

## The Science and Spirituality of the Mind

Dr. Pratap Sanchetee <sup>1</sup>

### Introduction

Mind is an excellent creation of nature bestowed to the animal kingdom. Agreeing with philosophies including Jain *darshana*, science also qualifies that it has no conventional structure and is formless and weightless. Rather than a structure, it's a program that runs and monitors the body system and decides its relationship with others. It influences all *karma* be it mental, vocal, or physical. Whether the mental and physical parts of the universe are separate, or one is derived from the other, has been the subject of debate for millennia. Till the latter half of the last century, the scope and mechanism of mind were in the domain of philosophy. Advances in neuroscience have given birth to 'Science of Mind' involving many other disciplines such as Biology, Psychology, Sociology, and etc.

### Definition

The modern English word *mind* originates from the Old English word *gemynd*, meaning "memory". In Sanskrit *manas* denotes mind. The words psyche and mentality are often used as synonyms of mind. In contrast to the matter and the body, the mind is the totality of psychological phenomena and capacities, encompassing consciousness, thought, perception, sensation, perception, feeling, mood, motivation, activation, behavior, memory, thinking, learning, and unconscious processes. The human mind stands apart qualitatively from the animal mind and is the outcome of specific influences of social, cultural, and linguistic factors.

### Scientific perspective of mind and brain

Through centuries, philosophy has been heavy on soul and mind with scant references to the brain. They put the soul, mind and body on different platforms. It is divided into physical and mental (psychic). Inter-relationship of brain and mind, and body and mind are now the areas of intense research. Research has confirmed that all mental processes, even the most complex, derive from the operations of the brain. Science puts the whole process i.e. mind, brain and body as a continuum. It is further established that all these systems work in tandem and faultlessly. They also propose that the mind is an extension of the structural brain.

The mind works on electromagnetic energy and influences neuro-endocrine secretion to guide instincts, emotions, feelings, and many more. With advanced investigations such as functional magnetic resonance imaging (fMRI) and electroencephalography (EEG),

---

<sup>1</sup> A Neurologist and Jain Scholar from Jodhpur.

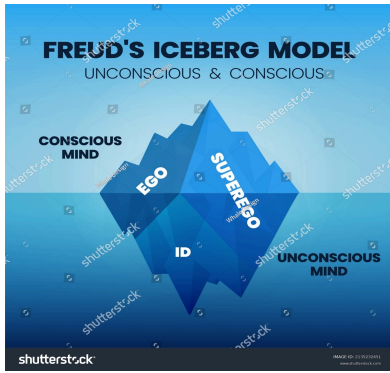


Fig 1: Different parts of mind (Reproduced: Iceberg Model Infographic Vector Has Three Stock Vector (Royalty Free) 2135232451 | Shutterstock)

neuroscience examines the implementation of mental phenomena on a physiological basis. Mind is a set of functions that works on waves (radio-magnetic waves). It is ultrafast, self-correcting, and mostly faultless. It's purely a subjective and private phenomenon. Others can gauge it with expressions, motor actions, speech, facial gestures, and changes in biochemical, hormones, EEG, and fMRI. The mind has two main parts: the conscious and the unconscious mind (Fig 1).

**Conscious mind:** The conscious mind is approx. 5-10% of the mind complex. It encompasses a wide variety of states, such as perception, thinking, planning, fantasizing, dreaming, and short-term memory. It recognizes problems and finds solutions to fix them. The

conscious mind cannot handle all the information that could be gained in every moment of our life; it selects what to concentrate on.

**Unconscious mind:** The unconscious mind is approx. 90% of our mind. This is the most powerful part of the mind. Unconscious or non-conscious mental processes operate without the individual's awareness but can still influence all mental phenomena. Some theorists distinguish between preconscious, subconscious, and unconscious states depending on their accessibility to conscious awareness. The subconscious mind consists of long-term memory storing every piece of received data and associating them with emotions, feelings, and beliefs. It controls all involuntary body functions, creativity, imagination, intuition, and beliefs. We filter and delete the information that we do not need. This allows us to experience life in a way that makes sense and keeps us sane.

**Brain:** The brain is the central organ of the nervous system and is present in all vertebrates and the majority of invertebrates. The human brain is a neural network consisting of approx. 100 billion neurons (length 1000 km), each one making 10,000 connections (synapse). The total number of synapses is estimated to be 1000000000000000 ( $10^{15}$ ). They communicate via electrochemical ways. Equally interesting is to know that approximately one-fifth of total blood from the heart flows to the brain and utilizes 20% of body oxygen.

**Animal mind:** It is generally accepted by scientists that all forms of life including non-human animals are equipped with a mechanism of mind that is highest developed in humans. However, there is no agreement on where exactly the boundary lies and how their

mind differs from the human mind. Discontinuity views state that the minds of non-human animals are fundamentally different from human minds that have higher mental faculties, like thinking, reasoning, and decision-making.

### **How to control or tame the mind**

It is a hot topic in both philosophy and science. The scientific approach to it is still in its infancy. It is pertinent to know that on average a human spends one-third to one-half of awake time in mind wandering. The average person has approximately 60,000 thoughts per day. The default mode network (DMN), a brain circuitry, is active when a person is not focused on the outside world and the brain is at wakeful rest. Its activity can be controlled by meditation with biofeedback.

**Belief:** Our beliefs, though personal, are guided by many factors. They help us with survival, safety, and security. We have four types of beliefs—instincts, unconscious, subconscious, and conscious.

- Instincts: They are genetically determined and are species-specific. While we are aware of external instincts, internal instincts that govern homeostatic regulation have no conscious perception.
- Unconscious beliefs: These are the beliefs we learn while the reptilian mind/brain is developing during the first two years of life. They are meant to keep the body alive and functioning.
- Subconscious beliefs: These are the beliefs that develop while the limbic mind/brain (emotion) is developing from the age of 2–7 years. They react to life-affirming feelings with happiness and life-depleting feelings with anger, fear or sadness. With practice, one can bring subconscious beliefs into conscious awareness.
- Conscious beliefs: These are the beliefs one learns while the neocortex brain (rational mind) is developing—up to the age of about 24 years and during the remainder of life.

### **Role of spirituality in changing brain & mind**

Spirituality can shape our mind in the following ways.

**Personal level :** Diet, self-disciplined, mentally alert, peaceful, to develop one's consciousness to higher stages

**Social level:** Live in harmony with humans and all living through tolerance, nonviolence, forgiveness, aparigraha, etc.

**Global level:** Coexistence and by practicing its profound theories

Some of the life-style practices that help us to control our mind are laughter and bring happiness, being friendly to nature, *sattvic* diet, adequate sleep, being physically active, and being spiritual

### **Conclusions**

Mind is an invisible, imperceptible force and without mind, we are 'Dead'. Science is actively investigating the structure and functioning of the brain. Mind wandering is a common substrate in its functioning and methods are being devised to tame it. Practically we have witnessed that meditators have good control over the functioning of the mind and brain.

Some of the major unanswered questions are;

- How animals (including humans) acquire this marvelous entity, remains a mystery.
- Is our mind a part of a global or collective mind? What are the bad and harmful potentials from the collective psyche or mind?
- Can we transplant 'MIND' or 'Mechanism of Mind' as we have achieved others such as organs including brain transplant?
- With religion, we must find answers to it and lead a life that helps in spiritual ascent.

