Chapter-1

Introduction
THE PERSPECTIVE

History has accorded destination to the pioneer work of Sir Francis Galton, who first recognized individual differences in mental abilities and attempted to measure them by objective methods. Galton believed that before one can improve human conditions, it is necessary to measure the range of human abilities and aptitudes. Psychological research and psychological literature regarding individual difference and behaviour were greatly influenced by works of Cattell, Goddard, Spearman, Watson, and Jensen among many others. Behaviour is a function of many factors. It is related to the characteristic of the stimulus, internal conditions of the individual and various past experiences and as such, it could be observed and measured, through action and reaction of an individual. The study of individual differences in behaviour is not only rewarding in the present scenario but also for its bearing upon future mankind (Sen, 2004).

The very existence of the discipline of psychology rests upon the (observable) fact that different persons exhibit varied behaviour and the variability needs to be explained for the proper understanding of behaviour, in general. Variance in behaviour is conceived as the product of additive and interactive variance in persons and situations \( V_B = V_P + \)
Person is the sum total of all the physical (constitutional), psychic (experiential) and psychological traits/dimensions etc. Some of them may be quite stable, relatively enduring while others are states (temporary/unstable). When different persons exhibit different behaviours in the same situation, the variance in behaviour is ascribed to variability in persons, i.e., $V_B = f(V_p)$, $V_s = 0$. Whereas, when similar persons exhibit different behaviour in different situations, the variability in behaviour is ascribed to situations, i.e. $V_B = f(V_s)$, $V_p = 0$. However, similarity among individuals is far from reality, although, owing to interaction between persons and situation, they may exhibit same behaviour in different situations or/and similar persons are likely to exhibit same behaviour in similar situations, i.e. $V_B = f(V_p \times V_s) = 0$; $V_B = f(V_p = 0, V_s = 0) = 0$.

The psychology of individual differences (Differential Psychology) encompasses following five functional prepositions:

I $V_B = f(V_p + V_s + V_{ps})$;

II $V_B = f(V_p)$, where $V_s = 0$;

III $V_B = f(V_s)$, where $V_p = 0$;

IV $V_B = f(V_{ps}) = 0$, and

V $V_B = 0$ where $V_p = 0$ and $V_s = 0$.  


No branch of psychology, pure or applied, is independent to differential psychology due to its pervasive and essential role (to explain behaviour). The traits relating to individuals serve as explanatory constructs of behaviour, e.g., temperament, intelligence, personality, motivation etc. Even demographic features of people explain considerable variance, e.g., age, sex etc. It is hard to find studies in psychology which do not involve a subject related variable, quite often varied through selection or, directly when it is addressing to situational (external) variables in relation to some performance variable (Singh, 2004).

In the individual differences approach, represented by trait theories of personality, temperament is considered as one of the basic elements in the structure of personality. Trait psychologists differ in their views regarding the number and types of traits by which personality is defined and this is also true of the understanding of the notion of temperament. The increasing interest in research on temperament that can be observed in the last decade goes together with the growing variety of theories as well as methodological issues regarding temperament. A recent text on temperament (Angleitner and Ostendorf, 1994) exemplifies to some extent the spectrum of these diversities and richness of problem
being discussed in the area of temperament. The questions addressed in various researches relate to the “Concept of temperament” (e.g., Goldsmith, Buss, Plomin et. al., 1987), the structure’ (e.g. Angleitner, 1990), ‘development aspect (e.g., Thomas and Chess, 1977), biological bases’ (Eysenck, 1970; Gray, 1964), ‘methodological issues’ (Angleitner and Rieman, 1990), and importance for practical applications (Chess and Thomas, 1986; Strelau, 1983, 1988).

Personality is different from temperament which can be called a system of emotional dispositions. There is a certain amount of consistency in the emotional reactions of any individual and that constitutes his temperament. Temperament differences are sometimes accounted for in terms of the inborn psychological constitution determined by the endocrine secretions or in terms of the changing activities of the sympathetic nervous system. Temperament is “the general affective nature of an individual as determined by inheritance and life history” Shanker (1981). In other words, it is the sum of the effects upon one’s mental life and on the metabolism or chemical changes that are constantly going on in all the tissues of one’s body. But the system of emotional dispositions by which we understand temperament is only the affective side of personality and so personality is more than the
temperament (Shankar, 1981). Thus, the present study belongs to the perspective of differential psychology and the context is temperament.

**Temperament: The Western View**

Hippocrates (fifth century B.C.) believed that the condition of the organism was mainly dependent on the quantitative proportion (crisis) of ‘juices’ or fluids in the body (blood, lymph, bile). Several centuries later, Roman physician changed Greek “crisis” to Latin “temperamental” (a mixing in due proportion) and the term survived till our times. Gradually ancient science came to view mental characteristics of individuals as a function of crisis or temperament, i.e. of the proportion of vital juices in the body. Roman anatomist Galen living in the second century B.C. was the first to give a detailed classification of temperaments which included 13 types. Subsequently, their number in ancient medicine was reduced to 4 distinguished by the prevalence of one of the four body’s fluids: blood, lymph, yellow bile, black bile and called, respectively, sanguine (L.Sanguineous-blood), phlegmatic (Gr. Phlegma-slime), choleric (Gr.Cholera-Yellow bile) and melancholic (Gr.Melancholia-black bile).

Numerous hypotheses put forward in later centuries attempted to account for differences between temperaments. The importance of ancient physicians on scientific thought is attested to by the significance
attached to humoral (moisture, fluid) system of the organism. For instance, German philosopher Immanuel Kant (the late eighteenth century) believed that temperament was determined by blood properties. Very close to this view was the theory of Russian anatomist and physician Pyotr Lesgaft who wrote (in the nineteenth and early twentieth centuries) that temperament is a function of blood circulation, particularly the thickness and elasticity of the walls of blood vessels, their inner diameter, the form of heart, etc. According to this theory, the blood flow rate and pressure determine the individual excitability characteristics of the organism and the duration of its reaction to different stimuli.

German psychiatrist Kretschmer (1944) starting from the 1920s, contended that the mental make-up of the individual corresponds to his build, the general bodily constitution. According to him, the connection between the type of constitution and some mental qualities is traceable to their common base i.e. the chemical composition of blood and the hormones secreted by the glands of the endocrine system. Kretschmer’s system focused on three basic types: pyknic (stocky), asthenic (slender), athletic (muscular); and one mixed type: dysplastic. He sought to relate body type to propensity for mental disorders. He argued that the asthenic
type was prone to schizophrenia, the pyknic to manic depression and the athletic to sanity.

US scientist Walter Sheldon and Stevens (1942) also believed that individual's physiological traits are directly related to bodily build controlled by the hormonal system i.e. to the relationship between different organism's tissues. He argued that there were three primary components of physique and three primary components in temperament attached to them. These are: Ectomorphic (thin, light bones and muscles) – cerebrotonia (restrained, self conscious, fearful); Endomorphic (heavy, poorly developed bones and muscles) – visceretonia (losing, sociable, comfortable), and Mesomorphic (strong, well developed bones and muscles) – somatotonia (adventurous, vigourous, physical activities).

Gordon W. Allport (1938), one of the founders and giant of psychology of personality, defined temperament as the characteristic phenomena of an individual's emotional nature, including his susceptibility to the emotional stimulation, his customary strength and speed of response, the quality of his prevailing mood, all the peculiarities of fluctuation and intensity of mood, these phenomena being regarded as dependent on constitutional make-up and therefore largely hereditary in origin.”
In his later works, Pavlov also acknowledged the importance of environmental factors, arguing that while each individual belongs to one or another temperament class, his behavior (the phenotype) depends on experience. Pavlov (1951-52) described temperament, as the CNS types are what we call in man temperaments. The temperament constitutes the most general characteristics of his nervous system. Pavlov described three basic properties of the nervous system, viz., strength, balance and mobility of excitations and inhibition and their four basic and typical combination in the form of higher nervous activity: -(1) Strong, balanced and mobile; (2) Strong, balanced and inert; (3) Strong and disbalanced; (4) Weak.

Pavlov used the term strength of excitation interchangeably with the term strength of Nervous system (NS). It is manifested in its withstanding strong and or prolonged excitation without slipping into transmarginal inhibition. Excitatory strength, measured by resistance to extinction with reinforcement is a consequence of low reactivity or sensitivity of receptors and cortical projection area (Nebylitsyn, 1957, 1960; Teplov, 1956)

Teplov (1956) recognized the influence of ante and postnatal factors and the results of early social experience on shaping up of
temperament. According to him the interaction of temperament and early environment described as character with aptitudes, constitutes personality.

Temperament, a subclass of personality traits is shared by our species and non-human primates (Buss, 1988), and defined as being inherited and appearing early in life. To be more precise, temperaments are inherited personality traits that appear during the first two years of life and endure as basic components of personality. However there are personality traits that appear during infancy, are not inherited. These are certainly inherited personality traits that appear later in life, but they appear too late to be called temperaments and they may be childhood problems that leave behind no residue of any importance for personality.

The notion of temperament is used to describe relatively stable differences in human behavior, which might be explained in term of biological mechanism. There are two contexts in which the term temperament is used. One of the developmental theories and other of the theories related to adult temperament. Primarily North American psychologists have proposed the developmental theories of temperament. The adult conceptualization of temperament have been proposed by Eastern European psychologists (cf. Strelau, 1983), and some trait
psychologists (cf. Eysenck, 1970). The present work deals with the latter context/approach i.e. of adult temperament hence emphasizes it only while passing description of the former is given.

Yet a mention of developmental theory of temperament would help to differentiate the two. Goldsmith and Campos (1982) have discussed four theories of temperament with developmental orientations namely a 'style' approach by Thomas and Chess (1977), a critical approach proposed by Buss and Plomin (1975), a psychological approach proposed by Rothbart and Derryberry (1981), and a neonatal approach proposed by Brazelton (1973).

The most widely known developmental theory of temperament is by Thomas and Chess (1977) based on the New York Longitudinal Study (NYLS). This theory conceptualizes temperament as a 'behavioral style' that appears early in life. 'Style' is conceptually different from the content and motivation of behavior and not to 'what' or 'why'.

The Buss and Plomin's (1975) theory (revised by Plomin and Rowe, 1978) postulated four temperaments: emotionality, activity, sociability, and impulsivity (EASI). A subsequent revision (Buss and Plomin, 1984) eliminated the impulsivity temperament variable because
of a lack of empirical support. However, Buss (1995) again included it in his final version.

The ‘psychological’ theory of temperament proposed by Rothbart and Derryberry (1981) attempts to integrate the adult models proposed by Gray (1972), Eysenck (1967) and Zuckerman (1979), the relevant Eastern European theories of the nervous system (Pavlov, 1928; Strelau, 1975), with the theories and research on emotional and social development during infancy (e.g. Buss and Plomin 1975; Thomas and Chess, 1977). Rothbart and Derryberry (1981) focus on two major constructs: reactivity of the nervous system and self-regulation reactivity.

The fourth theory of the development of temperament that Goldsmith and Campos (1982) discuss is Brazelton's (1973) theoretical approach, closely related to the Brazelton Neonatal Behavioral Assessment Scale (BNBAS), which assesses individual differences in the level of the neonate’s adaptation of his/her physical and social environment (Rathee, 1999).

In discussing the origins of temperament, Goldsmith and Campos (1982) expect strong genetic influences with respect to the development of many temperamental variables. Heritability of a temperament variable may change at different periods of development.
Introduction

Bates (1987) provided a definition of temperament, which conveyed its distinctive characteristics: biologically rooted individual differences in behavior tendencies that are present early in life and are relatively stable across various kinds of stimulation and over the course of time.

In Strelau’s (1974, 1983, 1985) regulative theory of temperament, the optimal level of arousal is considered as a standard for stimulation regulation (Eliasz, 1981; Strelau, 1983). The concept of optimal level of arousal explains the role that temperament activity plays in regulating the energy level of behaviors and the situation in which behavior occurs. Strelau’s concept of the energy level of behavior included all those traits associated with individual differences in physiological mechanisms responsible for the transmission of energy, including both the accumulation of energy and its release from store.

Two basic temperamental features are distinguished in relation to energy level: reactivity and activity. Reactivity is conceived as a property responsible for a relatively stable intensity of response to stimuli; this is estimated on a comparative basis, comparing each individual against a data set derived from a group, expressing the magnitude of the individual's response in relation to others response to the same stimulus.
The assumption here is that the stimulus administered has a similar value for all persons or is neutral in volume. Reactivity is a co-determinant of sensitivity, as measured by sensory threshold and the organism’s capacity for work (its endurance), as manifested in reaction is strong and/or prolonged. The weaker the stimulus, which elicits a perceptible response (the higher the sensitivity) and weaker the stimulus which starts to lower efficiency (the lower the capacity), the higher the reactivity of the individual and conversely, a low reactive person is marked by low sensitivity and high endurance (Batra, 2001).

Buss (1995) described four components of temperaments EASI (emotionality, activity, sociability and impulsivity). These temperaments are broad personality dispositions divided into two categories $T_1$ and $T_2$. Temperament I includes emotionality and activity. In temperament II, sociability and impulsivity are included.

Emotionality refers to negative affect, specifically being distressed or upset. Emotionality is defined as high arousal, generalized negative affect, and its synonym being distressed. For example, anger is an immediate negative reaction to a current situation, a transient reaction that involves physiological arousal and logical expression. Anger can be reduced by aggression, exercise or even the passage of time. When
aggression succeeds in diminishing anger, the process is called catharsis or it consists of attacking or threatening. Fear is another universal emotion, not only in our species but also probably in most animals and certainly in all mammals. The fear reaction itself is not unitary but consist of several components. Fearfulness involves the tendency to be wary, run away, or lower as well as the accompanying physiological arousal.

Activity is defined as the amount of energy expended in body movements. The energy is physical, not the “mental energy” (assumed to be involved in thinking, remembering, and imaging which may require intense concentration, such prolonged concentration may include fatigue, hence the assumption that energy has been expended). The cognitive processes are excluded from the definition of activity, which consist only the physical behavior. Activity refers to total energy output, as expressed in vigour or tempo.

Tempo is a major component of the trait of activity. People at the low end of this trait dimension tend to speak deliberately or even drawl, stroll when they walk, take their time ascending stairs and in general, maintain a slow pace of life. The high tempo people are regarded as excessively driven and perhaps even manic.
Vigorous responses are of greater amplitude or intensity: e.g. talking loudly, laughing heartily, pushing door open with force, taking longer strides when walking and making broader and more emphatic gesture. Vigorous people prefer sports that involve great strength and endurance, such as weight lifting, mountain climbing, swimming or running a marathon. Thus, tempo involves fast paced repetitive behavior and vigour involves responses of great amplitude. But at the upper end of the trait dimension there is also a third, minor component that cut across tempo and vigour. The motivation to be up and around, to keep busy and generally to be expending energy (Buss, 1995).

Sociability is defined as preference for being with others as opposed to remaining alone. Least social person still likes to be with others, though his or her motivation to be so may be weak. Highly sociable persons are strongly motivated to seek out others and remain in their company. Two types of intrinsic rewards determine the expression of sociability: social rewards (Buss, 1983) – (1) Stimulation reward and (2) Affective reward.

Impulsivity is the tendency to respond quickly and without reflection. Impulsive people tend to respond immediately to whatever stimulus impinges on them, without forethought or care for later
consequences. Impulsive people act quickly and deliberate people act slowly. The concept of quick action may seem familiar, overlapping the tempo component of activity but there is a difference. The tempo refers to the rate of responses once the behavior started, whereas the impulsivity refers to the time between a stimulus and the start of the response, which may be called the latency of response, a phenomenon also called lability.

Buss (1995) described three classes of impulsivity: control, discipline and reflection. Emotions, motives and temptation are the three aspects of control. People differ in the tendency to be controlled. Both emotions and motives represent an internal pressure to act. Incentives represent an external pull on behavior. Focus and impatience are the aspect of discipline. Focus is closely related to impulsivity. Impulsive people tend to be distractible, unable to concentrate on a book, a paper or a lecture. Impatience is considered in many contexts that require us to wait: a physician’s office, a supermarket line, the delivery of mail and other. Impatient people are not bothered by having a stand in line and may get in line for a popular concert or ball game the day before. Reflection refers to planning, deliberation and caution or their opposites.
Ayurvedic Construct

Eastern Psychologies are concerned with states of consciousness and the laws that govern their alteration, they also contain articulate theories of personality. The goal of Eastern psychologies is to alter a person's consciousness so as to transcend the limits imposed by the habits that form the person's personality. Each personality type needs to overcome different obstacles to attain the liberation from these limits.

Among modern personality theorists, C.G. Jung was probably the most knowledgeable about Eastern psychologies. He reached into matters alien to positivistic science by his extensive analysis of Eastern religions. Although he also warned of the dangers for a Westerner of being engulfed by Eastern traditions, Jung's writings form a major bridge between the psychologies of the East and West (Hall and Lindzey, 1985).

Abhidhamma the psychological theory stems directly from the insights of Gautam Buddha in the 5th Century B.C. It contains an ideal type of the perfected personality around which its analysis of the working of the mind oriented. As Bhikku Nyanaponika, a modern Buddhist scholar-monk put it, "In the Buddhist doctrine, mind is the starting point, the focal point, and also, as the liberated and purified mind of the Saint, the culminating point."
Considering the significant role accorded to organism’s fluids or juices in temperament, it is not surprising that these ideas also form the basis of treatise of ancient Indian seers—Charaka and Sushruta (600-300 B.C.). Ayurveda is an intricate system of healing that originated in India thousands of years ago. Ayurveda consist of two words, ‘Ayur(s)’ meaning life, and ‘Veda’ meaning science or knowledge. Literally, therefore, Ayurveda means the science of life. This covers the art of living. Charaka has comprehensively defined ayu as a unified state of physical body-sarira, cognitive organs-indriyas, mind-manas and soul-atma and therefore signifies a living human being (Sastri 2002). The objective of Ayurveda is maintenance of the metabolic equilibrium of the human psychosomatic machine and restoration of the same normality if the homoeostasis is upset or disturbed factor. Ayurveda is a holistic system of medicine that uses a constitutional model.

Mishra, Singh and Dagenais (2001), considered. Ayurveda, the science of life, as a comprehensive medical system that has been the traditional system of healthcare in India for more than 5000 years. This medical system was well established around 2500 to 600 BC, when it evolved into 2 schools: the School of Physicians and the School of Surgeons, similar to allopathy. Charak Samhita, Susrut Samhita, and
Ashtang Hridaya Samhita are the Senior Triad texts, and Madhav Nidan Samhita, Sarangdhar Samhita, and Bhavprakash Samhita are the Junior Triad texts. Around 600 BC. Ayurveda was branched into internal medicine; pediatrics; psychiatry; surgery; eye, ear, nose, and throat; toxicology; geriatrics; and eugenics/aphrodisiacs. The body is composed of 3 body doshas, 3 mental doshas, 7 dhatus, and malas. The harmony among the body doshas of vatta (nervous system), pitta (enzymes), and kapha (mucus) and the gunas, or mental doshas (which are human attributes: satogun [godly], rajas [kingly], and tamas [evil]), constitutes health, and their disharmony constitutes disease. The management of illness requires balancing the doshas back into a harmonious state through lifestyle interventions, spiritual nurturing, and treatment with herbo-mineral formulas based on one's mental and bodily constitution.

An atom (anu) has no points, beginning, middle or end. It is infinitesimal, eternal and ultimate. It is neither created nor destroyed. It is a murta (formless), though the basis of all murta (form). The atoms are said to possess weight. The heavier move downwards and the lighter upwards. Each atom occupies are point of space. When in the subtle state, innumerable atoms occupy the space of one gross atom. Each atom has a kind of taste, colour, smell and contact. These qualities are not permanent.
and fixed. Material things are produced by the combination of atoms which are subject to mutual attraction. Two atoms form a compound, when one is viscous and the other dry, or when both are of different degrees of viscousness and dryness. Atomic linking takes place only when the atoms are of unlike natures. Atoms are not constant in their nature, but are subject to change or development (parinama), which consists in their assuming new qualities. It also follow that there are not different kinds of atoms answering to the different element of earth, water, fire and air. The atoms by developing the characteristic qualities of the elements become differentiated and form the elements (Leahey, 1992).

There are only four elements, and not five: earth, which is hard; water, which is cool; fire, which is warm; and air which is mobile the fifth element, akasha, is not recognized. The external objects are the results of the gathering together of the ultimate atoms according to their capacity.

Mahdihassan (1990) compared Chinese cosmology and humorology. The Chinese conceived of creation as starting with creative energy in its latent form, as Th’ai-Chi, meaning the absolute existence. Later, it assumed its dynamic form called Chhi. It was dual-natured with
the opposites called Yang (light) and Yin (darkness). The reproductive power was projected as creative energy called Chhi and male and female opposites were projected as the universal pair of opposites as Yang and Yin. Creative energy produced the cosmic elements, which in turn produced all creation. The cosmic elements of Chinese cosmology were Wood, Fire, Water, Earth and Metal. They also included the factors of humorology when the following elements had, as contents, items belonging to humorology, Wood-contained Air, Earth.....Moisture; Metal. ......Dryness. By assigning dual-sense to three cosmic elements, Chinese humorology came into existence but has incorporated it in its cosmology. It is easy to equate Air = \textit{Vayu/Vatta} of tridosha doctrine of India, Moisture = \textit{Kapha}, Dryness = \textit{Pitta}. Then with five elements of cosmology including three with dual-sense, as belonging to humorology, we have eight elements in all as cosmology-cum-humorology. It is obvious that Air, so important in the cosmologies of India and Greece, is nowhere explicit in Chinese cosmology.

Endo & Nakamura (1995) have observed that the tridosha theory in Ayurveda originated from the theory of the three elements of the universe. The names of these three \textit{doshas}, which are roughly equivalent to humour, are \textit{vatta} (wind), \textit{pitta} (bile), and Kapha (phlegm),
corresponding to the three elements of the universe: air, fire, and water. On the other hand, Buddhist medicine which has a close relation to Ayurveda is based on the theory of the four elements of the universe which includes the earth as well as the three elements mentioned above. Greek medicine on the other hand, is founded on the theory of the four humours, i.e. blood, yellow bile, black bile, and phlegm. Furthermore, even in Ayurveda, like in "Sushruta Samhita", the theory of the four humours can be found: this includes the above-mentioned tridosha plus blood as the fourth humour. "Timaios" by Plato also mentions this. Endo & Nakamura compared these various theories and pointed out that the tridosha theory had its origin in the theory of the four elements of the universe. The process of the formation of the tridosha theory is considered as follows: (1) "Earth" was segregated from the four elements of the universe owing to its solid properties, and was rearranged into the seven elements of the body called "dhatu"; and the other three elements, "water", "fire", and "air", were integrated as the tridosha theory, namely, the theory of the three humours, owing to their properties of fluid; (2) "Blood", assigned to the element of "earth", was segregated from the tridosha because "blood" was considered to be comprised of the properties of every humour without having its own peculiar properties.
Therefore, the diseases caused by deranged "blood" were regarded as an aggregate disease caused by the other three deranged humours. Then the category of the disease, caused by deranged "earth", did not appear.

Prakriti/Prakruti

Prakriti/Prakruti The word prakriti means “natural form of the build and constitution of the human body. pra means the “beginning”, “commencement” or “source of origin” and kruthi means “to form”. Put together, prakriti means “natural form” or “original form” or “original source” (Shyam Sundar, 2000). In another words Prakriti /Prakruti is a Sanskrit word that means, “nature”, “creativity” or “the first creation”. One of the very important concept of Ayurveda is that one’s basic constitution is fixed throughout his lifetime. Ayurvedic scholars have postulated a classification of human beings based on the characteristics manifested due to the predominance of one or other somatic humor. Chakerpani interprets prakriti /Prakruti as sawabhavam, which has different connotation –inherent property; temperament, constitution etc; the first indicates that the characteristics are inherent to the human being. The temperament indicates the mental disposition, whereas constitution usually expresses the physical makeup of a person. Both Arunadatta and Chandrananadana explained prakriti /Prakruti as physical makeup only
(Sastri, 2002). The combination of vatta, pitta and kapha that was present in the individual at the time of conception is maintained throughout his lifetime. No doubt different persons can have different combinations of vatta, pitta and kapha as their basic constitution or prakriti /Prakruti. This is how Ayurveda can explain the subtle differences between individuals and explains why everyone is unique and that two persons can react very differently when exposed to the same environment or stimuli. As the DNA and fingerprints of an individual are unique just to the prakriti /Prakruti.

Ideally the constitution of an individual remains fixed throughout his life. Unfortunately, this is not the case. Every person is subjected to the constant interaction with his or her environment, which will affect the person’s constitution at any time. The body will try to maintain a dynamic equilibrium or balance with the environment. Although it reflects our ability to adjust to life’s influences and is always changing, it should match our prakriti /Prakruti, or in born constitution, as closely as possible. If the current proportion of doshas differs significantly from the constitutional proportion, it indicates imbalances, which in turn can lead to illness. Our current condition is called vikruti. According to Ayurveda vikruti can be changed by means of diet and meditation so as to approach
to prakruti or the state where person have perfect health the concept of prakriti and vikruti can be illustrated by reference to the body temperature, when healthy, we maintain an average body temperature of about 98 degrees. Although, different persons can have different base temperatures, it dose not change much so long as the person is healthy. When we go out side on a winter day, our body temperature may go down slightly; but will pick right back up to the normal if we are healthy. Similarly, jogging on a hot day can temporarily raise our temperature.

Dosha

In Ayurveda philosophy, the five elements (air, space, fire, earth and water) combine in pairs to form three dynamic forces or interaction called doshas (Fig. 1.1). Dosha means, “that which changes”. It is a word derived from the root ‘dus’, which is equivalent to the English prefix ‘dys’ such as in dysfunction, dystrophy etc. In this sense, doshas can be regarded as a fault, mistake, error, or a transgression against the cosmic rhythm. The doshas are constantly moving in dynamic balance, one with the other. In Ayurveda, dosha is also known as the governing principle as every living thing in nature is characterized by the dosha. It is the factor, which is not only capable of vitiation but also of vitiating other factors of the body. The word tridosha clearly denotes that the somatic humors are
three only. But there was an attempt to establish blood (rakta) as dosha on the basis of some doubts such as the somatic humors three only in number or are they more? Since Susruta has relegated a very important position to rakta be also accepted as dosha? Vatta, pitta, kapha have their own seats in the body, separate qualities, physiological function, and cause of vitiation and specific lines of treatments. Similarly, rakta also has its seats, qualities, function etc. In spite of all these, rakta cannot be recognized, as a dosha for the following reason It is a second dhatu to be evolved and nourished in the chain of metabolic process of dhatu parinama. Rakta is produced in the body through the dhatu parinama only. Yakrt and pleeha, stated to be the seats of rakta, are the seats of pitta, one of the somatic humors. Rakta is also the seat of pitta hence there is no independence between the two. But neither vatta, pitta nor kapha has been mentioned as the seat of another because of their divergent qualities. The construct presumed complete independence/orthogonality among the doshas. Therefore rakta cannot be considered as a dosha. Charka has stated that the rakta is vitiated during sarat kala due to the nature of that season. This vitiation of rakta is only due to the independent nature between pitta and rakta. Rakta is vitiated during sarat kala due to the absence of regular rakta mokshana.
mentioned to bring pitta to an equilibrated state, but not due to natural cause. The prakriti of human being, which are based on the *dosha* predominant at the time of the fertilization of the ovum, are classified as *vatika*, *pattika* and *kaphaja* only and their qualities are described in the classic texts of Ayurveda; but the *prakrti* associated with *rakta* has not been mentioned and therefore no qualities have been described.

![Venn diagram of doshas](image)

*Fig. 1 – Showing representation of various elements in various doshas (overlapping is not scaled).*

Abbreviations: W-Water, F-Fire, S-Space, E-Earth, A-Air, V-Vatta, P-Pitta, K-Kapha,

Thus, according to *Ayurveda*, there are three primary energies, or *doshas*. The *doshas* are *Vatta*, *Pitta*, and *Kapha*. These *doshas* regulate all physical and psychological behaviors, from basic cell structure to the
most complex mental functions. The *doshas* are found in unique proportion in every individual. This singular combination of the *doshas* is called our constitution or prakriti, and it will determine our basic physical appearance, preferences, behaviors, and emotional tendencies. When the *doshas* are in their natural balance with one another, our physical and mental states are at optimum health. When the *doshas* fall out of balance, disease may manifest. *Ayurveda* seeks to return the *doshas* to and maintain them at their natural balance in our individual constitution (Sastri, 2002).

**Vatta:**

*Vatta* is a force conceptually made up of elements ether and air. *Vatta* literally means ‘what blows’ representing air or wind. The air has ether as its field of action. It is present in the cavities of the head, spaces in the bones and joints and the lower intestinal tract-colon where gas generally collects. The *vatta* principle includes the complete nervous system, some aspects of the endocrine glandular system which coordinate the metabolism and most of the sense organs. *Vatta* structures and functions are responsible for all the communications within the human being as well as the communication with the outer universe (psychophysics and cognitive/information processing). *Vatta* also deals
Vatta entities are responsible for the pumping action of the heart, the breathing process of the lungs, the peristaltic movement of the intestines, and all the movements of the bones and muscles. Vatta dosha is also responsible for mental functions like intuition, imagination, resilience, sensitivity, spontaneity and emotions like exhibition, fear, insecurity and doubt. In lay terms, vatta represents the biological principles of air and space. Vatta structures and functions usually have qualities like dry, cold, light, quick, rough, unstable and subtle.

Physically such people are very tall or very short, non-muscular, with thin and bony limbs and have a quick gait with short fast steps. Skin is generally thin, dark, coarse and either kinky or curly. The face is usually long and angular, often with an underdevelopment of chin. The neck is thin and scrawny. Nose is small and narrow, may be long, crooked or asymmetrical also. Eyes tend to be small, narrow or sunken, dark brown or gray in color, dull luster. The mouth being small, with thin, narrow or tight lips. Teeth are irregular, protruding, or broken, set in receding gums. And while the voice is weak, low or cracked, speech is fast with interruption. They have low temperature, are quick to learn and grasp new knowledge, but also quick to forget, are social and talk and
walk quickly. Sexually easily excitable but quickly satiated; they tend to
tire easily from overwork or over exercise, nevertheless, they are the most
adjustable of the three constitutional types and realize what is expected of
them and they tend to be adaptive. Once they understand something that
knowledge is retained.

*Charka*, one of the most celebrated commentators on Ayurveda,
wrote that there are five types of *vatta*. This classification seems to be
based on both anatomy (structure) and physiology (function). These are:

*Prana*: relates to chest and respiration.

*Vyana*: pertain to the chest, though more to cardiac functions.

*Udana*: concerns the upper gut. This may be important to emesis and
other motility disorder of the upper gut.

*Samana*: refers to the intestines. This controls the churning movement
required for digestion of food and formation of stool.

*Apana*: relates to the rectum and genito-urinary system. This controls
evacuation of stools, ejaculation of sperm and parturition (delivery of
child).

When the skin or scalp becomes dry and scaly, when there is
dandruff in the hair or there are fissures on the soles of one’s feet,
warning bells herald an imbalance in the *vatta dosha*. Depending on
several other factors, like the cause of this imbalance, the constitution and age of the patient and the season and the weather, several other symptoms also tend to manifest themselves. Thus, the individual loses acuity of intelligence, memory becomes weak and grasping power slackens. Insomnia haunts the nights and indigestion with gaseous distension darkens one’s days. Low backache, joints and thigh pain, as well as interference to cold and wind are the accompanying symptoms are of the old age. For, old age is indeed the time that vatta loses control and becomes deranged.

Vatta tends to be maximally deranged during the summer and monsoon seasons, lack of sleep; excessive physical activity and long hours of fasting also vitiate vatta (Sastri, 1994).

Pitta :-

The literal meaning of the word ‘Pitta’ is what cooks. Pitta is the fire humor and it resides in the system as heat influences like blood, digestive fluids and cerebrospinal fluid. It predominates in the liver region, small intestine and governs digestion and assimilation of nutrition for the body and also for the ideas in the mind. ‘Pitta’ includes all the digestive enzymes secreted with our gastrointestinal system, the cellular enzymes and the stimulating hormones. ‘Pitta’ structures and functions
are responsible for all the digestion, absorption, assimilation, heat regulation, sweating, and metabolism going on in the body and the mind. It also governs skin complexion, visual perception, and the process of understanding.

‘Pitta’ dosha is responsible for mental functions like intelligence, confidence, enterprise, organization and emotions like joy, excitement, courage, anger, jealously and hatred. Pitta may be described as the biological principle of fire and water. The structures and functions of pitta have qualities like hot, moist, light, fluid, sour, smelling, sharp and penetrating. Pitta governs biological fire. Pitta is mainly concerned with the body’s balance, energies. Pitta’s process involves digestion, whether it be digestion of food or thoughts and theories in the mind.

Physically these people are of medium height, are slender and body frame may be delicate, their chests are not flat as those of vatta people and they show a medium prominence of veins and muscle tendons. Muscle development is moderate. The pitta complexion may be coppery, yellowish, reddish, or fair. The skin is soft, warm and less wrinkled than vatta skin. Physiologically, these people have a strong metabolism, good digestion and resulting strong appetites. The person of pitta constitution usually takes large quantities of food and liquid. The body temperature
may run slightly high and hand-feet will tend to be warm. *Pitta* people do not tolerate sunlight, heat or hard work well. They speak with a loud, strong voice and precise, convincing speech. The skin burns easily in the sun–has freckles, many moles, and a tendency to rashes. A sweaty, characterized by fine and soft, either fair or reddish hair that tends to be shaped, often with a pointed chin. While the neck is proportionate and of average sized, nose matches the average sized eyes that are either light blue and with an intense luster which get red in summer or after bathing.

Psychologically, *pitta* people have a good power of comprehension; they are very intelligent and sharp and tend to be good orators. *Pittas* have an intellectual and precise disposition due to a very alert, focused anger; they are irritable, jealous and aggressive by nature. Discriminating and articulate, learned and proud. With a developed sense of responsibility, they can run affairs well. Argumentative, but with a sense of humor, they are selectively excelled learners. Moderately passionate in their sexual pursuits.

*Pitta* – akin to *vatta* has five types: -

*Aharpachak*: - This is the *pitta* that controls digestion to food. This *pitta* works together with the *samana vatta* to keep the gut functioning
normally. Both physical movement (controlled by vatta) and chemical transformation (produced pitta) are required to digest the food we eat.

*Ranjak pitta:* - This *pitta* controls the color of the skin and complexion, the needs to be vital and healthy, to encourage formation of further tissues and subsequently improve the general appearance of the person.

*Sadhak pitta:* - This is located in the brain and responsible for processing the multitude of impulses reaching it from the environment. The work of *sadhak pitta* is to transform the sensory message to the level of actual perception. This entire phenomenon is finetuned by the *vatta*.

*Bhajak pitta:* - This *pitta* resides in the skin and seems to control some of the chemical activities of the skin. It also has the capacity to metabolize several drugs like steroids and nitrates.

*Alochak pitta:* - This is the most fascinating type of *pitta*. It resides in the eyes and is responsible for vision. It helps in creating the image of the retina. *Pitta* made up of fire and water and is thus a net and mobile fluid. All environmental items (diet and weather), which are hot and fiery, can disturb *pitta*, thus leading to disease. It is usually most active during the afternoon and in the autumn season (September-October), although it increases during the monsoon when in combination with *vatta*, it can create chaos unless controlled. It is during this season that people with the
pitta predominance suffer the most. More so if they eat hot, spicy food there is every likelihood of their developing some disturbance in their body. Although the predominance of pitta dosha imparts a glow to the skin and makes the hair soft and shiny, it can also lead to early wrinkling of the skin, greying of the hair and a tendency to bald prematurely. Excessive sweetening, intolerance to heat, warm soles and palms (the later being often moist) are further characteristics of pitta predominance (Sastri, 1994).

Increase in pitta either due to dietary imbalance or seasonal variation lead to a feeling of hunger, but the food is not well digested, thus leaving the individual feeling lethargic. Such a person fails to gain weight even if he eats enough to feed a horse; Headache, vomiting or diarrohea and skin disease occur. Pitta dosha is most prominent during youth and early adulthood.

Pitta gets deranged on eating spicy or oily food or on having a late night (particularly if alcoholic beverages have been consumed) or if under tension or anxiety. Pitta then is responsible for transformation and works under the watchful eyes of the ‘older’ vatta. It represents all the characteristics of youth and if increased, can hasten aging besides causing havoc to digestion.
Introduction

Kapha: The water-humor is 'kapha' literally meaning 'what sticks'. It has a secondary aspect of earth as its field of action with the mucous membranes and skin forming its boundaries. It is responsible for weight, cohesion and constitutes as it were the internal ocean' in which the other two humours freely circulate (Fig.1.2).

Fig. 1.2: Showing the basic nature of Kapha Dosha

It provides for proper lubrication, discharge of secretions and cushioning for the nerves, mind and senses. Kapha predominates in the upper part of the body, stomach, lungs and head where mucus tends to accumulate. At the psychological level, kapha governs feelings, emotion and the capacity of the mind to hold on to forms. Though contributing to calmness to the mind and thereby stability, mental growth and expansion may be retarded. Emotional imbalance results in holding on to things in the mind thereby over-burdening it. The Kaphas tend to be corpulent and
over-weight and to water loading. It is hard for them to lose weight even with effort. They like sweets and may run the risk of developing diabetes later in life. They get into sleep easily and find it difficult to keep awake.

Psychologically, they tend to be tolerant, calm, forgiving and loving: however also exhibit traits of greed, attachment, envy and possessiveness. Their comprehension is slow but definite. Being water type, they tend to suffer from congestive symptoms, obesity, glandular swellings, asthma, oedema and tumours. Kaphas prefer to be sedentary but once active they would sustain it. Consistency and perseverance help them to succeed rather than their skill and cunning. Physically they suffer from inaction and they lack a sense of discipline. They are emotional and are imbibed with love, devotion and loyalty. On the other hand, they harbour too many desires, and get attached and become possessive. Slower to learn than the other two types, they do retain what has been learnt. Neither creative nor original, they are good in finishing rather than starting. They are traditional and conventional in beliefs and behavior. Seldom rebellious they are good followers. They find difficult to change and would prefer to remain stagnant. They are usually good parents and providers and kapha women make good mothers and wives. With large chest, good lungs and good voice they become popular singers. They tend
to accumulate wealth in every form and cling to it. Real estate and banking are the areas in which they tend to excel. Once motivated they are hard workers and consistent in their application Venkabo Rao (2002).

Just like vatta and pitta, there are five types of kapha. This classification, like that of vatta, seems to be based on both anatomy (structure) and physiology (function). The various types are: -

**Bodhak:** This makes taste of food possible and probably refers to the saliva. Its main location is in the mouth and at the root of tongue. When the ‘mouth water’ or when euphemistically speaking, there is a ‘bitter taste’ in the mouth after certain unpleasant incidents, one knows that the bodhak kapha has been incited.

**Kledak:** This is active in the gut and protects the stomach from the fiery pitta. Perhaps it is the mucus that lines the stomach on the inside!

**Tarpak:** This lies in the brain and protects it from external injury. It probably is the cerebrospinal fluid.

**Shleshak:** This is the synovial fluid that oils and lubricates the joints, making them suppler. It also gives strength and firmness to ligaments.

**Avalambhak:** This resides in the thorax and pelvis. It lubricates the organs in these regions and facilitates their proper functioning.
Kapha, being made up of water and earth, is heavy, stable and moist. Sweet, sour and salty items in the food can thus disturb this inherently heavy dosha. Also ‘weight promoting’ carbohydrates and fats can increase kapha. It usually is at its most prominent during the morning and early evening. Similarly, springtime sees the kapha dosha at its most aggressive. It is during this that people with kapha predominance suffer the most and if sweetmeats are consumed in large quantities, followed by a snooze during daytime, they tend to become lazy.

It imparts gentle, innocent sweetness to a person who is devoid of the manipulative tendencies of adulthood (pitta) or the sober maturity and wisdom of old age (vatta). True to this property it predominates in childhood and adolescence.

A preponderance of kapha makes a person plump, contented and perhaps a little slow. Yet this property makes the person have an immense durability in the most adverse of conditions. If the dosha is deranged, there can be emaciation, impotence, decreased salivation (or dry mouth) and poor digestion, along with the trait of enviousness. Classically, kapha abnormalities lead to respiratory diseases, polyuria, feeble-mindedness, weakness and lethargy. Kapha, therefore, is the gentle
one, controlling the youthfulness of *pitta* but always willing to obey the orders of *vatta*.

**Dosha:- Transient Nature – Interaction with age, season, time.**

The importance of three somatic humors may be noticed in every aspect of life e.g. age, day and night and the time taken for the digestion of the ingested food etc. If these can be divided into three equal parts, the predominance of *vatta* in the last part, of *pitta* in the middle part and of *kapha* in the first part are noticed. Referring to the age of the person, *vatta* is predominant in the old age, *pitta* in youth and *kapha* in childhood. Referring to the daytime, if the period of daytime is taken as 12 hours i.e. from 6.00 a.m. to 6.00 p.m., *vatta* is prominent in the last 4 hours i.e. from 2.00 p.m. to 6.00 p.m., *pitta* predominates from 10.00 a.m. to 2.00 p.m. and *kapha* predominates from 6.00 a.m. to 10.00 a.m. The same assessment will hold good to the twelve hours of the night-time. If the time taken for the digestion of the ingested food is also divided into three parts, *kapha* is predominant in the first one third, *pitta* in the middle one third and *vatta* in the last one third (Sastri, 2002).
Interaction among doshas:

A balance among the *tridosha* is necessary for health. For example, the air principle kindles the bodily fire, but water is necessary to control fire, otherwise the bodily fire would burn the tissues. *Vatta* moves *kapha* and *pitta*, since *kapha* and *pitta* are immobile. Together, the *tridosha* governs all metabolic activities: anabolism (*kapha*); catabolism (*vatta*); metabolism (*pitta*). When *vatta* is out of balance, the metabolism will be disturbed, resulting in excess catabolism, which is the breakdown or deterioration process in the body. When anabolism is greater than catabolism, there is an increased rate of growth and repair of the organs or tissues. Excess *pitta* disturbs metabolism, excess *kapha* increases the rate of anabolism and excess *vatta* creates emaciation (catabolism).
**Triguna theory**

The term "Trigunas" is composed of two words: *Tri & Gunas*. *Tri* means three and *gunas* means qualities, thus *trigunas* determines the three qualities, which determine people’s nature, belief and perception. The three *gunas* are classified as:

- **Satwa**
- **Rajas**
- **Tamas**

These three *gunas* - *Trigunas* - are found in nature as well as in mind corresponding to the three *doshas* (*vatta, pitta, kapha*) of the body. Just like the three *doshas* of body are the essential components of body, the three *gunas* - *Satwa, Rajas, Tamas* - are the essential components (or energies) of mind, describing the mental state of the mind of a person. Ayurveda advocates a unique description and distinction of people on the basis of the psychological state (constitution) of their mind- *Manasa Prakriti*. Genetically determined, these psychological characteristics are dependent on the relative dominance of the three gunas.

The three *gunas* - *Satwa, rajas, and tamas* - are found in nature and in the mind, paralleling the three *doshas* of the body. *Satwa*, or purity, is the ideal state of mind because a person with this quality is calm, alert, kind, and thoughtful. A person whose mind is predominantly *rajasic* (too
Introduction

(active) always seeks diversions (incessant activity). The tamas-predominant mind is a dull, lethargic mind. If in nature, there should be material based on some elements/atom.

Marutham, Balodhi and Mishra (1998) developed a personality inventory based on the concept of Triguna in ancient Indian philosophy. According to this theory, the presence of 3 factors, Satwa (essence), Rajas (motion) and Tamas (inertia) are seen to comprise the temperamental aspects of human personality. The 120-item inventory was called the Satwa, Rajas and Tamas Inventory Ss were 322, 22–25 years old male and female college students with Hindu and Non-Hindu religious preferences. Results showed that the inventory had content validity and that each item assessed a specific aspect of the triguna factor. The 3 factors were independent to a certain extent with a general trend for Satwa and Rajas predominance over Tamas, though Rajas was more predominant than Satwa.

Just as combinations of Vayu, Pitta and Kapha exist for the body, the mind has combinations of Satwa, rajas, and tamas. Individuals whose minds are sattvic and rajasic are those who enthusiastically study spiritual and holistic measures to improve themselves. Rajasic-tamasic minded people will actively work and exercise to overcome their
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lethargy. This description matches more with phenomenological approach-Gestalt and Humanism in psychology. This notion puts control and anti autonomy and reality which are two basic components of phenomenalism. There appears some contradictions, which do not make it amenable to verification based on available methodology at our command. Hence, the present thesis deals only with tridosh aspects.

While all individuals have mixed amounts of the three, the predominant *guna* determines an individual's *mansa prakriti*. In equilibrium, the three *gunas* preserve the mind (and indirectly the body), maintaining it in a healthy state. Any disturbance in this equilibrium results in various types of mental disorders. *Satwa*, characterised by lightness, consciousness, pleasure and clarity, is pure, free from disease and cannot be disturbed in any way. It activates the senses and is responsible for the perception of knowledge. *Rajas*, the most active of the *gunas*, has motion and stimulation as its characteristics. All desires, wishes, ambitions and fickle-mindedness are a result of the same. While *Tamas* is characterised by heaviness and resistance. It produces disturbances in the process of perception and activities of the mind. Delusion, false knowledge, laziness, apathy, sleep and drowsiness are due to it. *Rajas* and *Tamas*, as with the *doshas*, can be unbalanced by stress
analysis; tamas (inactivity) guna, rajas (activity) positive guna, Satwa (inactivity) guna, and the rajas negative guna.

Wolf (2000) and Wolf and Abell (2003) conducted a study on the effects of chanting the hare krishna maha mantra on stress, depression, and the three gunas. The hypotheses of the study were based on vedic theory, and stated that the maha mantra group would increase sattva, and decrease stress, depression, rajas and tamas, significantly more than the other two groups. ANOVA results, controlling for gender and age, supported these hypotheses at p<0.05 for all dependent variables except rajas, with effect sizes for the four variables whose results supported the hypothesis ranging from 0.21 to 0.33. The author suggests that the maha mantra has potential for utilization in clinical areas similar to those where other interventions of Eastern origin have been successful, such as treatment of stress, depression, and addictions. Further, it is recommended that the maha mantra be integrated into a spiritual approach to client care in social work and related fields. The findings, however, suggested to the transient nature of gunas and put the theory against question mark. Should the personality feature be state or trait?

Tripathi and Pandey (2005) conducted a study on a sample of 100 cancer patients admitted to S.S. Hospital, B.H.U., Varanasi. Their mental
behaviour was assessed on a self-devised psychological Performa in relation with *Ayurvedic* concept. For such studies, a standard proforma containing 133 items based on *Ayurvedic* tests as well as personality characters psychologically was assembled. This study indicated that the patients belonging to *Rajsik* and *Tamsik* mentality, were more prone to cancers. The data enabled us to conclude that the cancer arising from various types of physical and mental behaviours, the depression and antecedent life stresses playing a part in the etiology of cancer. Some of the *Satwik* patients accepted their disease as a punishment of their “previous birth effect”.

**Typology (Ayurvedic)**

*Tridosh* theory aspoused seven types of temperaments based on the proportion of the three humours in our constitution. A perfect balanced constitution of three *doshas* is four *vatta*, two *pitta* and one *kapha*. Such a person is typed as “*Sannipatika*”. However *Charkas* believed that mostly the *Prakruti* is the combination of three *doshas* with poorly represented third. Such persons are typed as “*Dwandavaja*”. They exhibit action and behavior as per the characteristics of two predominant *doshas* e.g. *Vatta-Pattik; Vatta-Kaphik* and *Kapha-Pattik*. Hence, there may be three types of “*Davandavajas*”. At the same time there may be three pure
types having disproportionately represented single dosha: Vatta type, Pitta type and Kapha type. Thus Ayurvedic theory has a hierarchical structure (Table 1.1) espoused seven types, three doshas and five bhootas to describe the original form of an individual (Charka). The proportion of V-P-K makes our body and determines our strengths and weaknesses. There are three pure types and four mixed types (Sastri, 2002).

Fig. 1.4 – Showing seven types (typology) of persons as per tridosha theory (Proportions are not to be scaled)

Abbreviations: K-Kapha, P-Pitta, V-Vatta, D-Dwandavaja, S-Sannipatika,
Table: 1.1: Showing three tier hierarchical structure of temperament

<table>
<thead>
<tr>
<th>Levels</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level-1</strong></td>
<td>Bhoota (Elements)</td>
</tr>
<tr>
<td></td>
<td>1. Water</td>
</tr>
<tr>
<td></td>
<td>2. Fire</td>
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<td></td>
<td>3. Space</td>
</tr>
<tr>
<td></td>
<td>4. Air</td>
</tr>
<tr>
<td></td>
<td>5. Earth</td>
</tr>
<tr>
<td><strong>Level -2</strong></td>
<td>Dosha (Humours)</td>
</tr>
<tr>
<td></td>
<td>1. Vatta - Air + Space</td>
</tr>
<tr>
<td></td>
<td>2. Pitta - Water + Fire</td>
</tr>
<tr>
<td></td>
<td>3. Kapha - Water + Earth</td>
</tr>
<tr>
<td><strong>Level – 3</strong></td>
<td>Temperamental (Typology) Prakriti</td>
</tr>
<tr>
<td><strong>Type</strong></td>
<td><strong>Dosha</strong></td>
</tr>
<tr>
<td>Pure Vatik</td>
<td>Vpk</td>
</tr>
<tr>
<td>Pure Pitta</td>
<td>vPk</td>
</tr>
<tr>
<td>Pure Kaphik</td>
<td>vpK</td>
</tr>
<tr>
<td>Dwandavaja PVk/VPk</td>
<td>Pitta &amp; Vatta Predominance low kapha</td>
</tr>
<tr>
<td>Dwandavaja Kvp/VKp</td>
<td>Kapha &amp; Vatta Predominance low pitta</td>
</tr>
<tr>
<td>Dwandavaja PKv/KPv</td>
<td>Pitta &amp; Kapha Predominance low vatta</td>
</tr>
<tr>
<td>Sannipatika VPK</td>
<td>Balanced of all doshas (4:2:1::V:P:K)</td>
</tr>
</tbody>
</table>

To sum up this chapter, it can be compounded that the construct of adult temperament in western literature had been quite heterogeneous.
encompassing humoural, constitutional, psychological and behavioural (trait and type) approaches. Whereas the eastern viewpoint was dominated by humoural (dosha), trait (guna) and typological. Through some serious efforts have recently been made to operationalize and apply Triguna in psychology, typology based on tridosha, despite its seeming relevance, had been unexplored. Therefore, the present work was planned to evaluate the tridosha theory of adult temperament with the help of empirical methodology prevalent and acceptable in behavioural sciences.

The next chapter reviews some earlier attempts.