CHAPTER – I

INTRODUCTION

1.0 Introduction: -

Historically, India has remained a society of hierarchies in which the constituent members were placed in a well established and explicitly defined set of social positions determining the extent of their entitlement to respect, prestige, influence, wealth and education (Hutton, 1961). Since after independence, Scheduled Castes (SCs) and Scheduled Tribes (STs) which form the lowest rung of Hindu-social order came to be accepted as equal to other citizens of the country to avail equal opportunities in national life (Government of India, 1991).

With the desire to bring low castes in step with the higher castes, reservation policy was introduced offering them the advantage of basic education & professional education among other benefits.

However, some section of larger society didn't appreciate the policy for the reasons that the social mobility on the crutches of reservation was likely to produce substandard and inefficient professionals (Maheswari, 1991).

Holding this view, Kulhara (1992) reacted that the principles of efficiency, merit and excellence are being sacrificed at the altar of convenience and instead mediocrity is flourishing. Chaudhry et al. (1997) in their study on various categories of students found that SC and ST group students performed poorly as compared to general category students. It was further observed that their performance remained...
poor from their school days. They have less intellect with little grasping power and are not as accustomed to work hard.

Capacity to respond to and benefit from education depends upon the level of child's motivation, emotional intellect and personality characteristics. Further education is considered to be costly imparted by a university. A student's failure needs to be understood because it amounts to wastage of resources and there is a possibility that some students might be failing to acquire knowledge consistent with their ability. What makes SC and ST students more vulnerable? A comparative data of socio demographic profile, personality characteristics and personal problems with academic performance of SC, ST and general category students is almost nonexistent.

The present study is an attempt in this direction by exploring the caste and gender difference on students’ achievement motivation, emotional intelligence and personality.

1.1. Motivation

Motivation is the driving force which causes us to achieve goals. Motivation is said to be intrinsic or extrinsic. The term is generally used for humans but, theoretically, it can also be used to describe the causes for animal behavior as well. This article refers to human motivation. According to various theories, motivation may be rooted in a basic need to minimize physical pain and maximize pleasure, or it may include specific needs such as eating and resting, or a desired object, goal, state of being, ideal, or it may be attributed to less-apparent reasons such as altruism, selfishness,
morality, or avoiding mortality. Conceptually, motivation should not be confused with either volition or optimism. Motivation is related to, but distinct from, emotion.

1.1.1 Intrinsic and extrinsic motivation: -

Intrinsic motivation refers to motivation that is driven by an interest or enjoyment in the task itself, and exists within the individual rather than relying on any external pressure. Intrinsic motivation has been studied by social and educational psychologists since the early 1970s. Research has found that it is usually associated with high educational achievement and enjoyment by students. Explanations of intrinsic motivation have been given in the context of Fritz Heider's attribution theory, Bandura's work on self-efficacy, and Deci and Ryan's cognitive evaluation theory. Students are likely to be intrinsically motivated if they:

- Attribute their educational results to internal factors that they can control (e.g. the amount of effort they put in),

- Believe they can be effective agents in reaching desired goals (i.e. the results are not determined by luck),

- Are interested in mastering a topic, rather than just rote-learning to achieve good grades.

Extrinsic motivation comes from outside of the individual. Common extrinsic motivations are rewards like money and grades, coercion and threat of punishment. Competition is in general extrinsic because it encourages the performer to win and beat others, not to enjoy the intrinsic rewards of the activity. A crowd cheering on the individual and trophies are also extrinsic incentives.
Social psychological research has indicated that extrinsic rewards can lead to over justification and a subsequent reduction in intrinsic motivation. In one study demonstrating this effect, children who expected to be (and were) rewarded with a ribbon and a gold star for drawing pictures spent less time playing with the drawing materials in subsequent observations than children who were assigned to an unexpected reward condition and to children who received no extrinsic reward.

Self-determination theory proposes that extrinsic motivation can be internalised by the individual if the task fits with their values and beliefs and therefore helps to fulfil their basic psychological needs.

1.1.2 Importance of motivation

Most motivation theorists assume that motivation is involved in the performance of all learned responses; that is, a learned behavior will not occur unless it is energized. The major question among psychologists, in general, is whether motivation is a primary or secondary influence on behavior. That is, are changes in behavior better explained by principles of environmental/ecological influences, perception, memory, cognitive development, emotion, explanatory style, or personality or are concepts unique to motivation more pertinent.

For example, we know that people respond to increasingly complex or novel events (or stimuli) in the environment up to a point and then responses decrease. This inverted-U-shaped curve of behavior is well-known and widely acknowledged (e.g., Yerkes & Dodson, 1908). However, the major issue is one of explaining this phenomenon. Is this a conditioning (is the individual behaving because of past
classical or operant conditioning), a motivational process (from an internal state of arousal), or is there some better explanation?

1.2 Achievement Motivation

One classification of motivation differentiates among achievement, power, and social factors (McClelland, 1985; Murray, 1938, 1943). Achievement motivation or the need for achievement is the psychological drive to excel, a social form of motivation to perform at a high level of competence. It is sometimes abbreviated to N Ach or nAch. Usually this is understood to mean competing in socially valued activities where achievement can be recognised and given appropriate recognition either by the group or internally by the performer.

The term need for achievement was first introduced by Henry Murray in 1938 in his book "Explorations of Personality" where he used it in the sense of overcoming obstacles or being regularly willing to take on difficult tasks. The term achievement motivation has been the preferred term more recently.

1.2.1 Need for achievement

Need for Achievement (N-Ach) refers to an individual's desire for significant accomplishment, mastering of skills, control, or high standards. The term was first used by Henry Murray in "Explorations in Personality" (1938) and associated with a range of actions. These include: "intense, prolonged and repeated efforts to accomplish something difficult. To work with singleness of purpose towards a high and distant goal. To have the determination to win" (p164). The concept of NAch was subsequently popularised by the psychologist David McClelland.[citation needed]

Need for Achievement is related to the difficulty of tasks people choose to undertake. Those with low N-Ach may choose very easy tasks, in order to minimise
risk of failure, or highly difficult tasks, such that a failure would not be embarrassing. Those with high N-Ach tend to choose moderately difficult tasks, feeling that they are challenging, but within reach.

People high in N-Ach are characterised by a tendency to seek challenges and a high degree of independence. Their most satisfying reward is the recognition of their achievements. Sources of high N-Ach include:

- Parents who encouraged independence in childhood
- Praise and rewards for success
- Association of achievement with positive feelings
- Association of achievement with one’s own competence and effort, not luck
- A desire to be effective or challenged
- Intrapersonal Strength

1.2.1.1 Theory

The pioneering research work of the Harvard Psychological Clinic in the 1930s, summarised in Explorations in Personality, provided the start point for future studies of personality, especially those relating to needs and motives. David C. McClelland's and his associates’ investigations of achievement motivation have particular relevance to the emergence of leadership. McClelland was interested in the possibility of deliberately arousing a motive to achieve in an attempt to explain how individuals express their preferences for particular outcomes — a general problem of motivation. In this connection, the need for achievement refers to an individual's preference for success under conditions of competition. The vehicle McClelland employed to establish the presence of an achievement motive was the type of fantasy

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a person expressed on the Thematic Apperception Test (TAT), developed by Christiana Morgan and Henry Murray, who note in Explorations in Personality that "...when a person interprets an ambiguous social situation he is apt to expose his own personality as much as the phenomenon to which he is attending. Each picture should suggest some critical situation and be effective in evoking a fantasy relating to it". The test is composed of a series of pictures that subjects are asked to interpret and describe to the psychologist. The TAT has been widely used to support assessment of needs and motives.

The procedure in McClelland's initial investigation was to arouse in the test audience a concern with their achievement. A control group was used in which arousal was omitted. In the course of this experiment, McClelland discovered through analyzing the stories on the TAT that initial arousal was not necessary. Instead, members of the control group — individuals who had had no prior arousal — demonstrated significant differences in their stories, some writing stories with a high achievement content and some submitting stories with a low achievement content. Using results based on the Thematic Apperception Test, McClelland demonstrated that individuals in a society can be grouped into high achievers and low achievers based on their scores on what he called "N-Ach".

McClelland and his associates have since extended their work in fantasy analysis to include different age groups, occupational groups, and nationalities in their investigations of the strength of need for achievement. These investigations have indicated that the N-Ach score increases with a rise in occupational level. Invariably, businessmen, managers, and entrepreneurs are high scorers. Other investigations into the characteristics of the high achievers have revealed that
accomplishment on the job represents an end in itself; monetary rewards serve as an index of this accomplishment. In addition, these other studies found that the high achievers, though identified as managers, businessmen, and entrepreneurs, are not gamblers. They will accept risk only to the degree they believe their personal contributions will make a difference in the final outcome.

These explorations into the achievement motive seem to turn naturally into the investigation of national differences based on Max Weber's thesis that the industrialization and economic development of the Western nations were related to the Protestant ethic and its corresponding values supporting work and achievement. McClelland and his associates have satisfied themselves that such a relationship, viewed historically through an index of national power consumption, indeed exists. Differences related to individual, as well as to national, accomplishments depend on the presence or absence of an achievement motive in addition to economic resources or the infusion of financial assistance. High achievers can be viewed as satisfying a need for self-actualization through accomplishments in their job assignments as a result of their particular knowledge, their particular experiences, and the particular environments in which they have lived.

1.2.1.2 Measurement

The techniques McClelland and his collaborators developed to measure N-Ach, N-Affil and N-Pow (see McClelland et al., 1958) can be viewed as a radical break with the dominant psychometric tradition. However, it should be recognised that McClelland's thinking was strongly influenced by the pioneering work of Henry Murray, both in terms of Murray's model of human needs and motivational
processes (1938) and his work with the OSS during World War Two. It was during this period that Murray introduced the idea of "situation tests" and multi-rater / multi-method assessments. It was Murray who first identified the significance of Need for Achievement, Power and Affiliation and placed these in the context of an integrated motivational model.

Whilst trait-based personality theory assume that high-level competencies like initiative, creativity, and leadership can be assessed using “internally consistent” measures (see psychometrics), the McClelland measures recognize that such competencies are difficult and demanding activities which will neither be developed nor displayed unless people are undertaking activities they care about (i.e. are strongly motivated to undertake). Furthermore, it is the cumulative number of independent, but cumulative and substitutable, components of competence they bring to bear while seeking to carry out these activities that will determine their success. Accordingly, the N-Ach, N-Aff and N-Pow scoring systems simply count how many components of competence people bring to bear whilst carrying out activities they have a strong personal inclination (or motivation) to undertake.

An important corollary is that there is no point in trying to assess people’s abilities without first finding out what they care about. So one cannot (as some psychometricians try to do) assess such things as “creativity” in any general sense. One has always to ask “creativity in relation to what?” So McClelland’s measures, originally presented as means of assessing “personality”, are best understood as means of measuring competence in ways which break radically with traditional psychometric approaches.
1.2.2 David C. McClelland's motivational needs theory

American David Clarence McClelland (1917-98) achieved his doctorate in psychology at Yale in 1941 and became professor at Wesleyan University. He then taught and lectured, including a spell at Harvard from 1956, where with colleagues for twenty years he studied particularly motivation and the achievement need. He began his McBer consultancy in 1963, helping industry assess and train staff, and later taught at Boston University, from 1987 until his death. McClelland is chiefly known for his work on achievement motivation, but his research interests extended to personality and consciousness. David McClelland pioneered workplace motivational thinking, developing achievement-based motivational theory and models, and promoted improvements in employee assessment methods, advocating competency-based assessments and tests, arguing them to be better than traditional IQ and personality-based tests. His ideas have since been widely adopted in many organisations, and relate closely to the theory of Frederick Herzberg.

- David McClelland's needs-based motivational model

David McClelland is most noted for describing three types of motivational need, which he identified in his 1961 book, The Achieving Society:

- Achievement motivation (n-ach)
- Authority/power motivation (n-pow)
- Affiliation motivation (n-affil)

- The need for achievement (n-ach)
The n-ach person is 'achievement motivated' and therefore seeks achievement, attainment of realistic but challenging goals, and advancement in the job. There is a strong need for feedback as to achievement and progress, and a need for a sense of accomplishment.

- **The need for authority and power (n-pow)**

  The n-pow person is 'authority motivated'. This driver produces a need to be influential, effective and to make an impact. There is a strong need to lead and for their ideas to prevail. There is also motivation and need towards increasing personal status and prestige.

- **The need for affiliation (n-affil)**

  The n-affil person is 'affiliation motivated', and has a need for friendly relationships and is motivated towards interaction with other people. The affiliation driver produces motivation and need to be liked and held in popular regard. These people are team players.

### 1.2.3 Effects of Achievement Motivation on Behaviour

Motivation can be defined as the driving force behind all the actions of an individual. The influence of an individual's needs and desires both have a strong impact on the direction of their behavior. Motivation is based on your emotions and achievement-related goals. There are different forms of motivation including extrinsic, intrinsic, physiological, and achievement motivation. There are also more negative forms of motivation. Achievement motivation can be defined as the need for success or the attainment of excellence. Individuals will satisfy their needs
through different means, and are driven to succeed for varying reasons both internal and external.

Motivation is the basic drive for all of our actions. Motivation refers to the dynamics of our behavior, which involves our needs, desires, and ambitions in life. Achievement motivation is based on reaching success and achieving all of our aspirations in life. Achievement goals can affect the way a person performs a task and represent a desire to show competence (Harackiewicz, Barron, Carter, Lehto, & Elliot, 1997). These basic physiological motivational drives affect our natural behavior in different environments. Most of our goals are incentive-based and can vary from basic hunger to the need for love and the establishment of mature sexual relationships. Our motives for achievement can range from biological needs to satisfying creative desires or realizing success in competitive ventures. Motivation is important because it affects our lives every day. All of our behaviors, actions, thoughts, and beliefs are influenced by our inner drive to succeed.

1.3. Personality

Personality is a concept to be used to recognize stability and consistency of behavior across different situations, uniqueness of the person and individual differences. There are controversies among psychologists to define personality. Among the numerous definitions of personality, the most commonly accepted definition is given by Allport (1937). He stated that originally persona denoted theatrical mask used in Greek drama. The legend is that a popular actor had to put the mask so as to cover some cosmetic defect. During the course of time the word assumed so many shades of meanings.
Allport (1937) did not find biosocial formulations and omnibus definitions of personality to be useful. Distinctiveness, adjustment and growth are the elements that Allport (1937) found useful in defining personality: he defines personality as;

“Personality is the dynamic organization within the individual of those psychophysical systems that determine his unique adjustment to the environment”(Allport, 1947).”

Elaborating this definition Allport presented the following assumptions regarding personality:

- Personality is a self-regulating system, which is constantly changing and evolving.
- This organization entails the operation of what is known as mental and what is known a physical.
- Personality is not the manifest behavior or impression which an individual makes on others. It is something behind the manifest behaviour; it does something when an individual is aroused to make a response to the impinging stimuli or to meet environmental demand.

Allport assumes that not only every individual’s mode of adjustment to the environment is different qualitatively, but there is an also quantitative variation in respect of common traits.

Though personality gives distinctiveness and identity to the individual, its role is not confined to making the individual distinctive. It also serves a useful purpose by making an individual to behave in the interest of his survival.
Later on, Allport (1965) revised his definition of personality. The revised definitions contain the word ‘characteristic’ for ‘uniqueness’ and words ‘behaviour and thought’ in place of ‘adjustment’:

“Personality is a dynamic organization within the individual of those psychophysical systems that determine his characteristic behaviour and thought” (Allport, 1965)

The substitution of “unique” by “characteristic” is the realization that personality is to be studied by ideographic as well as homothetic methods and that acts and concepts, which an individual shares with others, are ultimately individualistic and idiomatic. The replacement of “adjustment” by “behaviour and thought” is acknowledgement of the fact that in addition to dealing with the demands of survival created by environmental situations, one grows in accordance with the psychological system that comprise personality.

1.3.1 Personality type

Personality type theory aims to classify people into distinct CATEGORIES, i.e. this type or that. Personality types are synonymous with ”personality styles”.

A type refers to categories that are distinct and discontinuous, e.g. you are one or the other. This is important to understand, because it helps to distinguish a personality type approach from a personality trait approach, which takes a continuous approach.
To clearly understand the difference between types and traits, consider the example of the personality dimension of "introversion". We can view introversion as:

- A personality type approach says you are either an introvert or an extravert
- A personality trait approach says you can be anywhere on a continuum ranging from introversion to extraversion, with most people clustering in the middle, and fewer people towards the extremes

The following sections provide an overview of some of the more popular and commonly known personality type taxonomies.

Allport and Odbert (1936, cited in Funder, 1999) found over 17,000 words in the dictionary which referred to psychological differences between people, e.g., trustworthy, shy, arrogant. Typically, modern personality taxonomies have emphasized between two, three, four, and five personality types, through to identifying 16 or more subtypes.

- **The Four Humors - Ancient Greeks (~2000 BC - 0 AD)**

  Ancient Greek philosophers such as Hippocrates 400 BC and Galen, 140/150 AD classified 4 types of "humors" in people. Each type was believed to be due to an excess of one of four bodily fluids, corresponding to their character. The Somatotypes - William Sheldon, 1940's. William Sheldon (1940, 1942, cited in
Phares, 1991) classified personality according to body type. He called this a person’s somatotype.

- **Ayurvedic Body Types (Doshas) (India, ~3000 BC to present)**

In Ayurvedic medicine (used in India since ~3000 BC), in which there are three main metabolic body types (doshas) - Vata, Pita, & Kapha.

- **Jungian Types, Myers-Briggs, & the Four Temperaments**

Jungian psychological types are probably the most widely used and amongst the best-known in everyday life. Jung’s typology emerges from Jung’s deep, holistic philosophy and psychology about the person. Jung's typology is not, unfortunately, always included in mainstream personality courses, because it wasn’t empirically-driven. Jung viewed the ultimate psychological task as the process of individuation, based on the strengths and limitations of one's psychological type.

    Myers-Briggs developed the Myers-Briggs Type Indicator, a commercially available questionnaire, which is widely used in business and training, etc. and which provides information and exercises for better understanding one's own personality type and others with who the individual interacts and works.

    Keirsey has renamed and reconceptualised the Jungian types, but they relate very closely to the Jungian types. Keirsey refers to "temperaments" rather than personality.

Underlying all these typologies are four personality traits (functions):

1. Extroversion (E) --- Introversion (I)
2. Intuition (N) --- Sensing (S)
3. Thinking (T) --- Feeling (F)

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4. Judgement(J)---Perception(P)

1.3.1.1 Extroversion and introversion

The trait of extroversion-introversion is a central dimension of human personality. Extroverts (also spelled extraverts) tend to be gregarious, assertive, and interested in seeking out excitement. Introverts, in contrast, tend to be more reserved, less outgoing, and less sociable. They are not necessarily loners but they tend to be satisfied with having fewer friends. Introversion does not describe social discomfort but rather social preference: an introvert may not be shy but may merely prefer less social activities. Ambiversion is a balance of extrovert and introvert characteristics.

The terms introversion and extroversion were first popularized by Carl Jung. Virtually all comprehensive models of personality include these concepts. Examples include Jung's analytical psychology, Eysenck's three-factor model, Cattell's 16 personality factors, the Big Five personality traits, the four temperaments, the Minnesota Multiphasic Personality Inventory, the Myers Briggs Type Indicator, and Socionics.

Extroversion and introversion are typically viewed as a single continuum. Thus, to be high on one is necessarily to be low on the other. Carl Jung and the authors of the Myers-Briggs provide a different perspective and suggest that everyone has both an extroverted side and an introverted side, with one being more dominant than the other. In any case, people fluctuate in their behavior all the time, and even extreme introverts and extroverts do not always act according to their type.
Extroversion is "the act, state, or habit of being predominantly concerned with and obtaining gratification from what is outside the self". [Extroverts tend to enjoy human interactions and are generally enthusiastic, talkative, assertive, and gregarious. They take pleasure in activities that involve large social gatherings, such as parties, community activities, public demonstrations, and business or political groups. Politics, teaching, sales, managing and brokering are fields that favor extroversion. An extroverted person is likely to enjoy time spent with people and find less reward in time spent alone. They tend to be energized when around other people, and they are more prone to boredom when they are by themselves.]

Introversion is "the state of or tendency toward being wholly or predominantly concerned with and interested in one's own mental life". Introverts are people whose energy tends to expand through reflection and dwindle during interaction. Introverts tend to be more reserved and less outspoken in large groups. They often take pleasure in solitary activities such as reading, writing, music, drawing, tinkering, playing video games, watching movies and plays, and using computers; along with some more reserved outdoor activities such as fishing and hiking. In fact, social networking sites have been a thriving home for introverts in the 21st century, where introverts are free from the formalities of social conduct and may become more comfortable blogging about personal feelings they would not otherwise disclose. The archetypal artist, writer, sculptor, engineer, composer, and inventor are all highly introverted. An introvert is likely to enjoy time spent alone and find less
reward in time spent with large groups of people, though he or she may enjoy interactions with close friends. Trust is usually an issue of significance: a virtue of utmost importance to an introvert choosing a worthy companion. They prefer to concentrate on a single activity at a time and like to observe situations before they participate, especially observed in developing children and adolescents. Introverts are easily overwhelmed by too much stimulation from social gatherings and engagement. They are more analytical before speaking.

Introversion is not the same as shyness or the social outcast. Introverts choose solitary over social activities by preference, whereas shy people (who may be extroverts at heart) avoid social encounters out of fear and whereas the social outcast faces solitude, but not by choice.

✓ Ambiversion

Although many people view being introverted or extroverted as a question with only two possible answers, most contemporary trait theories (e.g. the Big Five) measure levels of extroversion-introversion as part of a single, continuous dimension of personality, with some scores near one end, and others near the half-way mark.[8] Ambiversion is a term used to describe people who fall more or less directly in the middle and exhibit tendencies of both groups. An ambivert is normally comfortable with groups and enjoys social interaction, but also relishes time alone and away from the crowd.
1.3.2 Measurement

Extroversion-introversion is normally measured by self-report. A questionnaire might ask if the test-taker agrees or disagrees with statements such as I am the life of the party or I think before I talk.

Self-report questionnaires have obvious limitations in that people may misrepresent themselves either intentionally or through lack of self-knowledge. It is also common to use peer report or observation.

Another approach is to present test-takers with various sets of adjectives (for example: thoughtful, talkative, energetic, independent) and ask which describes them most and least. Psychological measures of this trait may break it down into sub-factors including warmth, affiliation, positive effect, excitement seeking, and assertiveness/dominance seeking.

1.3.3 Causes

1.3.3.1 Jungian theory

According to Carl Jung, introversion and extroversion refer to the direction of psychic energy. If a person’s psychic energy usually flows outwards then he or she is an extrovert, while if the energy usually flows inwards, the person is an introvert. Extroverts feel an increase of perceived energy when interacting with a large group of people, but a decrease of energy when left alone. Conversely, introverts feel an increase of energy when alone, but a decrease of energy when surrounded by a large group of people.
1.3.3.2 Eysenck's theory

Hans Eysenck described extroversion-introversion as the degree to which a person is outgoing and interactive with other people. These behavioral differences are presumed to be the result of underlying differences in brain physiology. Extroverts seek excitement and social activity in an effort to heighten their arousal level, whereas introverts tend to avoid social situations in an effort to keep such arousal to a minimum. Eysenck designated extroversion as one of three major traits in his P-E-N model of personality, which also includes psychoticism and neuroticism.

Eysenck originally suggested that extroversion was a combination of two major tendencies, impulsiveness and sociability. He later added several other more specific traits, namely liveliness, activity level, and excitability. These traits are further linked in his personality hierarchy to even more specific habitual responses, such as partying on the weekend.

Eysenck compared this trait to the four temperaments of ancient medicine, with choleric and sanguine temperaments equating to extroversion, and melancholic and phlegmatic temperaments equating to introversion.

1.3.3.3 Biological factors

Twin studies find that extroversion/introversion has a genetic component.

The relative importance of nature versus environment in determining the level of extroversion is controversial and the focus of many studies. Twin studies find a genetic component of 39% to 58%. In terms of the environmental component,
the shared family environment appears to be far less important than individual environmental factors that are not shared between siblings.

Eysenck proposed that extroversion was caused by variability in cortical arousal. He hypothesized that introverts are characterized by higher levels of activity than extroverts and so are chronically more cortically aroused than extroverts. The fact that extroverts require more external stimulation than introverts has been interpreted as evidence for this hypothesis. Other evidence of the "stimulation" hypothesis is that introverts salivate more than extroverts in response to a drop of lemon juice.

Extroversion has been linked to higher sensitivity of the mesolimbic dopamine system to potentially rewarding stimuli. This in part explains the high levels of positive affect found in extroverts, since they will more intensely feel the excitement of a potential reward. One consequence of this is that extroverts can more easily learn the contingencies for positive reinforcement, since the reward itself is experienced as greater.

One study found that introverts have more blood flow in the frontal lobes of their brain and the anterior or frontal thalamus, which are areas dealing with internal processing, such as planning and problem solving. Extroverts have more blood flow in the anterior cingulate gyrus, temporal lobes, and posterior thalamus, which are involved in sensory and emotional experience. This study and other research indicates that introversion-extroversion is related to individual differences in brain function.
1.3.4. Behaviour

Extroverts and introverts have a variety of behavioral differences. According to one study, extroverts tend to wear more decorative clothing, whereas introverts prefer practical, comfortable clothes. Extroverts are likely to prefer more upbeat, conventional, and energetic music than introverts. Personality also influences how people arrange their work areas. In general, extroverts decorate their offices more, keep their doors open, keep extra chairs nearby, and are more likely to put dishes of candy on their desks. These are attempts to invite co-workers and encourage interaction. Introverts, in contrast, decorate less and tend to arrange their workspace to discourage social interaction.

Although extroverts and introverts have real personality and behavior differences, it is important to avoid pigeonholing or stereotyping by personality. Humans are complex and unique, and because extroversion varies along a continuum, they may have a mixture of both orientations. A person who acts introverted in one scenario may act extroverted in another, and people can learn to act “against type” in certain situations. Jung's theory states that when someone's primary function is extroverted, his secondary function is always introverted (and vice versa).

1.3.5. Implications

Acknowledging that introversion and extroversion are normal variants of behavior can help in self-acceptance and understanding of others. For example, an extrovert can accept his or her introverted partner’s need for space, while an introvert can acknowledge his or her extroverted partner’s need for social interaction.
Researchers have found a correlation between extroversion and happiness. That is, more extroverted people tend to report higher levels of happiness than introverts. This does not mean that introverts are unhappy. Extroverts simply report experiencing more positive emotions, whereas introverts tend to be closer to neutral. This may be due to the fact that extroversion is socially preferable in Western culture and thus introverts feel less desirable. In addition to the research on happiness, other studies have found that extroverts tend to report higher levels of self-esteem than introverts. Others suggest that such results reflect socio-cultural bias in the survey itself. Also, according to Carl Jung, introverts acknowledge more readily their psychological needs and problems, whereas extroverts tend to be oblivious to them because they focus more on the outer world.

Extroversion is perceived as socially desirable in Western culture, but it is not always an advantage. For example, extroverted youths are more likely to engage in delinquent behavior. Conversely, while introversion is perceived as less socially desirable, it is strongly associated with positive traits such as intelligence and "giftedness." For many years, researchers have found that introverts tend to be more successful in academic environments, which extroverts may find boring.

Career counselors often use personality traits, along with other factors such as skill and interest, to advise their clients. Some careers such as computer programming may be more satisfying for an introverted temperament, while other areas such as sales may be more agreeable to the extroverted type.

Although neither introversion nor extroversion is pathological, psychotherapists can take temperament into account when treating clients. Clients
may respond better to different types of treatment depending on where they fall on
the introversion/extroversion spectrum. Teachers can also consider temperament
when dealing with their pupils, for example acknowledging that introverted children
need more encouragement to speak in class while extroverted children may grow
restless during long periods of quiet study.

1.3.6 Extroversion, Introversion, and the Brain

The terms "extrovert" and "introvert" are often used to describe individuals’
interpersonal relations, but what do these terms mean precisely, and is there a
neurobiological basis for these personality traits?

The terms originated from psychologist Carl Jung's theory of personality. Jung saw the extrovert as directed toward the outside world and the introvert as
directed toward the self. He characterized extroverts as being energized by being
around other people and drained by being alone and introverts as the opposite. He
recognized that most people shared characteristics of both introversion and
extroversion and fell somewhere along a continuum from extreme extroversion to
extreme introversion.

Richard Depue and Paul Collins, professors of psychology at Cornell
University and University of Oregon, define extroversion as having two central
characteristics: interpersonal engagement and impulsivity. Interpersonal engagement
includes the characteristics of affiliation and agency. Affiliation means enjoying and
being receptive to the company of others and agency means seeking social
dominance and leadership roles, and being motivated to achieve goals. They also
closely link extroversion to "positive affect" which includes general positive feelings
and motivation. Extroverts, they claim are more sensitive to reward than punishment whereas introverts are more sensitive to punishment than reward. According to Depue, "When our dopamine system is activated, we are more positive, excited, and eager to go after goals or rewards, such as food, sex, money, education, or professional achievements", that is, when our dopamine system is activated, we are more extroverted, or exhibit more "positive emotionality".

What Depue and Collins refer to as "positive emotionality" is not precisely what Carl Jung referred to as extroversion. Positive emotionality is the willingness to pursue rewards, to be more stimulated by reward than punishment. Extroversion, according to Carl Jung is enjoying the company or others and being oriented toward the external world and energized by interactions with other people. In the vernacular, an extrovert is someone who has many friends, seems to be around people all the time, and is socially dominant. While positive emotionality and extroversion describe two separate attributes, they are fundamentally related. The desire to pursue goals and being more sensitive to rewards than punishments is an integral part to enjoying relationships with other people, building large networks of friends and being socially dominant. Other people, or groups of people can be punishing of those who attempt to befriend them. One of the possible punishments an individual’s risks by attempting to form a friendship is social rejection. For someone with low positive emotionality, this punishment would be enough to deter them from even attempting to form new relationships. Similarly, to achieve social dominance, one must risk losing face in front of one's peers for the possibility of appearing confident and original. Again, there is a risk of social rejection, perhaps a greater risk than in the first scenario, but the reward is also greater: the admiration of one's peer group.
Someone with high positive emotionality would be willing to take this risk whereas someone with low positive emotionality would not.

In their article, "Neurobiology of the Structure of Personality: Dopamine, Facilitation of Incentive Motivation, and Extraversion", Depue and Collins argue that there is a strong case for a neurobiological basis of extraverted behavior, because it closely resembles a mammalian approach system based on positive incentive motivation which has been studied in animals. Animal research has provided evidence to support the theory that a series of neurological interactions are responsible for variable levels of reaction to an incentive stimulus. First, the incentive is recognized in a series of signals between the medial orbital cortex (the eye), the amygdale (the emotional control centre) and the hippocampus (memory centre). Next the brain evaluates the intensity of the incentive stimuli in a series of interactions between the nucleus accumbens, ventral palladium, and the ventral tegmental area dopamine projection system. This creates an incentive motivational state which can be motivate a response by the motor system. Differences in individuals incentive processing are thought to be due to differences in the ventral tegmental dopamine projections which are directly responsible for the perceived intensity of the incentive stimulus. Genes and past experience are the sources researchers believe most affect a person's dopamine projections and so, the perceived intensity of incentive stimuli and the persons motivation to pursue the incentive: their degree of extroversion.

Drugs like cocaine, alcohol, or prozac, all affect these processes and also an individual's degree of extroversion. They can artificially correct an ineffective dopamine system and make someone feel more sociable or motivated to pursue a
goal. Low levels of serotonin, correlated with depression, may make people more responsive to dopamine and more susceptible to dopamine-stimulating drug use such as the use of cocaine, alcohol, amphetamine, opiates, and nicotine. Impulsivity, which Depue and Collins link to extraversion, can in its extreme case cause attention deficit/hyperactivity disorder, pathological gambling, intermittent explosive disorder, kleptomania, pyromania, trichotillomania, self-mutilation, and sexual impulsivity, as well as borderline personality disorder, and antisocial personality disorder. Jennifer Greenberg and Eric Hollander, M.D., in their article "Brain Function and Impulsive Disorders" characterize impulsivity as "the failure to resist an impulse, drive or temptation that is harmful to oneself or others". One can see why Depue and Collins see impulsivity as being linked with positive emotionality: this definition of impulsivity is almost the same as their definition of positive emotionality (more sensitivity to reward than punishment). The only addition is the inability to determine when the punishment outweighs the reward. According to Depue, "the extreme extrovert, then, is someone who has high dopamine reactivity and, as a result, easily binds rewarding cues to incentive motivation. That person will appear full of positive emotion and highly active in approaching rewarding stimuli and goals. The low extrovert will find it difficult to be so motivated and will require very strong stimuli to engage in rewarding activities". It is interesting to consider that the same quality that in moderation is looked at as ambition, in excess is considered a failure to resist an impulse, drive or temptation that is harmful to oneself or others. Clearly, this extroversion/impulsivity/incentive motivation is a very influential trait which must be kept in balance to maintain emotional well-being.
The brain structures research has indicated are active in controlling impulsivity are the orbit frontal cortex, nucleus accumbens, and amygdala regions, many of the same ones that mediate extroversion. Damage to these structures often results in impaired decision-making and increased impulsivity. In their article in the Journal of Psychiatric Research, David S. Janowsky, Shirley Morter and Liyi Hong relate novelty seeking and impulsivity to increased risk of suicidality and they correlate depression with an elevated degree of introversion. Impulsivity is linked to an increased risk of overt suicidality because it allows patients to avoid considering the long-term consequences of their actions. Research has indicated that introversion decreases as depression improves and continued introversion is associated with increased risk of relapse into depression. Even recovered depressed patients scored lower (more introverted) than never ill relatives or normals on the Maudsley Personality Inventory Extroversion Scale. Janowsky et al. infer that the social isolation associated with introversion may compound the depressed patient's need for a social support network. Still, the connection between introversion and depression remains ambiguous because other research has shown no correlation between them.

An interesting question that arises is to what extent these traits of introversion and extroversion are genetic and to what extent they are learned by through interaction with one's environment. Depue claims that it is likely that genetics make up for 50-70% of the difference between an individual's personality traits, he says, "The stability of emotional traits suggests that the extent of the interaction between environment and neurobiology is in part determined by the latter. Experience is interpreted through the variable of biology". While experience
may modify our response to incentives, our hardwiring, in terms of dopamine production and absorption remains intact.

It seems likely that past experience would play a larger role than Depue indicates in incentive motivation. Experiencing social rejection would seem to discourage more risk-taking in the future, but perhaps, for those with high positive emotionality, and the effective dopamine production and absorption system that it implies, the reward for succeeding is so great that they will continue the behavior even if they fail repeatedly. Perhaps there is a neurobiological basis for having "tough skin" or "thin skin"; for being resilient or oversensitive. What happens if someone has the neurobiological make-up of someone with high positive emotionality and then suffers a traumatic, punishing, experience which damages their self-confidence. Do they become a frustrated extrovert? According to Depue, such a person would be in the 30-50% of the population whose personality is not directly related to genetics and the functioning of their dopamine reuptake receptors. What happens to this person? Do they suffer from cognitive dissonance, wanting to take more risks but unnaturally wary from what experience has taught them? Does their brain chemistry alter to adapt to their behavior or does their behavior eventually adapt to fit their brain chemistry in spite of past experience, or do they suffer internal turmoil and rely on drugs to free themselves of inhibitions and allow themselves to pursue rewards as they would naturally have done?

Neurobiologically, drugs and alcohol add something new to the mix. Do introverts or suffering extroverts self-medicate with them, or get a prescription for Prozac? First of all, all of these scholars have treated introversion as something of a disease to be medicated, which seems strange considering that Jung appeared to
have a fairly egalitarian approach to introversion and extroversion. He treats them as
different lifestyles rather than a disease and the lack of one. He defines introversion
as enjoying solitude and the inner life of ideas and imagination; hardly a negative
description. Depue and Collins probably came up with the term "positive emotionality" because they wanted to describe the quality which those typically
thought of as extroverts tend to possess in a social context, but which those termed
introverts may also have but manifest in different ways: the desire and ability to
achieve goals. Janowsky, on the other hand, refers to introversion as a trait marker
for depression, which decreases as depression improves, not as a personality trait of
healthy, well-adjusted individuals.

What is introversion, and is it a bad thing? In the Jungian way of thinking
most of us are at least somewhat introverted, and a good thing too, or else we would
rarely get any studying done. Low positive emotionality is not really the same thing
as introversion, although an introvert could have low emotionality in social settings
and be more demoralized by fear of rejection than motivated by the prize of
friendship or social dominance. This type of introversion is more than likely linked
to depression because it does deprive a person of a necessary source of emotional
release: the social support network. On the other hand, being introverted can mean
that you keep a small, close circle of friends, which would definitely constitute a
social support network, and there is no reason to believe that this is unhealthy or
even abnormal. The term introvert implies that one is emotionally satisfied by a
mostly internal life. The only really conflictual state seems to be the repressed
extrovert, one who would like to forge more social relationships but is too
intimidated to do so, but this is most probably not the case with all those classified as introverts.

The terms "extrovert" and "introvert" may be inherently problematic. They are so well established in the vernacular now that they have connotations that were probably never intended, for example that the extrovert is always the "life of the party" or that introverts are social outcasts. This may be the reason Depue and Collins chose to use the term "positive emotionality." Using a new term gave them a fresh opportunity to be absolutely clear about what they meant. Their term, however, still does have relevance in relation to the notion of extroversion because extroversion depends on some degree of positive emotionality.

The evidence for a neurobiological basis for all of these traits is strong. Animal research has supported the idea of a network of brain structures communicating signals in order to process and respond to incentives in the environment. In particular, there is convincing evidence that the production and absorption of the neurotransmitter, dopamine, affects the perceived intensity of the incentive stimulus, and so, how motivated the subject is to pursue the stimulus. The changes that occur within the dopamine system and their affect on personality is easily observable in people under the influence of drugs that positively affect the dopamine system like cocaine or alcohol: their fears and anxieties vanish and they are able to pursue goals (although perhaps not higher level ones) in an uninhibited fashion. In a less uninhibited way, the same affect is observable in people taking antidepressants: they are no longer dissuaded from pursuing goals by fear of negative consequences; they regain an ability to "look on the bright side" and focus on the positive aspects of achieving goals rather than the negative repercussions of
failing to achieve them. It would be difficult to dispute that there is a relationship between positivity and goal oriented behavior and the dopamine system, but the reason why the dopamine system has this affect on personality remains unknown, and the precise interactions between the dopamine system and the rest of the brain, body, and the exact effect on behavioral patterns are yet to be discovered.

1.4. Emotional intelligence

"All learning has an emotional base."-- Plato

Emotional intelligence (EI) refers to the ability to perceive, control, and evaluate emotions. Some researchers suggest that emotional intelligence can be learned and strengthened, while other claim it is an inborn characteristic.

Since 1990, Peter Salovey and John D. Mayer have been the leading researchers on emotional intelligence. In their influential article “Emotional Intelligence,” they defined emotional intelligence as, “the subset of social intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions” (1990).

Salovey and Mayer proposed a model that identified four different factors of emotional intelligence: the perception of emotion, the ability reason using emotions, the ability to understand emotion, and the ability to manage emotions.

According to Salovey and Mayer, the four branches of their model are, "arranged from more basic psychological processes to higher, more psychologically
integrated processes. For example, the lowest level branch concerns the (relatively) simple abilities of perceiving and expressing emotion. In contrast, the highest level branch concerns the conscious, reflective regulation of emotion" (1997).

Emotional intelligence (EI) is the ability, capacity, skill; or, in the case of the trait EI model, a self-perceived ability to identify, assess, and control the emotions of oneself, of others, and of groups. Different models have been proposed for the definition of EI and there is disagreement about how the term should be used. Despite these disagreements, which are often highly technical, the ability-EI and trait-EI models (but not the mixed models) enjoy support in the literature and have successful applications in various domains.

1.4.1 History

The earliest roots of emotional intelligence can be traced to Darwin's work on the importance of emotional expression for survival and second adaptation. In the 1900s, even though traditional definitions of intelligence emphasized cognitive aspects such as memory and problem-solving, several influential researchers in the intelligence field of study had begun to recognize the importance of the non-cognitive aspects. For instance, as early as 1920, E.L. Thorndike used the term social intelligence to describe the skill of understanding and managing other people.

Similarly, in 1940 David Wechsler described the influence of non-intellective factors on intelligent behavior, and further argued that our models of intelligence would not be complete until we can adequately describe these factors. In 1983, Howard Gardner's Frames of Mind: The Theory of Multiple Intelligence introduced the idea of multiple intelligences which included both interpersonal intelligence (the
capacity to understand the intentions, motivations and desires of other people) and intrapersonal intelligence (the capacity to understand oneself, to appreciate one's feelings, fears and motivations). In Gardner's view, traditional types of intelligence, such as IQ, fail to fully explain cognitive ability. Thus, even though the names given to the concept varied, there was a common belief that traditional definitions of intelligence are lacking in ability to fully explain performance outcomes.

The first use of the term "emotional intelligence" is usually attributed to Wayne Payne's doctoral thesis, A Study of Emotion: Developing Emotional Intelligence from 1985. However, prior to this, the term "emotional intelligence" had appeared in Leuner (1966). Greenspan (1989) also put forward an EI model, followed by Salovey and Mayer (1990), and Daniel Goleman (1995). The distinction between trait emotional intelligence and ability emotional intelligence was introduced in 2000.

1.4.2 Definitions

Substantial disagreement exists regarding the definition of EI, with respect to both terminology and operationalizations. There has been much confusion about the exact meaning of this construct. The definitions are so varied, and the field is growing so rapidly, that researchers are constantly re-evaluating even their own definitions of the construct. Currently, there are three main models of EI:

- Ability EI model
- Mixed models of EI (usually subsumed under trait EI)
- Trait EI model
Different models of EI have led to the development of various instruments for the assessment of the construct. While some of these measures may overlap, most researchers agree that they tap different constructs.

1.4.2.1 Ability model

Salovey and Mayer's conception of EI strives to define EI within the confines of the standard criteria for a new intelligence. Following their continuing research, their initial definition of EI was revised to "The ability to perceive emotion, integrate emotion to facilitate thought, understand emotions and to regulate emotions to promote personal growth."

The ability-based model views emotions as useful sources of information that help one to make sense of and navigate the social environment. The model proposes that individuals vary in their ability to process information of an emotional nature and in their ability to relate emotional processing to a wider cognition. This ability is seen to manifest itself in certain adaptive behaviors. The model claims that EI includes four types of abilities:

1. Perceiving emotions – the ability to detect and decipher emotions in faces, pictures, voices, and cultural artifacts—including the ability to identify one's own emotions. Perceiving emotions represents a basic aspect of emotional intelligence, as it makes all other processing of emotional information possible.

2. Using emotions – the ability to harness emotions to facilitate various cognitive activities, such as thinking and problem solving. The emotionally intelligent
person can capitalize fully upon his or her changing moods in order to best fit the task at hand.

3. Understanding emotions – the ability to comprehend emotion language and to appreciate complicated relationships among emotions. For example, understanding emotions encompasses the ability to be sensitive to slight variations between emotions, and the ability to recognize and describe how emotions evolve over time.

4. Managing emotions – the ability to regulate emotions in both ourselves and in others. Therefore, the emotionally intelligent person can harness emotions, even negative ones, and manage them to achieve intended goals.

The ability EI model has been criticized in the research for lacking face and predictive validity in the workplace.

➤ Measurement of the ability model

The current measure of Mayer and Salovey's model of EI, the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) is based on a series of emotion-based problem-solving items. Consistent with the model's claim of EI as a type of intelligence, the test is modeled on ability-based IQ tests. By testing a person's abilities on each of the four branches of emotional intelligence, it generates scores for each of the branches as well as a total score.

Central to the four-branch model is the idea that EI requires attunement to social norms. Therefore, the MSCEIT is scored in a consensus fashion, with higher scores indicating higher overlap between an individual's answers and those provided
by a worldwide sample of respondents. The MSCEIT can also be expert-scored, so that the amount of overlap is calculated between an individual's answers and those provided by a group of 21 emotion researchers.

Although promoted as an ability test, the MSCEIT is most unlike standard IQ tests in that its items do not have objectively correct responses. Among other problems, the consensus scoring criterion means that it is impossible to create items (questions) that only a minority of respondents can solve, because, by definition, responses are deemed emotionally "intelligent" only if the majority of the sample has endorsed them. This and other similar problems have led cognitive ability experts to question the definition of EI as a genuine intelligence.

1.4.2.2 Mixed models

The model introduced by Daniel Goleman focuses on EI as a wide array of competencies and skills that drive leadership performance. Goleman's model outlines four main EI constructs:

1. Self-awareness – the ability to read one's emotions and recognize their impact while using gut feelings to guide decisions.

2. Self-management – involves controlling one's emotions and impulses and adapting to changing circumstances.

3. Social awareness – the ability to sense, understand, and react to others' emotions while comprehending social networks.

4. Relationship management – the ability to inspire, influence, and develop others while managing conflict.
Goleman includes a set of emotional competencies within each construct of EI. Emotional competencies are not innate talents, but rather learned capabilities that must be worked on and can be developed to achieve outstanding performance. Goleman posits that individuals are born with a general emotional intelligence that determines their potential for learning emotional competencies. Goleman's model of EI has been criticized in the research literature as mere "pop psychology" (Mayer, Roberts, & Barsade, 2008).

➤ **Measurement of the Emotional Competencies (Goleman) model**

Two measurement tools are based on the Goleman model:

1. The Emotional Competency Inventory (ECI), which was created in 1999, and the Emotional and Social Competency Inventory (ESCI), which was created in 2007.

2. The Emotional Intelligence Appraisal, which was created in 2001 and which can be taken as a self-report or 360-degree assessment.

➤ **Bar-On model of emotional-social intelligence (ESI)**

Bar-On defines emotional intelligence as being concerned with effectively understanding oneself and others, relating well to people, and adapting to and coping with the immediate surroundings to be more successful in dealing with environmental demands. Bar-On posits that EI develops over time and that it can be improved through training, programming, and therapy. Bar-On hypothesizes that those individuals with higher than average EQs are in general more successful in meeting environmental demands and pressures. He also notes that a deficiency in EI
can mean a lack of success and the existence of emotional problems. Problems in coping with one's environment are thought, by Bar-On, to be especially common among those individuals lacking in the subscales of reality testing, problem solving, stress tolerance, and impulse control. In general, Bar-On considers emotional intelligence and cognitive intelligence to contribute equally to a person's general intelligence, which then offers an indication of one's potential to succeed in life. However, doubts have been expressed about this model in the research literature (in particular about the validity of self-report as an index of emotional intelligence) and in scientific settings it is being replaced by the trait emotional intelligence (trait EI) model discussed below.

➢ Measurement of the ESI model

The Bar-On Emotional Quotient Inventory (EQ-i), is a self-report measure of EI developed as a measure of emotionally and socially competent behavior that provides an estimate of one's emotional and social intelligence. The EQ-i is not meant to measure personality traits or cognitive capacity, but rather the mental ability to be successful in dealing with environmental demands and pressures. One hundred and thirty three items (questions or factors) are used to obtain a Total EQ (Total Emotional Quotient) and to produce five composite scale scores, corresponding to the five main components of the Bar-On model. A limitation of this model is that it claims to measure some kind of ability through self-report items (for a discussion, see Matthews, Zeidner, & Roberts, 2001). The EQ-i has been found to be highly susceptible to faking (Day & Carroll, 2008; Grubb & McDaniel, 2007).
1.4.2.3 Trait EI model

Petrides and colleagues, 2009) proposed a conceptual distinction between the ability based model and a trait based model of EI. Trait EI is "a constellation of emotional self-perceptions located at the lower levels of personality". In lay terms, trait EI refers to an individual's self-perceptions of their emotional abilities. This definition of EI encompasses behavioral dispositions and self perceived abilities and is measured by self report, as opposed to the ability based model which refers to actual abilities, which have proven highly resistant to scientific measurement. Trait EI should be investigated within a personality framework. An alternative label for the same construct is trait emotional self-efficacy.

The trait EI model is general and subsumes the Goleman and Bar-On models discussed above. The conceptualization of EI as a personality trait leads to a construct that lies outside the taxonomy of human cognitive ability. This is an important distinction in as much as it bears directly on the operationalization of the construct and the theories and hypotheses that are formulated about it.

➢ Measurement of the trait EI model

There are many self-report measures of EI, including the EQ-i, the Swinburne University Emotional Intelligence Test (SUEIT), and the Schutte EI model. None of these assess intelligence, abilities, or skills (as their authors often claim), but rather, they are limited measures of trait emotional intelligence. One of the more comprehensive and widely researched measures of this construct is the Trait Emotional Intelligence Questionnaire (TEIQue), which was specifically designed to measure the construct comprehensively and is available in many languages.
The TEIQue provides an operationalization for the model of Petrides and colleagues, that conceptualizes EI in terms of personality. The test encompasses 15 subscales organized under four factors: Well-Being, Self-Control, Emotionality, and Sociability. The psychometric properties of the TEIQue were investigated in a study on a French-speaking population, where it was reported that TEIQue scores were globally normally distributed and reliable.

The researchers also found TEIQue scores were unrelated to nonverbal reasoning (Raven's matrices), which they interpreted as support for the personality trait view of EI (as opposed to a form of intelligence). As expected, TEIQue scores were positively related to some of the Big Five personality traits (extraversion, agreeableness, openness, conscientiousness) as well as inversely related to others (alexithymia, neuroticism). A number of quantitative genetic studies have been carried out within the trait EI model, which have revealed significant genetic effects and heritability's for all trait EI scores.

Two recent studies (one a meta-analysis) involving direct comparisons of multiple EI tests yielded very favorable results for the TEIQue.

### 1.4.3. Alexithymia and EI

Alexithymia from the Greek words "λέξις" (lexis) and "θυμός" (thumos) (literally "lack of words for emotions") is a term coined by Peter Sifneos in 1973 to describe people who appeared to have deficiencies in understanding, processing, or describing their emotions. Viewed as a spectrum between high and low EI, the alexithymia construct is strongly inversely related to EI, representing its lower range. The individual's level of alexithymia can be measured with self-scored
questionnaires such as the Toronto Alexithymia Scale (TAS-20) or the Bermond-Vorst Alexithymia Questionnaire (BVAQ) or by observer rated measures such as the Observer Alexithymia Scale (OAS).

1.4.4. Criticisms of the theoretical foundation of EI

1.4.4.1. EI cannot be recognized as a form of intelligence

Goleman's early work has been criticized for assuming from the beginning that EI is a type of intelligence. Eysenck (2000) writes that Goleman's description of EI contains assumptions about intelligence in general, and that it even runs contrary to what researchers have come to expect when studying types of intelligence: "[Goleman] exemplifies more clearly than most the fundamental absurdity of the tendency to class almost any type of behaviour as an 'intelligence'... If these five 'abilities' define 'emotional intelligence', we would expect some evidence that they are highly correlated; Goleman admits that they might be quite uncorrelated, and in any case if we cannot measure them, how do we know they are related? So the whole theory is built on quicksand: there is no sound scientific basis."

Similarly, Locke (2005) claims that the concept of EI is in itself a misinterpretation of the intelligence construct, and he offers an alternative interpretation: it is not another form or type of intelligence, but intelligence—the ability to grasp abstractions—applied to a particular life domain: emotions. He suggests the concept should be re-labeled and referred to as a skill.

The essence of this criticism is that scientific inquiry depends on valid and consistent construct utilization, and that before the introduction of the term EI,
psychologists had established theoretical distinctions between factors such as abilities and achievements, skills and habits, attitudes and values, and personality traits and emotional states.[34] Thus, some scholars believe that the term EI merges and conflates such accepted concepts and definitions.

1.4.4.2. EI has little predictive value

Landy (2005) claimed that the few incremental validity studies conducted on EI have shown that it adds little or nothing to the explanation or prediction of some common outcomes (most notably academic and work success). Landy suggested that the reason why some studies have found a small increase in predictive validity is a methodological fallacy, namely, that alternative explanations have not been completely considered:

"EI is compared and contrasted with a measure of abstract intelligence but not with a personality measure, or with a personality measure but not with a measure of academic intelligence." Landy (2005)

Similarly, other researchers have raised concerns about the extent to which self-report EI measures correlate with established personality dimensions. Generally, self-report EI measures and personality measures have been said to converge because they both purport to measure personality traits. Specifically, there appear to be two dimensions of the Big Five that stand out as most related to self-report EI – neuroticism and extroversion. In particular, neuroticism has been said to relate to negative emotionality and anxiety. Intuitively, individuals scoring high on neuroticism are likely to score low on self-report EI measures.
The interpretations of the correlations between EI questionnaires and personality have been varied. The prominent view in the scientific literature is the Trait EI view, which re-interprets EI as a collection of personality traits.

1.4.5. Criticisms of measurement issues

1.4.5.1. Ability EI measures measure conformity, not ability

One criticism of the works of Mayer and Salovey comes from a study by Roberts et al. (2001), which suggests that the EI, as measured by the MSCEIT, may only be measuring conformity. This argument is rooted in the MSCEIT's use of consensus-based assessment, and in the fact that scores on the MSCEIT are negatively distributed (meaning that its scores differentiate between people with low EI better than people with high EI).

1.4.5.2. Ability EI measures measure knowledge (not actual ability)

Further criticism has been offered by Brody (2004),[40] who claimed that unlike tests of cognitive ability, the MSCEIT "tests knowledge of emotions but not necessarily the ability to perform tasks that are related to the knowledge that is assessed". The main argument is that even though someone knows how he should behave in an emotionally laden situation, it doesn't necessarily follow that he could actually carry out the reported behavior.

1.4.5.3. Ability EI measures measure personality and general intelligence

New research is surfacing that suggests that ability EI measures might be measuring personality in addition to general intelligence. These studies examined the multivariate effects of personality and intelligence on EI and also corrected [45]
estimates for measurement error (which is often not done in some validation studies). For example, a study by Schulte, Ree, Carretta (2004),[41] showed that general intelligence (measured with the Wonderlic Personnel Test), agreeableness (measured by the NEO-PI), as well as gender had a multiple R of .81 with the MSCEIT. This result has been replicated by Fiori and Antonakis (2011),[42]; they found a multiple R of .76 using Cattell’s “Culture Fair” intelligence test and the Big Five Inventory (BFI); significant covariates were intelligence (standardized beta = .39), agreeableness (standardized beta = .54), and openness (standardized beta = .46). Antonakis and Dietz (2011a)[43], who investigated the Ability Emotional Intelligence Measure found similar results (Multiple R = .69), with significant predictors being intelligence, standardized beta = .69 (using the Swaps Test and a Wechsler scales subtest, the 40-item General Knowledge Task) and empathy, standardized beta = .26 (using the Questionnaire Measure of Empathic Tendency)--see also Antonakis and Dietz (2011b)[44], who show how including or excluding important controls variables can fundamentally change results--thus, it is important to always include important controls like personality and intelligence when examining the predictive validity of ability and trait EI models.

1.4.5.4. Self-report measures are susceptible to faking

More formally termed socially desirable responding (SDR), faking good is defined as a response pattern in which test-takers systematically represent themselves with an excessive positive bias (Paulhus, 2002). This bias has long been known to contaminate responses on personality inventories (Holtgraves, 2004; McFarland & Ryan, 2000; Peebles & Moore, 1998; Nichols & Greene, 1997; Zerbe & Paulhus,
1987), acting as a mediator of the relationships between self-report measures (Nichols & Greene, 1997; Gangster et al., 1983).

It has been suggested that responding in a desirable way is a response set, which is a situational and temporary response pattern (Pauls & Crost, 2004; Paulhus, 1991). This is contrasted with a response style, which is a more long-term trait-like quality. Considering the contexts some self-report EI inventories are used in (e.g., employment settings), the problems of response sets in high-stakes scenarios become clear (Paulhus & Reid, 2001).

There are a few methods to prevent socially desirable responding on behavior inventories. Some researchers believe it is necessary to warn test-takers not to fake good before taking a personality test (e.g., McFarland, 2003). Some inventories use validity scales in order to determine the likelihood or consistency of the responses across all items.

1.4.5.5. Claims for the predictive power of EI

Landy distinguishes between the "commercial wing" and "the academic wing" of the EI movement, basing this distinction on the alleged predictive power of EI as seen by the two currents. According to Landy, the former makes expansive claims on the applied value of EI, while the latter is trying to warn users against these claims. As an example, Goleman (1998) asserts that "the most effective leaders are alike in one crucial way: they all have a high degree of what has come to be known as emotional intelligence. ...emotional intelligence is the sine qua non of leadership". In contrast, Mayer (1999) cautions "the popular literature's implication—that highly emotionally intelligent people possess an unqualified advantage in life—appears overly
enthusiastic at present and unsubstantiated by reasonable scientific standards." Landy further reinforces this argument by noting that the data upon which these claims are based are held in "proprietary databases", which means they are unavailable to independent researchers for reanalysis, replication, or verification. Thus, the credibility of the findings cannot be substantiated in a scientific way, unless those datasets are made public and available for independent analysis.

In an academic exchange, Antonakis and Ashkanasy/Dasborough mostly agreed that researchers testing whether EI matters for leadership have not done so using robust research designs; therefore, currently there is no strong evidence showing that EI predicts leadership outcomes when accounting for personality and IQ. Antonakis argued that EI might not be needed for leadership effectiveness (he referred to this as the "curse of emotion" phenomenon, because leaders who are too sensitive to their and others' emotional states might have difficult to take decisions that would result in emotional labor for the leader or followers). A recently-published meta-analysis seems to support the Antonakis position: In fact, Harms and Credé found that overall (and using data free from problems of common source and common methods), EI measures correlated only $r = .11$ with measures of transformational leadership. Interestingly, ability-measures of EI fared worst (i.e., $r = .04$); the WLEIS (Wong-Law measure) did a bit better ($r = .08$), and the Bar-On measure better still ($r = .18$). However, the validity of these estimates does not include the effects of IQ or the big five personality, which correlate both with EI measures and leadership. In a subsequent paper analyzing the impact of EI on both job performance and leadership, Harms and Credé found that the meta-analytic
validity estimates for EI dropped to zero when Big Five traits and IQ were controlled for.

1.4.6. Measuring Emotional Intelligence

"In regard to measuring emotional intelligence – I am a great believer that criterion-report (that is, ability testing) is the only adequate method to employ. Intelligence is an ability, and is directly measured only by having people answer questions and evaluating the correctness of those answers." --John D. Mayer

Reuven Bar-On’s EQ-I; A self-report test designed to measure competencies including awareness, stress tolerance, problem solving, and happiness. According to Bar-On, “Emotional intelligence is an array of noncognitive capabilities, competencies, and skills that influence one’s ability to succeed in coping with environmental demands and pressures.”

Multifactor Emotional Intelligence Scale (MEIS); An ability-based test in which test-takers perform tasks designed to assess their ability to perceive, identify, understand, and utilize emotions.

Seligman Attributional Style Questionnaire (SASQ); Originally designed as a screening test for the life insurance company Metropolitan Life, the SASQ measures optimism and pessimism.

Emotional Competence Inventory (ECI); Based on an older instrument known as the Self-Assessment Questionnaire, the ECI involves having people who know the individual offer ratings of that person’s abilities on a number of different emotional competencies.
1.4.6.1 Emotional intelligence theory (EQ - Emotional Quotient)

Emotional Intelligence - EQ - is a relatively recent behavioural model, rising to prominence with Daniel Goleman's 1995 Book called 'Emotional Intelligence'. The early Emotional Intelligence theory was originally developed during the 1970s and 80s by the work and writings of psychologists Howard Gardner (Harvard), Peter Salovey (Yale) and John 'Jack' Mayer (New Hampshire). Emotional Intelligence is increasingly relevant to organizational development and developing people, because the EQ principles provide a new way to understand and assess people's behaviours, management styles, attitudes, interpersonal skills, and potential. Emotional Intelligence is an important consideration in human resources planning, job profiling, recruitment interviewing and selection, management development, customer relations and customer service, and more.

Emotional Intelligence links strongly with concepts of love and spirituality: bringing compassion and humanity to work, and also to 'Multiple Intelligence' theory which illustrates and measures the range of capabilities people possess, and the fact that everybody has a value.

The EQ concept argues that IQ, or conventional intelligence, is too narrow; that there are wider areas of Emotional Intelligence that dictate and enable how successful we are. Success requires more than IQ (Intelligence Quotient), which has tended to be the traditional measure of intelligence, ignoring essential behavioural and character elements. We've all met people who are academically brilliant and yet are socially and inter-personally inept. And we know that despite possessing a high IQ rating, success does not automatically follow.

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1.4.6.2 Aspect of Emotional intelligence

This is the essential premise of EQ: to be successful requires the effective awareness, control and management of one's own emotions, and those of other people. EQ embraces two aspects of intelligence:

- Understanding yourself, your goals, intentions, responses, behaviour and all.

- Understanding others, and their feelings.

1.4.6.3 The five domains or Component of Emotional intelligence -

Goleman identified the five 'domains' or Components of Emotional Intelligence

- **Self-awareness. Knowing your emotions.**

  The ability to recognize and understand personal moods and emotions and drives, as well as their effect on others. Hallmarks of self-awareness include self-confidence, realistic self-assessment, and a self-deprecating sense of humor. Self-awareness depends on one's ability to monitor one's own emotion state and to correctly identify and name one's emotions.

  A hallmark is a sure sign: since self-awareness is necessary for, say, realistic self-assessment, that is, without self-awareness no realistic self-assessment, the presence of realistic self-assessment is a sure sign (sufficient to conclude that there is) self-awareness.
- **Self-regulation; Managing your own emotions**

  The ability to control or redirect disruptive impulses and moods, and the propensity to suspend judgment and to think before acting. Hallmarks include trustworthiness and integrity; comfort with ambiguity; and openness to change.

- **Internal motivation; Motivating yourself.**

  A passion to work for internal reasons that go beyond money and status -which are external rewards, - such as an inner vision of what is important in life, a joy in doing something, curiosity in learning, a flow that comes with being immersed in an activity. A propensity to pursue goals with energy and persistence. Hallmarks include a strong drive to achieve, optimism even in the face of failure, and organizational commitment.

- **Empathy; Recognising and understanding other people's emotions.**

  The ability to understand the emotional makeup of other people. A skill in treating people according to their emotional reactions. Hallmarks include expertise in building and retaining talent, cross-cultural sensitivity, and service to clients and customers. (In an educational context, empathy is often thought to include, or lead to, sympathy, which implies concern, or care or a wish to soften negative emotions or experiences in others.)

- **Social skills; Managing relationships, i.e., managing the emotions of others.**

  Proficiency in managing relationships and building networks, and an ability to find common ground and build rapport. Hallmarks of social skills include effectiveness in leading change, persuasiveness, and expertise building and leading teams.
1.4.7. Emotional Intelligence of Adolescents

Adolescence is a period during which a young person learns who he is and what he really feels. It is a crucial time for young people to develop their capacity for empathy, abstract thinking and future time perspective; a time when the close and dependent relationships with parents begin to give way to more intense relationships with peers and other adults. It has been regarded as a group searching for them to find some form of identity and meaning in their lives (Erickson 1968).

Youth today are living in an anxiety–ridden atmosphere: “an age of anxiety”. The all pervasive atmosphere encourages adolescents constantly to compare themselves, consequently the new generation has to live, eat and breathe competition which makes them vulnerable to the threats of various psychosomatic problems.

Regarding the present emotional state of adolescents, Goleman (1995) cited that “there is a world-wide trend for the present generation to be more troubled emotionally than the last; more lonely and depressed; more angry and unruly; more impulsive and angry and more nervous and prone to worry.” With the mushrooming of so many of multinational companies with lucrative packages, the demand for individuals with soft skills like the ability to communicate, promote teamwork, present ideas, solve problems and manage projects and people has arisen. Now it is believed that within a person’s soft-skills lies his true smartness and this smartness is defined as emotional intelligence (EQ).
Emotional intelligence is the ability to monitor one’s own and others feelings and emotions, to discriminate among them and to use this information to guide one’s own thinking and action (Salovey and Mayer 1990).

Adolescence is the most vulnerable stage to the emotional problems, thus teaching adolescents about emotions and how they deal with others as well as their actions can be very helpful in their daily struggles and maintaining good relationships. But if tribal adolescents are looked at, which are also a major part of Indian population, the conditions are lamentable. The tribes are economically inferior, uneducated at times and are less exposed to the modern world. Being the earliest inhabitant of the country, they have maintained a distinctive life style for centuries. Unfortunately the isolation has kept them out of mainstream and made them easy prey to exploitation (Talesara 1994) and when they are forced to get along with the mainstream culture, they don’t get adjusted easily. Kundu (1984) stated that lack of education and deprivation that these tribes face due to poverty may result in frustration both in personal as well as social relationships thereby resulting in poor self-concept and low self-esteem.

With the lots of reservations and programmes launched for SC and ST people for upliftment and to bring them into the mainstream, the emotional intelligence i.e. the ability to get adjusted with new people and new situations needs to be addressed and strengthened.