,. As the river is swift at the source, we were advised not to go too close to it.

At first it appeared that the Ganges is coming out of a tunnel in the mountain, but then we realized that the brown coloured structure appeared to be stone / mountain was actually the glacier. Only two of us finally made to the last point. We collected some *Ganga jal*. I could hardly believe that I was in face to face with the source of the mighty Ganga. No wonder the river is called the stream of life or life giver, as millions of life forms are dependent on it. We became all the more aware of the need to care and protect it from pollution and death. We offered our prayers to mother Ganga. Then we forgot all the stress and strains of the trek.

Now it was time for us to return. How quickly the weather changes in the Himalayas! The sun soon disappeared among the clouds. All of a sudden it became windy and cold. Rainfall was imminent. By the time we reached Bhojbasa, the other members of the group had already left. The syces urged us to hurry. We thought of the treacherous ride ahead- the uneven and very narrow path, the precariously placed loose boulders on the mountain side and the a deep gorge on the side below . It is amazing how the ponies carried on, moving by their instinct. By the time we reached half way through, it was pitch-dark. The faint glow over the peaks had also vanished. The ponies crossed water channels and streams with sure steps over unsure stones. Only when we saw the first light indicating human habitation did we give a sigh of relief.

We look back at the visit to Gomukh with a sense of utmost satisfaction despite all the hardships. The pristine water gushing out of Gomukh is etched deeply in our memory for ever.

----- Ref: [en.wikipedia.org/
www.euttarakhand.com/indiahikes.com](http://en.wikipedia.org/www.euttarakhand.com/indiahikes.com)

“I would love to live like a river flows, carried by the surprise of its own unfolding.” – John O’Donohue



Trekking trail Bhojbasa (Credit:devilonwheels.com)



Gomukh-Gangotri Glacier (Photo credit: Barry Silver)



A Bharal spotted on way to Gomukh (photo credit:devilonwheels.com)

Men die but travellers live, forever!--Amit Chandra

UNIVERSE: NO TIME TO STAND AND STARE

Ashish Garg is Associate Professor of Materials Science and Engineering at IIT Kanpur. Apart from his research and teaching interests, he has interests in general science and its popularization, and issues related to the wild life and environment. He is a regular trekker to the Himalayas.



YOU CAN SPOT THE MOON AND THE PLANETS VENUS & JUPITER

(Source Joe Dawson <http://oberlin-college.tumblr.c>)

Today, except for professional and amateur astronomers, no one gazes at the stars in the heavens or even look towards the skies. This may be because in today's fast-paced life, people have really no time 'to stand and stare'. Or maybe they do not get any material gratification out of it. Or it could be simply because the stars are not visible due to air and light pollution. However, anyone who had watched the spectacular display of the triple conjunction involving the Moon, and the planets Venus and Jupiter over the western horizon after sunset ,

would have experienced something rare and exhilarating. In this picture, the waxing crescent Moon is visible to the upper right of Jupiter. Although the planets are far apart in space, they appear so close. Both planets are bright enough to be visible even to the unaided eye. This celestial event reinforces a feeling in us that 'exploring celestial wonders even from our backyards' can be surreal and that 'cosmic sight- seeing' has its own joys.

Mortal as I am, I know that I am born for a day. But when I follow at my pleasure the serried multitude of the stars in their circular course, my feet no longer touch the earth-Ptolemy C.150 AD



LIFE STREAM is a quarterly magazine on holistic life published by a group of people who are committed to spreading the message of living in harmony with nature.

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***If we could see the miracle of a single flower clearly, our whole world would change-
Buddha***

LIFE SCIENCE FOUNDATION

ABOUT US

The Life Science Foundation is a Not- for- Profit Public Charitable Trust registered on 30th December, 2009. It is a unique initiative by two officers belonging to the Indian Administrative Service (Bihar cadre) namely S. Jalaja and A.N.P. Sinha (IAS-1974) who have retired as Secretaries to Government of India. Their long experience with Governments at the National and State levels have instilled in them the will to continue to serve people, although from a different platform. Service through the medium of a public charitable Trust is in keeping with the Gandhi's ideal of Trusteeship.

OUR VISION

The term Life science encompasses all aspects of life from Right to life- an inalienable right of every human being- to the interconnectedness of the entire web of life. Our vision, therefore, is to promote holistic understanding of life and its purpose, and improvement of quality of life of all.

MISSION

Our mission is to improve quality of life through policy formulation, applied research and real life action. The Gandhian ideals of Sarvodaya and Trusteeship will be the guiding spirit.

AIMS AND OBJECTIVES

To accomplish the above vision and mission, the Foundation will initially have the following aims and objectives. In course of time, more could be included:

1. To promote strategic thinking and suggest policy interventions on holistic and sustainable development.
2. To promote holistic health care system based on simple living, preventive healthcare, and both modern and traditional health systems.
3. To undertake studies, research and action-oriented projects pertaining to holistic life.
4. To undertake pilot projects of good governance including e-governance and eventually support the governments in adopting and up scaling successful pilots.
5. To work towards promoting quality of life of vulnerable sections of population, including women and children.
6. To promote all- round human resource development.
7. To design self- sustaining livelihood projects which minimise subsidies and donor-dependency.
8. To undertake other activities which are conducive to pursuit and fulfilment of the vision, Mission and Objectives of the Foundation.
9. Network with institutions and agencies to achieve the above objectives.