The variability in human behaviour is so immense that it has been a challenge to psychologists who study individual differences. Yet they have been successful in identifying certain consistencies in some people over time as well certain fluctuations at particular times which have been duly termed as traits and states. Both have been found to be governed by basic genotype, phenotype over phylogeny, ontogeny through prolonged exposure and experience as a by-product of interaction with environment and its situations. However, several perspectives have been advanced. This thesis mainly focussed on evolutionary perspective and one of its strong theory.

Theory and Theoretical Perspective

Evolutionary theory points out that the humans are mammals, especially, primates and, as such, are biologically similar to the three great apes: orangutans, gorillas and chimpanzees. Although we obviously differ from the great apes in important ways – for instance, our language, imagery, and thought processes are far more advanced than theirs, we do share the same sense organs, many ways of perceiving and learning, many facial expressions, and various behaviours.

Like other primates, we follow a circadian rhythm of activity, which typically reaches a low point at night and peaks during the day, especially before feeding; we also exhibit intense bursts of energy in aggressive, escape and sexual behaviour, or in rollicking play. In the process, we (and they) may meet strangers and become wary and shy. Thus, shyness may be one component of fear. Despite differences in the way in which we and the other primates express fear, activation of the sympathetic nervous system triggers a common set of reactions, including an increased rate of breathing, higher blood pressure, and the shunting of blood from the digestive system to the skeletal muscles in preparation for fight or flight (Buss, 1988).
According to Buss (1995) these diverse behaviours express underlying broad based temperament that are shared with other primates. These traits are as follows:

1. *Emotionality* refers to high physiological arousal and generalized negative affect. It is the tendency to become aroused easily and intensely, to become easily frustrated and distressed.

2. *Fearfulness* involves the tendency to be wary, run away, or cower, as well as the accompanying physiological arousal.

3. *Activity* refers to total energy output, as expressed in vigour or tempo.

4. *Nurturance* is the tendency to help others; it includes altruism.

5. *Sociability* is a preference for being with others rather than remaining alone.

6. *Impulsivity* is the tendency to act on the spur of the moment without pause or reflection.

7. *Aggressiveness* consists of attacking or threatening.

8. *Dominance* refers to seeking and maintaining superior status over others.

Each of these traits has a genetic component. They evolved because they have adaptive value; that is, they help ensure survival and reproduction. A closer examination suggests that moderate levels of these traits are more likely to be adaptive than extreme levels (Zukerman, 1990), e.g. extreme fearfulness and a complete lack of activity obviously have severe negative consequences.

Although, these traits have a biological basis, it is also clear that the environment plays a determining role in each of them (Buss, 1988). Evolutionary theorists assume that both biology and environment influence behaviour. They endorse an interactional temperament model, which states that
environment and temperamental traits mutually influence each other. As an example, let us consider how one of these eight traits, activity level interacts with environment or situations to influence an individual’s behaviour. Clearly, considerable differences exist among people in their activity levels. Some people speak rapidly and loudly, walk and run quickly and gesticulate frequently and emphatically; others speak deliberately and softly, stroll when they walk, and, in general, maintain a slow pace of life. Lethargic people, in contrast, may be frustrated in high stress, fast-paced jobs that demand large amounts of energy.

Buss also believes that we inherit broad temperament traits, which become more differentiated into specific components as we mature. Aggressiveness e.g., may become differentiated as physical aggression, verbal aggression, irritability and passive aggression.

Temperament traits also combine to produce unique behaviour, e.g., people who are sociable and dominant tend to seek social status through sharing and working with others. In contrast, people who are low in sociability and high in dominance are likely to seek social status through aggression. Sociable people who are altruistic will feel empathy for others and endeavour to help not only friends and relatives but also strangers in distress. Unsociable people who are altruistic will tend to help others, not out of empathy, but because of a moral code or a sense of responsibility (Buss, 1995). Finally, evolutionary theorists argue that there are biologically rooted sex differences in humans and in other primates for most of these traits. Primate males poke, prey, and stir things up, whereas females act as a conservative, quieting, and nurturant force in primate groups (Buss, 1988).

Having introduced the basic tenets of the evolutionary perspective based theory of temperament by Buss, the following three research questions were selected for the present thesis:
1. Whether EASI shall be differentiated into 8 proposed temperament traits?

2. Whether certain combination of temperament traits may emerge as separate empirical conglomerates (factors)?

3. How extensive are sex differences across measures of temperament traits?

The psychology of individual differences, however, dominated by a colossus descriptive and explanatory construct namely, personality, but a strong corollary construct has always been profoundly prevalent and thus need to be introduced. Even temperament has been considered as a substrate (biological) of personality.

The place of temperament in personality research has been broadly discussed taking into account different understanding of both concepts, temperament and personality.

**Temperament and Personality**

In reviewing the literature on temperament, a primary challenge lies in adopting a widely acceptable definition of the broad construct of temperament or of any of its component dimensions. The history of the study of temperament and personality reveals several themes across various definition, including a biological or constitutional basis, emphasis on longitudinal stability and cross-situational consistency, association with clinical risk, and multidimensional or multivariate nature (for an extensive review of the history of temperament research, see Strelau, 1998).

Strelau and Angleitner (1991) in reviewing the international perspectives on the theory and measurement of temperament noted that during the years 1975 to 1979, the term temperament was used in the life title and/or summary of 173 abstracts. During the next five years (1980-1984), it was
used in 367 abstracts and during the years 1985-1989, the term appeared in 463 abstracts. As the authors noted even if the review of temperament literature is restricted to those abstracts. "It can easily be concluded that temperament is used in different contexts and with different meanings, hardly allowing any comparisons or general statements. One of the consequences of this state of affairs is that our knowledge on temperament does not cumulate despite the increasing research activity in this field. 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 (Strelau and Angleitner, 1991), other factors, the energy level and the temporal characteristics of action.

Being primarily determined by inborn physiological mechanisms, temperament is subject to changes caused by maturation and by some environmental factors.

Teplov (1956) recognized the influence of ante and postnatal factors and the result of early social experience in shaping up of temperament. He believed that the interaction of temperament and early environment described as character with aptitudes, constitutes personality. In his later works, Pavlov (1952) also acknowledged the importance of environmental factors, arguing that while each individual belongs to one or another temperament classes his/her actual behaviour (the phenotype) depends on experience.

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

Temperament like intelligence and/or physique might be said to designate a class of raw material from which personality is fashioned. It refers to the chemical climate or internal weather in which personality evolves. The
more anchored a disposition is in native constitutional soil, the more likely is to be spoken of as temperament.

According to Strelau (1987a), “Temperament may be regarded as (a) one of the element of personality (b) as a synonym of personality and (c) as a phenomenon with its own specificity not belonging to the structure of personality (p. 107).” Strelau favours the last position namely that temperament is a phenomenon with its own specificity. He points out that temperament consisted of a set of formal relatively stable traits which are revealed in behaviour at the level of energy and in the temporal patterning of reactions. The term formal was used to emphasize the notion that temperament per se has no content and does not determine the content of behaviours in any direct way. But the possibility of indirect influence cannot be ruled out.

As one of the regulatory mechanisms of behaviour temperament is manifested in all kinds of reactions (actions) independent of their direction or content. Temperament conditioned by structural and functional properties of an individual has an effect on the course of actions by determining, alone or in conjunction with other factors, the energy level and the temporal characteristics of action. Being primarily determined by inborn physiological mechanisms, temperament is subject to changes caused by maturation and by some environmental factors.

Strelau (1987) discusses five respects in which there is at least a popular difference between personality and temperament.

1. Temperament is biologically determined whereas personality is a product of the social environment.

2. Temperament features may be identified from early childhood, whereas personality is shaped in later periods of development.
3. Individual differences in temperamental traits like anxiety, extraversion-introversion, and stimulus-seeking are also observed in animals, whereas personality is the prerogative of humans.

4. Temperament stands for stylistic aspects, personality for content aspect of behaviour.

5. Unlike temperament, personality refers to the integrative function of human behaviour.

Diamond (1957) considers the dispositions which we share with other animals as being temperament. Those aspects of individuality which arise from distinctively human’s capacity Diamond calls personality. Philips (1983) defines personality as: “The integrated organisation of all the cognitive, affective, and physical characteristics of an individual as it manifests itself in local distinctiveness and carrying a special meaning to others”.

The dynamics of temperament are addressed by Hinde (1986) who argues that: “Temperament characteristics cannot be viewed as aspect of the behaviour style of an individual. They may vary at least to some extent, with the context of behaviour. And they are affected by the social and physical situation, cognitive development, and by other aspects of the individual.”

Gordon Allport, a pioneer in the field of personality wrote about temperament earlier, but his clearest statement of what temperament is can be found in his 1961 book, “Temperament refers to the characteristic phenomenon of an individual’s nature, including susceptibility to emotional stimulation, his customary strength and speed of response, the quality of his prevailing mood, and all the peculiarities of fluctuation and intensity of mood, thus being phenomenon regarded as dependent on constitution, and therefore largely hereditary in nature.”
The modern history of temperament research began in the late 1950s, with the New York Longitudinal Study (NYLS) conducted by Alexander Thomas, Stella Chess, and their colleagues (1963, 1968). Similar research was conducted in Russia by Boris M. Teplov (Moscow) and Vulf S. Mcrlin (Perm, Ural) and their students. The decades which have passed since the beginning of this modern approach to the studies of temperament may be characterized as a period of essential development of temperament research which grew both in the number of studies and the range of problem being attacked. As van Heck (1991) notes:

"The last two decades were a period of crisis and critical self examination for western psychology. Until the late 1960, by far the most prominent model of personality was the dispositional model reflecting the conviction that a person's striving, beliefs, feelings, typical ways of behaving, etc. could be condensed in a rather limited set of personality traits. At the end of the 1960s, however, doubts increasingly arose concerning the usefulness of dispositions and traits. The continuous confrontation especially with limited success in predicting behaviour in specific situations added fresh fuel to the critical attitude".

In the New York Longitudinal Study (NYLS), interviewed parents described their children which led them to establish nine categories or dimensions of temperament:

1. Activity level
2. Rhythmicity
3. Approach or withdrawal
4. Adaptability
5. Intension of reaction
6. Threshold of responsiveness
7. Quality of mood
8. Distractibility
9. Attention span and persistence.

There is also a pressing empirical question: Are there nine dimensions of temperament? Several factor analyses of items, reviewed by Buss and Plomin (1984) came up with fewer than nine factors (dimensions), but the obtained factors match only two of the NYLS dimensions. The paediatric approach clearly is important for dealing with problems of childhood, its original purpose, but of less value as a perspective on personality or adult temperament.

Solomon Diamond (1957) published his evolutionary approach to temperament. He describes four temperaments shared by primates (including our species) and perhaps some social mammals: fearfulness, aggressiveness, affiliativeness, and impulsiveness. He conducted no human research nor did he offer specific means of his testing his hypothesis. In the 1950s, however, there was little interest in an evolutionary approach to personality and Diamond’s ideas were neglected by most psychologists.

Eventually Buss and Plomin built on Diamond’s fascinating ideas to formulate own theory (Buss and Plomin, 1975). Buss sees temperament as a subclass of personality traits, shared by our species and primates (Buss, 1988) and defined as being inherited and appearing early in life. To be more precise, temperaments in our approach are inherited personality traits that appear during the two years of life and endure as basic components of personality. There are three defining properties of temperaments: they are inherited, they appear early and they endure. Then consider the following: there are personality traits that appear during infancy, but they are not inherited. There certainly are inherited personality traits that appear later in life, but they appear too late to be called temperaments. And there may be early childhood problems that leave behind no residue of any importance for personality.
These temperaments are broad personality dispositions. It is of course possible that human possess inherited propensities that are highly specific, but most of our inherited dispositions appear to be generalized. Thus, temperaments appear to be consistent with other inherited human psychological tendencies in being broad rather than narrow.

**Constitution and Temperament: Early views**

Charaka (5\textsuperscript{th} Century BC) and Sushruta Samhita (2\textsuperscript{nd} century B.C.) presented the ancient Indian version of ‘Prakriti’ (temperament). The ‘ayurvedic’ (Medical) thinkers Charaka and Sushruta recognised the influence of bodily humours. *Vata, Pitta, Kapha* over and above the three ‘gunas’ – *Satva, rajas* and *tamas*. (Sastri and Chaturvedi, 1989).

Charaka enumerated seven satvik types of person, six rajas types ad three tamas types, altogether sixteen types.

Sushruta spoke of seven different types of temperament according to the deranged ‘doshas’ of the body, either singularly or in combination of two or of all the three together. The three main temperament types based on three *doshas* (humours) are - *Vataja* (wakeful, averse to bathing, vain and dishonest, impulsive, capable of accumulating very little money), *Pittvaja* (irritable in temper but cools down very soon, intelligent and possesses good money); *Kaphaja* (self controlled, far-bearing, unselfish, does not hastily form opinions, capable of sustaining pain and fatigue).

A combination of two different temperaments was called a double temperament or a *Dvandvaja* one; and one of all the three temperaments in a person was stated as a *sannipatika* one. He asserted that the temperament (prakriti) of a person is determined by the preponderance of the particular doshas at the time of conception, hence hereditary in nature.
The relationship between Eysenck's two basic dimensions of personality and the four major temperamental types distinguished by the Greek physicians Hippocrates and Galen was established by Eysenck (1970). The Greek believed that all of nature was composed of four elements: air, earth, fire, and water. Hippocrates and Galen went on to suggest that these four elements were represented in the human body by four humors (blood, black bile, yellow bile, phlegm), each corresponding to a temperament: Sanguine, Melancholic, Choleric, Phlegmatic.

The Russian physiologist Ivan Pavlov (1927) also was influenced by Galen's typology. He viewed personality as reflecting three properties at the central nervous system strength, balance and excitation/inhibition. These properties were used to account for the four types of temperament.

1. **Sanguine** = strong, balanced, excited.
2. **Phlegmatic** = strong balanced, inhibited
3. **Melancholic** = weak, unbalanced, inhibited
4. **Choleric** = strong, unbalanced, excited

Individual differences in temperament corresponded to the predominance within the individual of one or another of the four humours. Similarly, diseases corresponded to excesses in one or another humour (e.g. too much black bile and depression). In other words, theory on a classification of temperament types was proposed, one based on constitution or basic body chemistry.

The Polish psychologist Jan Strelau (1983) has used Pavlov's theory as a springboard for his own conception. Though, he discards the fourfold classification of temperaments. These major concepts are energetic level and temporal characteristics. Energetic level embodies Pavlov's concepts of strength and balance of the nervous system. It consists of both activity and
reactivity. Activity is manifested in the amount and range of activities engaged in by the individual. Reactivity also has two facets: threshold of stimulation and intensity of reaction. Temporal characteristics match Pavlov’s mobility of the nervous system. Relevant personality traits are tempo and persistence of behaviour.

In England, Hans Eysenck (1947) arranged the four types of personality in a circle with two axes: extroverted-introverted and emotionally stable – unstable. Thus, the sanguine person is extraverted and emotionally stable, the melancholic person is introverted and emotionally unstable, and so on.

In the twentieth century the German psychiatrist Ernst Kretschmer conducted his studies of the relation between body type and personality (physique and character, 1925). Kretschmer devised a method of measuring body type, resulting in a classifications of three fundamental types.

Pyknic (plump, round physique), athletic (muscular vigorous physique), asthenic (frail, linear physique). These physiques were then found to differ in incidence of psychiatric disorder, a pyknic physique being associated with manic-depressive disorder and an asthenic physique being associated with schizophrenia. Beyond this, Kretschmer assumed a relation between physique and normal personality (e.g., pyknic and extroversion, asthenic and introversion), although no evidence was presented for such a relationship. Kretschmer’s work suffered from faulty methodology (e.g., he did not correct for the fact that manic-depressive disorder tends to occur later in life than schizophrenia and people tend to become heavier and rounded with age) but it laid the foundation for later work in constitutional psychology.

Kretschmer’s work on body type and personality was followed-up by William Sheldon, who spent time with Jung and also visited both Freud and Kretschmer. Clearly defining his work as the study of constitutional psychology, Sheldon (1942) suggested that each person has an inherited basic
biological structure (bodily physique, constitution) that determines one's temperament. He defined three dimensions of physique that largely corresponded to those suggested by Kretschmer endomorphy (soft and round), mesomorphy (hard and rectangular, muscular) and ectomorphy (linear and fragile, thin, lightly muscled).

Sheldon (1942) proposed three aspects of 'temperament', each of which has many manifestation in personality. Viscerotonia is made up of such qualities as relaxation, tolerance (even complacency), sociability, love of comfort, and easygoingness. Somatotonia includes qualities such as courage, energetic assertiveness, and a desire for adventure, risk and physical activity. Cerebrotonia includes a mental over intensity that approaches apprehensiveness, an inhibition and avoidance of social interaction, a physical and emotional restraint, and a tendency toward privacy (even secretiveness). As with somatotypes, most people have some degree of each quality of temperament.

Sheldon believed that the temperament quality and the corresponding somatotype quality go together. Sheldon conducted a laborious study (Over 5 years, involving 200 men) to assess association between the temperament qualities and the components of somatotype (Sheldon, 1942). He found a correlation between physique and temperament, endomorphy (soft, round) correlating 0.79 with viscerotonia (sociability); mesomorphy (muscular) correlating 0.82 with somatotonia (risk taking, assertive, aggressive), and ectomorphy (thin, lightly muscled), correlating 0.83 with cerebrotonia (inhibited, fearful, introverted). A problem with this research, however was that the same individual made both sets of ratings so that the correlations found could be due to the raters' preconceptions and theoretical bias. In addition, other investigators found less robust relationship between body build and temperament. Finally, it was hard to define the biological basis for these
associations and one could not rule out the possibility that they were based more on experience than biology: that is, people with different types of physique are rewarded for different types of activities and respond to stereotypes that others have of each body type. Thus, although emphasizing a biologically based psychology, Sheldon could not establish the biological basis for a linkage between constitution and temperament.

Sheldon used temperament to refer to the aspects of personality he measured, but he didn’t define it explicitly. Others have used the singular form temperament, rather than the plural, to refer to a person’s overall ‘emotional nature’ (e.g., Allport, 1961; Gallagher, 1994; Kagan, 1994).

Individual differences in temperament can be summarized in terms of three big super-factors similar to those suggested by Eysenck and also corresponding, roughly, to three of the Big Five dimensions: NE (Negative Emotionality), PE (Positive Emotionality), and DVC (Disinhibition V/s Constraint). Individuals high on the NE factor experience elevated levels of negative emotions and see the world as threatening, problematic, and distressing whereas those low on the trait are calm, emotionally stable, and self satisfied. The PE factor relates to the individual’s willingness to engage the environment with high scorers (like extroverts) enjoying the company of others and approaching life actively, with energy, cheerfulness, and enthusiasm, whereas low scorers (like introverts) are reserved, socially aloof, and low in energy and confidence. It is important to note that although NE and PE have opposite sounding qualities, they are independent of one another, that is, an individual can be high or low on each. This is because they are under the control of different internal biological systems. The third factor, DVC does not involve affective tone, as was true for the first two factors, but rather relates to style of affective regulations, with high DVC scorers being impulsive, reckless, and oriented towards feelings and sensations of the moment whereas low
scorers are careful, controlled by long-term implications of their behaviour, and avoiding risk or danger (Oliver & John, 2001).

Recent research is consistent with Buss and Plomin’s proposal that temperament is the precursor to adult personality. Rothbart et al. (2000) factor analytic work on temperament and personality indicates moderate correlations between these temperament factors and three of the Big Five personality factors. Specifically, negative affectively (including fear, discomfort, and frustration) is linked to Neuroticism, effortful control (including attention, focusing and shifting) is linked to conscientiousness, and surgency (including high intensity pleasure, activity, and sociability) is linked to Extraversion.

Today researchers generally think of temperament as a general pattern of behaviour and mood that can be expressed in many different ways and that depending on one’s experiences, develop into different personality traits. How these general dispositions develop into stable personality traits depends on a complex interplay of one’s genetic disposition and the environment that a person grows up in.

In ordinary English usage, a temperamental person is someone who is high-strung, easily excitable, prone to quick changes in mood, or fickle. The most typical definition of temperament was proposed by Thomas and Chess (1986). Temperament by their definition, can be equated to the term behaviour style. Each refers to the ‘how’ rather than the ‘what’ or the ‘why’ of behaviour. By the definition:

“Temperament is a phenomenological term in which the categorization of any individuals is derived from the constellation of behaviour at any one age period. These behaviours are the result of all the influences, past and present, which shape and modify these behaviours in a constantly evolving interactive process”.


To personality psychologists temperament refers to three aspects of behaviour, that appear relatively early in life: activity level, mood and emotional responsiveness to other people. Individual differences among body's activity level, general level of irritability and positive versus negative emotional tone when interacting with people are the behavioural characteristics or dimensions. Most temperament researchers assume to be both genetically based and influenced by the babies' early environments (Bates, 1989, Goldsmith et al., 1987).

Temperaments are broad personality dispositions rather than specific personality traits. How general behavioural dispositions develop into specific traits depends on how these dispositions interact with the environment the person grow-up finally. Individual differences in temperaments can usually be seen in the first year life and persist throughout a person and lifetime (Buss, 1991).

Although researchers agree that temperaments are general behavioural patterns that can often be seen in newborns, they do not always agree on how to identify and classify the different kinds of temperaments they observe (Caspi, 1998; Shiner, 1998). Cattell (1965) classified some personality factors as temperament traits, those traits that describe the general style and emotional level of our behaviour.

Beginning in the 1970s, Arnold Buss (1924 - ) of the University of Texas of Austin, and Robert Plomin (1948 - ) of Pennsylvania State University, identified temperaments that they believe are the basic building blocks of personality.

**THE CRITERIAL APPROACH OF BUSS AND PLOMIN**

Buss and Plomin (1975) modified Thomas and Chess' model by framing temperament as a developmental precursor to adult personality. They described
five inclusion criteria for temperamental traits, specifying that traits be heritable, relatively stable during childhood, evolutionarily adaptive, and present in our phylogenetic relatives. Four broad temperament traits or dimensions emerged from these criteria, including emotionality (i.e. intensity of emotion), activity (i.e. quantity of motor activity), sociability (i.e. closeness to others), and impulsivity (quickness vs inhibition of response). These traits were measured in Buss and Plomin's (1975) Emotionality and Sociability Inventory and the Colorado Childhood Temperament Inventory (Rowe & Plomin, 1977), which also included the dimensions of attention span and persistence, reaction to food, and soothability.

Buss and Plomin suggest that each person's personality is composed of different amounts of each temperaments. The temperaments combine to form personality patterns or so-called supertraits, such as introversion or extraversion (Buss & Plomin, 1984, 1986). Their formulations have sparked a great deal of research interest (Bates, 1994).

Buss is the most prolific writer and theorist in the psychology of temperament with a standing of more than four decades. He has been constantly expanding and refining his theory of temperament along with behaviour genetic scientist Plomin. His theory has also attracted an overwhelming response from developmental psychologists.

Buss took upon the very basic temperament trait: aggression. The behaviour relevant to personality can be analysed into their components. There are several ways of partitioning particulars, each offering its own enlightenment.

**Instrumental Acts** - Instrumental acts have an impact on the environment. They are so named because they are often instrumental in attaining a goal or a reward, or in avoiding punishment. Thus, the instrumental component of aggression, indeed, the defining features of the behavioural class called
aggression, is the act of hurting or harming another individual, trying to do so, or threatening to do so. There are several closely related categories of instrumental aggression.

Buss and Perry (1992) gave four types of aggression – anger, hostility, physical aggression and verbal aggression.

1. **Physical Aggression:** Most aggressive acts are direct. A person attacks a victim. A major kind of direct aggression is physical aggression. In this, beat with fists, slap with hands, kick with feet, scratch with nails, or even bite with teeth. As tool users, we can escalate the hurt or harm with such weapons as knives, spears, axes, arrows, clubs and a variety of guns.

   Physical aggression is ordinarily accompanied or preceded by facial expressions and bodily preparations for attack. These accessory behaviours, though their link with aggressive cuts, can come to signal forthcoming aggression. As such they constitute threat of physical aggression.

   Physical aggression is another category of attack, seen mainly in humans, is indirect aggression, in which the victim typically is not present but is harmed in a round about way. The aggression may leave behind a booby trap that explodes when the victim triggers it. The attacker may get at the victim by harming the latter’s wife, husband, or child. Other options are setting fire to the car, spilling garbage on the town, knocking down a fence, or trashing the bedroom.

2. **Verbal aggression:** An alternative to physical attack is verbal aggression. We can curse, jeer, censure, retrieve, chide, deride, mock, ridicule, and taunt others, often causing psychological distress, anxiety, or loss of self-esteem. The verbal content of the attack is often accompanied by such stylistic – paralinguistic features as yelling and screaming. And threat can be delivered verbally, a promise to deliver bodily or psychological harm. A few
years ago, a television evangelist publicly rebuked another television evangelist (direct verbal aggression). Verbal aggression's another category of attack is indirect aggression, include malicious gossip about someone or the deliberate spread of lies (Cheating, stealing, infidelity) that will ruin the victim's reputation. In political contests, such indirect aggression, especially in television advertisement, now seems as common as the more direct verbal aggression that occurs in political debates. There is also the threat of indirect verbal aggression. This is the ploy of the blackmailer who, unless paid off, promises to publicize facts of even fabrications that would dishonour the victim's family.

3. **Anger**: Anger, the emotion closely linked to aggressive acts. Anger involves physiological arousal. Heart rate and breathing accelerate, blood pressure rises, blood is directed away from the gut to the large skeletal muscles, and sugar is mobilized in the blood. These are the preparations for the massive muscular effort that occurs in physical aggression (Cannon, 1929). For anger is often a precursor to aggression. As an emergency reaction, physiological arousal cannot last long. It sets in motion homeostatic mechanisms that eventually restore the body to its resting state.

Anger also has an expressive aspect. The brows are knitted, the nose is slightly flared, the mouth is grim or the teeth are bared, and the fists are clenched. The facial characteristics of anger are recognized in all the cultures in which it has been studied, which suggests that these features are universal (Ekman and Friesen, 1971). Aggression after occurs when a person is angry. Such aggression was originally called angry aggression (Buss, 1961). Aggression can occur in the absence of anger, thus with little or no physiological arousal.

4. **Hostility**: Hostility is the cognitive component of aggression. Cognition includes a wide range of mental activities: thoughts, attributions, memories,
fantasies, and planning. We are sometimes aware of these covert processes, and at other times not. Hostility consists of dislike, ill-will and resentment towards others. Hostility also involves suspicion that others are lurking or that they mean harm. At first glance, it might not seem appropriate to place both resentment and suspicion under the heading of hostility but there is an empirical basis for doing so.

Hostility may accompany anger as an immediate reaction to a current situation. The negative cognition of hostility, however, is usually await later reflection.

Hostility can occur even when there have been no prior attacks or flights, real or imagined. Others are disliked for no other reason than that they are different, which of course is an example of prejudice, widespread hatred of others may occur simply because of their different nationality, religion, skin colour, others.

Models of Temperament

Buss and Plomin developed two tests to assess temperament: the Emotionality, Activity, Sociability, Survey for Adults (EAS) (1984) and the Emotionality, Activity, Sociability Infant Temperament Survey (EASI) for children. For the latter test, the questionnaire is filled out by the parent or primary caregiver (Buss and Plomin, 1975, 1986). Based on extensive research with identical or fraternal twins, Buss and Plomin concluded that temperaments are primarily inherited, part of the genetic package with which we are equipped at birth. These findings have been replicated and supported by considerable independent research (e.g. Saudino et al., 1995).

Within the EAS temperament model, emotionality refers to the intensity of one’s emotional reactions. Adults who easily become upset and have a
'quick temper' are also high in general emotionality. Activity refers to the person's general level of energy output.

Emotionality - is defined by Buss and Plomin as the tendency to become physiologically aroused - easily and intensely - in upsetting situations. They argue that this temperament pertains to only three emotions: distress, anger and fear. In their view, other emotions did not involve enough arousal to be relevant to this temperament. Their temperament survey for adults has three subscales to measure general emotionality: undifferentiated distress, anger proneness, and fear proneness. It is of some interest that these scales aren't highly correlated with each other (Buss & Plomin, 1984), except for a strong association between distress and fear. Thus, the temperament of emotionality may actually be two or three distinct traits.

Buss and Plomin's view of emotionality is similar in many ways to Eysenck's supertrait of neuroticism or emotionality instability. Eysenck's two labels have different connotations, which can be confusing. Neuroticism, implies negative emotions, and it hints at personality problem. Emotional instability may be taken to mean nothing more than emotional reactivity. The items making up Eysenck's measure, however, locus mostly on negative emotions. Thus, this supertrait is similar to emotionality as Buss and Plomin measure it.

Adults with a high level of activity temperament are always on the go prefer active to quiet past times, and keep busy most of the time. Finally, sociability refers to a person's general tendency to affiliate and interact with others. Adults with this temperament have a lot of friends and enjoy social encounters. Thus, adult personalities are determined by both inherited temperament and the environment.
Table 1.1  Summary of Recent Status of the Structure of Buss’s Theory of Temperament (1995)

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<td>Traits</td>
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<td>cognition</td>
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</tr>
<tr>
<td></td>
<td>Physiological</td>
<td></td>
</tr>
<tr>
<td></td>
<td>reaction</td>
<td></td>
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<tr>
<td></td>
<td>Instrumental</td>
<td></td>
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<tr>
<td></td>
<td>Behaviour</td>
<td></td>
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<tr>
<td></td>
<td>Emotional</td>
<td></td>
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<tr>
<td></td>
<td>Expression</td>
<td></td>
</tr>
</tbody>
</table>

In Buss’ temperament’s theory there are four temperamental traits: emotionality, activity sociability and impulsivity, which are represented by the acronym EASl. These temperaments are divided into two temperaments. Temperament–I and Temperament–II.

**Temperament –I:** It consists of emotionality and activity.

**Emotionality** refers to negative affect, specifically, being distressed or upset. In everyday usage, these terms include not only the high (physiological) arousal state of frustration, pain, or generalized discomfort, but also the low arousal states of bereavement and depression. These low arousal states are specifically excluded on the assumption that what is inherited in emotionality is the tendency to become (autonomically) aroused easily and intensely. In brief, emotionality is defined as high arousal, generalized negative affect, its
synonym being distress. But low arousal states, e.g. bereavement and depression, are excluded. Negative emotionality has been found to correlate consistently with many of the symptoms of anxiety and depression (Watson, Clark and Carey, 1988). These relationships make sense, for anxiety and depression involve negative mood and by extrapolation, the temperament of emotionality. This chain of reasoning and empirical relationships leads to the conclusion that extremely high state of emotionality is likely to be a precursor of mood-related abnormal behaviour.

This account of emotionality is necessarily brief because the temperament of emotionality has received less attention than its derivatives, fear and anger. Perhaps the reason for the paucity of research is that emotionality is very broad and diffuse, while the dispositions of fear and anger are more narrowly defined and lend themselves more readily to study. Emotionality having three components (Distress, Anger, Fear).

**Anger** is construed as an immediate negative reaction to a current situation, a transient reaction that involves physiological arousal and logical expression. (already described as a component of aggression)

**Fear** is a universal emotion, not only in our species but probably in most animals and certainly in all mammals. The fear reaction itself is not unitary but consists of sexual components. Fearfulness involves the tendency to be wary, run away, as well as the accompanying physiological arousal.

Subcomponents of Fear are:

(a) Feeling and Cognition: Though animals may have feelings, they cannot verbalize them; we can. However, frightened people report a variety of internal sensations, butterflies in the stomach, a vague feeling of unease or weakness, a tightening of the muscles as tension mounts in the neck or back, nausea, cramps or a constricted or dry throat. The cognition reported in fear usually
focus on imminent or distant danger: becoming hurt or sick, having an accident, failing an exam, being rejected and so on through a list of harmful physical or psychological events. In a word, this is *apprehension*. These feelings and cognitions are what we identify as fear in every day situations, but there are other components.

(b) Physiological reaction: The pioneering research of the physiologist Walter Cannon (1929) established the internal bodily reaction to fear. Sugar is released into the bloodstream: blood is shifted from the viscera to the skeletal muscles, which slows digestion, the bronchioles of the lungs expand, and breathing rate increases; and the heart beats faster. All these bodily reactions allow greater muscular exertion, which in turn produces sweating. Cannon recognized that these various physiological reactions were part of the body’s preparation for massive action in the face of threat.

(c) Instrumental behaviour: Fear typically occurs in the face of threat real or imagined. One immediate and typical way of dealing with danger is to escape by running, climbing or even hiding. Another way is to seek reassurance from a more powerful person who is strong enough to cope with the threat, after soothing, or both.

Fear can paradoxically induce an inhibition of behaviour, either because the frightened person freezes into immobility or because he or she becomes wary and stops all behaviour unrelated to the immediate danger. When the immediate threat has dissipated, there is a residual tendency to avoid the event or the place associated with danger. Thus, some people simply cannot enter an airplane even when they must travel thousands of miles, and others cannot be induced to get up and talk to an audience.

(d) Emotional Expression: A fearful face is so easily recognized that it can be identified by people from a variety of cultures around the world (Ekman and Friesen, 1971; Ekman et al., 1987). The eyes are especially prominent: open
wide to expose an unusual amount of white. The mouth is open, and the lips tense. The brows are raised and drawn together. The body is tense. Neck and shoulders muscles tend to be rigid, and the hands are usually clenched tightly. There may be a spill-over into random movements as the person sits down and gets up repeatedly, paces back and forth, makes vague gestures, wrings the hands, wipes the brow, and touches the hair or face. If the fear is sufficiently intense, the person may cringe in terror, the hands and lips trembling, and the voice quivering or becoming hoarse as the throat constricts.

**Distress:** Distress may be observed in an infant, say, a boy, on the first day of life. He crinkles his face as if to cry, though tears will not be available until later. His face reddens, and his breath comes in gasps. He may kick his legs, move his arms vigorously, or even arch his back. The infant obviously is uncomfortable, and his distress can usually be relieved by feeding him, warming him, or picking him up and comforting him. e.g. in an infant can usually be relieved by feeling him, warming him or picking him up and comforting him. Distress splits into fear and anger and should be related to each other. Differentiation does not cause distress simply to disappear.

**Activity:** Activity is defined as the *amount of energy expended in body movements.* As such, it is the temperament most open to observation, as is clear when children are at play. They climb ropes, climb over playground equipment, dash up a ladder to race down a slide or jump vigorously on a swing. They ride by cycle or tricycle, roller-skate, ice-skate, jump rope, or push wagons.

Notice that the energy is physical, not the 'Mental Energy' assumed to be involved in thinking, remembering and imagining, which may require intense concentration. Such prolonged concentration may induce fatigue, hence the assumption that energy has been expended. But these cognitive processes are excluded from the definition of activity, which consists only of physical behaviour.
As any parent or teacher knows, children vary greatly in the energy they display. Some are so active that they seem bursting with energy, whereas others are so languid that they seem to be weak or chronically ill. Most children are somewhere between these extremes. Activity refers to total energy output, as expressed in vigour or tempo (components). Active adults may speak rapidly, ascend stairs quickly, and perhaps even dash for an elevator. Even their gestures may be brisk as they bustle through life.

**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. They regard high tempo people as excessively driven and perhaps even manic. They are regarded by people with a rapid tempo as being lethargic, sluggish and dull.

**Vigorous** responses are of greater amplitude or intensity, e.g. talking loudly, laughing heartily, pushing doors open with force, taking longer strides when walking, and making broader and more emphatic gestures. Vigorous people prefer sports that involve great strength and endurance, such as weight-lifting, mountain climbing, swimming, running, a marathon. A person of less vigour might in fact nod in agreement to this sentiment, expressed by a friend of mine: “When I feel the urge to exercise, I lie down until it passes”. Highly active people need to expend energy, whether through tempo or vigour. Some like their schedule fully taken up with appointments, classes, specific jobs, and other responsibilities; having an empty schedule may cause boredom, for there is nothing to do. Others want a fast pace or vigorous activity at work or play and may chafe at inferred idleness of the requirement of just sitting still or waiting. In brief, there is motivational component at the high end of the activity dimension.
In summary, tempo involves fast paced repetitive behaviour and vigour involves responses of great amplitude. But at the upper end of the trait dimension, there is also a third, minor component that cuts across tempo and vigour: the **motivation** to be up and around to keep busy and generally, to be expending energy. This motivational component at the high end of the activity dimension; active people become frustrated if they cannot release their profligate energy. This motivational component is absent at the low end of the activity dimension, low active people having no particular need to be up and doing something. But it is not operationalized in tools and theory.

**Temperament -II.**

Sociability and impulsivity are included in it.

*Sociability is defined as a preference for being with others* as opposed to remaining alone. We evolved from ancestral primate stock, and most living primates are highly social animal; our species is no exception. It is not much of an exaggeration to say that no normal person can become a hermit. Even the least social person still likes to be with others, though his/her motivation to do so may be weak. Highly sociable persons are strongly motivated to seek out others and remain in their company.

The research suggests that sociability is a persistent trait from infancy. Approximately 10 percent of the population has a high degree of sociability at birth and 10 percent has a low degree of sociability (Kagan, 1984). Even when there is no external reason for being with others, such as cooperation, exchange, or defense, we may still prefer to do so. Certain social stimuli are pleasurable in and of themselves — that is, they are intrinsically rewarding. These stimuli may be divided into two classes (Buss, 1983) of intrinsic social rewards: stimulation reward and affective reward.
Stimulation reward something we like to do with others: eating, working in an office, attending a movie, singing in a group, or just watching a beautiful sunset. Many students opt to study with others perhaps in a library, rather than studying alone in a room. There may even be a social facilitation effect. Those who eat together consume more food, those who work together produce more work, and each member of an audience laughs louder at humor than does a solitary person (Zajonc, 1965).

Sharing is one kind of stimulation rewards. There can be downside to sharing activities. However, sometimes there are too many people. In a packed movie theatre, people may talk during the film to the annoyance of others. When a cafeteria table is jammed with people, there may not be enough room to eat. And excessive crowding causes invasion of personal space, that “envelope” of space that we need to maintain an adequate distance from strangers or acquaintances (Hall, 1966). Thus, though sharing tends to be rewarding, crowding can make shared activities aversive. We want not only to share an activity with others but also to receive their attention. No one likes to be ignored, for it spawns feelings of rejection, anger, or hurt. This general observation has been confirmed in the laboratory (Fenigstein, 1979). In a waiting room, subjects were uncomfortable and felt rejected when they were shunned by other “subjects” (experimental confederates) who were strangers. We want people to look at us and listen to us, for these sensory actions convey an interest in us.

Attention is another stimulation reward. Attention of the kind described is normative; its absence implies that something is socially wrong. As we all know from experiences, however, there can be too much attention from others. Most of us do not like to be stared at as if there were something wrong with our appearance or demeanor. Clearly too much attention can be just as aversive as too little.
Beyond attention others can offer responsivity. **Responsivity** is the third stimulation reward, includes the first two rewards for in a conversation an activity is shared and each person receives attention. However, it is dynamic in that the interaction flows back and forth between two people.

Each of three rewards may be regarded as a dimension, whose extremes may be unpleasant, but whose middle range is pleasurable.

Only the stimulation rewards are relevant for the trait of sociability. Said another way, highly sociable persons especially desire these social rewards.

**Table 1.2 Stimulation Rewards**

<table>
<thead>
<tr>
<th>Reward</th>
<th>Too little</th>
<th>Too much</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sharing</td>
<td>Isolation</td>
<td>Crowding</td>
</tr>
<tr>
<td>Attention</td>
<td>Shunning</td>
<td>Conspicuousness</td>
</tr>
<tr>
<td>Responsivity</td>
<td>Boredom</td>
<td>Overreaction</td>
</tr>
</tbody>
</table>

Affective Rewards: The other class of social stimuli, **affective rewards are** more familiar than the first class. It consists of *praise, sympathy and affection*. Usually offered only by friends or those in intimate relationship, these rewards tend to induce moderate to strong positive affect in the recipient hence their name.

These three rewards are universally sought and valued. Each has its unpleasant opposite: for praise, criticism; for sympathy, disdrain; and for affection, dislike. Again, each reward may be regarded as a dimension, but each dimension is bipolar; positive at one end and negative at the other. By definition, only the positive end is reinforcing, and there cannot be too much of the positive end: Praise, sympathy, or love. These three rewards may be ranked
in order of increasing intensity and the degree to which they enhance a relationship. The more intense the affective rewards the more likely it is to occur in a close relationship. Thus, praise may be offered by friends sympathy by very good friends and love by family members or lovers.

As far the affective rewards, who does not want praise, sympathy, and love? These rewards are wanted not only by sociable individuals but also by unsociable persons. But there maybe individuals who especially need of the affective rewards and therefore place a higher value on it. Those who are low in self-esteem, for instance, might be especially motivated to seek praise as a way of boosting self-esteem.

**Impulsivity:** Impulsivity, or impulsiveness is a complete trait as is clear in the following definition: Impulsivity is “the tendency to respond quickly and without reflection”. It is rather coarse variable which includes: (1) Short reaction time to social press, (2) Quick intuitive behaviour, (3) Emotional driveness, (4) Lack of forethought. The subject is usually somewhat restless, quick to move quick to make up his mind, quick to voice his opinion. The subject often says the first thing that comes into head, and does not consider the future consequences of his conduct. Deliberation is easier to observe than impulsion. It is marked by : (1) long reaction time to social press, (2) inhibition of initial impulses, (3) hesitations, caution, and reflection before action, (4) a long period of planning and organizing before beginning a piece of work. The subject may have obsessional doubts: a ‘load’ of considerations which he must ‘lift’ before beginning. He usually experiences difficulty in emergency” (Murray, 1938). Impulsive people tend to respond immediately to whatever stimulus impinges on them, without forethought or care for later consequences. At the end of this dimension, deliberate people wait, reflect, and consider many possible consequences before they are ready to act. In short, 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. Tempo refers to the rate of response once the behaviour has started.
Impulsivity refers to the time between a stimulus and the start of the response,
which may be called the latency of response e.g., one may be slow to act
(deliberate), but once action is initiated, he moves rapidly (fast tempo). Another
man may be quick to act (impulsive), but once action is initiated, he moves at a
leisurely pace (slow tempo). Impulsivity and tempo linked by the dimension of
time but differ in when the issue of time comes up before responding
(impulsivity) or during responding (tempo).

The relationship between activity and impulsivity is of course an
empirical issue. “The correlation on the EASI-I were in the thirties for both the
sexes, but subsequent examination of the activity items revealed one that
appears to overlap impulsivity cannot sit still for long” (Buss and Plomin,
1975). When that activity item was replaced by another one on the EAS-II, the
correlation was not different from zero for both sexes. Despite their linkage in
being related to time, the two traits are independent.

The various behaviour that make up impulsivity may be divided into
three major components. In each instance, there is a dimension that extends
from the impulsive extreme to the deliberate extreme. Control, Discipline and
Reflection:

**Control:** Emotions, motives, and temptations (incentives) are the three aspects
of control. These three aspects of control differ in the tendency to be
controlled. The first two are emotions that can be suppressed or expressed and
motives that one can act on, delay, or entirely inhibit. Both emotions and
motives represent internal pressure to act. Incentives on the other hand, can be
so enticing that they may prove difficult to resist. Incentives represent an
external pull on behaviour.
**Discipline:** 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. Their attention wanders from the immediate stimulus to any event that happens to occur. At the other extreme are people whose intense concentration does not wane, they are constantly engrossed in the task at hand. Such people may be so caught up in an activity as to disregard anything else occurring around them.

Another aspect of discipline is impatience. Consider the many contexts that require us to wait a physician's office, a supermarket line, the delivery of mail. Some people can endure the wait, calmly, even stoically. At the opposite extreme are people who seem unable to cope with even the slightest delay. They fidget, pace restless, glance repeatedly at the clock and complain bitterly about the passage of time.

**Reflection:** Reflection refers to planning, deliberation, and caution, or their opposites. Many activities require preparation if they are to go off smoothly. Impulsive people somehow do not prepare adequately, they seem to lack planfulness.

Making decision is closely related to making preparations. Consider two men who need to buy a car. One drops into a showroom to look at a car, drives it, looks under the hood, likes its colour and the way it performs, and buys it on the spot. The other goes through the same process but does not buy the car immediately. He needs time to think about such an expensive purchase and is cautious about making a sudden choice. He ponders whether he can afford it, whether to finance it or pay cash, whether the car is reliable. He consults consumer magazines and asks his friends about their cars. For any given make, he shops around for the best bargain. He may ruminate about these issues for weeks, being in no hurry to come to a decision. Impulsive people, seemingly unable to look before they leap, jump headlong into situations that may prove
their undoing. They may buy expensive items on credit, only to discover that they cannot make the payments.

Table 1.3 Components of Impulsivity

<table>
<thead>
<tr>
<th>Control</th>
<th>Lack of Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suppresses emotions</td>
<td>Expresses emotions</td>
</tr>
<tr>
<td>Inhibits action</td>
<td>Acts on motives</td>
</tr>
<tr>
<td>Resists temptation</td>
<td>Gives in to temptation</td>
</tr>
<tr>
<td>Discipline</td>
<td>Lack of discipline</td>
</tr>
<tr>
<td>Persists in one activity</td>
<td>Jumps from one activity to another</td>
</tr>
<tr>
<td>Remains focused</td>
<td>Is easily distracted</td>
</tr>
<tr>
<td>Reflection</td>
<td>Lack of Reflection</td>
</tr>
<tr>
<td>Plans painstakingly</td>
<td>Does not plan</td>
</tr>
<tr>
<td>Deliberates at length</td>
<td>Decides on spur of the moment</td>
</tr>
<tr>
<td>Acts cautiously</td>
<td>Acts rashly</td>
</tr>
</tbody>
</table>

Control refers to pressure to act, whether the pressure is internal or external. Discipline consists of one or another aspects of persistence: staying with an activity, remaining focused, or just waiting. Reflection refers to planning deliberation and caution or their opposites. The three behaviours within each component are highly similar and may even overlap, which is why the behaviours have been grouped together. Is there any concepts that links all three components? Perhaps it is time. Lack of reflection involves time virtually by definition. Lack of discipline may be regarded as failure to persist over time. Lack of control may be seen as failure to wait until a motive or emotion has waned or a temptation is no longer present. Time as the link among the three components is entirely consistent with Murray’s (1938) definition of impulsivity mentioned earlier. “The tendency to respond quickly and without reflection.”
It is clear from the above description that there has been several changes in the theory the summary of which is presented chronologically. It follows:

**Table 1.4: CHRONOLOGY OF BUSS’S TEMPERAMENT THEORY**

<table>
<thead>
<tr>
<th>Year</th>
<th>Author(s)</th>
<th>Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>1957</td>
<td>Buss &amp; Durkee</td>
<td>Published self report aggression questionnaire.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Resistance (is a component of dominance)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>may contain elements of a spiteful obstinacy as exemplified by items</td>
</tr>
<tr>
<td></td>
<td></td>
<td>on the negativism scale of an early hostility inventory</td>
</tr>
<tr>
<td>1961</td>
<td>Buss</td>
<td>Construct the temperament trait of aggression. Such aggression was</td>
</tr>
<tr>
<td></td>
<td></td>
<td>originally called angry aggression.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tried an experimental and objective measure of aggression called</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘Aggression machine’</td>
</tr>
<tr>
<td>1966b</td>
<td>Buss</td>
<td>Investigated in a social psychological experiment, the impact of</td>
</tr>
<tr>
<td></td>
<td></td>
<td>frustration on aggression.</td>
</tr>
<tr>
<td>1975</td>
<td>Buss &amp; Plomin</td>
<td>Formulated own theory with four temperament traits which are EASI</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(emotionality, activity, sociability, impulsivity)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gave a self report of a combination of traits called extraversion.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Thus, the sociability scales of the EASI temperament survey I</td>
</tr>
<tr>
<td></td>
<td></td>
<td>includes the item ‘I tend to be shy’.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gave EASI -1, the two temperaments ‘activity and impulsivity’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>correlate in the 30 for both men and women.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Here that activity item was replaced by another one on the EASI-2.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The correlation was not different zero for both sexes.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The self-report questionnaire to tap all the three components is the</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EASI – 3, and the items were assigned to scales a priori and not</td>
</tr>
<tr>
<td></td>
<td></td>
<td>empirically.</td>
</tr>
<tr>
<td>1975</td>
<td>Fenigstein, Scheir &amp;</td>
<td>Construct a questionnaire to assess individual differences is</td>
</tr>
<tr>
<td></td>
<td>Buss</td>
<td>self-consciousness</td>
</tr>
</tbody>
</table>
as a trait. The questionnaire revealed that there are two kinds of self-consciousness: private and public.

Here the private and public self-consciousness correlate from the low twenties.

1978 Scheir, Buss & Buss

College men and women filled out questionnaires on the trait of aggressiveness, and later their instrumental aggression was assessed in the laboratory with the aggression machine.

Recalled that those high in private self-consciousness, knowing themselves better, after a self-report of aggressiveness that correlates strongly with observed laboratory aggression.

1979 Buss, Iscoe & Buss

First appearance (is a component of self-awareness) would help to know when children first show signs of public self-awareness. There is a evidence, but it realize on the assumption that reimbursement is an indicator of public self-awareness.

1980 Buss

Produced a body of work on transient self-awareness and the traits of private and public self-consciousness.

1981 Buss & Cheek

Revised EASI, yielded the following scale, which contain only sociability items.

1981 Cheek & Buss

Gave a questionnaire of self-esteem which was used to obtain most of the correlations to be reported.

Global self-esteem was correlated with several other personality traits, sociability and shyness, loneliness, fearfulness and optimism. In these correlations and in the means for self-esteem, the self-differences will trivial.

Gave a questionnaire of shyness and sociability.

Correlational data of shyness is a mixture of (low) socialibility and emotionality and
<table>
<thead>
<tr>
<th>Year</th>
<th>Author(s)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1983</td>
<td>A.H Buss</td>
<td>Found that shyness correlated 0.31 with sociability and 0.50 with fear, a major component of emotionality (neuroticism)</td>
</tr>
<tr>
<td>1984</td>
<td>Buss &amp; Plomin</td>
<td>Divided intrinsic social rewards of sociability into two classes, stimulation rewards and affective rewards.</td>
</tr>
<tr>
<td>1984</td>
<td>Buss &amp; Plomin</td>
<td>Gave the emotionality scale of the EAS temperament survey.</td>
</tr>
<tr>
<td>1984</td>
<td>Buss &amp; Plomin</td>
<td>Gave a self-report questionnaire of emotionality (fear).</td>
</tr>
<tr>
<td>1986</td>
<td>Buss</td>
<td>Gave a self-report measure which includes items on both tempo and energy. i.e. collateral (motivational)</td>
</tr>
<tr>
<td>1987</td>
<td>Gallaher &amp; Buss</td>
<td>He described the style of personal identity and said that each of us also possesses particular ways of doing things, a class of behaviour called style.</td>
</tr>
<tr>
<td>1988</td>
<td>Buss</td>
<td>Self-report of 499 college students were obtained for the four relevant traits – leadership, competition, aggression, correlate with the trait dominance (business). Moreover the correlation between each trait and dominance should be higher than the correlations among the three traits.</td>
</tr>
<tr>
<td>1990</td>
<td>Perry and Buss</td>
<td>A self-report questionnaire of tempo and vigour.</td>
</tr>
<tr>
<td>1992</td>
<td>Buss &amp; Perry</td>
<td>Correlate public self-consciousness with self-esteem, which suggest that among people who are concerned about themselves as social objects there is (weak) tendency to have a negative self-image. At that time, private and public self-consciousness correlate from the low twenties to the low thirties.</td>
</tr>
<tr>
<td>1995</td>
<td>Buss</td>
<td>A self-report, recent aggression questionnaire that is revised and updated version of a widely used older one (Buss and Durkee, 1959).</td>
</tr>
</tbody>
</table>