That way you are safe. That doesn't leave you very much to believe in, but that's scientific too."

II

REVIEW OF LITERATURE

There is no better way of predicting the future than by studying the past. The fruits of today are a consequence of the seeds sown yesterday. Thus to arrive at any meaningful conclusion of the situation today, a review of the past is absolutely essential. Both the present and the future are firmly anchored in the past.

A review of the past literature, and various other opinions on the subject is inevitable in order to understand the present study in a proper perspective. The studies stated below not only achieve this but also justify the choosing of the defining characteristics of autism in the thesis.

The basis of the present study is the belief that normality - abnormality, health - ill-health fall on the two ends of the same continuum, with both extremes being only theoretically possible. There can be no absolutely normal person and neither absolutely abnormal person. Human personality is like a kaleidoscope with varying hues and colors, diffusing into each other. Autism here is an elaboration of a metaphor rather than a clinical description of symptoms.

The following studies on autism fall into the twilight zone where some areas overlap. Certain traits in some amount also seem to find their parallels in the normal everyday behaviour, in the new world order of today.
Historical Antecedents of Autism Like Process

Itard's (1932) report was the first description of autism in a child, the Wild Boy Aveyron suffering from the severest form of infantile autism. Earlier accounts of feral or animal reared children were so vague that no real diagnosis could be made from them.

Singh and Singh (1940), Gesell, (1940) described two girls Amala & Kamla, the two famous wolf-girls of Midnapore and their partial recovery. Their story closely parallels that of autistic children. The children were found living with three grown up wolves and two wolf cubs. Singh describes their behaviour as follows "from the very beginning their aloofness was noticeable. They would crouch together in a corner of the room, and sit there for hours on end facing the corner, as if meditating on some great problem. They were quiet indifferent to all that was going on in the room. The children in the orphanage would be playing, chattering and moving about in the room, but those things did not interest them at all. They wanted to be all by themselves and they shunned human society altogether."

Ogburn (1957) reported about a six year old boy Barasram near Agra. His description of the boy's behaviour closely resembled that of an autistic child.

Haslam (1809) described the case of an autistic boy who was admitted in 1799 to Bethlehem asylum (Valliant, 1962).

Dars and Worden, (1951) in 1921 studied a four year old autistic child at the John Hopkin's Hospital. Kanner (1943) (1951-52) was the first to give a name to the disease and also the first to conduct a systematic investigation of the disease. According to him "the characteristic features consist of profound withdrawal from contact with people, an obsessive desire for the preservation of sameness, a skillful relation to objects, the retention of an intelligent and pensive physiogonomy, and either autism, or the kind of language that does not seem intend to serve the purpose of interpersonal communication. This behaviour differs from ordinary obsessive ritualism in one significant respect; the autistic child forces the people in his world to be even more obsessive than he is himself. While he may make occasional concessions, he does not grant this privilege to others. He is a stern and unrelenting judge and critic, when one watches such a child for any length of time it becomes evident that unless he is completely alone, most of his activities
Studies Related to Autism as an Individual Characteristic

After Kanner's description of autism there have been no dearth of studies on autism, its origins, aetiology, treatment, etc. Those related to the current study are described here.

Goldstein (1959) views autism as a secondary defense against an organic deficiency. The impairment, he feels, is the autistic child's inability to engage in abstract thinking. Autistic behaviour is likened to the reactions of brain injured patients and represent expressions of protective mechanisms, occurring passively as a means of safeguarding the patient's existence in situations of unbearable distress and anxiety. Autism is then how the so impaired child avoids a catastrophic reaction.

Benda (1960) states that the autistic child suffers from an inadequate form of mentation which manifests itself in the inability to handle symbolic forms and issue an abstract attitude. In these children there is a specific disorder of abstraction. The autistic child though seemingly withdrawn is not lacking in emotion, affection or even intensity of personal contact. He is confused because he cannot handle abstract material, speech and communication on the level required or expected at his age.

Piaget (1954) states that between about two to six years of age, thought originates in an autistic state which is not oriented of towards reality but towards the "dream world of imagination". Autistic thought is qualitatively distinct obeying a whole system of special laws, by contrast adult thought is directed and intelligent. It is concerned with concrete truth and is adopted to reality which it tries to influence.

Mahler (1952) postulates that the first phase of development of the sense of self is the autistic phase. During this stage which occurs in the first few weeks of life, instinctual responses to stimuli are on a reflex and thalamic level and the ego is not integrated.

Klein (1948) commented upon the primitive protective identifications that underlie the autistic child's feeling of omnipotently controlling the world. Parts of the self are projected into
the object, evoking the experience of having controlled it. This fantasy can be, and often is, shattered when an external object behaves independently. At this point, the autistic child is at the mercy of the persecutory object, embodying all of the contents, its own destructive impulses, and fears annihilation. The fear of a persecutory world operates a boundary, which is clung to, dividing that which is felt to be good from that which is bad and alien. It is a massive defense against confusion and loss of differentiations. Klein also hypothesized a relationship to an ideal internal part object, to account for the blissful moments that are frequently observable. The child's total disregard for protecting the body from pain or injury was viewed as the product of attention being occupied with protecting this ideal internal object.

Rodrigue (1955) found that an apparent lack of interest in the external world was a result of an intense need to deny its existence. It amounted to a negative hallucination of the environment, which the autistic child seemed to hate and fear. He postulated that everything hateful, painful and frightening was projected into the external world, including the entirety of the children's aggressive selves. This massive disowning explains why an object outside the self of the patient suddenly turns into a frightening persecutor and why these patients are so unaggressive that they lack even the basic self-preservative behavior characteristics. It suggests that participation in external situation depended upon the existence of "sameness", as a suitable background to support the controlling, omnipotent fantasies that dominated their immature mental functioning.

Sarvis and Garcia (1961) after a study of about eighty autistic children, arrived at a similar conclusion. They found that it not the maternal attitude that produces autism, but the child's spontaneous immediate reaction to it. They postulated that during the period of gradual differentiation from the mother (from six months to three years), anything that happens to the child, whether from the inside or from the outside, is apt to impress upon the child as persecution by the mother. Thus feeling that the mother is responsible for his difficulties, the child rejects her. We call this paranoid rejection the autistic reaction.

Bosch (1973) states, that, such persons find no access to the variegated forms of interpersonal relations or to historical thinking, to freedom and responsibility for their own and
other's existence, but with the help of their rationality they construct a rigid, schematically constructed world, that is conditioned through measurements and numbers, and lacks the meaning and fulfillments through an appropriately developed common world experience. Because of this their world becomes depersonalized, static, and meaningless both as an inner, personal world and with respect to common purposes within this world of a rigid rationalism, they think and act in an automation life perseverating fashion, but in safety.

According to Newcomb (1947) people tend to avoid those encounters that produce aversive feelings in them. If we have formed a negative expectation or impression of another persons, we attempt insofar as possible, to avoid interacting with that person. Newcomb labeled it autistic hostility. A major consequence of autistic hostility for interpersonal relations is that it limits the possibility of changing our impression or feelings about the initially disliked person. As with other expectations, autistic hostility, in a sense, has a life of its own-that is because such an expectation generates avoidance responses, there after, there are few opportunities to experience events that might counter-act the negative expectation. If one assumes that an encounter is going to be unpleasant and thus avoids it, the assumption will never be tested. Another major feature is that the expectation need not be accurate, that is, the prediction of negative interaction with another may be completely unfounded, but for the actor, it nonetheless, operates as a powerful influence on behaviour. Like other expectations and impressions, autistic hostility can act as a self fulfilling prophecy, that is when actors expect to find themselves in an unpleasant encounter and can't avoid it, they will structure the encounter so that it does, indeed, result in an aversive reaction to them.

Galtung (1989), believes that the cold war can be viewed as an exercise in autism, when one disregards the external reality and turns in on itself, responding to its own internal reactions. It is not the objective threat from the others side that matters since it is not credible enough. What matters is the autism of the other's side. Both sides feel that regardless of what they themselves do there is no or insufficient response from the other side. Two autisms running on parallel tracks do not an arms race make, if they are not racing with each other, but only with themselves, using the guy on that parallel track as a justification. Also there is action-reaction between the two autisms. This response system obviously occurs in the armament process where
there are self-propelling forces under the heading "modernization located within the military bureaucratic - intelligentsia - corporate complexes. It also characterizes the more general psycho-political nature of the situation where the establishment politicians may be less concerned about the actual relationship between the nations but more concerned about the internal relations of each system. However, the more autistic systems, are, the less attention will they pay to the realization that autism may in itself be dangerous because of its impact on the other side.

Studies related to Austism as a Social and Environmental Characteristic

Kanner (1960) states that children with autism were the offsprings of highly organized, professional parents, cold and rational who just happened to defrost long enough to produce a child. This was his view of the "refrigerator" type of parent.

Bettelheim (1967) defined the basic pathology in autism as the infants not being effective in utilizing its primordial autonomy and sense of self in affecting the inter-personal environment. This experience is equivalent to the annihilation of that primitive self and reflected the destructive effect of the environment upon the infant. Bettelheim felt that the basic flaw in infants who become autistic was an absence of the internal organization for experiencing and interacting with the external world. With the autistic child, there is a special pathogenic interaction between the infant and the nurturing, emotional, parental environment during periods of special sensitivity that is destructive to the developing self of the child. Because inner and outer are confused and this actuality is not recognized, the infant develops massive inner feelings of complete impotence about making itself felt and recognized as an autonomous, masterful self. There is no emotional response or verification of an active, striving, influencing self from primary persons in the external world. Reported failures to confirm this innate capacity lead the infant to stop trying. The autistic infant turns its back upon parents, the world and with draws within a self that has lost the desire to reach out or even recognize the external world. Bettelheim attributed the anlage of autism to the catastrophic, destructive effects on the infant's sense of mastery by destructive, deficient and insensitive parenting. The infant then concentrates all attention on defensive systems to the exclusion of all other inner and outer stimuli. There is an utter repression of hostility and
an unremitting fear for his or her life. Autistic children seem convinced that death is inevitable and that it can be postponed by not taking cognizance of life.

Bettelheim (1943, 1960) discusses how extreme situations, can have radical effects on the personality particularly in reference to the German concentration camps. He found various parallels between the prisoners and autistic children he worked with. To begin with, there was the intense wish of the prisoners to have everything in the outside world stay unchanged and their helpless rage if changes occurred. This was parallel to the autistic child's insistence on sameness and seems to come from an identical feeling of helplessness about influencing the external world. Then there was the feeling of hopelessness about things ever changing for the better, a total absence of hope. Tracing the step-by-step deterioration of the concentration camp prisoner, it appears that he first lost the ability to act in line with objective reality and withdrew into fantasy; first wish-fulfilling, then anxious and finally rather vague day dreams. Then he lost self-respect, the feeling that he was indeed a person. Next came an inner curb on his perception of reality, and then even of his emotions, because both were too painful. Next he suppressed interest in emotional ties to his family, because those too were painfully upsetting. And finally came the true watershed between those prisoners apt to survive, and those apt to die; the death of all hope that things would ever improve. With it came a withdrawal of all interest in the external world. The prisoner gave up seeing, hearing, reacting. The essential difference though is that the child never had a chance to develop much of a personality. The child is convinced that life is run by insensitive irrational powers who have absolute control of his life and death.

Ekstein and Wallerstein (1956) in discussing psychotic children, discuss the story of Hansel and Gretel as it illustrates how the rejecting mother figure is transformed in the mind of the child. This story, they note, follows a regressive pathway, moving from the suspiciousness of the children at the outset to the paranoid projection of the devouring witch. The figure of the destructive mother is the creation of the child's imagination, though an image that has its source in reality namely the destructive intents of the mothering person.

Eisenberg (1957) states that parents of autistic children rear them by a caricature of Watsonian behaviorism, a doctrine they find congenial. Such interest as they have in the children
is in their capacity as performing automata. Hence, the frequent occurrence among autistic children of prodigious feats of recitation by rote memory. Conformity is demanded; what is sought is the "perfect" child i.e. one who obeys, who performs and who makes no demands.

Durfee and Wold (1933) found that while life in a bad institution did not seem to interfere with the infants intelligence at three months, those who remained longer than eight months could no longer be tested for lack of appropriate responsiveness.

Spitz (1945, 1946) (1951) concluded that emotional deprivation and an absence of appropriate stimulation leads to anaclitic depression and severe emotional and intellectual retardation. In extreme cases the results are marasmus and death.

Goshen (1963) extending these studies to the private home, stresses, the impact of the mother who fails to stimulate the child or to evoke meaningful signals during critical periods of life, particularly between the ages of six and eighteen months. As a result the child may fail to grasp the significance of language and eventually reach a state of mental retardation.

Escalona, (1963) feels that autism is a result of a lack in experiences which may come about through extreme variations in either intrinsic or extrinsic determinants, or both. It is caused by the absence of those vital experience in early childhood which are necessary condition for ego synthesis.

According to Mendelsohn (1987), body-ego experiences and their object - impression counter parts are initially registered and represented and disconnected parts in accordance with their differing qualities. The coalescence into unified entities is dependent upon the experience of an adequate symbiosis and is seriously interfered with, when pathological forces are excessive. The autistic infant's initial contact with an external object is reactively experienced as invasively destructive and elicits a need for the massive defensive response of withdrawal. The nature of the original contact leaves a traumatic, annihilative impression, which, at this primitive level, has instigated the only defense available. Body ego experiences and object impressions are registered but are represented as disjointed mental events. An attempt is made to compensate for this deficiency by establishing symbiotic fusions with those representations of bodily processes.
possessing the attributes of an object. The autistic disorders result when there is difficulty in negotiating the developmental step of entering a symbiosis. The impact of traumatic contact with an object during the earliest stages of development is profoundly debilitating. The autistic infant is left with little motivation to establish further contact with an object during the earliest stages of development. Bad qualities of deprivation, impingement, or over-stimulation carry with them the potential threat of total destruction, and they are responded to by a total autistic withdrawal. The primitive mechanism of autistic withdrawal is characterized by effecting a detachment from a stimulus to which a perceptual correction is retained.

Tinbergen and Tinbergen, (1983) ascribe autism largely to traumatic influences of the early environment. They further state that the main-difference between autistic and normal children is one of degree. They attribute the behaviour to motivational conflict. In autists avoidance, which in normal children appears briefly at the start of each encounter with such situations and is soon replaced by a less and less inhibited social or exploratory approach, remains dominant for much longer periods and is very often permanent. Autists live in an almost contains state of withdrawal (anxiety) dominated motivational (emotional) conflict.

Tinbergen and Tinbergen, (1983) in their ethological studies found that short-term fluctuations in the behaviour of autistic as well as normal children were not only correlated with certain changes in the environment, but could be produced at will be controlling those changes. They further found that under certain, very specific circumstances almost all normal children could show slight or even intense autistic behaviors; and conversely, that serve autists could under certain circumstances behave, at least for limited periods like normal children. They state that there is in reality a continuum, all the way from normal, through merely 'shy' or 'timid' or 'apprehensive' children, through very mildly and less mildly autistic children, to reverse autists.

Tinbergen and Tinbergen (1983), further argue that autism is a true civilization disease. They view autism as one little expression of the very many extremely complex and far reaching changes which are taking place in the environment. The 'autismogenic' factors can be considered as expressions of genuine psychosocial pollution, which itself is only part of the overall process of
disadaptation to which the civilization is subjecting us. Autism seems to be more common in modern, industrialized, urbanized and highly competitive societies.

Litton, (1986) in understanding how Nazi doctors came to do the work of Auschwitz postulates the principal of "doubling", the division of the self into two functioning wholes, so that a part-self acts an entire self. Doubling has a life death dimension, the Auschwitz self - is perceived by the perpetrator as a form of psychological survival in a death dominated environment; in other words, there is the paradox of 'killing self' being created on behalf of what one perceives as one's own healing or survival. There is suppression of feeling or psychic numbing. In general psychological terms, the adaptive potential for doubling is integral to the human psyche and can be at times life saving, example for a solder in combat, or for a victim of brutality, who must undergo a form of doubling, in order to survive. The opposing self can be life, enhancing but under certain conditions it can embrace evil with an extreme lack of restraint. Doubling is an active psychological process, a means of adaptation to extremity.

Shatan, (1977) states that the regimented training, verging on the inculcation of autism like traits, may be given in the army. The army may create conditions facilitating self isolation and a decrease in empathy and sympathy. The training is such that persons have to be objectified or depersonalized, to deal with combat situations. Also there is a strict emphasis on maintenance of disciplines, order and the structure of the institution, so much so that persons are secondary to the structure and order.

Mohan and Joshi (1990) investigated the creativity in relation to personality, locus of control and alienation in management (100) and engineering (100) students. Thinking, creativity with pictures (Torrance,1966),Eysenck Personality Questionnaire (1978), I-E locus of Control Scale (Rotter,1966) and Dean's Alienation Scale (1961) were used to measure creativity, personality, locus of control and alienation. The means, SDs, intercorrelations and 't' ratios were calculated for all the variables. Engineering group was found to be highly significant from management group on various dimensions of creativity, extraversion, psychoticism, neuroticism and alienation dimensions. High creatives of engineering group were found to be more psychotic, neurotic, externally oriented and more alienated than management group. Low creatives scored
significantly higher mean scores than high creatives on psychoticism of management group. Among engineering group high creatives appeared to be more socially isolated than low creatives. Originality was found to be positively correlated with extraversion and psychoticism was found to be negatively correlated with fluency and originality among management group. External locus of control was found to be related with high flexibility, originality and elaboration among engineering group. High flexibility, originality and elaboration were found to be positively related with social isolation of engineers.

Cohn (1987) on nuclear language and language of defence intellectuals reveals the emotional currents in an emphatically male discourse, and learning the language she shows how thinking can become abstract focusing on the survival of weapons rather than the survival of human beings. The language reveals strong currents of homoerotic excitement, heterosexual domination, the drive towards competence and mastery, the pleasures of membership in an elite and privileged group, of the ultimate importance and meaning of membership in the priesthood. The language and mode of thinking she feels are not neutral containers of information but developed by a specific group of men, trained largely in abstract theoretical mathematics and economics specifically to make it possible to think rationally about the use of nuclear weapons.

**Related Recent Clinical Studies on Autism**

The following studies have been done on autistic children in various settings.

Roser and Buchhotz (1996) attempt to link the theory of intersubjectivity with the syndrome of autism. In particular, they emphasize the specific nature of the intersubjective matrix as it has evolved between parent and the child starting in the womb and how the matrix manifests itself in the interaction between the child and the therapist. The theory of intersubjectivity defines the treatment situation as being “focused on the interplay between the differently organized subjective worlds of the observer and the observed. The observational stance is always one within rather than outside, the intersubjective field.” (Atwood Stolorow, 1984) Applying this to development they argue that both psychological development and pathogenesis are best conceptualized in terms of specific intersubjective contexts that shape the development process and that facilitate or obstruct the child’s negotiation of critical developmental tastes and
successful passage through developmental phases. The observational focus should be the evolving psychological field constituted by the differently organized subjectivities of child and caretakers.

Boucher and Lewis (1992) carried out experiments assessing recognition. Discrimination and fixation of unfamiliar faces and unfamiliar buildings in 26 autistic, 26 learning disabled and 10 normal children. The experiments showed that unfamiliar face recognition was impaired in the autistic subjects relative to normal peers non-verbal ability matched and verbal ability matched controls, recognition of buildings was normal, there was an enhanced discrepancy between face discrimination and buildings discrimination in favor of buildings and fixation was normal. Results suggest that impaired face recognition does not result from impaired attention of discrimination.

Sigman, Kasari and Kwon and Virmiya (1992) studies attention, facial affect and behavioral response to adults showing distress, fear and discomfort were compared for 30 autistic (AU) children (mean age 42 mo); 30 mentally retarded (MR) children (mean age 10 mo); and 30 normal (NR) children (means age 10 mo). The NR and MR SS were very attentive to adults in all 3 situations. In contrast, many AU children appeared to ignore or not notice adults showing these negative affects. As a group the Au Ss looked at the adults less and were much more engaged in toy play than the other children during periods when an adult pretended to be hurt. The Au SS were also less attentive to adults showing fear although their behaviour was not different from that of NR Ss.

Dawson, (1992) examines the notions that autistic children have difficulty regulating arousal and processing information that is, novel and unpredictable and that these difficulties have profound negative influences on the autistic child's ability to engage in sustained, mutually pleasurable interactions with others. He further explores the idea that many of the autistic child's social & emotional deficits can be explained as a consequence of a disruption of early patterns of social interaction which are an essential foundation for socio-emotional understanding and development.

Kunzendorf, Beltz, Tymowicz, (1992) employed a televised mirror image to test for the dissociation of self-concept and for the dissociation of self-consciousness in a autistic subjects (aged 9-36 years), 9 hypnotized subjects, 9 hypnotic simulators, and 9 normal control subject.
Results demonstrate that autistic experience and hypnotic experience are dissociated from 2 different forms of self-awareness. Autistic subject's precepts are dissociated from self-concept, whereas hypnotized subject's sensations are dissociated from self-consciousness.

Asperger, and Frith, (1991) describe autism, as a fundamental disturbance which manifests itself in their physical appearance, expressive functions and indeed their whole behaviour, this disturbance results in severe characteristic difficulties of social integration.

Loveland, (1991), describes how humans perceive a rich set of affordances many of them culturally selected, that can be conceptualized in the following non exclusive categories

i) affordances for physical interaction with the environment

ii) culturally determined affordances that reflect preferred but not necessary interactions;

and

iii) social and communicative affordances that reflect the meaning of human activity for other humans. It is argued the meaning of human activity for other humans. It is argued that autism is a disorder or development in which the ability to perceive the meaning of some aspects of the human environment is impaired. The importance of the concept of social affordances for understanding development, including abnormal development is discussed.

Gilberg, Steffenburg, and Schaumann, (1991) studies a population of children (aged 13 years and under) and found that there has been a rise in the frequency of autistic disorder (AD) and autistic like condition (excluding asperger's syndrome) in the area of Western Sweden over the last 10 yrs. The frequency was 4.0/100,000 in 1980; 7.5/10,000 in 1974; and 11.6/10,000 in 1988 in the city of Goteborg. The apartment increase is in part due to detection but also to new cases born to immigrant parents. Typical cases of AD accounted for 75% of cases, and 20% had normal or near-normal IQ's.

Hobson (1991) explores autism from the vantage point of normal children's social relations and interpersonal understanding. The value of adopting a developmental perspective is emphasized, and the way in which biologically based impairments in the capacity for truly intersubjective, effectively coordinated personal relations might hold the key to the matter is suggested. To view autism as a disorder of interpersonal relations may lead to a better
understanding of the heterogeneity and homogeneity across individuals who manifest the syndrome.

Parnas, Bovet, (1991), review the evolution or the concept of autism and suggest that E. Bleuler's (1911, 1950) insistence on the withdrawal component in autism contributed to the decline of its use in adult psychiatry (PSY). Phenomenology offers another approach to grasping the nature of autism as a relations (subject outer world) phenomenon. European phenomenological PSY in the field of schizophenia is introduced and its attempts to reveal the essence of autism are presented. Autism is considered as a "loss of vital contact with reality". (E. Minkowski, 1926, 1927), "inconsistency of natural experience" (Biswanger, 1956, 1965), or "the global crisis of common sense" (Blankenburg; 1969, 1971, 1986). Autism is suggested to represent dysfunctional perceptual, expressive attunement to the other world. The usefulness of this concept is briefly examined in relation to the diagnosis and etiopathogenesis of schizophrenia.

Wing (1991), from the finding of the various researches states that it is inappropriate to apply the term "childhood psychosis" with its implications of illness to those with the triad of social impairments (of social interaction, communication and imagination). The author prefers the term "autistic continuum", since it stresses the relationship with autism but suggests a wider range of conditions than childhood autism" alone.

Cesaroni, and Garber, (1991) presents fiesthand accounts of the perceptions, mental process and experiences of living with autism from a 13 years old boy and a 27 years old man who are both verbal high functioning individuals with autism. Data collection included observation, formal informal interviewing, correspondence and collection of personal documents such as poems, art work and essays. Five salient themes are identified and discussed; sensory processing and empathy. Multichannel sensory processing memory of past events. Both subjects brought stereotypical behaviour under voluntary control as a result of awareness of non-autistic individual's reactions to those behaviors.

Baron-Cohen, (1991) states that abnormalities in the social and communicative development of children with autism may be related to an impairment in their ability to attribute mental states to others (that is, in the development of their "theory of mind"). The issue of
whether this deficit is specific to understanding mental states or whether it extends to domains of social cognition in autism that do not involve a theory of mind was investigated. Three areas (relationship, recognition, interpersonal reciprocity and understanding of the animate - inanimate distinction) was examined among 17 autistic and 16 mentally handicapped children (aged 9.3 - 19.8yr.) and 19 normal children (aged 4.1 - 6.8 yrs.) Autistic subjects, were unimpaired in all 3 areas compared with other subjects, suggesting that the deficits in autistic subjects theory of mind and may be specific.

Yirmiya and Sigman (1991) Reviews the literature in psychologist on high functioning individuals with autism. Whereas most autistic individuals are also mentally retarded 5-30% are high functioning, scoring in the average range on IQ and other intelligence tests. Regardless of intellectual level, autistic individuals exhibit cognitive, social and affective deficits. They display deficits in joint attention, interactions, symbolic play, recognition of emotions, conceptual problem solving and imetarepresentational ability.

Tanguagy, (1990) reviews research on social communication deficits in autistic persons. Autistic children, unlike even 1 and 2 year old children, appear impaired in using prosodic, gestural and facial expression cues. Most autistic persons have great difficulty in understanding what others might be thinking, leading to attainted or deviant attempts at social communication. Deficits in social communication are only found in autism, but may be seen to varying lesser degrees in other persons.

According to Filho, (1990), autistic children seem to lack links with other human beings. Instead autistic children develop relationships with objects due to sensory stimuli produced by objects. It is hypothesized that autistic humans have the instinctive prerecognition of members of their species, which is not fulfilled by the species members (imprinting) but by partial aspects of them (that is, sensory stimuli they produce). The hypothesis is based on clinical observations and ethological studies with animals.

Baron-Cohen, (1990), thinks biological and behavioral descriptions of autism by focusing on cognitive deficits and reviews studies suggesting that a specific cognitive disorder underlies the social and communicative symptoms of autism. People with autism may be impaired in their ability
to attribute mental states, such as beliefs, knowledge desires, or intentions to themselves and other people. Experimental and anecdotal evidence supports an autism specific cognitive deficit. The possible origins of autism are discussed. The team "mindblindness" is proposed to the deficit's circumscribed nature and to emphasize the difference between autistic children and other people who naturally have access to other's minds.

Dewey, Lord and Magill, (1988), investigated quality of play in child - child dyads, using 12 autistic, 13 behaviour - disordered, and 13 normal children (aged 5 - 18 years) and 60 normal non-target partners. Subjects were observed with four different partners, and with four different states of play materials (functional, Construction, dramatic or rule governed). Qualitative aspects of per person interaction were rated including symmetry, fun and complexity. Results indicate that rule governed games were associated with more fun and more complexity for dyads in all diagnostic groups and that construction toys rated higher in complexity than functional or dramatic materials. Findings highlight the importance of structure in facilitating social behaviour.

Hobson, Houston, Lee, (1988), tested 17 autistic retarded adolescents and young adults (aged 12 years 6 no. - 25 years 10 mo.) were tested for their ability to recognize emotion and personal identity in photographed faces and parts of faces. The tasks were to match expressions of emotion across different individuals and identify unfamiliar individuals despite changes in emotional expression. Faces were also presented upside - down. Results indicate specific abnormality in the way autistic subjects perceived emotion, and possibly sex, in people's faces. However, autistic subjects superior ability in matching upside - down face suggests a more far reaching abnormality in their perception of faces.

Allen, (1988), argues that the clinically observable differences in autistic children can be accounted for on the bases of qualitatively different manifestations of the core deficits in 1) social / affective / behavioral functions; 2) developmental language disorders with concomitant deficits in interpersonal communication and 3) play / preferred activities/ preoccupations with a repetitive or stereotypic quality. It is also argued that autism is a cover term for a spectrum disorder with similarities and differences in the clinical presentation of preschool children. A model for
subtyping the autistic spectrum disorders is suggested, from 5 prototypic cases of clinical subtypes are presented.

Bemporad, Ratey, John and D'DriscoIl, (1987), describes autistic symptomatology as resulting from 3 processes that have become integrated in clinical presentation. The basic deficit is hypothesized as an inability to participate in information exchange through systems of emotional communication. It is maintained that these systems have been extensively studied in lower animals, and a direct relation to human empathy, can be traced in evolutionary studies.

Sigman and Mundy, (1987), summarizes 2 studies of cognitive, social and emotional functions in 34 autistic children (mental age 16 - 38 mo) and equal number of normal and mentally retarded children matched on mental age. Developmental aspects examined included symbolic play, sensori - motor abilities, knowledge of object categories, preverbal communication skills, and social interactions. Data indicate that autistic subjects suffered from deficits in social understanding and symbolic representations of other individuals. The core deficit appeared to lie at the intersection of representational abilities and social experience (i.e. social cognition). Knowledge of non - social objects did not appear to be specifically delayed.

Stromgren, (1987) discusses the nosological history of autism. It is noted that E. Bleuler (1912, 1920) described autism as important symptom of schizophrenia and considered it to be an otherwise normal mechanism that found pathological expression in schizophrenics. Autism later came to be regarded as the central symptom of schizophrenia. L. Kanner (1943) created the term infantile autism for a special disorder in children, which has turned out to be basically different from schizophrenia. The case histories of a 26 years old schizophrenic woman and a 42 years old man with Kanner's syndrome illustrate the differences between the two types of autistic mechanisms.

Farber, (1986), discusses autism, which is a with-drawing into the self and is associated with a constellation of symptoms-bizarre behaviour, delayed and deviant language, development, lack of responsiveness to people, and onset before 30 mo of age. While 80% or more of autistic children are retarded, autism is a hetero-geneous disorder with a disorder with behavioral features such as social, receptive, expressive, verbal and non-verbal communication deficits. An