CHAPTER 1

INTRODUCTION

\[ \text{yukata ahaara vihaarasya. yukta cheshtasya karmasu.} \]
\[ \text{yukta swapnaawa abodhasya. yogo bhawati dukkha haa} \]

When one is mindful in eating and in recreation, mindful in speech and actions, and mindful with sleep and when awake, then yoga becomes the destroyer of suffering. \textit{atma samyama yoga}, Bhagavad Gita, Chapter 6, Verse 17

1.1 The Universality of Suffering

(Kapur 2009, Radhakrishnan 2009)

Suffering is universal. From time immemorial humans have enquired into the phenomena of pain and suffering. Seeing of suffering in others arouses compassion. Compassion motivates efforts towards finding the means to reduce suffering. So, over the ages philosophy and science have endeavoured to understand and interpret the human condition of suffering and develop means of alleviating suffering. We can trace the evolution of medicine to this endeavour of seeking means to alleviate suffering. Aristotle, the Ancient Greek Philosopher and Scientist (384 – 322 BCE), and teacher of Alexander the Great had said that suffering became beautiful when anyone bore great calamities with cheerfulness, not through insensibility, but through great equanimity of the mind. Goutama Buddha, in 500 BCE, who laid the foundation for the Buddhist tradition, propounded in his Four Noble Truths (\textit{chattiri arya sacchaani}), suffering, its causes, means of alleviation and the methods, which form the bedrock of the Buddhist philosophy. In much more ancient times, the \textit{sankhya darshana}, a philosophical school of the Vedic tradition begins with this very inquiry into suffering and the means of diminishing it. The \textit{yoga darshana} or Yoga philosophical school is a further extension of \textit{sankhya} and a practical means to this end.
With the development and establishment of science and more particularly medicine, suffering continued to be a core subject of study and discourse. Presently when pain and suffering are studied and discussed in modern medicine, it is within the scientific framework of the interdisciplinary speciality of medical neuroscience.

In the ancient Vedic Indian tradition, we see the subject of suffering, disease, health and healing being dealt with in much detail in the atharvana veda or atharva veda. This is the last of the four Vedas. The other three are the Rig Veda, the most ancient, the yajur veda and the sama veda. The rig veda also contains early considerations of suffering, health and healing. So, also the yajur and sama vedas to varying extents.

1.2 The Vedic Wisdom Tradition
(Kashalkar 2013, Radhakrishnan 2009, Ramteke 2015)

The Vedas are the most ancient scriptures ever known to civilization and dates back at least to over circa 10000 BCE. Some Indic scholars date it even further back to the glacial ice age which is over a 100,000 years ago. It is an oral tradition being transmitted continuously to this day through systematic memorization following strict rules through the guru-shishya parampara or traditional teacher-student heritage. The authorship of the Vedas is unknown. It is said to be of divine origin. They are said to have been revealed to the maha-rishis or great sages of ancient times.

The Vedas are divided into four major shakas: rig veda, yajur veda, sama veda and atharvana veda. Each shaka is further divided into samhita, brahmana, aranyaka and upanishad. Yoga as a means of emancipation and self-realization have been dealt with in all the divisions and sub-divisions of the Vedas. This goes to indicate that the concept of Yoga itself is of great antiquity. In fact, there are relics and artefacts in the form of seals and plaques from the archaeological excavations from Mohenjodaro and Harappa of the Indus Valley civilization depicting human figures in yoga asana and dhyana mudra or yogic meditation posture, dating back to 5000 BCE.
1.3 The guru-shishya Tradition of Wisdom Transmission
(Kashalkar 2013, Radhakrishnan 2009, Ramteke 2015)

The Vedic tradition of education is called the guru-shishya parampara. The selfless guru or wise teacher, is deemed a person of high wisdom who teaches the skills of living and imparts knowledge to the shishya or diligent student. The shishya diligently learns the discipline and practices the skills and assimilates the knowledge. He or she then becomes empowered to serve society and in turn assumes the role of the guru after having gained enough experience and wisdom. A good guru, who would be widely sought after, would have gone through adverse life experiences or suffering and attained a degree of resilience, mastered the art of wise living and therefore would be in a suitable position to impart the discipline, art and life skills to others.

Guru is therefore the scholar teacher who is also called an acharya or a wise noble person and preceptor. shishya is the discerning pupil and also called an adhyayanin or diligent student. The transmission of the knowledge and skills traditionally is called upadesha. This means teaching through close proximity. The shishya becomes close to the guru in a relationship based on mutual trust and unconditional positive regard towards each other. This provided a healthy and harmonious atmosphere for real learning to happen.

This teaching and learning happened in the gurukula or the homely environment of the guru. Through this tradition the vedas, upanishads, puranas, and darshanas and the shastras including the Yoga Shastra, were transmitted from generation to generation through the lineage of the maha-rishis or great sages who had initially developed the concepts through having faced hardships and suffering, right living, service, selfless sacrifice, rigorous penance, contemplation, spiritual living, self-realization, great compassion and divine inspiration.

1.4 Sanskrit as the Means of Transmission of Wisdom and Yoga Tradition
(Kapur 2009, Radhakrishnan 2009)
The ancient Vedic teachings are in the Sanskrit language. Sanskrit is an ancient language belonging to the Indo-European family of languages. Several of the modern languages of India and also Europe have their roots in ancient Sanskrit. Sanskrit has strict rules of grammar. The rules of grammar were codified by Panini and refined by Patanjali. Rules also exist for pronunciation of the sounds and the specific meters of phrases and sentences. These teachings are in the form of mantras and shlokas, with prosody, melody and rhythm. The chanting of these were considered important as they were seen as important and powerful instruments of positive and healing energy. Through the uninterrupted lineage of the guru-shishya paramparā, these were carefully preserved and meticulously transmitted.

In the later ages, with the development of writing, these ancient teachings in the form of scriptures were inscribed into stone tablets and also incorporated into temple architecture where much learning happened. The ancient written script is called the Devanagari, which means ‘of the abode of the Gods’. Much later they were written down on palm leaves using a quill as a pen and soot as ink. This not only helped preserve but also helped the movement and propagation of these ancient works far and wide.

Over the ages with the movement of people across the globe, other cultures became interested and several scholars learnt Sanskrit and translated the Vedas into their own languages. Chinese, Arab and Greek travellers who braved the journey to India were amazed at the highly developed and insightful ideas of these scriptures and the way they were transmitted. We can discern from the writings of these ancient travellers, an advanced system of University education prevalent in India in those ancient times. The Nalanda University, Takshasheela University, Kalinga University rapidly became world renowned centres of excellence and attracted students from all over the globe. They became centres of excellence in a wide array of subjects like philosophy, astronomy, commerce, science, art, medicine, etc. In the ancient times there was good trade and educational links between India and the Middle East, Far East and Europe.
1.5 The Invasions of India and the Vedic Civilization
(Kapur 2010, Keay 2011, Radhakrishnan 2009)

The Vedic civilization of the Indian sub-continent has been subject to land invasion and colonization from very early times. The Greeks, led by Alexander the Great, crossed the Sindhu River in 327 BCE but faced stiff resistance from Purushottama or Porus of the Pourava dynasty who ruled the land presently known as Punjab. The invasion was cut short, though Alexander won the battle, as the armies succumbed to the vagaries of war and the environment. From around 600 CE, there were Arab invasions. From about the 10th Century Moghuls, invaded and dominated the land and culture of the Indian Subcontinent. The Sanskrit works were translated into Persian and Arabic. Some of the rulers of the invading people tried to forcefully obliterate the prevailing culture and thrust their own beliefs and culture so as to weaken the population and dominate them. But the core traditions and Sanskrit work somehow survived though several works have been lost to eternity.

Later with the coming of the Europeans, starting with the Portuguese, followed by the Dutch, French and the English the ancient knowledge of the scriptures became better known in Europe. Here the first translations into European languages happened. Max Muller was a German philologist and professor of Indian Studies at Oxford University, England. He was considered the foremost expert and commentator on Indian culture in the West during his time. He was a Sanskrit Scholar and translated many Indian works including the Vedas in the mid-1800s and early 1900s. There are criticisms of his works. It is argued by some that it is biased and not very scholarly. But this kindled the interest of other European scholars who took up more rigorous studies of the Sanskrit language and the Vedic literature.

With growing curiosity of the orient and intrigue and interest in Sanskrit works, they were translated into several European languages including English. Serious research work ensued. Several reputed scholars did deep study and made authoritative translations and commentaries. As a result of the
geopolitical situation of the time with colonial ambitions of the Western political class, of course many works also emerged by vested interests to discredit and distort these Sanskrit Vedic works in connivance with some unscrupulous indigenous ‘scholars’. This was a ploy adopted by certain political and ruling colonizing powers wanting to dominate on and subjugate the indigenous populations and eradicate the established culture so as to weaken the population and impose their authority. The best way to do that was to discredit the prevailing culture, knowledge and traditions of the indigenous populations, create confusion and divide the society and prevailing social order, perpetuating conflicts among various sects and denominations. Then it would be easy for the invading colonizers to incorporate their doctored concepts making the indigenous people feel inferior and ashamed of their own culture and wanting to pursue the projected superior foreign culture which was made a costly, futile and disempowering exercise. This caused further division, mistrust, conflict and disillusionment in society. This led to the neglect, disregard and isolation of the scriptural works, Vedic traditional education and the Sanskrit language itself from the mainstream education system of the country, which was replaced by a Westernized and biased system convenient and subservient to the ruling colonial masters.

1.6 The Revival of Vedic Tradition and Culture
(Keay 2011, Radhakrishnan 2009)

During the independence movement there was a renaissance of culture. Great leaders like Swami Vivekananda, Sri Aurobindo, Swami Sivananda, Swami Dayanand Sarasvati, Raja Ram Mohan Roy, Rabindranath Tagore, Mahatma Gandhi and many others worked to revive the traditions, demonstrate their true merits and reconnect the masses with their ancient and noble roots during the long struggle for independence. This was met with opposition from the ruling colonisers who tried to suppress these movements. But the high spiritual ideals inherent in this tradition has allowed this to survive, thrive and prevail. Unfortunately there are forces still at work to undermine, distort and discredit this cultural treasure of India by devious means to pursue their own selfish vested interests for power and pleasure. Therefore the struggle continues.
Fortunately these great works have stood the test of time. The traditions still continue in certain families and communities throughout India and especially in some families and communities in South India through hereditary transmission. This has allowed further exploration and research by scholars with Westernized modern education. Genuine and sincere scholars both from the West and from India, inspired by the great works themselves and motivated by selfless and utilitarian intentions have strived to preserve the works against severe odds and have thus shown the true and noble ideas revealed in these works. Now several English translations are available both by Western English language Indology scholars and indigenous scholars well versed in both languages. This has made these ancient and great works more accessible to the vast number of people in India and the West who have received modern education mainly in the English language.

In recent times we see a renewed interest, confidence and pride in our own ancient heritage among modern Indians especially so in the younger generation. So much so that there is now a growing interest among the youth to learn the Sanskrit language so as to experience the beauty and depth of these great and ancient works. It is also noteworthy that even people from other cultures of the world are showing interest in studying these ancient Indian systems. Departments of Indology and Sanskrit Studies have been established in major Western universities. These institutions are reporting an increasing number of students showing interest and enrolling into the courses offered by these departments.

There are mainstream primary and secondary schools in USA and Europe where Sanskrit language and literature are being taught to children. It is noteworthy that recent studies have reported that children exposed to Sanskrit language and literature have apparently shown improved scholastic and numerical abilities. Sanskrit is also studied for its potential application in modern computer science. The vast body of ancient Sanskrit works cover several varied and unconventional professional subjects like astronomy, atomic science, weapon science, aeronautic science, agricultural science, political science, etc.
There is therefore a resurgence of interest in Sanskrit language and ancient Sanskrit literature of the Vedic era.

1.7 Ayurveda the Science of Life
(AYUSH 2016, Chattopadhyay 2007)

From the Vedas, developed the Indian ancient system of medical science called Ayurveda or the Science of Life. Ayurveda has been accepted as the oldest known medical system of more than 5000 years old. Detailed descriptions of the human system, pathology, diseases, their treatment and prevention and detailed descriptions of remedies are given in treatises called samhitas. The oldest thorough work in Internal Medicine available is called the Charaka Samhita by Maharishi Charaka. The work on Surgery is dealt with in the Sushruta Samhita by Maharishi Sushruta. The interesting aspect of the development of the ancient Ayurveda system of medicine is that the thread of yoga and its philosophy is incorporated within it. What is intriguing is that there are tracts of concepts very similar to the Patanjali Yoga Sutras in the Charaka Samhita, the oldest work in Ayurveda. The Charaka Samhita itself is a development of the concepts dealt with in the atharvana veda. The still earlier work of the rig veda also contains the beginnings of healing practices and yoga. In the Indian spiritual philosophical tradition we see that the ancient science of medicine has evolved with the purpose of looking at suffering closely and systematically in the context of health and developing means of restoring and enhancing health and thereby alleviating suffering.

The modern system of medicine appears to have evolved also with the same basic principle of alleviation of suffering and promotion of well-being. There is an argument that there was free exchange of knowledge across the globe during ancient times and many of the concepts of Ayurveda were incorporated into early Western medicine by the Greeks and Romans. For example, the concept of Humours in ancient Western medicine postulated that imbalances in the four humours led to diseases and so treatments involved restoring the balance. This is very similar to the concept of doshas in Ayurveda. In the tridosha system, three doshas are postulated to be occurring in the human
body-mind system called *vata*, *pitta* and *khapa*. Imbalance in the *doshas* is considered as the cause for diseases and methods are recommended to first diagnose and then restore the balance. Yoga as such does not find mention in ancient Western medicine.

Meditation, a concept central to yoga, is prevalent as a practice more as part of philosophy and as an old religious practice in the West. It is only very recently that we find Yoga increasingly accepted into mainstream medicine as a valid therapeutic concept. Yoga is offered as therapy in itself or as a complement to other interventions in several mainstream and university hospitals in the West. This is a direct outcome of increasing awareness and spread of yoga in the West in the late 1960s and early 1970s followed by clinical scientists taking interest leading to many good research studies in prestigious academic medical institutions and universities in the United States and Europe.

### 1.8 The Yoga Tradition and Practice

(AYUSH 2016, Prabhavananda & Isherwood 2008, Radhakrishnan 2009)

Yoga is derived from the root ‘yuj’ in Sanskrit which means coming together, or joining or to harness or yoke. It means integration or union as applied to the practice of yoga leading to the coming together of mind, body and soul. It is also used in its spiritual meaning of union of the ordinary self with the divine self. Yoga has a positive connotation and denotes something auspicious or something that will cause or bring together things leading to goodness. Yoga has been used in the Vedas, Upanishads, Shastras, Darshanas and Purana literature of India.

There are broad definitions and there are specific definitions of yoga. Patanjali in his first sutra describes yoga as the stopping of the cycle of conditioning of consciousness. Yoga is equal to samadhi or equanimity or absorption as per the yoga sutra and as defined in the ancient interpretative commentaries. Yoga is also defined in several ways in the Bhagavad Gita, considered another classical scriptural treatise on traditional yoga. Yoga is defined in the Bhagavad Gita as, *samatvam yoga ucchyate*, equanimity is called yoga. It also defines
yoga as, *yoga karmasu kaushalam*, yoga is skill or efficiency in action and *yogo bhavati dukkha haa*, yoga becomes the destroyer of suffering.

The yoga tradition is traditionally considered as eternal. Descriptions are seen in the earliest Sanskrit literature, the *Rig Veda*. The Vedas and Upanishads proclaim yoga as originating from Hiranyagarbha, the ancient luminous womb of the universe from which everything has originated. The Yoga Sutra of Patanjali itself attributes the yoga teaching to Ishvara, the guru in the beginning of time. The *Mundaka Upanishad* describes *yoga vidya* or the knowledge of yoga, as *brahma vidya*, or knowledge of *brahman* or ultimate reality. The lineage of transmission starts with Atharva, eldest son of Brahma, who passed it on to Angirasa. Angirasa taught it to Bharadwaja who in turn taught it to Satyavaha and thus the tradition has been passed on. This tradition is called the *rishikarampara*. Different traditions that originated in ancient India adapted and incorporated the yoga tradition into their own which include the siddha, Bouddha, Jaina, etc.

Different paths of yoga are recognized which have gained importance from ancient times as per the predominant orientation of a person practicing or taking up the path of yoga. The prominent paths are:

1. Jnana Yoga
2. Karma Yoga
3. Bhakti Yoga
4. Raja Yoga
5. Hatha Yoga
6. Mantra Yoga
7. Laya Yoga
8. Sanyasa Yoga

The *Bhagavad Gita*, which is a part of the great epic Mahabharata, is considered as a classical text of yoga. Several of the paths delineated above are described in this text.
Jnana yoga is the yoga path of knowledge. Karma Yoga is the path of deed or action. Bhakti Yoga is the emotional path of intense devotion or love of divinity. Raja Yoga or the sovereign yoga is also described in the Gita, but Swami Vivekananda describes it as the yoga as given in the Patanjali Yoga Sutras. Hatha yoga is the cultural yoga of the naatha sampradaya or Nath tradition, to which the present day popular practice of asana and pranayama are derived from. Mantra yoga is the yoga of chanting or specific formulaic Slokas or hymns. Laya yoga is the yoga of music and Sanyasa yoga is the yoga of renunciation of the material world.

In ancient Indian culture, a person was free to choose the path that his or her temperament, personality and predisposition was suited to and the mind was inclined towards. The classical yoga texts and other subsequent texts were used as manuals and the paths were taught in the different schools of Vedic culture in the gurukulas and the tradition was maintained and transmitted through the guru-shishya parampara.

1.9 Maharishi Patanjali and the Yoga Sutras

The Patanjali Yoga Sutras is an ancient and classical Indian treatise on Yoga. It is in the Sanskrit language. It is a highly regarded and respected text not only by traditional followers and students of Indian philosophy but also modern scholars and practitioners of yoga. The author is Maharishi Patanjali. Not much is known about Patanjali. He is sometimes referred to as Goniputra or Son of Gonika (the name of his mother). Some legends attribute Patanjali as a divine incarnation. He is considered as an Avatar of Adishesha or the thousand-headed serpent God on which Lord Vishnu or Narayana is depicted as resting in yoga nidra or yogic sleep posture.

Patanjali is more generally considered as a wise sage who contributed greatly to yoga, medicine and grammar. He is considered as a compiler and composer of the Yoga Sutras, organizing the science and art of Yoga that was already known and prevalent during that time. The generally accepted time of Patanjali
is between 500 and 250 BCE. Some sources pre-date this to 1500 BCE and some post-date it to 100 CE.

The Yoga Sutras, at least in part if not in its whole purpose, approaches the phenomenology of suffering by means of philosophical enquiry and with a scientific rational approach. The work is in Sanskrit prose form consisting of brief statements or aphorisms. *Sutra* means thread in Sanskrit. *Sutra* prose tradition developed to preserve and teach the concepts at a time when writing had not developed. The *Sutra* contains the core definition and concept and hence is very brief and precise. The Sutras rendered whole scriptures to be learnt by heart and memorised.

The sutras would be learnt by heart through rote learning and memorized by the pupils in the school or *gurukula* as a group exercise. *Gurukula* means belonging to the Guru or related to the guru. The guru would initially make the students learn the texts by vocal group recitation and memorization. Then he/she would expound, elaborate, and explain them and further facilitate healthy discussion and debate and practically live the philosophy and practice the tenets so as to know and experience the truth of the ideas and concepts together in the social community of the *gurukula*. Thus the *gurukula* system of teaching and learning facilitated the nurturing and flourishing of ideas and individuals.

### 1.10 Darshana Traditions of Indian Philosophical Wisdom
(Radhakrishnan 2009)

Patanjali Yoga Sutras follows in the tradition of the *darshana* or philosophy. The Yoga philosophy itself forms one of the six great philosophical schools of Indian culture and is called the *yoga darshana*. The other schools of Indian philosophy are *nyaya darshana*, *vaisheshika darshana*, *sankhya darshana*, *mimamsa darshana* (also called *purva mimamsa*) and *vedanta darshana* (sometimes called *uttara mimamsa*). These traditions are together known as the *shaddarshanas* or six philosophical traditions of the Indian Vedic culture. Each tradition has developed and evolved through the ages through the critical
thinking and wisdom of several great rishis. But the works that are available to us as Sutras have been attributed to a specific ancient sages or rishis. The *nyaya darshana* is attributed to Maharishi (great sage) Goutama. The *vaishshika darshana* is attributed to Maharishi Kanada. The *sankhya darshana* is attributed to Maharishi Kapila. The *yoga darshana* is attributed to Maharishi Patanjali. The *vimamsa darshana* is attributed to Maharishi Jaimini and the *vedanta darshana* is attributed to Maharishi Badarayana Vyasa. These *darshanas* are also referred to as *shastras* or disciplines or bodies of divine knowledge. The Yoga treatise is also called *yoga shastra* or yoga discipline or Yoga Science or the divine knowledge of Yoga. The *yoga shastra* like all other *shastras*, required the student to show earnestness, dedication, rigorous effort and disciplined practice to learn and master the *shastra*. Once a high level of mastery was achieved, the practitioner would be deemed to have become a Shastri or expert in the discipline. Such a person would be deemed a wise person fit to profess the knowledge.

These ancient philosophical traditions are also called wisdom traditions. They are called so as they have developed through long contemplation, experience and philosophical inquiry by great spiritual masters or the Maharishis (great sages). In Indian culture there is great reverence to the wisdom traditions as they are associated with basic truths about life. Those who have studied and mastered these scriptures are venerated by society. They are called *paramacharyas* or preceptors or teachers of high wisdom whose lineages have continued to this day. For example, Adi Shankaracharya is a *paramacharya* of the *advaita vedanta* tradition whose guru-*parampara* lineage continues to this day in the form of established institutions by him called the Shankara Mutts all over India. Ramanujacharya is a paramacharya of the *visishtadvaita vedanta* and Madhvacharya is a *paramacharya* of the *dvaita vedanta* tradition. These teachers had established schools to propagate their teachings. The wise counsel of the acharyas had been sought after and treasured by society through the ages. Continuation of the schools’ lineage was ensured by a system of discipleship and grooming in the broad Vedic and also particular tradition of the *paramacharya*. This ensured continuation and transmission of the wisdom tradition to the succeeding generations.
1.11 The Science of Wisdom
(Baltes et al 200, Jeste et al 2010, Jeste & Vahia 2008, Saunders 2013)

In more recent times, wisdom has become an important concept in psychology and neuroscience. It has the potential for practical application in understanding human nature and also as a means of therapeutic intervention for holistic health and well-being. Wisdom is seen as something good and a skill that can be acquired and cultivated. It is seen as being useful for the good of oneself and the society at large. Modern wisdom researchers have even gone on to term wisdom as the pinnacle of human achievements. The acknowledgement of uncertainty and adaptability in the wake of adversity are the core paradigms of wisdom in the modern scientific theories of wisdom. Wisdom is said to be gained as a person matures. A wise person is typically seen as an elderly person. But this need not be always so. In the literature of India like the Panchatantra, Hitopadesha and Buddha Jataka, we see youth, young children and even animals possessing and professing wisdom. But age does improve certain higher cognitive functions. Experience makes a person more emotionally self-regulated, more rational in making decisions and think more creatively. They may be more conscientious, reliable, hard-working and collegial with others. The brain and nervous system remains flexible and mouldable throughout life. This ability is called neuroplasticity. The last 20 years has seen a revolution in the study of neuroplasticity. The brain can modify and adapt to a great degree through neuroplasticity enhancing a person's higher mental abilities and therefore, wisdom.

As per the modern scientific theories, wisdom is a multidimensional concept. It is a complex of human traits with a set of components. We can identify ten components which are seen to be commonly recurring. These are: (1) rich knowledge of life (2) good emotional regulation (3) being insightful (4) good social decision making ability (5) contributing to the common good (6) tolerance towards different values (7) openness to ideas (8) decisiveness (9) refined humour and (10) spirituality. A person possessed of wisdom is seen as one who is not only able to think wisely but also act wisely.
1.12 Wisdom Tradition of the Vedic Culture
(Kapur 2010, Radhakrishnan 2009)

In the Indian Vedic cultural context, this ability where a person’s thinking, speech and actions are in sync or in harmony is highly regarded as a virtue worthy of cultivating. In traditional families, individuals from a very young age, who are initiated into the Vedic lifestyle through a ceremony called *upanayanam* or *brahmopadesham*, are taught and are reminded of this value through ritualistic chanting of certain Sanskrit mantras during the daily ritualistic morning and evening prayers called *sandhya vandana*. The *sandhya vandana* is practiced along with *surya namaskara* (set of simple Hatha Yoga Asana practice), Pranayama (breath work) and Dhyana (meditation) followed by *upasana* (a form of meditation upon a deity’s auspicious characteristics and qualities) and *havana* or *agnihotra homa* or *yajna* (purification and harmonization of the environment) and *bhagavad aradhanam* or deity worship, *bhagavad samkeertanam* (singing divine hymns) and *bhagavad prasadam* (offering and receiving of satvic food stuff as a form of devotion and gratitude). These are performed at sunrise and sunset. Some traditions may also perform at midday called *Madhyannikam*. It is the traditional belief that when these are practiced carefully there is a synchronization of thinking, speech and actions leading to equanimity, integrity, flexibility and flow of mind-body-spirit and empowering the practitioner thus enabling them to lead a wise life in harmony with the environment. This is valued as the art of living in wisdom. This was highly desired by the people of the Vedic tradition. It was considered as a life of integrity. In many of the ancient Sanskrit works by Vedic philosophers, we find that the whole art of living in wisdom and integrity is referred to as Yoga.

1.13 Wisdom in Modern Medicine and Therapy

The scientific study of wisdom has been undertaken in recent times by clinical neuroscientists in the modern Western tradition. This has found the potential for practical application in psychotherapy. Therapy is usually administered to
someone in need of help and who is suffering due to disorder or impairment in their physical or mental condition. Therapy can be seen not only as a method of restoration and rehabilitation of function and wellness but also a method of empowerment of the individual. Broadly, we can understand psychotherapy as a mode of facilitating improved awareness, emotional regulation, insight and improved problem solving skills. We can thus see clearly that some of the components of wisdom are in common with the therapeutic outcomes of psychotherapy.

The concept of wisdom as a life enhancing and empowering capacity that is worthy of human pursuit and a quality worth cultivating are themes that run throughout the ancient Indian philosophical traditions. This is exemplified not only in the ancient Vedas but also later works of the Darshanas, Upanishads and the great epics of Ramayana and Mahabharata. More practically the wisdom method is discussed in the Bhagavad Gita, a part of the Mahabharata, a classical work on Yoga and also considered a religious holy scripture in the Hindu religion. But the work itself deals with issues that are pertinent and applicable to all and has a secular and universal appeal. We will see how Yoga belongs to this ancient wisdom tradition.

1.14 Sankhya Tradition of Mindful Analytic Reasoning
(Radhakrishnan 2009, Ramanujapuram 2017)

The sankhya darshana provides a base on which the concept of yoga has been developed. sankhya darshana in its presently available version in Sanskrit was authored by Ishwara Krishna. The concept is attributed to a more ancient sage, Maharishi Kapila. We find that the concept of Sankhya is also dealt with in the Bhagavad Gita in the second chapter and is called sankhya yoga. Sankhya has different meanings in Sanskrit and stands for numerical, calculation, analysis, logic or reasoning. Sankhya Yoga can be defined as Mindful Analytic Reasoning.

Analytic reasoning is a philosophical concept and is also a mental faculty or ability of problem solving most well developed in human beings. Analytic
reasoning is of two types: The first type is instantaneous and is instinctive, reactive, associative and defensive. It is protective and survival motivated. The second type is slower, intuitive, more sophisticated and based on knowledge, experience, awareness and analysis. There is a higher cognitive process of reasoning with due diligence of weighing the pros and cons of various alternative solutions to a problem and choosing the most effective one. This can be seen as a process of wise decision making. The process of acquiring the ability of mindful analytical reasoning is brought out well in the Sankhya Yoga, which forms chapter two of the Bhagavad Gita.

The Bhagavad Gita is part of the Mahabharata, the epic scripture. Even though it is seen as a sacred scripture of the Hindu religion, secular scholars also accept it as a manual of practical philosophy and wise living. In the chapter on Sankhya Yoga, the discourse is a compassionate and kind process of correction of faulty logic and facilitation of self-awareness leading to self-understanding and moving towards self-management thus laying the foundation for wisdom. This process can be best described as mindful analytical reasoning.

1.15 Mindfulness and Mindfulness Practice

Mindfulness is a concept that is again gaining currency in recent times as a powerful therapeutic tool. Mindfulness is being aware. It is the capacity of being in the present from moment to moment. It is the skill of paying attention to thoughts, emotions, impulses and sensations of each passing moment with a non-judgemental and non-reactive attitude. It is a practice of bringing into focus a wandering attention of the mind repeatedly so as to produce greater awareness. Scientifically, this has been seen to bring about positive changes in emotional regulation and behaviour in the person practicing the skill.

Neurological imaging studies have shown positive changes in brain circuitry with enhanced activation of prefrontal cortex, insula and cingulate cortex that
underlie sustained attention and the direct experience network and at the same time reducing the activity of the limbic circuits associated with stress, alarm reactivity and impulsivity in persons practicing mindfulness techniques. This would behaviourally translate to greater presence of mind and better decision making ability. The brain changes are observed due to the phenomenon of neuroplasticity. Neuroplasticity is the ability of the brain and its circuitry to change their structure and functions. In a positive context, it is their ability to form new nerve cells, adapt, renew and rewire even after trauma or disorder and compensate for impairments and disabilities. Conscious and deliberate mental efforts, choices a person makes and mental practices, which can all be processes of mindfulness, can also remodel the brain and enhance its capacity and functions.

Mindfulness has origins in the ancient spiritual traditions and practices of India. This is central to certain forms of meditation. It is commonly referred to in the Vedic literature. But in the form that is at present being studied, is derived from Buddhist practice of Vipassana. This has been subject to intensive scientific studies in recent times and is seen as a valid concept for therapeutic intervention in several physical and mental conditions. It is deemed to be a higher neurocognitive process. By adding mindfulness to analytic reasoning, the process becomes more effective. This is what appears to be conducive to a truly wise decision making. Mindful Analytic Reasoning or sankhya yoga can be seen as the foundation of wisdom. The philosophy of sankhya runs throughout the Yoga Sutras of Patanjali and forms its foundation.

1.16 The Wisdom of Patanjali Yoga Sutras

The antiquity of the Yoga Sutras of Patanjali is well established among the spiritual and philosophical traditions of India. The work comprising of four chapters are in the form of 196 brief aphorisms (Sutras). Because of the brevity and abstract nature of the aphorisms, several later scholars have written commentaries, interpretations and explanations to give meaning and currency
to the work. This is very similar to the hermeneutic analysis of more recent qualitative research.

One of the ancient and authoritative commentator on the Yoga Sutras is Maharishi Veda Vyasa whose commentary or bhāṣya is in the Sanskrit language. This has formed the basis of the works of subsequent scholars. In the 11th Century, scholar and king, Raja Bhoja, has commented on the Yoga Sutras in Sanskrit. Two other ancient commentators are Vijnana Bhikshu and Vachaspati Mishra. In the more recent past, great spiritual leaders like Swami Vivekananda and Swami Sivananda have written commentaries in English which have made the work more widely accessible to people with modern education and not familiar with Sanskrit. There are several other Indian and Western scholars who have written commentaries in English and other European languages. In India, more recently, a commentary by late Shri Yogendraji, founder of The Yoga Institute, Mumbai, is widely referred to by many yoga students. Most recently we have a translation with commentaries in English by world renowned Yoga guru late Sri B. K. S. Iyengar.

1.17 Patanjali and Yoga in the Modern World
(AYUSH 2016)

It is significant to note that in recent times, Yoga as a health enhancing system and particularly its association with Patanjali, has become household knowledge among the common people of India and also overseas. Most notable is the mass popularization of Yoga and the name of Patanjali through the efforts of popular Yoga Guru Swami Ramdev of Patanjali Yogpeeth, Haridwar, India. He is credited with making yoga and Patanjali household names. His free yoga camps and daily live classes on a dedicated television channel have been instrumental in this spread of awareness. The organization is active in researching, promoting and spreading Ayurveda, Yoga and national pride in a big way. They have taken up research in yoga in a big way with development of modern infrastructure and technology rich facility. The name Patanjali has also been used as a brand name promoted by Swami Ramdev which is becoming increasingly popular. His organization is engaged in
manufacturing various high quality and reasonably priced household products as a not for profit industry encouraging the concept of swadeshi or self-sufficiency and self-reliance on Indian made goods for the progress of India. As a direct result of this, Yoga and Patanjali are fast becoming brand icons of India in the world today.

Yoga has also become synonymous with Indian cultural heritage and a whole tourism industry has developed with this concept. Several people from other cultures living in various other countries come to India in large numbers to experience and learn Yoga at the place of its origin. Many also come to learn the traditional and classical philosophies especially the Yoga Sutras of Patanjali and the Hatha Yoga tradition.

1.18 Hatha Yoga and the Spread of Yoga in the West
(AYUSH 2016)

The most popular form of yoga is the Hatha Yoga practice of the natha sampradaya or the Nath tradition which has Adi yogi Shiva as the originator and the lineage of Matsyendra Nath, Ghoraksha Nath, up to Swatmarama of the 17th Century. The popularity of Hatha Yoga comes from the fascination with physical culture in the West. Hatha yoga was popularized in the West when it was first exposed to the West in the 1920s with the visit of Sri Yogendraji of The Yoga Institute, Mumbai, to USA. Later, during the same time, yoga grew in popularity with Paramhansa Yogananda settling in the USA and the publication of his bestselling book ‘Autobiography of a Yogi’. In the 1960s Maharshi Mahesh Yogi established his Vedic based teaching in the USA and popularized Transcendental Meditation (TM). Sri Krishnamacharya of Mysore is another great proponent of Hatha Yoga during the time of the immediate pre-independence of India and was the teacher to the Maharaja of the erstwhile Mysore state (now Karnataka). His tradition of yoga are even today popular in the West. His students who are well regarded are his son Sri T. V. Deshikachar, Sri Patthabi Jois, and Sri B. K. S. Iyengar of the Iyengar Yoga fame. Mindfulness Meditation is now gaining grounds and is a concept from Buddhist
tradition popularised by the Dalai Lama by collaborating with Western neuroscientists.

Presently different forms and traditions of Hatha Yoga have developed and become popular. The recent rejuvenation of yoga has taken on a world movement with the Indian representation led by Shri Narendra Modi, Honourable Prime Minister of India who have been able to lobby the United Nations (UN) to declare 21st June as World Yoga Day from the year 2015, to be celebrated each year throughout the world with public mass yoga programs. This has witnessed tremendous response worldwide so far by all nations of the world irrespective of their cultural and religious orientations. In the most recent 2017 World Yoga Day some 200 countries participated. A record number of people took part from even countries who are ordinarily assumed as not welcoming of yoga like Pakistan, Syria, and other Arab countries.

1.19 The Hermeneutic Philosophical Tradition in India
(Preisendanz 2009, Radhakrishnan 2009)

The tradition of systematic inquiry into philosophical truths and interpretation of scriptural treatises have been part of our Indian culture from antiquity. The paramacharyas, great Spiritual Gurus and philosophers of India like Sri Shankaracharya, Sri Ramanujacharya and Sri Madhvacharya have produced monumental works that form the backbone of Indian philosophical systems using the process of systematic interpretation, analysis of meaning, commentary and exegesis. Their works are called bhashyas and hence they are sometimes referred to as bhashyakaras or authors of bhashyas. The bhashyas are analysis, elaboration, interpretation and commentaries on the Sutra scriptures which are in the form of brief and axiomatic aphorisms.

The Sutras are terse and sometimes cryptic. They are seen as formulae which have great meaning when expanded. This means that they would need deciphering, interpretation and elaboration for contextual understanding. This was done by scholars and spiritual practitioners who had attained a certain level of mastery and considered as wise and authoritative in the particular vedic
tradition. Such a process of interpretation and authoritative analytical work was also sometimes known as *vritti* and the authors of *vrittis* were called *vrittikaaras*.

This process is similar to the hermeneutics and use of hermeneutic circle of Western philosophy and natural science. These ancient traditional methods can be compared to the modern scientific qualitative research methods of hermeneutic phenomenological analysis. The Patanjali Yoga Sutras has also been subject to *bhashya* and *vritti* interpretations by ancient scholars. Most notably among them is the Patanjala Yoga Sutra Bhashya of Maharishi Veda Vyasa. It is pertinent therefore that the modern qualitative research technique of hermeneutics should be applied to understand and interpret the Yoga Sutras of Patanjali using the knowledge of modern medical neuroscience as the science investigating suffering and the means to overcome suffering.

1.20 Medical Neuroscience and Yoga Sutras


The nervous system with the brain and mind form the apparatuses that process pain and suffering. Therefore when we consider pain and suffering from a medical point of view the mechanisms underlying these phenomena are best understood through the scientific study of the mind, the brain and the nervous system. These varied and interdisciplinary subjects can be considered under the umbrella term: medical neuroscience.

Modern medical neuroscience has progressed greatly especially with the advent of specialized computer based technologies to study the complexities of the brain and the nervous system. Modern advances in functional neuroimaging in neuropsychology have helped in the better objective observation and understanding of behaviour and mental phenomena. These scientific advances have greatly contributed towards developing physical and psychological therapeutic methods of reducing suffering due to various causes.
In the last two decades there are particular advances in the area of neuroscience called neuroplasticity research. Neuroplasticity as described earlier is the ability of the brain and nervous system to mould, modify and adapt to external and internal stimuli. It is the ability of the neural tissues to form new connections, develop new circuits and form new nerve cells throughout life.

This is a paradigm shift from the old thinking that the nervous system was rigid and once it suffered any damage, then this would lead to permanent deficits and disabilities. But now with neuroplasticity research we have become aware of this great regenerating and reorganization potential of the nervous system which has the potential for developing therapeutic interventions in several neurological and neuropsychiatric disorders.

The phenomenon of neuroplasticity can also explain the therapeutic and other positive effects of the practice of Yoga. Hence it is all the more pertinent to use the concepts of neuroscience to offer fresh and new interpretations to the phenomenology described in the Yoga Sutras. Using the current knowledge of medical neuroscience and the modern framework of hermeneutic qualitative research method the present study is an effort to explore the Patanjali Yoga Sutras to give a new and current interpretation from the perspective of neuropsychological medicine and health science.

The stress response is a common factor in the origination, maintenance and progress of several physical and mental disease conditions. The Autonomic Sympathetic Nervous System dysfunction is the main disturbance in the imbalance of the homeostasis of the organism. This can be countered by enhancing the tone of the opposite Autonomic Parasympathetic Nervous System. Mind-Body techniques including yoga have been shown to restore the balance in the homeostasis by activation of the Parasympathetic System through the action on the Vagus Nerve connections. Yoga asana, pranayama and dhyana or meditation are all mind-body techniques that have been scientifically demonstrated to bring about this homeostasis.
Yoga is considered as a mind-body practice and hence is an important tool in Mind-Body Medicine (MBM). Many diseases are now considered to have their pathogenesis in the alteration in the mind-brain-immunity-hormone systems. This field of study in the medical sciences is called psycho-neuro-immuno-endocrinology. Neuropsychological stress and its effect on the hormonal system in turn affecting the immune system producing Inflammation is considered as the final common pathway in many, not only physical but also mental, diseases. Mind body interventions and practices can positively influence and reverse this pathology.

Thus yoga as a mind-body therapeutic technique has a big role in prevention and treatment of physical and mental disorders. Given this association with real, experienced and observable positive changes and benefits on health and wellbeing, it is an important task to embark upon a scientific syntheses and interpret the classical text of the Patanjali Yoga Sutras in the light of modern medical neuroscience.