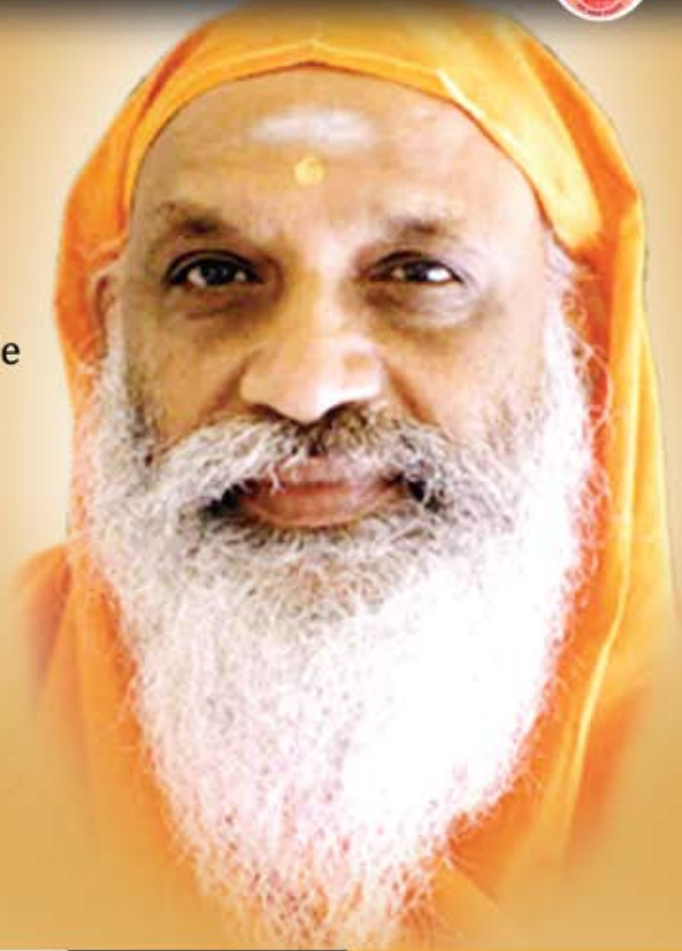


YOGA SUDHA

A Monthly Journal of S-VYASA Yoga University



Since the 24th of
September 2015,
Swami Dayanandji
is more vibrantly available
among us as a Voice
without form and
as a Beckon Light
without any limitation
to guide us to higher
realms of Happiness



Edison, New Jersey, Sept 12: Hindu Students Council, USA honoured **Dr. H R Nagendra ji** with 'Light of Yoga Award'. The award was given in appreciation of significant contributions made towards the promotion and propagation of Yoga

YIC (Yoga Instructors' Course) - 161st Batch, September, 2015



तं विद्यादुःखसंयोगवियोगं योगसंज्ञितम्

YOGA SUDHA

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EDITORIAL

It was fascinating to see the tremendous response from all quarters about Yoga in general and IDY in particular during our tour to USA. The Global Dharma Foundation in Edison attracted top thinkers such as Rajiv Malhotra to elaborate on all dimensions of Dharma, enshrined in our Sanatana Dharma which was an eye opener to most delegates. Yoga as a correlation to Dharma was presented by me with the suggestion, that the tremendous boost given to Yoga, by our PM through IDY should be used to spread the essentials of Dharma. As an action plan to train teachers of yoga in its holistic way, in most of the universities and temples has been worked out.

After the incorporation of Vivekananda Yoga University (VAYU) in Los Angeles, we have prepared all the documents for getting approval by the BPPE in the state of California and are soon submitting it. We hope to get the same done in a few months. Meanwhile, we are planning to start YIC in various universities and a suitable plan for the same is being worked out. The SDM follow up is going on in Los Angeles and other places of USA, where the camps were organised. With good results accruing, the participants are practicing regularly. It has become mandatory for us to standardise all the courses and make suitable modifications to the existing YIC to suit international scenario. Thanks to Dr. Manjunath N K, Vivekananda Yoga Global for

their efforts in this direction. The readers can visit the web www.vivekanandayoga.com for further details. After successful launch of our Shanghai Centre, which is doing very well, and are planning for establishing the second centre in other part of Shanghai and it is also planned to setup nearly 40 centres in next two years, says Tony, the coordinator of these VYGs. Three such centres are also coming up in Eastern part of USA and many such centres across other parts of the globe.

A Boys hostel for accommodating 300 students is coming up in Prashanti, and supported by ONGC and even the first instalment is released and the work is fast progressing. Similarly the construction of girls hostel is on. Many such projects are shaping up under the leadership of Sri Veerendra Nath, Director, (for infrastructural developments in Prashanti Kutiram). We are now hastening all these to make the 21st INCOFYRA (for details, refer last pages of Yoga Sudha) as the biggest and the most impressive in the history of Prashanti Kutiram. Many conferences are shaping up all over the world. We hereby invite all to participate in this unique 21st INCOFYRA, as delegates to make it a grand success.

■ *Dr H R Nagendra*



हे दयामय

आनन्द अमित अनन्त तुम
निज स्वरूप में हुए समाहित
कर सुरमित कोटि कोटि जन
तव सुमन सम निज तन !
करें समर्पित अब हम
ये अपना अन्तिम नमन !!

■ टी मोहन



ब्रह्मसूत्रम् (Brahmasūtram)

■ Prof. Ramachandra G. Bhat
Vice Chancellor
S-VYASA Yoga University, Bengaluru



स्मृत्यनवकाशदोषप्रसङ्ग इति चेन्नान्यस्मृत्यनवकाशदोषप्रसङ्गात् (ब्रह्मसूत्रम्-२-१-१)

ĀSmṛtyanavakāśadoṣaprasaṅga itī cennānyasṁṛtyanavakāśadoṣaprasaṅgāt (Brahmasūtram-2-1-1)

Meaning: *If it be objected that (from the doctrine of Brahman being the cause of the world) there would result the defect of there being no room for certain Smritis (we say) no, because (by the rejection of that doctrine) there would result the defect of want of room for some other Smriti.*

The first chapter, in Śārīraka Mīmāṃsā Brahmasūtra, is meant for Samanvayādhyāya (chapter of harmony). The second chapter is called Avirodhādhyāya (chapter of incontestable). Names of the chapters provide very insight about intended subject core of the chapter.

Sutras are threads like connective substance to bring flower like Upanishad sentences to present how they are connected each other. A reader would appreciate the harmony between Upanishad sentences presented by Rishi Veda Vyasa in first chapter of Śārīraka Mīmāṃsā Bhāṣyam (Great commentary on Brahmasutras) followed by Acharya Shankara. Sāṅkhya school of thought is main oppose (Pradhana Malla – main wrestler) in first section of second chapter, because Sāṅkhya got its own very strong philosophical base chronologically, logically also. ‘Other schools of thoughts starting from Vaiśeṣika (Indian physics) to Cārvāka will be defeated by defeating Sāṅkhya alone’ says Acharya Shankara in his commentary, establishing Brahma to be the inherent and material cause for creation in last Sutra of first chapter.

The main subject domain here is Srishti Shastra (cosmology), about cosmic structure, where is it originated from? How is it manifested? How and whereabouts creation of the worlds. Orthodox and heterodox philosophical thoughts are projected. First chapter already “Janmādyasya Yataḥ”, “Prakṛtiśca Pratijñā Dṛṣṭāntānuparodhāt” had focus on Sṛṣṭi Śāstra (cosmology) and Brahmakāraṇavāda (Theory of Brahma to be root cause of all) is very well projected. The wonderful world in which we are all living is Sat – Chit – Anandam. The existence of the world is perceived through perception. Existing perceiver perceives existing objects. World is of two substances, perceiver and perceived (Draṣṭā and Dṛśyam). Perception makes proof, Caitra perceives objects such as Ghata (pot) and Pata (cloth). Perceiver is established correspondingly along with objects. Sankhya and Naiyyāyika (Indian Logical system) are called Anuvādis (theory of establishing atoms to be the cause of creation). While other schools Prakṛtivādis, Anuvādis, Śūnyavādis, Īsaravādis etc... will also be defeated step by step in this chapter. Thoughts of other schools are

also very well presented by Veda Vyasa himself in different aphorisms. Now the first Adhikaranam is

Smṛtyanavakāśadoṣaprasaṅgāt || Bra. Sū. 2 | 1 | 1 ||

This sutra deals with the school of philosophy projected by Sāṅkhya. “The Mantra from Śvetāśvatara Upaniṣat –

Ṛṣiṁ prasūtam kapilam... ca paśyet ||

|| Shvetashvatara Upanishat ||

Refers Kapila, great preceptor of Sāṅkhya philosophy is one of the great Rishis of yore. Therefore it is mandatory to accept Prakṛti – Puruṣa vāda as an authentic one, because it has references from Śruti and Smṛti is Pūrvapakṣa (to be defeated)” says Acharya Shankara. Mīmāṃsākās advocated a theory of considering Śruti to be very much authentic completely and all other scriptures should support, which is also accepted by other schools of thoughts. Any Smṛti backs Śruti will be taken as an authentic. When Śruti and Smṛti are at logger head Smṛti will be kept away. If Smṛtis talk in different voice, wise have to examine very carefully. If the sentences from Smṛtis contradict each other, the Smṛti with backing from Śruti is there that is to be taken. So that Smṛti is not an independent proof, Brahmakāraṇavāda is taken in this context of two vādas projected, Brahmakāraṇavāda and Prakṛtikāraṇavāda. Śruti sanctions Brahmakāraṇavāda, but Prakṛtikāraṇavāda got only Smṛti. That is what Veda Vyasa says, Smṛti such as Manusmṛiti and others. Manusmṛiti projects both Brahma and Prakṛti as cause of creation. Finally Manu also quotes from Shṛuti “Sarvabhūteṣu Cātmanāṁ... Svarājyamadhigacchati” and highlighted by other Bhashyakaras. “Bahūnāṁ paraṣunāṁ yathā sukham”, these verses are quoted here. Thus all major works support Brahma to be the cause of creation. Tarka (logical understanding) has limitation in itself, but in this particular Pada Smṛiti is the main proof. In second chapter only Tarka will be taken, presently cacophony with reference to smṛti is taken for examination. That is how this Avirodhādhyāya starts with present Adikarāṇa.

to be continued...



ಪಾತಂಜಲ ಯೋಗಶಾಸ್ತ್ರ

ವೃತ್ತಿ ಶೂನ್ಯತೆ ವಿರಾಮಾನುಭವ



■ ಶ್ರೀ ರಾಜೇಶ ಎಚ್.ಕೆ.
ಸಂಯೋಜಕರು ಹಾಗೂ ಸಹಾಯಕ ಪ್ರಾಧ್ಯಾಪಕರು
ಯೋಗ - ಅಧ್ಯಾತ್ಮ ವಿಭಾಗ
ಎಸ್-ವ್ಯಾಸ ಯೋಗ ವಿಶ್ವವಿದ್ಯಾಲಯ

ವಿರಾಮಪ್ರತ್ಯಯಾಭ್ಯಾಸಪೂರ್ವಃ ಸಂಸ್ಕಾರಶೇಷೋಽನ್ಯಃ

|| ಪ.ಯೋ.ಸು - 1.18 ||

ಪರವೈರಾಗ್ಯವು ಸಂಪ್ರಜ್ಞಾತ ಸಮಾಧಿಯಿಂದ ಅಸಂಪ್ರಜ್ಞಾತ ಸಮಾಧಿಯ ಅವಸ್ಥೆಗೆ ಕಾರಣವೇನೋ ಹೌದು. ಆದರೆ ಈ ಅವಸ್ಥೆಯಲ್ಲಿ ಮನಸ್ಸಿನ ಎಲ್ಲ ಕ್ರಿಯೆಗಳು ಸ್ವಭವಾದರೂ ಸಹ ಅಪ್ರಕಟಿತ ಸಂಸ್ಕಾರಗಳು ಚಿತ್ತದಾಳದಲ್ಲಿ ಧಾರಣೆಯಾಗಿರುತ್ತವೆ.

ಮಹರ್ಷಿಗಳು ಈ ಸೂತ್ರದಲ್ಲಿ ಅಸಂಪ್ರಜ್ಞಾತ ಸಮಾಧಿಯ ಸ್ವರೂಪವನ್ನು ಮತ್ತು ಅದನ್ನು ಪಡೆಯುವ ವಿಧಾನವನ್ನು ನಿರ್ವಚಿಸುತ್ತಿದ್ದಾರೆ. ಮಣಿಪ್ರಭಾ ಭಾಷ್ಯದಲ್ಲಿ ಉಲ್ಲೇಖಿಸಿರುವಂತೆ (ವೃತ್ತಿನಾಮಭಾವೋ ವಿರಾಮಃ) ಪರವೈರಾಗ್ಯದ ಅಭ್ಯಾಸದಿಂದ ಮನಸ್ಸು ವೃತ್ತಿಗಳಿಂದ ವಿರಾಮವನ್ನು ಪಡೆದರೂ ವೃತ್ತಿಗಳಿಗೆ ಕಾರಣವಾದ ಸಂಸ್ಕಾರಗಳು ಉಳಿಯುವ ಕಾರಣ ಈ ಅವಸ್ಥೆಯನ್ನು ಅಸಂಪ್ರಜ್ಞಾತ ಸಮಾಧಿಯೆಂದು ಕರೆಯಲಾಗಿದೆ.

ಹಿಂದಿನ ಎರಡು ಸಂಚಿಕೆಗಳಲ್ಲಿ ಸಂಪ್ರಜ್ಞಾತ ಸಮಾಧಿಯ ಸ್ವರೂಪ ಮತ್ತು ಅವುಗಳ ವಿವಿಧ ಭೂಮಿಕೆಗಳನ್ನು ಅವಲೋಕನ ಮಾಡಿದ್ದೇವೆ. ಸವಿತರ್ಕದಲ್ಲಿ ಸ್ಥೂಲ, ಸೂಕ್ಷ್ಮ, ಅಂತಃಕರಣ (ಮನಸ್ಸು, ಬುದ್ಧಿ, ಅಹಂಕಾರ ಮತ್ತು ಚಿತ್ತ) ಹಾಗೂ ಅಸ್ಥಿತಾ

ಭಾವ ಈ ನಾಲ್ಕು ಅಸ್ಥಿತ್ವದಲ್ಲಿರುತ್ತವೆ. ಅದರೆ ಮುಂದೆ ಮುಂದೆ ಹೋದಂತೆ ಹೊರ ಅವರಣಗಳು ಕಳಚಿಕೊಂಡ ಚಿತ್ತವು ಸವಿಚಾರ ಅವಸ್ಥೆಯಲ್ಲಿ ಕೇವಲ ಸೂಕ್ಷ್ಮದಲ್ಲಿ ಪ್ರತಿಷ್ಠಾಪಿತವಾಗುತ್ತದೆ. ಹಾಗೆಯೇ ಆನಂದದ ಸ್ಥಿತಿಯಲ್ಲಿ ಅಂತಃಕರಣ ಮತ್ತು ಅಸ್ಥಿತಾ ಭಾವಗಳು ಉಳಿದಿರುತ್ತವೆ. ಅಂತಿಮವಾಗಿ ಅಸ್ಥಿತಾ ಅವಸ್ಥೆಯಲ್ಲಿ “ಸ್ವರೂಪ ಸ್ಥಿತಿಯಲ್ಲಿ ನಾನಿದ್ದೇನೆ” ಎಂಬ ಭಾವ ಸಂಪ್ರಜ್ಞಾತ ಸಮಾಧಿಯ ಅಂತಿಮ ಚರಣವಾಗಿರುತ್ತದೆ. ಅಂದರೆ ವ್ಯಕ್ತ, ಶಾಖೆಗಳು ಹಾಗೂ ಅದನ್ನು ಬೇರುಸಹಿತ ಉರುಳಿಸಿದ್ದಾಗಿದೆ.

ನಿರಂತರ ಅಭ್ಯಾಸ ನಿರತನಾದ ಯೋಗಿಯು ಚಿತ್ತದ ಎಲ್ಲ ವೃತ್ತಿಗಳನ್ನು ನಿರೋಧ ಮಾಡುವಲ್ಲಿ ಯಶಸ್ವಿಯಾಗಿತ್ತಾನೆ. ವೃತ್ತಿ ನಿರೋಧವು ಪ್ರಾಪ್ತವಾಗುವ ಕಾರಣ ಬಾಹ್ಯ ವಸ್ತುವಿನ ಜ್ಞಾನವು ಶೂನ್ಯವಾಗಿರುತ್ತದೆ. ಆದರೂ ವೃತ್ತಿಗಳ ಸಂಸ್ಕಾರಗಳು ಮನದಾಳದಲ್ಲಿ ಶೇಖರವಾಗಿರುತ್ತವೆ. ಕೊಳದಲ್ಲಿ ನೀರೇನೋ ತಿಳಿಯಾಗಿ ಕಾಣುವಹುದು. ಆದರೆ ಬಹು ತೂಕವಾದ ಕಲ್ಲೊಂದನ್ನು ಕೊಳಕ್ಕೆಸೆದಾಗ ಕೆಳಭಾಗದಲ್ಲಿ ಶೇಖರವಾಗಿರುವ ಮಡ್ಡಿಯ ಕಾರಣ ನೀರು ಬಗ್ಗಡವಾಗುತ್ತದೆ. ಹೀಗೆಯೇ ಮೇಲ್ನೋಟಕ್ಕೆ ಯೋಗಿಯು ಮನಸ್ಸಿನ ವೃತ್ತಿಗಳನ್ನು ನಿರೋಧಿಸಿದರೂ ಸಂಸ್ಕಾರಗಳು ಪರಿಸ್ಥಿತಿಗಳು ಎದುರಾದಾಗ ಸಂಸ್ಕಾರಗಳು ಅಭಿವ್ಯಕ್ತವಾಗುತ್ತವೆ. ಮನಸ್ಸು ಮತ್ತೊಮ್ಮೆ ಉಲ್ಲೋಲ-ಕಲ್ಲೋಲವಾಗುತ್ತದೆ. ನಾವು ಮರವನ್ನು ಸಂಪೂರ್ಣವಾಗಿ ಬೇರು ಸಹಿತ ಉರುಳಿಸಬಹುದು. ಆದರೆ ಅದರ ಬೀಜಗಳು ಅದರ ಬುಡದಲ್ಲೇ ಬಿದ್ದಿರುತ್ತವೆ. ಋತುಗಳ ಸಮಯದಲ್ಲಿ ಮಳೆಯ ಮಾರುತಗಳು ಕ್ರಿಯಾಶೀಲವಾದಾಗ ಅದೇ ಬೀಜಗಳು



ಮತ್ತೆ ಗಿಡ - ಮರಗಳಾಗಿ ಬೆಳೆಯುತ್ತವೆ. ಹಾಗಾಗಿ ಕಳೆ ಗಿಡಗಳು ಮತ್ತೆ ಬೆಳೆಯಬಾರದೆಂದೆ ರೈತನು ಬೇರುಸಹಿತ ಕಿತ್ತ ನಂತರವೂ ಅವುಗಳನ್ನು ಅಗ್ನಿಯ ಸಹಾಯದಿಂದ ಸುಟ್ಟುಹಾಕುತ್ತಾನೆ. ಮತ್ತೊಮ್ಮೆ ಅವುಗಳು ವ್ಯಕ್ತವಾಗಲು ಅವಕಾಶವೀಯುವುದಿಲ್ಲ. ಹಾಗಾಗಿ ಸಾಧಕನು ಚಿತ್ತದ ವಿವಿಧ ಭೂಮಿಕೆಗಳಾದ ವೃತ್ತಾನ್, ಸಮಾಧಿ, ಏಕಾಗ್ರವಸ್ಥೆಗಳನ್ನು ದಾಟಿ ನಿರೋಧವಸ್ಥೆಯನ್ನು ತಲುಪಿದಾಗ ಮಾತ್ರ ವೃತ್ತಿಗಳ ಸಂಸ್ಕಾರಗಳು ನಾಶವಾಗುತ್ತವೆ.

ಅಂದರೆ ಚಿತ್ತವು ಸಂಪೂರ್ಣವಾಗಿ ನಿರಾಲಂಬನವಾಗುತ್ತದೆ. ಯಾವುದೇ ಬಾಹ್ಯ ಆಲಂಬನವಿರುವುದಿಲ್ಲ. ಕ್ರಿಯೆಗಳಿಗೆ ಪ್ರತಿಕ್ರಿಯೆಯಿರುವುದಿಲ್ಲ. ಕೇವಲ ಸಾಕ್ಷಿಯಾಗಿರುತ್ತಾನೆ. ಅಸಂಪ್ರಜ್ಞಾತ ಸಮಾಧಿಯಲ್ಲಿ ಇನ್ನೂ ಸಂಸ್ಕಾರಶೇಷಗಳು ಇರುವ ಕಾರಣ ಸ್ವಭಾವತಃ ಚಂಚಲವಾದ ಮನಸ್ಸು ಮತ್ತೆ ಜಾರಿಬೀಳುವ ಎಲ್ಲ ಸಂಭವವಿರುತ್ತದೆ. ಅಸಂಪ್ರಜ್ಞಾತ ಸಮಾಧಿಯಲ್ಲೂ ಕ್ರಿಯೆಗಳಿಗೆ ಪ್ರತಿಕ್ರಿಯಿಸದಿದ್ದರೆ ಅದು ನಿರ್ಬೀಜ ಸಮಾಧ್ಯವಸ್ಥೆಗೆ ಎಡೆಮಾಡಿಕೊಡುತ್ತದೆ.

ಹಾವು-ಬೀಣೆ ಆಟದ ಹಾಗೆ. ಇನ್ನೇನು ಶತಕದತ್ತ ಮುಟ್ಟುವ ಸಂದರ್ಭದಲ್ಲಿ ಹಾವಿನ ಮನೆಗೆ ಪ್ರವೇಶಮಾಡಿದಲ್ಲಿ ಪುನಃ ತೀರಾ ಕೆಳಸ್ತರದಿಂದ ಆಟ ಆರಂಭಿಸಬೇಕಾಗುತ್ತದೆ. ವಿಶ್ವಾಮಿತ್ರ ತನ್ನ ತಪಸ್ಸಿನ

ಎಲ್ಲಶಕ್ತಿಯನ್ನು ತನ್ನದೇ ಕ್ರೋಧದ ಕಾರಣ ಶಾಪವನ್ನೀಯುವ ಮೂಲಕ ಶಕ್ತಿಯ ಹ್ರಾಸ ಮಾಡಿಕೊಳ್ಳುತ್ತಿದ್ದ. ಮತ್ತೆ - ಮತ್ತೆ ತಪಗೈಯುತ್ತಿದ್ದ. ಬುದ್ಧನಿಗೆ ಯಾರೋ ಒಬ್ಬ ಕ್ರೋಧಿತ ವ್ಯಕ್ತಿ ಮುಖಕ್ಕುಗುಳಿದ. ಶಿಷ್ಯರು ಕ್ರೋಧಿತರಾದರು. ಆದರೆ ಬುದ್ಧ ಅವರನ್ನು ತಡೆದು ಹೇಳಿದ " ಅವನನ್ನು ಬಿಟ್ಟುಬಿಡಿ, ಪ್ರಾಯಶಃ ನನ್ನ ಪೂರ್ವಜನ್ಮದ ಯಾವುದೋ ಒಂದು ಸಂಸ್ಕಾರ ಉಳಿದಿರಬೇಕು. ನನ್ನಿಂದ ಇವನಿಗೆ ಪೂರ್ವಜನ್ಮದಲ್ಲಿ ಘಾಸಿಯಾಗಿರಬೇಕು. ನಾನು ಪ್ರತಿಕ್ರಿಯಿಸಿದರೆ ಆ ಸಂಸ್ಕಾರ ಬೀಜರೂಪದಲ್ಲಿ ಮತ್ತೆ ಉಳಿಯುತ್ತದೆ. ಇದನ್ನು ಇಲ್ಲೆಸುಟ್ಟುಬಿಡಬೇಕು" ಎಂದು ಹೇಳಿದ. ಹಾಗಾಗಿ ಧರ್ಮಮೆಘ ಸಮಾಧಿ/ಧ್ಯಾನದ ಸಹಾಯದಿಂದ ಚಿತ್ತದಾಳದಲ್ಲಿರುವ ವೃತ್ತಿಗಳ ಸಂಸ್ಕಾರಗಳನ್ನು ನಿರೋಧಗೊಳಿಸುವ/ಸುಟ್ಟುಹಾಕುವ ಪ್ರಕ್ರಿಯೆ ನಿರ್ಬೀಜ ಸಮಾಧಿಗೆ ಕೊಂಡೊಯ್ಯುತ್ತದೆ. ಈ ಸ್ಥಿತಿಯಲ್ಲಿರುವ ಯೋಗಿ ಮಾತ್ರ ನಿರ್ಬೀಜ ಸಮಾಧಿಯನ್ನು ತಲುಪುವ ಮೂಲಕ ನಿರ್ವಿಕಲ್ಪ/ಕೈವಲ್ಯ/ಮೂಲಸ್ವರೂಪದಲ್ಲಿ ನೆಲೆನಿಲ್ಲುತ್ತಾನೆ. ಈ ಸ್ಥಿತಿಯನ್ನೇ ಪತಂಜಲಿ ಮಹರ್ಷಿಗಳು "ತದಾ ದ್ರಷ್ಟುಃ ಸ್ವರೂಪೇ ಖವಸ್ಥಾನಮ್" ಎಂದು ಹೇಳಿದ್ದು.

(ಸಶೇಷ)

Krishna Janmashtami celebrations

■ Kaushik, MSc (Y&C)^{1st Sem}

Krishnavatara's reason when observed can be divided into two, one for jnana karya and the other is bhubhara harana. Krishna as his name suggests mean one who attracts, he has attracted devotees as well as demons. If great devotees like Akroora to Bhishmacharya were attracted and attained salvation, demons like pootana to duryodhana were also attracted and attained their own nature. Krishnavatara was to balance the positive and negative forces. India has always been a land of yoga and wisdom, Krishna through his geetopadesha gave a royal path to it, geeta is a gist of the Vedas, Upanishads, puranas and the Mahabharata itself. Krishna is an embodiment of love, he is easily available to his devotees, he tells that "one who offers leaf, flower, fruits or atleast water with devotion I become his devotee forever", Krishna's action also has shown the same, we can see it in the case of Pandavas, Vidura, kuchela etc., Krishna's janma utsava is celebrated all over the world in different styles, our prashanthi kutiram which gives the message of vasudhaiva kutumbakam also celebrated janmashtami very grandly. People did not feel the need to eat or drink in the devotion of Krishna on that day, all arrangements were made by the students, different kinds of dishes were prepared to offer to baby Krishna. As the chandrodaya occurred, all the students, staff, participants assembled in the prayer hall where Krishna was beautifully decorated. As he was born in the night of ashtami in a half moon lit night, following the traditional way puja was done, bhajans were sung to please the saamagaana priya and Vedic hymms were chanted to please the veda vedya and finally arghya pradana was given to baby Krishna, devaki, Chandra and rohini as Krishna belongs to the Chandra vamsha, this was followed by the maha mangalarathi and teertha prasada vitarana. Krishna's action starting from his childhood has proved him as the yogeshwara or as Vishnu Sahasranama rightly praised he is yogavidaam neta. Let his blessings be on all of us. Shri krishnarpanamastu !!!





Consciousness - Science and Vedanta

Part II

Recapping Classical Theories

We covered the Higher Order Theory, Global Workspace Theory and Biological Theory.

The essence of Higher Order Theory is that there are two levels of mental state. When a higher order mental state becomes aware of a lower order mental state, the later becomes conscious. Consciousness thus is a relational property of the lower order state and not intrinsic to it.

The Global Workspace Theory views the brain as a society of bio- computers connected with hubs and highways capable of broadcasting waves across the entire system. Consciousness is defined as a momentary broadcast of wave medium in the cortical thalamic core. The essence of this theory is that consciousness emerges at a complex level of computation.

The Biological Theory states that there is something biological about consciousness. Interaction with the outside world leads to cortical activation, which connects with the brain stem via what is called a thalamic switch. This is consciousness.

We saw that all these theories focus on what consciousness does rather than what it is. Secondly there is this issue of the hard problem. These theories fail to explain why we need consciousness at all. These theories could well

■ *Sri Atul Sinha*
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work if we were zombies. They fail to explain qualia, that is, the subjective experience of consciousness. Most scientists agree that science does not have a solution to the hard problem.

In Part II of this series we look at the quantum theory of consciousness.

Background to Quantum Theory

Roger Penrose is a British mathematical physicist. His premise is that consciousness does not appear to be computational. While there is a lot of computational activity going on in the brain, somehow it is unconscious. It does not explain the subjective experience. If this premise is correct then there is some other physical basis of non-computational behavior in the brain. He determined that wave function collapse (explained later) was the prime candidate for a non-computational process.

In quantum mechanics particles are not described by position but by wave function. A particle can be in two states at the same time.





This is called superposition. When the quantum system interacts with the classical system, that is, when the particle is observed it collapses into one state. If the collapse is random then no algorithm can predict its outcome. In other words it is non-computational. This is the basis of Penrose's hypothesis.

Penrose however did not like the random nature of collapse for mathematical reasons. He proposed what he called Objective Reduction. The choice of state is neither random nor algorithmic. He theorized that the state is selected by a non-computational influence embedded in space-time geometry. He claims that such information is platonic and embedded in the universe. It encompasses mathematical truth, ethics and aesthetics.

Consciousness is thus not an emergent property of brain function. It is a fundamental property of the universe that we draw from.

What Penrose lacked was a structural model of how such quantum processing could be implemented in the brain. That's where Stuart Hameroff comes into the picture. Hameroff is an American anesthesiologist with interest in consciousness.

According to neuroscience, cognition emerges from complex synaptic interactions amongst many neurons. However, even a single cell organism like paramecium performs cognitive functions without synaptic interactions. Therefore, according to Hameroff, something other than synaptic interaction is needed to explain cognition. He studied the cytoskeleton, which provide an internal supportive structure for neurons. Embedded in the neural skeletal system are microtubules. He proposed that microtubules were suitable for quantum processing. The gap between cells is sufficiently small for quantum objects to tunnel through. This allows them to extend across a large area of the brain.

Penrose and Hameroff collaborated to postulate the Orchestrated Objective Reduction Theory of consciousness better known as Orch-OR theory. Penrose's book *Shadows of the Mind* (1994) elaborates this theory.

The Orch-OR Theory

As discussed already, computational activity in the brain does not explain subjective experience, which is at the core of consciousness. Therefore there must be a non-computational behavior in the brain. Penrose and Hameroff argue that quantum information reside in microtubules located in the neural skeletal system. The gap between neurons is small enough for the quantum information to tunnel through and thus extend across a large portion of the brain.

In quantum mechanics particles defined as wave functions can be in two places at once. This is called superposition. If observed the particle will collapse into one state.

How can something be in two places at once? The theory is that the underlying reality splits. However, this separation is unstable and something called quantum gravity will ensure reduction to one state.

The theory states that the collapse is neither random nor algorithmic. They say that there are platonic values embedded in the universe, which brings about this reduction. This is the non-computable factor Penrose refers to. This is what they call objective reduction.

The ancient Greek Democritus is invoked to describe platonic values. He had held that nature contains a raw component of consciousness. This developed into a philosophy called panpsychism where everything-animate and inanimate is imbued with this consciousness. Penrose and Hameroff call this proto-consciousness.

The elusive qualia, discussed earlier are thus a fundamental feature of space-time geometry.



This is what gives rise to the conscious experience. Simply stated proto consciousness is embedded in the universe. Values like aesthetics and ethics are part of this consciousness. We draw from this universal consciousness when we have the subjective experience. The process involves a quantum reduction brought about by this proto consciousness.

The question arises that if quantum processing is taking place what is the need for classical processing via synaptic interactions. According to Hameroff classical processing is required for unconscious functions and to communicate decisions resulting from quantum processing.

Criticism of Orch-OR Theory

To arrive at the hypothesis that there is a non-computational aspect to consciousness, Penrose used Gödel's mathematical theorem. Many mathematicians have widely criticized different aspects of Penrose's argument.

To support the theory Hameroff proposed 8 probable assumptions and 20 testable predictions. Neurobiologists have challenged many of these.

Some scientists have rejected this theory on the ground that the brain is too warm, wet and noisy to support quantum processing. However counter observations have found evidence of such processing at normal temperature.

Further in 2014, Anirban Bandyopadhyay discovered quantum vibration in microtubules to confirm the Orch-OR hypothesis.

Wider Implication of Orch-OR

Penrose and Hameroff have proposed the plausibility of things, which conventionally fall in the presumably spiritual realm.

They say that when the body dies, the quantum

processing stops but the quantum information, which includes memory, is not destroyed. It just leaks out into the universe. Due to, what they call quantum entanglement; the individual integrity of this quantum information is maintained. In near death experiences, when the body is resuscitated, this quantum information returns.

In the case of death this information remains in the universe as a 'quantum soul'. The follow up conclusion that there could be reincarnation is seen as plausible

They conclude, "Consciousness is a self organizing process at a fundamental level of the universe. We are all really the universe. We are connected."

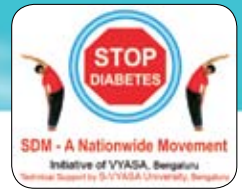
Summary

The classical theories do not solve the hard problem of consciousness. Orch-OR theory hypothesized that consciousness is not a result of the computational activity of the brain. It says that quantum processing occurs in the brain and consciousness results at the point of quantum collapse or reduction. This reduction is neither random nor algorithmic. Values such as truth, ethics and aesthetics exist in the universe as proto consciousness, which is behind the objective reduction. The quantum model explains qualia, which was unexplained by classical models.

Extending this model, it is plausible that there is a soul and reincarnation. This is the perfect point to segue into Vedanta, which will be the subject of Part III of this series.

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Madhumeha Mukta Bharat Abhiyan Nationwide Stop Diabetes Movement

Report from Ichalkaranji, Maharashtra



In continuation with the grand success of Yoga Saptaha under Madhumeha Mukta Bharat, a weeklong yoga camp was organized by Kolhapur Zilha Yoga Parishad and Healthy Lifestyle Foundation at Ichalkaranji, Maharashtra. Camp was held at Yoga and Gymnasium Hall from 6th September to 13th September, 2015. Blood tests were organized through SRL on 6th September. Total of 41 participants registered for blood tests, though total participants for camp were 70.

Dr. Amit Rathi, the National Coordinator of Stop Diabetes Movement conducted the camp with the help of Yoga Therapists – Sumit Rathi, Mrs. Rupali Rathi and other volunteers. All participant have been asked to do the practice regularly to assess the effect of yoga therapy in the prevention and management of diabetes.

Report from Varanasi, Uttar Pradesh

A weeklong training program was organized under Madhumeha Mukta Bharat (MMB) abhiyan by Surya Jankalyan Hospital at Varanasi from 15th to 21st September, 2015. Training was conducted by Dr. Amit Rathi, the National Coordinator of Stop Diabetes Movement with the help of yoga therapist – Ranapratap Singh. Yoga Module – 1 of MMB was taught to trainees.

Total 24 trainees attended the training program. Yoga camp under MMB will be organized at the same venue from 27th September for a week to give field experience to all trainees. Once trained completely, these trainers are expected to conduct small scale camps or classes at different places of Varanasi to prevent and management of diabetes through yogic way of lifestyle.



Upcoming Camps

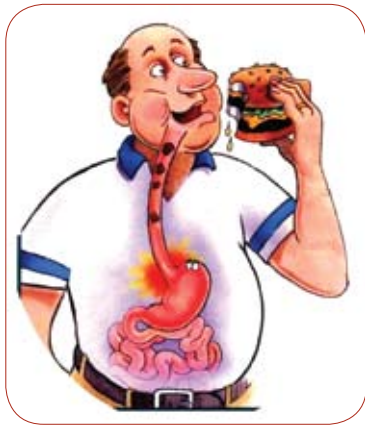
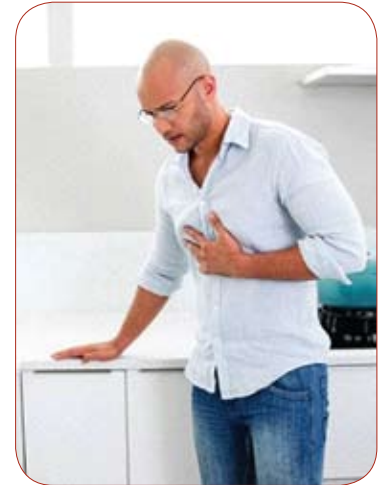
1. From Oct 1 - 8, 2015 at Paradeep, Orissa
2. From Oct 14 - 21, 2015
at Srikakulam, Andhra Pradesh
3. From Oct 24 - 31, 2015
at Vizag, Andhra Pradesh. ■



Arogyadhama Success Stories

Case 1: Acid Peptic Disease

Mr Ganesh (name changed), aged 28, was afflicted with abdominal discomfort (belching and distension) since 3 years. The problem started with epigastric burning in the form of a pain in the upper abdomen. He had disturbed sleep and heaviness over head with a widely fluctuating thyroid function in November 2014 but was not on any medication. He was passionately involved in physical activities and played tennis 3 hours a day and eating habits were irregular. He was diagnosed with Acid Peptic Disease, involving swelling or inflammation of the stomach lining.



He came to Arogyadhama in June 2014. His life, revolving round physical activities/sports along with haphazard eating habits and a toxic lifestyle, was the reason for his condition. During his week-long stay he was taught certain yoga practices based on Integrated Approach of Yoga Therapy (IAYT) with a focus on his problems. He was given counselling to improve his lifestyle with regular eating and sleeping habits. He was also made to practice vamana dhouti every alternate day along with cooling pranayama like sheetali and sheetakari etc to help him relieve from his symptoms. He had also practiced cyclic meditation which had worked very positively on his emotional level; he jubilantly shared with

us. In addition to the above treatments the focus was on his lifestyle. He was regularly counselled

and motivated to follow a systematic lifestyle. He was given a satvik diet as a healthy food style is most important for curing gastrointestinal diseases. He was also counselled what diet would help him keep his problems under control back home.

Improved Parameters

Within one week, his belching and abdominal distension reduced markedly. At the time of his discharge he reported 90% improvement on all counts.





Vital parameters

Parameters	DOA	DOD	Parameters	DOA	DOD
Pulse Rate (beats/min)	82	74	Weight (kg)	59	58
Blood Pressure (mm of Hg)	118/74	110/76	Brahmari time (sec)	16	18
Respiratory Rate (cycles/min)	14	13	Symptom score	4	0

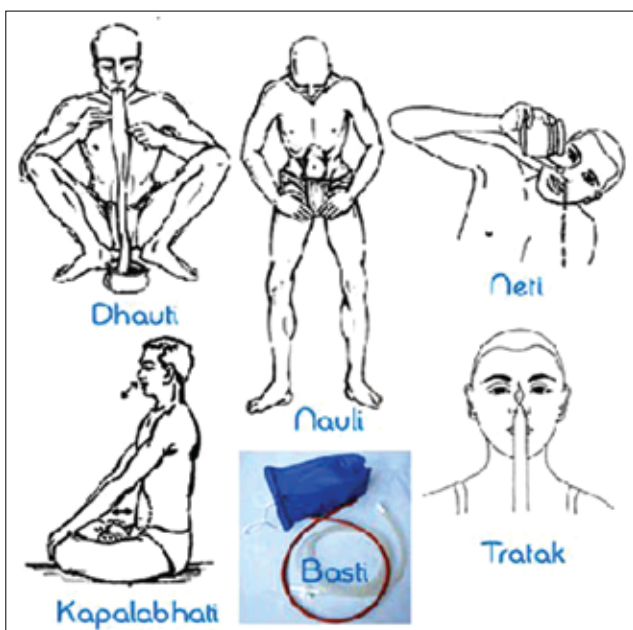
Symptoms as on date of admission (DOA) and date of discharge (DOD)

	1 st week
Symptoms	Belching ↓ by 100 % Abdominal distension ↓ by 80% Heat in stomach down by 80% Sleep quality improved dramatically

Case 2: Chronic Constipation

Mr Nagesh (name changed), aged 52, was suffering with chronic constipation and feeling of incomplete evacuation of bowels with hard stools since 10 years. Though not a serious disease by itself, it can be both painful and frustrating. Nagesh had difficulty in passing stools and suffered from abdominal distension, flatulence, disturbed sleep and increased frequency of micturition. He was diagnosed as a case of chronic constipation. There was no history of other major illnesses or surgeries in the past.

During his weeklong stay at Arogyadhama in June 2014 he



underwent yoga practices based on Integrated Approach of Yoga

Therapy (IAYT) along with naturopathy based juice diet and detoxification therapy. Counselling session was given to sublimate and let go his disturbed emotions. He was made to do special advanced meditation technique like cyclic meditation and mind sound resonance technique which helped him to sublimate his deep rooted emotions and relax him mentally and physically. He was able to do all the asanas with focus was on yogic kriyas like laghu shankhprakashana (intestinal cleansing technique) which cured him of his constipation along with the above said techniques.



Parameters

Within six days his constipation, flatulence and distension of abdomen was markedly reduced. At the time of his discharge he reported 80% improvement in his complaints.

Vital parameters

General Parameters	DOA	DOD	Specific Parameters	DOA	DOD
Pulse Rate (beats/min)	78	72	Weight (kg)	83	84
Blood Pressure (mm of Hg)	120/96	120/84	Respiratory Rate (cycles/min)	20	15
Brahmari time (sec)	16	22	Symptom score	4	0

Symptoms as on date of admission (DOA) and date of discharge (DOD)

	1 st week
Symptoms	Bowels became 100% normal & regular Flatulence and abdominal distension ↓ by 100% Sleep Quality improved by 90% Frequency of micturition ↓ by 70%



YIC DDE - Batch 23rd - Aug, 2015



Yoga for Doctors

Doctors suffer from high levels of stress and depression,¹ more so than other workers.²

The proportion of doctors and other health professionals showing above threshold levels of stress is significantly high at around 28%, as compared to around 18% in the general working population.³ Many studies show that the quality of patient care can be severely affected by the stress levels of clinical staff, particularly the doctors.³ Stressed doctors may make considerably more errors than those whose sense of well being is high.⁴ This is particularly true if they have insufficient hours of sleep.⁵ Major stressors for doctors are increased work hours, lack of sleep, making mistakes in clinical care, unsupportive family environment, being too self-critical, poor communication and poor team work. Clearly, while some stresses encountered by doctors are intrinsic to the job, others (such as hours worked) may be modified.²

Yoga, a form of holistic mind–body medicine, that includes the use of physical postures (*asanas*), breathing practices (*pranayamas*), meditations, relaxation techniques, and lifestyle changes

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based on ancient yogic philosophy, is simple, cost-effective and easy to practice.⁶ Yoga has become popular as an effective and safe coping strategy to deal with stress. Yoga reduces stress by improving autonomic functions via triggering neuro- hormonal mechanisms that suppress sympathetic activity through down regulation of the hypothalamic–pituitary–adrenal (HPA) axis.⁷ A review of studies on cyclic meditation suggests that this technique brings deeper levels of relaxation without hampering the alertness.⁸ Yogic relaxation (*YogaNidra*) is also a successful therapy for managing both recent and long standing psychological distress.⁹

Several yogic practices (performed daily for 60 minutes, for 3 months) may be useful for doctors in managing their stress better. The Integrated Approach of Yoga Therapy (IAYT) practices for doctors are provided in Table 1:

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Table 1: IAYT Practices for Doctors

SNo	Category of Practice	Name of Practice	Duration
1	Breathing techniques ¹⁰ (<i>Prānāyāma</i> ,)		total ~ 20-minute session
2		Hands in and out breathing	10 rounds in 2 minutes
3		Hand stretch breathing	10 rounds in 2 minutes
4		Tiger breathing	10 rounds in 2 minutes
5		Forceful exhalation (<i>Kapālabhāti</i>)	20 breaths per minute in 1 minute
6		left nostril breathing (<i>Chandra Anuloma Viloma</i>)	27 rounds in 5 minutes
7		Alternate nostril breathing (<i>Nādisuddhi</i>)	12 rounds in 5 minutes
8		Humming bee breath (<i>Bhramari</i>)	2 minutes
9		Abdominal breathing in lying-down position	2 minutes
10	Physical postures ¹⁰ (<i>Āsanas</i>)		1 minute each side, total ~ 15-minute session
11	Standing <i>āsanas</i>		
12		<i>Surya Namaskāra</i> (Sun Salutation) in slow mode with maintenance of each posture for 10 breaths	3 rounds
13		Hand-to-foot pose (<i>Pādahastāsana</i>)	1 minute
14		Half-waist-rotation pose (<i>Ardha Kati Chakrāsana</i>)	1 minute
15	Sitting <i>āsanas</i>		
16		Half-spinal-twist pose (<i>Ardha-matsyendrāsana</i>)	1 minute
17		Twisted pose (<i>Vakrāsana</i>)	1 minute
18		Hare pose (<i>Shashānkāsana</i>)	1 minute
19		Back-stretching pose (<i>Paschimottānāsana</i>)	1 minute
20	Prone <i>āsanas</i>		
21		Crocodile pose (<i>Makarāsana</i>)	1 minute
22		Cobra pose (<i>Bhujangāsana</i>)	1 minute
23	Supine <i>āsanas</i>		
24		Wind relieving pose (<i>Pawanmuktāsana</i>)	1 minute
25		Bridge pose (<i>Setubandhāsana</i>)	1 minute
26		Shoulder stand pose (<i>Sarvāṅgāsana</i>)	1 minute
27	Guided relaxation (<i>Savāsana</i>) ⁷	<i>YogaNidra</i> ⁹	10 minutes at the end of <i>āsanas</i> and <i>prānāyamas</i> .
28	Meditations		15 minutes
29		<i>Om</i> Meditation, ¹⁰ or Cyclic meditation ⁷	15 minutes, once a day



READINESS POTENTIAL IS THERE FREE WILL?

INTRODUCTION

The new area of Mind-Body medicine has come up with some intangible logical cul-de-sac regarding definitions of mind and body and their interaction possibilities. There has been a debate regarding where mind meets the body. While the model provided by both Yoga and Ayurveda are very clear about this, modern sciences (including psychology and medicine) are not sure if there is a mind at all or it is simply an epiphenomenon of brain function. This means that brain is really the repository and organizer of mind function and there is no separate entity called the mind. Further, there is a raging debate in the West if there is free will at all in humans and other animals; everything is predetermined and all our apparent choices are not really so; we may not have the opportunity to choose our future actions and emotions. We are preprogramed (to use a well-worn phrase) and the choices are only appearing so!

Well, fortunately for us, neurophysiology especially, electrical correlates of brain function

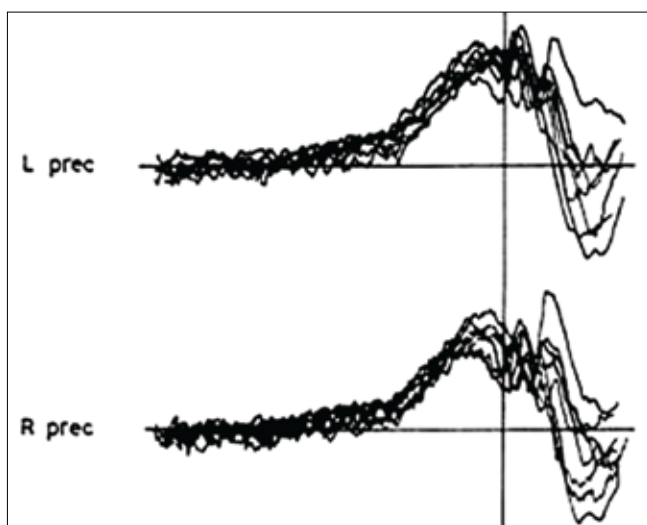


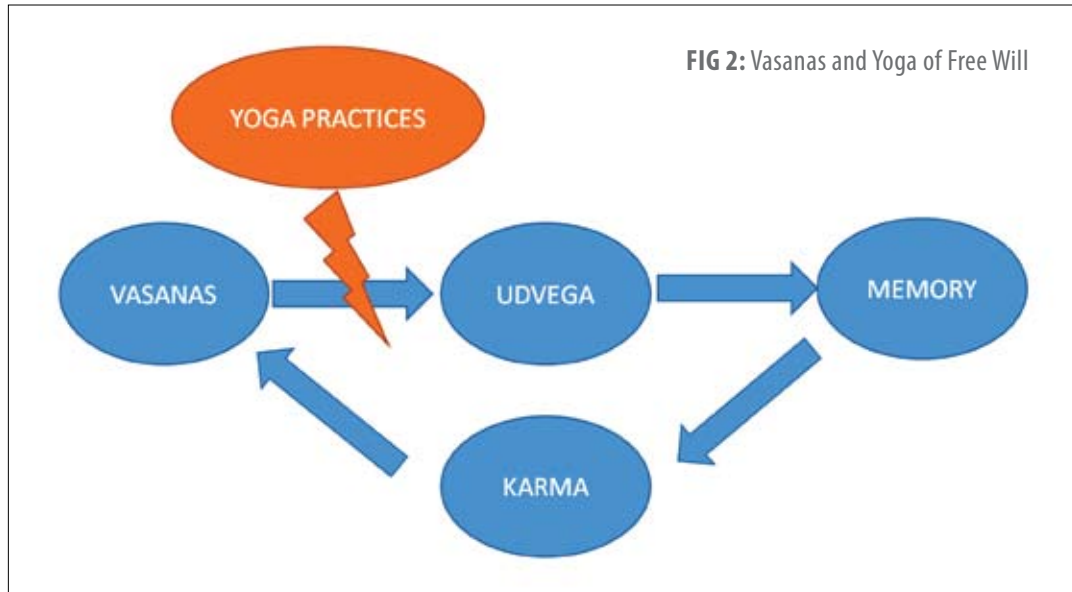
FIG 1: Typical recording of Readiness Potential obtained after volitional rapid flexions of right index finger. Note the readiness potential left of vertical line; the vertical line relates to initiation of muscle activity

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has thrown open new doors to answer some of the above questions. In the 1960, a pre-motor potential - known as Readiness Potential, RP (also known as *Bereitschaftspotential* in German) - was detected in the brain electrical activity. Just prior to voluntary muscle movement, a small potential is observed to initiate electrical activity in the motor and associated areas of the cortex of the brain. The first recording of this potential was reported in 1964 by Hans H Kornhuber and Luder Deecke at the University of Freiburg, Germany (and hence the popular German name). The potentials are so small that they could be observed only after a process known as averaging. This means that many responses (to repeated stimuli) are added together and the resultant waveform is displayed through a device known as CAT (Computer for Averaging Transients, not to be confused with Computer Assisted Tomography or CT scans!). Actually, most event related potentials from the brain are also observed only through such computer methods. Fig 1 shows a typical recording of Readiness Potential which is a result of averaging a number of stimulus-response events. This is necessary since RP is 10 to 100 times smaller than the alpha rhythm of the brain; hence, normally RP cannot be seen in routine EEG records.

Fig 1 shows averaging of a number of flexions of the right index finger of the hand. The zero second record (the vertical line) is the start of the muscle activity with resultant flexion. Left precentral (C3, L prec in figure) and right precentral (C4, R prec) records are shown in the figure. Since the



technology was advanced for its time, replication of the experiments took some years; however, many laboratories around the world have since confirmed these results. As seen in the figure, there is a potential about 0.35 sec earlier to the muscle activity (vertical line).

THE FREE WILL DEBATE

Dr Benjamin Libet at UCLA, USA conducted a series of experiments related to volition and Readiness Potential. As mentioned earlier, RP occurs about half a sec prior to muscle activity. This is also earlier to subjects' conscious awareness of the desire for muscle movement! To Libet this was an indication of lack of free will, in this case for muscle activity. However, it is possible to suspend the muscle movement wilfully after RP was recorded. Many researchers have questioned this conclusion of Libet. Kornberg and Deecker have suggested that there is no 'absolute freedom' but only 'degrees of freedom' wherein we can have possibilities of choice-no choice options. They also suggest that self-improvement and self-management are the processes which could be 'practiced' to achieve higher goals. We could also lose degrees of freedom through self-mismanagement. The existence of randomness in the brain leaves open the possibility that we sometimes make decisions

randomly, through the psychological equivalent of flipping a coin. However, as outlined above, this would be the opposite of free will.

The final nail in the deterministic coffin was eloquently summarized: "There can be no doubt that humans often operate on autopilot - maybe even most of the time. But that doesn't mean we don't have the capacity to exercise free will through deliberation: by evaluating our options and making considered choices. Libet's experiment and the conclusions that are often drawn from it reflect a bias towards randomness (and against free will) which is built into the experiment itself".

VASANAS AND FREE WILL

What does Yoga literature say regarding free will? Let us briefly look into this. Vasanas are the carry-over of our karmas and the resultant impressions from all our numerous lives in this realm. Do we have free will to overcome vasanas; it is necessary to overcome vasanas? Since vasanas are related to the three gunas of satva, rajas and tamas, it is necessary to overcome vasanas altogether if we aim for mukti or final liberation. We need to undo our natural tendencies and break away from conditioned responses to situations and events so that our ultimate freedom is achieved. Thus, to attain



complete freedom, we need to use free will. However, care is needed here; free will should not be from the place of selfish motives arising from *ahamkara*, which itself is associated with *vasanas*!

Fig 2 provides a schematic for *vasanas* leading to *vedga* or impulses towards more desires and, through memory initiating more action of the same type; a predictable response to the deep seated memory. Free will with a commitment for spiritual advancement could disconnect the influences of memory for similar action. *Bhakti Yoga* turns selfish actions to one of dedicated service to society at large. *Jnana Yoga* obliterates the memory traces for action driven by *vasanas*; knowledge of *Brahman* and practices leading to it could transcend all *vasana*-based *karmas*. Thus *Yoga* initiated through free will could lead us to the ultimate goal of liberation from *samsara*.

Thus we have *genetic, epigenetic and pre-genetic tendencies* acquired over many lives. Genetic characteristics could be acquired over this life with dispositions of our parents and elders handed down to us at birth as genetic signals. Epigenetic aspects could change expression of genes due to practice in this life; by creating and reordering our external and internal environments and behaviour. Thus we recreate our internal milieu. We could very well override our genetic tendencies through practice such as *Yoga*. *Pre-genetic tendencies* are *vasanas* that we come to this life with; here also it is possible to disconnect these tendencies through sustained practice of *Yoga, Yagna, dana* and *tapas*. These are essential for complete annihilation of our *vasanas, genetic* and *epigenetic tendencies*.

CONCLUSION

While the debate on free will and determinism is of interest to many in psychology and medicine, it is important to note the agility of modern science to propose, dispose and repose ideas that are new and sometimes incorrect postulates.

This self-correcting ability of science gives it a unique way to address new problems and a way to cross-check works of others so consensus and accord in ideas could emerge. A similar aspect is necessary in *Yoga* research also.

Coming back to *Readiness Potential*: we can guess what use monitoring such a potential could lead to. Sir John Eccles seems to have remarked: "There is delightful parallel between these impressively simple experiments and the experiments of Galileo Galilei who investigated the laws of motion of the universe with metal balls on an inclined plane".

Readiness potential are being tried out for use in applications related to *Brain-Computer Interface (BCI)*. The interface provides the user with communication and control channels that are other than normal neuromuscular control through brain initiated signals. This could augment or completely replace peripheral muscle activity for those with severe motor disabilities who cannot make use of normal augmentative methods since these methods require some voluntary muscle control. In patients with spinal cord injury, the wilful desire to move a finger or an arm could be traced through *RP* even if motor potential are absent or rudimentary. Further, 'mental steering' of artificial limbs is possible through the use of *RP*.

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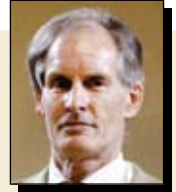
MAJOR PAPER ON THE MIND-BODY CONNECTION PUBLISHED BY S-VYASA

In August 2015, the journal *Progress in Biophysics and Molecular Biology* published a paper entitled, 'A complexity basis for phenomenology: How information states at criticality offer a new approach to understanding experience of self, being and time'. The paper gives details of a new proposal for how the body is able to support the mind, defining a completely new kind of information state that exists in systems controlling the body's functions. If the idea is right, the new 'information states' can account for all the properties we normally attribute to 'Mind'.

Everyone knows what it is like to be awake and to experience life. It is something we all take for granted, but the whole phenomenon of experience contains elements that have completely baffled scientists, even those who have thought about them in detail. For example we all have a 'sense of our own presence'. When we were in a class at school and a role call was held, we replied, 'Present!', when our name was called. We all have a sense of our own 'self', whatever that may be, a sense of being here in the



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'now', as it were, and a sense of time passing.

We take this for granted, yet no scientist has previously been able to give an adequate account of how the 'sense of self' with its continuing 'sense of existence', or 'being', is able to be supported by known aspects of the physiology; of how the body supports the mind. Clearly the mind processes information. But none of the kinds of information previously described by science could possibly support the properties of awareness described in the previous paragraph.

Previously described kinds of information are due to (1) Cambridge Professor Ronald Fisher who described the information derived from statistical analysis of scientific experiments, (2) the kind of information used in control systems, formulated almost simultaneously by US scientist, Claude Shannon, for digital computers, and by M.I.T. mathematician, Norbert Wiener for earlier kinds of control system, and (3) by 'Quantum Information' due to Oxford physicist, David Deutsch, to describe the information contained in microscopic systems of atoms, molecules and elementary particles, described by quantum theory.

None of these kinds of information can support a 'sense of self' or an internal 'sense of time passing', a fact which has led many scientists to conclude that these taken-for-granted aspects of awareness are illusions. Such has been the scientific animosity to the concept of 'self' that philologists have even stopped using it in dictionaries. In the 1980's, the word,



consciousness, used to be defined as 'That with self-knowledge'. Nowadays dictionaries merely state, 'Awareness'. But when you look up awareness, you find, 'Consciousness', which means that the philologists have been forced into the tacit admission that they do not have the first idea how to define either word properly. Not only that, but the scientific community has bounced them out of using common sense!

The sophisticated new proposals put forward in the new paper may hopefully allow common sense to be restored in this central area of human knowledge. The approach is based on new discoveries in experimental biology made in the last thirty years, and a particular theoretical interpretation put on them by the author of the paper. Everything depends on the (relatively) new subject of 'Complexity', and its application to biology as 'Complexity Biology', to which the paper devotes considerable time and space.

Everything reduces to the concepts of 'stability' and 'instability' in scientifically studied systems. We are used to dealing with matter with its stable properties; scientists have always assumed that the function of biological systems also depends on stable properties. When experiments are performed on physical systems, we do something to them, or let them do something, and record the results. If we don't get the same results every time, to within experimental errors, we would be very worried. Biologists have traditionally been taught to have the same expectations. They are taught that life is made of chemicals, albeit special arrangements of chemicals and that physiological systems should behave like any other material system studied in the 'hard' sciences.

Enter complexity: Complexity Biology is the study of how biological systems give variable responses, essentially of vagrancies in organism physiology. Variability of responses turns out to be fundamental, and to have a very simple explanation: physiological systems prefer to control themselves from instabilities. Norbert Wiener's theory of control provides a very

simple account of how instabilities arise within control systems. All control systems have at least one such point of instability. What is only now being realized is that biological organisms prefer to control themselves from that instability.

"Why on earth should that be?", you may ask. Well, apart from anything else, it offers species of organism increased chances of survival in difficult situations.

If a species of organism always make the same response to the same stimulus, they might all die when they encounter a condition in their environment not previously experienced. Should all chose the same, inappropriate, response, all will perish. However, if all respond differently, there is at least a small chance that one or more of the organisms will chose an appropriate response and survive, and with them the species. The abilities to make different responses in changing environments demanding adaptation, and to remember them, is therefore akin to a superior level of adaptive intelligence for a species as a whole place.

This scenario offers some insight into why organisms' preferred 'locus of control' should be at instability. The next point of investigation concerns the properties of the information states that instability will support. Arguing by analogy, 'reasoning' rather than logically proving, one can show that instability states support a completely new kind of information, which has never been previously suggested. Furthermore, these information states can support a 'sense of self', and also a sense of 'being', an internal 'sense of time passing', or personal continuing existence. All these are regarded as essential attributes to understand by philosophers and scientists who concern themselves with such matters.

"How could all those properties possibly arise at the same time?" You may inquire. Here is an explanation of how and why presented through an analogy. Consider what happens at the onset of turbulence, the main instability in fluid dynamics. Turbulence consists of little whirlpools, technically known as 'vortices'. Large ones can be seen in fast flowing rivers, or



in a steamer's wake. At the onset of turbulence, fluid flow becomes unstable, because although vortices would like to form, they cannot quite do so. Every fluid flow 'vector' representing the size and direction of fluid flow at every point in the fluid gains one or more tiny, infinitesimal, vortices attached to it. Vortices are present, but not finite, unmanifest, rather than manifest. They make the fluid flow ever so slightly variable and also variable in response to external stimuli (or they should do!).

Flow vectors in fluids represent information about the (mean) direction of fluid flow at each point in the fluid. So the analogy tells us something not only about the structure of fluid flow vectors at instability in fluids, but about information vectors at instability in information systems. Consider, therefore the same condition happening to information flows in an information system at an atomic or molecular level. Such information is also represented by 'vectors' (arrows). At an instability, the information vectors may also be considered to contain internal vortices - loops. Preferred loci of control of physiological systems are at instabilities, so their information states must also develop an attached loop, indicative of the instability. What could such a loop do? What could it represent? What might its applications be?

Being long schooled in meditation and its philosophy, and having long been a teacher of the same, I am completely familiar with the idea of a 'self' at the foundation of our mind. The philosophy of meditation holds that the deepest state of meditation, samadhi, is a state in which 'the Self experiences itself, through itself, by itself'. This statement is the essence of Vedanta philosophy. It can be represented by a pure information loop.

In other words the essence of our 'subjective experience' has all the behavior of being like a loop of information. When I look at my own body, a loop of information is formed as my body (eyes) sees itself. At a deeper level, when I reflect on my own understanding, a 'loop of information' is formed as my mind considers

its own contents. At the deepest level, when all mental excitations cease in deep meditation, we still maintain a sense of 'self' experiencing the passage of time. The nature of this 'self' may be taken to be an information loop. The above physical model suggests that information states with an appropriate internal loop structure occur when a system is at an information flow instability. This fulfils the traditional statements about the 'Self' that: 'it knows Itself, through Itself, by Itself'. 'Self-knowledge', the traditional definition of 'consciousness', is the inherent nature of the 'Self'! The simple presence of an information loop as part of the information state is all that is necessary for consciousness to fulfil this definition.

Such a loop must generate some kind of 'continuity' in awareness, our sense of time continuously passing; and thus the sense of our own existence or 'being'. All these properties were set out as incontrovertible and fundamental by the original philosophers of phenomenal experience, Edmund Husserl and his student Martin Heidegger. All three properties arise from one simple addition to normal information structures, the proposed loop in the information state, a major point in its favor.

Although it is not outwardly a dynamically changing state, an instability seems to have its own inherent dynamism, simply because certain aspects of it are unstable - they seem not to be fixed, but rather to be fluctuating. This internal dynamism is also able to give rise to the dynamic properties that we take for granted. We can make decisions, move in the direction of something we like, or take evasive action when we see something unwanted coming our way.

That constitutes the main content of the new paper. There is more, it derives 16 major results, many others in addition to the few intuitive ones derived here. Most depend on technicalities of instabilities; many were proposed over the past twenty years or so by philosophers and scientists, as requirements for any theory of experience. All are fulfilled. Those wishing to read the theory in full should email alexhankey@gmail.com. ■



Evidence Based Benefits of Pranayama on Cardiovascular and Autonomic Functions

INTRODUCTION

Breath is the dynamic bridge between body and mind and *Pranayama* (breathing techniques) is one of the most important yogic practices. *Pranayama* is an art of prolongation and control of breath.^[1] Various *Pranayamas* were shown to produce various cardiovascular and autonomic changes in the body. In this present article, the evidence based benefits of *Pranayama* on cardiovascular and autonomic functions were described in brief based on the available research papers.

EVIDENCE BASED EFFECTS OF VARIOUS PRANAYAMAS

Pranayama in General (Combination of various *Pranayamas*):

Daily *Pranayama* practice resulted in statistically significant blood pressure reduction of 11 points (systolic) and 8 points (diastolic) between baseline and week six. Blood pressure measurements at week nine were similar to week six.^[2]

Pranayama produces relaxed state and in this state parasympathetic activity overrides sympathetic

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activity.^[3] Regular practice of *Pranayama* causes a reduction in the sympathetic tone within a period as short as 7 days.^[4] Hence, addition of *Pranayama* can be a useful addition to antihypertensive drugs for better control of hypertension in mild hypertensives.^[3]

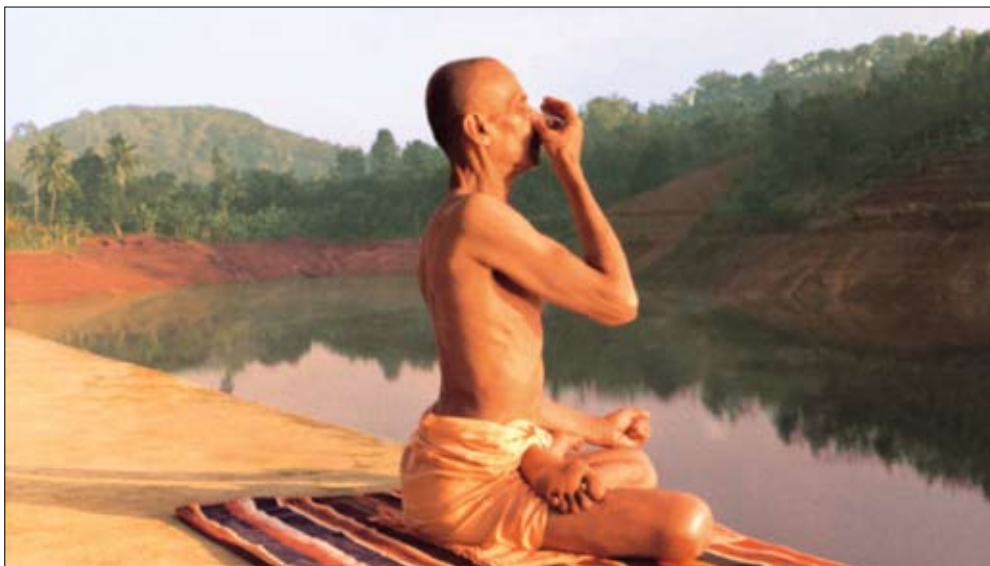
Anuloma-viloma and Bhramari Pranayama: These *Pranayamas* were shown to maintain normal blood pressure and reduces the stress level that we get in our day to day life.^[5]

Slow and Fast Pranayama: Both fast (*Kapalabhati*, *Bhastrika* and *Kukkuriya Pranayama*) and slow *Pranayama* (*Nadishodhana*, *Savitri* and *Pranav Parayanayama*) practice for the duration of 30 minutes, 3 times a week for the duration of 12 weeks were shown to be beneficial in reducing perceived stress scale score in the healthy subjects. However, the beneficial effects on cardiovascular parameters such as significant decrease in heart rate, diastolic blood pressure, Rate pressure product, and double product was seen in only after practicing slow *Pranayama*.^[6]

Individual Pranayama (Breathing Techniques):

Breath Awareness: 10 minutes of breath awareness showed a significant decrease in systolic blood pressure in patient with hypertension.^[7]

Slow breathing: In a previous study on slow breathing it was shown to reduce the blood pressure





and to enhance baroreflex sensitivity in hypertensive patients.^[8] Another study reported that the increase in baroreflex sensitivity depends on the slow breathing rate and not on the regularization obtained by controlling the breathing because controlled breathing at a fixed and faster frequency (15/min) did not produce such effect. A Class II A, Level of Evidence B recommendation for blood pressure lowering efficacy was conferred to slow breathing.^[9] Hence, these effects appear potentially beneficial in the management of hypertension.^[8]

Specific Nostril Yogic Breathing: Right, left yogic uninostril breathing and alternate nostril breathing techniques have differential physiological effects that are in tune with the traditional *swara yoga* concept.^[10]

Right Nostril Yogic Breathing: A previous study reported that the air flow through right nostril (*surya nadi/pingala swara*) is activatory in nature.^[10] Hence, reported to have a sympathetic stimulating effect.^[11] However, no significant increase in heart rate or blood pressure was found in hypertensive subjects who practiced 27 cycles of same practice at the same respiratory rate. They also reported that the right nostril breathing might be safe in patients with hypertension since cardiovascular effects of right nostril breathing in hypertensives are different than in normal subjects.^[12]

Left Nostril Yogic Breathing: A previous study reported that the air flow through left nostril (*chandra nadi/ida swara*) is relaxatory.^[10] Hence, left nostril breathing was shown to be effective in reducing heart rate and systolic blood pressure in hypertensive patients on regular standard medical management.^[13]

Alternate Nostril Yogic Breathing: Practice of alternate nostril breathing showed significant decrease in systolic blood pressure.^[14] and increases parasympathetic activity.^[15] In a previous study, alternate nostril breathing was shown to significantly decrease in systolic and diastolic blood pressure, while improving the performing in a task requiring attention, bimanual dexterity and visuo-motor co-

ordination in patient with hypertension.^[7]

Bhramari Pranayama: Slow pace *Bhramari Pranayama* for 5 minutes shown to reduce the systolic, diastolic and mean arterial blood pressure with a slight fall in heart rate. It indicates the effect of 5 *Bhramari Pranayama* in influencing the parasympathetic dominance on cardiovascular system.^[16]

Pranava Pranayama: It is effective in reducing heart rate, systolic blood pressure, pulse pressure, double product and rate-pressure product in hypertensive patients within 5 minutes of the practice. The result was said to be due to a normalization of autonomic cardiovascular rhythms as a result of increased vagal modulation and/or decreased sympathetic activity and improved baroreflex sensitivity along with an augmentation of endogenous nitric oxide production.^[17]

Sukha Pranayama: *Sukha Pranayama* at the rate of 6 breaths/minute reduces heart rate and blood pressure in hypertensive patients within 5 minutes of practice.^[18]

Mukh Bhastrika: It has shown to increase the parasympathetic activity (i.e., reduce basal heart rate, increase valsalva ratio and deep breathing difference in heart rate) and reduce sympathetic activity (i.e., reduction in fall of systolic blood pressure on posture variation). Hence, *Mukh Bhastrika* has beneficial effect on cardiac autonomic reactivity, if practiced for a longer duration.^[19]

Slow Base Bhastrika (6 breath/min): After 5 minutes of slow *bhastrika*, there was a significant reduction in both the systolic and diastolic blood pressure with a slight fall in heart rate unlike volunteers who performed the same breathing exercise for the same duration following oral intake of hyoscine-N-butylbromide (Parasympathetic blocker). Hence, it has shown to improve the autonomic nervous system through enhanced activation of the parasympathetic system.^[20]

Pranayama with meditation: Short term (15 days) regular *Pranayama* and meditation practice



on cardiovascular functions irrespective of age, gender, and body mass index in normal healthy individuals.^[21]

CONCLUSION

Pranayama is one of the most important parts of the ancient traditional *Yoga* practices. It is easy to learn, practice and follow in our daily life. It has a tremendous health benefits especially in cardiovascular and autonomic functions which are evidence based. Hence, let the *Pranayama* practice not only be the part of our ancient science but also be the part of our life.

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Recent MoUs of S-VYASA



Pune, Sept 3: SVYASA and Symbiosis Institute of Health Sciences (SIHS) which is a part of Symbiosis International University (SIU) have jointly ventured into an MoU to promote education, training and research in Yoga.



Prashanti Kutiram, Sept 26: Swami Vivekananda Yoga Anusandhana Samsthana (S-VYASA) entered into an MoU with Dayananda Sagar University (DSU), Bengaluru and Dayananda Sagar College of Engineering (DSCE), Bengaluru. It has been ventured to promote education, training and research in the field of Yoga.

Madurai: Recently, S-VYASA ventured an MoU with Vivekananda College affiliated to Madurai Kamaraj University to promote education, training and research in Yoga.



Yoga for Physical Fitness in Adolescents

INTRODUCTION

Emerging society has considered physical fitness as one of the important indicators of health. Physical fitness is the ability to perform physical activity, and influences a full range of physiological and psychological qualities (Ortega, Ruiz, Castillo, & Sjöström, 2008). Being physically fit has been defined as: "The ability to carry out daily tasks with vigor and alertness, without undue fatigue and with ample energy to enjoy leisure-time pursuits and to meet unforeseen emergencies" (PCPFS, 1952).

Physical fitness during adolescence is a predictor of cardiovascular disease risk profile in adults (Twisk, Kemper, & Mechelen, 2002). Fitness refers to the maximum capacity that people have or achieve while they perform physical activity that can be measured as the level of strength and flexibility of the muscular groups in different body parts.

Yoga in its original form consists of a system of physical, psychological and ethical practices; although of ancient origin, it transcends



■ *Dr. Vikas Rawat*
Abstract of PhD Thesis



cultures and languages (Nagarathna & Nagendra, 2001). The popularity of yoga is evident with emerging interest and research in the therapeutic applications of yoga in prevention and management of psycho-physical conditions. Further, estimated prevalence of practicing Yoga has doubled from 1997 to 2002, corresponding to 10.4 million adults in the U.S (Barnes, Powell-Griner, McFann & Nahin, 2004). Recent studies suggest that implementation of yoga is acceptable and feasible in a secondary school setting and has the potential role to play in protective or preventive role in maintaining mental health (Khalsa et al, 2012). Further, findings suggest that a school-based yoga intervention is acceptable to youth, teachers, and school administrators in serving chronically stressed and disadvantaged youth (Mendelson et al, 2010). Research literature suggests that yoga improves children's physical and mental well-being by improving their resilience, mood, and self-regulation skills pertaining to emotions and stress (Hagen & Nayar, 2014).

LITERARY REVIEW

In this chapter of literary research, attempts were made to understand concept of vyayama, and asanas, from ancient Indian scriptures. Relevant slokas are presented text-wise, and a



coherent discussion is provided for the same. Relevant slokas were selected from the Shastrani (Shastrani, 2004) and the multilingual E-Samhita with search option prepared by CCRAS, Department of AYUSH, Ministry of Health and Family Welfare, Government of India. Finally, a theoretical model which depicts the evolution of vyayama to asana has also been attempted.

REVIEW OF SCIENTIFIC LITERATURE

Review of scientific literature enumerates contributions and findings from various studies done in the domains of yoga, physical fitness, and its relevance to the psychological well-being of children. A growing number of studies present the need for stable physical fitness for adolescents. Further, the findings show a positive relationship between physical fitness during adolescence and its contribution to the emotional, physical and academic performance later in life. Finally, a summary of the effects of yoga on physical fitness in adolescents and the scope of yoga as mind-body training for adolescents is provided.

AIM

The main aim was to explore the effect of yoga on physical fitness among adolescents.

RATIONALE OF THE STUDY

Study of effect of short term effect of yoga on adolescents is of great need in today's scenario. It can be easily assessed in summer camps which children usually attend. Further, a study on practitioners and non-practitioners of yoga would bring to our notice, the advantages regular practice of yoga. It is known that pulmonary function is one important component of fitness. Pulmonary function, which is a key indicator of physical fitness, may vary from healthy and unhealthy populations. Hence PEFR would distinguish these two populations. As PEFR cannot be used in all the setups especially on large scale assessment setups like schools and colleges, a simple alternate is required.

Understanding this need, Bhramari Time is evaluated as an alternate to PEFR. Finally, a traditional system of physical activity, Yogic Squat is evaluated for attention to understand the application of physical activity in education. All these studies give an understanding covering a spectrum of adolescent physical fitness and influential role of yoga in understanding and modulating them.

RESEARCH QUESTIONS AND OBJECTIVES

OBJECTIVES

Earlier studies on yoga for adolescents have shown the benefits mainly on physical strength an performance, however, there are no studies that have looked at minimum muscular fitness, flexibility, pulmonary functions and its equivalent assessment using a simple technique like Bhramari Time.

Question # 1: Can a short term intensive summer yoga camp help in improving fitness in children?

Objective # 1: To assess the effect of intense yoga based personality development program on physical fitness in healthy children.

To investigate the influence of yoga practice on the physical fitness and ventilator function

Question # 2: Do long term regular practitioners have better physical fitness than short term practitioners?

Objective # 2: To compare physical fitness and ventilatory functions between experienced and non-experienced practitioners of yoga.

There is a need to establish that pulmonary function using a simple hand held PFR instrument correlates with general muscular physical fitness.

Question #3: Is there a correlation between muscular fitness and pulmonary function?



Objective #3: To evaluate relationship between muscular fitness using Kraus-Weber Test and ventilatory function using mini peak expiratory flow meter in children.

Yoga based personality camps are the need of the hour in rural and urban settings in all schools in all communities round the globe. Need simple tools to assess the progress when we enter into service programs. Instruments (although portable) for assessing the lung function may not be available or cost effective in mass yoga programs.

Question # 4: Can bhramari time be an acceptable objective test of pulmonary function ?

Objective # 4: To compare bhramari time with an established measure of lung function, the PFR meter.

There are several types of yoga that are evolving as its popularity and applications are increasing. Children seem to enjoy repetitive practice of squatting salutation which is a traditional practice in India during the festival of worshipping lord Ganesha (elephant headed GOD), believed to bestow higher cognitive abilities.

Question # 5: Can yogic squatting salutation improve cognitive ability?

Objective # 5: To understand the immediate effect of yogic squat on selective attention in adolescents.

METHODS

SUBJECTS

In this thesis, five different studies are reported. The source of subjects for all these studies was the Yoga based Personality Development Program (YPDC) held at SVYASA Yoga University.

1. This study evaluated the effect of 10 days of intense yoga on physical fitness on one hundred and three children.
2. This study compared hundred and ten competitive yoga children with equal

number of age, gender and weight-matched healthy yoga motivated children who were naive. Sample consisted of 50 boys and 60 girls in each group.

3. For the study that evaluated the minimum muscular fitness and ventilatory functions, three hundred and fifty two healthy schoolchildren of both genders in age range of 10- 16 years were recruited for the study. Sample consisted of 203 boys and 149 females with a mean age of 12.90 years (SD=1.55).
4. For the study designed to validate the acceptability of bhramari time (BHT) by checking its correlation with Peak expiratory flow rate (PEFR), three hundred and eighty six healthy schoolchildren were recruited. Sample consisted of 229 males and 157 females with a mean age of 12.78 years (SD=1.69).
5. This study looked at the immediate effect of Yogic Squat on selective attention in which 48 boys and 35 girls were included.

DESIGN

The research design was innovative in incorporating different research methods such as Cross sectional, cohort, Pre-Post and Self as Control design, for the five components of this research that aimed at looking at the role of yoga in physical fitness.

Papers published from the Thesis:

1. Rawat, V., Rajesh, S. K., & Nagarathna, R. (2014). Minimum muscular fitness and ventilatory function in south Indian school children. *Journal of Exercise Science and Physiotherapy*, 2,104-110.
2. Rawat, V., Rajesh, S. K., & Nagarathna, R. (2014). Development of a simplified yogic measure (bhramari time) of lung function in normal children- a correlational study. *International Scientific Yoga Journal: Sense*. [In Press].
3. Rawat, V., Rajesh, S. K., & Nagarathna, R. (2014). Physical fitness in adolescent competitive yoga practitioners- a cross sectional cohort study. *Indian Journal of Health & Wellbeing*, [In Press]. ■



Seminar on Neural Networks at S-VYASA

A half-day seminar on “Neural Networks and its application to Yoga research” was conducted on 12th September 2015 from 9:30 am to 1 pm, at the Anvesana Research Laboratories, S-VYASA. Mr. Venkatagiri and Mr. Shiva, who are also pursuing their PhDs from S-VYASA gave three sessions on theoretical as well as practical aspects of the technique. This Division of Yoga

and Physical Sciences organized seminar was attended by many S-VYASA PhD scholars and S-VYASA staff members. In the seminar the basis of neural networks, concepts and its application were presented. A detailed demonstration using SPSS was also done. The seminar concluded with an interactive discussion with the audience. ■



Ernakulam: Arogyadhama Chief Medical Director Dr. R Nagarathna delivered a lecture on Stop Diabetes Movement. Ernakulam Yoga Teachers who have completed YIC and MSc from S-VYASA DDE had taken part.



Mysore, Aug 14: Pro-Chancellor Dr. K Subrahmanyam was the Chief Guest in One Day Seminar on Knowledge Organisation. As a part of its Centenary Celebrations, University of Mysore organised the Seminar to commemorate the 123rd Birthday of Padmashri Prof. S R Ranganathan. Vice Chancellor of Mysore University, Prof. K S Rangappa presided the inaugural ceremony.



Pune: Recently, Smt. Karuna Nagaraj, Senior Faculty of S-VYASA DDE, gave a visit to VYASA centre at Pune. For two days she took special sessions for DDE students.



MBA student Gautam Netrakar's Internship at GSK headquarters, London

Gautam Netrakar, is a student currently pursuing MBA in People and Organisation Management (POM) under the Department of Yoga and Management in S-VYASA Yoga University, Jigani.

As part of the MBA programme, he did his Summer Internship at GlaxoSmithKline (GSK) Headquarters, Brentford, London.

GSK is a pharmaceutical MNC. It is a science led Global Healthcare Company. It researches & develops a broad range of innovative products in 3 primary areas of Pharmaceuticals, Vaccines and Consumer Healthcare.

The internship was with the Global ERP division of GSK. As part of the Governance Risk and Compliance (GRC) group, Gautam was trained on Document Archiving process and required to support the Document and Records team in archiving documents. Archiving is a key role



that promotes good information management & records retention. The archiving process included the utilisation of technology to accelerate the transition from manual archiving towards electronic archiving. The summer internship lasted for 6 weeks (July 2015 - Aug 2015).

When asked to share some information and experience, he replied "Whilst being in the GSK house I understood how various project

documents are organised and the processes involved in archiving. I was able to comprehend why is it necessary, how it can benefit the organisation & why records are retained for future use.

Overall, it was a valuable experience & a remarkable exposure to the corporate lifestyle & work environment" ■



Gowri Ganesha celebrations

Gowri Ganesha festival was celebrated with great enthusiasm and delight at Prashanti Kutir. The Campus was blessed by the holy presence of Gowri and Ganesha from 16th Sep 2015 to 20th Sep 2015. The idols of deities were installed in beautifully decorated mantapa at Managal Mandir. On September 16th Gowri vrata was held, Dr R. Nagarathna and many of the lady staff and students performed the puja with shraddha and Bhakti. The next day Lord Ganesha was welcomed with Great Spirit. Sri R. Venkatram, Sri Ramachandra G Bhat and Dr R. Nagarathna along with other staff members performed the puja, and the Students of SVYASA have participated in the celebration with great

devotion. Prof. Ramachandra G Bhat delivered a talk on the spiritual significance of Gowri Ganesha festival which was very inspiring. He added that, Yoga Vinayaka, an embodiment of Parramatman and one who is beyond Prakruti and Purusha, who remove all obstacles which are caused by trividha taapa (Adhi Bhautika, Adhi Daivika and Adhi Atmika). The four days of festival was celebrated with pujas and bhajans. On 20th of September the visarjan of Gowri Ganesha took place with a huge procession in which the inmates of Prashanti participated with gladness. The event was celebrated with Dance and music and colors. ■

■ Jayanti Rao, MSc (YT) 3 Sem





Varamahalakshmi celebrations
in Prashanti Kutiram

Rakshabandhan celebrations
in S-VYASA University Headquarters



Mind Reading Techniques (MRT) - Special session
by Vice Chancellor Prof. Ramachandra G Bhat



**Lakshmi Amma Memorial
Cricket Tournament - 2015**
Guruji is handing over the trophy
to Victorious Team - S-VYASA Staff





News from VYASA - Kolkata

Weekly **Kriya** classes are going on every Saturday.

On 27th July 2015 Mr. Sanatan Bera has joined the VYASA Kolkata as a Yoga Therapist.

On 8th August 2015 a **teacher's meet** held at the Eknath Bhawan for the Yoga Teachers. It was presided by Mr. Bishnu Kumar Dhanuka, the Chairman of VYASA Kolkata.

On 15th August **69th Independence Day** of India was celebrated by Team VYASA Kolkata. On this occasion one of the senior Regular Yoga Training Programme (RYTP) participant Mr. Brajendra Sukhla hoisted the National Flag. Programme was coordinated by Mr. Rajendra Kumar Jha.

On 29th August 2015 **Raksha Bandhan** festival



was celebrated the Team VYASA.

Along with this Regular Yoga Training Programme (RYTP) & Yoga Therapy (YT) classes at VYASA and Yoga Awareness Programmes (YAP) in the different schools and corporate houses are going on. ■



Guruji & Dr. Manjuna N K with Sri Prem Kumar Dhumal, Chief Minister, Himachal Pradesh



Glimpses of Guruji's US Tour



Proposed location of
Vivekananda Yoga University
at Brea, Los Angeles



Guruji, Dr. Manjunath N K
and others at Proposed Site
in Allentown, Pennsylvania
for setting up
Vivekananda Health center
for Integrative Medicine



With Mr. Bikram Chaudary at the International headquarters of Bikram Yoga, Los Angeles

During the meet of Medical Professionals at Rochester



Boston: During the meet with Dr. Sara Lazar, Asst. Professor, Dept. of Psychiatry, Mass General Hospital



Edison, New Jersey: With Ashok Singhal Ji, International Working President of VHP at Global Dharma Conference



YIC students of VYASA, Los Angeles

21st INCOFYRA

International Conference on Frontiers in Yoga
Research and Its Applications



THEME

Yoga in Integrated Healthcare System

Jan 6-9, 2016
Prashanti Kutiram
S-VYASA, Bengaluru - 560 105



Organised by

VYASA, Bengaluru

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Bengaluru

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My dear brothers and sisters...



Integration of modern medicine and AYUSH systems is the need of the hour to deal with communicable and non-communicable diseases. Modern medicine rooted in the bio-medical model with a matter-based paradigm will offer proven solutions to most communicable diseases, to diagnose NCDs, large number of surgeries for setting right and even replacing different parts of our body as we do it in machines. The Yoga Therapy and other systems of AYUSH on the other hand provide not just a cure for NCDs but also help in prevention and promotion of positive health at physical level by developing the organs and systems in normal and blossoming well being.

Due to failure of modern medical system in dealing with NCDs, integrative processes are being increasingly accepted. As modern science has not yet fathomed the subtle layers, Prana/Manas/consciousness, of human beings their explanation of the effects of medicines leaves a lacunae that can be easily filled

in by the alternative systems.

Can we provide a basic philosophy for this integration or symbiosis? The 21st INCOFYRA will make an effort to endeavour on the path for a new future in medical care by bringing the integrative approach to medical science. Integration of Ayurveda, Yoga, Unani, Sidha, Homeopathy and Allopathy needs a multi-pronged approach. Research basis by both ancient, traditional and modern experimental research approaches will be the primary requirement. Hence the focus of 21st INCOFYRA will be to bring together people in research from these fields to one platform. We welcome you all once again to the sprawling Prashanti Kutiram campus.

With Love
Dr H R Nagendra
President, VYASA and
Chancellor, S-VYASA University



CONFERENCE PROGRAMS AT A GLANCE

Date	Program
Dec 30, 2015 - Jan 6, 2016	Pre - Conference workshop
Jan 4 & 5, 2016	Himalaya Yoga Olympiad Finals
Jan 6, 2016	Inaugural Ceremony of 21st INCOFYRA
Jan 7 - 9, 2016	Main Conference Scientific Session, Poster presentation Oral presentation & Panel discussion
Jan 9, 2016	Valedictory Ceremony



MAIN CONFERENCE INCOFYRA

Jan 6 - 9, 2016

Theme - Yoga in Integrated Healthcare System

The theme addresses the urgent need for collaborative actions involving health professionals from conventional medicine and traditional medicine, policymakers, government organizations and Industries to deliver the best health care to public. Particular focus is placed on highlighting the importance of integrative medicine as preventive health care strategy, for the management of NCD's and Rehabilitation. This meet would be the basis for Policy reformation with respect to health care system in India.

Special workshop on National Health Policy Development by experts from different health system and stake holders.

CONFERENCE OBJECTIVES

1. To disseminate the research findings in the field of integrative medicine and give directions to future research
2. To translate the research findings of integrative medicine into clinical practice
3. To establish working groups comprising universities, health care providers and policy makers to initiate collaborative research programs
4. To deliver cost effective mass health care means to address common ailments at the primary health care level
5. To have discussions on reforms in policies related to integrated health care system

INVITED SPEAKERS

NATIONAL

- **Dr. H R Nagendra**, Chancellor, S-VYASA, Bengaluru
- **Dr. R Nagarathna**, Medical Director, Arogyadhama, S-VYASA, Bengaluru
- **Dr. Shirley Telles**, Director, Patanjali Research Foundation, Haridwar
- **Dr. Ishwar V Basavaraddi**, Director, MDNIY, New Delhi
- **Dr. D Nagaraja**, Director, School of Integrative medicine, S-VYASA, Bengaluru
- **Dr. B N Gangadhar**, Professor of Psychiatry, NIMHANS, Bengaluru
- **Dr. V Mohan**, Chairman & Chief Diabetologist, Madras Diabetes Research Foundation, Chennai
- **Prof. M S Valiathan**, former President, Indian National Science Academy, New Delhi
- **Dr. Issac Mathai**, Medical Director, Saukya, Bengaluru
- **Dr. Devi Prasad Shetty**, Chairman and Founder, Narayana Health, Bengaluru
- **Dr. Thimmappa Hegde**, Director - Narayana Institute of Neurosciences, Bengaluru
- **Dr. Dharshan Shankar**, Vice Chancellor, Institute for Trans-Disciplinary Health Sciences, Bengaluru
- **Dr. S C Manchanda**, Senior Consultant Cardiologist, Sir Ganga Ram Hospital, New Delhi
- **Dr. Kotecha R**, Vice-Chancellor, Gujarat Ayurved University, Jamnagar, Gujarat
- **Dr. Naresh Trehan**, Chairman & Managing Director, Medanta - the Medicity, Gurgaon
- **Dr. Naveen K V**, Associate Professor, S-VYASA, Bengaluru
- **Dr. Manjunath N K**, Joint Director - R & D, S-VYASA, Bengaluru
- **Mr. D R Karthikeyan**, Former CBI Director & Board of Directors, Star Health Insurance
- **Dr. Bhushan Patwardhan**, Vice-Chancellor, Symbiosis International University (SIU), Pune
- **Prof. R S Ramaswamy**, Director General. CCRS
- **Prof. M A Siddiqui**, Director, National Institute of Unani Medicine (NIUM)
- **Dr. Shivaram Varambally**, Associate Professor, Dept. of Psychiatry, NIMHANS, Bengaluru
- **Prof. Alex Hankey**, Professor, S-VYASA, Bengaluru
- **Dr. Rangesh Paramesh**, Head -drug discovery, Himalaya Drug Company
- **Dr. B T Rudresh**, Classical homeopathic practitioner, Bengaluru
- **Dr. K K Deepak**, Professor of Physiology, AIIMS, New Delhi
- **Dr. Ram Manohar**, Director, AVP Research Foundation, Coimbatore
- **Dr. Rajesh K Grover**, Director, Delhi State Cancer Institute, New Delhi
- **Dr. Manoj Nesari**, GoI, New Delhi
- **Dr. Prashanth Shetty**, Principal, SDMCNYS, Ujire

INTERNATIONAL

- **Prof. Elizabeth Blackburn**, Department of Biochemistry and Biophysics, University of California, USA
- **Prof. John O Keefe**, Professor, Sainsbury Wellcome Centre for Neural Circuits and Behaviour and the Research Department of Cell and Developmental Biology, University College London, U K
- **Dr. Anita Goel**, Chairman & CEO, Nanobiosym, USA
- **Dr. Richard Davidson**, Professor of Psychology and Psychiatry, University of Wisconsin, Madison, USA
- **Dr. Dean Ornish**, Clinical Professor of Medicine at the University of California, San Francisco, USA
- **Dr. Brian Berman**, Director, Center for Integrative Medicine, University of Maryland, USA
- **Prof. Andrew Boulton**, Professor of Medicine, University of Manchester, UK
- **Dr. Kashinath Dixit**, Professor, University of Manchester UK
- **Dr. Lorenzo Cohen**, Professor and Director of the Integrative Medicine Program, University of Texas MD Anderson Cancer Center, USA
- **Dr. V S Ramachandran**, Professor of Neuroscience, University of California, San Diego, USA
- **Prof. Myeong Soo Lee**, Director, Korea Institute of Oriental Medicine, S. Korea
- **Dr. Sat Bir Khalsa**, Brigham and Women's Hospital, Harvard Medical School, Boston, USA
- **Dr. Christoph Garner**, Director, KWA-Klinik Stift Rottal Germany
- **Dr. Peter Fisher**, Consultant, Royal London Hospital for Integrated Medicine, U K

21st INCOFYRA

CONFERENCE PROGRAMS AT A GLANCE

DATE	PROGRAM
Dec 30, '15 - Jan 6, '16	Pre - Conference workshop
Jan 4 & 5, 2016	Himalaya Yoga Olympiad Finals
Jan 6 - 9, 2016	Main Conference

CALL FOR PAPERS

Scientific research papers and review papers on the theme and related topics in yoga and integrative medicine are invited for oral and poster presentations.

Last date for submission of Abstracts	Nov 15, 2015
The abstracts will be peer reviewed and acceptance or otherwise will be intimated by	Nov 30, 2015

- Submit your abstract on conference webpage. Please visit conference webpage for details. For any queries please write to incofyra21@svyasa.edu.in

CONFERENCE REGISTRATION

Register before Nov 1st, 2015 to gain maximum concession

Individual Programs	Dates	SAARC Centers		International	
		Before Nov 1 in ₹	After Nov 1 in ₹	Before Nov 1 in \$	After Nov 1 in \$
Pre-Conference	Dec 30, '15 - Jan 6, '16	7,000	9,000	350	450
Main Conference	Jan 6 - 9, 2016	3,500	4,500	250	350
Both Programs	Dec 30, '15 - Jan 9, '16	9,000	13,000	600	700
Day Rate for Conference		1,100	1,500	90	115

OBJECTIVES:

1. To disseminate the research findings in the field of integrative medicine and give directions to future research
2. To translate the research findings of integrative medicine into clinical practice
3. To establish working groups comprising universities, health care providers and policy makers to initiate collaborative research programs
4. To deliver cost effective mass health care means to address common ailments at the primary health care level
5. To discuss on reforms in policies related to integrated health care system



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CONFERENCE REGISTRATION AND DETAILS FOR PAYMENT

- **Dr Sanjib Patra** - 094833 90476; **Dr Balaram Pradhan** - 094837 11185
- Payment by Cash or DD payable to 'Vivekananda Yoga Anusandhana Samsthana' (VYASA)

CONTACT DETAILS & REGISTRATION

Sri Mahadevappa, Manager, S-VYASA City Office, 'Eknath Bhavan', #19 Gavipuram Circle, K G Nagar, Bengaluru - 560 019

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The Sixth Sense

■ Sri Rajeeva Kumar, Chief Chemist – CSR, ONGC



The human body is surrounded by layers of electromagnetic waves constituting an individual's aura. Thoughts emanating from mind are the radiations of our mind. A change in our thoughts, our moods, dispositions, attitude changes our aura too. While interacting with people, the vibes of our aura affect the subconscious mind of other persons. One's speech looks or body language may be deceptive, but vibes can never be.

One might be smiling outwardly, but the vibes will reveal one's sadness, one is really sad. Thanks to these vibes, people get sudden hunches or intuitions about certain object, people or situations, others even get visions.

The **GITA** says that every individual soul possesses a part of the super soul and thus there is a lingering connection between all of us. We all have been painted by the same paint brush, so if

we hurt some one, we actually hurt ourselves.

Look at the vast ocean, the development of a tornado increases the intensity and height of the waves on several shores even though they are miles away from the storm. The expanse of the ocean does not stop the shock of the tornado to create ripples far away. It is because the entire water body is one, it is all connected.

Similarly our unexplainable mood swings, bouts of sudden joy or sorrow may be due to another related or unrelated individual, perhaps even separated over distances. These are the small gifts of god that lie forgotten in the fastness of life. When well developed, our intuition complements our five senses. It becomes our sixth sense. It is this foresightedness that can protect us from several mishaps of life and at the same time guide us towards taking up tasks and challenges which are quite fulfilling. ■

Value Driven Leadership through

- Quality that is Infinite
- Service that Cares
- Hardwork that Endures



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