
BLOCK-II: HISTORICAL DEVELOPMENTS OF PSYCHOLOGY

UNIT-5: ORIGIN OF PSYCHOLOGICAL CONCEPTS IN INDIA

Structure

- 1.1 Objectives
- 1.2 Introduction
- 1.3 Origins and development of Indian thought traditions
- 1.4 Indian traditions and their underlying cognitive processes
 - 1.4.1 *Shrutis to smrti* – from revelation and intuition to intellect and memory
 - 1.4.2 Implications for understanding the origins of psychological concepts
- 1.5 Fundamental psychological concepts in Indian systems
 - 1.5.1 *Asu, prana, hrod and manas*
 - 1.5.2 *Citta and cittavrtti*
 - 1.5.3 *Atman and Jīva*
- 1.6 Development of psychological concepts and perspectives
 - 1.6.1 Modern psychology and Indian thought
 - 1.6.2 Implications for Psychology
 - 1.6.3 Indian thought - development or decline?
- 1.7 Development of “Indian Psychology”
- 1.8 Summary
- 1.9 Keywords
- 1.10 Check your progress
- 1.11 Answer to check your progress
- 1.12 References

5.1 OBJECTIVES

After studying this Unit, you will be able to:

- Trace the development of Indian Thought
- Examine the psychological aspects of Indian thought in the Philosophical Systems of India
- Classify the Indian Systems of Thought on the basis of their psychological foundations
- Trace the origins of psychological concepts in Indian traditions
- Bring out the implications of the Indian Thought Systems for the study of Psychology

5.2 INTRODUCTION

Psychological concepts and perspectives of India are integral aspects of the Indian thought traditions. As S. K. R. Rao, (1962, p. vii) observes though in ancient India psychology did not have the status of an independent discipline there was enough *psychologizing*. Our ancient thinkers in their attempts to solve the philosophical problems necessarily addressed psychological topics such as consciousness, experience, perception, illusion, will, desires, emotions and others. However, their ideas remained scattered in numerous sources for many reasons. The task of bringing all of them together is a stupendous one for the following reasons. *First*, the field of philosophical enquiry of ancient thinkers included numerous interests – orthodox and heterodox – and the compilation of relevant reflections of all of them concerning a specific problem was almost impossible. *Second*, psychological speculations in India existed in diverse and even disparate disciplines like metaphysics and medicine, logic and sexology, and religion and poetry. *Third*, Indian works are written in many languages. *Vedas* are in archaic Sanskrit; the *Upanishads* and later scholastic works are in classical Sanskrit; the early Buddhist texts are in Pali; and the Jaina texts are in Ardhamagadhi and mixed-Sanskrit. Therefore, a competent presentation of Indian psychological thought requires knowledge of these three languages, which are almost dead now. *Fourth*, acquaintance with Indian philosophy and allied branches of study and academic training in modern psychology are also needed to provide a psychological framework for indigenous insights. So, no writer could be expected to have enough mastery over all of them and fulfill all the other qualifications to sieve out the psychological contributions and bring them together. Thus, the psychological insights of India remained embedded in literary, philosophical, religious and other sources for

along time. Therefore, if we have to understand their origin and development then we have to necessarily begin with the origins and development of Indian thought traditions as a whole.

5.3 ORIGINS AND DEVELOPMENT OF INDIAN THOUGHT TRADITIONS

In tracing their origins we need to take into account three major factors viz., the *ancientness*, the *cultural diversity*, and the *major streams of thought traditions*. Nobody knows exactly how old is our country. Hirianna (1932/1993), a well-known Indian philosopher, points out that the only certain date available in the history of India is regarding the death of Buddha, 487 B.C.E. Therefore, he traces the 'development of Indian thought' in the following stages: *Vedic Period* (from the earliest times up to 500 B.C.E) - Pre-Upanishadic thought and The Upanishads; *Early Post-Vedic Period* (500 B.C.E – About the beginning of Christian Era) - Bhagavad-Gita, Early Buddhism and Jainism; and the *Age of the Systems* (From about the beginning of Christian Era onwards) - Materialism, Later Buddhistic Schools, Nyaya-Vaisesika, Sankhya-Yoga, Purva-Mimamsa, Vedanta-Advaita and Vishistadvaita. Psychological ideas have originated and developed in these three stages in innumerable sources till twentieth century.

What is the earliest time in the development of Indian thought to which the beginning of Vedic period can be attributed? It is believed in our culture that Vedas are "anadi", meaning having no origin in time. This is incomprehensible to our way of thinking, because the possibility of transcending time and space is not entertained in our ordinary consciousness. According to some astronomical references in the Vedas its period is calculated to be 6000 B.C.E. Jacobia German scholar and Indologist assigns Veda to a period much earlier than 4000 B.C. Another scholar Macdonell dates the Vedic period as 1500- 200 B.C.E (Rangachar, 1961) Georg Feuerstein (1989) observes that the compositions of the Rig Veda in archaic Sanskrit happened between 1200 -1000 B.C.E. Most historians believe that Vedic period might have begun towards the middle or latter part of Indus-Valley civilization/Harappan Civilization that existed between 3300 B.C.E and 1700 B.C.E and flourished between 2600-1900 B.C.E and extended several centuries further. Historians of modern psychology trace the early origins and development of ideas and concepts to ancient Greek traditions that commenced with Bronze Age (3000 B.C.E – 1200 B.C.E) (Brennan, 2003; Leahey, 2004). Hence, one could infer that Indian psychological concepts are as ancient as Western concepts, if not earlier to them.

Indian culture is as much diverse as it is in its flora and fauna. Chatterjee, Pusalkar, and Dutt (1958) note that even in the pre-historical period its people from all parts of the

world settled in *Bharata*, as our country is locally known. They included “the Eolithic Negroids from Africa; the Proto-Australoids and the Austric peoples, probably from Western Asia; the Mongoloids from the Far East in their various ramifications; the congeries of the Asian peoples who appear to have brought the Dravidian language and culture into India; the Indo-Europeans in their various elements, racial and linguistic – not only Nordic, but also Mediterranean, Alpine, and Dimaric in race as well as language; Aryan – both as Indo-Aryan and Iranian – as well as Proto-Hellenic and historical Hellenic; and other races and peoples, *too numerous to mention even for the prehistoric period only*” (p. viii – xi). All these people seem to have contributed to the thought development in India.

As to the major streams of thought traditions it should be noted that the Vedic tradition and the Jain tradition are almost contemporaneous. S.K.R.Rao (1962) notes that Jainism is perhaps the oldest religion in the country and even in the Indus Civilization traces of Jain practices like nudity, asceticism, bull-worship, etc. are discernible and it was probably pre-Aryan. Kalghatgi (1961) has noted that Jacobi traces Jainism to early primitive currents of metaphysical speculations and according to Zimmer Jainism reflects the cosmology and anthropology of a much older pre-Aryan upper class of North-Eastern India.

Dandekar an Indologist of great repute notes that a large number of elements in the classical Hindu way of life and thought clearly betray a pre-Vedic non-Aryan origin and “the Aryan Vedism may be regarded as a grand interlude in the continuity of ancient Indian thought” (1941/1981, p.339). Hence, from the point of view of the origins of psychological notions, the influence of Jaina worldview and of Indus civilization is no less important than Vedic and post-Vedic period. Thus, for the purpose of tracing the development of psychological thought in India it is essential to consider all the major traditions of India that existed in pre-Christian Era.

5.4 INDIAN TRADITIONS AND THEIR UNDERLYING COGNITIVE PROCESSES

Psychological systems are closely related to those of philosophy. An important similarity between the two is that both philosophers and psychological systematists tend to give great scope to their systems. A system is thus a set of very general statements (Marx and Hillix, 1978, p.66). In India, we do have philosophical systems known as *darsana(s)*, which embody many psychological concepts and theories that qualify to be called systems of psychology in the above sense. It is only in the post-Buddhist period that all the major Systems of Indian philosophy emerged.

Hiriyanna (1932/1993) has chosen to highlight how the thought process has undergone changes in different stages. In his view the development of Indian thought from Vedic Period up to the end of what he calls Early Post-Vedic Period, “may be described as largely consisting of results” (p.177) that must have been arrived at by processes more or less definite about whose methodology we know very little now. On the other hand, the philosophy of the period which refers to as *Age of the Systems* is different in the sense that it “gives us not only conclusions but also the methods of reaching them” (Hiriyanna, 1932/1993, p.177). He further observes that these several systems which developed during this stage “do not set about investigating their proper subject matter until they have given us what may be described as a critique of knowledge and considered how we come by truth” (p.177). “In other words”, he says, “Indian philosophy becomes self-conscious at this stage: and Logic emerges as an explicit branch of it” (p. 177). He notes that the exact causes of this change are not easy to discover but the growth and consolidation of heterodox doctrines like those of Buddhism and Jainism must have contributed much towards it because some of the latter claimed to base their conclusions exclusively on reason. Many other scholars have made similar observations about the transition in the very structure of the thought process from Vedic period onwards, which is a very important basis for understanding the origins of psychological concepts.

5.4.1 *Shrutitasmṛti*—from revelation and intuition to intellect and memory

Based on the opinion expressed by many scholars (Dandekar, 1941/1981; Jaynes 1976; Jwala Prasad, 1958; Sharma, 1973; S.K.R.Rao, 1962; Sri Aurobindo, 1956) it is possible to infer the transition from the Vedic period to the age of systems as from revelation and intuition to intellect and memory.

Veda is derived from the Sanskrit root *vid*, to know, and hence also represents knowledge. Thus, in Indian epistemology *ya* *ab* *d* *a* *p* *r* *a* *m* *a* *n* *y* *a* or *ṛ* *i* *p* *r* *a* *m* *a* *n* *y* *a* (“scripture” as source of valid knowledge) refer to *Veda* as authority. Hence *vakya*, utterance of theseer, carried the stamp of authority and was relied upon and continues to be so. From a psychological point of view it may be worthwhile to raise the questions on the nature of the *Vedas*. What is Vedic experience? Does it represent any specific mode of cognition or mentality? How does it attain the status of valid knowledge? Both Indian and foreign scholars have attempted to grasp it.

Sharma (1973) in his discussions on the age of the *Rg Veda* notes that there are four different lines of approach for determining it: linguistic data, geographical conditions, archaeological evidence and astronomical evidence. Referring to the linguistic data he notes

that according to Yaska, the author of *Nirukta*, the *Vedas* were revealed to ancient seers and sages and were taught to the first three generations through the oral tradition. In later generations there was a decline in the oral instruction for want of intuition and required texts which could explain to them the Vedic meaning and other things connected with it.

Sri Aurobindo (1956) states: "Veda... is the creation of a faculty anterior to our intellectual philosophies. In that original epoch thought proceeded by other methods than those of our logical reasoning and speech accepted modes of expression which in our modern habits would be inadmissible. The wisest then depended on inner experience and the suggestions of the intuitive mind for all knowledge that ranged beyond mankind's ordinary perceptions and daily activities. Their aim was illumination, not logical conviction, their ideal the inspired seer, not the accurate reasoner. Indian tradition has faithfully preserved this account of the origin of the Vedas (p.11)".

S. K. R. Rao (1962) observes that among the pioneer thinkers of India there were poets, priests, and philosophers. Accordingly the mass of their literary productions styled as the *Veda*, was classified as hymnology (*mantra*), ritualistic tracts (*brahmana*), and philosophical essays (*aranyaka* and *Upanishads*). In them we find the birth of thought, of symbolism, of aesthetic expression, and of ethical codes. As he points out: "the Vedas being essentially a work of poetic imagination and emotion, it is improper to expect therein a scientific inquiry into psychological problems. Nevertheless, there are surprising flashes of intuitive conjectures (p.184)."

Julian Jaynes a former Princeton psychologist has made the following observations on the nature of the Vedas. "In India, the oldest literature is the *Veda*, which was dictated by gods to the seers or prophets; these too were poetry... Poetry then were divine knowledge... The poet and divine seer have a long tradition of association in the ancient world, and several Indo-European languages have a common term for them..." Jaynes further notes that "among the early Arabic peoples, the word for poet was *sha'ir*, 'the knower', or a person endowed with knowledge by the spirits; his metered speech in recitation was the mark of its divine origin... Poetry then was the language of gods" (1976, p.361-364).

According to the traditional belief prevalent in India Veda mantras were perceived by *rishis* (*mantra draeta*) which pours out or gushes out spontaneously in recitation - *udghosha*, *udgeeta* - in metered speech, *chhandas*,. To that extent Jaynes' views are acceptable. But they were not dictated by anyone, god or otherwise. However, there are many other observations of Jaynes that seem to be correct. A Vedic rishi is called *kavi*, poet, and as

shrotriya, one who heard. He is also *jnâni*, the knower. Barua (1921) notes that Gautama the Buddha even though refused to accept Veda as authority regarded the following ten sages as the ancient and real *mantra draeta*: Astaka, Vamaka, Vamadeva, Vishwamitra, Jamadagni, Angirasa, Bharadvaja, Vasiuta, Kayapa and Bhgu. It was their duty to invoke several deities, such as Indra, Soma, Varuna, Isana, Prajapati, Brahma, Mahiddhi and Yama. But as Barua notes by Buddha's time fascination about Veda had waned and also its influence as authority.

Sri Aurobindo (1956) notes that there was a change in the mental mode with the beginning of the Upanisadic period, which is dated as 1000 B.C.E when the "Age of Intuition" was passing away into the first dawn of the "Age of Reason". Further he notes that the Upanisadic *rshis* sought to recover the lost or waning knowledge through meditation and spiritual experience. They used what are recalled "vidya" as a means of entering mystical states to get those insights which earlier Vedic *rshis* had. They also used the text of the ancient *mantras* as a proper authority for their own intuitions and perceptions. The Vedic word was a seed of thought and vision by which they recovered old truths in new forms. In support of his views Sri Aurobindo reports about a personal 'unique auditory experience' that happened when he was in jail as a freedom fighter. He states that he had not found sufficient explanation for his experience either in European psychology or in the teachings of Yoga or Vedanta. Only later in Pondicherry when he read the *Vedas* for the first time *Veda mantras* illuminated with a clear and exact light the psychological experiences he had in the jail, and he realized his experience was an instance of cognizing of *mantras*. Further, Sri Aurobindo opines that *Vedas* are the ancient psychological science and the heart of spiritual living and the *Upanishads* are the philosophical outcome and modification of *Vedas* and that Vedanta, Samkhya and Yoga are late intellectual result and logical dogma (Salagame, 2008). Sri Aurobindo's experience affirms the belief that Veda mantras are heard (*shruta*) and hence they are also known as *œruti*. They are cosmic sounds of Truth.

Jwala Prasad (1958, p. 82) notes that the dialogue and discourses that characterized the Upanisadic period naturally resulted in the formulation of definite methods of debating and forms of reasoning, which gave rise to a science originally called *anviksiki* (the science of enquiry), then *tarka-vidya* (science of reasoning), and ultimately *Nyaya-Uastra* (the science of logic). *Anviksiki* began as a science of general enquiry, which included in its scope both metaphysics and logic. Later on it assumed a more specified form and became the science of pure reasoning. The transitions from the predominance of intuition to the intellect mode seem to have reached stability during the period when the *Nyaya* school of thought came into predominance (Salagame, 2008).

What came out of this gradual transition in the mode of thought and of subsequent period are collectively called *smṛti*. It means that which was recovered, recollected, recognized, and remembered. The insights recovered by Upanisadic seers and sages were further elaborated, interpreted, commented, and explained in different sources. Thus *smṛti*s are derived from *śruti* and hence they are secondary sources. As a result, six auxiliary treatises, the *Vedāṅgas*, were developed that include *śikṣā*, *vyākaraṇa*, *kalpauśtra*, *nirukta*, *chandasūtra*, and *jyotiṣa*. In addition, other texts and treatises also called *asmṛti* emerged, which include *Dharmaśāstra*, *Nibandha*, *Purāna*, *Itihāsa*, *Āgama* and *Tantra*, *Upa Veda*, *Sat Darhana*, and other scriptures like *Yoga Vasiṣṭha*. *Upa Veda* includes *āyurveda*, *dhanurveda*, *arthasūtra* and *gandharvaveda*.

Sat Darhana includes *Mīmāṃsā Sūtra*, *Brahma Sūtra* (*Vedānta Sūtra*), *Sākhya-Sūtra*, *Yoga-Sūtra*, *Nyaya Sūtra*, and *Vaiśeṣika Sūtra*. The tradition of *śruti* and *smṛti* led to emergence of innumerable treatises on all subjects: physics, mathematics, astronomy, chemistry, biology, political science, economics, art, literature, linguistics, medicine, philosophy, theology, and spirituality.

5.4.2 Implications for understanding the origins of psychological concepts

Therefore distinction between *śruti* and *smṛti* is very important from the psychological and epistemological viewpoint. The distinction between the revealed and the recovered has also led to a distinction between two types of knowledge viz., *parokṣa jñāna* (indirect and mediated through senses and intellect) and *aparokṣa jñāna* (direct and immediate). *Smṛti* falls into the first category and *śruti* falls into the second category. Much of Indian theory of knowledge and perception center on this fundamental distinction and has significant implications for cognitive psychology. In contemporary period we consider what a scientist says or has published in a journal as authoritative because it is based on *pratyakṣa*, *anumāna*, and *prayoga* (experimentation). But we hesitate to accept *Veda*, *śabda*, as *apramāṇa* because we have lost that capacity of intuitive cognition and hence we cannot comprehend their original import. It does not mean *Veda* by itself has no significance. It has significance to ancient seers because it was their true experience. In modern times it was significant to Sri Aurobindo and such other spiritual persons who had cognized the *mantras* (Salagame, 2008). Thus *śruti* and *smṛti* being continuous form one major source of psychological concepts and stream of thought as distinguished from other sources such as those of Jainism and Buddhism.

If such a gradual transition occurred what are its implications for psychology. Scholars like Dandekar (1941/1981) and S.K.R.Rao (1962) have noted that Vedas have an organismic emphasis. Dandekar (1941/1981) has observed that many Vedic notions related to mental functions represent somaticism. The implications of Dandekar's thesis are as follows. *First*,

the primitives and our early Vedic ancestors probably experienced reality without a notion of separate mental faculty. In other words, they were not 'thinking beings' in the modern sense of the term. *Second*, neither can we derive a psychology with a 'mentalist' notion from the early Vedic literature, nor can we superimpose one such psychology on our ancestors. Both are misguided attempts. *Third*, we have to labour hard to find out how and when the transition took place from materialist to mentalist usage of the term *manas*, which is not just a linguistic phenomenon, but probably a fundamental change in the nature of experience of our ancestors. This last one is an interesting problem of Vedic psychology, according to Dandekar, which he has not attempted to answer (Salagame, 2008).

Julian Jaynes (1976) has proposed a theory on the origins of human consciousness based on extensive archeological, ethnographic, anthropological, historical, linguistic and biological evidences collected from ancient civilizations across the globe. Jaynes proposes that there are three kinds of human awareness: (a) the *bicameral* or god-run man, (b) the modern or problem-solving man, and (c) contemporary forms of throwbacks to *bicamerality*, such as hypnotism, schizophrenia, poetic and religious frenzy and other such phenomena. Jaynes postulates that in the *bicameral* era ancient peoples from Mesopotamia to Peru could not "think" as we do today, and were therefore not conscious. Unable to introspect, they experienced auditory hallucinations, voices of gods actually heard as in the *Old Testament* or the *Iliad*, which, coming from the right hemisphere of the brain told a person what to do in circumstances of novelty or stress. This ancient mentality he has called the *bicameral mind* and notes that *bicameral cultures and bicameral kingdom* existed up to second millennium B.C.E. With reference to Indian traditions Jaynes states as follow. "Indian hurtles from the *bicameral Veda* into the ultra-subjective *Upanishads*, neither of which are authentic to their times" (Jaynes, 1976, p. 313). Jayne's views support the contention of Dandekar and others.

Thus, in understanding the origins and nature of psychological concepts in India from Vedic period onwards and their influence on Indian psyche as a whole even in contemporary times the distinctions discussed above play a major role.

5.5 FUNDAMENTAL PSYCHOLOGICAL CONCEPTS IN INDIAN SYSTEMS

The term psychology is originally derived from the ancient Greek term *psuche*, which has been in course of time pronounced as *psyche* (Lennox, 2004). The connotation of the term *psyche* developed in five stages in Greek history from the period of Homer which dates back to 3000 B.C. to 5th century C.E. During this long interval of 3500 years the term has been used to refer to: (a) a kind of breath which is blown out at death; (b) the seat of emotion;

(c) intellectual ‘interpreter’ of sense data; (d) moral as well as intellectual faculty; and (e) to ‘a person and within a person a soul’. The term has also been used to denote a thing, a process or an agent (personal or divine). While Plato (428/427 BC – 348/347 BC) understood psyche or soul as an immaterial entity which apprehends an ideal world, Aristotle (384 BC – 322 BC) used soul and mind synonymously and regarded psyche as process, form, or function and defined it in terms of its activity (Cohen, 1972). The contemporary usage is clearly Aristotelian. In a similar way even in Indian traditions we come across terms that were used in different systems, which refer to a gradual development of the notions of mind and its functions.

5.5.1 Asu, prana, hrod and manas

In the Vedas three terms are used that seem to have been the precursor of the notion of mental functions which have a clear organic basis and connotation. They are *asu*, *prana*, and *hrod*. S. K. R. Rao (1962, p.5) notes that *asu* is an energizing influence, it is a distinct principle, distinct from the body and devoid of it the body is dead and men are described as “possessors of *asu*”. Dandekar (1941/1981) states that primitives believed in a universal all-penetrating magic fluid like *aronda* or the Vedic *asu*, the amount of which, and not the possession or non-possession of any special mental or physical faculties, determined the gradation among beings in the universe. Another term that has direct parallel with psyche is *prana*. *Prana* is a physiological reality and is the essential vital constituent in the organism.

The Vedic word *hrod* (heart) is frequently associated with *manas* and there are numerous references to mind being ‘located’ in the heart in Vedic texts. Linguistically the word *hròðd* has to be traced back to Indo-European *hrd* which later has been preserved only in Aryan languages. In certain Vedic passages it also means ‘belly’ or ‘stomach’. Thus, Dandekar asserts that the “association of *manas* with human psychology is, therefore, clearly an afterthought” (1941/1981, p.247). S. K. R. Rao (1962) notes that when *manas* is used in association with *hròðd*, it represents the stirred-up state of the individual and it is identified as the source of all involuntary, irrational and normally uncontrolled psychological processes such as desires and urges, emotions and moods - in general, the affective aspect of human nature. But, it is doubtful whether the Vedic *hrod* is the same as the physical organ located on the left side of the chest, because *hròðd* in some ancient spiritual literature refers to a location on the right side of the chest and is considered as the seat of the transcendental Self (Sri Ramana Maharshi 1996, p.11 & 62).

Mana is another term for the magic fluid which was supposed to have the capacity to bestow upon beings some kind of occult power which made them 'men'. The words *manas, manus, man, mensch*, etc., have come into existence as the result of the influence of primitive thought and those words did not originally denote exclusively psychological or non-material notions. In many of the *Rgvedic* passages, *manas* suggests a dualism with the physical body, not in the sense of 'cogitatio' and 'extensio', i.e., as a thinking substance different from body implied in Cartesian dualism, but in the sense of a potence-bestowing substance and its substratum. The loss of *manas* results in virtual death (Dandekar, 1941/1981).

In the early Vedic literature *manas* is often represented as being capable of modifications, which are usually associated with matter. For instance, *manas* is considered to be capable of movement in space and no function of *manas* is possible without some movement on its part. There are references to the 'placing' of *manas*; 'yoking' or 'directing' of *manas*; and 'grasping' of and by *manas*. Many more such usages are found. "Such descriptions may not be explained away as mere imaginative or poetical representations of the activities of *manas*. They clearly betray the original 'somatic' nature of *manas*. *Manas* must have been regarded as a kind of 'material substance', and its activities were, therefore, necessarily described as mechanical and dynamic modifications of that 'substance'" (Dandekar, 1941/1981, p. 246-50).

In Vedic literature itself, the term *manas* is used in two distinct ways. In the *Rg Veda*, particularly in 57 and 58 *sukta* of Tenth *mandala*, the term is used in the sense of a material substance and in *Vajasaneyi-Samhita* 34 the term is used in the sense of the faculties of the human mind. Dandekar observes that the substance notion of *manas* persisted even in the Upanishads, Buddhism and Yoga, and influenced the way the nature and activities of psychological functions are represented. Ashenotes, *Chandogya Upanishad*, (VI, 5.4:6.1-2) states "annamayam hi somyamanah" i.e., "*manas* is said to have originated out of the food that we eat" (Dandekar, 1941/1981, p. 251).

According to Dandekar, the substance notion of *manas* leaving its substratum, the physical body, and going forth to the object of comprehension has developed into an important feature of Indian epistemology and Indian psychology. Here an analogy from the field of computer science may be useful. We know today how the computer has changed in its structure and function from just an aid for mathematical calculation, inspired by the *abacus* used in ancient times, to a binary digital electronic processing machine that can be used to create art and music, literary works, scientific experiments and even perform virtual worship using designated software. Thus, the contemporary concept of a computer certainly does not match

with what it was when it originated almost a century ago. In a similar way even the notions of *manas* has passed through many vicissitudes like computers, both in the West and in India (Salagame, 2008).

5.5.2 Citta and cittavritti

Citta is another term used as synonymous with *manas* to represent psyche as a whole. Dandekar (1941/1981 p. 251) draws our attention to the three types of disturbances in the psychical matter, from what he terms as the 'somatic' standpoint: first is the 'movement', 'vibration' or 'oscillation'; the second is 'solidification' or 'thickening'; and the third is that of 'defilement' or 'affliction'.

Movement, vibration or oscillation is indicated in *cittavritti* and as Dandekar points out, this is reflected in the many technical terms used in yoga. In yoga, all consciousness phenomena such as feelings, emotions, perception, conception, knowledge, are regarded merely as either disturbances in or modifications of the psychical substance. *Citta*, referred to by Patanjali, instead of *manas*, is *parirami* i.e., it is constantly suffering a thousand modifications and the terms *vritti* and *pravritti* are clearly indicative of this feature. *Vritti* means the activity of an object; *pravritti* means the going forward of the *citta* towards its object. *Dharana* is the literal binding of *citta* to the desired object; *dhyana* is explained as the homogeneity of the stream of consciousness. As Dandekar points out, the stream of consciousness is *not a metaphorical imagery but it is a real flow of the waves of citta*. (Salagame, 2008).

Solidification or thickening according to Dandekar is represented in the gradation of the four psychological *skandhas*, viz., *vijnana*, *samskara*, *vedana*, and *samjna*. As Rao (1962) notes in *Maitri Upanishad* the terms *skandha* is used in the sense of "branches of a tree" (7, 11). The illusion to solidification or thickening is obvious in this usage. However, the Buddha employed the term *khand* instead of *skandha*, to designate the items in man's personality which included both bodily and mental aspects. The psychological *skandhas* represent object experience (*vedana*), perception (*samjna*), volitional organization (*samskara*), and consciousness (*vijnana*). Here again we can see that there is a progressive "solidification" from object experience to consciousness in a metaphorical sense (Salagame, 2008).

The third type of disturbance, defilement or affliction, is indicated by the notions of *klesa*, *asrava*, and *prasa*da.

"According to the *bhāṣya* on *Yoga Sūtra II, 11*, *citta*, when defiled and afflicted through *klesa*, is to be treated in the same manner as a dirty cloth. The

Yogacara school of Buddhism, represented by Maitreya Asanga, believes in the divisibility of *citta*. All these conceptions in later Indian psychology clearly remind one of the descriptions of *manas* and its activities in the early Vedic literature” (p.251). (Salagame, 2008).

5.5.3 Atman and Jiva

Another important term in Indian tradition that has similar connotations with *psyche* is *atman*. Although not frequently mentioned in the *Rg Veda* (1400 BCE to 900 BCE), there are many *suktas* devoted to it in the *Atharva Veda* (about 900 BCE). As S.K.R. Rao (1962) notes, the origin of the word *atman* remains obscure, although there is a Greek word structurally similar to *atman*, ‘*atmos*’, meaning ‘smoke’, ‘vapour’. He suggests that Vedic *atman* may be an alternate expression for *prana* or *asu* both of which indicate life, the former signifying the actual vital process and the latter abstract vital principle. Rao observes that the term *atman* lends itself to different interpretations depending upon where the emphasis is laid. For instance, Vedic commentator Sayana derives the word from the root *an*, which signifies the breathing process and according to Vopadeva it signifies movement or action. This emphasis leads to the interpretation that *atman* is the dynamic principle of breathing. On the other hand, *Nirukta* (the branch of knowledge related to semantics of Sanskrit words) attaches importance to the root *at*, which means ‘to spread’, ‘to pervade’, ‘to fill’. Rao further notes that modern scholars “are attracted by the suggestive ending of the word with ‘+man’, which renders it a *nomina actionis*: the importance of the expression consists in its indication of the spirit’s capacity for action” (1962, p.6).

The emphasis laid on breathing, movement, action, pervasiveness, filling, and enlivening, lead to the understanding of *atman* as the most essential or central vital principle and it parallels the ancient concept of *psyche*. This ancient distinction between body and a principle separate from it, which is responsible for life and activity, is found commonly all over the world. While modern psychology has banished this separate principle, it has been elevated as the highest principle in Indian tradition in the *Upanishads*. This marks the crucial distinction between modern psychology and Indian psychology (Salagame, 2008).

Another ancient term that has parallels with *psyche* is *jiva*. *Jiva* represents life as against *nirjiva* (lifeless). This is equivalent to animate and inanimate and it has become associated with the principle of consciousness/awareness in a living organism as against dead. It also has the connotations of energy, movement and action all derived from vitality or life principle. Though both *atman* and *Jiva* are associated with the life principle, the latter is conceived as the life force in an individual, which later comes to mean the empirical self.

Atman, on the other hand, is understood as the fundamental principle of the universe in the *Upanishads*, which represents both awareness and energy. Even mental functions are all considered modifications of *atman* only (*Aitareya Upanishads*, Chapter III, *shloka* 1-4). It is important to realize that a single principle is upheld as governing everything and *atman*, *jiva*, and all mental activities are viewed as manifestations of Brahman (supreme spirit/consciousness) alone in different functional ways.

The concept of *atman* is questioned in other Indian systems, which has significant implications for the development of psychological thinking. Even within the Vedic tradition from which *Upanishads* and schools of Vedanta have emerged, we find only the Advaita Vedânta School not accepting the ‘reality’ of the distinction between *âtman* and *jiv* in ontological sense, but other schools admitting them.

Thus, it can be said that Indian tradition has concepts parallel to the Greek *psyche* and made similar distinctions in understanding behavior. The distinction made between *deha* (gross physical body) on the one hand and *manas* and *atman* on the other in early *Rg Vedic* period was the first precursor of later psychological thinking. This tripartite distinction can be found as body, mind and soul in Western traditions also. Unique to Indian tradition and ethos is the concept of *atman*. Its implication is so vast that it remains an integral part of Indian thinking - classical and folk - even today; *atman*, *manas*, and *deha* are in the linguistic repertoire of all Indians - illiterate and literate. While Western thinking progressively veered towards *body centeredness*, Indian tradition remained predominantly *spirit centered*, and that is the foundation of Indian psychological thought (Salagame, 2008). In this background various psychological concepts have been developed in Vedic, Vedic related and non-Vedic systems.

5.6 DEVELOPMENT OF PSYCHOLOGICAL CONCEPTS AND PERSPECTIVES

While most psychological concepts originated in the Vedas, much of their later development happened in the *Upanishads*. In view of this we can treat Vedic and post-Vedic philosophy as one unit contributing to a major movement of psychological thought. Within this movement there were many *rishis* who contributed their views over several centuries leading to different schools of thought. For example, *Aitareya Brahmana* and the *Aitareya Aryankas*, represent together a homogenous body of doctrines that may be judged as the formulation of a particular individual i.e., of Mahidasa *Aitareya*, or of a particular school of thought, i.e., the *Aitareya School*. However, the *Aitareya Upanishad* contains the views of many other individuals and schools in addition to those of *Aitareya School*. On the other hand, *Taittiriya*

Brahmana, *Taittiriya Aryanka* and *Taittiriya Upanishad* represent the views of Taittiriya only and hence can be termed as Taittiriya School. Varuna, father of Bhrgu Varuni, is considered as the best exponent of Taittirîya School. Aitareya and Taittiriya schools have their origin in *Rg Veda* and *Krishna Yajurveda* respectively. Aitareya School is earlier to Taittiriya School. Such a continuity of thought cannot be found in *Kausitiki*, *Brhadarnayaka*, and *Chhandogya-Brahmana Upanishads*, which are compilations containing the views of several teachers, differing in content from one another (Barua, 1921).

In addition to the above Upanishadic schools from whose teachings emerged later systems like Purva Mimamsa (founder Jaimini) and Uttara Mimamsa (also known as Vedanta – founder Badarayana), there were other independent thinkers like Kapila, Patanjali, Kanada, and Gautama who propounded their own theories leading to Samkhya, Yoga, Vaisheshika and Nyaya systems. Since these thinkers accepted the Vedas as a valid authoritative source of knowledge, I have termed them as *Vedic related systems*. Since all these systems held different world views their understanding and interpretation of *atman*, *manas*, and *jiva* differed significantly.

Non-Vedic systems viz., Jainism and Buddhism strike a different note among Indian traditions. It is likely that non-Vedic thought was influenced more by pre-Vedic traditions. Hence, Vedic and post-Vedic thought and non-Vedic thought could be treated as precursors for two independent systems of psychology, within which we can identify many schools. These different systems have affirmed monistic or dualistic world-view and it is not necessarily characteristic of either of the systems. For instance, we have *Advaita Vedanta* (Non-dualism) and *Dvaita Vedanta* (Dualism) both of which belong to the Vedic stream. Non-Vedic philosophers seem to have influenced Jain and Buddha traditions more. If we accept the suggestion of Ajaya (1983) that Indian systems can be hierarchically arranged beyond Piaget's formal operational thought as "dualistic" and "unitive", then all Indian thought systems may be considered to have emerged from post-Piagetian stages, except that of Carvakas school, which is out and out materialistic and reductionist. Hence, the primary and fundamental assumptions and tenets of systems and schools of Indian thought cannot be understood with reference to modern scientific psychology and its systems (Salgame, 2008).

Just as we have specific schools and theories focused on one or the other aspects, like behaviorism was focused on learning, gestalt theory on perception, humanist psychology on personality and growth, psychoanalysis on unconscious, existentialism on the issue of meaning of life, free will and determinism and so on, the different systems and schools of Indian thought have also focused on certain processes and issues. Some of them are listed as examples as

potential sources for developing specific theories and models of psychology. For instance, contemporarily both Western and Indian psychologists have concentrated on Vedanta and Yoga as psychologies of consciousness and transcendence. Upanishads and Vedanta can contribute more for the understanding of consciousness and self, from ordinary to extraordinary states and empirical to transcendental self. Similarly many Indian psychologists have already explored the concept and theory of *triguna* in Sankhya for their potential to develop psychological typologies and have developed instruments (see Murthy & Kumar, 2007 for a review of this work). Along with the concepts *ahamkara*, *buddhi* and *citta*, a comprehensive theory of motivation, personality and values can be developed.

The many discussions on the theories of knowing and epistemology in *Nyaya* address cognitive processes like perception, reasoning and criteria of truth and right knowledge and also errors and distortions in cognition and hence can contribute to developing a cognitive psychology that also takes into account intuition as a valid source of knowledge. The *Vaishishika* with its emphasis on determining the specific nature and property of objects and also uniqueness can help in developing a psychology of individual differences. *Purva Mimamsa* with its emphasis on what is known as *karma kanda* and *Bhagavad Gita*'s emphasis on *nishkam karma* can help develop theories of human motivation and action, of control and of personal efficacy. *Dharma Uastra* and *Gnyha Sutras* speak about one's social life, conduct, and ethics and also about social institutions like marriage and family, which can help develop developmental and social psychology. *Natyauastra* of Bharata and the entire Sanskrit literary works can help us develop an understanding of human affect. *Vyākaraṇa* is psycholinguistics. *Ramayana*, *Yoga Vasishtha*, *Mahabharata*, *Bhagavad Gita* can provide insights into the practical aspects of dealing with life's problems and help develop counseling psychology. The *Ayurveda samhita* can be used to develop an understanding of biological processes, mental illness and therapy. This list can be continued but is not meant to be exhaustive and readers may think further on these lines (Salagame, 2008).

5.6.1 Modern psychology and Indian thought

Modern scientific psychology has limited itself to the study of the three states of consciousness. It does not recognize the fourth or pure consciousness, called *turiya* in *Mandukya Upanishad*. This is because modern psychology has emerged in the western intellectual tradition (see Unit on Western Perspectives) within the scientific framework, with its denial of anything other than the material universe that can be known through our sensory perception. Therefore, in modern psychology whatever we experience in our waking state through our five senses is given the topmost priority. Such experiences which do not involve

any of the sense organs like 'telepathy', 'clairvoyance', and others generally called as 'extra-sensory perception' or 'psychical phenomena' are rejected as pseudophenomena. If you take an introductory text book on psychology, you will not find anything on these phenomena. If you take a book on cognitive psychology, you will not find anything on intuition. If you take a book on personality, you will not find anything on transcendental Self. Only recently textbooks on psychology discuss about states of consciousness. But you will find there are laboratory studies on 'brain states' i.e., activity of the different areas of the brain during hypnosis, meditation, sensory deprivation and so on.

Compared to the study and understanding of human nature by the ancient Indian seers and sages the scope of modern psychology is limited. Our ancient rishis had the distinct advantage of transcending the limitations of ordinary waking state and thus were able to fathom the whole range of phenomenal experience starting from normal to what is called paranormal and mystical. In the contemporary terminology our rishis experienced a whole range of 'altered states of consciousness' (ASCs) and studied the nature and function of mind from a broad perspective. Because of this the way Indian seers have understood the psychological processes differ from the understanding of modern psychologists. Bearing this in mind we have to understand the Indian systems of thought.

5.6.2 Implications for Psychology

Indian thinkers always made a distinction between what is knowable from perception and reasoning, which is within the limits of ordinary waking conscious state, and knowledge obtained from intuition (heterodox systems) and from revelation (orthodox systems). This led them to distinguish between different orders of reality as well. Therefore, all the philosophical discussions centered on the ultimate nature of reality and the valid means of coming to terms with it. In this process ancient thinkers necessarily distinguished between ordinary human experience and non-ordinary human experience. In their quest to know the ultimate truth, they were more concerned with the non-ordinary human experience rather than the ordinary human experience and hence did not pay much attention to the development of a discipline of psychology as we understand it today. Hence, much of the psychological discussions in the orthodox and heterodox systems were focused on perception and its nature and it is possible to develop a Psychology of Perception from Indian perspective based on these two distinct thought trends.

Second, there is a lot of information related to intuition and revelation – their nature, characteristics and classification – which is completely neglected in mainstream modern

psychology but very much part of psychical research and parapsychology and now that of the newly emerged branch, “transpersonal psychology”.

Third, it was noted that nature of soul formed a very important part of the philosophical discourses in India. It has resulted in rich insights on the nature of self that requires further attention.

Fourth, the ancient thinkers explored different states of consciousness viz. *jagrat*, *swapna*, and *sushupti* (waking, dream, and sleep) and also spoke of “pure consciousness” (*turîya*, the fourth), which according to them is the ‘ground state’ on which waking, dream and sleep occur as ‘figure’ (see unit on Gestalt Psychology to understand figure-ground relationship).

Fifth, all types of yoga methodologies developed as ways of developing intuition or obtaining revelation. According to many scholars, in the beginning, i.e., during Vedic period they were natural capacities of many persons and that is the way their his mind worked. But as the time passed and by the end of the Vedic period this natural way of experiencing reality was lost and later thinkers had to develop techniques of altering their state of consciousness, to use modern day terminology. What this means is that Vedas and the philosophy derived from Vedic insights are products of a different type of psychology, so to say, as compared to those which are developed out of Vedic-free thinking. Hence, in understanding Indian thought we need to be aware that we are speaking of knowledge emerging from different types of mentality and perhaps one cannot be substituted for the other. On the other hand, the two may complement each other.

5.6.3 Indian thought-development or decline?

When we trace the Indian thought and its psychological underpinnings we find that the development is not a simple linear progression. It appears there is some kind of decline in the human capacity. Regarding this Mukerji (1953, p.475-476) has made some very pertinent observations. He notes that out of the many philosophical subjects discussed in our country discourse on soul occupy the most prominent place in the cultural life of India because political organizations, ethical codes, social institutions, and religious rites and observances have all been determined by the attitude the Indian people have assumed to this supreme problem in the successive phases of their long history. This he attributes to a persistent belief in Indian culture, that a correct knowledge of the *Atman* provides the only remedy for the evils and sufferings incidental to human existence. Hence self-knowledge came to occupy the highest place in the hierarchy of man’s duties and obligations and discussion on this subject reached its peak as early as the age of the Upanishads.

Nevertheless, Mukerji observes that it is wrong to assume that the chronological history of Indian speculations on the *Âtman* always corresponded to the stages in a progressively perfect analysis. “On the contrary, the fact seems to be that some of the post-Upanishadic developments, when judged by the standard of logical correctness, were symbolic of a retrograde process and a speculative decline. “Mukerji considers it inevitable because he says “Truth is as much a concern of him who discovers and transmits it, as of him who receives it; and the most unfortunate thing is that men differ profoundly in their capacity to receive what has been discovered by a philosopher of genuine insight. The profounder an analysis, the deeper is the insight it needs for its correct appreciation. Thus it came about that a backward movement in the speculations on the *Âtman* set in even during what is generally known as the Upanishadic age, and this was due to the comparatively inferior intellectual equipment of the majority, who could not reach the dizzy height in which the minority’s thoughts had moved.”(p.475-476).

5.7 DEVELOPMENT OF “INDIAN PSYCHOLOGY”

Since the beginning of 20th century it was Western scholars who first attempted to synthesize the psychological insights of ancient India and presented them as psychology. To my knowledge the first such work was *Buddhist Psychology* by Mrs. Rhys Davids published in 1914. Earlier to this in 1901 Hans Jacob’s published *Western Psychotherapy and Hindu Sâdhanâ* which provides a comparative perspective. Geraldine Coster published *Yoga and Western Psychology: A comparison* in 1934 and in 1936 Mrs. Rhys Davids published another book titled *The Birth of Indian Psychology and its Development in Buddhism*. Such attempts by foreigners indicate that it is the desire and will that matters in developing Indian perspectives on psychology more than linguistic and academic expertise as mentioned by Ramachandra Rao.

Among Indian scholars Jadhunath Sinha first published his *Indian Psychology: Perception* in 1936. He was inspired by the works of Rhys Davids. He subsequently worked on this project leading to three Volumes on *Indian Psychology* (Volume 1 – Cognition; Volume 2 – Emotion and Will; and Volume 3 – Epistemology of Perception). They are monumental works to this day because they provide a very comprehensive view of the rich insights

in Indian traditions, though at first reading the content of these volumes appears more philosophical for a modern day psychologist. Nevertheless, these early works inspired many other Indian scholars to write books on Indian Psychology. Noteworthy among them are Swami Akhilananda’s *Hindu Psychology: Its Meaning for the West* (1948) and *Mental Health*

and *Hindu Psychology* (1952); Ramachandra Rao's (1962) *Development of Psychological Thought in India*; Raghunath Safaya's (1975) *Indian Psychology*; Saraswathi Chennakeshavan's (1960) *Concept of Mind in Indian Philosophy*, Mohan Lal Mehta's (1955) *Jaina Psychology*; and Kalghatgi's (1961) *Some Problems in Jaina Psychology*. P.H. Prabhu's (1962) *Hindu Social Organization* was an important contribution to social psychology.

In the last two decades we have second generation works on Indian psychology, which provide a comparative perspective in addition to presenting the Indian insights and also address specific themes. This includes Anand Paranjpe's *Theoretical Psychology: East and West* (1983) and *Self and Identity in Modern Psychology and Ancient Indian Thought* (1998), Kuppaswamy's (1985) *Elements of Ancient Indian Psychology*, Ross Reat's (1990) *The Origins of Indian Psychology*, Srivastava's (2001) *Systematic Survey of Indian Psychology*, and Prakash Veereshwar's (2002) *Indian Systems of Psychotherapy*. The most recent ones are *Handbook of Indian Psychology* (2008) edited by K. Ramakrishna Rao, Anand C. Paranjpe and Ajit K. Dalal and *Foundations of Indian Psychology: Theories and Concepts (vol. 1) and Applications (vol. 2)* (2011)⁷ edited by Matthijs Cornelissen, Girishwar Misra and Suneet Varma. Chapters in these books are written by Indian and foreign authors and this is the first major attempt to bring together psychological insights of Indian origin by a group of international psychologists.

In addition, we have such works as *Integral Psychology* (Indra Sen, 1952), *Social Psychology of Sri Aurobindo* (Subbannachar), *A Greater Psychology* (A.S. Dalal, 2002), and *Yoga Psychology and the Transformation of Consciousness - A View From Infinity* (Don Salmon and Jan Maslow, 2007) which are rooted in Sri Aurobindo's vision of Integral Yoga and his approach to psychology. All these books⁸ are attempts to bring together their rich psychological insights scattered all over in various sources of Indian traditions.

5.8 SUMMARY

Indian thought originated about 5000 years ago. Though scholars speculate that Indus Valley Civilization that existed in pre-Vedic times has influenced our thought traditions, due to a want of definite evidences it is customary to trace the origins of Indian thought to the Vedas which are the first available literary products of our country. There are certain hypotheses about the origins of the Vedas, which suggest that the Veda mantras are products of a different type of mentality or cognitive style that was lost in course of time. Therefore, the development of Indian thought systems have to be understood with reference to their underlying

psychological basis. So approached it is possible to trace the course of Indian thought development as representing two fundamentally different paradigms viz., Vedic and non-Vedic, with definite characteristics. Vedic thought is unitary and Vedic paradigm affirms monism. The non-dual system of Vedanta, *Advaita Vedânta*, is recognized by scholars and wise people all over the world as the pinnacle of Indian thought development. The other systems take position on some kind of dualism. These have implications for the development of psychological notion in our country.

In spite of wide ranging differences Indian thought traditions agree on certain aspects, which differentiate them from western perspectives. They include recognition of pure consciousness, super conscious states, intuition, paranormal phenomena, a belief in the continuity of life after death, the law of karma, and release from bondage which provide a different perspective on human existence than western thought. These characteristics have formed the bases of our cultural belief system shaping the psyche of Indian people all through. Therefore, in understanding and developing a psychology relevant and appropriate to Indian masses the above characteristics cannot be ignored.

5.9 KEYWORDS

Philosophy	Manas
Upanishad	Citta
Veda	Chittavritti
Jnana	Atman
Jiva	

5.10 CHECK YOUR PROGRESS

1. How do Hiriyanna classify the periods of Indian thought?
2. What are the psychological foundations of Indian thought?
3. What is bicameral hypothesis?
4. Distinguish between shruti and smrti.
5. What are the implications of Indian thought systems for Psychology?

5.11 ANSWERSTOCHECKYOURPROGRESS

1. Hiriyanna's
 - (i) Vedicperiod
 - (ii) Earlypost-Vedicperiod
 - (iii) AgeoftheSystems
2. Study of pramānas or sources of knowledge which includes topics of attention, perception, sensation, imagination, reasoning, memory, language and emotional intelligence.
3. Julian Jaynes postulated that people who existed before 2nd B.C. had *bicameral mind* and it meant they experienced auditory hallucinations. Calls from God from their right hemisphere at the time of novel or stressful situations. This is known as *bicameral hypothesis*.
4. Vedic mantras are known as *shruti*, which in Sanskrit means that which is heard. They were a spontaneous outpouring, *udgeeta*, *udghosha*, of rishis of what they heard. *Smriti* refers to wise saying, knowledge and revelation of wise men preserved, transmitted and remembered.
5. Psychological aspects of Indian systems have the following implications for modern psychology.
 - i. They were more concerned with non-ordinary human experiences and hence there is further scope for the study of perception.
 - ii. Lot of information is related to intuition and revelation which has implications for para-psychology and transpersonal psychology.
 - iii. Soul formed the focal point of many discussions.
 - iv. Ancient Indian thinkers explored all the states of consciousness – waking (*jâgrat*), dream (*swapna*), and deep sleep (*sushupti*) and also pure consciousness (*turîya*) .
 - v. Yogamethodologies were developed which could be applied to achieve higher states of consciousness.

5.12 REFERENCES

1. Barua, B.M. (1921). *A history of pre-Buddhist Indian philosophy*. Delhi: Motilal Banarsidass Publishers
2. Dandekar, R. N. (1941/1981). 'Somatism of Vedic psychology'. In: R. N. Dandekar *Exercises in Indology*. Delhi: Ajanta Publishers.
3. Deikman, A. J. (1971). Bimodal consciousness. *Archives of General Psychiatry*, 25, 481-489.
4. Georg Feuerstein (1989) (*Yoga – The technology of ecstasy – Los Angeles: Jeremy P. Tarcher*) Hiriyanna, M. (1993) *Outlines of Indian Philosophy*. New Delhi: Motilal Banarasidas Publishers. (Originally published in 1932 in UK).
5. Jaynes, J. (1976). *Origins of Consciousness in the Breakdown of the Bicameral Mind*. New Jersey: Princeton University Press.
6. Joshi, K & Cornillisen, M. (2004). *Consciousness, Indian psychology, and yoga*. New Delhi: Centre for Studies in Civilization
7. Kumar, S.K.K., (2008). Indian thought and traditions – A psycho-historical perspective. In K.R. Rao, A.C. Paranjpe and A. K. Dalal (Eds.) *Handbook of Indian Psychology*. New Delhi: Cambridge University Press of India.
8. Kumar, S.K.K. (In press). 'Indian indigenous perspectives: Developments and future possibilities'. In: G. Misra (Ed.). *Fifth ICSSR Survey of Research in Psychology*. New Delhi: Pearson Education Leahey, 2004).
9. Marx, M.H., and Hillix, W.A. (1978). *Systems and Theories of Psychology* (2nd Ed.). New Delhi: Tata McGraw-Hill.
10. Maslow, A.H. (1971). *Farther Reaches of Human Nature*. New York: Penguin Books
11. Misra, G. & Mohanty, A.K. (Eds.). (2002). *Perspectives on Indigenous psychology*. New Delhi: Concept Publishing Company
12. Mukerji, A.C. (1953). Nature of the Soul. In H. Bhattacharya (Ed.) *The cultural heritage of India, Vol. III*. Calcutta: The Ramakrishna Mission. Murthy & Kumar, 2007
13. Rangachar, 1961 – *Outlines of the history of classical Sanskrit literature – Mysore: Samskrita Sahitya Sadana*.
14. Sharma, S.N. (1973). *A History of Vedic Literature*. Varanasi: The Chowkamba Sanskrit Series Centre Office.
15. Sri Aurobindo. (1956). *On the Vedas*. Pondicherry: Sri Aurobindo International University 81

UNIT-6: EASTERN PERSPECTIVES

Structure

- 6.1 Objectives
- 6.2 Introduction
- 6.3 China
 - 6.3.1 Naturalistic and social foundations of Chinese perspectives
 - 6.3.2 Taoism
 - (Daoism) 6.3.2.1 Terminology
 - 6.3.2.2 History
 - 6.3.2.3 Philosophical Taoism
 - 6.3.2.4 Taoist Religion
 - 6.3.2.5 Taoist perspective
 - 6.3.2.6 Tai Chi
 - 6.3.3 Confucianism
 - 6.3.3.1 Terminology
 - 6.3.3.2 History
 - 6.3.3.3 Beliefs and Practices
 - 6.3.3.4 Confucian Psychology
 - 6.3.3.5 Distinctive contribution of Chinese culture to Psychology
- 6.4 Japan
 - 6.4.1 Background
 - 6.4.2 Shinto
 - 6.4.2.1 Terminology
 - 6.4.2.2 History
 - 6.4.2.3 Worldview and Characteristics
 - 6.4.2.4 Shinto beliefs and practices 82

- 6.5 Eastern and western perspectives - differences and similarities
 - 6.5.1 Differences
 - 6.5.1.1 Perception of God and gods
 - 6.5.1.2 Relationship between God and the Universe
 - 6.5.1.3 Relationship between the individual and the universe
 - 6.5.2 Similarities
 - 6.5.2.1 Attempts at synthesis
- 6.6 Summary
- 6.7 Keywords
- 6.8 Check your progress
- 6.9 Answers to check your progress
- 6.10 References

6.1 OBJECTIVES

After reading this unit, you will be able to:

- Background and foundations of Chinese and Japanese Psychology
- Bring out the differences between the Eastern and the Western perspectives.

6.2 INTRODUCTION

In tracing the origins of psychology from Eastern perspectives, besides India the perspectives of China, Japan, Korea and other countries of Asia are equally important. We find valuable psychological insights developed within the framework of religio-spiritual traditions of those cultures such as Daoism (Taoism) and Confucianism of China and the ones that developed in Japan like Shintoism and Zen Buddhism. In this Unit we will be discussing about the fundamental assumptions of those traditions and how they have influenced the behavior of people in those cultures. In the end the significant differences between Eastern and Western perspectives on human nature are discussed which provide a background to appreciate the relevance of indigenous perspectives on psychology.

6.3 CHINA

The practice of naive psychology was widespread in ancient China, and many present-day psychology applications could trace their roots to thousands of years ago. For instance, the roots of psychological testing can be traced back to the concepts and practices of ancient China for some 3,000 years when various methods for measuring talent and behavior were popular, such as observing traits from behavioral changes, identifying intelligence by response speed, eliciting personality across situations, and measuring mental attributes through interviews. The purpose of all these tests was to allow the Chinese emperor to assess his officials' fitness for office. In *Medical Principles of the Yellow Emperor*, the first Chinese encyclopedia of medicine, published about 2,000 years ago, links between brain pathology and psychological problems were described, and a bio psycho-social model was the main approach to medical and mental treatment. Another famous ancient Chinese text, Sun-Tzu's classic book *The Art of War*, was written 2,500 years ago. It is a treatise on strategies of warfare containing an analysis of human nature, organization, leadership, the effects of the environment, and the importance of information and may have influenced the development of modern organizational psychology. However, psychology in China did not develop into a systematic discipline, despite the fact that the concepts of psychology have deep roots in

Chinese civilization dating back thousands of years. When Chinese intellectuals began the reform movement in the early 1900s, they promoted an uncompromising rejection of Chinese traditions (especially those with Confucian roots) and advocated total or whole-hearted Westernization in terms of science, resulting in import of psychology from the West (Louise & Mo, 2002), as it happened in India.

6.3.1 Naturalistic and social foundations of Chinese perspectives

Unlike the systems of Indian thought which are rooted in non-ordinary cognitions and in transcendent experience of pure consciousness we can trace the origins of Chinese religious and philosophical perspectives to natural and social factors. Hawkins (2004) notes that in the West religion had always been associated with the human being's relation to the divine and when Europeans got acquainted with India they found that the Indian religion was essentially the same as theirs. Further, Indians had reached some radically different answers to the great questions of life and death.

In contrast, it was not the case in China and the central concerns of Indian and European religions was of little or no interest. According to Hawkins, the Chinese were much more concerned with practical issues of human existence in this world rather than the hereafter and the ultimate purpose of human life. Therefore, even though the Chinese had some interest in metaphysical speculation it was governed and shaped by practical, this-worldly concerns and their experience of the natural world. Thus, neither Daoism (Taoism) nor Confucianism focused on questions that were central for European and Indian cultures. "This does not mean that the Chinese lacked 'religion', but they approached the great questions of human existence from a very different perspective than did the Europeans or Indians" (Hawkins, 2004, p. 179).

Since ancient times China has been facing such problems as huge population density, variability in climate and inclement weather, drought, floods, etc. Added to this was lack of cohesion and unity among different kingdoms. Thus, a major concern for the ruling class was the problem of right governance, which helps to overcome these problems through proper management and utilization of natural and human resources. As a matter of fact, many of the preoccupations of the ruling class were focused on production of a standardized culture that may bind the country together under a single ideology. Hawkins notes that "the reaction of the two major divisions of society, the rulers and the ruled, to their sociogeographical reality has shaped their religious thinking quite profoundly" (p. 177). It was this central concern that shaped many of the Chinese religious-philosophical speculations.

Besides the sociogeographical aspect another foundation of Chinese thought lay in the extended family. The Chinese extended family unit existed widely dispersed in time and space and their members were spread throughout the local villages and in those which surrounded it. It often included three or four generations living under the same roof. This extended family unit was seen as the building block of Chinese society and not the individual. Each family was seen as descending from a founding ancestor to whom it and other related families traced their origins. This emphasis on family and its ancestral roots had direct implications for the development of Chinese religion.

The Chinese recognized three classes of supernatural beings – gods, ancestors and ghosts. The gods were the government officials of the spirit world; the ancestors were the family carried into eternity; and ghosts were those elements of Chinese society that disrupted its orderly flow – the counterparts of beggars and thieves in the natural world. Each of these supernatural agents had his or her role to play in the drama of existence. However, the Chinese belief is that the unseen aspects of Reality originate from this world and hence the supernatural was seen as an extension of the structures and realities of the natural world and it was considered important so far as it aided one's worldly concerns. Thus, the Chinese understanding of the supernatural realm differs quite markedly from that of other religions.

The most significant and primary aspect of the Chinese religions was the 'cult of the ancestors'. Ancestors were seen as being able to influence events in this world and hence regular worship was directed toward these supernatural figures in the form of offerings of food, incense, and spirit money. In comparison, the Chinese do not see the gods (*shen*) as complete omnipotent beings in the way the other Western and Indian traditions view. Though the powers and knowledge of these gods far exceeded that of human beings they were by no means as absolute as that ascribed to God in the Jewish, Christian, and Islamic religions. Gods are distinctly geographically limited in their influence. Generally, they tend to be efficacious in only one village or urban neighborhood. Limit of their power depends on a complex constellation of factors that include the god's perceived efficacy, social divisions, and other factors. A ghost, a *gui* (pronounced, *kuei*), is a person who was not given the proper funeral ceremony. Even though a ghost is not actively malevolent, is certainly not well-disposed to humans. Hence, they must be propitiated with proper rituals and offerings of food and other goods, at the appropriate times of the year so that their disruptive influence can be minimized. In this background we need to understand the two important religious perspectives prevalent in China viz., Taoism (Daoism) and Confucianism, which influenced the psyche of Chinese people and also of other Asian countries to where they spread.

6.3.2 Taoism(Daoism)

6.3.2.1 Terminology: There are two commonly used systems for translating the Mandarin Chinese language into Roman letters: (a) Wade-Giles: This system is commonly used in Taiwan and the U.S. The Chinese character for “Way” becomes “Tao,” which leads to the English word “Taoism.”; (b) Hanyu pinyin or Pinyin: This system was developed by the Chinese people and is now finding increased use worldwide. The “Way” becomes “Dao,” which leads to the English word “Daoism.” The “Dao” is pronounced like the “Dow” in “Dow-Jones Index.” (www.religioustolerance.org/taoism)

Taoism is an “umbrella” concept under which different religious expressions share certain core characteristics, like Hinduism. “The constellation of Chinese beliefs that grew out of the experience of the natural world is collectively termed Daoism” Taoism is broadly divided into two groups viz., *philosophical Taoism* and *Taoist religion*. The philosophical Taoism is called Tao-Chia (*Daojia*), the School of the Way. Daoist religion is called Tao-Chiao (*Daojiao*). It was a later development, with its texts appearing around 100 C.E. (Hawkins, 2004, p. 190).

6.3.2.2 History: The founder of Taoism is believed by many to be Lao-Tse (604-531 BCE), an older contemporary of Confucius. (Alternative spellings: Lao Tze, Lao Tsu, Lao Tzu, Laozi, Laotze, etc.). He was searching for a way that would avoid the constant feudal warfare and other conflicts that disrupted society during his lifetime. The result was his book: *Tao-te-Ching (Daodejing)*.

Others believe that Lao Tse is a mythical character. Laozi (Lao-Tzu) means literally “old master” and it is a title rather than the name of any person. In China, as in India, it was customary to trace schools of thought back to definite founders and the figure of Laozi probably developed to give the emerging Daoist School of philosophy credibility and a sense of focus. This view is further suggested by the fact that the next great philosopher of Taoism, Zhuangzi, never mentions Laozi nor do other writers, including Mencius, a Confucian, who catalogued and refuted all the schools of thought that were not orthodox Confucianism. Nevertheless, the influence of Laozi, real or fictional, on Chinese thought is greater than that of any other single person, except that of Confucius (Hawkins, 2004).

6.3.2.3 Philosophical Taoism Taoism emerged consequent to an attempt to codify wisdom gained from the natural world into a coherent philosophy. Philosophical Taoism had only a brief period of activity from about 500 to 200 B.C.E. “Different Chinese philosophers, writing probably in 5-4 centuries B.C., presented some major ideas and a way of life that are nowadays known under the name of Taoism, the way of correspondence between man and the tendency

or the course of natural world.” (Alan Watts - “Tao: The Watercourse Way.”). But it had lasting impact on Chinese thought. It was formulated as a counterpoint to the more active politico-ethical systems of thought such as Confucianism, Mohism, and Legalism. All these philosophical systems were originally conceived for a similar purpose – the regulation of society. They were aimed at a similar audience – the ruling class of the states that made up the China of the Warring States period.

Tao-te-Ching attributed to Laozi (Lao-Tzu) and the *Zhuangzi* (*Chuang Tzu*) of Zhuangzi are the two texts of the philosophical Daoism and they were meant to be read by as wide an audience as possible. The *Tao Te Ching* (*Daodejing- the Book of the Way and its Power*) has been immensely influential and not just in its Chinese homeland. It has been translated into more languages than any book of scripture except the Bible. The text is extremely brief running to only some five thousand Chinese characters. Traditionally it is divided into two sections; the first contains 37 chapters, the second 44. The book is an anthology (collection) of related aphorisms collected by various compilers at an uncertain date probably between 500 and 200 B.C.E. Therefore, Hawkins opines that it is wrong to look for a coherent philosophy in the work. Even then a number of powerful themes run through it that continue to be echoed in later Chinese philosophy.

6.3.2.4 Taoist Religion Though specific religious aspects are not mentioned in the *Tao-te-Ching* or *Zhuang Zi*, as Taoism spread in China it became mixed with other, pre-existing beliefs, such as Five Elements theory, alchemy, ancestor worship, and magic spells. The texts of the Taoist religion were more esoteric and were originally aimed at a small group and at first had only limited circulation. Nevertheless, by the fifth century C.E. the literature related to Taoist religion grew in numbers and were collected together and the canon of the texts that emerged were together known as the *Tao-tsung* (*Daozung*) and was fixed by 15th century and ran to almost 1500 titles. Thus, scholars of Taoist religion have a vast amount of material for study (Hawkins, 2004).

Taoism which started as a combination of psychology and philosophy thus evolved into a religious faith in 440 CE when it was adopted as a state religion. At that time Lao-Tse became popularly venerated as a deity. Taoism, along with Buddhism and Confucianism, became one of the three great religions of China. Chinese Chan Buddhism was also directly influenced by Taoist philosophies. Eventually elements of Taoism were combined with elements of Buddhism and Confucianism in the form of Neo-Confucianism. Taoism currently has about 20 million followers, and is primarily centered in Taiwan. About 30,000 Taoists live in North America; 1,720 in Canada (1991 census). Taoism has had a significant impact on North

American culture in areas of ‘acupuncture, herbalism, holistic medicine, meditation and martial arts...’ (www.religioustolerance.org/taoism).

Attempts to procure greater longevity were a frequent theme in Taoist alchemy and magic, with many extant spells and potions for that purpose. Many early versions of Chinese medicine were rooted in Taoist thought, and modern Chinese medicine as well as Chinese martial arts are still in many ways concerned with Taoist concepts such as Tao, Qi, and the balance of Yin and Yang (www.religioustolerance.org). (see Sub-Section 6.3.2.5 below).

6.3.2.5 Taoist perspective The central concept of the Taoism is the idea of the Tao, which literally translates as the “way” or “path”. But it has many other connotations and Hawkins observes that “the best way to conceptualize it is to say that the Dao is the essential source or ground of the universe. Consequently, it totally transcends any human ability to describe it.” (Hawkins, p. 191). Tao brings everything into being and continues to sustain that being. From this it necessarily follows that the Tao must have preceded the universe and is the ultimate Reality. It is described as “a constantly moving, ineffable process of change, interaction, and adaptation that is undergirded and motivated by an eternal but indescribable principle that operates according to its own set of unknowable dictates” (ibid. p.192). It “refers to a power which envelops surrounds and flows through all things, living and non-living. The Tao regulates natural processes and nourishes balance in the Universe.” (www.religioustolerance.org/taoism). Thus, Tao is basically indefinable. It has to be experienced. The Taoists concluded that “the greatest human happiness must necessarily lie in achieving congruence with this first principle in which the material universe lived, moved and had its being” (Hawkins, p.192).

Another important theme of Taoism is the concept of polarity, later came to be known as yin and yang. This is represented in a well-known Taoist symbol. “It represents the balance of opposites in the universe. When they are equally present, all is calm. When one is outweighed by the other, there is confusion and disarray.” There are different interpretations about what yin and yang derived (www.religioustolerance.org/taoism).



The Yin Yang symbol

The most traditional view is that ‘yin’ represents aspects of the feminine: being soft, cool, calm, introspective, and healing... and “yang” the masculine: being hard, hot, energetic, moving, and sometimes aggressive. Another view has the ‘yin’ representing night and ‘yang’ day”. According to one source it was derived from astronomical observations which recorded the shadow of the sun throughout a full year. The two swirling shapes inside the symbol give the impression of change — the only constant factor in the universe. One tradition states that Yin (or Ying; the dark side) represents the breath that formed the earth. Yang (the light side) symbolizes the breath that formed the heavens. Allan Watts, a well known psychotherapist, describes the yin and yang as negative and positive energy poles. They are associated with such polarities as the masculine and the feminine, the firm and the yielding, the strong and the weak, the light and the dark, the rising and the falling, heaven and earth, and they are even recognized in such everyday matters as cooking as the spicy and the bland. Since nothing in nature is purely black or purely white, the symbol includes a small black spot in the white swirl, and a corresponding white spot in the black swirl. Ultimately, the ‘yin’ and ‘yang’ can symbolize any two polarized forces in nature. Taoists believe that humans often intervene in nature and upset the balance of Yin and Yang. (www.religioustolerance.org/taoism).

Chinese Taoist scholars considered that opposition exists everywhere in the universe and that the synthesis of contrary systems operates to form an integrated unity, which is a manifestation of the power and operation of the Yang and the Yin. These powers are the mainspring of every activity, the mechanism of constant change and balance, which maintain the harmony of the cosmos. According to Lao-tzu nature keeps a proper balance in all its working. If any activity moves to an extreme in one direction, sooner or later a change occurs to swing it back toward the opposite. This thinking may have influenced Jungian psychology, for “Jung discovered the self from Eastern philosophy and characterized it “as a kind of compensation for the conflict between inside and outside”. In addition, recent findings indicate that the self-actualization theories of Rogers and Maslow bear certain similarities to concepts in Taoism and Zen Buddhism (Louise & Mo, 2002).

Some of the important beliefs and practices of Taoism are as below.

- Tao is the first-cause of the universe. It is a force that flows through all life.
- Each believer’s goal is to harmonize themselves with the Tao.
- The many gods are manifestations of the one Tao, which could not be represented as an image or a particular thing.

- There is no personified deity nor is the universe created by any God. Hence, there is no God to pray nor there is one to hear the prayers or to act upon them.
- Answer to life's problems are to be sought through inner meditation and outer observation.
- Time is cyclical, not linear as in Western thinking
- Taoists strongly promote health and vitality.
- Five main organs and orifices of the body correspond to the five parts of the sky: water, fire, wood, metal and earth.
- Each person must nurture the *Ch'i* (air, breath) that has been given to them.
- Development of virtue is one's chief task. The *Three Jewels* to be sought are compassion, moderation and humility.
- Taoists follow the art of "*wuwei*," which is to let nature take its course. For example, one should allow a river to flow towards the sea unimpeded without erecting a dam which would interfere with its natural flow. (www.religioustolerance.org/taoism).

6.3.2.6 Tai Chi: It is an exercise and movement technique practiced by the followers of Taoism. It works on all parts of the body. Traditional Chinese medicine teaches that illness is caused by blockages or lack of balance in the body's *chi* (intrinsic energy). Tai Chi is believed to balance this energy flow. It stimulates the central nervous system, lowers blood pressure, relieves stress and gently tones muscles without strain. It also enhances digestion, elimination of wastes and the circulation of blood. Moreover, tai chi's rhythmic movements massage the internal organs and improve their functionality. (www.religioustolerance.org).

6.3.3 Confucianism

6.3.3.1 Terminology Confucianism originated in China from the teachings of K'ung Fu Tzu, Master Kung (551-479 B.C.E). 'Confucius', is a Latinization of Kung Fu Tzu and this Latin name has become widely known and the teachings of Kung Fu Tzu also became known through the Latinized version of his name.

6.3.3.2 History Confucius was born in troubled times during the Spring and Autumn (770-481 B.C.E) period in the state of Lu (modern day Shantung Province). Confucius lived during the Chou dynasty, an era known for its moral laxity. During his time there were many kings and a civil war was going on and many were wishing to develop a unified China. Confucius was worried about the troubled times he lived in. He went from place to place trying to

spread his political ideas and influence the many kings contending for supremacy of China. He promoted the ancient virtues of illustrious kings such as the Duke of Zhou. He wanted to found a new dynasty by gaining sufficient political power to implement his ideas, but did not succeed. He was known as a “King without a crown”. Later in life, he wandered through many states of China, giving advice to their rulers. He accumulated a small band of students during this time. The last years of his life were spent back in Lu, where he devoted himself to teaching. His writings deal primarily with individual morality and ethics, and the proper exercise of political power by the rulers. The *Analects of Confucius* is considered as the closest work we have as a primary source for his thoughts. It relates discussions with his disciples in short sayings. As this book is a compilation of bits of conversation, questions and answers, or slices of Confucius’ life, there is no description of a coherent system of thought in it. His teachings were later systematized into an ethical and political doctrine by his disciples, which later evolved into a system of philosophy.

In China teachings of Confucius were debated during the civil war and were forbidden during the short-lived Qin dynasty. Confucianism was chosen by Han emperor and used as a political system and a kind of state religion. Despite loss of influence during the Tang dynasty, Confucianist doctrine remained mainstream Chinese orthodoxy for two millennia, until the beginning of 20th century. Since Confucius’ death, many people, mostly in China, Korea, Japan, and Vietnam, have professed Confucianist beliefs. The sacred texts of Confucianism were assembled by Chu Hsi (1130-1200 CE) during the Sung dynasty. There are six schools: Han Confucianism, Neo-Confucianism, Contemporary Neo-Confucianism, Korean Confucianism, Japanese Confucianism and Singapore Confucianism. There are approximately 6 million Confucians in the world.

6.3.3.3 Beliefs and Practices: Confucianism is primarily an ethical system to which rituals at important times during one’s lifetime have been added. Confucian ethical teachings include the following values: (a) Li (includes ritual, propriety, etiquette, etc.); (b) Hsiao (love within the family: love of parents for their children and of children for their parents); (c) Yi (righteousness); (d) Xin (honesty and trustworthiness); (e) Jen (benevolence, humaneness towards others; the highest Confucian virtue); and (f) Chung (loyalty to the state, etc.).

Since the time of the Han dynasty (206 CE) four life passages have been recognized and regulated by Confucian tradition. They are (1) birth, (2) reaching maturity, (3) marriage, and (4) death. Each of them has associated beliefs and practices, which are as below.

Birth: The spirit of the foetus (T’ai-shen) protects the expectant woman and deals harshly with anyone who harasses the mother to be. A special procedure is followed when the

placenta is disposed of. The mother is given a special diet and is allowed rest for a month after delivery. The mother's family of origin supplies all the items required by the baby on the first, fourth and twelfth monthly anniversary of the birth.

Reaching maturity: This life passage is no longer being celebrated, except in traditional families. It takes the form of a group meal in which the young adult is served chicken.

Marriage: This is performed in six stages: 1) Proposal, 2) Engagement, 3) Dowry, 4) Procession, 5) Marriage and reception, and 6) Morning after.

- 1. Proposal:** The couples exchange the eight characters: the year, month, day and hour of each of their births. If any unpropitious event occurs within the bride-to-be's family during the next three days, then the woman is believed to have rejected the proposal.
- 2. Engagement:** after the wedding day is chosen, the bride announces the wedding with invitations and a gift of cookies made in the shape of the moon.
- 3. Dowry:** This is carried to the groom's home in a solemn procession. The bride-price is then sent to the bride by the groom's parents. Gifts by the groom to the bride, equal in value to the dowry, are sent to her.
- 4. Procession:** The groom visits the bride's home and brings her back to his place, with much fanfare.
- 5. Marriage and Reception:** The couple recites their vows, toast each other with wine, and then take center stage at a banquet.
- 6. Morning after:** The bride serves breakfast to the groom's parents, who then reciprocate.

Death: At death, the relatives cry out loud to inform the neighbours. The family starts mourning and puts on clothes made of a coarse material. The corpse is washed and placed in a coffin. Mourners bring incense and money to offset the cost of the funeral. Food and significant objects of the deceased are placed into the coffin. A Buddhist or Taoist priest (or even a Christian minister) performs the burial ritual. Friends and family follow the coffin to the cemetery, along with a willow branch which symbolizes the soul of the person who has died. The willow branch is carried back to the family altar where it is used to "install" the spirit of the deceased. Liturgies are performed on the 7th, 9th, 49th day after the burial and on the first and third anniversary of the death. (www.religioustolerance.org).

6.3.3.4 Confucian Psychology

Human nature, education, human development, and interpersonal relationships are

central to Confucian thinking. For example, Confucius asserted that “human nature is the order of heaven” by which he meant that our patterns of existence are determined by Nature or by God and proposed it as a common heritage upon which personal and mental development could be based through education. His statement: “by nature close to each other, but through practice far from each other” (Analects 17:2, Dawson, 1993) illustrates the importance of education. In his view people are similar when they are born but they become different as a result of social molding; hence the importance of learning.

Confucius categorized people into three types: superior, medium, and inferior and concluded that everyone should be educated according to their abilities. These ideas are in agreement with the modern idea of everyone’s right to education and the concept of individual differences and the need to provide education whatever their abilities may be.

With regard to human development, Confucius viewed this as a life-long process as stated in the summary of his own life: At fifteen I set my mind on learning, at thirty I became firm in my purpose; at forty I was free from doubts; at fifty I came to know fate; at sixty I could tell truth from falsehood by listening to other people; at seventy I followed my heart’s desire without trespassing the norm of conduct (Analects 2:4; Tang, 1996). A distinctive feature of his outlook is an emphasis on the development of wisdom and social maturity at a later age. Contrary to some modern thinking that human development is primarily an early childhood process (as has been proposed by Freud or Piaget), Confucius gave new insight with the view that development is a life-long process (Louise and Mo, 2002).

6.3.3.5 Distinctive contribution of Chinese culture to Psychology

According to Louise and Mo (2002) the most important contribution of Chinese culture to the application of psychology is that of mental testing. While it is common to think of testing as both a recent and a Western development the origins of testing, however, are neither recent nor Western. As some Western psychometricians have themselves acknowledged (Anastasi, 1988; Kaplan & Saccuzzo, 1993) the roots of psychological testing can be traced back to the concepts and practices of ancient China for some 3,000 years. Various methods for measuring talent and behavior were popular, such as observing traits from behavioral changes, identifying intelligence by response speed, eliciting personality across situations, and measuring mental attributes through interviews (Lin, 1980 cited in Louise and Mo, 2002). The purpose of all these tests was to allow the Chinese emperor to assess his officials’ fitness for office.

Louise and Mo (2002) note that by the time of the Han Dynasty (206 B.C. to A.D. 220), the use of test batteries (two or more tests used in conjunction) was quite common in the civil service examination system with essay writing and oral exams in topics such as civil law, military affairs, agriculture, revenue, and geography. Tests had become quite well developed by the time of the Ming Dynasty (A.D. 1368-1644). During this period, there was a national multi-stage testing program that involved local and regional testing centers equipped with special testing booths. Those who did well on the test at the local level went on to the provincial capital for more extensive essay examinations. After this second testing, those with the highest test scores went on to the nation's capital for a final round of examinations. Only those who passed this third set of tests were eligible for public office.

Testing was also well developed in ancient Chinese folk culture. An article written by a scholar, Yen (531-590), indicated that the so-called "testing the child at one year of age" was a popular custom in southern China. On a child's first birthday, he/she would be placed on a large table full of food, clothing, paper, pens, jewelry, toys, books with, in addition, an arrow and sword for the boys, and needle and thread for the girls. The baby would be encouraged to crawl freely and pick up the item he or she liked best. By observing what the baby grasped first, the proud parents projected the baby's intelligence, personality characteristics and aptitude by the thing taken from the table. This custom lasted until the 20th Century (Zhang, 1988, p. 102). Although clearly not a test by modern standards, it does illustrate a willingness to assess individual differences by concrete means. Zhang (1988) also noted that Lin Xie, a well-known 6th century scholar, designed what appeared to be the first experimental psychological test in the world. He asked people to draw a square with one hand and at the same time draw a circle with the other. His aim was to show that, with interference from the attempt to do the second task, neither task could be done correctly.

It is probable that the Western world learned about these national testing programs through exposure to the Chinese during the 19th century. Reports by British missionaries and diplomats encouraged the British East India Company to copy the Chinese system in 1832 as a method for selecting employees for overseas duty. Testing programs worked well for the company, and the British government adopted a similar system of testing for its civil service in 1855. Later, French, German, and American governments in succession endorsed it, and the testing movement in the Western world has grown rapidly since then (Kaplan & Saccuzzo, 1993). Interestingly, Binet in the 1890s developed a similar test as part of the early psychological work on the effect of distraction (internal and external) on mental tasks and he may have been aware of the Chinese history (Louise and Mo, 2002).

6.4 JAPAN

6.4.1 Background

Geographically, Japan is a land of plenty with lot of natural resources and of peril with susceptibility to earth quakes and volcanic eruptions. This combination made life in Japan uncertain from the beginning and resulted in the consciousness of the ephemeral nature of life that has strongly influenced Japanese art and religion. The earliest inhabitants of Japanese islands are known as the Ainu, who display characteristics more reminiscent of Caucasian than of the Mongolian group. Now reduced to a minority, much like Native Americans in US, they live in northern Japan and still practice a shamanic (communicating with spirits and influencing them) religion centring on reverence for bears as messengers of the spirits. Their religion seems to be of great antiquity sharing many similarities with the hunting and gathering cultures of mainland north eastern Asia. However, later many people from Siberia, Vietnam, Cambodia, Indonesia, Philippines, Korea and China settled in Japan over several centuries and brought their own cultural beliefs into Japan. Japanese have their cosmogonic myths and the native religion of Japan is known as Shinto.

6.4.2 Shinto

6.4.2.1 Terminology The word *Shinto*, from the original Chinese *Shendao* is a combination of “*shin*” meaning gods or spirits; and “*tô*” meaning a philosophical way or path (originally from *dao*). As such, Shinto is commonly translated as “The Way of the Gods.” Some differences exist between *koshinto* (the ancient Shintô) and the many types of Shinto taught and practiced today, showing the influences of Buddhism when it was introduced into Japan in the sixth century.

6.4.2.2 History Unlike most other religions, the indigenous Japanese religion had no real founder, no written scriptures, no body of religious law, and only a very loosely-organized priesthood. It was an amorphous mix of nature worship, fertility cults, divination techniques, hero worship, and shamanism (cult of people communicating with spirits and influencing them). The term Shinto was not used before sixth century C.E. “It seems to have come into use not to describe some organized religion, but rather to distinguish the indigenous traditions of Japan from the imported religions of Buddhism and Daoism, which were entering the country at that time from China and Korea” (Hawkins, 2004, p.288). Nevertheless, the main outlines of this belief system were clear and it was primarily a religion of practice and not speculation.

By the sixth century, the amorphous indigenous religion got systematized and subordinated to the ambitions of the imperial clan, which attempted to consolidate its control

over the islands of Japan, leading to the emergence of a state-subsidized cult centered on the imperial divine ancestress Amaterasu Omikami, the Heavenly Shining Great Deity. This cult was served by three hereditary priestly families. In its first stage of development, the indigenous Japanese religion was a relatively unformed collection of folk beliefs and practices from various sources and ethnic traditions, which coexisted over a long period of early Japanese history.

Beginning in the sixth and seventh centuries C.E. when Daoist, Buddhist and Confucian ideas were introduced from the Asian mainland into Japan, and religious ideas were expressed more clearly in Chinese terms and concepts. Probably then the term Shinto also came into use, as noted above. When the priestly families of the Shinto wanted to usurp power from the traditional emperor and since Shinto had neither a philosophical framework nor an organization to support it, under the influence of other traditions it started losing grounds and got subordinated to Buddhism. This trend continued until the middle of the nineteenth century.

Political scenario changed in Japan in 1868 when the emperor was brought back to power through a coup by Japanese officials known as Meiji Restoration and along with it came a restoration of Shinto as a state religion.

After World War II, Shinto ceased to be Japan's state religion, although it continued to be considered the native religion of Japan. Some Shinto practices and teachings, once given a great deal of prominence during the war, are no longer taught or practiced today, while others still exist as commonplace activities such as *omikuji* (a form of fortune-telling) and the Japanese New Year to which few people give religious connotations. However, Shinto had and continues to have an impact on the practice of other religions within Japan. The Japanese "New religions" that have emerged since the end of the Second World War also show a clear Shinto influence.

6.4.2.3 Worldview and Characteristics Scholars feel that Shinto is a difficult religion to classify because Shinto has no binding set of dogma, no holiest place for worshippers, any person or *kami* deemed holiest, and no defined set of prayers. Shinto does not have as fully developed a theology as do most other religions. It does not have its own moral code.

According to the worldview of Shinto, universe is a vibrant one permeated with the life force. All things in the universe – stones, natural features, plants, animals and human beings are held to be alive. Since Shinto has derived this basic worldview from shamanic religion, it was originally a religion aimed at propitiating the spirits (*kami*) or gaining their aid through the medium of sacrifice, which could take the form of offerings. The term *kami* connotes gods, nature spirits, or just spiritual presences. According to Hawkins (2004, p.287) "perhaps

the best way to define it is to say that it signifies all that is mysterious and “awesome” in human experience – those things that send a shiver up the spine. As such, the *kami* had a variety of origins and functions.” Shinto is a collection of rituals and methods meant to mediate the relations of living humans to *kami*. These practices have originated organically in Japan over a span of many centuries and have been influenced by Japan’s contact with the religions of other nations, especially China. As Hawkins notes, Shinto was and has remained a religion of practice and not speculation. Japanese religious sentiment, art and literature have grown from this perspective.

About 84% of the population of Japan follows both Shinto and Buddhism. Buddhism first arrived in Japan from Korea and China during the 6th through 8th centuries C.E. The two religions share a basic optimism about human nature, and for the world. Within Shinto, the Buddha was viewed as another “*Kami*”. Meanwhile, Buddhism in Japan regarded the *Kami* as being manifestations of various Buddhas and Bodhisattvas. Most weddings are performed by Shinto priests; funerals are performed by Buddhist priests.

6.4.2.4 Shinto beliefs and practices: Shintoists generally follow the code of Confucianism. Their religious texts discuss the “*High Plain of Heaven*” and the “*Dark Land*” which is an unclean land of the dead, but give few details of the afterlife. Afterlife is not a primary concern in Shinto, and much more emphasis is placed on fitting into this world, instead of preparing for the next. Ancestors are deeply revered and worshipped. On the one hand, it can be seen as merely a highly sophisticated form of animism and may be regarded as a primal religion. On the other hand, Shinto beliefs and ways of thinking are deeply embedded in the subconscious fabric of modern Japanese society.

One particular aspect of Shinto which has a great national influence is related to its emphasis on cleanliness and purity. As Hawkins notes, very early in its development “the idea arose that the *kami* were particularly repulsed by impurity, which could be simple – hence the Japanese emphasis on cleanliness that permeates their entire culture even today...” (p.289).

There are “Four Affirmations” in Shinto:

- 1. Tradition and the family:** The family is seen as the main mechanism by which traditions are preserved. Their main celebrations relate to birth and marriage.
- 2. Love of nature:** Nature is sacred; to be in contact with nature is to be close to the Gods. Natural objects are worshipped as sacred spirits.
- 3. Physical cleanliness:** Followers of Shinto take baths, wash their hands, and rinse out their mouths often.

4. “Matsuri”: The worship and honour given to the *kami* and ancestral spirits.

6.5 EASTERN AND WESTERN PERSPECTIVES – DIFFERENCES AND SIMILARITIES

Sofar we have discussed some of the important beliefs and perspectives related to India, China and Japan in the previous and present Unit. Though Buddhism has widely spread in these cultures, they are not discussed here because it originated in India and it has been dealt with as a non-Vedic system of Indian thought in the previous unit. What emerges from the study of Indian systems and other Eastern perspectives is that, India has the most well developed philosophical framework, as compared to the traditions of China and Japan. One important characteristic of Indian traditions is that they are all essentially spiritual, except Câr vâka tradition. Therefore, whether it is Hinduism, Jainism, Buddhism, or any other tradition of later origin all have emphasized on the spiritual development of human beings and hence our life style and ways of thinking have been moulded by the teachings of these different traditions.

Though the worldview of Taoism and the concept *Tao* has some basic resemblance to Vedic and Upanishadic teachings it does not seem to have the same degree of influence in China, as the latter have in India. This may be because as noted in the beginning Chinese traditions developed more as ethical and moral doctrines more concerned with practical and social issues of worldly life rather than as metaphysical systems. From this point of view there is a difference between systems of Indian thought and other Eastern perspectives on the one hand and that of the West that you will study in the next Unit on “Western Perspectives”. In order to understand how cultural perspectives influence human psyche you may refer to Unit on “Cultural and Indigenous Psychologies”.

6.5.1 Differences: One fundamental reason for the separation of the Eastern from Western is that both traditions of Eastern philosophy – Indian and Chinese - tend to be marginalized or ignored in Western studies of the “history of philosophy.” Both of them tend to be relegated to the World Religions departments of Western universities, or to New Age non-academic works, though there are several notable exceptions. There are certain fundamental aspects with which Eastern and Western philosophies differ.

6.5.1.1 Perception of God and gods: First difference is in the perception of God and the gods in two traditions. Because of the influence of monotheism and especially the Abrahamic religions, Western philosophies have been faced with the question of the nature of God and

His relationship to the universe. This has created a dichotomy among Western philosophies between *secular philosophies* and *religious philosophies* which develop within the context of a particular monotheistic religion's dogma regarding the nature of God and the universe.

However, Eastern philosophies have not been as concerned by questions relating to the nature of a single God as the universe's sole creator and ruler. The distinction between the religious and the secular tends to be much less sharp in Eastern philosophy. The same philosophical school often contains both religious and philosophical elements. Thus, some people accept the metaphysical tenets of Buddhism without going to a temple and worshipping. Some have worshipped the Taoist deities religiously without bothering to delve into the philosophic underpinnings, while others embrace Taoist philosophy while ignoring the religious aspects. This is in marked contrast to most philosophies of the West, which has traditionally enforced either a completely unified philosophic/religious belief system (e.g. the various sects and associated philosophies of Christianity, Judaism, and Islam), or a sharp and total rejection of religion by philosophy (e.g. Nietzsche, Marx, Voltaire, etc.). The distinction between religion and philosophy is not so important in the East.

6.5.1.2. Relationship between God and the Universe. Second distinguishing characteristic is the relationship between God or the gods and the Universe. Western philosophies typically either deny the existence of God, or hold that God or the gods are something separate and distinct from the universe. Again, this comes from the influence of the Abrahamic religions, which teach that this universe was created by a single all-powerful God who existed before and separately from this universe. The true nature of this God is incomprehensible to us, His creations.

On the other hand, Eastern philosophic traditions generally tend to be less concerned with the existence or non-existence of gods. Although some Eastern traditions have supernatural spiritual beings and even powerful gods, these are generally not seen as separate from the universe, but rather as a part of the universe.

6.5.1.3 Relationship between the individual and the universe. Third distinguishing characteristic is the relationship between the individual and the universe. It is conceived in the same way as in case of God and universe, as separate in Western philosophies. Western philosophies attempt to describe and categorize the universe from a detached, objective viewpoint.

Eastern philosophies, on the other hand, typically hold that people are an intrinsic and inseparable part of the universe, and that attempt to discuss the universe from an objective

viewpoint as though the individual speaking was something separate and detached from the whole are inherently absurd.

6.5.2 Similarities Despite these differences Western and Eastern philosophical systems share certain central conceptual structures that included dichotomies between reason v emotion, appearance v reality, one v many, and permanence v change. In particular, Indian and Western thought, with their robust mind-body conceptual dualism, share consequent tendencies to subjective idealism or dualism. Formally, they also share the rudiments of “folk psychology” - e.g. belief and (propositional) knowledge; subject-predicate grammar (and subject-object metaphysics); truth and falsity; and inference.

Other noticeable similarities include structural features of related concepts of time, space, objecthood and causation - all concepts hard to isolate within ancient Chinese conceptual space.

6.5.2.1 Attempts at synthesis. There have also been attempts to synthesize Eastern and Western philosophy. German philosopher Georg Wilhelm Friedrich Hegel was very interested in Taoism. His system of dialectics is sometimes interpreted as a formalization of Taoist principles. Arthur Schopenhauer developed a philosophy that was essentially a synthesis of Hinduism and Buddhism with Western thought. He anticipated that the *Upanishads* would have a much greater influence in the West than they have had. However, Schopenhauer was working with heavily flawed early translations (and sometimes second-degree translations), and many feel that he may not necessarily have accurately grasped the Eastern philosophies which interested him. Recent attempts to incorporate Western philosophy into Eastern thought include the Kyoto School of philosophers, who combined the of Husserl with the insights of Zen Buddhism.

6.6 SUMMARY

Eastern perspectives as distinguished from Western perspectives refer to the religious-philosophical traditions and systems of Asia in general and of India, China and Japan in particular, where most of them originated.

Compared to Indian systems which are avowedly spiritual with a clear concept of spirituality and well developed philosophical framework and practices aimed at helping an individual to evolve spiritually, Chinese and Japanese traditions are less well articulated and systematized. Further, though both Chinese and Japanese traditions recognize spiritual dimensions, their focus is more on concerns of practical life rather than attaining self-realization and liberation.

Eastern philosophies are distinguished from their Western counterparts with respect to their perception of God and gods, the relationship between the God and the universe and the relationship between the individual and the universe.

There are also certain similarities between Eastern and Western philosophies in terms of central conceptual structures that included dichotomies between reason v emotion, appearance v reality, one v many, and permanence v change. In particular, Indian and Western thought, with their robust mind-body conceptual dualism, share consequent tendencies to subjective idealism or dualism. In addition, German philosophers like Hegel and Schopenhauer have attempted to synthesize ideas from Eastern traditions like Buddhism, Hinduism and Taoism with Western philosophical traditions.

6.7 KEYWORDS

Taoism Beliefs

Taichi

Practices

Shinto

6.8 CHECK YOUR PROGRESS

1. What are the naturalistic and social foundations of the Chinese perspectives?
2. Which are the two types of Taoism?
3. Mention the two texts of philosophical Taoism.
4. What does the symbol of Yin and Yang in Taoism represent?
5. What are the different interpretations of Yin and Yang symbol?
6. What is the essence of Taoism?
7. Mention any five beliefs/practices of Taoism.
8. What is the technique of Tai Chi?
9. What is the origin of Confucianism?
10. Which are the values preached by Confucius?
11. What is T'ai Shen?
12. Which are the six stages of marriage in Confucianism?

13. What are the main features of Confucius Psychology?
14. What are the distinctive contributions of Chinese culture to Psychology?
15. What is the meaning of the word Shinto?
16. Which are the landmarks of Shinto history?
17. What is the world view of Shinto?
18. What are the main beliefs and practices of Shinto?
19. What are the differences between the Eastern and the Western perspectives?
20. What are the similarities between the Eastern and the Western perspectives?

6.9 CHECK YOUR PROGRESS

1. The naturalistic-social foundations of Chinese perspectives are:
 - Natural and social factors as foundations of religions.
 - Extended family; leading to importance of ancestors.
 - Recognition of the three classes of supernatural beings; gods, ancestors and ghosts.
 - Cult of ancestors.
2. Philosophical Taoism called Tao-Chia (Daojia). The Taoist religion is called as Tao-Chiao (Daojio).
3. Tao-te-Ching by Lao-tzu and Zhuangzi by Zhuangzi.
4. The symbol of Yin and Yang represents the balance of opposites in the universe. When they are equally present, all is calm. When one is outweighed by the other, there is confusion and disorder.
5. The different interpretations of the Yin and the Yang symbols are:
 - Astronomical observations which recorded the shadow of the sun throughout a full year.
 - Symbol of change.
 - Breath that formed the Earth and Heaven.
 - Feminine and masculine.

- Night and day.
 - Activity and passivity.
6. Tao refers to a power which envelops, surrounds and flows through all things living and non-living. The Tao regulates natural processes and nourishes balance in the universe. It embodies the harmony of opposites (i.e. there would be no love without hate, no light without dark, no male without female).
 7. Write any five beliefs/practices of Taoism.
 8. Tai Chi is an exercise and movement technique practiced by the followers of Taoism. It stimulates the central nervous system, lowers blood pressure, relieves stress and gently tones muscles without strain. It also enhances digestion, elimination of wastes and the circulation of blood. Tai Chi's rhythmic movements massage internal organs and improve their functionality.
 9. Confucianism originated in China from the technique of Kung-Fu Tzu, Master King (551-479 BCE), called as Confucius in Latin language.
 10. The values preached by Confucius were:
 - Li - includes ritual, property, and etiquette.
 - Hsiao - love within family.
 - Yi - righteousness
 - Xin - honesty and trustworthiness
 - Jen - benevolence and humaneness
 - Chung - loyalty to the state.
 11. T'ai Shen, the spirit of the fetus protects the pregnant woman and deals harshly with anyone who harasses the would-be mother.
 12. Proposal, engagement, dowry, procession, marriage and reception and the morning after.
 13. Confucian psychology is primarily concerned with human nature and its development through education.
 14. Recognition of individual differences in abilities and practices of identifying them through various means, which are similar to modern psychometric tests, for selection and recruitment to army. Identifying children's aptitudes through indigenous ways of testing them.

15. The word Shinto is derived from the original Chinese word Shendo which is a combination of 'Shin' meaning gods or spirits and 'to' meaning way or path (originally from Dao). Shinto means the way of gods.
16. The landmarks of Shinto history are:
- It had its origin in nature worship, fertility cults, divination techniques, hero worship and shamanism.
 - By the sixth century, the amorphous indigenous religion got systematized and became subordinate to the ruling class. The Shinto cult emerged.
 - Later on, Shinto was influenced by Daoism, Buddhism and Confucianism.
 - After the Meiji restoration in 1868, Shinto became a state religion.
 - After World War II, Shinto lost its importance and started declining.
17. According to Shinto, the universe is a vibrant one permeated with the life force. All things in the universe are held to be alive.
18. The beliefs and practices of Shinto are:
- It believes in high plain of Heaven and the Darkland.
 - It aims primarily in fitting life into this world.
 - Ancestors are deeply respected and worshipped.
 - Has a sophisticated form of animism
 - Emphasizes on cleanliness and purity.
 - Has four affirmations:
 - i. Tradition and the family.
 - ii. Love of nature.
 - iii. Physical cleanliness.
 - iv. 'Matsuri' - the worship of Kami (holy person) and ancestral spirits.
19. The difference between Eastern and Western perspectives are
- | | | |
|----------------------------------|---------------------------------------|----------------------|
| Aspects | Eastern perspectives | Western perspectives |
| Perception of god/ gods | Less concerned with the nature of god | Monotheistic |
| correction of god as the creator | | |

Relationship between god and the universe Gods or supernatural powers as part of the universe Separate existence of god or denial of god.

Relationship between the individual and the universe People are an intrinsic and inseparable part of the universe An individual is separated from the external world.

20. The similarities between Eastern and Western perspectives are:

- Similar in conceptual structures relating to dichotomy between reason-emotion, appearance-reality; one-many; permanence-change.
- Mind-body dualism.
- Subjective idealism or dualism.
- Belief and propositional knowledge.
- Metaphysics.
- Sources of knowledge or pramanas.
- Notions relating to time, space, objecthood and causation..

6.10 REFERENCES

1. Anastasi, A. (1988). *Psychological testing* (6th Ed.). New York: Macmillan.
2. Hawkins, B. K. (2004). *Asian religions*. New York: Pearson-Longman.
3. Kaplan, R. M., & Saccuzzo, D. P. (1993). *Psychological testing: Principles, applications, and issues*. Pacific Grove, CA: Brooks/Cole.
4. Lin, C. D. (1980). A sketch on the methods of mental testing in ancient China. *Acta Psychologica Sinica*, 12, 75-80 (in Chinese).
5. Louise T. H., Mo, Z. (2002): An Introduction to Chinese Psychology— Its Historical Roots until the Present Day. *The Journal of Psychology* v. 136 no 2, p. 225-39.
6. Zhang, H. C. (1988). Psychological measurement in China. *International Journal of Psychology*, 23, 101-177.

www.Indopedia.com www.religioustolerance.o

rg www.Wikipedia.com

UNIT-7: WESTERN PERSPECTIVES

Structure

- 7.1 Introduction
- 7.2 Objectives
- 7.3 The birth of naturalism and universalist perspective
 - 7.3.1 Spiritual worldview and the psyche
 - 7.3.2 Spiritualism to naturalism
 - 7.3.3 Nature philosophers and their Universalist perspective
 - 7.3.4 Protopsychoanalysts
 - 7.3.5 Being–Becoming–Reality and Appearance–
Towards a theory of knowledge
 - 7.3.6 Revelation to sensation and reason–Empiricism–Rationalism
 - 7.3.7 Determinism, Atomic theory, Materialism, and Hedonism
- 7.4 Sophists’ relativism and the contextual perspective
- 7.5 Humanism and humanistic perspective
 - 7.5.1 Socrates–the moral philosopher
 - 7.5.2 Plato and the theory of knowledge
 - 7.5.3 Aristotelian philosophy and psychology
- 7.6 Epicureanism, cynicism, skepticism, stoicism, Gnosticism, hermeticism and Neo-Platonism–philosophers of happiness
- 7.7 Medieval psychologies–early, high, and late middle ages
 - 7.7.1 The birth of empiricism–William of Ockham
 - 7.7.2 The Renaissance
 - 7.7.3 Development of individualistic views
- 7.7 Summary
- 7.8 Keywords
- 7.9 Check Your Progress
- 7.10 Answer to Check Your Progress
- 7.11 References

7.1 OBJECTIVES

After reading this Unit you will be able to,

- Trace and explain the origins of naturalism, universalism, relativism, empiricism, rationalism, determinism, materialism, hedonism, contextualism, humanism and epistemology in Ancient Greece and their implications for psychology as a scientific discipline.
- Explain the developments relevant to Psychology, during Middle Ages and Renaissance

7.2 INTRODUCTION

The history of Western intellectual tradition has its origins in ancient Greece and development in other European countries. The history of psychology is an integral aspect of this development. Leahey (2004) has traced the historical sequence of this development in four phases spanning around 5000 years (3000 years before the Christian Era and 2000 years during the Christian Era). During these four phases different thinkers laid the foundations for Western philosophy and science by contributing the seminal ideas and methods of obtaining valid knowledge. From the first phase to the third phase there has been a gradual dominance of the intellect over intuition and revelation, in other words, science over religion. What is striking in this whole sequence of development is the conflict between faith (in the divinity) and reason. This conflict has shaped the history of Western civilization itself with its many ups and down. While some have affirmed faith, others have rejected faith totally. Still others have tried to reconcile faith and reason. In this process many different streams of thought have emerged leading to different schools of philosophy and psychology. An important outcome of this conflict is the debate about the reality of the soul. It has haunted the discipline of psychology from the very beginning and it keeps doing so. Another aspect of the conflict is the definition of truth and the means of knowing the truth. It is in this background we should understand the history of modern psychology.

On both these issues Indian perspectives differ from the Western perspectives. All the systems, including Buddhism, believe in rebirth and hence in some kind of entity that survives bodily death. Second, our ancient seers and sages recognized reason as a valid means of obtaining knowledge, but never elevated it to the number one status. They considered *pratyakshajñāna*, immediate or direct knowledge, obtained by intuition and revelation as more important than *parokshajñāna*, mediated or indirect knowledge, obtained through

sensory organs (perception) and reason (inference). Even Buddha, who refused to accept the authority of Vedas (which are products of revelation) just on faith and emphasized on realizing the Truth oneself directly, did not reject the status of Vedic and Upanishadic rishis as seers

of Truth. He provided a list of such rishis (see Unit 5, Section 5.3.1). Therefore, Indian perspectives and Western perspectives differ fundamentally.

7.3 THE BIRTH OF NATURALISM AND UNIVERSALIST PERSPECTIVE

The first phase of Greek thought is marked by Bronze Age (3000-1200 B.C.E), Dark Age (1200- 700 B.C.E), Archaic Age (700-500 B.C.E) and Classical Period (500-323 B.C.E). In these 2700 years there was a significant transition in the worldview of ancient Greek people from spiritualism to naturalism. The concept of *psyche* was an integral part of the spiritual worldview of ancient Greek people and with the change in the worldview it continued to haunt the Greek philosophers and has remained to haunt the modern philosophers as well. What you will read below is the story of that struggle!

7.3.1 Spiritual worldview and the psyche

Homer's (the well-known most ancient Greek poet) *Iliad* and *Odyssey* are the two important sources which represent the oral tradition of the ancient Greeks dating back to the Bronze Age. Ancient Greek men were warriors and *Iliad* and *Odyssey* are the tales of love and loyalty, passion and battle and they contain explanation of human behavior, indirectly revealing the oldest folk psychology of the West, of which we have record. Their warrior ethos is the key to understanding Greek concepts of mind and behavior. "To begin with, the *Iliad* and *Odyssey* contain no word designating the mind or personality as a whole. Closest is the word *psuche* (traditionally, but misleadingly transliterated as *psyche*, and usually translated as soul) from which the field of psychology – the study of (*logos*) the soul (*psuche*) – takes its name." The term *psuche* primarily referred to the breath of life, because its departure from a wounded warrior means his death. During sleep or a swoon, it may leave the body and travel around, and it may also survive bodily death. However it is never described as being active when a person is awake and it is never implicated in causing behavior. Instead, behavior is attributed to several independently operating soul-like entities residing in different parts of the body. For example, the function of *phrenes*, located in the diaphragm, was rationally planning action; of *thumos*, located in the heart, governing action driven by emotion; and of *noos*, accurate perception and clear cognition of the world. There were other less frequently mentioned mini-souls (Leahey, 2004, p.37).

7.3.2 Spiritualism to naturalism

However the intellectual climate of ancient Greece changed with the collapse of royal culture and there was a gradual but fundamental change in the worldview of Greek people from spiritualism to naturalism in the Archaic Age (700-500 B.C.E). In this age a new form of socio-political organization known as, the city-state, or *polis* emerged. With this citizens' allegiance shifted from divine kings to city-states, which comprised of a small city and a few surrounding square miles of territory. They were governed by their citizens rather than by a king. The *polis* marked the beginning of the rule by the people and the idea of a law governing all people came into existence. The idea eventually mirrored in the important scientific idea that *natural laws govern natural events* and they could be discovered by human minds. This idea first appeared in Greek myths, wherein the chief god Zeus is subjected to constraints, which even he cannot escape (Leahey, 2004).

Development of these ideas initially centered on understanding the nature of the universe and fundamental nature of reality. This I will refer to as *cosmo-centric*. The cosmo-centric pursuits of ancient Greek philosophers progressed with a fundamental belief that the nature of the universe and the fundamental nature of the reality can be understood in physical terms, without resorting to any supernatural explanations. All those thinkers who proceeded with this belief are known as "naturalists" and their views lead to the development of a major philosophical perspective broadly referred to as *naturalism*. "Until the term *scientist* was coined in the nineteenth century, people who studied nature was called *natural philosophers*" (Leahey, 2004, p.63).

7.3.3 Nature philosophers and their Universalist perspective

The intellectual life of Greece in this period took a different turn leading to a tradition of systematic critical thinking, which Karl Popper has termed as "*open system of thought*". "In an open system of thought, ideas are considered on their own, apart from the personality, character, ethnic background, or faith of the person who advances them" (Vernant, 1982)" (Leahey, 2004, p. 41). Democratic Greeks had open debates in which all citizens of the *polis* could participate as equals and ideas were debated on their own merits leading to formulation of laws, which were binding on everyone. Thus, founding a critical tradition of thought was the other major achievement and an outcome of democratic *polis*. These two significant developments resulted in the development of what we now know as *universalism and naturalism*, which are the two foundational aspects of modern science and hence of psychology.

Among the ancient Greek thinkers who subscribed to universalism and naturalism, some focused on understanding external physical environment/reality and the others on the internal environment of physiological functioning of human and animals. The former group was interested in searching for the single element, *physis* in Greek that constitute the whole universe from which the term physics is derived. That group is now known as Ionian *physicists*. Among them three thinkers are well known Thales of Miletus, Anaximander of Miletus, and Anaximenes who postulated water, boundless space, and air respectively, as the *physis*. They are the material monists because they believed in the single underlying element of physical reality. The latter group of natural philosophers consisted of physicians like Alcmaeon, Hippocrates and Empedocles who believed that internal state and physiology of humans hold the clue to life. They explained human activity with reference to physiological mechanisms, without resorting to supernatural notions like god and soul. Leahey (2004) has termed them as “protopsychoanalysts” who explained mind and behavior using the methods and findings of physiology.

7.3.4 Protopsychoanalysts

Alcmaeon (5th century B.C.E) was interested in understanding perception and he understood the connection between sense organs and the brain by studying optic nerves and explained the phenomenon of perception by distinguishing between sensory perceiving and thinking, which was later developed into the first theory of perception by another physician-philosopher Empedocles. Alcmaeon held the view that the causal determinants of human activity lie within the mechanisms of the body. The body seeks equilibrium of its mechanisms and this process explains the dynamics of human activity. This view may be considered as the precursor of the principle of homeostasis.

Another important physician-philosopher was Hippocrates (460-377 B.C.E), who is well known for his “Hippocratic oath”, which represents the code of conduct for practicing physicians. Hippocrates was also responsible for separating the practice of medicine and religion, which marked a significant advancement in Greek philosophy and science. Hippocrates emphasized the role of brain in psychological processes. He contributed a theory of “humors” to account for the basis of human activity. He taught that the body contains four humors: blood, yellow bile, black bile, and phlegm. Borrowing the concept of equilibrium from his predecessors, Hippocrates argued that perfect health is a result of the proportionate mixture of these four humors and the dominance of any one of them results in characteristic indisposition leading to imbalance or illness.

Empedocles (500-430 B.C.E) attempted to develop a theory of perception based on human physiology. Following Alcmaeon, Empedocles believed that the senses are the “duct (s) of understanding”, through which information about the world travels to the brain. He proposed that objects emit *effluences*, like *eidola* of Democritus, which are sense-modality specific copies of themselves that enter the body through the ducts of the senses. Empedocles held that sensations are the product of particles from stimuli falling upon the “pores” of the sense organs. He postulated that the *effluences* get in the bloodstream where they meet and mix in the heart. He argued that the agitation of *effluences* in the beating of the heart was thinking. Though it looks absurd today, Empedocles’ theory was a significant step for naturalism in psychology because it proposed a purely physical basis for mental activity, without any reference to soul. Thus, the notion of psyche took a beating as early as fifth century B.C.E and body, in Greek *soma*, gained prominence.

7.3.5 Being–Becoming–Reality and Appearance–Towards a theory of knowledge

Another important development in Greek thinking which significantly influenced the future development of different schools of psychology was the philosophies of Becoming and Being propounded by Heraclitus of Ephesus (535 – 475 B.C.E) and Parmenides of Elea (early 5th century B.C.E). The search for the *phusis* by Thales and his followers was influenced by a belief that there is an ‘underlying permanent reality’. This belief was challenged by Heraclitus who believed that (a) the only constant in the universe is change; (b) things never simply *are*, but are always becoming something else; (c) change is lawful and not capricious and regulating change is a dynamic universal harmony that keeps things in equilibrium of balanced forces; (d) and there is no eternal Truth, only useful truths. Heraclitus’s most famous aphorism was that “no one ever steps in the same river twice”. That is, nothing in the universe is ever the same twice and hence proposed the doctrine of Becoming. Nevertheless, Heraclitus like Thales agreed with the idea of *phusis* and proposed ‘fire’ as the single constituent element in consonance with his belief in change. Fire symbolizes flux in nature and physical properties of fire cause noticeable changes in other physical objects. Hence, he chose fire as the *phusis*.

In contrast to the doctrine of Becoming, Parmenides is credited with formally postulating the doctrine of Being. He was the founder of the Eleatic school of philosophy. His only known work titled *On Nature* is a poem which has survived only in fragmentary form. The poem is an narrative sequence in which the narrator travels “beyond the beaten paths of mortal men” to receive a revelation from an unnamed goddess (variously identified by the commentators with Nature, Wisdom or Themis and generally thought to be Persephone) on the nature of reality. In the Poem Parmenides describes his journey from darkness to light and spoke of two ways:

the Way of Truth and the Way of Appearance/Opinion. Parmenides attempted to distinguish between the unity of nature and its variety. In the Way of Truth, he explained how reality is one; change is impossible; and existence is timeless, uniform, and unchanging. He insisted in the Way of Truth upon the reality of its unity, which is therefore the object of knowledge. In the Way of Appearance/Opinion, he explained the world of appearances, which is false and deceitful. He spoke upon the unreality of its variety, which is therefore the object, not of knowledge, but of opinion. In the Way of Opinion he propounded a theory of the world of seeming and its development, pointing out however that, in accordance with the principles already laid down, these cosmological speculations do not pretend to anything more than mere appearance. Parmenides also explained the structure of the becoming of cosmos (which is an illusion, of course according to him) that comes from The Way of Truth (www.Wikipedia.com).

Under the Way of Truth, Parmenides distinguished between two ways of inquiry: “that Is” (ho *pos estin*) and “that Not-Is” (ho *ouke stin*). When translated to English they read as follows: *that it is that it is not*. In ancient Greek, which, like many languages in the world, does not always require the presence of a subject for a verb, “is” functions as a grammatically complete sentence. The simplest explanation as to why there is no subject here is that Parmenides wishes to express the simple, bare fact of existence in his mystical experience without the ordinary distinctions. Parmenides concluded that “Is” could not have “come into being” because “nothing comes from nothing.” Existence is necessarily eternal. In Parmenides, the view “That which is not” can never predominate over “That which is”. Hence, he forbids the way of perception as a means of obtaining valid knowledge and insists on judging by means of the Reason (*Logos*). Parmenides’ assertion that the human sensory perception cannot know the reality was an important step in the development of Greek thought that prompted an inquiry into the nature and means of reaching the Truth on the one hand and the functioning of the human mind on the other (www.wikipedia.com/Parmenides).

7.3.6 Revelation to sensation and reason-Empiricism-Rationalism

The debate between Being and Becoming was a metaphysical one, but it created an important difficulty for the theory of knowledge. For Heraclitus there was no underlying Reality or Being. But for Parmenides the Appearance was change and the Reality was Being. Parmenides’ views resulted in two major issues: (1) how best to discover Truth; and (2) how the mind is connected to the world. Parmenides asserted that what we know through sensory perception is only appearance (the *doxa*), which changes and hence cannot be claimed as truth. Only pure reason (*Logos*) will result in the understanding of the Truth of the world. For

example, based on our ordinary sense perception we speak of birth and death of organisms and, creation and destruction of objects. According to Parmenides this belongs to the superficial world of movement and change and the idea of genesis-and-destruction, is illusory, because the underlying material of which the table is made will still exist after its destruction. What exists must always exist. And we arrive at the knowledge of this underlying, static, and eternal reality (*aletheia*) through reasoning, not through sense-perception. This resulted in the birth of Rationalism. However, the emphasis on sensory perception as the way to truth among naturalistic philosophers led to the birth of Empiricism. These thoughts strongly influenced Plato, and through him, the whole of western philosophy.

It is important at this point to note that there are many parallels between Parmenides' journey from darkness to light and his mystical insights about appearance and reality and that of Vedic and Vedantic thinkers. Also, Parmenides' views on ways of obtaining knowledge have a lot of parallels with criteria of *Pramâna* as we discussed in Unit 5. Further, it is significant that in contemporary psychology there is an ongoing debate on Universalism vs. Contextualism, which fundamentally rests on the distinction between Reality and Appearance; and many are arguing about the validity and usefulness of following Universalism in developing psychological theories and models.

7.3.7 Determinism, Atomic theory, Materialism, and Hedonism

The last of classical philosophers to be concerned with the nature of physical reality were Leucippus of Miletus (flourished 430 B.C.E) and his better known student Democritus of Abdera (460-362 B.C.E). Leucippus said "nothing happens at random, everything happens out of reason and by necessity" (Leahey, 2004, p.45). The soul and free will are illusions that can be reduced to the mechanical functioning of our physical bodies. Democritus was known as the "laughing philosopher" because he laughed at the follies of human beings who believed in freedom and struggle against the necessities of fate. This view may be considered as representing what is well known as determinism.

Regarding the fundamental nature of reality Democritus said only atoms and the void exist and there is no God and soul. While atoms differ in size, weight, and configuration, their relationship among them is completely governed by natural laws and not left to chance or spontaneity. Humans and animals consist of atoms that are the most sophisticated and mobile. Democritus considered atoms as the basic explanatory principle of life. He wrote: "We know nothing accurately in reality, but only as it changes according to bodily condition and the constitution of those things that impinge upon [the body]" (Freeman, 1971, p.93, cited in

Leahey, 2004, p.45). He also said that every object gives off “special kinds of atoms called *eidola*”, which are copies of the object. When these *eidola* reach our sense, we perceive the object indirectly through its copy. Thus, our thought processes are limited to putting together or taking apart these *eidola*, in our brains. Democritus argued that the quantity of matter is always a constant leading to the proposition of indestructibility of matter and its conservation. This is the precursor of modern atomic theory

Democritus’ views on the nature of reality with an emphasis on matter in the form of atoms lead to a view called materialism and the denial of the notion of god and soul on the other encouraged sensations as a guide to the conduct of life with an emphasis on pursuit of pleasure and avoidance of pain, which came to be called hedonism. Democritus said: “The best thing for man is to pass his life so as to have as much joy and as little trouble as may be (Copleston, 1964, p.933, cited in Leahey, 2004, p.45). The logical outcome of this view is reducing the value system to our natural bodily experiences of pleasure and pain and nothing more. These views are comparable to the views of the Indian materialist Charvaka.

7.4 SOPHISTS’ RELATIVISM AND THE CONTEXTUAL PERSPECTIVE

The development of thought so far discussed laid the foundation for physical and biological sciences that has helped to understand the materialistic universe. While natural philosophers were attempting to arrive at first principles of the materialistic universe, there were a group of people known as sophists (experts in the art of persuasion), during the Classical Period (500-323 B.C.E) who did not agree with this approach. They were wandering intellectuals who gave lectures for a fee and imparted wisdom (*sophes*) and functioned as mobile universities of ancient Greece. Protagoras is generally regarded as the first of the sophists. Others included are Gorgias, Prodicus, Hippias, Thrasymachus, Lycophron, Callicles, Antiphon, and Cratylus. They initiated what is now known as contextual perspective which opposes universalism of natural philosophers. They are the early forerunners of a different stream of thought who adhere to relativism. Contemporarily there has been a controversy regarding the appropriateness of Universalism for the development of psychology, and there are many who have been proposing Contextualism as more appropriate (Capaldi & Proctor, 1999) (see also unit on Cultural and Indigenous Psychology).

Protagoras (490-420 B.C.E) denied the value of making generalizations or extrapolating beyond the physical and hence rejected the universalistic approach. He held that the first principles of absolute generalization i.e., truth, goodness and beauty do not exist in themselves, and we only know such concepts to the extent that they are embodied in people. Therefore,

a search for the basis of life must be confined to the investigation of life as it operated in living beings and beware of generalizations beyond what we observe. The famous statement attributed to Protagoras is as follows: "of all things the measure is man, of things that are that they are, and of things that are not that they are not" (Spragus, 1972, cited in Leahey, 2004, 0.46). Leahey observes that Protagoras' statements suggest three important meanings or interpretations, *personal, cultural and metaphysical*.

First, personal interpretation of "of all things the measure is man", is that what is important is the world as it appears to us in our immediate experience and the criterion of truth is our experience, not some absolute principle or ultimate *physis*. For example, if two persons enter the same room, one may experience it as cool because he was working in front of a hot furnace before that and the other may experience it as warm, because he was drenched in heavy rain on a chilly day. According to Protagoras's statement each is true for its perceiver and there is no need to think of temperature of the room in an abstract way. It is a preference for appearance over Reality. This view is known as *relativistic empiricism*.

Second, the cultural interpretation of "of all things the measure is man", is that there is no one right way of living—the Greek way—as ancient Greeks believed. Traditional Greeks had considered their way of life as the best and had raised it to the level of absolute and the ultimate and identified with the universal law of nature. Traditional Athenians saw human nature as relatively fixed, so that one culture – the free *polis* – was most suited to it. But Sophists argued that human nature is quite adaptable and people are capable of adapting to very different ways of life. Sophists asserted that different cultures have their own unique way and each is right in itself and sharpened the division between *physis* (natural law) and *nomos* (human law or convention) by making *nomos* mere matter of arbitrary convention, a set of equal way of life lived in different cultures, none superior to another. This is known as *cultural relativism*.

Third, the metaphysical interpretation of "of all things the measure is man", refers to the belief in god and the supernatural. Sophists argued that if the so-called Reality of nature is unknowable through sensory experience, so too are the gods and there is no divine truth or god given law to which human beings are subject. Therefore, right and wrong are matters for culture to decide not gods. Hence, they felt philosophers should not waste time on idle speculations about Reality or the gods. Instead they should concern themselves with practical achievement conducive to human happiness and work. This is called *ethical relativism*.

Unlike other Sophists Gorgias did not profess to teach *arête* (excellence, or, virtue). He believed that there was no absolute form of *arête*, but that it was relative to each situation

(for example, virtue in a slave was not virtue in a statesman). His thought was that rhetoric, the art of persuasion, was the king of all other sciences, since it was capable of persuading any course of action. While rhetoric existed in the curriculum of every Sophist, Gorgias placed more prominence upon it than any of the others.

7.5 HUMANISM AND HUMANISTIC PERSPECTIVE

Another outcome of Sophist's teaching was that ancient Greek philosopher's attention turned from the nature of the universe or cosmos, to practical concerns of humans. Questions related to human nature, knowledge, ways of living, morality, conduct, happiness, etc., got more attention. In other words, there was a shift from cosmocentric concerns to *anthropocentric* issues, which led to the development of *humanism* and *humanistic perspective*. An important feature of this development is that human beings are distinguished from the rest of life by considering them at a higher plane and emphasizing those characteristics that set them apart from other living beings such as reason, language and self-reflection. In other words, uniqueness of human beings was given importance. Among the humanistic thinkers Socrates and his student Plato stand out for their significant contributions. Each left his own unique imprint in the development of western philosophy.

7.5.1 Socrates

the moral philosopher. Socrates was not a Sophist, though Athenians mistook him for one. Socrates is well known as a moral philosopher. He believed that no positive doctrine is possible without ultimate first principles and hence was on a self-defined quest for the nature of true virtue and goodness. He tried to understand the meaning and nature of abstract human concepts such as justice, goodness, and beauty. Socrates also believed that to call something as knowledge or truth, it should be conscious and we should be able to explain it. Not only a person should do right things, he should also give a rational justification for his actions. Then only the person is truly virtuous. Intuitively one might know right and wrong, but a theory of virtue is also important. In Greek *theoria* means contemplation. This requirement was adopted by Plato and became a standard goal of Western Philosophy.

Socrates is well known for his method, a special form of dialogue called the *elenchus*. He believed that everyone possess some intuitive knowledge of right and wrong, of moral truth and act upon them, even though they are not reflectively aware of it. Socrates believed that through a process of dialogue it is possible to bring out this truth, by dislodging false or erroneous beliefs one holds. That will result in a state of enlightenment called *aporia*. This

belief in latent knowledge of virtue and making it conscious/explicit through *elenchus* is the starting point of modern psychotherapeutic methods (Leahey, 2004).

7.5.2 Plato and the theory of knowledge

Plato (427-347 B.C.E) was a student of Socrates. He is credited with the development of *epistemology*, a branch of philosophy that deals with nature and means of obtaining valid knowledge to arrive at truth. Therefore, his role is very significant in the development of Western intellectual tradition and also for the development of contemporary cognitive psychology. Plato held that knowledge to be called Truth has to be valid absolutely in all times and places and should be rationally justifiable. The truth Plato sought lay in the Realm of Being and knowledge of it could not be derived from material senses occupied with the changing material world. Plato was convinced that transcendental Truth exists, and perception was not the path to knowledge. Plato like Parmenides believed that the Way of Truth was the inward path of logic and reason rather than the outward path of seeing. Plato distinguished between Forms which really exist as non-physical objects from copies of that object found in the material world. Plato's Form is in the Realm of Being and the physical objects are in the Realm of Becoming. He offered metaphors like the Sun, the Line, the Cave and the Ladder of Love to explain his notion of Form, which cannot be understood otherwise.

Plato believed in the existence of soul and its reincarnation. As Leahey (2004) notes he was influenced by Hindu religious scriptures and beliefs. He posited the different souls in a gradation from high to low viz., *rational, spiritual and desiring* soul and classified people into categories depending on the kind of soul they possess. He explained human motives and actions, with respect to the nature of three kinds of souls. Plato carried on the concept of his teacher Socrates, by formulating the first clearly defined concept of immaterial existence. Plato's theory of Ideas/Forms – the realm of immaterial, self-existent and eternal entities comprises the perfect prototypes of all earthly imperfect objects.

7.5.3 Aristotelian philosophy and psychology

It was Aristotle (384-322 B.C.E) the famous student of Plato who worked out a comprehensive philosophical system, including the first psychology. Aristotle was a biologist as well as the first truly systematic philosopher. He believed that the human way of life should be built on what was best for human nature. He was always practical and down to earth in dealing with any subject matter and was always concerned with discovering what is natural. While his teacher Plato was a rationalist, Aristotle was an empirically inclined observer of nature. Aristotle developed his system based on observation, not on experimentation (Leahey, 2004).

Soul Aristotle considered the soul as that which differentiates the animate from the inanimate worlds. "All living things possess soul as their form and thus it is a living thing's soul that defines its nature, what it is to be that living thing. Soul is the actuality and the actualizing; directing force of any living organism, fulfilling the body's potential *having of life*" (cited in Leahy, 2004, p.66). The word "form" has a special meaning like Plato's Form, in Aristotle's system. He distinguished between matter and form. Matter is sheer undifferentiated physical existence, and as such is unknowable. For matter to be knowable, to be an object of perception and science, it has to be joined by form, which makes a thing that which it is, defining it and making intelligible to us. In perception, Aristotle said, the mind receives the form of an object but not its matter. Aristotle rejected Plato's thesis of separability of Forms.

Aristotle's concept of form is comprised of three causes viz., *essential cause*, *efficient cause*, and *final cause*. Essential cause refers to form defining what something is in its essence. Efficient cause refers to how things come into existence or are made of. Final cause refers to the purpose for which a thing exists. According to Aristotle at least the form of a living thing, soul is the essential, efficient, and final cause of an organism. As essential cause, the soul is what defines an animal or plant. The soul is efficient cause of bodily growth and movement and of life processes generally. The soul is the final cause of an organism for the body serves the soul and soul guides its purposive development and activity. Aristotle's view of soul and body relation is different from Plato's. He rejected the separability of soul and body, the dualism of Plato, the Pythagoreans, and of many religions. Soul is not a separate thing neither made of something other than matter nor added to the body. An organism is a unity. Without the soul the body is dead; without body, there is no soul.

Aristotle distinguished three levels of soul appropriate to different levels of actualization on his natural scale. At the lowest level there is the *nutritive soul*, possessed by plants, serving three functions: (1) maintaining the individual plant through nutrition, (2) maintaining the species through reproduction, and (3) directing growth. Animals possess a more complex, *sensitive soul*, which subsumes the nutritive soul's functions while adding others, making it more fully actualized than the nutritive soul. Animals unlike plants are aware of their surroundings. They have sensations; hence, "sensitive soul". Because of this they experience pleasure and pain and so feel desire either to seek pleasure or to avoid pain. Further, sensations lead to imagination and memory and movement are a consequence of desire. Highest in the scale of souls come the human or *rational soul*, subsuming the others and adding *mind*, the power to think and have general knowledge. According to Aristotle, gaining knowledge is a psychological process with the perception of particular objects and ends with general knowledge of universal forms.

Mind. According to Aristotle the rational part of the human soul, which he called *the mind*, is unique to human beings, capable of acquiring knowledge of abstract universals as opposed to the knowledge of individual things given in perception. He distinguished *passive mind* from *active mind*. *Passive mind* is potentiality. It has no characteristic of its own, for it can take on the form of experienced objects. *Active mind* is pure thought acting on the contents of passive mind to achieve rational knowledge of universal. *Active mind* according to Aristotle is unchangeable and hence immortal, for death is a form of change. *Active mind* is therefore separable from the body and may survive death, but *active mind* is *not* a personal soul, for it is identical in all human beings. *Active mind* is pure thought and carries nothing away from its sojourn on earth. Knowledge is realized only in the passive mind, which perishes. *Active mind* corresponds to the process of abstract thought, *passive mind* to the contents.

Perception. Perception the starting point of knowledge has to do with form, not matter. In perception our mind receives the form of an object without the matter. The five special or specialized senses receive forms appropriate to each of them. In addition, Aristotle also postulated the *interior sense*¹. According to him the information provided by the special sense is passed on to faculties that deal with it in various ways. In the animal soul, these faculties are called the *interior sense*, because they are not connected with the outside world, but still are dealing with experienced sensation. *Common sense* is the first interior sense. It does the function of sensory integration. Aristotle located common sense in the heart. *Common sense* along with imagination is involved in judging what an object is. Memory is another faculty of the sensitive or animal soul. It is a storehouse of the images created by common sense and imagination. In contemporary jargon it is “episodic” memory, memory for events. Organization of memory is based on association and three *laws of association*, according to Aristotle are *similarity, contiguity* and *contrast*.

Motivation. Motivation according to Aristotle is the function of the sensitive soul, which can experience pleasure and pain. In animals, motivation is directed by an image of what is pleasurable and the animal seeks only present pleasure or the avoidance of pain. This type of motivation is *appetite*. Human beings are capable of reason and so can conceive of right and wrong. We can be motivated by desire for what is good or for long term future benefits. This type of motivation is called *wish*². Animals experience simple motivational conflicts between opposing appetites, but humans have the problem of moral choice, in addition.

Aristotle believed there is a natural proper goal to human life, namely human *flourishing*, just as an acorn will grow into a big oak tree. Because the human soul is in its essence rational, and therefore capable of virtue, “human good turns out to be activity of the

soulin accordance with virtue” (cited in Leahey, p. 70). Here in Aristotle’s concept we have the seeds of the later concept of “self-actualization”, discussed by humanistic psychologists like Kurt Goldstein, Adras Angyal, Carl Rogers and Abraham Maslow (see Unit on Humanistic Psychology).

7.6

EPICUREANISM, CYNICISM, SKEPTICISM, STOICISM, GNOSTICISM, HERMETICISM AND NEO-PLATONISM-PHILOSOPHERS OF HAPPINESS

In the *second* phase, during the Hellenistic (323-31 B.C.E) period, the Greeks rejected the traditional values of Homeric fame and classical Greek politics. They turned away from public life toward the pleasures of private life and home. They also turned inward to their souls, seeking succor from the misfortunes of the world. The more secular of them sought freedom from their inner turmoil, in philosophy. The more religious of them sought solace, in traditional worship or in the exotic new religions that flowed from the East into the West. In between was the philosophical religion of Neo-Platonism. While the classical Greeks had sought the happiness of *eudaemonia*— human flourishing or living well, the Hellenistic Greeks sought freedom from disturbance, a form of happiness Greeks called *ataraxia*. Eudaemonia depended on luck, including living in favorable circumstances. Ataraxia was in control and within the reach, the ability to quiet one’s own soul, to achieve self mastery and thus personal freedom from disturbance no matter what fortune might bring. Recipes for achieving ataraxia were offered by a new form of philosopher, the *philosopher as physician*. The Hellenistic school of philosophy set out to create and teach a *therapy of the soul*. Their philosophies also touched religious themes: Are there gods? Is there an afterlife? How may I be saved? By addressing these questions at a personal and philosophical level Hellenistic philosophy downplayed the role of cult worship helping pave the way for a religion of personal redemption, Christianity. Among these therapeutic philosophies, Epicureanism, Cynicism, Skepticism and Stoicism are well known. All these philosophies propose a *non-polis* like degree of disengagement from the social world. The Epicurean withdrew from the world physically; the Cynic withdrew from the social world of *nomos*; the Skeptic withdrew from strong belief of any kind; the Stoic refused to let the world’s troubles be disturbing. Another way of dealing with a troubling world was to turn away from it to a better, purer, transcendent one. This is found in religious philosophies like Gnosticism and Hermeticism, and Neo-Platonism and in mystery cults. (Leahey, 2004).

Saint Augustine (354-430). St. Augustine was the last classic philosopher and the first Christian one, who combined Stoicism, Neo-Platonism and Christian faith to develop *Augustinian Neo-Platonic Psychology*. Among the many Christian saints Augustine's role is critical to the history of psychology because he completed the "Christianization" of Greek philosophy by affirming the Platonic relationship between body and soul. Augustine considered mind as the receptor for divine wisdom and shares in the glory of God. Through mind we can acquire a type of knowledge that is unknowable through the bodily senses. Further, this interior sense of the soul or mind allows us a level of consciousness that transcends, yet completely explains, physical reality. By emphasizing on this transcendent knowledge, Augustine downplayed the rationality of mind, which is dependent on unreliable sensory information. According to Augustine only by removing the faulty impressions of sensory knowledge we can reach this level of consciousness. Augustine taught the ideal of the mind reflecting upon itself as the key to ultimate beauty and love in God and Christian thought was dominated by this view until the end of the Middle Ages³. Thus all intellectual attempts that studied life including psychology were done in a Platonic context.

We have seen that almost all the basic ideas and perspectives that served as the foundation of Western intellectual tradition emerged in ancient Greece over a period of 3000 years. Ancient Greek thinkers focused on the universe (cosmocentric) as well as on human beings (anthropocentric). Just as in the development of Indian thought even in the western context the ancient Greek philosophers addressed five primary issues viz., (a) nature and existence of God; (b) nature of the soul; (c) nature of the physical world; (d) nature of mind and its activities; and (e) extra sensory and super conscious experiences. Natural philosophers, Human Philosophers, and Philosophers of Happiness contributed their ideas. Aristotle attempted to develop a comprehensive system of philosophy and first psychology.

7.7 MEDIEVAL PSYCHOLOGIES-EARLY, HIGH, AND LATE MIDDLE AGES

In the *third* phase, the Roman era (31 B.C.E – C.E. 476) commenced. Classical civilization ended and a medieval way of life began during the Roman Empire in the late third and fourth centuries and lasted till the beginning of Renaissance in Italy in the end of fourteenth century. Though the Romans conquered Greek territory and established the Roman Empire, they were conquered culturally by the defeated Greece. Thus, ancient Greek ideas were adopted by the Romans, who transmitted them around the Mediterranean and into Gaul (modern France), Germania, and Britain, which spread across the globe. As Leahey (2004) observes most medieval philosophers believed, as did the Greeks, in the power of human

reason to know eternal Truth and they even asserted that God's truth and the philosophical truth were one and could be synthesized, as St. Thomas Aquinas attempted.

Unlike the Greek the Romans did not share the love of natural science that formed the basis of the Greek philosophical systems. The Greek emphasis on the unity of knowledge had produced the universal philosophers. In contrast, the Romans valued application and use over abstract studies and hence were more interested in technology than pure science. The Roman emphasis on applied and practical knowledge required specialists. The advances in philosophy that the Romans developed were extensions of the Greek ideas based on the teachings of the Zeno (336-224 B.C.E) (Stoicism), Epicurus (342-270 B.C.E) (Epicureanism), and Plato (Neo-Platonism). All the three systems were limited in scope and were mainly expressed in religious practices. Romans did not attempt to devise a comprehensive system of human knowledge, for which the role of psychology was central. On the other hand, the Roman philosophies were specialized and limited to a rather general attitude toward life.

With the fall of Roman rule in the West, scholarly pursuit, including the study of psychology regressed and psychology was reduced to the practice of Christianity under the influence of the theocratic feudal society in which religion was mixed with psychology and science. Medieval Europe was an age of faith, and science, including psychology, was dormant. The ancient Greek ideas were later worked out and elaborated by generations of thinkers in different continents during the Middle Ages (476 to 1360 C.E).

In the early middle ages (476-1100 C.E) various writers developed on Aristotle's psychology by elaborating on the set of faculties possessed by Aristotle's sensitive souls. Because these faculties processed sensory images passed on from the special or exterior senses, they were called *inward wits* or *interior senses*. These were thought to be the exact transition point between body and soul in the chain of being. Such schemes appear in Islamic, Judaic, and Christian thought in the Early Middle Ages. "He who knows his soul, knows his creator" (Proverb of the Muslim Brethren of Purity). This was the motto of early and high medieval psychology. Within the Islamic world, a naturalistic, rather than religious, faculty psychology developed, based on Aristotle. Ibn Sina, known in Europe as Avicenna, who was both a doctor and a philosopher and whose works are influential in constructing medieval philosophy and psychology, developed *Islamic Psychology*. This was originally worked out in a Neo-Platonic framework within which Aristotle was interpreted, and it combined an elaboration of Aristotle's psychology with late Roman and Islamic medicine. In the Neo-Platonic scheme of things, humans stand midway between God and matter. As a rational animal, a human being resembles God; as a physical being, a human resembles animals and

other purely physical creatures. In this view, when allied with Aristotelian faculty psychology, the human mind itself reflects this ambiguous position: The five corporeal senses are tied to the animal body, while the active intellect – pure reason – is close to God. A person is a microcosm (a small universe) reflecting the universal Neo-Platonic macrocosm.” (Leahey, 2004, p. 89). In the High Middle Ages (1100-1350) two great medieval approaches to knowledge, humanity and God were – Platonic Augustinian mystical way and the Aristotelian Thomistic way of natural reason constrained by faith. St. Bonaventure and St. Thomas Aquinas are considered as twin peaks of high medieval Christian philosophy and they developed two different types of Christian psychologies, Neo-Platonic and Aristotelian.

7.7.1 The rebirth of empiricism – William of Ockham

One more important development during this age was the rebirth of empiricism. Medieval philosophers blend psychology and ontology, the study of the nature of being or existence. Following Plato most medieval thinkers believed that something ‘real’ must correspond to each mental concept. But the way the ‘real’ was understood differed. For Plato, it was the Forms; for Aristotle it was ‘essences’; for medieval philosophers, it was the Ideas in the mind of God. For the Greeks and medieval the only real knowledge was knowledge of the universals. The medieval philosophers believed that the abstracted essences were metaphysically true, that they corresponded to holy ideas.

William of Ockham challenged this centuries-old assumption. He replaced metaphysics with psychology. He asserted that knowledge begins by “intuitive cognition” – direct infallible acquaintance with some object in the world. Intuitive cognition yields knowledge of what is true and false about the world⁴. From such knowledge of things “abstractive cognition” of universals may develop, and universals exist only as mental concepts⁵ and they have no existence outside the mind. Such abstract concepts may be either true or false; for example, one may form the concept of unicorn (a mythical horse-like animal with a horn on its forehead), which does not exist. Abstractive cognition is thus wholly hypothetical and the touchstone of reality and truth is intuitive cognition, according to Ockham.

Ockham’s contribution can be summarized as follows. 1. He explained the process of formation of universal concepts based on the mental operation of noting similarities among objects and classifying them based on similarities. Thus, for Ockham universals are logical terms that apply to some objects and not to others, and they indicate relations among objects. This is known as *conceptualism*. 2. He denied the distinction of soul from its faculties. The soul does not have the faculty of will or intellect. Instead willing, thinking, imagining, etc., are

all acts of the soul. In his view, faculties are unnecessary reification (materialization) of mental acts into mental entities apart from the mind. 3. According to him, concepts were learned habits and ideas derived from experience. These habits make possible the idea of a person's thinking independent of actually sensed objects. Thus, in Ockham's understanding of the mind, habit was crucial. 4. He drew a radical distinction between faith and reason. He pointed out that there is no ground in experience, or intuitive cognition, for believing we have an immaterial, immortal soul. It is only from faith that knowledge of the immortal soul comes. As far as reason or philosophy goes, the mind may be a perishable entity dependent on the body. Ockham's emphasis on experience and reason and separating them from faith greatly weakened theology and metaphysics, but it helped bring science into being and psychology as well.

7.7.2 The Renaissance

From the end of 14th century to the beginning of the 16th century, a remarkable event of profound cultural significance occurred in Italy, which is known as Renaissance (1360 to 1600 C.E.). It was the rebirth of European culture characterized by a turn toward humanism in art, literature, and music leading to a change in emphasis from the dominance of traditional Christian themes to glorification of humanity. The distinctive development of the Renaissance was the reappearance of humanism. The humanism expressed itself in placing importance on individual human beings and their lives in this world as opposed to the medieval concern with feudal social status on the one hand, and the religious concern with future lives in Heaven or Hell on the other. Reappearance of humanism turned the focus of human inquiry away from medieval preoccupations with God and heaven toward the study of nature, including human nature. An important aspect of this development which has significant influence on psychology is as follows. Artists such as Leonardo da Vinci and physicians such as Andreas Vesalius undertook detailed anatomical studies through dissection of the human body and began to see the body as an intricate but understandable machine. This led to the mechanistic approach to understand human nature.

7.7.3 Development of individualistic views

Another significant development of the middle ages relates to the changing conception of the individual. Medieval psychologists had little interest in individual differences in psychological makeup. Medieval peoples' social roles were stereotyped. During the Early Middle Ages the aspects of the social understanding of individuals and of individual mind had come to resemble the old Greek Bronze Age. In the Bronze Age there was little conception of individual mind or soul because human actions were deemed to be controlled by gods. But

during the Middle Ages it was the legal status of a person as emperor, pope, king, lord, knight or serf that determined his or her life and hence the legal status was considered more important than the status as an individual human being distinct from all others. Either way there was no conception of the individual as an important object of concern or study. This lack of focus on the individual during the Early Middle Ages was part of the Neo-Platonic theory that dictated that the human intellect knows only universals, not individuals. Thus, individualism was really not possible in the Early Middle Ages. Accordingly people were viewed as coming in types based on social status and having minds that worked according to rules appropriate to each type.

The modern concept of the individual began to emerge in many areas during the High Middle Ages and Renaissance in literature, religions and in academic thought. The change from an external conception of mind to a more internal and individualistic one began first in the highly individualistic Italian city state of the High Middle Ages, which in turn gave rise to Renaissance. In Florence, Machiavelli and Dante expressed such concepts through their work. The 14th century English poet Chaucer created the first individualized realistic characters in English. William Shakespeare portrayed individuality in his characters of the many dramas he wrote and acted.

Ethics and mystic religion were the two areas, through which individualism entered into medieval academic culture. For example, before 12th century sin was not considered as personal and penance was a mechanical procedure for expiating sin. But in the 12th century people began to view sin as a matter of personal intention and it was formalized in Peter Abelard's concept of *voluntaristic ethics*. An act by itself is neither right nor wrong; it is the intention behind the act which has to be judged one or the other way. Since intentions are intensely personal, Abelard's ethics was part of the growth of the individual. Mysticism seeks a direct connection between self and God, without the mediation of the priest. Mysticism began in popular religion rather than scholastic theology. St Francis of Assisi the greatest medieval popular preacher, abandoned wealth and status in favor of communing with God through nature and his teaching was individualistic. This ascetic ideal is a common one in world religions. Ascetic religions focus inward for enlightenment or salvation.

7.8 SUMMARY

The origins of modern psychology can be traced back to ancient Greece. Since then the psychological thought can be considered to have developed in different phases as an integral part of Western thought. In each phase the thinkers have attempted to focus on

certain themes and issues. There are two major currents of philosophical development viz., natural philosophy and human philosophy. Relating to the psychological ideas have developed. With the development of natural philosophy leading to modern science, the issues related to the understanding of human nature as a sentient being or as a machine have been debated. With the development of human philosophy, the distinctiveness of human being and individuality of humans have been discussed. Later psychologies have drawn inspiration from these philosophies and have developed in different directions. Among all the issues the problem of soul is one which has remained unresolved till today, though modern psychology has striven hard to wriggle out of this contentious issue by embracing reductionism.

Modern psychology with its focus on the individual started in High Middle Ages and Renaissance. Thus in the *first stage* the ancient spiritual worldview in which matter and soul were not sharply divided gradually gave way to a scientific, mathematical, and mechanical worldview due to developments that began in the Late Middle Ages and Renaissance. The *second stage* of transition occurred with the emergence of the individual as the functional unit of the social order in Western societies. As Sampson (1989) notes, studying individuals during the time in which the household was the functional unit of the social order would have made little or no sense. Once the individual emerged as central, however, seeking to understand the individual became a highly cherished cultural project. Leahey (2004) states that psychology “is the science that is concerned with the individual person” and hence, “how societies and cultures view and value individuals are important for understanding the history of psychology” (p.99). He further observes that “not until the nineteenth century do we find, among psychologists, a systematic interest in individual differences, and even then, the founder of psychology, Wundt, was indifferent to them” (ibid, p.99-100)”.

7.9 KEYWORDS

Spiritualism Epicureanism
 Stoicism Naturalism Cynicism
 Gnosticism Determinism
 Skepticism
 Hermeticism Neo-platonism

7.10 CHECK YOUR PROGRESS

1. Give the meaning of the following Greek words—*arête*, *tyche*, *psuche*, *logos*, *polis*.
2. What is the fundamental belief of Naturalism?

3. Which are the two perspectives of Naturalism?

4. Match the following

Philosophers	Main Concept
A. Thales	1 space as one element
B. Anaximander	2 body equilibrium
C. Anaximenes	3 effluence
D. Alcmaeon	4 humors
E. Hippocrates	5 water as one element
F. Empedocles	6 pneuma

5. Which are the propositions of Heraclitus of Ephesus?

6. What is the main thesis of Parmenides?

7. What is the idea of Determinism according to Leucippus?

8. Which concept can be considered as the precursor of atomic theory?

9. Who are Sophists?

10. Which are the three interpretations of Protagoras' statement "of all things the measure is man"?

11. What is the nature of Socratic Method?

12. What is the main contribution of Plato?

13. Which are the three types of soul according to Plato?

14. Which are the three causes of Form?

15. Which are the three levels of soul according to Aristotle?

16. State Aristotle's three laws of association

17. Distinguish between appetite and wish.

18. What is the meaning of these Greek terms—*eudaemonia* and *ataraxia*?

19. What do you mean by Epicureanism and Stoicism?

20. What is the nature of a Cynic and a Skeptic?

21. What is the significance of Saint Augustine in the history of psychology?
22. What is the contribution of Ibn Senna?
23. What is 'intuitive cognition' according to Ockham?

7.11 ANSWERS TO 'CHECK YOUR PROGRESS'

1. arete-the good life; tyche-fate; psuche-the soul; logos-study of; polis-city state.
2. The nature of the universe and the fundamental nature of reality can be understood in physical terms, without reasoning to any supernatural explanations.
3. (i) Universalistic-naturalistic perspective with physical orientation.
(ii) Universalistic-naturalistic perspective with biological orientation.
4. A-5; B-1; C-6; D-2; E-4; F-3.
5. (a) The only constant in the universe is change.
(b) Things never simply 'are', but are always 'becoming' something else.
(c) Change is lawful and not capricious and regulating change is a dynamic universal harmony that keeps things in equilibrium of the balanced forces.
(d) There is no eternal truth, only useful truths.
6. Reality is one; change is impossible and existence is timeless, uniform and existence is timeless, uniform and unchanging. Reality is the object of knowledge because of its unity. This is the doctrine of *being*.
7. Nothing happens at random, everything happens out of a reason and by necessity. The soul and free will are illusions that can be reduced to the mechanical functioning of our physical bodies.
8. The concept of eidola explained by Democritus can be considered as the precursor of the atomic theory.
9. Experts in the art of persuasion who existed during the Classical period (500-323 BCE) were known as Sophists.
10. Personal, cultural and metaphysical are the three interpretations of Protagoras' statement "Of all things the measure is man".

11. It is a process of dialogue through which the truth which is inherent in the individual is brought out by disparaging false erroneous beliefs. This will lead to *aporia* or enlightenment.
12. Plato was convinced that the *transcendental truth* exists and perception is not the path to knowledge. He distinguished between *forms* which really exist in the realm of *being* and the physical objects in the realm of *becoming*.
13. (i) Rational (ii) Spiritual (iii) Desiring souls
14. Essential, efficient and final are the three causes of *form*.
15. (i) nutritive soul (ii) sensitive soul (iii) rational soul
16. (i) law of similarity (ii) law of contiguity (iii) law of contrast
17. Appetite is an adhesive motivation directed by an image of what is pleasurable. It is found in animals. Wish is desire motivated by a desire for what is good or for long term benefits. It is found in human beings.
18. Eudemonia is human flourishing or living well; ataraxia is freedom from disturbance.
19. Epicureanism is the philosophy put forward by the Greek philosopher Epicurus which states that pleasure is the chief good, by which he meant freedom from pain and anxiety. Stoicism is the view of stoics that we should not allow world's trouble to disturb us.
20. Acynicism is one who withdraws from the social world and criticizes everything.
21. Saint Augustine combined stoicism, Neo-Platonism and Christian faith to develop Augustinian Neo-Platonic psychology.
22. Ibn Sina, known as Avicenna in Europe who influenced development of medieval philosophy and psychology was responsible for the development of Islamic psychology.
23. Intuitive cognition is the direct infallible acquaintance with some object in the world. From such knowledge of things *abstractive cognition* of the universals may develop. This process is called conceptualism.

7.12 REFERENCES

1. Brennan, J.F. (2003). *History and systems of psychology*. (6th Edition). Delhi: Pearson Education.
2. Capaldi, E.J. & Proctor, R.W. (1999). *Contextualism in Psychological Research - A critical review*, Sage Publications, New Delhi.
3. Leahey, T.H. (2004). *A history of psychology - Main currents in psychological thought*. (6th Edition).

Delhi: Pearson Education. www.Wikipedia.com

UNIT-8:EARLYBEGINNINGSOFSCIENTIFICPSYCHOLOGY

Structure

- 8.1 Objectives
- 8.2 Introduction
- 8.3 Scientific revolution and its implications
 - 8.3.1 Implications for the development of scientific psychology
René Descartes - John Locke - Gottfried Wilhelm Leibniz
 - 8.3.2 Implications for the psychology of human affairs
Thomas Hobbes - Blaise Pascal - Baruch Spinoza
- 8.4 The age of enlightenment and the future of psychology
- 8.5 The French tradition - Sensationalism and materialistic psychology; Hedonism; Specific nerve energies; Environmental determinism; and Comprehensive Psychology of Biran
- 8.6 The British tradition –
Early empiricism and passive view; Material scepticism; Mental scepticism; Scottish enlightenment; and Later empiricists and principle of association
- 8.7 The German tradition – Passive to active view of mind
- 8.9 Development in physiology -
forerunners of classical psychophysics and physiological psychology
General Physiology of the Nervous System (Luigi Galvani - Charles Bell and François Magendie - Johannes Müller); Physiology of the Brain and Phrenology (Franz Joseph Gall - Johann Caspar Spurzheim); Localization of functions (Luigi Ronaldi - Jean-Pierre-Marie Flourens); Physiology of sensations (Thomas Young - Jan Purkinje); Sensory physiology and Psychophysics (Ernst Heinrich Weber - Gustav Theodor Fechner - Hermann von Helmholtz)

- 8.10 Summary
- 8.11 Keywords
- 8.12 Checkyourprogress
- 8.13 Answerstocheckyourprogress
- 8.14 References

8.1 OBJECTIVES

After the study of the unit, you will be able to,

- Explain the implications of scientific revolution for the development of psychology
- Explain the extreme and moderate views of French thinkers during the 18th century about sensationism and materialism.
- Examine the views of the British Empiricists
- Explain the process of association of ideas as put forth by the British thinkers.
- Explain the difference between German and British/French traditions
- Describe the work of French scientists during the 18th century on the physiology of the nervous system.
- Explain phrenology as a precursor to the localization of the brain functions.
- Describe the contributions of physiologists to the physiology of sensations and psychophysics.

8.2 INTRODUCTION

As noted in Unit 7 in the Bronze Age of ancient Greece there was little conception of individual mind or soul or of self, though there were great and distinctive individuals both men and women. Since then till High Middle Ages and Renaissance, modern concept of the individual did not exist in the Western intellectual tradition. Individual was not an important object of concern or study. But it was only during the High Middle Ages there was a gradual transition from an external conception of mind to a more internal and individualistic one. In this Unit you will be learning about the developments in 17th and 18th century philosophy which had a direct bearing on the development of psychology in different countries. You will also study the developments that took place in the field of physiology in 19th century, which paved the way for the formal founding of psychology as a scientific discipline in Germany.

8.3 SCIENTIFIC REVOLUTION AND ITS IMPLICATIONS FOR THE DEVELOPMENT OF PSYCHOLOGY

Scientific Revolution took place in the 17th century which occurred simultaneously in different parts of Europe, in the *fourth* phase of the development of Western thought. By now natural philosophers/scientists had demonstrated the mechanical nature of the *avenly* and

earthly phenomena and then of the bodies of animals. The older Greek and Roman views of the universe as divine being or a readable book was substituted by the view that universe is a machine. It also proposed that people could improve their lot by the application of reason and experiment rather than by prayer and devotion. In the process the ancient view of the world and its relation to humankind as a pattern of mystically meaningful symbols disappeared. Eventually the mechanical approach was extended to humanity itself. The study of the humankind was subjected to scientific method.

Consequently a conflict arose between the view of the universe derived from our ordinary day-to-day sensory experience and the one developed based on mathematical calculations. For example, Galileo made a distinction between the *primary* (physically objective) and *secondary* (subjective sense) *properties*. Shape, size, motion, rest, etc., were considered the primary/objective properties in the world and tastes, colours, odours, etc., were considered subjective sense properties. Galileo said the subjective properties, “reside only in the consciousness” and “if the living creature were removed all the equalities would be wiped away and annihilated” (cited in Leahey, p.128). The world as we experience/perceive was subordinated to the scientific world view developed on the basis of mathematical calculations and the latter was considered more truthful.

This new scientific view began to alienate human beings from the universe and humans discovered that the world they experience was not the real world, but something created by their minds. The distinction of primary and secondary properties laid the foundation for psychology *as the study of consciousness*, which Structuralists pursued until the Behaviourists later redefined the field around 1900 *as the study of behaviour*. Hence, psychology was philosophically important because its study could shed light on epistemological issues through the understanding of the scope and limits of human knowledge. Three philosophers viz., the Frenchman, Rene Descartes; the Englishman, John Locke; and the German, Gottfried Wilhelm Leibniz contributed most to define psychology as the study of consciousness/mind and together they created the basis for the first scientific psychology and influenced the future course of psychology in different directions in France, Britain and Germany respectively.

8.3.1 Implications for the development of scientific psychology

René Descartes' (1596-1650) major contribution to philosophy and psychology is his famous statement *Cogito ergo sum* (I think therefore I am). Unlike his Greek predecessors who turned outward to find *phusis* in nature, Descartes turned inward to investigate his own

mind in order to develop a foundational philosophy and adopted a method of “radical doubt”. He doubted everything - existence of God, the validity of his own sensations, the existence of his body, the reality of the external world, and so on. But one thing he could not doubt was his own existence as a self-conscious thinking being. He considered that I, which does the thinking, as the soul which is a spiritual substance wholly without matter, not occupying space and completely separate from the body. This differentiating of a spiritual substance from matter or soul from body is well known as “Cartesian split” or “Cartesian dualism”. Soul is neither matter nor form nor is it the form of the body according to Descartes. On the other hand, soul dwells within the mechanical body as a sort of ghost, receiving sensations from it and commanding it by acts of will, which resulted in the well-known phrase “ghost in the machine”.

Cartesian dualism created a further distinction between ‘self’ and ‘conscious experience’. Descartes went a step further than Galileo here. Descartes claimed that it is possible to step back from one’s experience and examine it as “a collection of objects-sensations

- that are not part of the self” (Leahey, 2004, p. 136). “Descartes says conscious experience is like a theatre photograph, an image that one naively takes to be real, but an image that can be examined as a thing - consciousness itself - through a special kind of inward observation called *introspection*... With the Cartesian Theatre, the psychology of consciousness was born, although it was not yet a science” (ibid, p. 138). Descartes had come very close to Indian thinkers in differentiating self and the mind/consciousness. But his I am is a ‘thinking self’, which is similar to the concept of *viveka* (discriminative intellect) in Indian thought. Still it is a state of duality (*dvaita*) between the thinking self and the other i.e. all kinds of phenomena experiences. Indian seers and sages went beyond this duality and spoke of non-duality (*advaita*).

John Locke (1632- 1704) was a physician and also a practical politician and his approach to the subject was down to earth. He held that mind has no immediate Object, but its own *Idea* and hence mind does not know Forms or Essences (as Plato put it) or even objects themselves, but its own ideas only. Our knowledge is only about ideas and they come from experience. Either they are derived through observation of external sensible objects (sensation) or through observation of the internal operations of our mind (reflection). Locke also distinguished between sensations, which are physical, and perceptions, which are the reflected products of sensations. His famous statement was “*Nihil est in intellectu nisi quod prius fuerit in sensu* – There is nothing in the mind that was not first in the senses” (cited in Brennan, 2003, p. 108). This principle is affirmed in another famous phrase of Locke about mind that it is a *tabularasa*, a blank slate, on which the accumulation of life’s experiences

are gradually impressed to constitute the entire contents of the mind. Therefore, Locke is also considered as the father of British empiricism.

Though Locke spoke of mind as *tabula rasa*, he did not completely deny the possibility of *innate ideas* in the mind. Locke also viewed mind as a complex, information processing device prepared to convert the materials of experience into organized human knowledge.

He discussed about “association” and “reflection” as two active mental operations that are involved in information processing. Locke’s psychology is described as rational empiricism, because he felt the need to retain the idea of mind and emphasized its rational operations and discarded the theological implications of the soul. Locke’s emphasis on the environmental determinacy (experience) influenced the subsequent British empiricist movement.

Gottfried Wilhelm Leibniz (1646–1716) was a mathematician, logician, and metaphysician. Leibniz’s original contribution to psychology was his concept “monad”, which he regarded as the agent of activity. Leibniz conceived of the universe as composed of an infinity of geometrical –point entities called *monads*, each of which to some extent living and possesses some degree of consciousness. They are unextended units of force or energy. Each monad is a separate, independent force asserting its uniqueness against all other centres of force. All living beings are composed of monads that define individuality and reflect the universe. The monad of an individual human being is mind, to the extent that it has sensitivity and responsiveness. The monad grows and develops throughout life; change occurs because of internal, individual striving. The elements of life in the individual are the result of a collection of various monads, each with a specific purpose and direction and with varying degrees of consciousness. This aggregate becomes the living harmonious organism of the person under the organizational direction of the dominating monad of the soul.

Following are some of the important implications of Leibniz’s psychological views. *First*, the individual is not at the mercy of environmental determinants. Rather, a person’s mind is structured to act on the environment. *Second*, the concept of monadology, does offer an explanation for the dynamics of mental activity. Processes such as attention, selective memory, and the unconscious are easily accommodated in ways not permitted in empiricist or sensationist frameworks. *Third*, Leibniz’s doctrine of active mental apperception was the central theoretical concept of Wundt. Leibniz’s active view of mind is in contrast to the passive view of mind proposed by Locke. Leibniz’s theory of monads led a solution to the mind-body problem that became popular in the next two centuries. It is known as mind-body or psychophysical parallelism

8.3.2 Implications of scientific revolution for the psychology of human affairs

Scientific revolution also demanded new answers to the traditional questions of philosophy, psychology, politics and values. The questions related to the origins of human conduct, about the place of values in a world of facts, about moral responsibility, about the proper forms of human government, and about the place of feelings in worldviews founded on scientific reason are the important ones to which new answers had to be found. In the 17th century, philosophers began to struggle with these questions. Among them Thomas Hobbes (British), Blaise Pascal (French) and Baruch Spinoza (German) are important here.

Thomas Hobbes's (1588-1679) importance in the scientific revolution derives from being the first to comprehend and express the new scientific view of humans and their place in the universe. Hobbes unlike Descartes propounded the mechanistic view of human behaviour and dismissed the notion of spiritual causes and substance. According to Hobbes there are laws inherent in nature, existing apart from humanity's recognition of them, that govern everything from the planetary movement of the solar system to the biological mechanisms

of the animals, including humans. However, Hobbes's view of Natural Law was not like the laws of physics, because he said that human beings rationally consent to follow the natural laws, which cannot happen in case of physical objects and animals. Hobbes's idea that Natural Law would apply to people is of considerable importance to psychology.

His foremost principle of psychology was that all knowledge is derived through sensations. Further, he suggested that except matter and motion, nothing else exists internal or external to us. Thus Hobbes's psychology was grounded in materialism and empiricism. Hobbes's greatest importance lies in thinking about the relation between human nature and human society. He was the first to ask, "What would people be like in a state of nature, without government?" and this question was the inception of the Enlightenment Project that happened in the 18th century (see Section 8.4). This question pushed psychology into the forefront because as a study of human nature, our discipline becomes important to those who desire or need to govern and manage human beings, when scientific worldview was adopted abandoning the idea of God and divine rule.

Blaise Pascal (1623-1662) was a scientist and mathematician who investigated the vacuum and helped to found probability theory. Leahey (2004) points out that Pascal was the first person to sense that the human mind could be conceived as an information processor capable of being mimicked by a machine, a concept central to contemporary cognitive psychology and artificial intelligence. The implication of this is that reason which was considered

as a unique human attribute by Descartes (remember “I think therefore I am”) and hence exempted by him from his mechanical system, could not be so exempted. Nevertheless, Pascal disliked Descartes’ excessive rationalism. He derived solace and truth from his faith in God. For him the essential attribute in humans is not natural reason, but will and the capacity for faith—that is, the heart. He doubted the human capacity to fathom nature or to understand self, yet believed that humans’ unique self-consciousness can lift them above nature and the animals, offering salvation through faith in the Christian God. Pascal’s emphasis on faith echoed through all modern existentialists, including theists such as Sartre.

Baruch Spinoza’s (1632-1677) philosophy begins with metaphysics and ends with a radical reconstruction of human nature. Spinoza argued that God is essentially nature and God is no more than totality of the universe. Hence he was considered as an atheist. Further, Spinoza believed that nature/God was entirely deterministic and to understand anything means to unravel its efficient causes. He denied the existence of final causes and considered teleology (the theory that universe/nature has a purpose or goal) to be a projection of humanity’s feelings of purpose on nature applied to those events for which we cannot give a deterministic explanation by finding an efficient cause. Thus, he was also considered as a naturalist (Leahey, 2004).

Spinoza did not deny the existence of mind but he saw it as an aspect of a fundamentally material nature and hence for him mental activity is as deterministic as bodily activity. But he rejected the Cartesian dualism and viewed the mind and the body as different aspects of the same fundamental substance. The mind is the internal manifestation and the body is the external manifestation of the individual’s unity. For example, desires give rise to emotions that, in turn, have both physiological and mental aspects. Spinoza described the mental functions of feelings, memories, and sensations as mechanical processes mediated by the physical senses and originating through the stimulation of physical objects. Higher mental processes of perception and reason, as well as what Spinoza called intuitive knowledge, are derived from the external world but from the mind acting on itself. The mind is not an entity or agent, but rather an abstraction; the mind and its activities are identical (Leahey, 2004).

Spinoza extended his deterministic analysis to human nature. According to Spinoza the essential state of the person is to act. But absolute freedom does not exist for the individual. We feel we are free, but it is an illusion. Action is ultimately motivated by self-preservation, which is guided by desire. The individual struggle for survival was seen by Spinoza as the source of all motives and desires, although a person may not be always conscious or aware of the ongoing struggle. In most of us conflicting desires give rise to emotions and people are

governed by the desires that eventually secure self-preservation. Echoing the Epicurean theme, Spinoza asserted that all desires ultimately involve seeking pleasure and avoiding pain. Spinoza's notion of self-preservation is critical to his psychological views. Spinoza's views influenced German philosophers who developed the concept of the essential dynamic action of the mind and in turn the development of psychology in German tradition.

8.4 THE AGE OF ENLIGHTENMENT AND THE FUTURE OF PSYCHOLOGY

Eighteenth century is known as the Age of Enlightenment. It entailed replacing religion (the priest) and tradition (the aristocrat) with the study of nature – *science*. The result of the Enlightenment was the beginning of the secularization of European thought. However, Enlightenment movement took different shape in different countries depending on the socio-political climate prevalent thus leading to different kinds of philosophies.

The key concept of this movement was nature, especially human nature. Enlightenment thinkers, especially in France, believed that in order to reform society along scientific lines it was necessary to inquire into human nature scientifically. Thus, in the 18th century human sciences began to become socially important because their findings would be used by reformers and revolutionaries to construct better societies. Hence, psychology no longer remained a mere philosophical inquiry into the human mind. It also became the basis of social engineering. Unfortunately, however, the thinkers of this century did not agree upon what human nature was leading to questions about human knowledge and morals. In France, more than anywhere else, there was an anti-religious and anti-traditional spirit operating among Enlightenment thinkers. As a consequence French philosophers pushed Cartesian, Newtonian and Lockean ideas to an extreme not found in other countries, resulting in materialism.

Elsewhere, in Britain and Germany, when Enlightenment thinkers investigated human nature in the spirit of Newtonian science, the age old Greek problem of the possibility of human knowledge in a naturalistic context got reopened. Philosophical psychologists came to question whether we could know the world as it is, or even if we could, they asked, what was the certainty that there was a reality outside the Cartesian theatre (of mind). Some philosopher-psychologists who examined the human mind and human nature concluded that no human opinion was free from the possibility of error, and that the very existence of the physical world was open to doubt. These were the conclusions of the British philosophers George Berkeley and David Hume. But this was resisted by others who were attached to the possibility of secure human knowledge like Scottish thinkers who affirmed common sense. In Germany, Immanuel Kant responded to Hume's skepticism by asserting the old claim that metaphysics

was science's true foundation.(Leahey,2004).Consequent to these different turns which Enlightenment took in different countries, the philosophies that developed and also the psychologies based on them proceeded on different lines with varying assumptive framework. Developments in physiology and psychophysics were also influenced by different philosophical traditions that existed in France, Britain and Germany as we will see.

8.5 THE FRENCH TRADITION

After Descartes, French thought on psychological issues concentrated on the sensory aspects of human experience and the study of human nature based on sensations and perceptions characterized it. The mind-body distinction made by Descartes got obscured in French thought. In their quest to understand the mechanism of sensation French philosophers reduced mental activity to sensory mechanisms. While Etienne Bonnot de Condillac (1715-1780), Charles Bonnet (1720-1793), and Julien Offroy de La Mettrie (1709-1751) held extreme views of sensationalism and materialism, Claude Adrien Helvetius (1715-1771), and Pierre Cabanis (1757-1808) held moderate views on materialism and attempted to rescue the concept of mind.

The psychology developed by Condillac is characterized as “materialistic psychology” because of the extreme position he took in interpreting psychological activity based on sensory experience alone. He held that the entire complexity of the mind can be derived from a single sense capacity. He gave an elaborate theory of how different psychological capacities like judgment, memory, imagination, self, will, etc., emerge in the course of the development of different sensory experiences, starting with olfactory sensation. Condillac relied solely on the physiologically based senses.

Bonnet's contribution lies in extending the views of Condillac on physiological mechanisms of sensory process to include the role of nervous system. He was one of the first scholars to mention about specific nerve energies, which means that a given function is executed by a certain system of neural fibers (see Section 8.9 for more details). He argued that the tracing of nerve fibers would explain not only sensory processes but also the psychological functions such as attention, memory, and recognition. He viewed higher mental processes in terms of the association of sensations or memories through the commonality of some dimensions, such as time, place, or meaning. Charles Bonnet was one of the first natural philosopher/scientist of the 18th century who used the term *evolution*, by which he meant the chain of life from simple atoms to human beings. From his investigations he concluded that

plants are endowed with cognitive functions such as sensation, discrimination, and even judgment and considered that as evidence of intelligence.

La Mettrie entrenched materialistic psychology firmly in France, through his book *L'Homme Machine (Man, a Machine, 1748)*, which shook intellectual Europe because of its simple and clear statement on materialism. La Mettrie argued against the need for a separate discipline of psychology! He asserted that psychology is ultimately physiology and this reductionism pushed Descartes' dualism to the background completely. La Mettrie held that matter has an active element, which is motion. He derived this conclusion from the sensory feelings found in the lowest animals and plants and this observation led him to propose a type of evolutionary hierarchy in the motion of matter. He proposed that in higher animals, the motion of matter allows the heart to beat and the brain to think. He also postulated a motivational principle for human activity, which is hedonistic in nature, i.e., seeking of pleasure is the ultimate force that propels the individual. That led to elevation of sensual pleasure as important in life and the actions of people were judged as determined by their desire for sensual gratification leading to a new ethic (Brennan, 2003). As Brennan (2003) has put it "Faith in materialistic science was pushing psychology out of consideration only 100 years after Descartes first defined psychology by distinguishing it from physiology" (p.96).

The two philosophers who tried to rescue the concept of mind that was pushed into background by earlier French thinkers are Helvetius and Cabanis. Helvetius concentrated on the environmental determinants of the individual. He attempted to relate La Mettrie's motivational principle of hedonism to environmental influences. According to Helvetius, physiology may explain the mechanisms of psychological functions, but the mechanisms are still dependent on environmental context. His explanation of the role of environment involved its differential effect on individuals strengthening attention and widening perception in some people but not in others, though all people are born with equal capacities as he believed. This resulting individual difference in capacity to deal with the environment Helvetius defined as intelligence. He believed that the key to success in the environment is the opportunity for enriching experiences.

Cabanis being loyal to the French tradition embedded mental processes in the materialism of the nervous system. He proposed a central ego of the brain that acts as the integrator and synthesizer of sensory input, which preserved the need for the concept of mind, even though couched in physical terms. According to him sensations do not exist as pure forms; rather sensations are part of an entire system, mediated by the central ego, or self, and sensations are known only through the integration of the entire system. Another

aspect of Cabanis' thinking was his recognition of the levels of consciousness, including unconscious and semiconscious.

Maine de Biran (1766-1824) attempted a comprehensive psychology that went beyond materialism and his thinking was an exception to the French tradition of materialistic psychology. According to Brennan, Biran passed through four distinct phases of intellectual evolution and he "personified the full gamut of eighteenth century psychological views" (2003, p.97).

During the first phase, 1790-

1800, Biran belonged to a group called Ideologists. This group was founded by Cabanis to promote the teachings of Condillac. Accordingly, Biran believed in a physiological psychology explained by sensory processes. However, in 1805, he broke from the Ideologists' group and he argued that human activity cannot be reduced to the mechanistic atomism of sensory elements. He wrote that thought was a whole entity composed of distinct processes, but that it was not simply an aggregate of those processes. He also focused on the will as an intentional activity that defined the essential character of the self, which made the individual more than the passive receptacle of sensations. It defined a spiritual force that explained life itself. This was the second phase.

In the third phase, 1810, Biran's conception of psychology embraced the notion of consciousness. He concluded that "psychology is the science of the immediate data of consciousness", to Descartes' "I think, therefore, I am," Biran responded, "I will, therefore I am." "Psychology's province is to study the intentionality of the self represented in consciousness" (Brennan, 2003, p.97-98). Methodologically, Biran insisted on the objective observation of the self through individual experience. In the last or fourth phase, beginning in 1820, Biran turned to religious experience and attempted to integrate religious aspirations in life to his total concept of psychology. He was more interested on those aspects of human nature that result in creative, unpredictable activities fully expressive of the person, than on the commonality of physiological make-up or psychological processes.

It is interesting to note that many psychologists have moved in their conception of what psychology is, like Biran. The most contemporary example is that of Abraham Maslow who studied primates in his initial career was later responsible for the founding of humanistic and transpersonal psychologies. William James, the reputed American philosopher and psychologist of the late nineteenth century referred to Biran as the greatest psychologist of the 18th century for the breadth of his vision of psychology as well as for his anticipation of the variety of models that may be applied to psychology. Perhaps it is not wrong to count Biran as one of the pioneers of humanistic and transpersonal psychology.

8.6 THE BRITISH TRADITION

Philosophers of the British tradition, unlike their French counterparts, retained Descartes' mind-body dualism. However, they firmly adhered to empiricism, which holds that experience is the only source of knowledge. The foundation for British empirical tradition was laid in the 17th century by Thomas Hobbes and John Locke. In the 18th century this line of thinking was continued by George Berkeley (1685-1753), David Hume (1711-1776) and David Hartley (1705-1757) and by later empiricists James Mill (1773-1836) and his son John Stuart Mill (1806-1873) in the 19th century. Between the early empiricists and later empiricists were Scottish Enlightenment thinkers like Thomas Reid (1710-1796) and Thomas Brown (1778-1820) who emphasized on common sense and thus tried to show the absurdity of early British empirical thought which skeptically denied the existence of matter and mind. A major implication of this position for psychological inquiry in British tradition was the focus on studying the relationship between the sensory input of experience and the operations of the mind.

Berkeley followed empiricism but argued that reality exists only to the extent that mind perceives it². Hence, he dismissed the common sense belief about the existence of an independent objective reality and asserted that sensation and perception are the only reality about which we can be certain. This is known as "material skepticism". Berkeley used the principles of association to explain the accumulation of knowledge. According to him simple ideas of sensory origin are compounded or constructed to form complex ideas. It is a process of mechanical coupling and hence adds nothing in the association process, so that complex ideas are directly reducible to simple elements. This association principle, which is active during perceptual processes, allows us to acquire knowledge of the environment. As Brennan (2003) notes Descartes, Locke and Berkeley approached the problem related to mind-matter/mind-body dualism in different ways. While Descartes asked the question "how the mind is related to matter?" Locke attempted to answer it by seeing the problem as "how the matter generates mind?" But, Berkeley took an opposite view and saw the problem as "how the mind generates matter?" Berkeley held "*Esse est percipi*, - To be is to be perceived."

David Hume accepted the basic empirical principle and also acknowledged the distinction between "primary" and "secondary" qualities proposed by Locke. But he defined mind solely in terms of the sensations, perceptions, ideas, emotions or desires of a person at any given point. Thus by limiting the notion of mind to only ongoing sensory and perceptual processes he opined that any additional spiritual characteristic of the mind is unnecessary.

This is mental skepticism. Hence, for Hume mind was the transitory collection of impressions. Thus, mind *per se* did not exist. By identifying mind solely with its functions, he questioned the need for a mind construct. He rejected the mental operations of reflection suggested by Locke. According to him associations are compelling links that are formed by the contiguity and simultaneity of events and considered even such basic relationships as cause and effect as illusory. For example, Hume observed that perception of flame followed by the perception of heat does not imply a causal connection. Instead what we observe is a succession of events. But we impose a cause-effect relation between the two events as derived from the custom. Hume was of the view that reason is slave to emotion. So he did not believe that reason as a higher mental process controlled emotions. Instead it is the antagonism or tension between emotions that result in their control or ethical constraint. Further, he believed that it was the physiological mechanism that integrated and mediated the motivational states derived from emotional interplay.

Hume's is a passive view of empirical psychology and he viewed human activity as reactive and having little initiative or control of the environmental events impinging on the organism. For Hume, even personal freedom was also an illusion. According to him we are determined by the momentary influx of sensory events and hence, any subjective freedom is simply some idealistic concept again taught to us by custom or religion. Therefore, for Hume the primary motivational construct was based not on free will, but on emotion or passion governed by the seeking of pleasure and avoidance of pain. That is, hedonism.

David Hartley defined his psychology in the empirical mold suggested by Hobbes and fully elaborated by Locke. He accepted the material skepticism of Berkeley and the mental skepticism of Hume. According to Brennan (2003) Hartley's importance was in his role as a synthesizer. He advocated the explanation of all human activity, including emotion and reason, through the mechanism of association formed by the contiguity of events and strengthened by repetition. According to him every mental activity has a concomitant physiological activity; the association of ideas is the mental aspect of the sensory association of events occurring together in time and place. He postulated that fiber connections of the brain comprise the correlates of all mental operations and vibrations of brain fibers form the basis of ideas, thus proposing a physical mechanism that underlies a so-called mental operation. Hartley established a physiological basis for Hume's brand of empiricist psychology. Hartley's physiological psychology brought together trends that resembled the psychology of Condillac and his followers in France. However, he made a significant distinction in retaining the need for some notion of mental activity.

Most of the philosophers and literary contributors to the Scottish Enlightenment were independent of British thought, except for David Hume who belonged more appropriately to British tradition though a Scottish by birth. Scottish thinkers highlighted the absurdity of denying the existence of matter and mind and based their views on common sense. Thomas Reid accepted Locke's distinction between primary and secondary qualities and argued that the primary qualities justify belief in the reality of physical objects, i.e., matter. He believed that we perceive objects directly; we do not perceive sensations arising from them. Similarly, he viewed secondary qualities as mental judgments stimulated by the objects and not as projections of the mind. Sensations are the product of a true interaction between physical objects and mental operations. With this he affirmed mind also.

Thomas Brown was a student of Reid. His major contribution was in emphasizing the role of associations in mental processes and restoring the importance of associative processes in empiricism. But his view of association was different from that of Hartley and Hume and was less mechanistic in conception. He argued that associations are suggestions and proposed two kinds of suggestions viz., simple and relative. Simple suggestion produces complete ideas; for instance, title of a film song can evoke an entire thought sequence of melodies. On the other hand, relative suggestion involves non-sensory input, resulting in exclusively mental operations. For example, multidimensional mathematics is studied in a branch of mathematics called topology, which is completely abstract and not represented through sensory experience (Brennan, 2003). With this distinction of simple and relative suggestion Brown broadened the basis of associations to explain the complexity of mental operations. Contributions of Reid and Brown helped later empiricists to broaden the scope of their consideration of mind to lay the foundation of modern psychology.

James Mill (1773-1836) and his son John Stuart Mill (1806-1873) were two important thinkers who shaped the course of British empiricism in late 18th century and in the 19th century. The major focus of the later empiricists was principles of association. They viewed the contents of the mind in terms of the acquisition of experiences by the individual in which association played a significant role as the primary mechanism, leading to an emphasis on learning and memory in British psychology. James Mill held the extreme associationist position according to which the ideas are the residual of sensations when the physical stimulating object is removed in the environment. It implies complete mental passivity. As to the emergence of association he believed that contiguity of events gave rise to them. Thought sequences were trains of successive or synchronous ideas, and they mimicked the order of sensations. Complex ideas were simply aggregates of simpler ideas and were reducible to them. Implication of this

view is that even complex psychological constructs such as self also can be reduced to its constituent components. In addition to his empiricist views, James Mill was also influenced by the British philosopher Jeremy Bentham who propounded Utilitarianism. James Mill championed Bentham's views in psychology.

John Stuart Mill's empirical psychology was firmly based on induction. Though he, unlike his father, was aware of the developments in neurophysiology of his times was not willing to reduce psychological processes into their material basis. He argued that human thought, feelings, actions were the province of psychology. Stuart Mill postulated three principles of associations. 1. Every experience has a corresponding idea. 2. Contiguity and similarity produce associations. 3. The intensity of an association is determined by the frequency of its presentation. Therefore, the goal of psychology according to Stuart Mill was to find underlying causality in human cognitive and emotional activity. Further, John Stuart Mill recognized the role of changing social context of humanity in determining individual differences. Therefore, he did not propose to evolve laws to predict human activity. Instead, he advocated the search for "empirical laws", which were expressions of systematic variation. Here, we have in Stuart Mill's thinking the early seeds of Contextualism (see Unit on Cultural and Indigenous Psychology).

8.7 THE GERMAN TRADITION—PASSIVE TO ACTIVE VIEW OF MIND

In contrast, to French and British thinkers, German philosophers emphasized Descartes' views on the activity of the mind especially innate ideas. However, it was Spinoza's teachings that served as the intellectual foundation of German psychology more than Descartes'. Spinoza conceived the physiological and psychological processes as descriptions of the same entity and allowed for continuity in the activity of human functioning. Spinoza viewed the two as integrative aspects of human activity. Therefore, the psychology that emerged in Germany viewed sensations and ideas as aspects of the same active process. Unlike their French and British counterparts, who looked to the environmental input of the mind, German philosophers looked into preexisting dynamics of the mind to order the environment. Here we move away from a passive view of mind to an active view of mind.

Among the German philosophers who contributed significantly to this new development of psychology in 18th century is Immanuel Kant (1724-1804). Kant was one of the most influential philosophers of the post-Renaissance Europe. Kant made a distinction between the sensible world and intelligible world. Sensible world referred to the world of appearances which can be experienced through sensory organs. Intelligible world referred to what can be

conceived by the intellect or reason. Kant believed that time and space are properties of the objective environment but perceptual forms are innate in the mind. Thus he held that mind is an active entity governed by innate laws and structures, and it translates sensations into ideas. Kant's position implied a psychology of mental operations that are not solely dependent on sensory experience. After 12 years of contemplation Kant formalized his psychological views in his monumental work *Kritik der Reinen Vernunft (Critique of Pure Reason, 1781)*. By pure reason, Kant meant knowledge requiring no experiential proof. He called it "a priori knowledge".

Kant's system holds that the objective world is unknowable and that sense data are ordered by the mind, which meant that all knowledge exists in the form of ideas. However, Kant does not deny the reality of the objective world because its existence is confirmed by the stimulating and initiating functions of sense data in the formation of ideas. Thus, Kant incorporated both empiricism and rationalism though his major emphasis was on the latter. Kant's emphasis on the primacy of the will, along with rationalism, added a critical dimension to the definition of mental activity and provided a dominant theme for the future of German psychology. He distinguished knowledge into two groups viz., empirical and transcendental. Empirical knowledge depends on sensory experience and transcendental knowledge is independent of it. Kant accepted that to begin with all knowledge is initiated by sensations to the extent they provide stimulation to activate the operations of the mind. However, once the stimulation has occurred the experience is molded by the mind's inherent forms of perceptions and conception. The perceptual forms then transform the experience as the external sense of space and the internal sense of time. Kant distinguished between four categories, similar to Aristotle's teachings on mental categories, which mold an experience resulting in forms of conceptualization that are independent of experience. They are as follows. 1. *Categories of quality*: limitation, negation, and reality. 2. *Categories of quantity*: plurality, totality, and unity. 3. *Categories of relation*: substance and quality, cause and effect, activity and passivity. 4. *Categories of modality*: possibility and impossibility, existence and nonexistence, necessity and contingency. Each perception falls into one of these categories, so that perceptions are sensations interpreted by the inherent forms of time and space.

8.8 DEVELOPMENTS IN PHYSIOLOGY – FORERUNNERS OF CLASSICAL PSYCHOPHYSICS AND PHYSIOLOGICAL PSYCHOLOGY

While most of the 18th century developments related to psychology focused on mind-behavior, the French sensationalism, British mental passivity or German mental activity, the

developments related to physiology occurred primarily in 19th century which laid firmer foundation for the development of psychology as a scientific discipline. These developments were related to general physiology of the nervous system, physiology of the brain, and the physiology of sensation.

Luigi Galvani (1737-1798) an Italian physiologist used Leiden jars, which can store electrical charges, as an electrical source to elicit reflex action in the leg of a frog with a partially intact spinal cord and concluded that nerves are capable of conducting electricity and thus established that neural conduction is basically an electrical process. A second major step in understanding the physiology of nervous system was the work of Charles Bell (1774-1842) and François Magendie (1783-1855) who independently demonstrated through their experiments the distinction between sensory and motor nerves. Their collective work, known as Bell-Magendie Law, was based on their discovery that the posterior roots (front) of the spinal cord contain sensory fibers only, whereas the anterior roots (back) contain motor fibers. Their findings gave a clear understanding about the anatomy and physiology of nerves. Johannes Müller (1801-1858) based on the work of Bell and Magendie, fully articulated the doctrine of "specific nerve energies". In this doctrine, Müller described the specific qualities of neural transmission. The major implication of this doctrine is the explicit statement that our awareness is not of objects, but rather of our nerves themselves. Müller believed that the nervous system serves as the intermediary between sensed objects and the mind and asserted that five kinds of nerves each impose their own quality on the mind. Two of Müller's students, Emil DuBois-Raymond (1818-1896) and Hermann von Helmholtz (1821-1894) established the modern basis of neural transmission by describing the electrical properties of the neural impulse (Raymond) and measuring the speed of a nerve impulse (Helmholtz), thus permanently rejecting the idea of "animal spirit" or "animal electricity".

Among the many early scientists Franz Joseph Gall (1758-1828) may be regarded as the father of contemporary approaches to brain- behavior relationship because he was the first to propose seriously the idea that the brain was the specific organ of mental activity, in the same way that the stomach is the organ of digestion and the lungs the organ of respiration. Hence, Gall proposed that study of human nature should begin with those functions of the brain that give rise to thought and action, rather than with abstract and introspective inquiries into mind. He assumed that well-developed mental faculties would correspond to well-developed parts of the brain. The "organs" corresponding to the well-developed faculties in the brain would be larger than the organs corresponding to less- developed faculties, and their relative size would be registered on the skull as bumps overlying the developed organ.

That implies people differ in the anatomy of skull with varying bumps corresponding to different traits developed in them. Gall's doctrine of location of mental faculties is known as phrenology. Phrenology became the foundation for both science and pseudoscience of psychology. As a pseudoscience the doctrine of phrenology had appeal for common people and it was popularized by Gall's associate Johann Caspar Spurzheim (1776-1832). Gall and Spurzheim suggested that there are 37 mental powers corresponding to the same number of brain organs, and the development of these organs causes characteristic enlargements of the skull. It was in Spurzheim's hands phrenology became first popular psychology and he aimed to reform education, religion, and penology. Spurzheim carried phrenology to the United States and there it had a fertile ground for the development of this doctrine and it later contributed for the success of evolutionary psychology in America and for the development of the psychology of adaptation.

Though Gall's psychology was rejected by scientists it has many firsts to its credit that inspired the future generations to develop a scientific psychology. (a) It was nativist. (b) It compared humans with other animals. (c) It was materialistic, although Gall himself struggled against this tendency. (d) It was also behavioristic rather than introspectionist, because his system rested on observation of behaviors and of bumps on the skull rather than on the introspection of his own mind. (e) It was therefore the first objective rather than subjective psychology. (f) Further, unlike philosophical psychology which had been concerned with the grand problems of epistemology rather than the applied aspects like how the human mind copes with the world, Gall's was functional/applied, having been concerned with how the mind and its organ, the brain, actually adapt a person or animal to everyday demands. (g) Finally, his was a psychology of individual differences, because Gall explicitly rejected the study of the generalized adult mind in favor of a study of how people differ (Brennan, 2003).

Scientifically, Gall and Spurzheim through their phrenology forced the question of localization of functions in the brain into the forefront of physiological investigation and it inspired many experimentally minded physiologists to investigate the location of different behaviors in different parts of the brain. Luigi Ronaldo (1773-1831) based on pathological evidences Ronaldo argued that the cerebral hemispheres are the chief mediators of sleep, dementia, melancholia, and mania; and sensory functions which are localized in the medulla oblongata. He also found that electrical stimulation elicited more violent muscular contractions as the point of stimulation moved to higher brain centers.

Unlike Ronaldo who relied on pathological clinical evidence observed during postmortem examinations, Jean-Pierre-Marie-Flourens (1794-1867) made use of the controlled

method of extirpation/ablation (i.e., an area of the brain of a living animal is isolated, then removed surgically or destroyed without damaging the remainder of the brain). After the animal recovers from the operation, the animal is observed for loss of functions and recovery of functions. Flourens assumed that there are six separate areas in the brain and was able to identify the important functions of each of these areas, using the method of ablation. The areas below: *Cerebral hemispheres* (willing, judging, memory, seeing, and hearing); *Cerebellum* (motor coordination); *Medulla oblongata* (mediation of sensory and motor functions); *Corpora quadrigemina* (containing inferior and superior colliculi) and vision; *Spinal cord* (conduction); *Nerves* (excitation). His methodological innovations resulted in data that clearly anticipated the future of neurophysiological research.

Flourens was a Cartesian dualist who viewed the soul as residing in the cerebral hemispheres, and was of the view that since the soul is unitary the action of the hemispheres must also be so. Thus, he noted the essential unity of the nervous system by stressing the common action of the various parts, in addition to their specific functions thus anticipating Karl Lashley's theories of "mass action" and "equipotentiality" proposed in 1950's.

Another important development of this period was studying the sensations from the perspectives of physics and anatomy. Scientists attempted to study sensation with respect to the anatomical properties of the sensory organ on one hand and the physical properties of the stimulus concerned resulting in psychological experience. Thomas Young (1773-1829) an English scientist attempted to extend Newton's work in optics, and successfully developed a theory of color vision. Young argued that specific areas of the retina are differentially stimulated by specific wavelengths leading to the experience of three primary colours – red, yellow, and blue. Later the German psychophysicist Helmholtz strengthened this theory by providing better evidence and is now known as Young-Helmholtz theory of color vision.

Jan Purkinje (1787-1869) a Czech researcher made most significant contribution to the understanding of sensory physiology. In his early research Purkinje used himself as a subject because of lack of funds, and studied his visual reactions through meticulous self-observations. He noted that certain events, such as perceptual errors, discrepancy between stimulus intensity and perceptual strength, and uncaused sensory experiences, were not random. He found them to be governed by the systematic relationship between the structure of the eye and neural connection to brain. His most significant contribution, now well known as "Purkinje effect", was derived from his observations that the relative luminosity of colors in faint light differs from that in full light. This difference between, what are known as, "scotopic" and "photopic" vision was later explained by these separate

mediation of rods and cones of the retina. Purkinje also found out that retina cannot differentiate colours in its periphery. Purkinje proposed a corresponding objective, physiological basis for all subjective sensory phenomena that he observed, and showed how these phenomena may be used as an appropriate tool to explore the objective basis. With this, Purkinje admitted method of self-observation or self-description as a valid investigative approach. Purkinje's recognition of the need for experimentation and self-observation in physiological research made a great impact on the methodological direction of psychology. Purkinje also contributed extensively to neurophysiology, as reflected by his identification of certain cells of the cerebrum, known as *Purkinje cells*, and in the structure of the heart (*Purkinje fibers*).

The term *psychophysics* refers to a type of sensory physiology that emphasized "subjective experience" in the study of the relationship between physical stimuli and sensations. Psychophysicists examined sensations from several perspectives. They considered sensations as a reflection of the mind-body problem, rather than as a subject of anatomical and physical study alone. However, since they were not psychologists, but physiologists and physicists, they remained within the framework of their disciplines in which they had training. Psychophysics served as a critical transition between the study of the physiological and physical components of sensation and the emergence of psychology itself. The three key persons associated with psychophysical movement were Ernst Heinrich Weber, Gustav Theodor Fechner, and Hermann von Helmholtz. These scientists were the immediate precursors of modern psychology.

Ernst Heinrich Weber (1795-1878) was a professor of anatomy and physiology. His primary contribution was an exhaustive investigation of the sense of touch. He distinguished three manifestations of the sense of touch: temperature, pressure, and locality sensations. Weber divided temperature sensation into positive and negative sensations, of cold and warm, which he felt were similar to the light and dark sensations of vision. In his investigations on pressure, Weber developed a methodological innovation now well known within psychology disciplines as "two-point threshold". It refers to the method of detecting the sensitivity of the skin (cutaneous sensitivity) to pressure sensation. In this method Weber used a geometrical compass with two points and attempted to measure cutaneous sensitivity by the smallest detectable distance between the two points, which could be sensed by the subject. Weber found out that this threshold of detectable difference varied with the place of stimulation, which he explained by postulating differential densities of nerve fibers underlying the skin's surface.

Weber extended his method to the study of weight discrimination also. He found out that the smallest detectable difference between two weights can be expressed by the ratio of the difference between the weights relative to the absolute value of the weights, and that this ratio is independent of the absolute values of the weights. His findings on weight discrimination eventually lead to the formulation of “Weber’s Law”, named after him by his colleague Gustav Fechner. Weber extended his method to other senses and found general validity for the ratio of the smallest detectable difference between two stimuli. Weber’s Law got established as one of the important principle of psychology of sensation. Thus, Weber succeeded in using quantitative approach to sensations that was adopted by his successors. In interpreting mental action on these sensations, he followed Kant’s view of the mind (active mind) that prevailed as the philosophical perspective in Germany during his time. Hence, for Weber perceptions are governed by mental categories of space and time.

Gustav Theodor Fechner (1801-1887) was a physicist. He was the major proponent of psychophysics among the three key persons. He intended to develop psychophysics as an exact science of the functional relations between the body and the mind. He specifically did not believe that the notions of science and the mind are necessarily mutually exclusive; there is no compelling reason to reduce the mind to materialism as it was done by French sensationists and in physiology, in order to study mental operations scientifically. He acknowledged the essential activity of the mind, as it was done in German tradition, and proposed an empirical science of the mind that allows the relative increase of bodily, sensory stimulation to serve as the measure of the mental intensity of experiences. Fechner was convinced of the existence of both mind and matter, and believed that the materialism of science as exemplified by sensory physiology of his times is a distortion.

Fechner’s primary contribution was his studies on methods of determining thresholds, which are now known as methods of classical psychophysics. He proposed three fundamental methods viz., the *method of just noticeable differences (jnd)*, the *method of right and wrong cases*, or the *method of constant stimuli*, and the *method of average error*. In the method of jnd the subject is asked to detect or respond to minimal changes in stimulus values. In the method of constant stimuli, the subject has to judge repeatedly which of the two stimuli is the more intense. In the third, the method of average error, the subject is required to adjust stimuli until he/she finds them equal. These techniques effectively estimate the major variables in psychophysical studies.

Herman von Helmholtz (1821-1894) was a distinguished scientist both as a physiologist and as a physicist. Helmholtz’s contribution to psychophysics lay in his empiricist methodological

approach to define perception as being more than sensory physiology. Helmholtz's approach to sensory physiology was closer to the British philosophical tradition of empiricism, than to the German tradition. That means, according to Helmholtz our experiences play a significant role in perception and hence argued that the development of perceptions can be adequately explained from experiences. He postulated a perceptual doctrine of unconscious inference. According to this doctrine perceptual responses are based on accumulated experience. He noted that many of our perceptions cannot be accounted by presenting stimuli alone. For example, how do we perceive depth, i.e., three dimensional perceptions, even though the actual stimulus we receive in our eyes is only two dimensional? For this Helmholtz's answer was that we infer perceptual characteristics as a result of our past experiences and this process of inference is so instantaneous without any conscious calculation or solution that it qualifies to be called unconscious. He described this process as "irresistible", because, once formed, such unconscious inferences cannot be modified. Further, he described this process as inductive, because the brain is capable of generalizing an inference, once acquired to others similar stimuli in the environment. Methodologically, Helmholtz laid greater emphasis on the importance of observing sensations as opposed to objects sensed. For him, the critical level of observation is the experiencing person, not characteristics of the stimulating object. Hence, he had high regard for the work of Purkinje who had pioneered the method of self-observation.

8.9 SUMMARY

This Unit was primarily concerned with the major developments in philosophy that happened in 17th and 18th century and the major developments in physiology that happened in 19th century leading to the establishment of modern scientific psychology. We have seen that thinkers in France, Britain and Germany differed in their understanding of the relation between mind-body problem taking positions on a continuum ranging from "material skepticism" to "mental skepticism". French thinkers reduced mind to matter, British thinkers took a passive view of mind and Germans took an active view of the same. Developments in physiology particularly focused on the study of brain, nervous system and sensory processes. Localization of function was the primary preoccupation of early physiologists. Study of sensory processes resulted in important discoveries in vision, hearing, touch and temperature sensations leading to the emergence of "psychophysics", whose methods were incorporated into scientific psychology as the methods of studying the relation between mind and matter. To begin with psychology was formally established as a scientific discipline in the University of Leipzig, in Germany, where the active view of mind prevailed and psychophysics emerged, affirming

mind and matter. However, subsequent developments under the strong influence of British empiricism in America, and also under the strong influence of reductionism/materialism of French thinkers, psychology has developed more as a material science over the years, with a passive view of mind.

French and British philosophers of 18th century were inspired by one of the three important views related to psychology proposed by Descartes. That was mind-body dualism. It had given rise to the distinction between physiological and psychological levels of study. While the French sensationalists reduced the psychological level to physiological level and thus blurred the distinction between mind-body leading to materialism, British empiricists retained the distinction but attempted to explain mental functions, such as associations, with physiological basis. In the British and Scottish empiricist tradition all the thinkers accepted the view that the mind is determined by individual experience. They also agreed that the predominant activity of the mind is associating sensations and ideas. Thus, unlike French sensationalists, they accepted mind and did not reduce psychology to physiology. But they took a passive view of mind. It was the British philosophical tradition that primarily influenced the development of psychology in the United States, both in content and methodology. Hence, the contribution of British empiricism is of special significance for modern psychology.

8.10 KEYWORDS

Cartesian dualism	Materialistic psychology
Hedonism	Specific nerve energies
Environmental determinism	Tabularasa
Sensationalism	
	Scepticism

Mental scepticism

8.11 CHECK YOUR PROGRESS

1. What is the main impact of Scientific Revolution?
2. Distinguish between Galileo's concepts of primary and secondary qualities?
3. What is Descartes' famous statement and its meaning?
4. What is Cartesian dualism?
5. Write Locke's famous statement.

2. What is *tabularasa*?
3. Explain Leibniz's Monadology.
4. Explain Hobbes' idea of Natural Law.
5. What are the contributions of Pascal?
6. What is the central theme of Spinoza's psychological views?

7. Match the following:

Scientist

Contribution

- | | |
|--------------------|--|
| i. Condillac | a. Environmental determinants of the individual |
| ii. Charles Bonnet | b. Psychology as science of immediate data of consciousness. |
| iii. D. La Mettrie | c. Single sense capacity |
| iv. Helvetius | d. Postulated a central ego of the brain |
| v. Cabanis | e. Specific nerve energies |
| vi. M. de Biran | f. Asserted that psychology is ultimately philosophy |

8. Complete the following:

- a. Condillac's psychology was _____
- b. Charles Bonnet was the first scientist in the 18th century who used the term _____
- c. D. La Mettrie shook intellectual Europe of his time through his book _____
- d. The emphasis on the environment by Helvetius reserved psychology from being reduced to _____
- e. Cabanis recognized the level of _____
- f. Biran responded to Descartes' dictum "I think, therefore I am" as _____

9. What are the main ideas of George Berkeley's psychology?

10. What are David Hume's contributions to psychology?

11. Why do we consider David Hartley as a 'synthesizer'?

12. What are the contributions of the Scottish thinkers?

17. How does James Mill explain association of ideas?
18. State J.S. Mill's principles of association.
19. Mention the four categories of experience according to Kant.
20. Match the following:

Luigi Galvani	a. Phrenology
Bell and Magendie	b. The ten laws of neural transmission
Johannes Mullen	c. The electrical nature of neural conduction
Emil Du Bois	d. Distinctions between sensory and motor nerves
Helmholtz	e. Electrical properties of the neural impulse
Gall and Spurzheim	f. Measuring reaction time
21. What are the contributions of Ronaldo and Flourence to localization of brain functions?
22. What is Purkinje effect?
23. State Weber's law.
24. Which are Fechner's psychophysical methods?

8.11 ANSWER TO 'CHECK YOUR PROGRESS'

1. Scientific revolution shifted the spiritual world view to scientific, mathematical and mechanical views.
2. Primary qualities are, objective qualities of objects like size, shape, motion, etc. which are perceived as same by all. Secondary qualities are subjective qualities like taste, odour, colour, etc. which can be perceived differently by persons.
3. Cogito ergo sum - I think, therefore I am.
4. The separation of soul which is a spiritual substance from matter/body.
5. Duality is experience as a sense of separateness between self and the other. Non-duality is not having this sense of separateness.
6. There is nothing in the mind that was not first in the senses.

7. Tabula Rasa was the conception John Locke had that the mind is like a blank slate on which the accumulation of life's experiences is gradually impressed to constitute the entire content of the mind.
8. Leibniz conceived the universe as composed of an infinity of geometrical-point entities called monads, each of which is to some extent living and possesses some degree of consciousness.
9. Natural law implies that there are laws inherent in nature, existing apart from humanity's recognition of them, which govern everything from planetary movement of the solar system to the biological mechanism of animals, including humans.
10. Pascal formulated theory of probability, invented a mechanical calculator and emphasized human's unique self-consciousness, lifting them above animals.
11. Spinoza did not believe in god and in technology (existence of a final cause). He was deterministic in explaining human nature. The essential state of the person is to act. Action is ultimately motivated by self-preservation. He preached an ethic of self-control.

12. 1-C; 2-E; 3-F; 4-A; 5-D; 6-B

13. Complete the following:

- a. materialistic
- b. evolution
- c. L'Homme Machine
- d. physiology
- e. consciousness
- f. "I will, therefore I am"

14. The main ideas of George Berkeley's psychology are:

- i. All knowledge is derived from senses.
- ii. Rejected the existence of primary qualities and objective reality.
- iii. Sensation and perception are the only realities.
- iv. "To be is to be perceived"
- v. Principles of association
- vi. Depth perception

15. David Hume's contributions to psychology are:
- i. Distinction between 'primary' and 'secondary' qualities
 - ii. Mind as a transitory collection of impressions
 - iii. Relationships as a cause and effect are illusory
 - iv. We only observe mere succession of events, not cause and effect.
 - v. Personal freedom is also an illusion.
 - vi. Reason is slave to emotion.
16. Hartley defined psychology in the empirical mould suggested by Hobbes and fully elaborated by Locke. He accepted the material scepticism of Berkeley and the mental scepticism of Hume. He tried to explain all human activity, including emotion and reason, through the mechanism of association.
17. Thomas Reid agreed that primary qualities justify belief in the reality of physical objects. Sensations are the products of interaction between physical objects and mental operations. Thomas Brown considered associations as suggestions; simple and relative. He broadened the basis of association to explain complexity of mental operations.
18. James Mill's views on association of ideas are as follows:
- i. Hold the extreme associationist position.
 - ii. Ideas are the residue of sensations.
 - iii. Contiguity is a condition of association.
 - iv. Complex ideas are simply aggregates of simpler ideas.
19. J.S. Mill states the principles of association as follows:
- i. Every experience has a corresponding idea
 - ii. Contiguity and similarity produce associations.
 - iii. The intensity of an association is determined by the frequency of its presentation.
20. The four categories of experience according to Kant are:
- Categories of quality
 - Categories of quantity

- Categories of relation
- Categories of modality

21.1-C;2-D;3-B;4-E;5-F;6-A

22. Ronald established that cerebral hemispheres are the chief mediators of sleep, dementia, melancholia and mania and sensory functions are localized in medulla oblongata. Flourance assumed six areas of the brain and identified the important functions of these areas through the method of ablation.
23. The relative luminosity of colours in faint light differs from that in full light.
24. The smallest detectable difference between two weights can be expressed by the ratio of the difference between the weights relative to the absolute values of the weights.
25. Fechner's psychophysical methods are:
- The method of just noticeable differences (jnd)
 - The method of right and wrong cases.
- The method of constant stimuli.
 - The method of average error.

8.12 REFERENCES

1. Brennan, J.F. (2004). *History and the systems of psychology*. (6th Edn.). Delhi: Pearson Education.
2. Leahey, T.H. (2006). *A history of psychology: Main currents in psychological thought*. (6th Edn.). Delhi: Pearson Education.
3. Sir John Eccles, a famous neurosurgeon, wrote the book "Self and its brain" in 1970s, which seemed to echo this position.
4. It is interesting to note that even in Indian traditions we have this position, particularly in Vedic and Vedic related systems.