

योग विज्ञान

YOGA VIJNĀNA

THE SCIENCE AND ART OF YOGA

Half Yearly Journal of MDNIY



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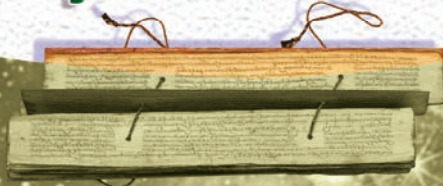
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Yoga Vijnana

(The Science and Art of Yoga)

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Brief note about Yoga Vijnana Advisory Board Members



Dr. H R Nagendra served a short stint as a faculty at IISc, joined University of British Columbia as Post-Doctoral Research Fellow. He was the Secretary of Vivekananda Kendra Yoga Research Foundation, Bangalore and the Director of Indian Yoga Institute. Currently he is the President of Vivekananda Yoga Anusandhana Samasthana. Served as Vice Chancellor of S-VYASA (Swami Vivekananda Yoga Anusandhana Samasthana), the premier Yoga University from 2002 to 2013, and currently serving as Chancellor from 2013. Receptient of Padma Shri award, Government of India – 2016 and Bharata Ratna Sir M Visvesvaraya Science Award for the contributions in the field of Yoga Education and Yoga Therapy from Svadeshi Vijnana Andholan, Karnataka – 2010.



Dr. W. Selvamurthy is presently working with Amity University as President, Amity Science, Technology and Innovation Foundation, Director General for Amity Directorate of Science and Innovation and Chancellor, Amity University, Chhattisgarh. Dr. Selvamurthy has served Defence Research and Development Organization (DRDO), Government of India for 40 years in which, all the health related and life science related technologies were developed and inducted in the Armed Forces for keeping the health and efficiency of soldiers even in extreme operational environments. This biomedical research immensely benefited the Armed Forces personnel and gave a lot of spin off benefits to the society at large. His R&D contributions include development of life support technologies for soldiers, NBC Defence Technology, Nano Technology Application for Defence, Application of yoga for the Armed Forces, Military psychology and others. He was the leader of the first Indo-Soviet scientific expedition to the Arctic Circle for polar physiology research.



Dr. Mukund V. Bhole has completed his M.B.B.S. from Govt. Medical College, Nagpur, Nagpur University, M.D. (Physiology) from A.I.I.M.S., New Delhi and Honorary D.Sc. (Yoga). Awarded by SVYASA, Deemed Yoga University, Bangalore. From 1961 to 1995 he Worked in Kaivalyadhama Yoga Research Institute, Lonavala in various capacities and retired as Joint Director of Research in May 1995. He also worked as the Managing Editor of the Quarterly Research Journal, 'Yoga Mimansa', published from the Institution since 1924 and 1987: Compiled and Edited 'Abstracts and Bibliography of articles published from Kaivalyadhama' during 1924 to 1984.



Dr. David Frawley (Pandit Vamadeva Shastri) is a Vedic teacher (Vedacharya) and author of forty books published in twenty languages worldwide over the last several decades. His diverse fields of expertise include Ayurveda, Yoga, Vedanta, Vedic astrology and Vedic Studies, on which he developed several courses and training programs. Dr. Frawley is a recipient of the Padma Bhushan Award from the govt. of India. He regards Vedic knowledge as a guiding light for humanity for the planetary age.



Dr. Avinash Patwardhan is Adjunct Assistant Professor in the department of Global & Community Health at George Mason University in Virginia, U.S.A.

Dr. Patwardhan's research interests are human sexuality, subjective wellbeing, violence and stress, yoga & Ayurveda, chronic diseases, health robotics, program evaluation, and women's health. In 2016-17, Dr. Patwardhan published seven articles on "yoga" in the context of "public health" in peer-reviewed journals. He has also published on topics like "syndromic surveillance" and "convenient care clinics".

Dr. Patwardhan is a non-practicing physician (Obstetrics and Gynecology) for 40 years with a Masters in Kinesiology and Health Promotion. His clinical and research work spans across three continents: Asia, U.S.A. and, Europe [work on a study for the W.H.O. (Traditional Medicinal Systems)]. Dr. Patwardhan is a Certified Health Education Specialist (CHES), is an Experienced Registered Yoga Teacher (Yoga Alliance USA- ERYT500), and a Member of International Association of Yoga Therapists (IAYT). Before coming to Mason, Dr. Patwardhan worked in non-profit as well as for-profit sectors of the American healthcare system and had been mainly involved in programs evaluation research.

Brief note on Yoga Vijnana Editorial Board Members



Sh. S. Sridharan, 71 years old, is the senior most teacher of the Krishnamacharya Yoga Mandiram (KYM). He is presently the Trustee, Yoga Therapist Consultant and Mentor at KYM.

Drawn by the desire to fully devote his time to Yoga, he gave up his position as a Merchant Banker and took to Yoga on full time basis in 1998. In 2002, he was directed to take the position of Managing Trustee of KYM, which was held by Desikachar for 25 years from the inception. In this position, he had to lead the KYM as the administrative and technical head. He held this position for about 8 years. This brought him to lime light in the world of Yoga.

He represented KYM in all the forums, conferences, seminars, etc. His career as Managing Trustee includes the distinction of getting ISO Certification and in KYM moving to its own building.

From 2010 to 2015 he served as a member of the Governing Body, Governing Council of the Morarji Desai National Institute of Yoga (MDNIY), the apex body for Yoga of the Ministry of AYUSH, Government of India. This gave an opportunity for him to spread the teaching of the tradition of KYM. He represents KYM in the Indian Yoga Association (IYA) as one of the founding members. He is a Life Time Member of IYA.

He is also on the Board of the Technical Committee of the Yoga Certification Board set up by the Ministry of AYUSH, which is active in bringing certification for Yoga Teachers. He Chairs the sub-committee constituted to draft a syllabus for Yoga Therapy Certification.

He was recently awarded the title 'Dronacharya' by the Rotary Club of Madras East.



Prof. Tanuja Nesari has completed her M.D. and Ph.D. in Ayurvedic Pharmacology (Dravyaguna vidnyan) from Gujarat Ayurved University, Jamnagar. Currently, she is working as Director as well as Head, Division of Translational Research & Biostatistics at All India Institute of Ayurveda, New Delhi. She is also heading Chair for Health Sector sub-skill Council for AYUSH, GOI. She has worked as CEO, National Medicinal Plants Board, Ministry of AYUSH, GOI. Currently she is member of Governing Council of IMS, BHU; member of General Assembly of ICCR; Member of Board of Governors, CCIM and Convener, Working Group-3 (Clinical Practice) on formulation of Integrative Health System; member, academic board of various universities like IPGT&R, Jamnagar; member, Scientific Advisory Board of CCRAS, member (Domain expert) of Technical Screening Committee (TSC) of NMPB; member, Scientific Panels in the Food Safety and Standards Authority of India. She has guided 33 MD, 20 PhD & 3 MPhil Scholars at post graduate level. She visited many countries for conducting CME courses and teaching Ayurveda.



Dr. Dilip Sarkar, MD, FACS, C-IAYT, D.Litt (Yoga) and Chairman of the Center for Integrative Medicine and Yoga, Taksha Institute, Hampton, Virginia is a retired Vascular Surgeon turned Yoga Acharya, Certified Yoga Therapist, Certified Ayurvedic Yoga Therapist and Ayurvedic Practitioner. He retired as an Associate Professor of Surgery at Eastern Virginia Medical School, Norfolk, Virginia and now teaches Yoga Therapy, Ayurvedic Philosophy and Ayurvedic Yoga Therapy both nationally and internationally to health care providers, with a focus on integrating Yogic and Ayurvedic wisdom with the science of Western Medicine. Dr. Sarkar started the first category one ACCME-approved CME (Continuing Medical Education) course in the USA for physicians: "Yoga Therapy for Medical Professionals" in 2010. He serves on several local and national healthcare boards as Past President of the Board of Directors for the American Heart Association, Hampton Roads Chapter, Virginia, Immediate Past President of the Board of Directors, International Association of Yoga Therapists (IAYT), Chairman of the Board, Life in Yoga Institute, Life Member, National Ayurvedic Medical Association (NAMA). Fellow, American College of Surgeons (FACS) and Fellow, American Association of Integrative Medicine (AAIM). On January 12, 2019 during annual convocation he was awarded Doctor of Letters (D.Litt) degree in Yoga by the best Yoga University of the world SVYASA (Swami Vivekananda Yog Anushandhana Samsthana) of Bengaluru, India.

His new DVD "*Yoga Therapy for Health and Healing: A Daily Practice*" and his book "*Yoga Therapy, Ayurveda and Western Medicine: A Healthy Convergence*" published in April of 2017" has been well received by the Yoga Therapy, Ayurveda and Western Health Care community. The book will be translated in Bengali and will be published in India by Ananda Publisher of Kolkata, India in 2019.



Dr. K. K. Deepak obtained his MBBS degree from GMC, Bhopal in 1981 and Post Graduate Degree in 1984 & PhD Degree in Physiology in 1990 from AIIMS, New Delhi. He has been awarded DSc degree from SVYASA University from Bengaluru. He has been serving as faculty in the Dept of Physiology since 1987. Currently he is heading the department and also serving as Dean, Examinations at AIIMS New Delhi.

Dr Deepak set up the Autonomic Function Lab in the department of Physiology in 1989. It was the first lab of its kind in the country. This lab provides clinical services, research facility and training. He has been directing research into the Autonomic investigation of various clinical disorders. He pioneered the development of Heart Rate Variability (HRV) and disseminated it throughout the country. Realizing the need of vascular assessment in autonomic testing, he set up another lab for evaluating human vascular functions in 2000. His team led to the development of indigenous software for quantification of autonomic tone by HRV & vascular tone by Blood Pressure Variability (BPV). His team has developed a cloud base program for centralized HRV system for the country.

He has been interested in innovations in medical research and worked with Indian Institute of Technology (IITs) & other engineering institutions. He devised blood pressure simulation model and filed 3 patents on medical devices. He also devised the techniques of EMG biofeedback for patients of hand dystonia and electro-gastro-graphy (EGG) for irritable bowel syndrome.

Recently he has served as Chairman for the committee to finalize various Physical activity and their assessment protocols under FIT India program of GOI, where he supported the inclusion of yoga protocols for fitness for all age groups. The age appropriate protocols are available on Fit India website.

He has published 187 full length indexed research papers which have more than 3200 citations with H index of 30 and i10 index 74 in Google Scholar.



Dr. P. N. Ravindra is a neurophysiologist by specialized training has a passionate interest in integrating Indian psychological aspects pertaining to Yoga (meditation) with neuroscience with special focus in understanding neuroscientific aspects of meditation and its effect on sleep & cognition. Has many peer reviewed publications in national and international journals of repute. His work recognized with an National award from Association of Physiologist and Pharmacologist of India. Conducts seminar/workshops at various institutions and organizations on various contemporary subjects with integrating neuroscience with Indian psychology and philosophy with special reference to Swami Vivekananda. Is a national faculty in conducting courses on sleep and sleep medicine. Has traveled extensively for lecture and workshops in various countries.

As a founder Hon. Director of Swami Vivekananda study center, Karnataka University Dharwad, a curriculum for a course personal and professional skill development an open elective course. The curriculum based on the integration of neuroscience, yoga, Indian psychology principles. He is also a fellow of Mind and Life Institute.



Dr. Indranill Basu-Ray is a staff Cardiologist and Cardiac Electrophysiologist & the Director of Cardiovascular Research at the Memphis Veterans Medical Center in Memphis, TN, USA. Concurrently he is an Adjunct Professor at The School of Public Health, The University of Memphis, Memphis, TN, USA. Dr. Basu-Ray has learned meditation from multiple Himalayan gurus and has been practicing Kriya Yoga for over three decades now. His research centers on the use of meditation and yoga in cardiovascular diseases. He is also one of the cardiologists who wrote the American Heart Association's scientific



Dr. Geetha Krishnan Gopalakrishna Pillai is currently the AYUSH expert in the World Health Organization. He is the first person to have been selected by the Govt. of India to this post, where as a Technical officer in the Traditional, Complementary and Integrative Medicine Unit of WHO, he works on policies and guidelines of WHO for AYUSH (Ayurveda, Yoga, Unani, Siddha, and Homeopathy) systems. Dr Geetha is a researcher, and clinician. His broad background expertise is in Ayurveda, with specific skills, training and experience Integrative Medicine and herbal drug development. He has proposed the Axial Model of Integrative medicine, a working model for integrating multiple systems of medicine in 2011. Based on this model, he successfully established the integrative medicine department in India's largest multispecialty hospital. Here he proved the clinical benefits and economic viability of Integrative medicine through successful application of the model and managed

more than 17000 patients in a period of seven years. He has experience and expertise in using clinical interventions of Ayurveda and Yoga in Integrative practice and research. He has several completed and ongoing clinical research projects, to his credit -as a Principal Investigator- in the areas of Cancer, Diabetes, and Infectious diseases. He also has several peer reviewed publications to his credit, from each completed project and has been awarded patents in US and Germany. His research has been supported by government, private, and institutional grants. He has been successful in initiating and establishing several effective collaborations.



Prof. JS Thakur is Professor of Community Medicine at Post Graduate Institute of Medical Education and Research, Chandigarh, India. He is Member of Mission Steering Group of National Health Mission, MOHFW, Govt; of India. He has authored a book on Public Health Approaches to Noncommunicable Diseases released by Union Health Minister of India in 2015. He is expert member of India COVID-19 expert group. He is a strong votary of functional integration of Yoga with modern medicine.



Dr. Ishwar V. Basavaraddi is the Director of Morarji Desai National Institute of Yoga, Ministry of AYUSH, Govt. of India, since June 2005. He has more than 32 years of teaching and research experience in the field of Yoga. Dr. Basavaraddi is basically a Physicist having done his M. Sc. in Physics. Later he turned to Yoga and Yoga Philosophy. He did M. A. in Philosophy and Ph. D in Yoga Philosophy. He has two Post Graduate Diplomas to his credit – one in Yoga Education and another in Computer Application. He has got Yoga training for Advanced Yoga adhana at eminent Yoga Institutes under reputed Indian Yoga Masters.



Prof. M. A. Lakshmithathachar is an internationally acclaimed scholar of Indian Philosophy and Sanskrit literature. He has dedicated his life for the preservation and propagation of the Indian Knowledge Systems and also in establishing their contemporary relevance. He is a Senior Scholar and Researcher of Yoga with a vast experience of teaching for more than six decades.



Dr. M. A. Alwar is a traditional Sanskrit scholar specialising in the Nyaya and Visistadvaita Vedanta Systems of Philosophy and is deeply interested and active in inter-disciplinary research of the traditional Indian knowledge systems with contemporary knowledge systems. He is, at present, working as Professor of Nyaya in the Maharaja's Sanskrit College, Mysore, and also as Honorary Project Director of the Trans-disciplinary University at Bengaluru



Md. Taiyab Alam is the Communication & Documentation Officer of Morarji Desai National Institute of Yoga, Ministry of AYUSH, Govt. of India, since January 2018. He is involved in the promotion and propagation of Yoga both in Indian and abroad.



Dr. Vandana Singh is an Assistant Professor at Morarji Desai National Institute of Yoga, New Delhi. Her area of interest is Film Studies and Comparative Literature.

किरेन रीजीजू

राज्य मंत्री (स्वतंत्र प्रभार)
युवा कार्यक्रम एवं खेल मंत्रालय,
आयुर्वेद, योग और प्राकृतिक चिकित्सा, यूनानी
सिद्ध, सोवा-रिग्पा एवं होम्योपैथी (आयुष)
राज्य मंत्री अल्पसंख्यक कार्य मंत्रालय
भारत सरकार



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Ayurveda, Yoga & Naturopathy, Unani,
Siddha, Sowa-Rigpa and Homeopathy (AYUSH) &
Minister Of State Minority Affairs
Government Of India



MESSAGE

Ministry of AYUSH, formed in year 2014, aimed to ensure the optimal development and propagation of AYUSH systems of health care. Earlier, it was created (in March, 1995) & known as the Department of Indian System of Medicine and Homeopathy (ISM&H). It was renamed in November, 2003 as Department of Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy (AYUSH) under Ministry of Health & Family Welfare.

The Yoga is an array of practices which encompasses physical, mental and spiritual disciplines originating from Ancient India. It is wide spread and adopted both within India and abroad. In recent times, people have accrued immense benefits from it on all these levels. The United Nations General Assembly has designated the 21st of June as 'International Day of Yoga', a testament to its popularity. AYUSH is an acronym where Y stands for Yoga and Naturopathy.

The Yoga Vijnana Journal is being brought out by the Morarji Desai National Institute of Yoga (MDNIY), an autonomous organization under the Ministry of AYUSH. The institute was established with primary objective of bringing out the fundamentals of Yoga, giving scientific credence to it and disseminating it across the world. This will enable both Yoga practitioners as well as teachers to understand all aspects of Yoga, in the way it was depicted in original sources, reaffirmed with adequate scientific enquiries. I extend my best wishes to the Editorial Team as well as all those who are contributing to this journal and wish them all success.

(Kiren Rijju)



सत्यमेव जयते

वैद्य राजेश कोटेचा
Vaidya Rajesh Kotecha



सचिव
भारत सरकार
आयुर्वेद, योग व प्राकृतिक चिकित्सा
यूनानी, सिद्ध, सोवा रिग्पा एवं होम्योपैथी (आयुष) मंत्रालय
आयुष भवन, 'बी' ब्लॉक, जी.पी.ओ. कॉम्प्लेक्स,
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MESSAGE

During last few decades, the world has witnessed a great renaissance in a unique manner with exalted Yoga traditions of India. In modern times, Yoga has gained immense popularity all over the world. Nowadays, people from all over the world are thronging to India to know the nuances of the yogic practices predominantly in view of wellness and therapeutics. However, the principal aim of Yoga, which the ancient Indian seers to whom the unique truths of Yoga were revealed, would not be limited to wellness and therapeutics alone. They were of the opinion that the final goal of Yoga was self-realization rather than practice of Asanas and Pranayama alone. Practice of these two aspects too was subsidiary to the principal objective of self-realization.

I am glad to see that the 'Yoga Vijnana' Journal being brought out by the Morarji Desai National Institute of Yoga (MDNIY), covers all the above aspects. MDNIY, an autonomous body under Ministry of AYUSH, has been a pioneer in disseminating globally the knowledge pertaining to Yoga and allied subjects such as modern medicine or therapy. Such efforts are the need of the day and Ministry of AYUSH actively cheers on the same. I sincerely wish that the Journal will grow from strength to strength and contribute positively.

I commend MDNIY for taking such initiatives to prepare this valuable publication, a welcome addition to any library. It will be of great utility in serving the needs of Yoga-knowledge-seekers, I believe. I further urge the institution to bring out with such publications in future with a view to enrich the literature preserving the authentic Indian Yoga traditions.

राजेश कोटेचा
(Rajesh Kotecha)

New Delhi,
Dated: 01st February, 2021

Editorial



Morarji Desai National Institute of Yoga, Ministry of AYUSH, Govt. of India. MDNIY is a focal Institute for Planning, Training, Promotion and Coordination of Yoga Education, Training, Therapy and Research in all its aspects. MDNIY aims to promote a deeper understanding of Yoga philosophy and practices based on classical Yoga amongst people. The main Vision and Mission of the Institute is “Health, Harmony and Happiness for all through Yoga”.

Presently, the institute has taken up the task of reviving its bi-annual Journal ‘Yoga Vijnana– the Science and Art of Yoga’. This peer-reviewed journal focusses to be a platform for preserving and disseminating the ancient knowledge system of Yoga which is both an art and a science as is becoming more and more evident, due to various scientific experiments being conducted all over the world. This Journal proposes to showcase to the world the strong theoretical foundations of Yoga in being an astute path to achieve self-realization, as well as being a comprehensive application-oriented knowledge system that ensures physical and mental wellness.

The word ‘Yoga’ in Sanskrit refers to ‘union’, i.e. union of ātman (Self, i.e. the person) with Brahman. Mention of Yoga occurs in the Upaniṣads, Purāṇas, Bhagavad Gītā and several other ancient sources. Yoga Sūtra defines the term Yoga as the process of making the mind tranquil and “stationary”, and also goes on to explain the real purpose of Yoga as reaching Brahman (Supreme Truth), i.e. attainment of mokṣa. Yoga is an ancient Indian science and art catering to the physical, mental and spiritual well-being of an individual and by consequence, society at large. Reports suggest that there are more than 300 million Yoga practitioners in the world, which is a testimony to its popularity.

Yoga has become extremely popular across the world not only due to the teachings and efforts of several personalities across the ages but also due to the fact that several studies have been conducted to justify the benefits of Yoga. Based on the benefits it offers, it is treated as an alternative therapy in modern times.

The current Journal ‘Yoga Vijnana’ - proposes to highlight all of the above issues in a versatile manner and has articles by several versatile traditional Yoga experts and scientists.

The first article titled **‘FOUNDATIONS, CONCEPTS AND PRACTICES OF YOGA FOR HEALTH AND WELL-BEING’** by *Dr. Ishwar V. Basavaraddi* explains the foundational concepts of Yoga as a comprehensive system for wellness.

The second article **“Practice of Eka-tattvābhyāsa in the Yogasūtra-s – Analysis Based on select classical commentaries”** by *Dr. M. Jayaraman* is a good analysis of one of the important principles associated with the spiritual aspects of Yoga.

The third article **THE ASHTAANGA YOGA OF THE YOGA UPANISHADS** by R. S. Alvar clearly delineates how the Ashtanga Yoga is mentioned in the Yoga Upanishads along with authentic references.

The fourth article **Svādhīna-Sañjīvanam - a 20th century Sanskrit work on Yoga** by *Dr. K. S. Kannan* is a well-written review of a versatile treatise authored in the last century in Sanskrit.

The fifth article **Yoga in the Purāṇas** by *Vinay Iyer* gives a comprehensive account of the Yoga system in the 18 Puranas’.

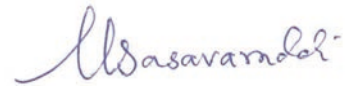
The sixth article titled **A Critical Review of Instrumentation on Nadi** by *Dr. TV Ananthapadmanabha* shows how the process of Naadi-Vijnana mentioned in the Yoga Shastra can be scientifically validated.

The seventh article **Pratyāhāra – A Neuroscientific Perspective of Yoga Shastra** by *Mohan Raghavan & M. K. Raghavendra*, is also another article that analyses the scientific background of a very unique practise associated with the spiritual aspect of Yoga Shastra.

The eighth and final article **AHAARA VIGNANA and YOGA** by *Dr. V. Prakash*, though relatively short in size, clearly summarizes the close relationship between food science and the practise of Yoga.

The Journal is well guided by an Advisory Board and Editorial Board having many stalwart scholars and scientists who have great regard and passion for the subject and are sincerely contributing for the cause of making this Journal a publication of a very high order. I, therefore, profusely thank all the members of the Advisory Board and Editorial Board for their guidance. I express my deep sense of gratitude to the officials and Honourable Minister of the AYUSH Ministry of the Govt. of India for their unstinted support. Further, I thank all the authors who have contributed scholarly articles to make the Journal a highly sought-after publication. I also thank the members of the Editorial team from the MDNIY who have strived hard to facilitate the offline and online versions of the Journal that is universally accessible.

Suggestions for improvement of the Journal are welcome from all quarters.



(Dr. Ishwar V. Basavaraddi)

Editor-in-Chief

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FOUNDATIONS, CONCEPTS AND PRACTICES OF YOGA FOR HEALTH AND WELL-BEING

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ABSTRACT

Yoga is the spiritual discipline based on an extremely subtle science, focussing on harmony between mind and body. As per Yogic scriptures the practice of Yoga leads to the union of individual consciousness with that of the Universal Consciousness, indicating a perfect harmony between the mind and body, Man & Nature. The science of Yoga has its origin thousands of years ago, long before the first religion or belief systems were born. Thus the aim of Yoga is Self-realization, to overcome all kinds of sufferings leading to 'the state of liberation' (Mokṣa) or 'freedom' (Kaivalya).

Keywords: Self-realization, Universal Consciousness

1. INTRODUCTION

Yoga is essentially a spiritual discipline based on an extremely subtle science, which focuses on bringing harmony between mind and body; thought and action; restraint and fulfilment; man and nature; a holistic approach to health and well-being. It is an art and science of healthy living.

The word '**Yoga**' is derived from the Sanskrit root 'Yuj', meaning 'to join' or 'to yoke' or 'to unite'.¹ As per Yogic scriptures the practice of Yoga leads to the union of individual consciousness with that of the Universal Consciousness, indicating a perfect harmony between the mind and body, Man & Nature. According to modern scientists, everything in the universe is just a manifestation of the same quantum firmament. One who experiences this oneness of existence is said to be in yoga, and is termed as a yogī, having attained to a state of freedom referred to as mukti, nirvāṇa or mokṣa. Thus the aim of Yoga is Self-realization, to overcome all kinds of sufferings leading to 'the state of liberation' (Mokṣa) or 'freedom' (Kaivalya). Living with freedom in all walks of life, health and harmony shall be the main objectives of Yoga practice. "Yoga" also refers to an inner science comprising of a variety of methods through which human beings can realise this union and achieve mastery over their destiny. Yoga has proven itself in catering to both material and spiritual upliftment of humanity. Basic humane values are the very identity of Yoga Sādhana.

2. BRIEF HISTORY AND DEVELOPMENT OF YOGA

The science of Yoga has its origin thousands of years ago, long before the first religion or belief systems were born. The seers and sages carried this powerful Yogic science to different parts of the world including Asia, the Middle East, northern Africa and South America. Interestingly, modern scholars have noted and marvelled at the close parallels found between ancient cultures across the globe. However, it was in India that the Yogic system found its fullest expression.

Yoga is widely considered as an “immortal cultural outcome” of the Indus Sarasvatī Valley Civilisation - dating back to 2700 BC. A number of seals and fossil remains of Indus Sarasvatī Valley Civilisation with Yogic motifs and figures performing Yoga sādhanā suggest the presence of Yoga in ancient India. The seals and idols of mother Goddess are suggestive of Tantra Yoga. The presence of Yoga is also available in folk traditions, Vedic and Upaniṣadic heritage, Buddhist and Jain traditions, Darśanas, epics such as Mahābhārata (including the Bhagavad-gītā, which is a section within it) and Rāmāyaṇa, theistic traditions of Śaivas, Vaiṣṇavas and the Tantric traditions. Though Yoga was being practiced in the pre-Vedic period, the great sage Maharṣi Patañjali systematised and codified the then existing Yogic practices, its meaning and its related knowledge through Patañjali’s Yoga Sūtras.

After Maharṣi Patañjali, many sages, scholars and Yoga masters contributed greatly towards the preservation and development of the field through well-documented practices and literature. Yoga has spread all over the world through the teachings of eminent Yoga masters from ancient times to the present date. Today, everybody has conviction in Yoga practices, with regard to prevention & management of diseases, and promotion of health. Millions of people across the globe have benefited from the practice of Yoga and the practice of Yoga is blossoming and growing more vibrant with each passing day.

2.1 Salient Features of Yoga:

1. Yoga is Essentially Spiritual
2. It is a Darśana (Philosophy)
3. It is a Science
4. It is an Art of Healthy Living
5. It brings Harmony
6. Yogic practices are Mind-centric

3. THE FUNDAMENTALS OF YOGA

Yoga works on the level of one’s body, mind, emotion, intelligence and energy. This has given rise to following broad classifications of Yoga: Jñāna Yoga, where we utilise the intelligence (Buddhi); Bhakti Yoga, where we utilise the emotions (Bhāva); Karma Yoga, where we utilise the body (Śarīra); Dhyāna Yoga, where we utilise the mind (Manas); and Kriyā Yoga, where we utilise the energy (Prāṇa). Each system of Yoga that we practice falls within the gamut of one or more of these categories.

Every individual is a unique combination of these five factors. Only a guru (teacher) can prescribe the appropriate combination of these five fundamental paths, as would be necessary for each seeker. All ancient texts and commentaries on Yoga have stressed that it is essential to work under the direction of a guru.²

4. TRADITIONAL SCHOOLS / KINDS OF YOGA

The different philosophies, traditions, lineages and guru-śiṣya paramparās of Yoga led to the emergence of different traditional schools. These include Jñāna Yoga, Bhakti Yoga, Karma Yoga, Pātañjala Yoga, Dhyāna Yoga, Kuṇḍalinī Yoga, Haṭha Yoga, Mantra Yoga, Laya Yoga, Rāja Yoga, Jaina Yoga, Bauddha Yoga, etc. Each school has its own approach and practices that lead to the ultimate aim and objectives of Yoga.

5. YOGIC PRACTICES FOR HEALTH AND WELL-BEING

The widely practiced Yoga sādhanās are: Yama, Niyama, Āsana, Prāṇāyāma, Pratyāhāra, Dhāraṇā, Dhyāna, Samādhi, Bandhas and Mudrās, Śatkarmas, Yuktāhāra, Mantra-japa, Yukta-karma, etc.

Yamas are restraints and **Niyamas** are observances.³ These are considered to be pre-requisites for further Yoga practice.⁴

Āsanās, which are capable of bringing about stability and comfort to the body and mind,⁵ “kuryāttadāsanam sthairyam”,⁶ involve, adopting various psycho-physical body patterns and giving oneself an ability to maintain a body position (a stable awareness of one’s own structural existence) for a considerable length of time.

Prāṇāyāma consists of developing awareness of one’s breathing followed by wilful regulation of respiration as the functional or vital basis of one’s existence. It helps in developing awareness of one’s mind and helps to establish control over the mind. In the initial stages, this is done by developing awareness of the “flow of inhalation and exhalation” (śvāsa and praśvāsa) through nostrils, mouth and other body openings, its internal and external pathways and destinations.⁷ Later, this phenomenon is modified, through regulated, controlled and monitored inhalation (śvāsa) leading to the awareness of the body space getting filled (pūraka), the space(s) remaining in a filled state (kumbhaka), and it getting emptied (rechaka) during regulated, controlled and monitored exhalation (praśvāsa).⁸

Bandhas and Mudrās are practices associated with Prāṇāyāma. They are viewed as the higher Yogic practices that mainly adopt certain physical gestures along with control over respiration. This further facilitates control over mind and paves the way for a higher Yogic attainment.

Pratyāhāra indicates dissociation of one's consciousness (withdrawal) from the sense organs which connect with the external objects.⁹

Dhāraṇa (concentration) indicates broad based field of attention (inside the body and mind) which is usually understood as concentration.¹⁰

Dhyāna (meditation) is contemplation (focussed attention inside the body and mind)¹¹ and **Samādhi** (integration).¹²

Ṣaṭkarmas are detoxification procedures that are clinical in nature and help to remove the toxins accumulated in the body.

Yuktāhāra (right food) advocates appropriate food and food habits for healthy living.¹³ A few dietary guidelines can ensure that the body and mind are flexible and well-prepared for practice. A vegetarian diet is usually recommended, and for a person over 30 years, two meals a day should suffice, except in cases of illness or very high physical activity or labour.

However practice of Dhyāna (Meditation) helping in self-realisation leading to transcendence is considered as the essence of Yoga Sādhanā. However, 'a judicious combination of practice of Āsana, Prāṇāyāma and Dhyāna daily, keeps an individual healthy and disease-free'.

The knowledge aspect of Yoga Sādhanā is being extensively researched today, an advantage to Yoga practitioners. Psychological, anatomical, physiological, bio-chemical and philosophical phenomena underlying Yoga Sādhanā are comparatively better understood today. This is a matter of satisfaction for the entire humanity. So also, elaborate and effective means of its transmission, such as internet across the globe, is a great stride towards the propagation of Yogic knowledge. Teaching methodology in Yoga has also ingrained the methodological rigours of modern education into it. There is also a growth of teaching schools of Yoga across the globe. An earnest scientific and philosophical-literary research has also arisen globally and is yet another encouraging sign of continuing evolution of Yoga.

Principles of Yoga Therapy and Methods:

Yoga Therapy

It is important to adopt a holistic lifestyle and follow a healthy regimen to live a healthy and peaceful life. The modern world is facing a pandemic of lifestyle disorders that require changes to be made consciously by the individuals themselves. Yoga places great importance on a proper and healthy lifestyle whose main components are:

1. **Āhāra** – Yoga emphasises need for a healthy, nourishing diet that has an adequate intake of fresh water along with a well-balanced intake of fresh food, green salads, sprouts, unrefined cereals and fresh fruits. It is important to be aware of the need for a Sattvic diet, prepared and served with love and affection.
2. **Vihāra** – Proper recreational activities to relax body and mind are essential for good health. This includes proper relaxation, maintaining quietude in the realms of action, speech and thoughts, and group activities wherein one loses the sense of individuality. Karma Yoga is an excellent method for losing the sense of individuality and gaining a sense of universality.
3. **Ācāra** – Yoga stresses the importance of healthy activities such as exercise and recommends Āsana, Prāṇāyāma and Kriyās on a regular basis. Cardio-respiratory health is one of the main by-products of such healthy activities.
4. **Vicāra** – Right thoughts and right attitude towards life is vital for wellbeing. A balanced state of mind is obtained by following moral restraints and ethical observances (Yama & Niyama). As Mahatma Gandhi said, "there is enough in this world for everyone's need but not enough for any one person's greed".

The Yoga therapy is based on the following doctrines and concepts:-

- Doctrine of "Chitta-vṛttinirodha", "Kriyāyoga" and "Aṣṭāṅga" as found in Patañjali's Yoga Sūtras.
- Doctrine of "Pañcakośa" (five sheaths/bodies) as found in Upaniṣads.
- Doctrine of various kinds of "Śuddhi" found in Patañjali Yoga Sūtra and Haṭhayoga.
- Doctrine of opening blocked channels of vāyus and prāṇa (nāḍīśuddhi), opening of lotuses and cakras, prāṇāyāma, mudrās and drṣṭis as found in Haṭhayoga and Kuṇḍalinī Yoga.
- Working with the mind on the lines of Patañjali Yoga Sūtra, Mantra Yoga and Haṭhayoga.

- Working on the lines of “Karma-Jñāna-Bhakti” from Bhagavadgītā.
- Certain aspects of Tantra Yoga also get integrated in various Yoga practices.

Practices to purify the body:

The aim of Haṭhayoga is to create a balance among activities and processes of body, mind and energy. This balance helps in the awakening of the central force, suṣumnā nāḍī which is responsible for the evolution of human consciousness. Purification of the cakras and nāḍīs is the first step; the assumption is that complete removal of impurities from whole body purifies the nāḍīs through six different ways which facilitates the flow of prāṇa. These are purificatory processes usually classified into six divisions and therefore they are often called Ṣaṭkriyās or Ṣaṭkarma.

These are: ¹⁴

1. Dhauti
2. Basti
3. Neti
4. Trāṭaka
5. Nauli
6. Kapālabhāti

The main effects of śuddhi-kriyās are:

1. Cleansing, activating and revitalising the organs
2. Toning up the functions of the organs
3. Desensitisation
4. Development of deep internal awareness

Principles of Yoga in the Management of Kleśas & Vṛttis:

Yoga is a path towards realisation of true nature of the Self and practitioners of Yoga in search of this spiritual goal have evolved this art and science from time immemorial. Yoga is a “true nature of the Self”. This is a continuous experiential path which transcends various states of consciousness to ultimately merge with the reality or the infinite pure consciousness featured by Kaivalyam or eternal freedom. This state of Kaivalyam can be attained only through ‘chittavṛtti-nirodha’ i.e. the cessation of all the mental processes. Patañjali advocates development of correct psychological attitudes such as Maitrī (friendliness towards those who are at peace with themselves), Karuṇā (compassion for the suffering), Mudita (cheerfulness towards the virtuous) and Upekṣaṇa (indifference and avoidance of the evil) as first step ¹⁵ and then suggests the practice of Abhyāsa-Vairāgya, ¹⁶ aṣṭāṅgayoga ¹⁷ and kriyāyoga ¹⁸ to achieve the state of Chittavṛttinirodha. Abhyāsa is regular / punctual practice with patience and perseverance and Vairāgya connotes a virtual freedom from attachment

and indulgence to all worldly things and all pleasure of life. The practice of Abhyāsa and Vairāgya leads to viveka khyāti (discriminating wisdom). Kriyā yoga has three parts: (1) training and purifying the senses (tapas), (2) self-study in the context of teachings (svādhyāya), and (3) devotion and letting go into the creative source from which we emerged (īśvara praṇidhāna). The practice of both Abhyāsa-vairāgya and kriyā yoga reduces the gross and subtle thought patterns (vṛttis and kleśas) such as thoughts / information perceived through the interaction with sense organs, this reduces the kleśas into an attenuated state, where the impulsiveness of the kleśas are reduced, Patañjali advocates the practice of graded course of meditation aṣṭāṅga Yoga such as Yama, Niyama, Āsana, Prāṇāyāma, Pratyāhara, Dhāraṇā and Dhyāna leading to a state of Samādhi which burn the attenuated kleśas with the light of prajñā (super sensuous knowledge) defined as “ṛtambharā tatra prajñā” ¹⁹, which reveals the true nature of puruṣa and its distinctness from buddhi known as viveka-khyāti.

Principles of Yoga therapy in the Management of Pañcakośa:

The application of Yoga as a therapy can be correlated with the Upaniṣadic model of the Pañca Kośa (the five aspects of our existence) ²⁰ and hence various Yogic practices may be used as therapeutic interventions at different levels in this respect.

- At the **Annamaya Kośa** (anatomical level of existence) Yogic Sūkṣma Vyāyāma (simple movements for all body parts), Mudrās (gestures for energy generation and conservation), Kriyās (structured movements), Āsanas (steady and comfortable postures) along with the dietary modifications are useful.
- At the **Prāṇamaya Kośa** (physiological level of existence) Ṣaṭkarma (six cleansing processes), various Prāṇāyāmas, development of breath awareness and working on breath-movement coordination with emphasis on balancing Prāṇic energy is to be done. Work on re-energising and integrating the energies of the Pañca Prāṇa and Upa-Prāṇa Vāyus needs to be done at this level.
- At the **Manomaya Kośa** (psychological level of existence) there are numerous practices such as Trāṭaka (concentrated gaze), Dhāraṇā (concentration), Dhyāna (meditation), Japa and Japa-Ajapa practices that are useful. Various aspects of concentration such as the Cakra-dhāraṇa and other Yoga Dṛṣṭi techniques are also available in Yoga. An

awareness of all aspects of the Antaḥkaraṇa needs to be developed at this level.

- When trying to deal with the **Vijñānamaya Kośa** (intellectual level of existence), Svādhyāya (self-analysis), Satsaṅga (lectures and spiritually uplifting exchange) along with the wonderful Jñāna Yoga and Rāja Yoga relaxation and concentration practices of Yoga are useful.
- To understand and work with the **Ānandamaya Kośa** (our universal level of existence), it is important to lose sense of the limited individuality. Learning to implement principles of Karma Yoga (Yoga as skilled action performed without expectation) and following the principle of action in relaxation helps us to achieve a sense of joy in all activities. A realisation that we live in a blissful universe and that all life is joy is to be brought about in this intervention through use of Bhakti Yoga, Karma Yoga and other aspects like Bhajana, Yogic counselling and Satsaṅga.

Practice of Jñāna Yoga: The present age of science has made man a rational being. Intellectual sharpness is imminent. Analysis forms the tool. Jñāna Yoga helps to discriminate between real and unreal nature, because avidyā (wrong knowledge) is the root cause to perceive the worldly phenomena as real but in reality it is not. The path of philosophy (Jñāna Yoga) is apt for the keen intellectuals and is centred on the analysis of 'reality and happiness', the vital contribution of Upaniṣads. Also many other fundamental questions regarding the mind, the outside and inside world are taken up. Basic questions are raised even involving the intellect itself to reach the very basis of intellect.

Practice of Karma Yoga: This path of working in relaxation, involves doing action with an attitude of detachment to fruits of action. This makes man release himself from the strong attachments thereby brings in him a steadiness of mind, which verily is Yoga – 'Samatvaṃ yoga ucyate'. Instruments of action and understanding (Karmendriyas and Jñānendriyas) get cleansed.²¹

Practice of Bhakti Yoga: The control of emotions is the key in the path of worship that involves pure love to the divine and is characterised by total surrender. In the age of globalisation, man is tossed up and down due to emotional onslaughts. The path of Bhakti is a boon to gain control over emotional instabilities by properly harnessing the energy involved in it.

Yoga is basically a preventive life-science and hence Yogic counselling is a vital component of **Yoga Cikitsā**

when dealing with all lifestyle disorders. The counselling process is not a 'one off' matter but is a continuous process that starts from the very first visit and continues with every session at different levels. Helping the patients understand their condition, finding the root cause of the problem and creating a healthy opportunity for them to change themselves, is the Dharma of the therapist. Dharma is defined as: doing the right thing for the right person at the right place and at the right time in the right manner. It may take many months before we start to witness benefits of these Yogic lifestyle changes and Yoga Cikitsā practices.

Mechanism of action of Yoga:

The following are just a few of the mechanisms through which Yoga works as an integrated mind-body medicine:

1. Cleanses the accumulated toxins through various śuddhi kriyās and generates a sense of relaxed lightness through sūkṣma vyāyāma (simple movements for all body parts). Free flow in all bodily passages prevents the many infections that may occur when pathogens stagnate therein.
2. Adoption of a Yogic lifestyle with proper nourishing diet, creates positive antioxidant enhancement thus neutralising free radicals while enabling a rejuvenated storehouse of nutrients packed with life energy to work on anabolic, reparative and healing processes.
3. Steadies the entire body through different physical postures held in a steady and comfortable manner without strain. Physical balance and a sense of ease with oneself enhance mental / emotional balance and enable all physiological processes to occur in a healthy manner.
4. Improves control over autonomic respiratory mechanisms through breathing patterns that generate energy and enhance emotional stability. The mind and emotions are related to our breathing pattern and rate and hence the slowing down of the breathing process influences autonomic functioning, metabolic processes as well as emotional responses.
5. Integrates body movements with the breath creates psychosomatic harmony. In Yoga the physical body is related to annamaya kośa (our anatomical existence) and the mind to manomaya kośa (our psychological existence). As the prāṇamaya kośa (our physiological existence sustained by the energy of the breath) lies in between them, the breath is the key to psychosomatic harmony.

6. Focuses the mind positively on activities being done, enhances energy flow and results in healthy circulation to the different body parts and internal organs. Where the mind goes, there the prāṇa flows!
7. Creates a calm internal environment through contemplative practices that in turn enable normalisation of homeostatic mechanisms. Yoga is all about balance or samatva at all levels of being. Mental balance produces physical balance and vice versa too.
8. Relaxes the body-emotion-mind complex through physical and mental techniques that enhance our pain threshold and coping ability in responding to external and internal stressors. This enhances the quality of life as seen in so many terminal cases where other therapies are not able to offer any solace.
9. Enhances self-confidence and internal healing capacities by the cultivation of right attitudes towards life and moral-ethical living through *yama-niyama* and various Yogic psychological principles. Faith, self-confidence and inner strength are most essential for healing, repair, rejuvenation and re-invigoration.
10. Yoga works towards restoration of normalcy in all systems of the human body with special emphasis on the psycho-neuro-immuno-endocrine axis. In addition to its preventive and restorative capabilities, Yoga also aims at promoting positive health that will help us to tide over health challenges that occur during our lifetime. This concept of positive health is one of Yoga's unique contributions to modern health care as Yoga has both a preventive as well as promoter role in the health care of our masses. It is also inexpensive and can be used in tandem with other systems of medicine in an integrated manner to benefit patients.

Yoga as a therapy (Cikitsā) is being practiced now as an alternative health care practice in many parts of the world. The number of Yoga practitioners continues to rise tremendously. Of the many benefits ascribed to Yoga practice, blood pressure control is among the most studied. There are several reviews regarding the potential benefits of Yoga for reducing blood pressure and other cardiovascular disease risk factors but the degree to which yoga therapy may decrease blood pressure and its

potential modifying effects remain unclear. Yoga therapy is also seen to improve indices of risk in adults with type-2 diabetes, including glucose tolerance and insulin sensitivity, lipid profiles, anthropometric characteristics and blood pressure. It also leads to a reduction in oxidant damage; improve coagulation profiles and pulmonary function, and decreases sympathetic activation in adults with diabetes and related chronic disorders. Yoga may also be useful in reducing medication requirements in patients with diabetes and could help prevent and manage cardiovascular complications in this population. Many research papers have been published in indexed peer-reviewed journals to prove the efficacy of Yoga therapy in the management of many muscular-skeletal disorders and lifestyle-related diseases

Conclusion: Thus, Yoga is the most perfect health and wellness module as it is comprehensive and holistic in its nature. Yogic principles of wellness help to strengthen and develop positive health enabling us to withstand stress better. This Yogic "health insurance" is achieved by normalising the perception of stress, optimising the reaction to it and by releasing the pent-up stress effectively through the practice of various Yogic practices.

Author Biography in brief:



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Dr. Ishwar V. Basavaraddi is the Director of Morarji Desai National Institute of Yoga, Ministry of AYUSH, Govt. of India, since June 2005. He has more than 32 years of teaching and research experience in the field of Yoga. Dr. Basavaraddi is basically a Physicist having done his M. Sc. in Physics. Later he turned to Yoga and Yoga Philosophy. He did M. A. in Philosophy and Ph. D in Yoga Philosophy. He has two Post Graduate Diplomas to his credit – one in Yoga Education and another in Computer Application. He has got Yoga training for Advanced Yoga Sadhana at eminent Yoga Institutes under reputed Indian Yoga Masters.

6. REFERENCES

1. Traditional Texts
2. Teaching Notes/Articles of Dr. M V Bhole

7. FOOTNOTES

1. Dhātupāṭha (rudhādi 7):
युजिर्योगे ।
2. As an example, refer Haṭhayogapradīpikā (1.14):
गुरुपदिष्टमार्गेण योगमेव समभ्यसेत् ॥
3. Yogasūtra (2.30 and 2.32):
अहिंसासत्यास्तेयब्रह्मचर्यापरिग्रहा यमाः ।
“Ahimṣa, satya, asteya, brahmacharya and aparigraha are the yamas.”
शौचसंतोषतपःस्वाध्यायेश्वरप्रणिधानानि नियमाः ।
“Śauca, saṁtoṣa, tapas, svādhyāya and īśvarapraṇidhāna are the niyamas.”
4. Yogasūtra (2.31):
जातिदेशकालसमयानवच्छिन्नाः सार्वभौमा महाव्रतम् ।
“[These] are to be kept in all situations, irrespective of class, place, time and circumstance [in the form of a] great penance.”
5. Yogasūtra (2.46):
स्थिरसुखमासनम् ।
“That posture which can be held for a long time without difficulties is āsana.”
6. Haṭhayogapradīpikā (1.19)
7. Yogasūtra (2.49):
तस्मिन्सति श्वासप्रश्वासयोगंतिविच्छेदः प्राणायामः ।
“[The practice of] stopping the flow of inhalation or exhalation [or both] when in it [seated in āsana] is termed prāṇāyāma.”
8. Darśanopaniṣad (Khaṇḍa 6 – Śloka 1 and 12-13):
प्राणायाम इति प्रोक्तो रेचपूरककुम्भकैः ।
“Prāṇāyāma is composed of pūraka, kumbhaka and recaka.”
बाह्यादापूरणं वायोरुदरे पूरको हि सः ॥
संपूर्णकुम्भकद्वयोर्धारणं कुम्भको भवेत् ।
बहिर्विरचनं वायोरुदराद्रेचकः स्मृतः ॥
“Filling of air into the stomach is known as pūraka. Holding air [in the stomach] just like a filled pot is known as kumbhaka. Releasing it is known as recaka.”
9. Yogasūtra (2.54):
स्वविषयासंप्रयोगे चित्तस्वरूपानुकार इवेन्द्रियाणां प्रात्याहारः ।

“When the mind interiorises and the sense follow suit, it is known as pratyāhāra.”

10. Yogasūtra (3.1)
देशबधश्चित्तस्य धारणा ।
“The fixture of the mind at a certain place is called dhāraṇā.”
11. Yogasūtra (3.2)
तत्र प्रत्ययैकतानता ध्यानम् ।
“Constant flow of thoughts towards only that is dhyāna.”
12. Yogasūtra (3.3)
तदेवार्थमात्रनिर्भासं स्वरूपशून्यमिव समाधि ।
“Dhyāna on an object where the objects form is no longer discernible, as though it no longer has a form, is samādhi.”
13. Bhagavadgītā (6.17):
युक्ताहारविहारस्य युक्तचेष्टस्य कर्मसु ।
युक्तस्वप्नावबोधस्य योगो भवति दुःखहा ॥
“[For a person who] practices proper food and exercise, proper activity and proper sleep and waking, yoga removes sorrow.”
14. Haṭhayogapradīpikā (2.22):
धौतिर्बस्तिस्तथा नेतिस्त्राटकं नौलिकं तथा ।
कपालभातिश्चैतानि षट्कर्माणि प्रचक्षते ॥
15. Yogasūtra (1.33):
मैत्रीकरुणामुदितोपेक्षाणां सुखदुःखपुण्यापुण्यविषयाणां
भावनतश्चित्तप्रसादनम् ।
16. Yogasūtra (1.12):
अभ्यासवैराग्याभ्यां तन्निरोधः ।
17. Yogasūtra (2.29):
यमनियमासन प्राणायामप्रत्याहार धारणाध्यानसमाधयोऽष्टावङ्गानि ।
18. Yogasūtra (2.1-2):
तपःस्वाध्यायेश्वरप्रणिधानानि क्रियायोगः । समाधिभावनार्थः
क्लेशतनूकरणार्थश्च ।
“Penance, Study, and renunciation to God constitute kriyāyoga. [This] is for the contemplation of samādhi and for the reduction of pain (or distractions).”
19. Yogasūtra (1.48)
20. Taittirīya Upaniṣad (second valli)
21. Bhagavadgītā (2.48-49):
योगस्थः कुरु कर्माणि सङ्गं त्यक्त्वा धनञ्जय ।
सिद्ध्यसिद्ध्योः समो भूत्वा समत्वं योग उच्यते ॥
दूरेण ह्यवरं कर्म बुद्धियोगाद्धनञ्जय ।
बुद्धौ शरणमन्विच्छत् कृपणाः फलहेतवः ॥

The practice of Eka-tattvābhyāsa in the Yogasūtras – Analysis based on select classical commentaries

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ABSTRACT

The practice of eka-tattva- abhyāsa needs to be understood so as to overcome the antarāyas. Unless one overcomes antarāyas, progress in the path of yoga will be difficult. Commentaries and sub-commentaries are written to explain and elaborate upon the ideas presented in the Sūtras. On most occasions they provide clarity and some times they provide multiple interpretations and at times mutually conflicting ideas. In such situations the discerning reader has to then reflect and draw conclusions which would assist practice.

Keywords: Ekatattva abhyasa, Antarayas, commentary, sutra

1. INTRODUCTION

The Yogasūtras mention about a practice of eka-tattva-abhyāsa which is advocated to overcome antarāya-s (obstacles in the path of yoga) which are also known as Vikṣepa-s (distractions). The practice of eka-tattva- abhyāsa needs to be understood so as to overcome the antarāyas. Unless one overcomes antarāyas, progress in the path of yoga will be difficult.

2. COMPOUND WORD

The word ekatattvābhyāsa is a compound word made up of three words – eka, tattva and abhyāsa. Translated literally it would mean one-object/principle-practice. (the practice of (focusing on) one object.).

3. VIEWS OF THE TRADITIONAL COMMENTATORS

Commentaries and sub-commentaries are written to explain and elaborate upon the ideas presented in the Sūtras. On most occasions they provide clarity and some times they provide multiple interpretations and at times mutually conflicting ideas. In such situations the discerning reader has to then reflect and draw conclusions which would assist practice. In this present topic of discussion too, one encounters various views presented as interpretations. From the point of view of the practitioner they need to be studied and reflected upon. This write-up endeavors to examine a few³ commentaries and sub-commentaries on eka-tattva-abhyāsa with an objective to just indicate the various ways in which this concept is discussed in the commentarial literature. This is not an exhaustive analysis based on all available commentaries.

- a) Vyāsa⁴ in his commentary simply states that – *one has to train the mind to hold on to one tattva (object/principle) in order to overcome Vikṣepa-s*⁵.

Vyāsa does not further elaborate this point. Rather, he focuses on refuting the view of Bauddha's that minds are many⁶.

- b) In the view of Vācaspati Miśra⁷— *eka-tattva* mentioned here is *īśvara*⁸. Hence, according to his view one has to contemplate upon *īśvara*. *Eka-tattva*, according to Vācaspati Miśra, has to be *īśvara* because it is the topic that has been dealt in preceding sūtras and that it is proper to be referred in the sutra on *eka-tattva-abhyāsa* (which follows them). This indicates that *eka-tattvabhyāsa* is same as that of *īśvara-praṇidhāna* in Vācaspati Miśra-s view.
- c) Bhoja in his commentary (*Bhoja-vṛtti*) states⁹ that *eka-tattva* can be taken to mean some principle/object of one's own liking (*abhimata-dhāyana*) that assists focusing the mind.
- d) But according to Vijñānabhikṣu *eka-tattva* may be any object which is gross etc¹⁰. He categorically states that *eka-tattva* cannot be *īśvara*¹¹. Hence, *eka-tattva-abhyāsa* cannot be *īśvara-praṇidhāna*. Further *īśvara-praṇidhāna* has been dealt in detail in the previous Sūtras. And so, he opines that it would not be proper to state that which has already been stated.
- e) Sadāśiva Brahmendra¹² toes the line of Vācaspati Miśra. He states that *eka-tattva* is *īśvara*¹³. And *abhyāsa* is the effort to enable the flow of the mental activity with that *eka-tattva* within the scope of mind. In the words that lead to this Sūtra (on *ekat-tattva*), Sadāśiva states it has been already stated that *antarāya-s* are to be overcome by *īśvara-praṇidhāna* (Yogasūtra 1.29). And this Sūtra on *eka-tattva-abhyāsa* is merely a reminder.¹⁴
- f) Hariharānanda araṇya¹⁵ says that – previously *īśvara-praṇidhāna* has been stated. In the initial stages of *īśvara-praṇidhāna*, one may start having multiple notions about *īśvara*. Like - *īśvara* is free from *kleśa-s* (miseries and their causes), he is omniscient, he is omnipotent etc. The mind will not be one-pointed then. So by practicing *eka-tattvābhyāsa* (single notion) initially on *īśvara* might help. He further adds that 'the one thought about *īśvara*' can be '*aham-bhāva*' ('I'ness in *īśvara*). One has to meditate '*I am also like īśvara*'.¹⁶

4. ANALYSIS OF THE VIEWS

The comments of the six traditional commentators above can be classified into three groups. Three opinions emerge out of the six commentators.

1. *Eka-tattva* is *īśvara*. And hence *eka-tattvābhyāsa* is nothing but *īśvara-praṇidhāna*. (Vācaspati Miśra, Sadāśiva Brahmendra)
2. *Eka-tattva* is *īśvara*. But it has to be practiced with single notion of *īśvara* so that mind is freed from *vikṣepa-s*. (Hariharānanda araṇya).
3. *Eka-tattva-abhyāsa* is focusing the mind on any (one) principle/object by which the mind can overcome *vikṣepa-s*. (Vyāsa, Vijñānabhikṣu and Bhoja)

Now a question arises as to which of the above three views is more probable. Let us examine one by one.

4.1 First view:

It has been stated previously that *īśvara-praṇidhāna* in the form of repetition of *praṇava* and contemplation upon its meaning helps to overcome

vikṣepa-s.¹⁷ Again it is stated that *eka-tattva-abhyāsa* will help overcome *vikṣepa-s*. Then a question arises as to which one of the two - *īśvara-praṇidhāna* or *eka-tattva-abhyāsa*, is to be practiced for overcoming

Vikṣepa-s?

If according to Vācaspati Miśra and Sadāśiva Brahmendra, *eka-tattva-abhyāsa* and *īśvara-praṇidhāna* are one and the same then the problem of which of the two should be practiced stands convincingly answered.

But then a question will arise? Why is there a repetition of ideas? Why is the same practice termed as *īśvara-praṇidhāna* and *eka-tattva-abhyāsa*? This is a Sūtra text which is of the nature of conveying ideas in a crisp manner. So, it would not be proper to state that ideas are repeated.

To this we find an answer in Vācaspati Miśra's work. He states¹⁸ that "this is a section which concludes ideas about (*abhyāsa* and *vairāgya*) on *īśvara-praṇidhāna*". Hence from his words it could be understood that rather than taking it as a repetition of ideas, this sutra on *eka-tattva-abhyāsa* is to be taken to sum up the section on *īśvara-praṇidhāna*.

4.2 Second view:

The second view by Hariharānanda is an attempt to find a golden mean.

He tries to overcome the possibility of repetition of ideas by presenting eka-tattva-abhayāsa as something different from īśvara-praṇidhāna. (as a practice prior to proper īśvara-praṇidhāna) But he tries to keep it related to īśvara-praṇidhāna by suggesting īśvara as the object of meditation in eka-tattva-abhayāsa.

4.3 Third view:

Of the three who hold this view – Vyāsa is non-specific about the object of meditation or the eka-tattva. His emphasis is on making the mind one pointed and overcoming vikṣepa-s. Since his emphasis is on the end and not the means, It can be assumed that he is not too particular that only īśvara should be the object of eka-tattva-abhyāsa.

Bhoja also explains that one can chose any object of that one prefers for focusing the mind(which can be termed as eka-tattva-abhyāsa). (But it would be interesting to see how the idea of repetition of ideas is avoided when the same idea of choosing an object of one's liking is stated later in the yogasūtra-s (1.39) – This idea is not further elaborated here for fear of losing focus on the present topic under discussion)

It should be noted that Vijñānabhikṣu is vocal in rejecting īśvara as the object of meditation in eka-tattva-abhyāsa. Because he says it would amount to repetition of ideas of īśvara-praṇidhāna. He further states that “eka-tattva-abhyāsa is a general term which means practice of focusing the mind in a single principle/object. Until and unless there is a compelling situation there is no need to interpret the meaning of a general term to denote a specific object. (The present context does not have any compelling necessity so as to restrict the meaning of the general term tattva (principle/object) to mean īśvara).”¹⁹ Further he makes certain points clear while discussing the yogasūtra 1.29.²⁰ “The result of īśvara-praṇidhāna is realization of the consciousness within. The absence of antarāya-s which is also said to be achieved by īśvara-praṇidhāna should be taken as mere ‘anuvāda’ (explanatory repetition).” Anuvāda is mere statement of fact to add to clarity. In his view, absence of antarāya-s

is achieved by the practice of eka-tattva-abhyāsa where any object can be taken up to counter the vikṣepa-s. When this is achieved, the practice of īśvara-praṇidhāna can be taken up which would lead to the realization of consciousness within. In that state quite naturally there would be absence antarāya-s.

5. CONCLUSION

Hermeneutically, the first view seems plausible. But keeping in view the need of the practitioner it lacks practical guidance. An objection raised by vijñānabhikṣu also needs to be stated in this context. “If Patañjali intended to state īśvara-praṇidhāna in the Sūtra on eka-tattva-abhyāsa then he could well have said it as īśvarābhyāsa to avoid ambiguity.”²¹ Why should he coin another word and use it in the same meaning? This question remains unanswered if one takes recourse to the first view. Further, the mechanism of how the practice of īśvara-praṇidhāna can remove antarāya-s is not evident from this interpretation.

The second sounds hermeneutically and practically possible. Even there a doubt persists. When one looks at the nature of vikṣepa-s and their off-shoots it can be understood that they are at multiple levels. Some of them are based on the body and prāna-s, some of them are based on the senses and some others arise from the mind.²² Hence fixing up īśvara (though with single notion) as the object of meditation to counter these challenges which may arise might be difficult for a practitioner who is at initial stages of his practice (as stated by Hariharānanda himself). īśvara is a subtle concept and needs a trained intellect to grasp his nature. It is evident from the sūtra-s that explain the concept of īśvara.²³ Even for an advanced practitioner it would be quite a challenge to have a subtle support (īśvara) to overcome distractions of varying proportions.²⁴

Thus from the above discussion it can be concluded that the third view which allows the freedom to fix-up any object of focus according to one's level of comfort seems to be the probable meaning intended by patañjali by the term eka-tattva-abhyāsa.

Even the third view needs further reflection. Rather than randomly fixing up any object for eka-tattva-abhyāsa, if the object of focus during eka-tattva-abhyāsa is determined by the practitioner going by the nature

of vikṣepa encountered, only then the very objective of eka-tattva-abhyāsa, i.e to overcome vikṣepa could possibly be achieved.

When once these anatārya-s are overcome gradually by eka-tattva-abhyāsa, higher practices like īśvara-praṇidhāna which directly lead to the accomplishment of samādhi becomes practicable by an initiate (practitioner) in the path of yoga.

Author Biography in brief:



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6. NOTES

1. Yogasūtra – To negate them (antaraya-s) one should do the one-object-practice 1.32
2. Obstacles include - disease, idleness, indecision, negligence, sloth, lack of detachment, confusion, not attaining a base state of mind for concentration and instability - Yogasūtra 1.30
3. The commentaries are presented in chronological order
4. The commentary of Vyāsa to the Yogasūtra-s is considered the earliest.

5. Vikṣepa-pratiṣedhārtham eka-tattvāmbanam cittam abhyaset
6. This discussion is beyond the scope of this article and hence it is not elaborated here.
7. He has written a sub-commentary to Vyāsa-s commentary on Yogasūtra-s. Vācaspati miśra-s sub-commentary is called Tattva-vaiśaradī.
8. ekatattvam īśvaraḥ prakṛtatvāt.
9. ekasmin kasmimścit abhimate tattve abhyāsaḥ cetasaḥ punaḥ punaḥ niveśanam kāryam
10. ekaṃ sthūlādi kiñcit
11. yattu ekatattvaśabdena atra parameśvara eva ukta iti tat na
12. author of yogasudhākara, commentary on the yogasūtra-s
13. ekatattvasya īśvarasya abhyāsaḥ kartavya-ḥ
14. pūrvoktam īśvarapraṇidhānameva asmin aṃśe smārayati
15. The name of his sub-commentary (on vyāsa-s work) is Bhāsvatī.
16. ekatattvāmbanāya ahambhāvaḥ śreṣṭho viśayaḥ... īśvaravadaham iti dhyāyet
17. tataḥ pratyak-cetanādhiḡamaḥ apyan-tarāyābhāvaśca yogasūtra-s 1.29
18. uktārtha-upasaṃhāra-sūtram avatārayati
19. bādhakaṃ vinā sāmānyaśabdasya viśeṣaparavānaucityāt
20. īśvara-praṇidhāna realization of the consciousness within and also absence of vikṣepa-s are achieved.
21. nissandehārtham īśvarābhyāsa ityeva vaktum yuktatvāt
22. Refer footnote 2.
23. Yoga-sūtra-s 1.24-26

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THE ASHTAANGA YOGA OF THE YOGA UPANISHADS

Colonel Ramesh Shama Alvar (Retd), Bangalore, 20 Jun 2020

was written under the Guidance of my Guru, Professor Lakshmithathacarya Swami and based on a work on the Yoga Upanishads written by me earlier.



ABSTRACT

Asanas are just one part of the System of Yoga called the Ashtaanga Yoga. Yoga as advocated by the Yoga Upanishads, which are about twenty in number. The Yoga of the Yoga Upanishads is fundamentally different from many other types of Yoga such as Hatha Yoga, Raj Yoga, Gnyana Yoga, Bhakti Yoga, Kriya Yoga, etc., though there may be some common elements. If one limb of the Ashtaanga Yoga were to be attempted without mastering the previous one, it would lead to a dangerous failure. Yamas & Niyamas are designed to make the Body and the Mind, strong, pure and fit for further Yoga. Asanas constitute the third limb of Yoga. Pranayama, Prathyahara, Dharana, Dhyana and Samadhi are the other limbs discussed here.

Keywords: Asana, Dharana, Dhyana, Pranayama, Prathyahara, Niyama, Samadhi, Yama, Yoga

1. INTRODUCTION

There are many people, both in India and abroad, to whom the term Yoga conjures up images of Asanas or physical postures demanding effort, great flexibility and determination. Asanas are just one part of the System of Yoga called the Ashtaanga Yoga. Our aim in this article is to briefly describe the Ashtaanga Yoga and to distinguish it from other types of Yoga. At the outset, it must be made clear that wherever the term Yoga is used in this article, it refers only to the Yoga as advocated by the Yoga Upanishads, which are about twenty in number. The Yoga of the Yoga Upanishads is fundamentally different from many other types of Yoga such as Hatha Yoga, Raj Yoga, Gnyana Yoga, Bhakti Yoga, Kriya Yoga, etc., though there may be some common elements.

The Yoga advocated by the Yoga Upanishads is called the Ashtaanga Yoga, which means Yoga of Eight Limbs or Components. It is a graded course in increasing order of difficulty and complexity.

Each limb prepares the adept specifically for the next one. If one limb of the Ashtaanga Yoga were to be attempted without mastering the previous one, it would lead to a dangerous failure. In real life, a student who has secured poor marks or failed in the 3rd Standard and yet been promoted, may do well in the 4th standard. But that would be impossible in Yoga. The Eight Limbs of Ashtaanga Yoga are as follows:-

1. Yama
2. Niyama



3. Asana
4. Praanaayaamaa
5. Pratyahaaraa
6. Dhaaranaa
7. Dhyana
8. Samaadhi
9. Yamas & Niyamas

Yamas & Niyamas are designed to make the Body and the Mind, strong, pure and fit for further Yoga. More importantly, they bring the Mind and the Body under the full control of the Jiva or the Sentient Principle in embodiment. The term 'yamah' in Sanskrit connotes a sense of restraint, control or self control. The Trishikhi Braahmanopanishad [Mantra, 32(ii) -33] and the Darshanopanishad [1-6] both tell us that there are ten kinds of Yamas, namely, ahimsa or non-violence; satyam or truthfulness; steyam or abstaining from theft or robbery; brhamacaryam or celibacy; dayaa or compassion; aarj- vama or rectitude; kshmaa or forbearance; dhruvi or firmness & fortitude; mitaahaaraha or temperance in food; and shaucam or cleanliness. Students can follow variations in other Texts with added benefit. However, the adept would do well to consult his or her Guru.

The term Niyama in Sanskrit also denote the sense of restraint; taming; subduing; a restriction or limitation. The Trishikhi Brahmanopanishad [Mantra, 33] says that tapah or penance; santosha or contentment, astikaya or belief in the existence of God and the other Worlds; 'daanaam' or charity: 'araadhanamhare' or the adoration of Sri Hari; 'vedaantashravanam' or the study of the Vedanta; 'hniha' or modesty; 'mati' or knowledge and discrimination; 'japa' or prayers; and lastly; 'vratam' or austerities; are the ten Niyamas. The Varaahopanishad [5/13-14 p.435] concurs with the Trishikhi Braahmanopanishad except that it uses the phrase 'Ishvara Poojanam' in place of 'Aaraadhanam Hare' to denote the adoration and worship of God. In effect, like Yamas, Niyamas are also restraints, rules and restrictions. If so what is the difference between Yamas and Niyamas? Yamas are things forbidden for the aspiring Yogi. They are negative in the sense of avoidance. Niyamas are things the Yogi is exhorted to do. They are positive and pro-active action oriented. Thus Yamas are restrictions or restraints and Niyamas are observances positively enjoined. Together, they form a code of conduct that transforms the Mind and the Body making

the adept fit for further Yoga. Niyama is the second of the eight Limbs of Yoga. Sri Krishna says [Gita 2/50]:

बुद्धियुक्तो जहातीह उभो सुकृतदुकृतौ
तस्माद्योगाय युज्यस्व योगः कर्मसु कौशलम् [50]

A man with evenness of mind discards here and now good and evil. Therefore endeavour for Yoga. Yoga is skill in action. [50]

Asanaas

Asanaas constitute the third limb of Yoga. The term 'aasanam' in Sanskrit has a number of meanings such as sitting down; a seat; a particular posture or mode of sitting; stop- ping, camping; abiding, dwelling. The term 'Yogaasanam' in Sanskrit means 'a posture suitable for profound meditation.' Yogaasnam is important per-se in that it purifies the mind and body of the Yogi making it strong, healthy and focused for the rigorous stages of Yoga to follow. Another role that aasanams play, which is certainly as important, if not more, is that many of the Asanams act as the indispensable foundation for performing other limbs of Yoga such as Praanaayaama, Pratyahaara, Dhaaranaa, Dhyana and Samaadhi. For instance, the Trishikhi Braahmanopanishad [Mantra 92-94] says;

रसनां ताल्लुनि न्यस्य स्वस्थचित्तोनिरामय
आकुञ्चितशिरः किञ्चिन्निबध्योगमुद्रया [92]

हस्तौ यतौक्तविधिना प्राणायामं समाचरेत्
रेचनं पूर्णं वयोः शोधनं रेचनं तथा [93]

चतुर्भिः क्लेशानं वायोः प्राणायाम उदीर्यते
हस्तेन दक्षिणेनैव पीडयेन्नासिकापुतम् [94]

Yogi assuming the posture at first, keeping his body erect, (his Mind) alert, with his eyes fixed on the tip of the nose, (one row of) teeth not touching the (other row of) teeth, the tongue fixed on to the palate, his Mind at ease, showing no distemper, with his head slightly inclined, with his hands bound in the (characteristic) Yoga-posture (of Cin-Mudra), (the Yogi) should practice Pranayamaa according to the prescribed rules. Expiration (of foul air from the body), then Inspiration (of pure air), then purifying the air (with the Kumbhaka), similarly

expiration (once again completely); the exhaustion of air by (repeating) the (above) four (processes), is said to be Pranaayaamaa. [92-94]

The Yogakundally Upanishad [1/32-34] says a man of clear intellect having assumed the Padmaasana posture; keeping his neck and belly in line; controlling the mouth firmly; should expel the vital air through the nose such that vital air moves from the throat and occupies the cranium with a distinct sound. The Dyaanabinduupanishad [70] says that Yogi is deemed the liberated one without doubt, who, after assuming the Padmaasana, fills the vital air in the passages of the Naadis and retains it by Kumbhaka. The Yogi having assumed the Baddha-Padmaasana, and saluting his Guru and Shiva, should practice Praanaayaama with his eyes fixed on the tip of the nose says the Yoga Cuudaamany Upanishad [106]. There are many examples in the Yoga Upanishads recommending the use of specific Asanaas or Postures while practicing aspects of other Limbs of Ashtaanga Yoga such as Pratyahaara, Dhaarana, Dhyaana and Samaadhi. What is the aim of Asanas? Briefly put, it is to purify and strengthen the mind and the body in order to make the Yogi fit to pursue the next angaa or stage of Yoga and indeed all different angaa of Yoga successfully. Mastery of the Asanaas will enable the Yogi to conquer the three worlds according to the Darshanopanishad [3/13].

It is impossible to answer the question as to which is the best Yoga Asanaa because each Asanaa is meant for specific goals and attainments. But one may ask as to what are the elements of the right posture? The Mandala Braahmana Upanishad [1/5] says the right posture is one wherein one can transport his mind (to the Supreme Atman) comfortably; wherein one can abide for a long time (without discomfort). The Yoga Upanishads sometimes stress the importance of comfort and firmness of the posture before mentioning the name of the Asanaa. The Shandilyopanishad [1/13] says that, "In whichever posture one can hold one's body comfortably, the man of feeble strength should take recourse to it."

2. PRAANAAYAAMA

The Sanskrit term Praanaayaamaa is a composite of two words namely 'Praana' and 'aayaama'. Praana refers to the vital airs that course through the body, and ayaama denotes the sense of 'restraint or control or stopping'. Praana is not just the breath which is the source of oxygen,

which we inhale and exhale continuously to remain alive. It is best described as the vital force which regulates and maintains the body and the mind in running condition. The Trishikhibraahmanopanishad [Mantra, 93(ii)-94(i)], explains the term Praanaayaamaa as being that process which begins with exhalation of the vital air followed by its inhalation. Thereafter the Vital Air is held for the given duration to be followed by exhalation once again to facilitate the next cycle. These four processes taken together, which destroy all 'kleshanam' or fears constitute Praanaayaamaa according to this Mantra.

Trishikhibraahmanopanishad [Mantra, 53] reminds us that Praanaayaamaa must come only after perfect control has been gained over the Mind and the Body by diligently observing the Yamas, Niyamas, and Asanas and after the Naadis have been purified. The adept must not lose sight of the fact that each Angaa or Limb of Yoga is meant to prepare the adept for undertaking the Angaa to follow in sequential order. That is part of the grand design of Yoga. It means that no Angaa or stage of Yoga can be skipped or performed imperfectly without adverse repercussions on the next stage, and indeed, on the whole of the discipline.

The Darshanopanishad [6/1-3] says that Praanaayaamaa is made up of three components namely, Recaka, Puuraka and Kumbhaka, which are said to be of the triad of Varnas or letters that constitute the Pranava or AUM. Praanaayaamaa is made up of that Pranava. The Darshanopanishad [6/12(ii), 13] defines these three terms clearly and briefly. It says that Puuraka is the inhalation of the outside air and filling it up in the belly. Kumbhaka is the retention of that inhaled air in the belly as though it were a filled-up pot. Recaka is the expulsion of the air freely. According to the Yoga Upanishads, Kumbhaka or retention of the vital air is really the essence of Praanaayaamaa for without it, the process of inhalation and expiration would tantamount to normal or supernormal or abnormal breathing but not Praanaayaamaa. The longer the Kumbhaka one performs, the better it is.

The Dhyaanabinduupanishad [19-21] says that one should meditate upon the Lord in the form of the Omkaara stationed in the middle of the pericarp or the Lotus of the Heart; who resembles the steady flame of a lamp; who is the size of a thumb; and perfectly still. Drawing in the air through the Idaa, one should meditate upon the Omkaara in the middle of the body surrounded by a lustrous halo. This Mantra emphasizes meditation on the Omkaara during the Kumbhaka phase.

3. PRATYAHAARAA

Pratyahaaraa or Abstraction consists in the withdrawal of the Mind and the sense-organs from their respective objects. It comes after Praanaayaamaa and before Dhyaana in the order of the Ashtaanga Yoga. The Amrta Naadopanishad [5] says that when one thinks of the five senses such as sound and the like as horses of the chariot, and the fickle Mind as being the reins or bridle in the hands of the Atman, it is known as Pratyahaaraa. The Mantra exhorts the Jiva to take up the reins and to exercise its inherent authority over the Mind and the Senses in its capacity as the inner-controller of the body in which it finds itself in embodiment. The natural propensity of the Senses and the Mind is to collaborate with each other to provide the Jiva with various sense experiences, which delays final liberation, if not making it impossible.

Another age-old and apparently irresistible natural tendency of the sense organs is to gravitate towards sense-objects that are within their ambit and to pass on the sensory impressions acquired by them to the Mind for processing so that Jivaatman may cognize and experience the external Universe. After all, any Data without the sentient principle to make use of it is meaningless. However, if the Mind has to be freed from its natural but incessant propensity of acquiring, interpreting and transmitting sensory data, it must be trained not to react to any external sensory impression in the first place. Slowly the Mind must be compelled to pay less and less attention to the stream of sensory data inputs from the outside. Next, the Mind must be trained to turn inwards abandoning the external world for the inner. Who will train the Mind to do all this? Obviously, no entity other than the Jivaatman itself Pratyahaara teaches the Jivaatman how to bring the Mind and the Senses under its control and to obey its wishes. Pratyahaara teaches the Yogi not only how to take charge of the Mind and the Senses but also to compel them to move away from all sense-objects. Pratyahaara prepares the Yogi for the next stage of Yoga called Dhaaranaa.

4. DHAARANA

In the Yoga Angaa called Dhaaranaa, which follows Pratyahaara, the Jivaatman takes further control of the Citta and gives it a specific target to focus on. Since both Pratyahaara and Dhaaranaa involve the control and direction of the Citta or the Mind, one may like to know the difference between the two? The Trishikhi

Braahmanopanishad [Man- tra, 30 (ii)-31 (i)] says that when the Jivaatman cognizes that his Citta has turned fully inwards, it constitutes the adoption of Pratyahaara and when the Jiva cognizes itself as being one with the Paramaatman, it constitutes the adoption of Dhaaranaa. When the Citta is pointed towards the Paramaatman, it would be the highest form of Dhaaranaa.

5. DHYAANA

The Sanskrit term 'dhyaana' denotes 'meditation, contemplation, attention, or reflection'. In the sequence of Ashtaanga Yoga, Dhyaana comes after Dhaaranaa and before the last Angaa of Samaadhi. Recall that beginning with Pratyahaaraa, the Jivaatman of the Saadhak or the aspirant, turns its attention to the most important business of taking full control of the Mind. In Pratyahaaraa, the Mind and the Sense Organs are withdrawn from the objects of the Senses. Their orientation is turned away from the external Universe to the internal. It is by no means easy to control the naturally wayward Mind and the Sense Organs long used to external sensory stimuli over repeated births. If the aspiring Yogi does succeed in Pratyahaaraa, no new sensory impressions or stimuli would thereafter be received from the outer world and the Mind and the Sense Organs of the Yogi would have become fit to take up the next Yoga Angaa of Dhaaranaa.

In the stage of Dhaaranaa, the Jivaatman of the Yogi further tightens its hold over the Mind giving it specific targets to rivet its attention upon for increasing periods at a time. It is but a part of the rigorous training and disciplining of the most powerful entity of the human body, which ought to have been the Jiva's willing slave but which has always tended in the default programming mode to be an unwilling servant, if not to dominate the Jiva in the vast majority of the cases of embodiments. Despite, successful Pratyahaaraa, distractions will continue to crop up, not from the outside world but from the inside, triggered by residual impressions in the Mind. In Dhaaranaa, the Yogi attempts to reduce these distractions in strength and frequency in a progressive manner. The taming of the Mind is an ongoing process without any let or relaxation. If the Yogi eventually succeeds in eliminating all distractions and is able to concentrate upon an object smoothly without interruptions, he is ready for the next stage of Yoga which is Dhyaana. When Dhyaana is perfected, all objects except the one chosen for Dhyaana would be completely eliminated.

The Tejobinduupanishad [1/36] says:

ब्रह्मैवास्मीति सद्रुत्यानिरालम्बतया स्थितिः
ध्यानशब्देन विख्यातः परमानन्ददायकः [36]

that the very act of contemplation that one is one with that Brahman, which rests on no support and which yields supreme bliss is famous by the name of Dhyaana. [36]

The Trishikhibraahmanopanishad [Mantra, 31(ii)] says, “Reflection in the Mind that ‘I am of the form of Consciousness alone’ is known as Dhyaana.” The Yogatattvopanishad [24(ii)-25] refers to Dhyaana using the Sanskrit phrase ‘ध्यानंभ्रुमद्यमेहरिम् dhyaanambhramadyameharim’ which means that Dhyaana is the meditation of Sri Hari in the middle of the eyebrows. The Mandala Braahmanopanishad [Brahmana, 1/1/5-10] defines Dhyaana as the contemplation upon the Supreme Consciousness abiding in all. In the act of Dhyaana, one’s consciousness must flow continuously without a break towards the object of meditation chosen and there must be intense and one-pointed devotion for it to bear fruit.

The Yoga Upanishads are theistic by nature. They advocate Dhyaana upon Divinity more than upon abstract objects. They often speak of Meditation upon a Deity of choice with various wonderful attributes and divine qualities. This is because devotion integrated with the object of meditation facilitates sustained concentration and unbroken application of the Mind to the object of Dhyaana. It also satisfies the spiritual needs of man for expressions of devotion and communion with Divinity. Dhyaana done without a break and complete devotion can become an independent means to Moksha. Sri Krishna says [Gita 8/30]

भगवद् ध्यानयोगोक्तिवन्दनस्तुतिकीर्तनैः
लब्धात्मा तद्रूपं गमनो बुद्धीन्द्रियक्रियः [30]

When one has begun to find life’s sole satisfaction in meditation on the Lord, the vision of Him through such meditation, speaking about Him, saluting Him, singing about Him and praising Him— then the operation of the senses, intellect, mind and vital forces will get concentrated on Him. [30]

6. SAMAADHI

Samaadhi is the final and most intense stage of concentration of the consciousness. It follows Dhyaana

or Meditation. The term ‘Samadhi’ as used in Sanskrit Literature has several different connotations in English such as that of ‘collecting or composing’, ‘profound meditation’, ‘intensity or concentration’, ‘the fixation thoughts’, ‘penance’, ‘perfect absorption of thought into the object of meditation’, and ‘perseverance’ to cite some. As far as Yoga is concerned, the English sense of ‘perfect absorption of thought into the object of meditation’ is the closest explanation of the term Samaadhi. However, the depth, complexity, and ramifications of the term Samaadhi defy a simple or concise explanation in any language. We have to turn to the Yoga Upanishads for insights. The Mandala Braahmanopanishad [1/1/10] uses the Sanskrit phrase ‘Dhyaana-Vismruti’ to define Samaadhi. This means that Samaadhi is that state wherein one has become oblivious of the very act of contemplation. Such a concept of Samaadhi is substantiated by the Amrta Naadopanishad [16] which says that, “After having attained it (the Supreme Self or a Deity of Choice), when one looks upon oneself as being the same (as that attained), such a state is known as Samaadhi.”

The Trishikhi Braahmanopanishad [Mantra, 160(ii)-161] says that when the thought becomes firmly established in the Yogi that he or she has become a part of that Supreme Brahman and verily that Brahman alone, it is known as the state of Samaadhi devoid of all functioning. The Brahman is then attained and the Yogi would not have to go back to worldly existence any more. The Darshanopanishad [10/1-5] says that Samaadhi is the advent of that state of consciousness in which the Jivaatman and the Paramaatman (The Brahman) are found to be merged.

7. CONCLUSION

What is the grand Aim of Yoga? I conclude this Article with my firm belief that the purpose of Yoga as stated in the Yoga Upanishads themselves is not to develop yogic-siddhis (extraordinary or supernatural powers), but to seek Moksha and thence attain either the State of Kaivalya or merger with the Brahman as may be desired by the Yogi who has reached the summit of the Yoga. Siddhis acquired in the course of the practice of yogic disciplines are to be used only to facilitate further progress in the quest for emancipation and God. According to the Yoga Upanishads, they are not to be disclosed or publicized for fame or misused in any form. These Upanishads seek to provide valuable aspects of knowledge helpful to the seeker of the Brahman. Each

Shloka of every Yoga Upanishad contains a gem of an insight for the aspirant working his or her way on the path to the Brahman. The depth of the insights gained depends upon the efforts of the seeker himself, the Grace of the Brahman, and the help of the Guru. The mosaic of insights provided by the Yoga Upanishads is the end result of knowledge received by our ancient Sages in states of super-consciousness called Samaadhi, collected, collated, analyzed and written down for the benefit of all Mankind. Lastly, the final goal of Yoga is mysterious per se and cannot be easily described or imagined. In this spirit, we quote a shloka from the Mahaavaakya Upanishad which describes the immense difficulty of comprehending the final goal of Yoga, if not its impossibility. It says [ibid. 6-9]:

ब्रह्मण्यभिध्यायमाने सच्चिदानन्द परमात्माविर्भवति
सहस्रभानुमच्छुरितापूरितत्वादलिप्य परावरपूर इव
नैषा समाधि नैषा योगसिद्धिः नैष मनोऽल्यः
ब्रह्मक्यं तत्

When the Paramatman manifests himself in Meditation in the form of Existence, Consciousness and Ananda or Bliss, that state known as the knowledge of the Truth; intensely resplendent with the radiance of thousands of Suns rising up simultaneously: is like the waveless deep (ocean), incapable of being absorbed on account of its very fullness. This is not Samadhi. Nor is this the successful accomplishment of Yoga. Nor is this the final dissolution of the Mind.

That is oneness with the Brahman.

Author Biography in brief:



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Colonel (retd.) Ramesh Shama Alvar (born 1942), an independent researcher, was selected through UPSC All India Examination & Interview to undergo training at the National Defence Academy and the Indian Military Academy. Upon completion of training, he was

commissioned as a Class I Gazetted Officer in the Artillery Branch. During service, he fought in the 1965 War against Pakistan spending 9 months in Pakistani territory captured by the Indian Army until withdrawal due to the Tashkent Agreement. He participated in several internal security operations all over Northern India as Commanding Officer. During Service, he qualified in the highest Armament Technology Course of the Indian Army. On the civil side, he acquired the degrees of M.Com and MBA (First Class). Being of a naturally spiritual bent of mind, he studied various Scriptures & Ancient Indian Knowledge Systems and successfully ventured to write articles on selected topics associated with the Yoga and spirituality.

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Svādhīna-Sañjīvanam - a 20th century Sanskrit work on Yoga

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ABSTRACT

Svādhīna Sañjīvanam is a mid-20th century work on Yoga/Tantra designed for an inner spiritual growth. Consisting of a little less than 200 verses in chaste Sanskrit (inclusive, though, of a few corroborative verses culled from Upaniṣadic/allied literature) and a prefatory prose passage running to no more than half a dozen pages, the work sets forth a somewhat novel theory-cum-practice schema designed to help spiritual aspirants.

The author Raghavendracharya, as well as the work have remained obscure as the work was printed only in Kannada script. The philosophy the work embodies was “earned with inordinate efforts”, asserts the author, vouchsafing at the same time that it has stood in good stead in his own personal life, and exuding confidence too that it will help others in the attainment of a sound health such as conduces to the attainment of the supreme dharma.

The author seems to have absorbed key precepts of the practice of Yoga, as also certain principal tenets of Dvaita and Advaita philosophies. He has carefully and skillfully steered clear of worthless controversies via choosing to dwell on little else than quintessential issues, as too, making an apt choice of words, and pressing into service a style easily reminiscent of a Madhva or a Vidyāranya.

Setting forth an “effortless practice” of a “wordless mantra”, he delineates the logical process involved in the natural coalescence of the ways of karman, bhakti, and jñāna. Dependent upon no external appurtenances or observations of strict regulations that most rites insist upon, the method he posits is one fit alike for practice by all - immaterial of time and place, or age and gender.

The paper studies this little-known work against some standard texts/approaches in Yoga and Tantra.

Keywords: Svadhina Sanjivanam, Yoga

1. INTRODUCTION

Svādhīna-Sañjīvanam (SS) is a 20th century Sanskrit work on Yoga authored by Paṇḍita M(ydugolam V(enkappacharya) Raghavendracharya, and published (in Kannada script) with an explanatory Kannada translation by the author himself (in 1959). The work consists of 177 verses divided over 8 chapters called *adhyaḥya*-s.

The book opens with a claim by the author - that the work has absorbed into itself the essence of all the *śāstra*-s; and that it bears the name *Svādhīna-Sañjīvanam* (which literally means “Autonomous Resuscitation”) significantly; and that being easy to implement, it is capable of conferring on *any* human being not only the worldly riches such as longevity and health in addition to *jñāna*, *bhakti* and *vairāgya* (knowledge, devotion and detachment - roughly), and finally, even *mukti* (beatitude).

The author styles the work as “peculiar”- as not conforming to the pattern of standard works. The author elaborates on ideas such as the following.

One needs to fix, first of all, wherefrom he came, whereto he would go, and where indeed he stands in the immediate present. The sense organs etc. are all directed towards a distinct superior goal. *Karman* and *jñāna* are like two wings

of a bird. All actions to be surrendered to the Lord. Every action should have three goals directly/ indirectly:

- (a) atonement for our *pāpa* (sins);
- (b) attainment of *puṇya* (merit); and
- (c) attainment of Truth.

The ancient dictum “*amantram akṣaram nāsti*,” which occurs in this text also, indicates that things under our control are to be properly utilised as nothing can be a waste. We all have 3 selves –

- (a) *sthūla-śarīra* or the gross body that grows with the food that we take, (and which is not the true self);
- (b) the *sūkṣma-śarīra* which grows with our thoughts and
- (c) the *jīvātman* whose “food” is the Lord: during meditation one ought to think of offering the Lord as food to this self; and this is what is meant by *bhakti*(devotion).

Of these while the *sthūla-śarīra* or the gross body has birth as well as death, the last, the *jīvātman*, has neither; the middling has no birth but has death. *Jīvātman* is of the nature of *sat*, *cit*, and *ānanda*. As all can attain the Supreme, none – none at all - should feel disheartened at any point of time.

The method shown in this work is something that is done purely internally, whence the name. The “medicine” advocated here demands no monetary expenditure, and no dependence on

another individual. The method taught in the work is not constrained by factors such as time, age, place, and gender. The method is unfailing, yet not difficult to implement. And the more it grows, the more powerful it becomes. One must contemplate upon the vital fact that there is a certain continuous flow of energy from the Lord, the ocean of all potentialities: this is in fact what is meant by *dhyāna*.

This work has 8 chapters viz.

1. *Sarva-śāstrārtha-saṅgraha* (a compendium of the contents of all the śāstra-s)
2. *Sādhanaṅuṣṭhāna-tatphalādi-nirūpaṇa* (an exposition of the spiritual practice and its benefits)

3. *Sākṣi-prajñā-rūpa-pradhāna-sādhana-nirūpaṇa* (an exposition of the primary means in the form of *sākṣi-prajñā* or the Witness Consciousness)
4. *Jīvātma-paramātma-tatsambandha-nirūpaṇa* (an exposition of the relation between the *jīvātman* and *paramātman*)
5. *Sāghanakrama-tatphalādi-nirūpaṇa* (an exposition of the procedure that has been adopted)
6. *prāṇavāyu-prabhāva-nirūpaṇa* (an exposition of the power of the *prāṇa-vāyu* (vital breath)).
7. *svādhīna-saṅgīvana-sevana-prakāra-nirūpaṇa* (an exposition of the way the medicine viz. *svādhīna-saṅgīvana* is to be ingested)
8. *kaivalyaphala-prādhānya-nirūpaṇa* (an exposition of the importance of the fruit in the form of *Kaivalya* (the Solitude Supreme)).

Though this work teaches a *mantra*, the famous *ajapa-gāyatrī*, it demands no specific, tough, discipline. The *mantra* can be pursued *at all hours*. The hexasyllabic *mantra* runs as: *haṁsah so’ham svāhā*, and need not be uttered through the mouth. *Haṁ* is uttered along with the inhalation and *saḥ* with the exhalation. While the *aṅga-nyāsa* and *kara-nyāsa* are required only during *japa*, the rest of the time only “*haṁsa*” needs to be dwelt upon in one’s own mind, coupled with a reflection upon its meaning. As a consequence, one’s entire lifetime becomes *tapas*.

The *mantra* can also be thought of as the Lord’s *upadeśa* (tuition) to the *jīva*. The meaning of the *mantra* in that case would be as noted below.

The Lord addresses the *jīva* thus:

“[Oh *Jīva*], *saḥ haṁsah* (that Lord Whose name is *Haṁsa* is done by the *parama-haṁsa-s*, is) *aham* (Myself). *Svāhā* means “[Oh *Jīva*], offer your own self to Me, saying *svāhā*”. As a reward, I bless you, says the Lord, and hence this *upadeśa* is of the form of *abhaya-pradāna* or conferring freedom from fear. It is well known that *ātmārpaṇa* (or offering of one’s own self) is the most important one among the nine types of *bhakti*.

The author adds a personal note that at the age of 61 he fell somewhat ill (adding that “the astrologers had indicated that his life may be in danger around that time”). But then, he resorted to such food as is suggested in the *Bhagavad-gītā*, and was cured of the illness in a matter

of 15 days by pursuing this very medicine (viz. *Svādhīna-Saṅgīvana*); and that he is now (in the year 1959) 92, and is in a sound physical and mental state - all on account of this very medicine. The author recommends this to all as an *additional* medicine in case they are already under some medication.

The author also says that he has labelled his very house *Saṅgīvanālaya*, and welcomes all to benefit by discussion with him, and he also insists that they “come singly”. The author claims in his Introduction, finally, that all the statements in the text are supported by the Vedas and the śāstra-s. Further there are, he says, a few elements that are not intrinsic to the śāstra-s, but they are all supported by his own personal experience.

Coming to the actual text, the opening verses 1 & 2 of **Chapter 1** praise the Lord and the Goddess in the form of Consciousness. Verses 3, 4, and 5 glorify Hanūmat, Bhīma and Madhva respectively. This is followed by philosophical tenets which may be stated thus.

The Lord, the Ātman, is omnipresent, and is of the nature of pure knowledge and happiness, and all the *jīva*-s are his *aṁśa*-s, portions. The Lord is the original (*bimba*) and the *jīva*-s are all His *pratibimba*-s, reflections. The *jīva*-s do his *upāsana* variously, and He responds as per the [Vedic] dictum *taṁ yathā yathopāsate tathaiva bhavati*. Being the *aṁśa*-s of paramātman, the *jīva*-s are all similarly *sac-cid-ānanda* in essence, and it is only on account of their association with *Prakṛti* that they have been vitiated. By the grace of the Guru they obtain their original form. Disbanding the first two bodies, they enter into the Lord in the third form - of the *sat-cit-ānanda*. The Lord is the Ocean of *satya*, *jñāna*, and *dayā* (Truth, Knowledge and Compassion), and has waves in the form of Bliss Eternal.

Chapter 2 deals with the discipline and the benefits one reaps out of them. Three steps are to be taken. Firstly, one must nullify one’s sins via the *nitya-karman*-s and the *naimittika karman*-s (respectively the mandatory *karman*-s, and occasional ones – as prescribed in the śāstra-s). Secondly, one must make gifts over to the worthy and thereby earn merit. Thirdly one must resort to a guru and thereby learn the śāstra-s.

While by means of the first, one can rid oneself of demerits, by means of the second and the third, he attains merit and knowledge; while the first two conduce to the higher worlds or higher births, the last one leads to the attainment of the High Abode of the Lord.

One must keep contemplating on three questions – as to whence one came, where he is stationed and whereto, he is going; and take guidance from three sources, viz. the *guru*, the śāstra and the *anubhava* – the spiritual master, the scriptures and one’s own experience. The more one withdraws from *saṁsāra*, the more one gets closer to the Lord.

The author makes a reference to the four types of *mokṣa* viz. *Sālokya*, *Sāmīpya*, *Sārūpya* and *Sāyujya*; but says that he does not insist on the truth of any of these singly and exclusively, the essential point being liberation from the fetters of *saṁsāra*. Disputes, similarly, regarding the nature of the reality and otherwise of the world are also of no use, as one is after all to transcend the world itself, ultimately. Similarly, there are various views regarding the nature of liberation and such views are natural for those at different stages of their evolution in life. All doubts get dispelled anyway, when one *actually attains* the goal; no point would be served by dwelling on the numerous philosophical differences.

Chapter 3 is on what is introduced as *sākṣi-prajñā*. Though all [schools of Vedānta] accept the three *pramāṇa*-s viz. *Pratyakṣa*, *Anumāna* and *Āgama* (perception, inference and scripture), there is a fourth one called *Sākṣin*, the Witness –the one different in nature from all the other *pramāṇa*-s. The *Sākṣin* is called *svarūpendriya*.

This self divides himself eightfold viz. the seer, the seen, the act of seeing and the fruit of seeing, plus place and time, and the instrument and the experience. Dry logic, the author cautions, can sometimes detonate even deep experiences.

One’s own self becomes one’s *guru* and all other elements are merely contributory factors. Ātman, *manas* and the *avyākṛta ākāśa* are all perceived only by *Sākṣi-prajñā* only. And therefore, none can absolutely deny the existence of this faculty. Further, it is this *Sākṣiprajñā* that enlivens the other *pramāṇa*-s viz. *Pratyakṣa* and *Anumāna*. The importance of this *prajñā* is to be realised by the factor that it is this that acts as a *cintā-maṇi*, the Wish yielding Gem, or the *kalpalatā*, the Wish-yielding Tree. It is he who realises this faculty of *prajñā* that becomes a *prājñā*, wise man. *Prajñā* is the boat to cross the ocean of *saṁsāra*. *Prajñā* itself becomes the *sādhana* at first, and then the *sādhyā*, and finally, the very *phala* – thus the means and the end and the very fruit.

Chapter 4 speaks of the preciousness of human birth - as the culmination of evolution in about four stages - of grass and shrubs, of insects, of animals and birds, and finally of humans. Human birth opens up possibilities of enjoyment right up to ruling over a kingdom, and even attaining *mokṣa*. It is only after a lot of experimentation that one seeks, after several births, the final and permanent liberation. There is none who may be damned as useless.

Given this preciousness of the human birth, every human being must ascertain the truth of things with the three-pronged approach - of the śāstra-s, the words of the guru and, too, personal experience. The *jīva* has three forms – the first one, consisting of the hands, feet etc. is the physical one; the second, the mental, which lasts longer than the former – lasting till the end of the cycle of births and deaths. But the one without beginning and ending is the *cin-mātra* (one of pure consciousness) one. One must ultimately be established in that one, abandoning the first two, and eschewing identification of one's self with them. The very notion of the *jīva* is erected on the foundations of the link with the two bodies, whereas the true self is pure, being of the nature of *sat*, *cit* and *ānanda*.

The *Dhātupāṭha* notes the sense of the root *jīv* as “*jīva prāṇa-dhāraṇe*”, and thus it is on account of the association with *manas* and *prāṇa* that the condition of *jīva*-ness is conjured up. The Lord, the Sustainer of the Universe, being of the nature of *sat*, *cit* and *ānanda*, and being the very In-dweller, shines thereupon.

Chapter 5 deals with *jīva*-s who are *sāmśa*, such as Lord Brahmā, and *niramśa*, like ourselves. (It is significant that the author refers to the realms such as *svarga* as *bhāva prapañca*; Indra and other gods being the *abhimānin*-s of those realms). It is for the sake of the *niramśa-jīva*-s that the five *mahā-bhūta*-s are created in two fashions –

- (a) as *sthūla* and *sūkṣma* – gross and subtle, and
- (b) as *bāhya* and *ābhyantara* – external and internal.

The *sāmśa-deva*-s are present in the bodies – gross as well as subtle, of the *niramśa-jīva*-s, and impel us to act, and themselves function alongside with us. *Sāmśa* divinities assume three types of forms – the subtle, indwelling ones one within us, the *bhāva-śarīra* in the *bhāva loka*, and on occasion, even the *sūkṣma* ones.

The Lord is always on the wait to confer fruits upon us as per our *upāsana*-s, and for the sake of this divides the

creation into three – viz. the *sādhana*, the *adhvan* and the *phala* – the endeavour, the way and the fruit viz. the human world, the proper knowledge of the śāstra-s and the Lord himself of the nature of bliss. A mere knowledge of even this much coupled with the absence of relish - of things else than the Lord - makes one *Jīvanmukta* right here, attaining liberation *even while being alive* in this world.

Human birth is for the attainment of *dharma*, and it will be wasted if *dharma* is not accomplished. Knowing the *ātman* via *yoga* is the supreme *dharma* - high above the half a dozen paths such as the performance of *yajña*-s, adhering to proper observances, practice of *ahimsā*, giving away gifts, and even the pursuit of *svādhya*ya (Vedic studies). The *Ātman* is the dearest to oneself, and is of the nature of *jñāna* and *ānanda*, knowledge and bliss. Going abegging elsewhere for what is already with one's own self - is no wisdom. Everything in the universe is to lead one to one's own self. Of the four *puruṣārtha*-s, the valid goals of life, the last one alone is the eternal one, and the first three are non-eternal, and so constitute a means for the final one. The mind is the prime instrument to attain the self. The world is impermanent and sorrowful; and it is the self, with its opposite qualities, that needs to be pursued.

Chapter 6 deals with *prāṇa-vāyu*. Fish live in the ocean of waters, and we humans live in an ocean of air - with our inhalations and exhalations.

Humans breathe 21,600 times a day. The act of this breathing assumes the name of *ajapa gāyatrī* or *haṁsa-gāyatrī*. It is this that we label, the author says, as *svādhina-saṅgīvana* in this book. We do not perform this *japa*; on the other hand, it is Lord Vāyu who keeps doing this *japa*, and confers upon us the fruit of this *japa*.

Mind flows constantly through either of the “auspicious” and “inauspicious” tracks, and one should engage it effortfully in the righteous track. It is *vāyu* that sustains all, the Veda declares in the words “*namaste vāyo, tvam eva pratyakṣam brahmāsi*” (Salutations to you O Vāyu, You are verily Brahman incarnate). It is Vāyu who confers nine benefits upon us - viz. long life and health, wealth, knowledge, devotion and detachment, merit and fame, and even *kaivalya*, Solitude Supreme.

There is no effort involved in the pursuance of this *japa*, and no disturbance to any worldly activity. Considering breathing itself as the *mantra*, and viewing it as the *upāsana* alone can suffice. One has of course to get to know of things from the śāstra-s and from the *guru*.

We have in our pair of nostrils two *nāḍī*-s functioning viz. *Idā* and *Piṅgalā*, also called *Candra-nāḍī* and *Sūrya-nāḍī*; they are designed by the Lord for a balance of the cold and the heat. The *vāyu* called *Prabhañjana* significantly absorbs during inhalations what is useful for the nourishment of all the three bodies, and even as it returns, discards along with exhalation, all the vicious elements.

A pursuit of this *mantra* dispels our negativities and reinforces positivities. As a consequence, the presence of *ātman* in our mind increases. Here lies the distinction of this *mantra* entitled *svādhīna-saṅgīvana*. As a lion or an elephant or a tiger comes under control gradually, so does *vāyu*, yielding all its fruits once it is under control. The less the number of breathings per day, the longer our *āyus* (life-span) would be.

Wherever there is in the body any deficiency, this *prāṇa-vāyu*, there directed, rectifies the same. Whichever limb the mind hovers upon during meditation, this *vāyu* puts it in order. The mucus and the hair filter the impurities of the air inhaled. *Prāṇāyāma* destroys all defects, and goes to nourish all the three bodies. The ease and autonomy make this the best and exclusive method, surpassing all other methods. It is for this reason that the *vinīyoga* for even the *Gāyatrī-mantra* is *prāṇāyāma* itself. To the aspirant who wends his way on this track, the path ahead reveals by itself.

Chapter 7 deals with the technique. *Gāyatrī-mantra* is of two types – *Japa-Gāyatrī* and *Ajapa-Gāyatrī*. This book deals with *Ajapa-gāyatrī* only, as it has to serve all – the former being reserved for the elect. Common though to all creatures, this *Ajapa-Gāyatrī* confers special benefit on humans. Thinking before acting, and changing one's desires - are acts possible for humans alone. Per *ghaṭikā*, one breathes 360 times. There are 7 crore *mahā-mantra*-s conferring various fruits, but this *mantra* is the one that is easy, and bestows all of the *puruṣārtha*-s. The actual, hexasyllabic *mantra* is **haṁsaḥ so'haṁ svāhā**.

The *kara-nyāsa* and the *dhyāna* for the *mantra* are next given. The period from the previous morning till today's morning is considered as one unit, and the period from this day's morning till the next day's morning is counted as the second. The *japa* is made of counts of 12, 24, 48 or 96, or even more.

Chapter 8, the last chapter, deals with *Kaivalya*. It is stated that there are 3 types of *jīva*-s viz. *mukti-yogya* – those fit for liberation, and *tamo-yogya* – those deserving *tamas* or darkness, and *nitya-saṁsārin*-s – the ones who

are forever doomed to be in the cycles of births and deaths. The discipline detailed in this book will be limited to the *mukti-yogya*-s (who, for all practical purposes, are all of us).

One must establish one's mind in the self, and think of nought else. The person who has taken his final birth is verily the one that would get interested in spiritual lore; others get swayed elsewhere. This is set forth clearly in *Kaṭhapaniṣad* where it is stated: *Brahmā* created the sense organs opening outwards; should one turn one's vision inwards, he would become capable of beholding the *antar-ātman*. Some 26 verses here are selections from *Kaṭhapaniṣad*. What needs to be realised ought to be realised in this very birth, right here. The *Haṁsa-mantra* purifies the dirt of the body, the sense organs, and the mind.

One must contemplate on the fact that whatever is non-self is but instrumental in character to the nature of the self. The nature of the self as *sat*, *cit* and *ānanda* is the very goal to be attained. For the noble who thinks on these lines, the nature of the self is cognizable directly; and even the Lord Supreme appears as the Indweller.

It is thus that one ends the "never-ending" peregrination, and attains Supreme bliss.

The last chapter concludes stating that this book is as the butter obtained upon churning all the noble *śāstra*-s. Those who believe in the Lord should take this seriously up.

The above provides a gist of the entire text *Svādhīna Saṅgīvanam*. A discussion of the tenets and their implications follows.

2. DISCUSSION

Like all texts in a field where there is a vast literature (here, the Yogic literature), SS has to present something new even while reiterating, even if succinctly, much that is of value in the earlier literature. In the case of a spiritual text in the Hindu context, there is also the burden to show that what is said does not go counter to the *śāstra*-s. The pressure upon concise statements is more in a brief text where detailed explanations are not possible ("*granthasyāsya saṅgraha-rūpatayā vicāre vaiśālyam nāsti*" as the text says (p19, Introduction).

Quite like many traditional texts, the work simply quotes many verses *verbatim* and shows adaptations of a few verses. Thus, over two dozen verses are cited, as noted earlier, from *Kaṭhapaniṣad* in the last chapter (pp 62-71 = 8.9 - 8.33)

The work betrays a very positive outlook on life - taking a cue from the verse that starts with the words 'amantram akṣaram nāsti' and asserts that there is none who may be declared or damned useless (*ayogyah puruṣo nāsti*).

The text steers clear of all unnecessary controversies. Thus, it says there are 4 kinds of liberation viz. *sālokya*, *sāmīpya*, *sārūpya*, and *sāyujya* - all characterised as sanctioned by śāstra-s.

It dismisses much of worthless controversies - with a sensible statement that the state of *mokṣa* being so distant, many questions assume no importance for us at this stage, and so we assert no particular stand (2.13 *asmākaṁ tatra nāgrahaḥ*); and on the other hand, what is agreed upon unanimously by all is, that we must indeed set ourselves free from the fetters of *saṁsāra*. So also, with regard to the issue of the reality or unreality or the illusory nature of the world (2.14-15): whatever may be the various views on the status of the world, all are at one about the *sac-cid-ānanda* nature of the ātman.

Clarity of thinking is a hallmark of this work: thus, who am I, whence have I come here, where am I now, and where am I to go? - these vital questions are the ones everyone has to put to himself constantly (2.5). The confidence the author shows in the book regarding the means and the end is also significant. He introduces the ideological framework with the assertive words *asty ātmā* (1.7) (note the verb occupying the primal position in the sentence), pointing towards the ātman who is omnipresent, who is of the nature of truth, knowledge and happiness, and whose portions (*aṁśa*) are the various *jīva*-s. It may be said that the entire thesis of the author is erected on a firm Vedic foundation - that the āyus or lifespan of an individual is a function of his *prāṇa* or life-breath. As *Taittirīyopaniṣad* says *prāṇo hi bhūtānām āyuh*. What is deduced as a corollary from this is, that in proportion to the reduction of the number of breaths, the lifespan of a person increases. 6.24 *prāṇāyāma-prasaṅgena yāvantaḥ śvāsa-vāyavaḥ / ūnībhavanti klṛpteṣu tāvad āyur vivardhate*!!

The essential contribution of the work may be said to be the underscoring of what is called *ajapā*. Of course, this concept figures in various yogic Upaniṣad-s such as *Brahmavidyopaniṣad*, *Dhyānabindūpaniṣad*, and *Yogacūḍāmanyupaniṣad*, and, of course, *Haṁsopaniṣad*. We find that in the *mantra* "haṁsas so'ham svāhā", *so'ham* is obtained by a reversal (in the Devanāgarī script) of *haṁso* (the sandhied form of *haṁsaḥ*). Glossing upon the repetition of the

word *haṁsa* in *Brahmavidyopaniṣad* 79, Upaniṣad Brahmayogin, the famous commentator says "haṁsa haṁseti vīpsayā - **haṁsas so'ham** - iti vākyam vadet - iti dyotyate". The original itself notes that this *ajapā* is a knot between *prāṇa* and *apāna*. (*Brahmavidyopaniṣad* 78). *Dhyānabindūpaniṣad* 61 refers to the famous link between the sound 'ha' and the exhalation and the sound 'sa' and the inhalation; and further that every being is constantly uttering this *mantra* : *hakāreṇa bahir yāti sakāreṇa viśet punaḥ | haṁsa haṁsety amuṁ mantram jīvo japati sarvadā ||*

That this *mantra* is uttered 21600 times a day by an average human being is no new discovery of this work. It is again cited in all the Upaniṣad-s referred to above.

The singular distinction of this little work on Yoga is that it does not prescribe any difficult āsana-s or types of *prāṇāyāma*. On the other hand, a careful observation of the breathing, and making use of the natural rhythm itself so as to work for us as the utterance of a *mantra* - is what is taught in this work. In other words, *what is happening involuntarily is itself grasped and converted into a voluntary act* conferring immense benefits upon us.

Thus, the author says that actually speaking we are not doing any *japa* of the *mantra*; on the other hand, Lord Vāyu himself does the *japa* constantly, and himself confers the various benefits upon us, as a consequence of what we are ourselves reflecting upon.

6.5 *na japāmo vayam mantram bhagavān vāyur eva hi |*

japtvā tu sarvadā mantram phalam dāsyati nas svayam It may be recalled that the author belongs to the tradition of Madhvācārya, and what is said here, is already stated in the opening *sandhi* (chapter) of the work of Jagannāthadāsa.

āru mūreraḍomdu sāvira
nūreraḍu śata-śvāsagaḷa japa
mūru-vidha-jīvaroḷ abja-kalpa-paryanta
tā racisi satvarige sukha saṁ-
sāra-miśrariḡadhama-janariga-
pāraduḥkhagaḷīva guru Pavamāna salahemma |
(citation from Maṅgaḷācaraṇa-sandhi of *Hari-kathāmṛta-sāra*(=1.4) of Jagannāthadāsa).

This way, the work may be said to prescribe the most minimum regimen on the aspirant. This also marks high efficiency in terms of input and output – with its minimal input prescribed and maximum output promised. The only insistence is on a discreet alertness (7.9):

sapta-koṭi-mahā-mantrāḥ kliṣṭāḥ bhinna-phala-pradaḥ |

svādhīno haṁsa-mantro'yaṁ sukaraḥ sakala pradaḥ ||

The author also points out how even animals are constantly doing this *japa*, but it is only with humans that it can be so highly beneficial – and because of two reasons viz. that humans have the power to know and act, and can change the direction of their desires. (What is to be noted is that there are certain explanatory notes in Kannada which are supplementary and complementary to the Sanskrit text). The universality of the *mantra* and the speciality with the human beings is thus expressed (7.6) :

prāṇimātra-samāno'pi narāṇām eva kevalam |

viśeṣa-phaladas teṣāṁ anusandhāna-bhedataḥ ||

The author also shows that irrespective of one's status in society everyone is an *adhikārin* for this mantra: *sarvādhikārikatvāt* (7.5).

The work gives a special emphasis on the development of *prajñā* - a particular awareness and alertness. The essential idea of the fourth *pramāṇa*, viz. the *sākṣin*, is shown to have a vital role. The *sākṣin* is also designated as the *svarūpendriya*. It is this factor that continues with the *jīva* even in the state of liberation. (3.3) *ataś caturtham [pramāṇam] sarvārtha-sādhakam ca svayamprabham | vyaṁ tu sākṣiṇam brūmah svātmataṭṭva-viniścaye ||* It is thus self-luminous. He also points out that true knowledge is attained by the *prajñā* of the disciple whereas the role of all teaching is only to support the same. He identifies the *sākṣin* with *svarūpa-bhūtā prajñā*, or the awareness which is of the very essential nature (3.10). The *ātman* is the *guru* of the *ātman* (*ātmano gurur ātmaiva*); what all else may provide is merely the pretext and the context for the same. In this context, he makes use of a famous verse which is quoted in the *Vyāsabhāṣya* (on *Yoga-sūtra* 1.47) viz. *prajñā-prāsādam āruhya hy aśocyaś śocato janān | bhūmiṣṭhān iva śailasthas sarvān prajñā'nupaśyati ||* This is also a famous verse occurring in the *Mahābhārata*. The ocean of *saṁsāra* is crossed with *prajñā* as the boat. Like the role of

bhakti in Viśiṣṭādvaita, which assumes a double role as *sādhyā-bhakti* and *sādhana-bhakti*, *prajñā* assumes a here a triple role here as *sādhana*, *sādhyā* and *phala*.

Another indication of the very logical nature of the text is its repeated insistence on the trio of evidences viz. the *śāstra*, the *guru*, and *anubhava* – the scripture,

the teacher and one's own experience. (4.10) *tameva śāstra-mārgeṇa guru-vākyena sarvadā /svānubhūtyā ca nirṇīya dhyānam eva samāśrayet ||* This is comparable to the Vedantic statement : *atra pramāṇam vedāntāḥ guravo'nubhavas tathā*, famous in Advaitic tradition.

The text makes use of several śāstraic utterances absorbed as direct quotations incorporated into the text. E.g. verse 6.10 *śubhāśubhābhyāṁ mārgābhyāṁ vahantīm bhāva-vāhinīm* is easily reminiscent of the statement from *Vyāsabhāṣya* on *Yoga-sūtra* 1.12 (*abhyāsa vairāgyābhyāṁ tan-nirodhaḥ*), where Vyāsa says *citta-nadī nāmobhayato-vāhinī – vahati kalyāṇāya, vahati pāpāya* etc. Similarly, there are statements lifted straight away from standard texts on Yoga and other texts and placed appropriately in this work in a very befitting manner. References from *Yājñavalkya-smṛti*, *Haṭhayogapradīpikā*, some of the Yoga Upaniṣad-s, the *Kaṭhōpaniṣad* and even some *subhāṣita*-s are worth mentioning.

There are again statements which are adaptations of yogic texts. E.g. (8.5) *ātma-saṁstham manaḥ kṛtvā na kiñcid api cintayet | ityuktvā bhagavān eva nivārayati cetarat ||*

The hierarchy of values is very clearly made out, based on a citation from *Yājñavalkya-smṛti* at 5.10, where it is stated how, against over half a dozen of other choices, the one called "*ātmadarśana via yoga*" is the Supreme *dharma*. Cf. *ayaṁ tu paramo dharmo yad yogenātmadarśanam (Yājñavalkya-smṛti 1.8)*.

The author has absorbed ideas from Advaita and Dvaita traditions freely. For example, he makes use *verbatim* of the idea in *Viveka-cūḍāmaṇi* as to who there can be who would be so idiotic as not to be selfish (5.11). The idea of Jagannāthadāsa, a Mādhva saint, in *Hari kathāmṛta-sāra* has already been cited. The idea that the commonality between *jīvātman* and *paramātman* is being *sat-cit-ānanda*, and also the idea of liberation being nothing more than being stationed in one's own true self – are clearly set forth in 2.10 and 5.15.

Another important aspect where one can note the exudation of confidence of the author is in the idea, and the emphasis on the same, that the attainment of liberation is not to be left as a post-mortem affair, but is something to be attained right here, even while we are alive. Cf. *atra brahma samaśnute* (5.8), actually an Upaniṣadic statement; also 8.26 *iha ced aśakad boddhum prāk śarīrasya visrasaḥ*, actually a statement from the *Bhagavad-gītā*.

The strong logical structure of the text is exemplified in instances such as 5.23. The work also has certain good maxims which are easily appreciated – e.g. no goal is reached without its proper means (2.8).

What is also interesting is that this yogic work also calls itself a *kāvya*. The diction of the work is commendable and delectable. There are easy and beautiful strokes of metaphor in 1.14 and 3.18, and a natural simile occurs in 6.9. There is also a nice play on words as in 5.10 *ātmā preṣṭaś ca (preṣṭhaś ca)*. The maturity of the Sanskrit style of the author shows

itself all through. A reading of the text also gives the impression of the direct experience the author must have had in regard to what he has claimed.

Incidentally, and finally, the text also brings out the beauty and greatness of the Sanskrit language itself. The central thesis of the work, viz. *haṁsa mantra*, involves five items. viz.

- (a) so'ham
- (b) haṁso'ham
- (c) saḥ ahaṁ
- (d) ahaṁ saḥ and
- (e) om

The syllables *haṁ* and *saḥ* are, it may be noted here, are natural expressions of the sounds of exhalation and inhalation. *Mantra*-s are often constituted of apparently meaningless sounds and syllables, but here is the *Mantra* Supreme (viz. *so'haṁ*) which brings out the identification between the seeker (*ahaṁ* "me") and the sought (*saḥ* "He") - the (a) above.

saḥ ahaṁ, item (c), which means "He is me" and *ahaṁ saḥ*, item (d), "I am He".

And further, *haṁso'ham* is a sound that is heard in the process of the continuous and repeated utterance of *so'ham*. As Upaniṣadbrahmayogin points out, the *jīva* and the *Īśvara* are both referred to as *haṁsa* - at the microscopic and macrocosmic levels respectively (see his commentary on *Haṁsopaniṣad* 4).

And finally, as many works on Yoga and Tantra clearly show, the removal of the consonantal portions of *so'haṁ* yields *om* (upon the operation of the *pūrvarūpa sandhi*) (=AUM), which constitutes the very essence of the Vedas, and which is asserted by Patañjali in his *Yogasūtra* as the very label of the *Īśvara (tasya vācakaḥ praṇavaḥ -Yogasūtra 127)*.

The *Haṁsa-mantra* expounded in the text is thus apparently very simple, yet very profound. The propriety and justification of the title *Svādhīna-Saṅgīvanam* of the text is amply borne out by the well depicted content of the work.

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25. Yogasūtra. See Bhattacharya.

Yoga in the Purāṇas

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ABSTRACT:

The present article compares the different viewpoints and ideas propounded in some of the major purāṇas with respect to the subject of yoga. The philosophical basis for this subject as found in the purāṇas as well as the procedures of yoga have been compiled, contrasting the various opinions and ideas propounded in these texts. Purāṇas are a genre of literature from Ancient India which are encyclopaedic in nature and deal with a variety of subjects, often legends, stories, philosophies and related matters and also sometimes technical literature. Their composition is usually attributed to Sage Vyāsa, and they are invariably structured as a set of dialogues between various people. There are eighteen major purāṇas (mahāpurāṇas).

Keywords: Puranas, Vyasa, upapuranas

1. INTRODUCTION

The present article compares the different viewpoints and ideas propounded in some of the major purāṇas with respect to the subject of yoga. The philosophical basis for this subject as found in the purāṇas as well as the procedures of yoga have been compiled, contrasting the various opinions and ideas propounded in these texts.

Purāṇas are a genre of literature from Ancient India which are encyclopaedic in nature and deal with a variety of subjects, often legends, stories, philosophies and related matters and also sometimes technical literature. Their composition is usually attributed to Sage Vyāsa, and they are invariably structured as a set of dialogues between various people. There are eighteen major purāṇas (mahāpurāṇas):

1. Matsya Purāṇa
2. Mārkaṇḍeya Purāṇa
3. Bhāgavata Purāṇa
4. Bhaviṣya Purāṇa
5. Brahmāṇḍa Purāṇa
6. Brahma Vaivarta Purāṇa
7. Brahma Purāṇa
8. Vāmana Purāṇa
9. Varāha Purāṇa
10. Viṣṇu Purāṇa
11. Vāyu Purāṇa
12. Agni Purāṇa

13. Nārada Purāṇa
14. Padma Purāṇa
15. Liṅga Purāṇa
16. Garuḍa Purāṇa
17. Kūrma Purāṇa
18. Skanda Purāṇa

Apart from these, there are also minor purāṇas, called upapurāṇas. Some noteworthy ones include: Devī Bhāgavata, Śiva Purāṇa, Viṣṇudharmottara Purāṇa, etc. One of the themes that some of these purāṇas touch upon is yoga.

Yoga is one of the dominant philosophical systems that flourished in Ancient India, often paired with another system known as Sāṅkhya. Like other philosophical systems, the primary goal of yoga is mokṣa (also called: mukti, niśreyasa, nirvāṇa, etc.). In Indian philosophy, the cycle of birth and death (called saṃsāra) is said to cause suffering. Mokṣa is the release of a person from this cycle.

The Vedas, especially the Upanishads, speak of a single Brahman which is formless and cannot be described but is the source of the universe. In this context mokṣa is also understood in the philosophical systems as the merging of oneself into the Brahman or the realisation of Brahman. One of the hallmarks of yoga which distinguishes it from the other systems is the usage of an eight step method to achieve mokṣa.

2. DEFINITION OF YOGA

Yogasūtra, a major treatise on yoga, defines it as:

योगश्चित्तवृत्तिनिरोधः ।

“That which removes unsteadiness in the mind is yoga” (Yogasūtra 1.2)

Brahman is not describable, as it lacks attributes. Vedas hint about the nature of brahman. When the mind is tranquil with yoga practice, the mind is able to pick up these hints and realise the true nature of Brahman. The practice of yoga is equally conducive to worldly life since the steadiness of mind is indispensable in various circumstances. A person who practices yoga is called a yogī.

3. PHILOSOPHY OF YOGA

Every system is dependent on certain theories which can explain the principles. The theoretical elements of yogic

practices trace to the philosophies of Sāṅkhya and Yoga, which are briefly expounded in the purāṇas. These have been explained below:

It was mentioned earlier that the Vedas focus on a singular Brahman who is the source of the world. Brahman has no attributes, but is permanent and is in the form of light.¹ The singular Brahman splits into two: prakṛti and puruṣa at the time of creation.² The identifiable person, i.e. the soul, is termed as puruṣa (other terms: ātman, jīva, kṣetrajīva, jīva, dehī, etc.)³ while prakṛti (also called: avyakta, pradhāna, etc.) is the progenitor of the world. Prakṛti gave rise to mahat (intelligence). Mahat (also known as buddhi) gave rise to ahaṅkāra (ego).⁴ Ahaṅkāra creates a sense of distinction in objects; hence it is the foundation for creation.

Here, ahaṅkāra gets tinted with three guṇas: sattva, rajas and tamas.⁵ The nature of these guṇas is understood from the persons having excess of them: sattva is pure, free from defects, and binds a person to happiness and knowledge; rajas is composed of passion, and arises from cravings and attachment; and, tamas arises out of ignorance and causes delusion, laziness and sleep.⁶

Ahaṅkāra is of three types by the influence of the three guṇas⁷ –vaikārika, taijasa and tāmasa respectively.⁸ The vaikārika form of ahaṅkāra creates manas (the mind),⁹ as well as the indriyas (sense organs).¹⁰ The taijasa form supports creation since it is the form of rajas that represents action. The tāmasa form is the origin for the bhūtas and tanmātras.¹¹

Indian knowledge systems in general are founded upon a system of five elements (bhūtas) or the pañcabhūtas: pṛthivī (earth), jala (water), tejas (fire), vāyu (wind) and ākāśa (ether). Each of these pañcabhūta is associated with a sense organ (indriya) and sense object (the object perceived by these organs) in the manner stated:¹²

The objects perceived from these sense organs are termed as tanmātra. These are the characteristic qualities of each of these elements; however, one element is not devoid of the others' qualities. The qualities of the elements are:

Out of these, tāmasa first creates śabda (sound), which creates ākāśa.¹³ Ākāśa and śabda created sparśa (touch), which created vāyu.¹⁴ Vāyu and sparśa created rūpa (visual form), which created tejas.¹⁵ Tejas in conjunction with rūpa creates rasa (taste), which creates jala.¹⁶ Jala and rasa together create gandha (smell) which creates bhūmi, the final element in creation.¹⁷ Brahman, as puruṣa, split up into different creatures and entered the

Element		Sense organ		Sense object	
Pṛthivī	Earth	Ghrāṇa	Nose	Gandha	Smell
Jala	Water	Rasana	Tongue	Rasa	Taste
Tejas	Fire	Cakṣus	Eyes	Rūpa	Visual form
Vāyu	Air	Tvak	Skin	Sparśa	Touch
Ākāśa	Ether	Śrotra	Ear	Śabda	Hearing

creation as the various creatures. In this way, the entire world was created. When the world is being destroyed during pralaya, the above objects join back Brahman in the reverse order.¹⁸

	Sound	Touch	Form	Taste	Smell
Ether	✓				
Air	✓	✓			
Fire	✓	✓	✓		
Water	✓	✓	✓	✓	
Earth	✓	✓	✓	✓	✓

Each of the above objects is called a tattva. The sensory and motor organs¹⁹ put together are 10 in number. With the mind these make a set of 11 indriyas. Adding five bhūtas and five tanmātras makes it 21. Adding in ahaṅkāra, mahat, prakṛti and puruṣa brings the total upto 25. These are called the 25 tattvas.²⁰ Yoga additionally accepts the existence of a separate īśvara (personal God), a special type of puruṣa who is not affected by prakṛti, though they interact with each other. This is one of the main differences between Sāṅkhya and Yoga.²¹ There are various modifications or different viewpoints in this scheme of 25 such as the 6 dhātus of Agni Purāṇa,²² the scheme of pañcīkaraṇa in Agni Purāṇa and Devī Bhāgavata, and the 16 guṇas of the Brahma Purāṇa.²³

Prakṛti acts as a medium for all the tattvas and binds them together. Puruṣa is the only one among these which is alive while the others are lifeless. Puruṣa commands the above structure and gives it life. However, just as the sun is not affected by its reflection in water, puruṣa is above these, is without a change, motionless, and is not an agent for anything, is not tainted by the three guṇas.²⁴ Puruṣa only develops wants.²⁵ When a want arises, prakṛti moves according to this want. Puruṣa remains bound to prakṛti and all the tattvas which act

under its influence, experienced death and birth, by taking up a new body, in this saṃsāra.²⁶ The outcomes of Good deeds is good while bad results in bad.²⁷ Repeated actions develop habits which carry over to the next life as tendencies.²⁸ Experiences continue across lives.

However, when puruṣa realises that it is different from these objects, that they are not his, the concepts of 'I' and 'mine' disappear and wants cease.²⁹ Thus the cycle of birth and death (saṃsāra) is cut with these correct thoughts, just as a tree is cut with an axe, and the past, present and future set of actions and their results are destroyed.³⁰ Puruṣa gives up on these wants and becomes detached from prakṛti, attaining mukti.³¹ With knowledge of the final state and indifference towards the world outside, the yogī reaches the Supreme State, which is union with Brahman.³²

When rajas and tamas are high in a person, they express themselves in the form of six emotional states, called the six enemies:³³ kāma (desire), krodha (anger), lobha (greed), moha (confusion), mada (intoxication) and mātsarya (envy).³⁴ In these states, the intellect does not function since sattva in the mind (which represents clarity) is obscured by rajas and tamas. The person performs such actions that bind him further,³⁵ pushing him deeper into the cycle of birth and death. But sattva, with the clarity it brings, guides a person towards mokṣa.³⁶

Since binding of puruṣa to prakṛti is the cause of saṃsāra, when puruṣa exercises non-attachment, it is freed. Various paths (called yogas) towards mokṣa incorporating this core idea have been prescribed:

1. Jñāna: Devoting one's life to learning and understanding Brahman, often after renunciation of worldly affairs.³⁷
2. Sannyāsa: Living in complete renunciation and solitude.³⁸
3. Karma: Actions done without any expectation or desire or attachment to result.³⁹

4. Bhakti: Personal relation to Brahman (devotion). The formless Brahman is given a form using the concept of Īśvara in yoga (as Śiva, Viṣṇu, Durgā, Gaṇapati, Kṛṣṇa, etc.). The mind becomes fixated onto this form and merges into it; the devotee attains mokṣa.⁴⁰
5. Dhyāna: The practise of meditating on Brahman or on a deity with form.⁴¹

Each path is given prominence in different purāṇas: for example, one of the central themes of the entire Bhāgavata is bhakti, while Mārkaṇḍeya Purāṇa delves deep into aspects of dhyāna. As such, all these methods weave into one another, and a person might practice many together.

4. THE EIGHT STEPS

At the heart of yoga is a set of eight steps. These are: yama, niyama, āsana, prāṇāyāma, pratyāhāra, dhāraṇā, dhyāna and samādhi.⁴²

5. YAMA AND NIYAMA

Yamas and niyamas together constitute a code of conduct that the yogī is expected to follow. Yamas are restrictions put in place to promote self-control. They are five in number: (1) Brahmacharya – celibacy, (2) Ahimsā – non-violence, (3) Satya – truthfulness, (4) Asteya – refraining from theft, and (5) Aparigraha – not craving for another’s possessions.⁴³

Niyamas are behaviours which one must engage in. They are also five in number: (1) Śauca – cleanliness, (2) Saṃtoṣa – happiness, (3) Tapas – penance, (4) Svādhyāya – self-study, and (5) Īśvara-praṇidhāna – fixing one’s mind on Īśvara (personal God).⁴⁴

The above list is found, with minor variation, in the Kūrma Purāṇa,⁴⁵ Garuḍa Purāṇa⁴⁶ and Viṣṇu Purāṇa.⁴⁷ Some purāṇas provide larger lists. In Devī Bhāgavata, there are ten of each,⁴⁸ while the Bhāgavata has 12 of each.⁴⁹ Others combine the list into a single code of conduct: Brahma Purāṇa has a list of 16 practices.⁵⁰ Bhāgavata gives another list of 17 restrictions.⁵¹ Kūrma Purāṇa lists a vrata (vow) of 9 practices.⁵² These need to be understood as being meant to facilitate those who use the methods are given prominence in that purāṇa. Yogasūtra as well as Kūrma Purāṇa and others, provide an overview of the subject and the basic framework of five yamas and five niyamas are sufficient. Bhāgavata, being focussed on bhakti, adds those practices that

facilitate devotees, such as physical worship of Gods, etc. These practices must be constantly maintained.

6. ĀSANA AND PROPER PRACTICE

Āsana refers to the act of sitting or to seating posture.⁵³ The exact definition of āsana is provided in the Yogasūtra as:

स्थिरसुखमासनम् ।

“That posture which can be held for a long time without difficulties is āsana.” (2.46)

Based on this, any posture that can be held for a long time and does not damage the body in any way, is acceptable. Books such as the Yoga Upaniṣads and books on Haṭhayoga delve deep into several types of āsanās and their comparative merits and demerits. The purāṇas usually restrict themselves to at the most five āsanās. Some popular ones found in several purāṇas include: padmāsana,⁵⁴ bhadrāsana⁵⁵ and svastikāsana.⁵⁶ Other postures may also be selected provided the head, neck and body is straight.⁵⁷ The yogī must look forward as though towards the tip of his nose and focus on the image mentioned in dhāraṇā.

There are situations and places when a yogī must not practice yoga. Individual purāṇas provide lists of places where it would be safe to sit, such as avoiding places next to a fire or water or near anthills, or where it would not be conducive to yoga such as where studies are in progress or at junction of roads.⁵⁸ The place chosen by the yogī must be clean, neither too low nor too high.⁵⁹ As a general rule, any place that is quiet and free from interference of other people can be used for practice of yoga. Examples include: mountain tops, monasteries, at the foot of large trees.⁶⁰ Situations are stated in the Mārkaṇḍeya Purāṇa. The yogī must not practise yoga when he is weak, sick or disturbed, when the weather is not appropriate, if there is war or near areas which are unsafe (near leaf piles, dilapidated buildings, near snakes, etc.) or not conducive (at road junctions, cremation grounds, etc.). It would be best to surround oneself with people who support these activities than those who cause hindrance.⁶¹

7. PRĀṆĀYĀMA

In the system of Āyurveda, the cause of diseases in the body which are numerous are brought down to three

‘doṣas’ that act as agents – vāyu, pitta and kapha. In a healthy person, they have roles in various parts of the body,⁶² but they malfunction during a disease. The responsibilities of vāyu are divided into five and are known by five names: prāṇa, apāna, vyāna, udāna and samāna. Prāṇa is the name given to the breath which circulates between the head and chest.⁶³ It is the primary agent which retains the life of a person.⁶⁴ The āyāma (control) of prāṇa is defined as prāṇāyāma.⁶⁵ Yogasūtra defines it:

तस्मिन् सति श्वासप्रश्वासयोगितिविच्छेदः प्राणायामः ।

“[The practice of] stopping the flow of inhalation or exhalation [or both] when in it [seated in āsana] is termed prāṇāyāma.” (Yogasūtra 2.49)

Prāṇāyāma can be classified under two types: sagarbha, when it is accompanied with japa or dhyāna, and vigarbha, when it is not.⁶⁶ Chanting of the sound ‘om’ (resembling the sound of bells) mentally is considered good.⁶⁷ A type of sagarbha prāṇāyāma is used in the sandhyā vandana ritual.⁶⁸

The process of prāṇāyāma is split into three stages: pūraka, kumbhaka and recaka. Filling up the air into the body is known as pūraka (meaning ‘filling’). Keeping still with filled air is called kumbhaka (meaning ‘pot’ since the body is like a filled pot). Throwing out of air is recaka (‘throwing out’).⁶⁹

Prāṇāyāma can be done at three different lengths: short (also called laghu, adhama, manda, etc.), medium (also called madhya, madhyama, para, etc.) and long (also called utara, uttariya, mukhya, śreṣṭha, etc.) which lasts for 12, 24 and 36 mātrās respectively.⁷⁰ Brahma Purāṇa states that it should be performed for 10 or 12 mātrās but it should not be performed for more than 24 mātrās.⁷¹ This apparently contradictory picture is resolved when it is known that there are a few different opinions regarding the length of mātrā. In grammar, one mātrā is the time required to pronounce one short vowel.⁷² Indian astronomy uses this time period in calculations – one gurvākṣara is made of two mātrās, meaning the length of a mātrā is 200 milliseconds.⁷³ Yogacūḍāmaṇyupaniṣad defines one mātrā to be ‘composed of one breath’.⁷⁴ This is also a unit in Indian astronomy by the name of

prāṇa and is equal to 4 seconds.⁷⁵ Mārkaṇḍeya Purāṇa defines one mātrā in the context of prāṇāyāma as the time of the blinking of the eye,⁷⁶ which is called nimeṣa in Indian texts, and functions as a time unit. The length varies from author to author: Manusmṛti⁷⁷ (177 milliseconds), Arthaśāstra⁷⁸ (240 milliseconds), Śrīpati⁷⁹ (89 milliseconds) and Viṣṇu Purāṇa⁸⁰ (213 milliseconds), to name a few.

The body is a chariot, the senses are its horses and the mind is the charioteer. Prāṇāyāma is the whip used to control the horses. When the charioteer is controlled using knowledge and indifference, the practice of prāṇāyāma slowly and gradually brings the horses which are the senses to a standstill.⁸¹ When done properly, it results in good health, speed, enthusiasm, clarity in speech, bodily strength, proper skin condition, calmness and reduction of all issues.⁸²

Practice of yoga without giving attention to injunctions can result in issues including physical debility, disability, auditory, visual or speech impairment, mental unsoundness, etc.⁸³ When prāṇāyāma is performed wrongly, it can result in diseases such as recurrent hiccups, breathing difficulties, and other similar issues.⁸⁴ Prāṇa is a type of vāyu, and when it is not handled properly, it will not function well. Ears,⁸⁵ speech and sense organs in general⁸⁶ are all reliant on vāyu. They may cease to work. Other diseases such as kampa (tremor) can also arise.⁸⁷ To cure these issues, the yogī must eat hot rice gruel mixed with ghee or oil.⁸⁸ The yogī is expected to protect his body in whatever way necessary, since the body is after all the means to achieve dharma, artha, kāma and mokṣa.⁸⁹

8. PRATYĀHĀRA

After taking an appropriate āsana and performing prāṇāyāma, the yogī must bring into focus his wandering mind.⁹⁰ Both the senses and mind are brought under the control of the yogī.⁹¹ This step is known as pratyāhāra. As defined in the Yogasūtra:

स्वविषयासंप्रयोगे चित्तस्वरूपानुकार इवेन्द्रियाणां प्रत्याहारः ।

“When the mind interiorises and the sense follows suit, it is known as pratyāhāra.” (2.54)

Conquering the mind necessitates conquering rajas and tamas. However, one guṇa when in excess creates the other two.⁹² Hence, it is impossible to remove them completely. Nonetheless, tamas represents ignorance. The darkness which is tamas covers the clear nature of sattva. For this reason, sattva must keep rajas in check, while both of these must remove tamas as far as possible. A person who brings his indriyas under control will have to control these guṇas in the manner stated.

9. DHĀRAṆĀ AND DHYĀNA

Once the mind has been brought to a single place using pratyāhāra, it can be made to focus on something. Dhāraṇā refers to the fixing of the mind on an object. As stated in the Yogasutrā:

देशबधश्चित्तस्य धारणा ।

“The fixture of the mind at a certain place is called dhāraṇā.” (Yogasutrā 3.1)

When the object on which dhāraṇā is done, is retained in the mind of the yogī, through practice, whether he is moving or standing or doing some other voluntary act, then the dhāraṇā has been perfected⁹³ and that stage is known as dhyāna. Yogasutrā says:

तत्र प्रत्ययैकतानता ध्यानम् ।

“Constant flow of thoughts towards only that is dhyāna.” (Yogasutrā 3.2)

The word ‘dhyāna’ refers to the act of thinking. The word ‘dhāraṇā’ on the other hand refers to the act of fixing the object of interest in the mind. 94 Brahma Purāṇa states that prāṇāyāma and the concentration of mind in pratyāhāra are also modes of dhyāna.⁹⁵ The only difference between dhāraṇā and dhyāna lies in intensity;⁹⁶ in dhyāna, the mind moves only towards the object of dhāraṇā. This puts dhyāna squarely at the root of the practice of yoga.⁹⁷ The suggestions made for dhāraṇā and dhyāna below have been combined, and addressed as ‘dhyāna’. Dhyāna is often translated as ‘contemplation’ or ‘meditation’. A related idea is that of bhāvanā explored in the Viṣṇu Purāṇa. This is of three types: the first one, brahma-bhāvanā, bringing the idea of Brahman; the second, karma-bhāvanā, bringing the idea through action; and the third, Ubhaya-bhāvanā, doing both together. 98

Agni Purāṇa lists four things that the yogī must remember when performing dhyāna which are called the dhyānacatuṣṭaya (set of four in dhyāna):⁹⁹

1. Dhyātā: the person performing dhyāna
2. Dhyāna: procedure for it and other things to keep in mind
3. Dhyeya: the object of dhyāna
4. Dhyānaprayojana: the purpose of dhyāna – being mokṣa

An ideal performer of dhyāna has been ascribed the qualities: jñāna (knowledge), vairāgya (indifference to worldly affairs), śraddhā (attention or faith), kṣamā (patience), bhakti (devotion), and utsāha (enthusiasm).¹⁰⁰ The object of dhyāna varies from purāṇa to purāṇa, with each giving multiple options. Each choice brings a different result. If performed on worldly objects, the results are usually worldly, since dhyāna on an object with guṇas cannot liberate one from them. On the other hand, if dhyāna is performed on the formless Brahman or Gods with form without the mind becoming distracted,¹⁰¹ it leads to mokṣa.¹⁰² The various objects or techniques of dhyāna can be classified into six categories: (1) nirguṇa dhyāna, (2) worldly objects, (3) mantras (including om), (4) the use of cakras, (5) the use of mudrās and (6) using images.

10. NIRGUṆA DHYĀNA

Since Brahman lacks attributes, meditation on it for beginners is a very difficult task. Brahman is the only one which is permanent and whatever has come from it is destroyed over a course of time – in short time or over the eons, including objects that are seen as well as the eyes themselves. Hence, Brahman cannot be seen directly.¹⁰³ It is only possible to realise Brahman when one is fully rid of ahaṅkāra, which acts as a barrier between the ātman and Brahman, this is not practical for a beginner.¹⁰⁴ But those in an advanced stage can meditate upon the God of their choice being one and the same as Brahman. This God is formless. In the Devī Bhāgavata, this is known as Śakti.¹⁰⁵ In the Garuḍa Purāṇa, it is mentioned that meditation on a formless Viṣṇu is the same as Brahman

and the upholder of the world and its creatures,¹⁰⁶ as well as that of the Supreme Brahman that lacks form¹⁰⁷. Garuḍa Purāṇa also mentions a dhyāna equating oneself with Brahman (ahaṃ brahmāsmi).¹⁰⁸

11. WORLDLY OBJECTS

Dhyāna on worldly objects can be practised as a subsidiary to the main dhyāna or as the main dhyāna.

If the yogī suffers from a disease, he must cure himself. In this situation, meditation on the cure of the problem is said to solve the problem.¹⁰⁹ If the yogī experiences diseases in any body part, he must think of that particular body part for the cure of the disease.¹¹⁰ ¹¹¹ For cure of certain mental afflictions, ¹¹² the person can meditate upon the elements that are all-pervading and present in his body.¹¹³ A yogī bothered by hunger, heat or physical attack, must meditate upon the Vāruṇī mantra, while imagining the God of his choice being covered in snow or cold water. It will bring him happiness and relief.¹¹⁴ Dhyāna can also be done on the mantra of Viṣṇu. The yogī reminds himself of a white lotus which has the same colour as the full moon, and is located on his head.¹¹⁵ Similar dhyānas on the element ākāśa, half moon, and other objects have also been described in the Agni Purāṇa.¹¹⁶

Dhyāna can also be performed on different body parts, as suggested in the Devī Bhāgavata,¹¹⁷ Brahma Purāṇa¹¹⁸ and Kūrma Purāṇa.¹¹⁹ Mārkaṇḍeya Purāṇa¹²⁰ lists a set of places from which the yogī can drink air just as the thirsty drink water from pipes or straws, in order to overcome issues.¹²¹ They are supposed to be done in order. All of these methods are said to lead to mokṣa. In tabular form:

Devī Bhāgavata	Brahma	Kūrma	Mārkaṇḍeya
Toes			
Ankles			
Knees			
Thighs			
Mūlādhāra ¹			
Genitals			
Navel	Navel	Navel	Navel
	Stomach		

Heart	Heart	Heart	Heart
	Sides of torso		
	Chest		Chest
Neck			Neck
Throat			
Soft palate or Uvula			Mouth
	Ears		
Nose	Nose		Tip of nose
	Eyes		Eyes
Between eyebrows			Eye brows
Top of head	Head	Head	Middle of head
			Beyond the head

Since dhyāna on the formless Brahman is difficult, it is suggested to meditate on Brahman with form.¹²² As per Viṣṇu Purāṇa, this may be anything in the world (since they are perceivable forms of Viṣṇu) including Hiraṇyagarbha, Vāsudeva, Rudra, the sun, stars, planets, all the gods and their ancestors, humans, animals, mountains, oceans, rivers, trees, and all living and non-living things.¹²³ The entire world is pervaded by Viṣṇu hence it is possible to use any object for dhāraṇā.¹²⁴ Viṣṇu exists the least in things without life, a bit more in stationary living things, progressively more in insects, birds, wild animals, domestic animals and humans, in that order. After humans, it increases in Nāgas, Gandharvas, Yakṣas, Devas, Śakra (Indra), Prajāpati and Hiraṇyagarbha. It is complete in Viṣṇu.¹²⁵ Just as fire fanned by the wind, burns away dry grass, in the same way, Viṣṇu sitting in the heart of the yogī consumes the sins of the yogī and enables his mind to be fixated on the Supreme. This state of the mind is the perfect dhāraṇā.¹²⁶ The minds of all other people including devas, are altogether impure, since their actions arise out of their own desires.¹²⁷

Dhyānas on worldly objects with a wish for worldly gain create the gains but mukti does not result. If done with a sense of non-attachment (towards family, possessions, one's own body, etc.), it leads to mukti.¹²⁸ According to

Agni Purāṇa, proper dhyāna with focus on Hari, done for even half of a muhūrta (i.e. 24 minutes) can lead to higher levels than those attained by large sacrifices.¹²⁹

12. OM AND MANTRAS

Various mantras are used in dhyāna, just as in prāṇāyāma. The yogī must embed the mantras in his mind using japas and homas. Just as a jar in a dark room is illuminated with a lamp, the jīvātman surrounded by the darkness of māyā is illuminated with the mantra which is knowledge, and becomes visible to the Paramātman. Yoga is futile without mantra and vice versa.¹³⁰ The sound om̐ is considered equivalent to Īśvara and the best mantra.¹³¹ Simple dhyāna and japa (chanting) of ‘om̐’ is considered good for stabilising the mind.¹³² Chanting may be done for 3 mātṛās in length.¹³³ A person who meditates upon om̐ attains mukti.¹³⁴ The gāyatri mantra can also be used. The use of other mantras can be found in texts. One of the mantras that are recommended in the Devī Bhāgavata is ‘ai’ chanted twice (the seed mantra of Devī).¹³⁵ The story of Satyavrata, an illiterate who became the best of poets using this, is also described.¹³⁶

13. CAKRAS AND KUṆḌALINĪ

A system of dhyāna that relies on kuṆḌalinī and cakras is described in the Devī Bhāgavata. Nāḍī are pathways

in the body and number 3,50,00,000, as per the Devī Bhāgavata. Three are the most important, namely suṣumnā, iḍā and piṅgalā.¹³⁷ These have the nature of fire, the moon and the sun, and located in the centre, to the left, and to the right of the spinal cord, respectively.¹³⁸

The innermost portions of suṣumnā¹³⁹ at its base (between the anus and genitals) have a specific region where a type of fire known as kuṆḍalinī resides. KuṆḍalinī is associated with Śakti or thought of as a serpent.¹⁴⁰ It is surrounded by an area termed as the mūlādhāra. This area and ones like this are termed as a cakras and the spinal cord is dotted with these areas. Each cakra is pictured as a lotus with petals, with a colour and number of petals associated. The description and relevance of each cakra, along with these details has been presented as a table. All except bindusthāna are called ādhāra cakras and rely on the mūlādhāra.

Using the pūraka prāṇāyāma, the yogī concentrates upon the mūlādhāra and contracts and arouses the kuṆḍalinī, as he breathes in. KuṆḍalinī moves upwards along the suṣumnā piercing through each cakra, until it reaches the sahasrāra. There, one must meditate upon the united Śiva and Śakti. The yogī then brings Śakti back down to mūlādhāra. When the yogī practises this daily, he breaks free from the bonds of saṃsāra and attains mokṣa.¹⁴¹

Cakra	Location	Colour	No. of petals	Description and relevance
Mūlādhāra	Between anus and genitals	Golden	4	Base of all cakras. Centre is shaped like a hexagon. ²
Svādhiṣṭhāna	Behind genitals	Fiery	6	Bright like a diamond. ³
Maṇipūra	Navel	Lightning Clouds	10	Resembles a pearl. Residence of Viṣṇu, dhyāna here leads to sight of Viṣṇu. ⁴
Anāhata	Heart	Sun	12	Centre has structure called bāṇaliṅga. Emits sound of Śabda Brahman. Source of great joy. Rudra resides in this cakra. ⁵
Viśuddha	Throat	Smoky	16	Lustrous. Ātman sees the Paramātman and is purified. ⁶
Ājñā	Between eyebrows	-	2	Person situated here knows past, present and future. Receives orders from the Supreme. ⁷
Kailāsa and Rodhinī located here. ⁸				
Bindusthāna	Top of head	-	1000	Union with Brahma here. ⁹

14. MUDRĀS

One effective method for dhāraṇā and dhyāna that is explored in detail in Brahmāṇḍa Purāṇa is the use of mudrās. Mudrās are various hand gestures which, in the context of yoga, are a kind of dhāraṇā. These are also meant to please Devī,¹⁴² and used in worship of Devī.¹⁴³ That which helps the ātman, bound in the body, realise that it is not separate from the larger Brahman is mudrā.¹⁴⁴ Therefore, these mudrās bring mukti. The practice of mudrās can also be found in Haṭhayoga, as part of the twelve steps of Haṭhayoga.¹⁴⁵ There are ten principal mudrās: Mahāmudrā, Saṃkṣobhiṇī, Vidrāviṇī, Ākarṣiṇī, Vaśaṃkarī, Unmādinī, Mahāṅkuśā, Khecarī, Bījamudrā and Yonimudrā:¹⁴⁶

1. The first mudrā discussed is the mahāmudrā, also known as āvāhanī, vyāpikā or trikhaṇḍā. This mudrā is performed by joining and holding both the little fingers upwards, holding the ring finger of the right hand on that of the left hand and hold them with the pointing fingers, joining the middle fingers and the thumbs pointing upwards and little fingers pointing downwards.¹⁴⁷ This mudrā is praised across many books as one which frees a person from diseases.¹⁴⁸ A version of this mudrā uses the entire body.¹⁴⁹
2. In saṃkṣobhiṇī mudrā, the middle fingers of both hands are held in the centre. The pointing fingers are held like a stick (straight). The remaining fingers are held closely together.¹⁵⁰
3. The third mudrā is called vidrāviṇī or drāviṇī. The pointing (tarjani) and middle (madhyama) fingers of both hands must be pointed and the remaining fingers must be held closely together, just as in the saṃkṣobhiṇī mudrā.¹⁵¹
4. For the ākarṣiṇī mudrā, the middle fingers of both hands must be pointing outwards and the remaining fingers must be held holding closely together, so as to make a hook-like shape.¹⁵²
5. For the vaśaṃkarī, also called āveśakarī, mudrā, the fingers of both the hands must be closed together and interlocked.
6. Unmādinī is gestured by joining and holding the thumb, the pointing finger, middle finger and the little fingers of both hands facing up and pointing the

ring fingers together. The folded fingers will be in the shape of hook.¹⁵³

7. The mahāṅkuśā mudrā is achieved by joining and holding the thumbs, middle fingers and the little fingers of both hands facing up and bending the ring fingers and the pointing fingers in the shape of a hook.¹⁵⁴
8. Khecarī mudrā is one of the major mudrās.¹⁵⁵ It is praised as being the best among all mudrās¹⁵⁶ and one that releases a person from both diseases and worldly bonds.¹⁵⁷ The yogī must entwine his right hand over his left hand and holding these hands sky ward. Then he must perform the yonimudrā (described below) while keeping the hands in that position.¹⁵⁸ In another version, the tongue is moved in a peculiar way inside the head.¹⁵⁹
9. For bījamudrā, the fingers must be bent in the shape of a half moon. The fingertips of both hands must touch each other so that the shape looks like a circle. The bījamudrā brings its user various siddhis as well as mokṣa.¹⁶⁰
10. For yonimudrā (prathamā), the middle fingers must be bent and placed over the pointing fingers. The ring fingers are placed in the middle with the right one placed over the left. They must also be with the pointing fingers. The little fingers are placed above all the others pointing slightly downwards. The thumb is placed over all other fingers.¹⁶¹

Agni Purāṇa gives a different set of mudrās used for general yoga as well as worship of Varāha, incarnation of Viṣṇu. A total of 12 mudrās are used. Three of these are sādharmaṇa which bring the yogī closer to the object of dhyāna: añjali (namaskāra posture), vandanī (on the heart) and a third one where the left hand is folded as a fist and the thumbs are upwards and interlocked. The remaining are asādharmaṇa, and performed in order and accompanied with bījas (syllables with significance in tantra). The hands are interlocked and each finger is separated until only the thumbs remain interlocked. The ninth one involves raising the hand to the face, bending the left hand and then opening it.¹⁶²

15. IMAGERY

The purāṇas are replete with legends and stories of various Gods. All of them can be in fact used for dhyāna.

Lotus	Kūrma (1&2)	Agni (1&2)	Agni (3)	Garuḍa (1)	Garuḍa (2)
Location	End of śikhā			Heart	Heart
Root	Dharma	Dharma	Dharma	Viṣṇu's properties	Viṣṇu's properties
Stalk	Jñāna	Vairāgya	Vairāgya	Vairāgya	Vairāgya
Length	12 a (23 cm)	8 a (15 cm)	10 a (19 cm)		
Filaments		Jñāna	Jñāna	Vijñāna	Vijñāna
Petals	Aṣṭaiśvarya	Aṣṭaiśvarya	Aṣṭaiśvarya	Aṣṭaiśvarya	5 tanmātras + 3 guṇas
Size		12 a (23 cm)	12 a (23 cm)		
Centre	Vairāgya	Prakṛti	Prakṛti	Jñāna	Jñāna

However, certain images are specifically mentioned for this purpose. One image that is common across many purāṇas with some variation is that of a white lotus with eight petals. This is described first. There are four purāṇas that describe the dhyāna on the lotus in detail. These are the Kūrma Purāṇa, Agni Purāṇa, Bhāgavata Purāṇa and Garuḍa Purāṇa. The different variations have been designated in the following manner: Kūrma (1),¹⁶³ Kūrma (2),¹⁶⁴ Agni (1),¹⁶⁵ Agni (2),¹⁶⁶ Agni (3),¹⁶⁷ Bhāgavata,¹⁶⁸ Garuḍa (1) and Garuḍa (2).¹⁶⁹ Each aspect of the eight-petalled lotus is representative. Often the lotus was drooping until the yogī meditates on it; it then blooms and opens. A comparative table presents the different representations of the lotus seen across purāṇas. The centre of the lotus is depicted to contain various things. This has been given as a list under the table. In the table, 'a' represents aṅgula, an Indian unit of length, aṣṭaiśvarya is a set of eight siddhis attained at samādhi (see section on siddhis below). Blank entries denote unsaid aspects.

The descriptions of objects in the centre are given below:

1. Kūrma (1): On the centre, there is a golden kośa (vessel) that is composed of all powers and which is considered as divine and permanent. The sound om̐ is another name for it. It is not discernible and covered by a net of rays of light. The yogī must meditate on the faultless paramjyoti (Brahman) as being present there. One places one's own ātman (self) into this light considering the two to be the same.
2. Kūrma (2): At the centre of the lotus, he must think of puruṣa, in the form of a fire. Brahman is located in

the middle of this in the form of ākāśa and light, and is understood using the sound om̐. It is the highest tattva, singular, permanent and bestows wellbeing.

3. Agni (1): Prakṛti must be thought of to be the centre of a lotus. Three circles which represent tamas, rajas and sattva in that order are drawn around it in the colour of black, red and white respectively. On top of the centre, is Viṣṇu himself representing the ātman. The entire image is very clean. Optionally, the Viṣṇu can be pictured inside a net of light.¹⁷⁰
4. Agni (2): Above circles of tamas, rajas and sattva is a clean and steady lamp flame, one thumb width in height. It is in a spherical shape similar to the kadamba flower (*Neolamarckia cadamba*) or like a star. This flame represents the sound 'om̐' which in turn represents īśvara.
5. Agni (3) and Bhāgavata: The lotus is located at the heart. In the middle of the lotus, there are three circles one over the other in order: the sun, the moon and fire. Viṣṇu is situated at the middle of the circle of fire.
6. Garuḍa (1&2): Prakṛti must be thought of to be at the centre of the lotus. Three circles which represent tamas, rajas and sattva in that order are drawn around it in the colour of black, red and white respectively. On top of the centre, is Viṣṇu himself representing the ātman.

Apart from the lotus, the yogī may meditate upon the form of a God of his choice. Viṣṇu is described in the Agni Purāṇa, Bhāgavata, Viṣṇu Purāṇa and Garuḍa Purāṇa. Kūrma Purāṇa does not describe Śiva but mentions a dhyāna done on the form of Śiva. Devī

Bhāgavata describes various forms of Devī. Male Gods are usually directly equated with puruṣa or Brahman. However, female Gods who are always taken together as a single Devī may be equated with Brahman or with prakṛti. The connection of prakṛti with Devī is stated in the Devī Bhāgavata.¹⁷ The forms are given in a table:

Meditation on part of the form is also described in these books. In case of Devī, the devotee might meditate on different parts of the form of Devī such as hands, feet, etc. He conquers each of these places in the process and the heart of the yogī is purified. He then fixes the purified heart on the complete form of Devī, elaborated above. This is called avayava yoga.¹⁷² In the Bhāgavata,

Purāṇa	Description
Forms of Viṣṇu	
Agni Purāṇa	He has four arms carrying the śaṅkha (conch, Pāñcājanya), cakṛa (discus, Sudarśana), Gadā (mace) and a lotus. ¹⁰ He can be imagined to be white or golden in colour. He has the śrīvatsa mark on his chest. He wears a yellow cloth, golden necklaces, the kaustubha jewel, the vanamāla (divine garland), shining earrings in the shape of a crocodile (makara), and a crown full of jewels. ¹¹ Instead of four arms, Viṣṇu can also be pictured with eight arms. He would then additionally carry his bow (śārṅga), a rosary (akṣavalaya), a noose (pāśa), and a hook (aṅkuśa). ¹² Viṣṇu may also be pictured without any ornaments. ¹³
Bhāgavata	Viṣṇu is calm, tranquil and beautiful. He has four long well-formed arms. He has a beautiful neck. He has shining and clean cheeks, with a beautiful smile. His ears are proportional with crocodile-shaped earrings on each ear. His eyes radiate peace and joy. He wears a gold-coloured cloth and he looks dark like the rain-cloud. He has a mark of śrīvatsa on his chest where Śrī resides. His four hands hold the conch (śaṅkha), the discus (cakṛa), the mace (gadā) and a lotus. He wears a shining crown, wristlets, girdle and armlets. He wears a garland known as vanamālā and a gem known as kaustubha. He has anklets on his feet. His form is beautiful and bewitching in every way. ¹⁴
Garuḍa Purāṇa	Two types of dhyāna forms are stated. (1) The Viśvarūpa form – once the yogī understands this form, he is liberated. ¹⁵ (as stated in the Puruṣasūkta, Bhagavadgītā, etc.) (2) Viṣṇu standing on a lotus (this need not have eight petals). This can be combined with chanting of om. ¹⁶
Viṣṇu Purāṇa	Two types of dhyāna are mentioned – Viśvarūpa and the form of Viṣṇu. (1) The form of Viśvarūpa – ¹⁷ a yogī who meditates upon this form is freed from sin and becomes purified. ¹⁸ (2) The form of Viṣṇu –it is said that only a mind fit to grasp and retain this idea will be able to retain and meditate upon it. ¹⁹ The yogī must contemplate on Viṣṇu, who has a pleasing and attractive expression. His eyes are like the petals of the lotus. He has smooth cheeks, and a broad and shining forehead. His ears are equal in size and decorated with shining adornments. His neck is smeared. He has a broad chest with the Srivatsa mark. His belly has graceful folds, with a deep navel. He can be thought of as having eight or four long arms. He has firm and well-formed thighs and legs, with beautiful feet and toes. He wears a yellow robe, a crown (kirīṭa), a garland (hāra), and lustrous armlets and bracelets on his arms with other ornaments. He has in his hands the bow (śārṅga), the conch (śaṅkha), the mace (gadā), the sword (khaḍga), the discus (cakṛa), and the rosary (akṣavalaya). He shows his hands in the varada and abhaya mudrās ²⁰
Forms of Śiva	
Kūrma Purāṇa	Before commencing dhyāna, the yogī makes all his tattvas pure using the praṇava (the sound om). ²¹ He must then meditate on Śiva being present in ākāśa. Śiva is the root cause of the whole world and is all-pervading. ²² He firmly establishes his mind in Śiva, who is the ātman and Brahman. He submerges his body into this ocean of knowledge. ²³ He may optionally apply some bhasma (ashes) prepared from the agnihotra sacrifice, which represent Śiva. He puts these ashes over his body while chanting the mantra that begins ‘agni...’ He meditates upon the Śiva who is present within himself. ²⁴

Forms of Devī	
Devī Bhāgavata	<p>In Devī Bhāgavata, the form suggested is that of Devī. She is peaceful and easily worshipped. She is an ocean of mercy and fulfils all the desires of her devotees – the mere utterance of her name is sufficient. ²⁵ The singular prakṛti is viewed in five forms: Durgā, Lakṣmī, Sarasvatī, Sāvitrī and Rādhā. ²⁶</p> <p>Durgā (referred to as māyā) destroys all the pains and sorrows and gives devotees happiness and liberation. ²⁷ Lakṣmī is the presiding deity of wealth and prosperity and resides in all grains, vegetables and plant life. Her nature is that of pure sattva. She is peaceful and all auspicious. The beauty, glory, fame, prowess and wealth seen in people mark her presence. ²⁸ Sarasvatī is the presiding deity of knowledge, speech, intelligence and learning. She removes all doubts and difficulties in the minds of devotees and facilitates the understanding of books, helps every being earn livelihood. She is peaceful and holds the vīṇā and books in her hands. She has pure sattva and is modest. Her colour is white. ²⁹</p> <p>Sāvitrī is the origin of the Vedas, Vedāṅgas, the sandhyāvandana ritual, the tantras, being well-versed in all of them herself. She is tapas (penance) and japa. She is so pure that even the tīrthas (places of pilgrimage) want her touch for purification. Her colour is white. She has pure sattva and she is in the nature of paramānanda and the bestower of mokṣa. ³⁰ Rādhā is the presiding deity of the five vāyus, consort to Śrī Kṛṣṇa. She is Brahman herself. She transcends the three guṇas and is formless. She is the soul of all and devoid of ahaṅkāra. ³¹ These are the five Prakṛti Devis. There are more forms that arise from them such as Gaṅgā, who destroys all pāpa (sins), ³² or Tulasī, by whose grace austerities are performed. ³³</p>

the yogī first fixes his mind on the entire form of Viṣṇu. He then must focus on any one limb or part, ideally Viṣṇu's smiling face. When the mind is fixed there, there is no need to think of the rest of the form. This dhyāna leads to mukti.¹⁷³

The transition from saṅgā to nirguṇa is stated in the Viṣṇu Purāṇa, with reference to the form of Viṣṇu. First the yogī can meditate upon the above form, then that of a calm Viṣṇu with only the rosary in his hands. When this form is well entrenched,¹⁷⁴ the yogī meditates upon the form of Viṣṇu without any ornaments.¹⁷⁵ In the last step, Viṣṇu is meditated upon as a single whole.¹⁷⁶

15. PROGRESS

The indication that a person has successfully reached the higher stages of dhyāna is when only similar thoughts to the one of interest arise in the mind of the yogī and other thoughts do not arise.¹⁷⁷ On a physical level, as per Mārkaṇḍeya Purāṇa: (1) reduced movement, (2) good health, (3) compassion, (4) pleasant odour, (5) reduced excretions, (6) lustre, (7) pleasant demeanour and (8) softness in speech.¹⁷⁸ A person is considered siddha (perfect in yoga) when: (1) people view the yogī with affection, (2) people praise him in his absence; and (3) creatures are not afraid of him.¹⁷⁹ A person has reached the highest level of yoga when he is not affected by extreme cold or heat and he does not fear

anyone else.¹⁸⁰ A quantitative approach to progress is provided in several purāṇas in the following manner: 12 prāṇāyāmas make one dhāraṇā. 12 dhāraṇās make one dhyāna and 12 dhyānas make one samādhi.¹⁸¹ A parallel system in Mārkaṇḍeya Purāṇa is: 12 prāṇāyāmas make a dhāraṇā. Two dhāraṇās make one yoga.¹⁸²

A common issue is that of exhaustion (mental and physical). For this, Agni Purāṇa states that a person can intersperse dhyāna with japa or simply think of Viṣṇu. Viṣṇu will quickly be pleased with one who is engaged in japa, dhyāna and other activities.¹⁸³

It is important to keep in mind that when the yogī reveals the actions that he performs to others, it causes surprise in people and pride in him. This causes his knowledge to disappear. He should thus keep his actions secret.¹⁸⁴

16. SIDDHIS AND UPASARGAS

Siddhis are superhuman capacities obtained over the course of yoga. Upasargas are the term used to denote disturbances in the path of yoga. Siddhis are a subset of upasargas, since siddhis cause temptation in the mind of the yogī and he is bound again in worldly activities. Upasargas are dealt with in various books. On the whole, there are two kinds of siddhis, those that pertain to the world and those that arise from Brahman.¹⁸⁵ The latter are eight in number. The former is described first:

Upasargas in the Brahma Purāṇa are the following eight: (1) Pramoha – bewilderment, (2) Bhrama – confusion, (3) Āvarta – (incessant) deliberation, (4) Adbuta – superhuman faculties for smell, taste, sight, hearing and touch (such as ability to hear minute sounds from great distances, etc.), (5) Śītoṣṇa – ability to bear heat and cold, (6) Mārutākṛti – taking up any form of choice just like the wind, (7) Pratibhā – superhuman creativity; and (8) Status of superhuman beings, i.e. attaining the position of Nagas, Piṭṛs, Devas such as Candra (the Moon), etc.¹⁸⁶

The Agni Purāṇa provides another viewpoint to siddhis: The yogī is able to see or hear things not otherwise perceivable. Devas pray to him and give him various divine objects of enjoyment. Kings give him land and the wealthy give him money. He understands the meaning of the Vedas and all other śāstras. All kinds of divine medicines and rasāyanas¹⁸⁷ come within his reach. He acquires mastery over all arts.¹⁸⁸

In the Bhāgavata, siddhis are eighteen in number. Out of these, eight arise from Brahman and the remaining ten arise from the three guṇas.¹⁸⁹ The siddhis from guṇas are: (1) Anūrmimattva – freedom from hunger and thirst, (2) Dūraśravaṇadarśana – seeing and hearing from afar, (3) Manojava – travelling as fast as one wishes, (4) Kāmarūpa – assuming any form one wishes, (5) Parakāyapraveśana – entering another’s body, (6) Svacchandamṛtyu – dying only at will, (7) Devasahakṛiḍānudarśana – seeing the sports of devas, (8) Yathāsaṅkalpasamsiddhi – attaining anything one desires, (9) Ājñāpratihatāgati – unobstructed movement, (10) Trikālajñatva – knowledge of past, present and future.¹⁹⁰ Dhāraṇā done on selected objects is capable of producing the above siddhis or those that arise from Brahman as well as lesser siddhis.¹⁹¹

In the Mārkaṇḍeya Purāṇa, upasargas occur in two levels. In the first level, the yogī might wish for worldly objects, rites with future benefit or position of devas.¹⁹² The yogī must restrain himself from these thoughts and always bring his mind back towards Brahman.¹⁹³ Once these are conquered, these, five more upasargas arise out of sattva, rajas and tamas:¹⁹⁴

1. Prātibha: Appearance of knowledge of Vedas, literature, arts and every other subject¹⁹⁵
2. Śrāvaṇa: Understanding of all words and their meanings, as well as hearing of noises from thousands of yojanas away¹⁹⁶
3. Daiva: Ability to see in all eight directions (the cardinal and ordinal directions) like devas¹⁹⁷

4. Bhrama: The mind of the yogī no longer stays in a single place and roams about. The yogī loses basic sense of living and etiquette.¹⁹⁸

5. Āvarta: When the mind of the person is agitated because knowledge like a whirlpool engulfs the mind¹⁹⁹

These upasargas destroy the yoga practice of the yogī and he is born again and again as a deva.²⁰⁰ Hence, it is imperative that the yogī cover himself with a mental white blanket and focus himself on the supreme Brahman.²⁰¹

The final siddhis that indicate perfect dhyāna are called aṣṭaiśvarya ‘eight-fold wealth’ as they are eight in number. These arise from Brahman. A person who has these can get whatever he wishes.²⁰² These are:²⁰³

1. Aṇimā: Becoming smaller than the smallest
2. Laghimā: Swiftness
3. Mahimā: Becoming respected and worship-worthy to everyone
4. Prāpti: Ability to get anything wished for
5. Prākāmya: Become all-pervading
6. Īśitva: Becoming god-like
7. Vaśimā: Ability to control others
8. Kāmāvasāyitva: Stationing oneself wherever one wishes

A person with any of these siddhis is tempted to engage once again in the world. He becomes bound to the world made of guṇas and forgets his original goal. Thus all progress made in yoga is lost. Therefore, if a person is serious about mokṣa, it is imperative to give up on siddhis and retain the dhyāna he started with in order to get mokṣa.²⁰⁵

17. SAMĀDHI

A yogī who has advanced to a higher state of dhyāna, attains the last state, which is samādhi. The definition in Yogasūtra:

तदेवार्थमात्रनिर्भासं स्वरूपशून्यमिव समाधि ।

“Dhyāna on an object where the object’s form is no longer discernible, as though it no longer has a form, is samādhi.” (Yogasutrā 3.3)

During the later stages of dhyāna, the yogī is expected to progress from a dhyāna on something that has form to a formless dhyāna. When this transition is complete, the yogī is said to have attained samādhi. Only the

ātman appears to the yogī and the mind is completely stationary,²⁰⁵ like a lamp in a windless room.²⁰⁶

These thoughts are echoed in the Bhagavadgītā (6.19):

यथा दीपो निवातस्थो नेङ्गते सोपमा स्मृता ।
योगिनो यतचित्तस्य युञ्जते योगमात्मनः ॥

“The mind of a yogī who is absorbed in the Brahman stays still just as a lamp in a windless place does not flicker. That is the example stated.”

Mārkaṇḍeya Purāṇa provides four indications which show that the yogī has attained samādhi. These are:²⁰⁷

1. Dhvasti: Removal of mind from the results of good or bad actions²⁰⁸
2. Prāpti: Removal of greed for objects in this world and the next, as well as the desires that create confusion²⁰⁹
3. Saṃvit: The knowledge of the past and future is alike (and irrelevant) to the yogī and he also considers the effects of the sun, moon, planets and stars to be alike.²¹⁰
4. Prasāda: State where the mind, five vāyus, the senses and the elements are all in a state of calmness²¹¹

The yogī can neither hear, nor smell, nor see. He does not recognise touch. He does not wish to do anything nor does he wish for anything. He appears to not recognise anything like a block of wood.²¹² When his mind is completely stationary, the knowledge required to liberate him comes to him, and he is liberated.²¹³

18. CONCLUSION

From the above discussions, it can be seen that the purāṇas provide a more-or-less complete viewpoint of the different aspects of yoga. The philosophical aspects of yoga are generally drawn from the philosophy of Sāṅkhya, which is also the philosophical basis for Yoga. Devī Bhāgavata and Agni Purāṇa, have significant elements of Vedānta. Each purāṇa, with certain exceptions, provides at least basic definitions for each of the eight steps of yoga. Yama and niyama are the steps which might be found to be omitted. Different approaches to these are observed in the purāṇas. The purāṇas also specify what places are conducive to the practice of yoga. None of the purāṇas explore āsanās in much detail. In general, at the most three āsanās are found, usually padmāsana, svastikāsana and bhadrāsana. The picture of prāṇāyāma

is uniform across purāṇas. Since purāṇas tend to have a specific deity of focus, dhāraṇā and dhyāna tend to vary. All of them acknowledge the nirguṇa Brahman. The dhyāna of a lotus with eight petals is common among purāṇas that focus on Viṣṇu. The idea of cakras and kuṇḍalinī is mainly found in the Devī Bhāgavata. The use of mudrās is only found in Brahmāṇḍa Purāṇa and Agni Purāṇa. The method of Brahmāṇḍa Purāṇa is found across several texts on yoga. This is not the case with the method of Agni Purāṇa. Out of all the steps, the focus of Brahmāṇḍa Purāṇa is clearly on mudrās. Image of each deity is taken up in the purāṇas that prioritise those deities. The form of Viṣṇu is described in detail across books. In the mahāpurāṇas, Śiva is not described in comparable detail. Devī is not described physically; however, the roles of different aspects of Devī have been clearly stated in the Devī Bhāgavata. Bhāgavata Purāṇa focusses most on bhakti. Mārkaṇḍeya Purāṇa focusses the most on dhyāna. The description of progress and upasargas is most clear in the Mārkaṇḍeya Purāṇa, where indications for progress and the kinds of upasargas are stated in detail. Bhāgavata also provides a clear classification in terms of upasargas. The description of samādhi is common in all purāṇas. Each fleshes out the same description with a variety of lively examples, so as to convey the point. From this, it can be seen that purāṇas, when taken together, provide a complete viewpoint of the subject of yoga.

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21. FOOTNOTES

- 1 Refer section on cakras.
- 2 Devī Bhāgavata (7.35.34 and 7.35.36a)
- 3 Devī Bhāgavata (7.35.35 and 7.35.36b)
- 4 Devī Bhāgavata (7.35.37-39a)
- 5 Devī Bhāgavata (7.35.39b-42a)
- 6 Devī Bhāgavata (7.35.42b-44a):
- 7 Devī Bhāgavata (7.35.44b-45)
- 8 Devī Bhāgavata (7.35.46)
- 9 Devī Bhāgavata (7.35.47)
- 10 Agni Purāṇa (373.29)
- 11 Agni Purāṇa (373.30b-31)
- 12 Agni Purāṇa (373.30a)
- 13 Agni Purāṇa (373.32a)
- 14 Bhāgavata (11.14.38-42)
- 15 Garuḍa Purāṇa (235.37)
- 16 Garuḍa Purāṇa (235.38-39)
- 17 Viṣṇu Purāṇa (6.7.69-71)
- 18 Viṣṇu Purāṇa (6.7.72-73)
- 19 Viṣṇu Purāṇa (6.7.79)
- 20 Viṣṇu Purāṇa (6.7.80-86a)
- 21 Kūrma Purāṇa (2.11.64b)
- 22 Kūrma Purāṇa (2.11.59)
- 23 Kūrma Purāṇa (2.11.65)
- 24 Kūrma Purāṇa (2.11.66)
- 25 Devī Bhāgavata (3.9.40-41b)
- 26 Devī Bhāgavata (9.1.1)

- 27 Devī Bhāgavata (9.1.14-20b)
- 28 Devī Bhāgavata (9.1.22-28)
- 29 Devī Bhāgavata (9.1.29-37)
- 30 Devī Bhāgavata (9.1.38-43a)
- 31 Devī Bhāgavata (9.1.44-47 and 9.1.49-50)
- 32 Devī Bhāgavata (9.1.60-61)
- 33 Devī Bhāgavata (9.1.65-66)

22. NOTES

1. Devī Bhāgavata (3.7.11)
2. Agni Purāṇa (375.16-17)
3. Agni Purāṇa (376.7)
4. Agni Purāṇa (375.26a)
5. Agni Purāṇa (375.28a)
6. Bhagavadgīta Chapter 14
7. Bhāgavata (3.26.23)
8. Bhāgavata (3.26.24a)
9. Bhāgavata (3.26.27)
10. Viṣṇu Purāṇa (1.2.47)
11. Viṣṇu Purāṇa (1.2.46)
12. Agni Purāṇa (375.27a)
13. Bhāgavata (3.26.32)
14. Bhāgavata (3.26.35)
15. Bhāgavata (3.26.38)
16. Bhāgavata (3.26.41)
17. Bhāgavata (3.26.44)
18. Agni Purāṇa (375.27b)
19. The motor organs are: speech, legs, arms, urethra and anus. These facilitate interaction with the world outside.
20. Agni Purāṇa (375.24-25a)
21. Yogasūtra (1.24)
22. Agni Purāṇa (375.15)
23. Brahma Purāṇa (128.14)
24. Bhāgavata Purāṇa (3.27.1)
25. Agni Purāṇa (375.23b)
26. Bhagavadgītā (2.27)
27. Bṛhadāraṇyaka Upaniṣad (4.4.5)
28. Bhagavadgītā (15.8)
29. Mārkaṇḍeya Purāṇa (38.6)
30. Garuḍa Purāṇa (236.2b-3a)
31. Garuḍa Purāṇa (235.21)
32. Garuḍa Purāṇa (236.3b):
33. Devī Bhāgavata (7.35.3-4a)
34. Compare: Arthaśāstra (1.6.1)
35. Agni Purāṇa (375.18)
36. Agni Purāṇa (375.28b)
37. Bhagavadgītā, Chapters 4, 5, 15, etc.
38. Bhagavadgītā, Chapter 5
39. Bhagavadgītā, Chapter 3
40. Bhagavadgītā, Chapter 12
41. Bhagavadgītā, Chapter 6
42. Yogasūtra (2.29)
43. Yogasūtra (2.30)
44. Yogasūtra (2.32)
45. Kūrma Purāṇa (2.11.13 and 2.11.20)
46. Garuḍa Purāṇa (49.30-33)
47. Viṣṇu Purāṇa (6.7.36-38)
48. Devī Bhāgavata (7.35.6-8a)
49. Bhāgavata (11.19.33-35)
50. Brahma Purāṇa (128.44-47)
51. Bhāgavata (3.27.6-9)
52. Kūrma Purāṇa (2.11.6)
53. Agni Purāṇa (372.3a)
54. Trīśikhibrahmaṇopaniṣad (śloka 39) in ‘The Yoga Upanishads with commentary of Sri-Upanishad-Brahma-yogin’ (Adyar Library: 1930) - pages 129, 130: “When the soles of the feet are placed on the two thighs, each on each, the posture is known as padmāsana. It removes all diseases and poisons.”
55. Trīśikhibrahmaṇopaniṣad (śloka 45): “The ankles are placed below the scrotum and on the two sides of the frenulum of the prepuce. The hands remain attached to the ground. This is the bhadrasana.”
56. Kūrma Purāṇa (2.11.46): “The feet are placed on the opposite knees. This is the svastikāsana.”
57. Agni Purāṇa (372.3b)
58. As an example, Kūrma Purāṇa (2.11.47b-49)
59. Agni Purāṇa (372.1b)
60. Brahma Purāṇa (128.60)
61. Mārkaṇḍeya Purāṇa (39.46b-51a)
62. Aṣṭāṅgahṛdaya (Sūtrasthāna 11.1-3)
63. Aṣṭāṅgahṛdaya (Sūtrasthāna 12.4-5a)
64. Aṣṭāṅgahṛdaya (Nidānasthāna 16.56b-57a)
65. Agni Purāṇa (372.6b)
66. Agni Purāṇa (372.14a)
67. Bhāgavata (11.14.34)
68. Yājñavalkya Smṛti (1.2.23)
69. Garuḍa Purāṇa (49.34b-35a)
70. Kūrma Purāṇa (2.11.32)
71. Brahma Purāṇa (135.50b)
72. Yājñavalkya Śikṣā (verse 15)
73. Āryabhaṭṭīya (Kālakriyāpāda 1-2)

74. Yogacūḍāmaṇyupaniṣad (verse 100)
75. previous quote of Āryabhaṭṭīya.
76. Mārkaṇḍeya Purāṇa (39.15)
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79. Siddhānta Śekhara of Śrīpati (1.13)
80. Viṣṇupurāṇa (1.3.8)
81. Agni Purāṇa (372.17-18)
82. Agni Purāṇa (372.12b-13)
83. Mārkaṇḍeya Purāṇa (39.51b-53a)
84. Agni Purāṇa (372.12a)
85. Aṣṭāṅgahṛdaya (Sūtrasthāna 12.1)
86. Aṣṭāṅgahṛdaya (Sūtrasthāna 12.5-6)
87. Aṣṭāṅgahṛdaya (Nidānasthāna 15.15b-16a)
88. Mārkaṇḍeya Purāṇa (39.54b-55)
89. Mārkaṇḍeya Purāṇa (39.61b-62a)
90. Agni Purāṇa (372.2b)
91. Agni Purāṇa (372.20b)
92. Devī Bhāgavata (3.8.45-47)
93. Viṣṇu Purāṇa (6.7.87)
94. Agni Purāṇa (374.1a)
95. Brahma Purāṇa (135.47b-48a)
96. Brahma Purāṇa (131.36-37)
97. Brahma Purāṇa (131.31)
98. Viṣṇu Purāṇa (6.7.48-49)
99. Agni Purāṇa (373.7)
100. Agni Purāṇa (373.8)
101. Agni Purāṇa (373.1-2)
102. Agni Purāṇa (373.10b)
103. Bhagavadgītā (12.5-7)
104. Devī Bhāgavata (3.7.9, 16, 18-21)
105. Devī Bhāgavata (7.35.55-56a)
106. Garuḍa Purāṇa (14.1-12)
107. Garuḍa Purāṇa (16.2-9a)
108. Garuḍa Purāṇa (49.37b-40)
109. Mārkaṇḍeya Purāṇa (39.57b-58a)
110. Agni Purāṇa (374.6)
111. Agni Purāṇa (374.8b-11a)
112. Aṣṭāṅgahṛdaya (Uttarasthāna Chapters 3, 4 and 5)
113. Mārkaṇḍeya Purāṇa (39.59b-61a)
114. Agni Purāṇa (374.14-15b)
115. Agni Purāṇa (374.20b-22)
116. Agni Purāṇa (374.16-20b)
117. Devī Bhāgavata (7.35.22b-24a)
118. Brahma Purāṇa (131.39-40a)
119. Kūrma Purāṇa (2.11.39)
120. Mārkaṇḍeya Purāṇa (39.44b-46a)
121. Mārkaṇḍeya Purāṇa (39.43b-44a)
122. Refer section on cakras.
123. Viṣṇu Purāṇa (6.7.55)
124. Viṣṇu Purāṇa (6.7.56-59)
125. Viṣṇu Purāṇa (6.7.60)
126. Viṣṇu Purāṇa (6.7.64-68)
127. Viṣṇu Purāṇa (6.7.74-75)
128. Viṣṇu Purāṇa (6.7.77)
129. Agni Purāṇa (373.5)
130. Agni Purāṇa (373.6)
131. Devī Bhāgavata (7.35.59-62a)
132. Yogasūtra (1.24 and 1.27)
133. Agni Purāṇa (373.26-27a)
134. Garuḍa Purāṇa (235.39a)
135. Garuḍa Purāṇa (235.43a)
136. Devī Bhāgavata (3.9.43)
137. Devī Bhāgavata (3.9.44-48)
138. Devī Bhāgavata (7.35.28)
139. Devī Bhāgavata (7.35.29-30)
140. Devī Bhāgavata (7.35.31-32a)
141. Devī Bhāgavata (7.35.32b-33)

142. Devī Bhāgavata (7.35.34 and 7.35.36a)
143. Devī Bhāgavata (7.35.35 and 7.35.36b)
144. Devī Bhāgavata (7.35.37-39a)
145. Devī Bhāgavata (7.35.39b-42a)
146. Devī Bhāgavata (7.35.42b-44a):
147. Devī Bhāgavata (7.35.44b-45)
148. Devī Bhāgavata (7.35.46)
149. Devī Bhāgavata (7.35.47)
150. Devī Bhāgavata (7.35.48-54)
151. Brahmāṇḍa Purāṇa (3.42.1)
152. Brahmāṇḍa Purāṇa (3.42.19)
153. Yoginī Hṛdaya (1.56-57)
154. Yogatattvopaniṣad (26-27)
155. Lalitā Sahasranāma (part of Brahmāṇḍa Purāṇa) (verse 179)
156. Brahmāṇḍa Purāṇa (3.42.2-3)
157. Yogacūḍāmaṇyupaniṣad (69-70)
158. Dhyānabindūpaniṣad (91-93)
159. Brahmāṇḍa Purāṇa (3.42.3b-4)
160. Brahmāṇḍa Purāṇa (3.42.5)
161. Brahmāṇḍa Purāṇa (3.42.6)
162. Brahmāṇḍa Purāṇa (3.42.7-9)
163. Brahmāṇḍa Purāṇa (3.42.10-11)
164. Dhyānabindūpaniṣad (79-83b)
165. Brahmāṇḍa Purāṇa (3.42.14)
166. Yogacūḍāmaṇyupaniṣad (53-55)
167. Brahmāṇḍa Purāṇa (3.42.12-14b)
168. Yogacūḍāmaṇyupaniṣad (52)
169. Brahmāṇḍa Purāṇa (3.42.15-16)
170. Brahmāṇḍa Purāṇa (3.42.17-18)
171. Agni Purāṇa (26.1-7)
172. Kūrma Purāṇa (2.11.55-58)
173. Kūrma Purāṇa (2.11.60-64a)
174. Agni Purāṇa (373.18-23)
175. Agni Purāṇa (373.23-24)
176. Agni Purāṇa (373.27-28)
177. Bhāgavata (11.14.36-37)
178. Garuḍa Purāṇa (235.39-42)
179. Agni Purāṇa (373.25)
180. Devī Bhāgavata (9.1.4-8)
181. Agni Purāṇa (373.29)
182. Agni Purāṇa (373.30b-31)
183. Agni Purāṇa (373.30a)
184. Agni Purāṇa (373.32a)
185. Bhāgavata (11.14.38-42)
186. Garuḍa Purāṇa (235.37)
187. Garuḍa Purāṇa (235.38-39)
188. Viṣṇu Purāṇa (6.7.69-71)
189. Viṣṇu Purāṇa (6.7.72-73)
190. Viṣṇu Purāṇa (6.7.79)
191. Viṣṇu Purāṇa (6.7.80-86a)
192. Kūrma Purāṇa (2.11.64b)
193. Kūrma Purāṇa (2.11.59)
194. Kūrma Purāṇa (2.11.65)
195. Kūrma Purāṇa (2.11.66)
196. Devī Bhāgavata (3.9.40-41b)
197. Devī Bhāgavata (9.1.1)
198. Devī Bhāgavata (9.1.14-20b)
199. Devī Bhāgavata (9.1.22-28)
200. Devī Bhāgavata (9.1.29-37)
201. Devī Bhāgavata (9.1.38-43a)
202. Devī Bhāgavata (9.1.44-47 and 9.1.49-50)
203. Devī Bhāgavata (9.1.60-61)
204. Devī Bhāgavata (9.1.65-66)
205. Devī Bhāgavata (7.35.56-58)
206. Bhāgavata (11.14.43)
207. Viṣṇu Purāṇa (6.7.88)
208. Viṣṇu Purāṇa (6.7.89)
209. Viṣṇu Purāṇa (6.7.90-91)
210. Agni Purāṇa (373.3)

211. Mārkaṇḍeya Purāṇa (39.63)
212. Mārkaṇḍeya Purāṇa (39.64)
213. Mārkaṇḍeya Purāṇa (39.65)
214. Agni Purāṇa (374.4)
215. Mārkaṇḍeya Purāṇa (39.35b-36a)
216. Agni Purāṇa (373.32b-33)
217. Mārkaṇḍeya Purāṇa (39.62)
218. Bhāgavata (11.15.3)
219. Brahma Purāṇa (131.57-60)
220. Rasāyana: medications used on healthy persons to give them more strength.
221. Agni Purāṇa (375.6-10a)
222. Bhāgavata (11.15.3)
223. Bhāgavata (11.15.6-8a)
224. Bhāgavata (11.15.10-21 and 11.15.28)
225. Mārkaṇḍeya Purāṇa (40.2-4)
226. Mārkaṇḍeya Purāṇa (40.5)
227. Mārkaṇḍeya Purāṇa (40.6-7)
228. Mārkaṇḍeya Purāṇa (40.8)
229. Mārkaṇḍeya Purāṇa (40.9); a yojana is a unit of length that is roughly equal to 11-12 km.
230. Mārkaṇḍeya Purāṇa (40.10)
231. Mārkaṇḍeya Purāṇa (40.11)
232. Mārkaṇḍeya Purāṇa (40.12)
233. Mārkaṇḍeya Purāṇa (40.13)
234. Mārkaṇḍeya Purāṇa (40.14)
235. Bhāgavata (11.15.4-5)
236. Mārkaṇḍeya Purāṇa (40.29-33)
237. Agni Purāṇa (375.10b)
238. Agni Purāṇa (374.1)
239. Agni Purāṇa (375.2)
240. Mārkaṇḍeya Purāṇa (39.20-21)
241. Mārkaṇḍeya Purāṇa (39.22)
242. Mārkaṇḍeya Purāṇa (39.23)
243. Mārkaṇḍeya Purāṇa (39.24-25)
244. Mārkaṇḍeya Purāṇa (39.26)
245. Agni Purāṇa (375.3-4)
246. Agni Purāṇa (375.18b)

A Critical Review of Instrumentation for Recording Nadi

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ABSTRACT

Nadi is the subjectively felt movement experienced by the fingertips or fingerpads of the three fingers, index, middle and ring, placed at three specific sites near the wrist curled over the radial artery. The perceived movements are characterised by certain attributes of which 'gati' happens to be the most important attribute. Nadi vijnana is the art of feeling nadi and interpreting its attributes in terms of physical, mental and spiritual aspects of life.

Attempts have been made to develop electronic instruments to capture attributes of nadi, principally, the nadi gati. The motivation is to replace the subjectivity associated with the feeling of nadi and its interpretation. A brief review of the instruments is presented. It is argued that the instruments, as of date, merely record the wrist pulse (allopathic pulse) at three sites and that these instruments don't capture the nadi gati or associated attributes in the traditional sense. The author's conjecture is that some of the attributes may arise due to an interaction between certain characteristic subtle vibrations inherently present in the fingerpads and the cyclic pulsatile blood flow through the radial artery. If such a conjecture is true, any attempt to capture nadi gati by replacing fingertip or fingerpad by a sensor is self-defeating.

Keywords: Nadi, Vata, Pitta, Sleshma, Kapha, nadi gati, wrist pulse, pulse diagnosis

1. INTRODUCTION

The ancient Indian civilization has made singular contributions in the areas of Astronomy, Phonetics, Grammar, Mathematics, Medicine (Ayurveda), Yoga etc. Nadi, in the context of Ayurveda, refers to certain characteristic movement felt over the radial artery near the wrist, in a manner very similar to feeling the wrist pulse. Three specific sites on the radial artery are chosen for feeling the nadi. The three sites are referred to as Vata, Pitta and Kapha or Sleshma sites. Index, middle and ring fingers are placed over the Vata, Pitta and Kapha sites, respectively. Nadi vijnana, though considered as a branch of Ayurveda, plays a significant role also in Yoga. Nadi vijnana refers to the art of feeling the nadi and interpreting the associated attributes in terms of physical, mental and spiritual (adhi-bhautika, adhi-daivika and adhyatmika) planes of life.

A well trained physician can make an accurate diagnosis based on *nadi pariksha* (examination) alone without even inquiring a patient about the symptoms. In recent times, nadi vijnana has attracted a wide attention. There are many classical and contemporary books as well as review articles with an emphasis on medical diagnosis. Only a few select references are mentioned here (Lad, 1991, Lad, 2006, Mahesh et al 2008; Dattatraya et al, 2014; Kumar et al, 2017a). References to the original classical works and other secondary sources on nadi can be obtained from these select references.

The scope of nadi vijnana extends beyond medical diagnosis [Sriranga Mahaguru, 1945 and 1988]. According to Sriranga Mahaguru, every input, such as food or sensory, to a human system, produces distinct changes in the attributes

of nadi. This forms the basis for the subject matter of dravya-guna, the basis of Ayurvedic pharmacology. There is an intimate relationship between Ayurveda and Yoga as exemplified in a prayer offering salutations to Patanjali Maharshi wherein he is described as a proponent of Yoga, Ayurveda and Sanskrit Grammar. The term 'Ayu:' in Ayurveda signifies 'prana', a central concept in yoga. The term 'nadi' in the context of Yoga refers to a nervous path along which prana is flowing through at any given moment (Khedikar and Mukund, 2016). According to Sriranga Mahaguru, knowledge of nadi vijnana has been used in the evolution of yoga practices (asanas, pranayama, meditation etc) as well as in the shaping of various traditional customs and rituals of the ancient India (sanatana Bharatiya dharma) [Chamu, 1972, Chamu 2012, www.ayvm.in, Ananthapadmanabha, 1999].

There is an element of subjectivity involved in the feeling of nadi and in the interpretation of nadi gati. In order to develop an expertise in this area, a keen tactile skill and long duration practice are required. Trained experts as per tradition are rare to be found. There exists different schools of practice. It is a time consuming process to transfer the subjective traditional knowledge from one generation to the next via personal interaction. In this context, the need for objective instrumentation is well recognized. Inspired by tradition, pulse signal is recorded, at three sites as recognized by tradition, using sensors and associated instrumentation. Automatic classification algorithms are applied on the features extracted from recorded pulse signals for a differential diagnosis. Some parameters extracted from the recorded signal are assumed to represent the traditional attributes of nadi.

An attempt is made in this paper to critically review the available instrumentation for recording nadi from the author's perspective. The paper begins with a very short introduction to the subjective approach being practiced for feeling nadi. Such a background is essential to evaluate the performance of instruments developed for recording nadi. Some available instruments are reviewed. According to the author, a rigorous scientific validation of the instruments vis-a-vis traditional knowledge seems to be lacking. There is no clear answer to a question such as 'under a given experimental situation, do these instruments detect changes that are well correlated to the changes predicted by traditional experts?' The author concludes that the present day instruments merely record the conventional wrist pulse at one or more sites and that the recorded signals don't capture the attributes of nadi as per tradition.

An instrument to record nadi gati in the traditional sense is yet to emerge.

2. ABOUT NADI

2.1 The Origin of Wrist Pulse

Human heart pumps blood, in bursts, cyclically throughout the body. Oxygenated (pure) blood is pumped into aorta by the contraction of left ventricle of the heart. The aorta expands (dilates, increases in diameter) to accommodate the extra blood. The diameter at the entrance of aorta returns to its normal value after left ventricle completes its function of pumping of blood. This cyclic expansion and contraction at the entrance of aorta propagates along the arterial wall as a pressure wave (Levick, 1991, p.103; Milner, 1990, Ch. 6). A consequence of this is the repetitive 'pulse' felt on the radial artery near the wrist. This 'wrist pulse' is felt by placing one or more fingers superficially curled over the radial artery just below the wrist. The velocity of propagation of the arterial pulse is in the range of 400 to 1000 cm/sec. Blood itself moves away from the heart along the arteries at a much lower velocity of about 20 cm/sec.

2.2 Pulse and Nadi: Commonalities and Differences

In the contemporary literature, 'nadi' and 'pulse' are used almost interchangeably and 'nadi pariksha' is often translated as 'pulse diagnosis'. We emphasize that the perceived subjective feeling associated with 'nadi gati' and 'pulse' are entirely different. We prefer not to translate nadi as pulse since it would be like translating a proper name.

By feeling 'wrist pulse', an Allopathic medical practitioner infers the number of heart beats per minute and the strength of the pulse (strong or feeble). On the other hand, the subjective feeling associated with nadi is described by attributes that are very distinct from those associated with a pulse. Of the various attributes, gati is the most important attribute that is related to the apparent movement felt under the fingerpad. The relative dominance at the three sites with respect to gati is referred to by the term, dosha. Thus, the terms Vata dosha, Pitta dosha and Kapha dosha are used in practice. Other attributes [Lad 2006] are vega (rate or speed), tala (rhythm), bala (force), akruti (tension/volume), tapamana (heat) and kathinya (stiffness) etc.

Most persons are familiar on how to feel the 'wrist pulse' as in modern Allopathic system. Nadi is felt in a very similar manner. Though, both 'pulse' and 'nadi gati'

are felt by the fingers placed over radial artery, yet the two subjective experiences are distinctly different. How come that one and the same underlying phenomenon gives rise to two different perceptual experiences in the tactile mode?

The differences arising in the two subjective experiences of 'pulse' and 'nadi' can be appreciated by an analogy to the concept of 'figure' and 'ground' in visual perception. Readers may be familiar with a visual experience where one and the same image appears as either two faces in profile or as a vase in the middle. If readers are not familiar with such an image, they can find such images on the web (See 'Rubin Vase' in Wikipedia). Such a shift in the visual experience occurs because of a shift in 'figure' and 'ground'. In this context, a familiar experience with respect to the relative movement may be recalled. All movements are relative. If A moves with respect to B, we can say that B is moving relative to A. When a person seated in a stationary train at a railway station looks through the window at an adjacent moving train, that person feels as though the train in which he/she is seated itself is moving whereas if the person looks through the opposite window towards the railway station, the person feels no movement. Such a difference in experience can be attributed to a shift of 'ground' or the 'reference'.

2.2.1 Fingertip or Fingerpad to feel Nadi?

In the context of feeling nadi, in the literature, both the terms 'fingertip' and 'fingerpad' have been used. Fingertip refers to the semi-circular fleshy part just below the tip of the nail. Fingerpad is the inner fleshy part covering the topmost (distal) phalynx or phalange. Fingertip is used in the 'simultaneous approach' and fingerpad is used in the 'sequential approach' of feeling nadi (See Sec. II. D. below)..

It has been reported that there is a sophisticated somato-sensory system (Ch.8, Purves et al, 2004) underneath the fingerpad. Experimentally it has been shown that the cutaneous mechanoreceptors in the fingerpad can capture information accurately about the shape of contact object, contact force and the rate of change of shape (Srinivasan and LaMotte, 1987; Goodwin et al, 1995). Such neuro-sensory systems may be playing a big role in the tactile perception of nadi gati.

2.2.2 Feeling the Distinction Between Pulse and Nadi:

Feeling the pulse: Although feeling of a wrist pulse is a very common experience, we elaborate it as a

preliminary to appreciate the feeling of nadi. Place the fingerpad of index finger over the Vata-site; That is, what you consider to be the best guess of Vata-site (See Sec. II. C below). Ensure that other fingers are not making contact with the radial artery. Let the radial artery be considered as the 'ground' (background or stationary). Imagine the fingerpad as the 'figure'. That is, mainly focus on the pressure exerted by the pulse on the fingerpad. A repetitive pulse (conventional allopathic wrist pulse) is felt.

On closer introspection, it may be noted that a small lateral movement is felt due to the impact (or force) exerted by the pulse on the finger. There are three sub-intervals within each cycle with respect to the perceived movement: a pause (no movement), abrupt beginning of a movement, abrupt ending of a movement. Three main factors may be associated with respect to the experienced movement: (a) the beginning (denote as B) and the ending (denote as E) spatial locations. The spatial locations may be remembered relative to the mid-point of the fingertip. (b) the direction of movement from B to E and (c) the speed of movement from B to E. There are a few additional factors: The beginning and ending of the pulse may be felt as abrupt or gradual; The force of the impact is yet another factor.

In the case of a wrist pulse (with radial artery as 'ground' or stationary), locations B and E as well as the speed of movement are perceived to be the same from cycle-to-cycle. Since the locations B and E remain the same from cycle to cycle, the direction of movement experienced also remains the same from cycle to cycle. Usually, this direction of movement is lateral, sideways, i.e., perpendicular to the axis of radial artery.

Feeling the Nadi: In order to feel the 'nadi' at Vata-site, let the fingerpad of index finger remain at the same site as used above for feeling the wrist pulse. This is a case of sequential approach (See Sec. II. D. below.)

In order to feel the nadi, consider the fingerpad as the 'ground' or stationary. That is, pay less attention to the fingerpad of index finger. Treat radial artery as the 'figure' or the moving part. Mainly focus on the relative apparent movement of the radial artery within and around the fingerpad (i.e., experience the movement of pulse in the radial artery). With this shift in focus, identify the beginning and ending locations. The beginning location (B) of apparent movement for successive cycles seems to shift spatially within the fingerpad of index finger. Similarly, the ending location of apparent movement for successive cycles seems to shift

spatially within the fingerpad. This is unlike the feeling of pulse described above where the beginning and ending locations remain the same for successive cycles. Since the finger placement has not been changed, the change in experience has arisen only due to a shift in the focus (attention) and the selection of 'ground' or 'reference'.

Such an experiment may be repeated with the middle finger placed over the Pitta site and ring finger placed over the Sleshma or Kapha site. Distinction in the nadi movement at the three sites may be noted.

2.3 The Three Sites: Vata, Pitta and Kapha or Sleshma

Nadi is felt over the radial artery at three specific sites called Vata, Pitta and Kapha or Sleshma. Anatomically, it may be noted that the radial artery stretches in the forearm from elbow to wrist [Gray's Anatomy]. The radial artery usually lies about mid-way along the lateral outer-half (thumb side) of the forearm (right-half of right forearm and left-half of left forearm). However, the actual course of radial artery in the forearm may differ from one individual to another. By searching for the location where the pulse is felt maximally, the course of radial artery and the location of the three sites may be found.

Three fingers, index, middle and ring are used to feel the nadi at the three sites. The order of placement of these three fingers is such that the examiner's thumb is towards the thumb of the Subject (or one's own thumb in case of self-examination). Fingers are curled over the radial artery. Vata site is about one finger width below the root of the wrist on the radial artery (radial tubercle). The fingerpad of index finger is used to feel Vata gati. Pitta site is slightly below the lower edge of the index finger. Middle finger is used to feel the Pitta gati. Kapha or Sleshma site is slightly below the lower edge of the middle finger. Ring finger is used to feel the Kapha or Sleshma gati. Finer adjustments in the placement of fingers are made such that strong cyclic pulses are felt at each site. Chinese and Tibetan system also follow a similar approach of feeling nadi at three sites, which are referred to as Cun, Guan and Chi. The author leaves it to the historians to decide on the precedence of the origin of these different systems.

2.4 Simultaneous and Sequential Approaches for Feeling Nadi

Because of the subjective nature in feeling nadi and its interpretation, training is invariably through a personal

interaction with a teacher. There are different schools of practice. Despite diverse types of practice, there are some common grounds such as the choice of index, middle and ring fingers, correct order for the placement of these fingers, choice of right hand (or left hand) for a male (or female) Subject; the choice of three sites on the radial artery, the list of attributes associated with nadi etc.

There are two broad approaches [Lad, 2006] for feeling nadi. In the **simultaneous approach** all three fingers (index, middle and ring) make contact with the radial artery. The tightness of the contact varies depending on the so called 'Level' as described below. Here, fingertips play a major role. This is recommended to ascertain subtle qualities of Vata, Pitta and Kapha doshas. In the **sequential approach**, only one finger is used at a time and the finger makes a gentle contact with the radial artery. Here, fingerpad plays a major role. The sequential approach is said to be useful for ascertaining gross qualities of the doshas. In traditional literature nadi gati is compared to the movement of animals like that of snake, leech, frog, swan etc. To feel such characteristic movements or complex patterns of nadi gati only one finger at a time has to be used. The details of only the simultaneous approach are presented below.

Details of simultaneous approach: The author's training is based on sequential approach. Yet, the author attempts to give a description of simultaneous approach [Lad 2006] as understood by him and this is subject to correction. In the simultaneous approach of monitoring the gati, the **point of impact** of pulse (or the throb) felt on the fingertip is noted. If the point of impact of the pulse occurs near the bottom edge of a fingertip of any one of the three fingers, it is referred to as Kapha Spike, denoted by K. As an example, for a given cycle, if the impact is felt near the bottom edge of the index finger placed over the Vata site, it is still considered as a Kapha Spike. If the point of impact is near the mid-line of a fingertip it is referred to as Pitta Spike denoted by P. If the point of impact is near the upper edge of a fingertip it is referred to as Vata Spike, denoted by V.

Sometimes, the point of contact may be felt in-between the bottom edge and the mid-line (or the upper edge and the mid-line) giving rise to an ambiguity. That is, whether the contact is to be considered as a Pitta Spike or Kapha Spike (or Vata Spike). In such cases of ambiguity, the quality of contact is to be considered. A pointed strong contact corresponds to Pitta Spike, Feeble rapidly changing wavy contact (higher spatial frequency

or shorter wavelength) corresponds to Vata Spike. Deep, slowly changing wavy contact (lower spatial frequency or longer wavelength) corresponds to Kapha Strike.

Quantification of the doshas: The following procedure is followed to determine the relative proportion of doshas. Let us say that nadi is felt for one minute. The number of times Vata Spike occurs is counted. Similarly, the number of times Pitta and Kapha Spikes occur are counted. It may be difficult to keep track of the count of the heart rate as well as all the three types of spikes within the same one minute interval. Hence, heart rate, Vata, Pitta and Kapha Spikes may be counted during consecutive one minute or 30 second intervals..

To simplify the above task, today's technology of audio recording can be used. For each cycle, the sound 'V' or 'P' or 'K' may be recorded. This could be done for about one minute. Later the audio recording may be played and the number of spikes of each category as well as the heart rate may be deduced. If the heart rate is rapid, then only one Spike may be monitored at a time.

The **relative** dominance of doshas is quantified by assigning numbers 1 to 4, where 1 represents decreased or depleted dosha and 4 represents excess dosha, 3 represents balanced dosha and 2 represents an intermediate quantity of dosha, i.e., in-between decreased and balanced doshas. Experts can estimate up to a fraction of one-half. Let the heart rate be 72 per minute. If the number of V, P and K Spikes are 24 each ($1/3$ of 72), then all three doshas are balanced or equal in proportion. Such a balanced proportion is represented by V3P3K3. As another example, if the number of V, P and K Spikes, respectively, are 12 (far less than $1/3$ of 72), 22 (closer to $1/3$ of 72) and 38 (much greater than $1/3$ of 72), then the dosha is denoted as V1P3K4. This represents decreased Vata dosha, balanced Pitta dosha and excess Kapha dosha. A count in the range of 15 to 18 for a heart rate of 72 may be represented by '2'. Lesser the number of Spikes, greater the depletion or decrease in the corresponding dosha. In the above explanation, we have assumed heart rate to be 72. Appropriate changes in the counts have to be made for a different heart rate. It is the proportion of Spikes relative to the heart rate that is to be noted.

Concept of Level: In the simultaneous approach, there is yet another concept called 'Level' [Lad 2006] related to the tightness with which the fingers make a contact with the radial artery. Before counting the Spikes, all three fingers are firmly pressed as if to stop the blood flow through the radial artery (as in the case of measuring the

systolic blood pressure). Then, the pressure is released just enough to feel the throbs or the pulses. This is referred to as the deepest level or the seventh level (Level-7). If the pressure on the radial artery is released so that the fingers make a soft or gentle contact then it is referred to as superficial level or Level-1. For the 'Levels' between 1 and 7, the applied pressure has to be in-between those of Level-7 and Level-1. Of course, deciding on the pressure to be applied for intermediate levels is highly subjective. According the author, an objective way of controlling the 'Level' would be to use a mercurial sphygmomanometer and set the pressure just below the systolic pressure for Level-7 and just above the diastolic pressure for Level-1 and proportionately in-between these two pressures for other Levels.

Level-7 is used to measure the intrinsic prakruti (the congenital prakruti) of the doshas and Level-1 is used to measure the vikruti (or the current) status of doshas.

3. A BRIEF CRITICAL REVIEW OF INSTRUMENTATION TO RECORD NADI

3.1 Commercial Products of Indian Origin

There have been many attempts to develop instrumentation to record nadi using various types of sensors. Pressure (piezo and condenser microphone), photoelectric (optical) or displacement (strain gauge) and velocity (ultra-sound) based sensors have been used. In a single channel recorder, the sensor is placed at one site at a time (Vata or Pitta or Sleshma). A three channel instrument can record 'pulse' at all the three sites simultaneously.

Nadi Tarangini, an early attempt made at IIT, Delhi has undergone various revisions. A description of nadi tarangini has been published (Joshi et al, 2007) where it is mentioned that a strain gauge sensor has been used. The latest model is a three channel commercially available device (Nadi Tarangini, 2019). Nadiswara is yet another commercially available single channel product (Nadiswara, 2019). The technical details of these commercially available devices are not available in the open literature. Outwardly, the sensor used in these two commercial instruments resembles 'PulsePen' of DiaTecne Company (a part of Arterial Tonometer). Nadi yantra (Abhinav et. al., 2008) is a 3-channel mechanical setup that avoids manually holding the sensors at the chosen sites thereby providing hands-free recording to ensure stability, repeatability and long-term acquisition facility.

Based on some features or parameters extracted from the recorded pulse signal for known cases of ailment, a knowledge database has also been built for a differential diagnosis in some of these instruments. Further, some of the measured parameters are assigned the names corresponding to some of the attributes of nadi.

Comments on the above instruments: The term 'nadi' has been used in the naming of these commercial products and traditional names associated with the attributes of nadi have been assigned to the measured clinical parameters. A full scientific justification involves a rigorous comparison of the subjective assessment of these attributes of nadi made by traditional experts with the estimates provided by instrumentation for the same Subjects during the same session. The recorded signal (or the raw data) must be made available for researchers in order to independently evaluate these instruments and for the sake of transparency. Such a rigorous scientific evaluation seems necessary.

Secondly, the procedure used for recording based on the above instruments differs from that of the traditional approach. As per the simultaneous approach (Lad, 2006), as already described, all three fingers are initially pressed firmly on the radial artery as if to stop the blood flow through the radial artery. Then the applied force is released to feel the nadi, the degree of release depending on the 'Level'. Immediately after the release of applied pressure, the Spikes are counted. In the instrument based approach, this concept of 'Level' seems to be missing. Facility to trigger the recording at the time of release is also lacking.

A traditional expert compares the present doshas (vikruti) with the intrinsic prakruti of the Subject to arrive at a diagnosis. In the instrument based approach, only the vikruti seems to be measured.

Thirdly, as described earlier, the pulse is assigned to Vata or Pitta or Kapha Spike depending on whether the point of contact is at the upper edge or mid-line or the lower edge of each of the fingertips. This would require totally nine sensors in the instrumentation, three for each fingertip. Sometimes, the V or P or K Spike is decided based on the quality of contact rather than the location of contact, which is purely subjective and difficult to be implemented in an instrument.

Finally, a traditional expert carefully chooses the optimum location of the three sites to feel the nadi based on the individual anatomical differences. However, in

some of these instruments, the relative spacing of the sensors is fixed.

3.2 An Example of a Siddha-based System

Mahesh et al, 2008 describe a three sensor system supposedly meant for Siddha based medical diagnosis. In this setup, a piezo-electric polymer has been used as a sensor.

Comments: The setup has been used to determine the intrinsic prakruti of a group of subjects. The intrinsic prakruti so determined by the instrument has not been validated against a judgement made by traditional experts. The system makes use of only the amplitude of the recorded pulse and/or the heart rate, both of which are merely the attributes of the modern day allopathic wrist pulse. Thus, the traditional attributes of nadi have not been used in this study.

3.3 Instrumentation inspired by Traditional Chinese Medicine

Traditional Chinese system of medicine (TCM) uses a diagnostics method very similar to that of the traditional Indian system. A recently published book (Zhang, 2018) covers previous works on the recording of pulse followed by signal processing techniques, feature extraction and classification. A recent paper (Wang et al, 2016) may be considered as representative of the latest in instrumentation. This paper presents a very sophisticated design. Here, an array of photoelectric sensors is initially used to identify the optimal sites for each Subject. Pressure sensors are then positioned and firmly held at these optimal sites by mechanical means without manual involvement. Three channel signals are recorded simultaneously using the pressure sensors. The paper concludes that pulse signal recorded at the traditionally identified sites shows consistent wave shape whereas the pulse signal recorded at other sites shows a wide variability from cycle-to-cycle.

Comment These works don't claim to replicate the traditional Chinese knowledge. Only the choice of sites is inspired by tradition. The recorded signals are considered to be bio-medical signals. They explore the utility of recorded pulse signals at the three sites. Further, instead of an expert's interpretation, automatic classification algorithms have been applied on the features extracted from the recorded pulse signal. For example to classify a group of subjects (closed-set) into diabetic or non-diabetic (Wang et al 2018) etc.

3.4 Anatomical and Blood-flow Differences at the Three Sites

Measurements on the velocity of blood flow over the radial artery at three sites near the wrist has been carried out in order to gain a deeper understanding (Kim et al, 2015)]. Some minor differences in the mean velocity of blood flow profile at the three sites have been reported. Also, it is reported that a hard bone is seen just under Guan (Pitta) site.

Comment: It is not clear if these noted differences in blood velocity profiles are adequate enough to explain the observed systematic differences at the three sites as noted by traditional experts.

3.5 Equivalence of Nadi Attributes and Modern Medical Terms

The motivation with this approach is to find a correspondences between the modern Allopathic clinical parameters and the attributes of nadi so that the attributes of nadi may be measured using the available instruments meant for measuring the Allopathic clinical parameters. Although the approach of finding equivalences between the attributes of nadi and modern clinical parameters is worth pursuing, rigorous controlled experiments have to be planned to calibrate and validate such equivalence involving traditional experts

3.5.1 Bio-electrical Modelling of Nadi Gati

Dattatreya et al, 2014 propose a model to explain the origin of variability in nadi gati. In this context they cite previous works on the relation between nadi and certain biological processes at the cellular level. They suggest measurement of three bio-electrical properties as an alternative to subjective feeling of nadi gati at the three sites.

Comment: Such an equivalence has to be validated by an inter-disciplinary approach.

3.5.2 Arterial Stiffness and 'Kathinya'

Kumar et al, 2017b considers one of the attributes of nadi called 'kathinya' to be the equivalent of 'arterial stiffness'. In their reported pilot study, two parameters, viz., stiffness index and reflection index are computed using signals recorded by Nadi Tarangini and these indices are shown to differ at the three sites. The noted differences in the measured parameter at three sites is used as a justification of the approach.

Comments: Out of a large number of recordings made using Nadi Tarangini only a small subset of the recordings

(with clearly identifiable systolic and diastolic peaks) is found to be usable. This usable small subset has been chosen manually. It is not clear if the chosen recordings correspond to that of the same Subject. The measured parameter, claimed to represent the attribute 'kathinya', is not compared against an independent measurement of arterial stiffness using modern day instruments. In other words, calibration is missing. It is said that tradition mentions differences in 'kathinya' at the three sites. The study also reports differences in the measured stiffness index and reflection index at three sites. Perhaps, the modern clinical parameter 'arterial stiffness' may be applicable to the entire arterial tree and may not differ from one location to another along an artery. One could inquire if 'kathinya' can indeed be considered as equivalent of 'arterial stiffness'.

4. CONCLUSION

We have argued that 'pulse' and 'nadi gati' are distinctly different experiences and that we prefer not to translate the term 'nadi' as 'pulse'. We have presented in some detail the so called simultaneous approach to feel nadi gati. Contemporary effort to build instruments for recording nadi gati has been reviewed critically.

An inter-disciplinary approach is required for validation of instrumentation. When an experimental object is held in the palm, certain characteristic changes occur in the nadi gati compared to the nadi gati for an empty palm condition [See page. 185, Sriranga Mahaguru, 1988]. For example, the experimental object could be a piece of gold. Any suitable experimental object may be used. This experimental situation is not related to medical diagnosis and hence may be performed on any number of normal healthy Subjects. Pulse signals may be recorded with an empty palm and with an experimental object in the palm. These recorded signals may be analyzed to find out if there are correlates that change in a manner predicted by an expert feeling the nadi. The author has developed a two channel pulse recording system using electret condenser microphone as a sensor that is mounted on a stand whose position can be adjusted for each individual. Recorded signals with this setup for twelve Subjects didn't show any significant change for two different experimental objects compared with an empty palm condition.

It is argued that the present day instruments record only the arterial pulse, which may still be useful for a differential diagnosis, the recorded signal being considered as yet another bio-medical signal. However,

it is premature to describe recorded pulse signal as nadi or to assign traditional names of the attributes to the measured parameters without a rigorous validation.

According to the author's conjecture, some aspects of nadi gati may be arising due to an *interaction* of subtle vibrations inherently present in the fingerpad and the cyclic pulsatile blood flow through the radial artery. This conjecture is yet to be tested. If this were to be so, any attempt to record nadi by replacing a live fingerpad with an inanimate sensor would be self-defeating.

Several intriguing questions arise concerning nadi gati. Why, as per tradition, nadi is felt at three locations instead of a single location as in wrist pulse? What factors (anatomical, physiological and neuro-physiological) cause significant and noticeable differences in the nadi gati at such three closely spaced sites (within a few cm)? How come the attributes of nadi carry useful information helpful for a medical diagnosis? How come an object held in the palm produces systematic and consistent changes in nadi gati, that too almost immediately? In other words, what is the rationale behind the origin of 'nadi'?

At this point of time, the origin of nadi gati is a deep mystery that is yet to be unravelled. Wealth of information carried by nadi gati is yet to be fully explored. Traditional knowledge has to be collected, preserved and expressed using contemporary technical terms by an inter-disciplinary team. Instruments to record nadi gati, as distinct from pulse, are yet to be developed, calibrated and validated. Dubbing nadi gati as imaginary is an un-warranted criticism. Such a scepticism closes the doors on a great gift bestowed by Nature to monitor one's physical and mental health as well as one's spiritual status.

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Pratyāhāra – A Neuroscientific perspective of Yoga Shastra

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ABSTRACT

Ashtanga yoga or the eight limbed path of yoga to achieve the highest Samadhi state. Yama and Niyama can restrain and calm the faculties by a set of practices. Asana prescribes a set of dynamic postures. Pranyama is the control and restraint of breath. Pratyahara turns the senses inwards. The senses turned inwards are trained to focus attention on an object, it is known as Dharana. Dhyana is the focus on the chosen object and leads to Samadhi. Dharana, Dhyana and Smadhi are the core of eight fold path and known as samyama.

Keywords: Ashtanga Yoga, Pratyahara

1. INTRODUCTION

Aṣṭāṅga Yoga or the eight limbed path of *Yoga* is well known as a comprehensive system of achieving the highest state, variously called as *Samādhi*, *Unmanī* or *Sahajāvasthā*¹. It is a process of disciplining and conditioning the mental faculties gradually, and turning them inwards. *Yama* and *Niyama* prescribe a set of practices for restraining and calming the faculties. *Āsana* prescribes a variety of dynamic postures. *Prāṇāyāma* talks of the control and restraint of breath while *Pratyāhāra* is associated with turning the senses inwards. The senses that are turned inwards are trained to focus their attention on an object. This is termed as *Dhāraṇā*. In *Dhyāna*, the focus on the chosen object becomes intense and all-encompassing, eventually leads to *Nirvikalpa Samādhi* where the difference between the meditator, object of meditation and the act of meditation is no more cognizable.

In the eight-fold path, the last three steps – *Dhāraṇā*, *Dhyāna* and *Samādhi* are considered the core of the eight-fold path and technically known as *Samyama*. The first five steps are preparatory in nature and gradually turn the mind inwards. *Pratyāhāra* as the fifth step thus constitutes the critical phase transition where outward predisposition of the *citta* (mental faculties) transforms into an inward and focused *citta*. Hence the name *Pratyāhāra*, meaning leading (*āharaṇa*) inwards or against its natural flow (*prati*).

In this work, we proceed to collate the broad set of principles underlying *Pratyāhāra* from the primary sources or *śāstras* and in particular, the *Pātañjala Yoga sūtra* (Patañjali, Prasāda and Vyāsa, 1909) and the *Yoga Upaniṣats* (Sastri, 1920; Srinivasa Ayyangar, 1938). We will then elucidate some well-known neurophysiological principles related to sensory-motor processing that are of relevance to the subject matter. Using this dual understanding, we will next proceed to draw some parallels between the two perspectives namely that of *Yoga* and neurophysiology. We will conclude by proposing a hypothesis for the neuroscientific basis of *Pratyāhāra*.

1.1 PRATYĀHĀRA IN ŚĀSTRAS

1.1.1 PRATYĀHĀRA IN YOGA SŪTRA AND ITS ROLE IN AṢṬĀṄGA YOGA

Pratyāhāra is the process by which the senses are restrained by preventing their contact with their usual sense objects⁴. This is similar to the restraint of the mind or *citta*, where it is made to follow or concentrate on its own true natural disposition⁵. This exercise of *Pratyāhāra* results in the highest form of restraint of the senses⁶. This restraint where senses or other mental faculty are inhibited from their normal mode of operation, is a recurrent pattern in the philosophy of *Yoga*. *Yoga* itself is defined as restraint of normally encountered mental activities or states or *citta* vrittis⁷, such as cognition (factual or false), memory, imagination or sleep⁸. The first steps to achieve restraint of the mental faculties are *Yama*⁹ and *Niyama*¹⁰ which prescribe certain restraints on lifestyles choices, values and morals such as non-violence, truthfulness and the like. *Āsana* and *Prāṇāyāma* involve the restraint of the musculoskeletal system and breath respectively. The restraint in *Āsana* is of the form of maintaining one of the prescribed postures that is both dynamically stable and is comfortable¹¹. The dynamic equilibrium of the *Āsana* is further emphasized by the fact that the *Āsana* siddhi involves cessation of a conscious effort to maintain the posture¹². It is in this backdrop that restraint of the senses – *Pratyāhāra* is undertaken. This restraint is of the form of denial of the usual object of the senses, i.e., shutting the eyes out from vision, ears from hearing and so on. These 5 steps starting from *Yama* and culminating in *Pratyāhāra* lead the subject into the internal practice of *Yoga* or *Samyama* – where the mind focuses steadfastly internally on its chosen object or point in the body¹³. When this focus transforms into an unchanging, unbroken flow of thought where the object of meditation holds centre stage, it is *dhyāna*¹⁴. The culmination of this process is the state where the object of *dhyāna*, engulfs and takes full possession of the mind¹⁵. This state is thought to be brought on, as if in a burst of inspiration.

2. PRATYĀHĀRA IN THE YOGA UPANIṢATS

The *Yoga Upaniṣats* describe many different methods and their variants for the practice of *Pratyāhāra*. Two broad classes of methods are described in the *Darśana Upaniṣat*¹⁶. The first relates to the holding of breath and/or (de)focusing attention on different parts of the body. The second is related to the philosophy of

Vedānta, which requires the mind to be drawn away and focused directly on the atman which dwells within. The former is a graded, methodical process of withdrawal of senses, while the latter is more a drastic and complete withdrawal.

While these are largely two broad classes of methods, it must be recognized that these are akin to two ends of a spectrum, with a variety of methods that fall in one of the two classes or in between them.

Another scheme of classification with five different classes is described in the *Śāṅḍilya Upaniṣat*¹⁷. It is said that *Pratyāhāra* may be practiced in one of many ways, namely,

1. By withdrawing the senses forcibly from their sense objects¹⁸.
2. By practiced disinterest¹⁹ in the sense objects such as sights, sounds, smells, tastes, touches and the happiness derived therefrom.
3. Identifying all the sense objects with the atman itself²⁰: The *Amṛtanāda Up.* gives another variant of this method wherein it prescribes considering the sense objects as the rays of the atman, as having an organic connection with the atman²¹. *Yogachudamani Up.* takes it a step further and describes the process of *Pratyāhāra* as similar to that wherein, at sunset, the sun draws back its rays within itself²². The *Tejobindu Up.* further says that identifying this connection of the sense objects with the atman gives a pleasurable feeling. An alternate reading of this text may be taken to mean that the joy derived from a pleasurable sense object must be thought of as having an organic connection with the real nature of atman - bliss.
4. By giving up the fruits of the daily activities²³ or even those actions done for satiation of particular desires *Pratyāhāra* may be performed. These activities must be performed as if they were acts of worship - *brahmārādhana*²⁴.
5. By control of *Prāṇa*: This is described as being achieved by the performance of twelve *prāṇāyāmas*²⁵ or by means of the *kumbhaka*²⁶. Somewhat counter-intuitively it is also said to be achieved by filling in the air within the body from

toe to head²⁷. Elaborate and frequent mention is made of holding-*dhāraṇā*^{28, 29} or transferring^{30, 31} the *prāṇa* between *marma sthānas* or vital points in the body. *Kṣurikā Up.* mentions that not just the *prāṇa*, but the triad of *dṛṣṭi*, *manaḥ* and *prāṇa* are to be focused on one of the *marma sthānas*, and then withdrawn as the focus moves to another *marma sthāna*³².

2.1 PRATYĀHĀRA AND MARMA STHĀNAS IN THE BODY

This method is described in detail in several *upaniṣats* like *Kṣurikā Up.*, *Darśana*, *Śāṇḍilya*, *Trisikhibrahmaṇa Up.* *Pratyāhāra* is performed at eighteen *marma sthānas*³³ in both³⁴ ascending and descending orders, i.e. from head to toe³⁵ or toe to head^{36, 37}. The list of the 18 *marma sthānas* as given in *Śāṇḍilya Up.* is as follows³⁸

Big toe of the feet

1. Feet
2. Ankles
3. Shanks
4. Knees
5. Thighs
6. Anus
7. Genitals
8. Navel
9. Heart
10. Throat
11. Cavity of the throat
12. Palate
13. Nostrils
14. Eyes
15. Mid-brow
16. Forehead
17. Crest of the head

In addition, joints such as the shoulder, hip, elbows are also considered as *marma sthānas*³⁹.

The different parts of the body from toe to head are connected to the concept of five elements *pṛthivī*, *ap*, *agni*(*tejas*), *anila*(*vāyu*), *ākāśa*. From the sole up to the knees are associated with Earth (*pṛthivī*); knee onwards, until the anus with water (*ap*); thereon till the heart with fire(*agni* / *tejas*); thereon to the middle of the brows

with air (*anila* / *vāyu*); thereon till the crown with ether (*ākāśa*)⁴⁰. The association of these body regions with the five elements, their *maṇḍala*⁴¹ and *bijākṣara*⁴² are mentioned as well. The association of these five elements with the first five chakras *mūlādhāra*, *svādhiṣṭhāna*, *maṇipūra*, *anāhata* and *viśuddhi* are well known.

Often *Pratyāhāra* and *dhāraṇā* are treated as two facets of the same process. In *Pratyāhāra Prāṇa*, *dṛṣṭi* and *manaḥ* are exercised well, sometimes holding, sometimes moving from one *marma sthāna* to another. In *dhāraṇā*, this process is taken to the next level by withdrawing fully and severing the *marma sthānas* one by one – the ankles, shanks, knees, thighs, anus and genitals and entering the *suṣumnā nāḍī*⁴³.

3. SENSORY-MOTOR NEUROSCIENCE

3.1 Spinal and Cranial nerves

The cerebral cortex receives sensory information and controls the motor organs through a system of spinal and cranial nerves. The cortex is connected to the rest of the body through the thalamus, brainstem and the spinal cord. Olfactory information by virtue of its location on the ventral surface of the brain, connects directly. Cranial nerves connect the sense organs i.e., eyes, ears, organs of taste and touch (from the middle and anterior parts of the face to the brain). It also conducts control information for movement of the eyes, facial muscles and jaws. Spinal nerves bring information about the sense of touch from the posterior portion of the head and whole body. Spinal nerves also carry motor signals to control body movement by activating the muscles. Movement is effected by motor nerves that cause muscles to contract. The contracting muscles move the skeletal bones around the joints and effect movement. Sensory information from the body is of several kinds: information about touch – pressure, pain and temperature from the surface of the skin. Another important source of sensory information is the proprioceptive information from muscle spindles and Golgi tendon organs. These signals encode information about the state of the muscle stretch. Thus, the composite of these proprioceptive information from all the muscles of the body provide information about the position of the various limbs of the body (Purves, Fitzpatrick and Hall, 2008).

4. THALAMUS

The thalamus acts as the front office of the cerebral cortex. It's position as the front office naturally endows

it with a direct, large-scale access to almost all parts of the cortex. These connections are reciprocal in nature. As the front office, almost all sensory information either from the spinal or the cranial nerves are relayed to the brain through the thalamus. Thus, the thalamus plays an important role as the gatekeeper of sensory information. The fact that the thalamus is well connected to all parts of the cortex is also useful in another manner. It is an effective way for different parts of the cortex to communicate with each other and exchange notes. The part of thalamus that acts as the front office, relaying sensory information is different from the part of the thalamus that acts as the internal relay centre and helps communicate quickly between different brain regions. These two regions are respectively termed as first order and higher order areas of the thalamus 2.

5. SPINAL CORD AND BRAINSTEM

The spinal cord and brainstem manage the coordination of the body and act as intermediary between the body and the brain. Spinal cord is a hierarchical system³ with a rhythm generator at the top level. The next level contains the modular circuits required to coordinate antagonistic components: extensors and flexors, left and right sides of limbs and so on. Finally, at the bottom level are the motor neurons that cause the muscles to move, the afferent proprioceptive sensors from the muscles that indicate the state of the muscles, and interneurons in between. There are also the somatosensory inputs bringing in information of touch-pressure, pain and temperature. The descending connections from the brainstem and cortex largely turn on or off the various modules, or pace the central patterns generators 4. or at times the motor neurons directly. In turn, the sensory information is sent upwards to the brainstem, cerebellum and the first order thalamic nuclei. The brainstem contains other rhythm generators, most notably the one required for respiration⁵.

5.1 UNDERSTANDING THE BRAIN AT DIFFERENT SCALES

The basic functional unit of organization in the nervous system is the cell also called a neuron. Neurons receive information from multiple other neurons through dendrites and send outputs to other neurons through long processes called axons. Small regions of the brain can be thought of as a dense network of interconnected neurons that communicate with other networks of

neurons. The neurons are electrically active cells and communicate by means of ions. One can measure and understand brain activity by directly measuring electrical activity of neurons. Since it is impossible to measure each and every neuron, in order to understand activity in an area of the brain, electrical fields resulting from the lumped neural activity of large populations of neurons are measured. Thus, the ongoing activity must be understood both at the micro scale (electrical activity of neurons) and at the macro scale (activity in large populations of neurons, e.g. EEG) and at scales in between these two extremes.

6. NEUROSCIENCE OF PRATYĀHĀRA AND YOGA

6.1 *Citta vṛttis* from a perspective of neuroscience.

Citta vṛttis – activities or modes of working of the brain are cognition (factual and false), memory, imagination, or sleep. We know that during cognition, sensory information flows into the brain from sense organs to the cerebral cortex via the spinal or cranial nerves and then through the relays in the first order thalamic nuclei. This sensory information is integrated and interpreted by the associational cortices and other areas to understand, cognize and respond to it. The mode of cognition may also be broadly interpreted as interaction with the external world, to include sensory-motor interaction. The memories of these interactions are stored in areas such as hippocampus, amygdala and cortical areas. While hippocampus is largely associated with formation of explicit memories, implicit memories are represented in various diffuse areas. Recalling and recovering information from them, constitutes memory⁶. Sleep involves a shutdown of large cortical areas by means of synchronized oscillatory activity. This is achieved by the higher order nuclei of the thalamus together with the cortex by creating thalamocortical oscillations⁷. Since it may sound counterintuitive, a few words may be in order on why oscillations represent a silencing of the brain. Neurons in brain when alive are inherently noisy. Thus, to keep them silent requires firing of inhibitory neurons. Since different parts of the brain are highly connected, if activity was uncoordinated, then neuron's silent period would get disrupted by incoming activity from some other neurons. Thus, some populations of neurons engaged in certain oscillatory synchronies enable idling of regions of the brain, which can be measured with an EEG system²(Buzsaki, 2006).

6.2 CITTA VR̥TTI NIRODHAḤ IN THE LANGUAGE OF NEUROSCIENCE

Restraint or *Nirodhaḥ* is an important technique in *Yoga*. It is defined as the restraint of all *vr̥ttis*. On one end of the spectrum of *vr̥ttis* are cognition and memory involving an active cortex, processing inputs from the senses and controlling motor output or playing back old inputs from memory. The other end of the spectrum is sleep which involves a drastic and global shutdown of brain activity where even an awareness is lost. Hence, *citta vr̥tti nirodhaḥ* requires all these normal modes of cortical operation to be abolished. Neither sensory inputs nor their replay from memory, nor a global shutdown. Thus, it must be a state where sensory inputs are blocked but without the global shutdown of cortex, leaving intact a sense of awareness.

Experiments have shown that when subjects are asked to shut their eyes it results in a high amplitude oscillation termed alpha activity in the occipital area. Opening of eyes, movement of eyes, or even visual imagery abolishes this activity. However, the subject is awake and aware. It may specifically be noted that this state is incompatible with *vikalpa* - imagination. Similar oscillations (Rolandic mu rhythms) are found when recording above the sensory-motor area in the absence of musculoskeletal activity or movement. It requires that the limbs be immobile, but is not sensitive to sensory inputs from other modes such as visual inputs. Similar rhythms have also been recorded over the temporal area which is responsible for processing auditory stimuli. Absence of auditory stimuli gives rise to the tau rhythms when recording over the temporal lobe⁸. Since these rhythms - occipital alpha, Rolandic mu and temporal tau occur in absence of sensory inputs and are abolished by respective sensory stimuli, these rhythms are referred to as default state oscillations or idle oscillations. It is interesting to note that this name is quite literally the name for *Samādhi* in the *Yoga* Shastra – the *sahajā*⁴⁴. The mechanism of these oscillations is thought to be due to pacemaker like activity or due to a network phenomenon involving the thalamus and cortex⁹.

Oscillation as a natural mode of activity is seen in microscopic scales as well. Experiments on dissociated neuronal cultures¹⁰ and immature cortex *in-vivo*¹¹ have shown that the cultures spontaneously form recurrent networks that show synchronized bursting followed by long periods of sparse activity. The mechanisms of formation of synchronized oscillations in spontaneously formed clusters

have been well studied¹². These spontaneous oscillations are terminated by random external stimulations, which act like sensory inputs¹⁰. Thus, oscillations as the fundamental activity (some of them functioning to induce idling of certain areas of the brain), may be observed across microscopic and macroscopic scales in the nervous system. While we explore these rhythms from a context of resting, physiologically idling of certain parts of the brain also serves to increase the salience of inputs coming from other parts.

6.3 ROLE OF PRATYĀHĀRA IN SAMĀDHI

While it does look like alpha oscillations are commonly observed during yoga practice or during relaxed non-sensory processing states², it is pertinent to ask whether the alpha activities observed due to lack of sensory inputs completely characterizes *Samādhi* – culmination of *Yoga*? Or is there more to it? It may be recollected that in *Samādhi*, there is complete internal immersion and sensory stimuli do not have any effect. For instance, a shining of light on the closed eyes or a cold stimulus on the skin is likely to leave its mark on brain activity if the subject has only shut his eyes and is ‘relaxing’ with no mental activity. However, in experiments on experienced practitioners of *Yoga*, it has been reported that these stimuli do not alter the ongoing idling rhythms⁴⁵. This implies that in *Samādhi*, the default idling oscillatory dynamics are not altered by an external stimulus, which is normally not the case. In order for this to be functionally plausible, it is further required that in case of external stimuli, either the sensory stimuli do not reach the thalamus / cortex, or if they do, they are ineffective in altering the idling rhythms. We may presume that the steps leading to the stage of *Samādhi* must have placed the practitioner in such a state. *Pratyāhāra* being defined as the step that constitutes the phase transition where senses are cut off, or turned inwards, may be expected to play an important part in this process.

6.4 A PROPOSED NEUROPHYSIOLOGICAL BASIS FOR PRATYĀHĀRA

The starting point of our proposed neurophysiological basis of *Pratyāhāra* is the hypothesis (henceforth called Hypothesis P) that the steps preceding *Samādhi*, placed the subject in a state where

- a. sensory inputs to first order thalamic nuclei are suppressed and

- b. ensure that any subsequent external stimuli do not reach the first order thalamic nuclei, or at least are not strong enough to disrupt the ongoing rhythms.

We may also note here that the philosophy of *Yoga* proposes a gradual progression upwards along the spinal cord (more specifically the *suṣumnā*) and the culmination of this journey at the crown is *Samādhi*. Thus, it is pertinent to suppose that the spinal cord and its activity must have a role to play in achieving the conditions described in hypothesis P.

6.5 DEFAULT RHYTHMS FOR THE SPINAL CORD?

In order to understand what role it may play, we may start with a question as follows: “Does the spinal cord too have a natural state or rhythm similar to the cerebral cortex?”. The answer to this question it turns out is, yes. These rhythms are called fictive motor patterns¹³⁻¹⁴ and are found in spinal cord laboratory preparations in the absence of sensory inputs. The spinal cord circuits that generate these rhythms are called central pattern generators and are largely responsible for generating movement driving signals. These patterns are of different kinds and correspond to the different modes of locomotion such as walking, trotting, galloping. Some of these involve alternating of the left and right limbs while others involve synchronous activity (Kiehn, 2016). It is interesting to note that the mechanisms that generate these rhythms are very similar to the ones generating oscillations in the cerebral cortex as well, thus making it plausible that the notion of default state oscillation is a generic concept applicable in the cerebral cortex as well as in the spinal cord.

6.6 FACTORS MODULATING SPINAL CORD ACTIVITY

Three factors are known to modulate the rhythms of the spinal cord.

- Descending connections from the brainstem and cortex.
- Sensory inputs- touch, thermal and pain signals from the skin, proprioceptive from the muscles
- Hormones secreted by the neurosecretory organs

Based on the discussion above we may now postulate that if the spinal cord circuits themselves were placed under a persistent oscillatory state this might suppress the sensory stimulation of the thalamic first order nuclei, or even probably give an oscillatory rhythmic input to

them which could accelerate and exaggerate the rhythms corresponding to the state of *citta vṛtti nirodhaḥ*. The oscillatory state of the spinal cord may itself render it incapable of processing any external stimulus and thus act as a shield, leaving the thalamocortical rhythms unaffected.

Setting up the idling rhythm in the spinal cord may be achieved by using one of the three modulating factors mentioned above.

6.7 A BASIS FOR DIVERSITY IN PRATYĀHĀRA METHODS

We may recollect that there were largely two broad classes of methods applied for *Pratyāhāra*. Firstly, the methods where the subject assumes a state of mind or a mental attitude such as active disinterest, or disowning (treating the sense organs as non-self), or coopting (sense organs as being under the control of or part of the self). These may be called as the Vedantic approach to *Pratyāhāra*⁴⁶. We hypothesize that these correspond to the modulation of spinal cord through descending control from cortical centres, largely top down methods.

Second class of methods are based on the classical *Aṣṭāṅga Yoga*⁴⁷. Here the practices include *āsana* wherein a comfortable posture in dynamic equilibrium is assumed and maintained. Dynamic equilibrium implies that there is an active muscle force, but the limb posture is such that the forces exerted by the limbs counteract each other. This dynamic equilibrium results in a flow of patterned stimuli into the spinal cord which contributes to moving the spinal cord to its default rhythm. Similarly, during the phase of *prāṇāyāma*, breathing requires rhythmic activation of the motor neuron array and results in rhythmic afferent inflow into the spinal cord. It is worthwhile noting that breathing patterns also have neuromodulatory effects. Thus, *āsana* and *prāṇāyāma* contribute to setting up the default rhythm in the spinal cord through patterned afferent inflow. During *Pratyāhāra*, the triad of *dīṣṭi-mana-prāṇa* implies a focusing of attention on a *marma sthāna* and then gradually withdrawing it. It may be noted that most of the *marma sthānas* are major muscles or joints of the body. Thus, focused attention on a *marma sthāna* is likely accentuate the patterned afferent into the spinal cord from the relevant part and withdrawing the attention may release the accentuation. Performing *Pratyāhāra* in sequence from head-to-toe and/or toe-to-head in the manner prescribed is likely to result in a wave of input activation to the spinal cord travelling end

to end. This may be ascertained from dermatomes and myotomes by computing the sequence of spinal cord levels corresponding to the *marma sthānas*.

It may now also be noted that the setting up of these patterned input stimuli may have another important function. It may provide a persistent strong sensory stimulus that can drown out an external stimulus. For instance, the rigidity of muscles achieved may drown out the effect of a touch, thus acting as an additional fence around the cortical rhythms.

While it is proposed that the *vedānta* and *aṣṭāṅgayoga* based approaches to *samādhi* largely utilize respectively the top-down and bottom-up modulation of spinal cord respectively, it is most likely that these are not mutually exclusive. Aspirants pursuing *vedānta* based contemplation are also likely to adopt a suitable *āsana*. Similarly, *aṣṭāṅgayoga* prescribes adopting several mental attitudes as aids. Further, descending drives to spinal cord and proprioceptive input patterns are likely to interact with each other. Similarly release of neuromodulatory substances acting as inputs to the pattern generators may be utilized by either of the methods outlined above. The hypotheses proposed here are verifiable to various extents by experimentation. However, modeling may help support or weaken these hypotheses and develop further intuition.

CONCLUSION AND FUTURE WORK

In this work we have surveyed the practice of *pratyāhāra* in *Yoga sutras* and *upaniṣats* in the context of achieving the yogic state of *samādhi*. We also reviewed the neuroscience literature related to the various *citta vṛttis* and their *nirodha*. On the basis of this interdisciplinary study, we have proposed a hypothetical mechanistic basis for *pratyāhāra* grounded in modern neuroscientific literature. We have also described why there is a ground for diversity in methods for achieving *Pratyāhāra*. We hope that this work can serve as an impetus to the experimental and computational exploration of these hypotheses and advance the interdisciplinary area at the intersection of Yoga and neuroscience.

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9. NOTES

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4. indriyāṇām(of the senses), sva(self) viśaya(object) asaṃprayogaḥ(not coming in contact with), Pātañjala Yoga sūtra 2-54
5. cittasya svarūpa(inherent nature) anukāraḥ(the following of) iva(similar to), Pātañjala Yoga sūtra 2-54
6. tataḥ(Thence follows) paramā(highest / best) vaśyatā(restraint) indriyāṇām(of the senses), Pātañjala Yoga sūtra 2-55
7. yogaḥ citta(mind / mental) vṛtti(activity, form, modification) nirodhaḥ:(restraint), Pātañjala Yoga sūtra 1-2
8. pramāṇam (right cognition), viparyaya (incorrect cognition), vikalpa (imagination), nidrā (sleep), smṛti(recapitulation or memory), Pātañjala Yoga sūtra 1-6
9. ahiṃsā(Non-violence), satyam (Truthfulness), asteyam (abstinence from theft), brahmacarya (restraint of), aparigraha(non-covetousness), Pātañjala Yoga sūtra 2-30
10. śaucam (cleanliness), santoṣa (contentment), tapaḥ(ability to withstand hunger, thirst and extreme opposites like cold, hot. Also purificatory rites), svādhyaḥ (keeping the focus on study of relevant texts, chanting), īśvarapraṇidhāna (dispassionate action, making an extraneous force – God as the motive of all action) 2-32
11. sthira sukhaṃ āsanam, Pātañjala Yoga sutra, 2-46
12. prayatna(effort) śaithilya(loosening or weakening), Pātañjala Yoga sūtra 2-47
13. deśabandhaḥ(fixed to a place) cittasya(of mind) dhāraṇā, Pātañjala Yoga sūtra 3-1
14. tatra pratyaya(mental effort) ekatānatā(single continuous unbroken stream) dhyānam, Pātañjala Yoga sūtra 3-2

15. tadeva (that, same) arthamātra (object only, the light behind it) nirbhāsam (shining) svarūpaśūnyamiva (as if devoid of the seer, or act of seeing) samādhiḥ, Pātañjala Yoga sūtra 3-3
16. Darśana up. 7-1 – 7-9
17. Śāṅḍilya Up. 8-1,2
18. viṣayeṣu vicaratām indriyāṅām balādāharaṇam, Śāṅḍilya Up. 8-1,2
19. sarva viṣaya parānmukhatvam, Śāṅḍilya Up. 8-1,2
20. yadyat paśyati taṣasarvam ātmeti, Śāṅḍilya Up. 8-1,2
21. cintayeta ātmano raśmīn, Amṛtanāda Up. - 5
22. yathā tṛtīya kāletu raviḥ pratyāharet prabhām, Yogacūḍāmaṇi Up.- 121
23. nitya vihita karmaphala tyāga:, Śāṅḍilya Up. 8-1,2
24. nityakarmāṇi brahmārādhana buddhitaḥ kāmyānica tathā kuryāt pratyāhāraḥ sa ucyaate – Darśana Up. 7-4,5
25. prāṅyāma dviṣaṭkena, Yogacūḍāmaṇi Up – 111
26. yogī kumbhakam āsthāya, Yogatattva Up. - 68
27. nāsābhyām vāyumākrṣya niścalaḥ svastikāsaṇaḥ
28. pūrayet anilam vidvān āpādatalamastakam, Darśana Up. 7-10
29. marma sthāneṣu dhāraṇam, Triśikhibrahmaṇa Up. - 129
30. marma sthāneṣu kramāt dhāraṇam pratyāhāraḥ, Śāṅḍilya Up., 8-2
31. sthānāt sthānam samākṣya, Triśikhibrahmaṇa Up. - 129
32. vāyum ākrṣya sthānāt sthānam nirodhayet, Darśana Up. 7-5
33. dṛṣṭi-maṇaḥ-prāṅnān krameṇa āropya tatataḥ pratyāharet, Kṣurikā Up. - 6, Upaniṣadbrahmayogivākyā
34. aṣṭādaśasu marmasthāneṣu, Śāṅḍilya Up., 8-2
35. teṣu kramāt āroha avaroha krameṇa pratyāharet, Śāṅḍilya Up., 8-2
36. Darśana Up. 7-5 to 7-10
37. Kṣurikā Up., 6,7
38. Triśikhibrahmaṇa Up., 129-33
39. pāda aṅguṣṭha gulpha jaṅghā jānu ūru pāyu meḍhra nābhi hṛdaya kaṅṭha kūpa tālu nāsa akṣi bhrūmadhya lalāṭa mūrdhni sthānāni, Śāṅḍilya Up., 8-2
40. Triśikhibrahmaṇa Up., - 132
41. Darśana Up. 8-4
42. Yogatattva Up. 84-104
43. hayarāvalakārākhyam mantram uccārayet kramāt, Darśana up. 8-4
44. Kṣurikā Up. 11-14
45. ‘sahajā’, haṭhayoga pradīpikā 4-4
46. Personal Communications, Late Dr. G.R.Ganesh Rao, Aṣṭāṅgayoga Vijñāna Mandiram
47. Vedāntasammata pratyāhāra, Darśana Up. 7-13,14
48. Vāyudhāraṇātmaka pratyāhāra, Darśana Up. 7-10,11,12

AHAARA VIGNANA and YOGA

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ABSTRACT

Ayurveda emphasizes on nutritious and balanced food. Gut microflora is of utmost importance in the current scenario of obesity centric economy. GYM (Gut Yoga Meditation) is essential for a holistic approach. Health, food and exercise sharing an appropriate balance and slight imbalance in any of them can lead to a disease

In *Ayurveda*, very high importance is placed for nutritious and personalized food. An individual is a unique personification of the microbiome especially in the abdominal region. One must cultivate a large plethora of these beneficial gut microflora and its large species of microorganisms for good health. This is achieved by consuming a variety of foods per day. These foods get converted into good bioactive molecules for better health and sustainable wellness not only for the microbiota but also for the body. In the current scenario of obesity, diabetes, heart diseases, and non-communicable diseases that are rapidly emerging as the major causes of death in most of the obesity centric economies, if one does not give importance to the gut microflora, it has large repercussions on the overall health of the individual and the society. Despite modern scientific advancement, this subject is least understood. But we know the cause and effects as to what to eat and how it will help the body to be healthy.

There should be a sustained consumption as well as a clean, hygienic, and safe food that is desirable beyond nutrition and beyond proteins, carbohydrates, and fats. This is perhaps what we call as *Sampoorna Ahaara*. If one looks at *Ahaara* what one sees is the abundance of literature which is so voluminous, in Science, the tradition, variety and combination of the same and to comprehend all of it is not possible to even summarise within this article. These days people talk about GYM! This according to me is not Gymnastics! G stands for Gut, Y stands for Yoga and M stands for Meditation perhaps. So there is the importance of Gut and YOGA and Meditation all working hand in hand for a holistic approach. People may perform and cultivate these in many different ways, but the fundamental aspect is Food and Exercise for the body and mind is the most important point one, that one has to remember. Through the approach of deconstructing molecular gastronomy and nurturing our genes by well-documented plant-based foods, one can transform and transcend to a delayed onset of certain diseases thus improving the Quality of Life.

The implementation of Food and exercise perhaps through YOGA and evidenced-based traditional foods and understanding them on the platform of physiology appears to be lacking in our system. This is where the right intake

of the combination of Food is very important for a Yoga Practitioner. Scientific Institutions must focus on these aspects and work towards creating evidence for the cause and effect of each food we eat, digest, complete absorption and the benefit one receives with or without exercise. This data is very vital to Modern tools. Evidence-based science on the well-known holistic approach of the Integrated Indian Medicinal System followed much earlier in India and practices spanning and documented are well over 6000 years! We need to use it to our advantage, it is very similar to Yoga, which is India Centric, Food, especially Traditional and Ethnic food practices and wisdom are equally important and India can be a hub and spoke model with YOGA and FOOD at its center of Cultural diversity. It has and can attract the whole world for a healthy lifestyle approach especially in the current pandemic where Immunity plays a major role.

Very similar to Yoga which needs to be learnt from a proper Guru with the correct postures and breathing systems in place, so also a Yogi needs to comply with many qualities and some characteristics of food. One has to keep in mind Food has to be: Swaccha(clean), Shamshuddha(pure), Suraksha(Safe),

Swaadishta (tasty). Saatwika (virtuous), Sumanaka (well balanced), Sanskarita (well cooked and garnished), Supachya (easy to digest), Swarasya (interesting), Sukaramika (in the right sequence), Swasthya(Healthy), and may other attributes can be added but ultimately has to be Sampurna(Complete and Wholesome).

Thus the relationship between health, food, and exercise is that of a balancing act and a slight imbalance

in it can tilt the balance towards a disease which is avoidable if one practices the right YOGA, eats good food with some of the above characteristics mentioned and maintains good mental health as per their practice, a good Healthy life will continue to be blessed to all.

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