

**CHAPTER 1**  
**INTRODUCTION**

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# CHAPTER 1

## 1.0 INTRODUCTION

### 1.1 CONSCIOUSNESS

Consciousness is fundamental to our Existence as all creation emerges out of it and merges back to it. It is the eternal Cyclic of creation-sustenance–merge (*sāññi-sthiti-laya*) triplet. It relates to Experiences that we commonly associate with ourselves such as thoughts, feelings, images, dreams, body. It is derived from a Latin word “conscious” means con- together and Scio- to Know. Consciousness which is synonymous with awareness exceeds our organs, sense, brain and even our ordinary thoughts, it is present in latent manner in the materialistic world and is the basis of our religious emotion (Miśra, 1998).

In the Indian approach consciousness is known as *prajñā/cetanā*., In the body the sensory and motor organs (*jī ānandriya* and *karmendriya*) creates mind (*Manas/cittaḥ*) which responds to the impulses from senses (*Indriyas*), the response if positive leads to attraction (*rāga*) ,if negative leads to repulsion (*dveśa*). These response build emotions and creates enjoyment (*sukham*), distress (*duḥkham*), resulting in desire (*kāma*), anger (*krodhā*), avarice (*lobha*) and hatred (*dveśa*).

The concept of manifestation of Consciousness according to Patañjalī is *citta* or mind. It is gross in form when in wakefulness (*jāgrat*), subtle in dream (*svapnā*) and causal in deep sleep (*susuptī*) states. The fourth state *turīyaḥ* is known as pure consciousness (Saraswati, 1993).

*Vedās* are the fundamental texts of “consciousness studies” as they evolve techniques for individual involution of human growth towards perfect freedom as also those for transformation

to build ideal social orders working in time with all living and non-living beings of manifest consciousness.

Consciousness is not just the conscience, or the contents of the mind, but is the biological phenomenon permitting to survey the feelings, thoughts, and feelings of our mind. Consciousness is an elaborate rite of passage into these feelings, thoughts and knowledge that makes us humans (Ramamurthi, Gopal, Mohan, & Rao, 2001).

The Western concept of Consciousness is revealed as the order of the function, with pattern (structure), precision (quality), regularity (timing) in the physical Universe and as Cognition, experience and discrimination in the living Beings. Neurobiologists define the term Consciousness as the ability of the organism to respond purposefully to change in the environment and thus Consciousness is a basis function of life at all levels of evolution.

The wakefulness state, dream and sleep states physiologically are said to be in the normal states of consciousness. The Physiologists call the other states to be in the altered state of consciousness. In the anatomy of brain, reticular activating system and cerebral cortex are the areas considered to be responsible for the perception of consciousness. Our thoughts, attitudes, emotions, sensation, perception, and behavior interfere with each other just as physical quanta in the classical double slit experiment.

The Science of consciousness includes the study of quantum events in the living systems. Quantum's in the human body generate quantum electro dynamic field effects. Consciousness is

the relationship between two events and through quantum physical mechanism it appears as a probability field and exists in brain and everywhere.

The “quantum jump” indicates the shift from the potential to actual that we experience when a sensation, perception, emotion, or idea suddenly emerges into consciousness. This experience of is also called as conscious choice, and collapse of the wave function”. This represents the infinite potentials of quantum reality to actualize into a single experience. Quantum field is transcendental to time space dimension. Psychokinesis and Poltergeist phenomenon arise out of the energy potential of the quantum electrodynamics field (Vyas & Vyas, 2004).

Collective consciousness is a term used in the sociologies especially in the study of human societies. Humans are social animals who prefer to live in Group and share common goals, beliefs, behaviors and attitudes. An Every individual living in this world has his or her own consciousness and collective consciousness sometimes also known as collective knowing is a result of a Group activity. This is more recognizable in many settings- in relationships, classrooms, communities, groups and organizations. French sociologist Émile Durkheim coined the term collective consciousness in the 19th century. Human beings acting independently are made to act in concert with each other due to the existence of Strong Motivations.

Psychologists and Social Scientists agree the existence of strong parallels between the psyche of an individual and that of the society. Wilber in his book “Sex, Ecology and Spirituality The Spirit of evolution” pointed out that an individual human being and his socio cultural environment evidence the same basic structures of consciousness (correlation of micro and

macro), further, these same basic structures can be found in the evolution of the individual as well as the species. The collective and the personal go hand in hand.

Author and professor Stanley Krippner has suggested to view the Collective Consciousness as primary instead of individual consciousness as the individual's awareness, attention, memory is socially constructed. Identification with anyone and anything is achieved through group interaction. The ability to collectively observe enables a new level of clarity and intentionality in our behavior.

Ken Wilber with his four quadrant consciousness affairs explains that consciousness extends beyond the physical organism and is discovered in the extended field that permeates and sustains culture and society (Elgin, 2009)

## **1.2 RANDOMNESS**

In the Oxford Dictionary it is defined “as happening without method or conscious decision “. That which cannot be predicted by humans can also be the meaningful definition of Randomness. In simple terms randomness is synonymous to “ I don't know how it works”. The lack of pattern or predictability in events or steps having no order and does not follow an intelligible pattern or combination. Randomness is an integral part of quantum mechanics and behavior of the sub-atomic particles when observed individually is unpredictable. E.g.: Double slit experiments with electrons. Even after knowing where on the screen all the previous electrons have hit, we cannot predict the location of the next electron on the screen. (Randomness w.r.t Space)- We can only calculate the probabilities of hit for each point(Brian, 2003).

But when a group of particles are considered as a whole, randomness reduces and eventually vanishes when the group size is vast. Correspondence principle says that in systems incorporating millions of particles, averaging takes over and the statistical probability of random behavior approaches zero. Quantum mechanics then approaches classical Mechanics (Rosenfeld & Nielsen, 1976).

There have been several experiments over the past decades, exploring interactions between mind, awareness and group consciousness with the behavior of external physical systems. Most of these studies have reported, although with considerable variability, an ability of the mind to collapse the randomness of the physical system. These studies, on one hand, have explored the effect of the intention of a human operator to modulate the tendency of random events, (Jahn, Dunne, Nelson, Dobyns & Bradish, 1997; Radin, 2003) while also looking into the effects of synchronized attention of a group in changing the randomness of events (Nelson, 1997) and have broadly concluded on the existence of psychokinetic potential of the human consciousness. This consciousness correlated collapse is said to be due to biophysical factors influencing the output of the random physical systems like random event generator (REG) and resulting in an anomalous process when there are pre-stated conscious intentions of a human operator (Caswell, Dotta, & Persinger, 2013).

The REG or the random number generator (RNG) is a device representing quantum events, 1 s (one) and 0 s (zero) which are generated by electron tunneling within two field effect transistors or thermal noise (Johnson-Nyquist Noise) (Moddel, 2004) in a truly random manner which can

be subjected to an experimental test. This phenomenon has been used for detecting the impact of human operator intention (micro-psycho-kinesis) for several decades. A meta-analysis of several experiments done using this principle have shown significant results but with small effect sizes (Bösch, Steinkamp, & Boller, 2006). Since it is almost impossible to isolate a the effect of a single human mind or intention and implicate its effect on the randomness of an event, this principle has to be adapted to observe the effects of synchronized group activity, shared attention/emotion (field consciousness) on random events(Nelson, Bradish, Dobyns, Dunne, & Jahn, 1996, 1998). This has resulted in several such studies called the “Field REG” where group activities can show deviations from randomness.

True Random devices are used to study the Effect of Consciousness. The quantum processes are unaffected by physical parameters (temperature, pressure, magnetism) true randomness eliminates the concern that experimental outcomes might be influenced by factors other than consciousness. Their binary nature allows users to deal with known statistical distributions, and to measure any "anomalous" change in the distribution with simple statistical techniques. Results from REG trials can be seen in real time on a computer screen, then stored and graphed or analyzed in many different ways (“REG User Manual for versions: FieldREG 1.63,” 2007).

### **1.3 MEASURING COLLECTIVE CONSCIOUSNESS FIELDS: PSYLERONREG-1**

The Psyleron REG-1 is an improved version of the PEAR device. It is built with modern technology, such as the USB interface and SMT components. It is an exploration kit designed to allowed individuals and researchers to conduct their own experiments in direct mind-matter

interaction. It uses a USB-based true random event generator and software, documentation, and data analysis tools.

Field REG is run during different events and is used to study or to investigate the effects of group consciousness. It gives information or feedback on group coherency, measures the effective of a performance, presentations, and the device. The Psyleron software allows to see graphically the effect of your mind on the REG-1, in real-time. The REG helps in exploring the correlations between subjective factors and the REG data stream.

The present study chose to explore the effect of a collective gathering of people doing a common activity on the random event generator (REG) and to observe if there was a collapse in the random behavior of the REG data corresponding to epochs of attentiveness in field settings. The group activity chosen were the events of Mysore *Dasarā* celebration and *SomaYajña* Performance.

The study focuses on periods of synchronized attention during the selected events. This synchronized attention in field settings can be related to fixing Concentration (*dhāraṇa*) - the process of holding or fixing the attention of mind onto one object or place which leads to Meditative states (*Dhyāna*). In a sustained concentration, the attention continues to hold or repeat the same object or place, creating a consciousness fields which relates to deep absorption states (*Samādhi*), wherein only the essence of that object, place, or point shines forth in the mind, as if the mind were devoid even of its own form.



This thesis compiles briefly the concept of *Soma* in its various forms and brings out information about *Soma* as a plant, drink and presents the performances of *SomaYajña* as described in ancient literatures in Chapter 2. Scientific research survey of *Soma*, *Yajña* and REG studies related to festivals, dance, music and *Yajña in* chapter 3. The aim and objectives are delineated in chapter 4. The methodology used in these studies, results and discussions are presented in chapter 5 to 7. Chapter 8 brings out the summary and conclusion of the study and Chapter 9 assesses the strengths and weakness of the study with suggestions for future.