# AUTISM AS A MODEL OF ABNORMAL EMOTIONAL DEVELOPMENT

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The theoretical model of the establishment of the syndrome of early infantile autism is elaborated including all the stages of this establishment. According to Vygotsky and his ideas about the hierarchical organization of pathological syndromes, there is the definition of the difference between the structure and the function of the primary (biological) and secondary (sociological) phenomena of the syndrome of early infantile autism.

**Keywords:** autistic syndrome, autistic syndrome model, affective disorders.

The compilation of a multilevel picture of impairments secondary to anomalies in mental development requires differentiation of all pathological structures from the standpoint of the mechanisms underlying their genesis. Vygotsky (1983) criticized a linear model of organization of pathological syndromes such as that characteristic of the clinical descriptive method. He proposed instead a *hierarchical* model that required identification of the primary defect directly responsible for the disorder in the morphophysiological substrate and of secondary and tertiary structures, some of which are a consequence of the primary defect, others are formed indirectly, and still others are a response of the personality to the defect. The advantage of this approach is that it enables one to establish cause-and-effect relations among pathological symptoms of varying complexity and to focus psychotherapeutic and remedial interventions on the appropriate level of the disorder.

The productiveness of Vygotsky's idea was borne out by the whole of our practice of the science of defectology (Dyachenko, 1965). However, in child psychiatry, in which G.E. Sukhareva (1930) put forth similar positions, they did not receive sufficient support. The reasons for this will be discussed on the basis of the early infantile autism syndrome. L. Kanner (1985) was the first to describe the syndrome of early infantile



autism. The principal indicators of this syndrome are a marked insufficiency or total absence of contact with adults and other children, fear of novelty and of any change in the environment, monotonous, manipulative play, and impairment of the communicative aspect of speech to the point of mutism.

The infantile autism syndrome is manifested most distinctly between the ages of two and five, although specific attributes of it are noticeable at an earlier age: in particular, absence or weakness of the "intimation complex," delayed recognition of the mother, the relatively unformed nature of eye contact, coldness or, on the contrary, a symbiotic bond, the presence of motor stereotypes (rocking in the cradle, monotonic turns of the head), and a relatively low level of cooing and babbling (Lebedinskaya, and Nikol'skaia, 1991). In psychophysiological and clinical studies, the emergence of infantile autism is linked to disorders in mental tone (Mnukhin, and Isaev, 1969) and in the level of waking (Rimland, 1964) and to a low sensory threshold (Ornitz, and Ritvo, 1968). It is hypothesized that when sensitivity is extremely high (hypersensitivity), stimuli are inadequately filtered, and a hypercom-pensatory defense mechanism sets in that produces a deficit of information and, as a result, maladjusted behavior.

Psychoanalysis sees autism as a result of disorders in child-parent relations: emotional deprivation provokes depression, fear, and other symptoms of distress (Bettelheim, 1967).

Psychological studies of autism are basically concerned with cognitive processes. Descriptions of speech disorders (dysphasias in Weber's classification) and related difficulties in operating with signs and symbols (Hermelin, and O'Connor, 1970; Rutter, 1978; Rutter, and Schopler, 1988) occupy a central place in such studies. Recently, a large number of studies have appeared on the difficulties encountered in trying to teach social habits to autistic children. The negative experience acquired in social contacts may be one of the factors contributing to the formation of autistic attitudes.

A study by the Tinbergens (1983) is extremely important, although it has not received appropriate support from other authors. Agreeing that autism is of an affective nature (insisted upon especially by authors of psychoanalytic studies), ethologists who have made a comparative analysis of the behavior of normal children and of autistic children conclude that defensive forms of behavior are hypertrophied in the latter.

As is evident from this brief review, the literature is replete with observations and disjointed hypotheses on autism; hence, the skepticism of some authors with regard to finding a common foundation for symptoms of infantile autism that are very different in nature becomes understandable (Kagan, 1981).

The main difficulty in uncovering a hierarchical structure in the autistic syndrome lies in establishing cause-and-effect relations between pathological symptoms at the sensory level and more complex pathopsychological formations. The point is to find an intermediate term that would link the two poles of disorder together.

Data obtained in recent decades by child psychologists and ethologists in their studies of early childhood are therefore of major interest in this regard. A number of adaptive forms of behavior triggered in infancy by sets of sensory signals, i.e., olfactory, tactile, auditory, visual, have been described (Bard, et al., 1990; Horwich, 1989; Barnard, and Brazelton, 1990; Trad, 1990).

Literature data and our observations have indicated that autistic children display the following symptoms of sensory distress:

*Tactical gnosia.* In infancy, there is a tendency toward a negative emotional response to touching, diapering, and bathing, and older children exhibit an inability to tolerate clothing, shoes, and cleaning their teeth. Another group displays a mild reaction to touching and to wet diapers and being cold.

*Visual and auditory gnosia.* There is intolerance of bright light and loud sounds in one group of autistic children and a weak response to them in others. In a number of cases, autistic children have been mistakenly diagnosed as blind and deaf.

Medical researchers have noted the absence of fixation of the gaze on the human face ("looking past," "a shifting gaze"). Several explanations of this phenomenon are possible. The first is that the face itself and the eye in particular are the source of the strongest inputs; the above-mentioned hypersensitivity of the autistic child makes eye contact with other people traumatic for him. A second explanation is that a direct gaze, in the ethological repertory, is a signal of a threat. A permanent state of anxiety and fear is characteristic of autistic children. In some cases a child's inability to endure a direct gaze, sensed as dangerous, extends even to toys (cases have been reported in which autistic children poked out their dolls' eyes or covered them with play-dough).



Thus, lateral vision predominates over direct vision. This phenomenon is not directly related to primary impairment of visual gnosia; its origin is the result of autistic fears. Ethologically, the advantage of lateral vision over direct vision lies in the ability to see everything clone behind one and to the side, i.e., the most unprotected sides, without turning one's head. However, as a result, the area directly in front is sacrificed, and clarity and comprehensiveness of perception are reduced. Hence, inadequate visual orientation in the environment is characteristic of autistic children.

Sensory disorders have an inhibiting influence on all aspects of the autistic child's mental development. In infancy such disorders lead to distortions in the perception of key signals that, under normal conditions, trigger adaptive forms of behavior. Attachment behavior suffers above all;[1] in autistic children this behavior is shaped under conditions of high stress (under normal conditions, low stress); hence, it does not fulfill its main function: it does not give the child a sense of safety. One of the indices of the inadequacy of this feeling in autistic children is fixation on the symbiotic bond with the mother: anxiety and fear arise even when the child is separated only briefly from her. Another variant, lack of attachment to others, is also observed, albeit more rarely.

Under normal conditions, various new psychological formations form on the basis of attachment behavior, and these formations later become independent lines of development. In autism, their formation suffers. Thus, because of the lack of fixation of the gaze on the human face, the earliest form of communication, namely, eye contact, is lacking, and orientation to another's emotional state and the social smile are not adequately developed. Inattention to the components of the face impedes recognition of the mother and differentiation between "one's own and others." In some autistic children, exploration of a person's face resembles the actions of blind people (they touch and feel with no visual control). Because of poor orientation toward verbal signals, the mother's voice cannot serve as a reinforcing stimulus. Inattentiveness to another person's speech, facial expressions, and gaze later have an

[1] Under normal conditions, attachment behavior is triggered by a set of sensory signals: tactile (heat, pressure), vestibular (rhythmic rocking), visual (eye interaction with adults), and auditory (vocal reinforcement by the mother of the child's reactions). Existing data indicate that the entire set of signals is necessary; feeding alone is insufficient for the development of attachment behavior (Brazelton, and Cramer, 1990; Hopkins, 1987; Horwich, 1989; Landau, 1989).

inhibiting influence on the development of the communicative aspect of speech. Loss of a feeling of neighborliness is also typical.

Under conditions in which orientation in the surroundings is diminished, the autistic child becomes ultra-careful. One of the signs of such behavior is a rigorous maintenance of distance in contacts with other people. According to the Tinbergens' observations, an ambivalent posture, "a half-turn" is characteristic of the autistic child, evidencing the child's readiness to escape. The desire for a constant environment is associated with fear: a negative reaction to the appearance of unfamiliar adults and children and to changes in the ordinary arrangement of things.

Any moving object is perceived as dangerous. The retention of movement as the dominant attribute of something animate (and consequently of something that is dangerous) leads to difficulties in differentiating between "animate and inanimate things."

It is important to note that in autistic children, the intensity of fears does not depend on the ethological attributes of danger (as is observed under normal conditions): fears become generalized.

At the same time, one can observe a combination of hypersensitivity and a certain lack of feeling in autistic children. This is most often associated with a state of stress when the child finds himself in unfamiliar circumstances. With a constricted orientation toward the environment, the child's actions assume an impulsive nature. The same mechanism appears to underlie cases of impulsive aggression. Whereas under normal conditions fear is one of the regulators of behavior (moving closer versus avoidance, friendliness versus aggression), in autistic children it plays a disorganizing role, in some cases obliterating outgoing forms of behavior, and in others giving them an impulsive character.

In the autistic syndrome not only sensory but also *motor* disorders are observed. Defects in motor tone and associated phenomena of uncoordination are noted, and the pace and smoothness of movements suffer. A direct relation is found between the prominence of disorders in muscle tone and the child's affective state.

If we may take remedial inputs as a psychological experiment, the affective fascination of autistic children with fire, water (soap bubbles), and rhythm can have a positive influence on motor activity in that it increases outgoingness. A paradoxical phenomenon has been observed: children with symptoms of hypersensitivity not only do not ignore but in fact seek high-intensity stimuli provided they are affectively saturated. The child, so to speak, plugs into the source of energy and uses it for self-stimulation.



Observations indicate that the transition from involuntary actions to voluntary actions is often an insurmountable threshold for autistic children. Performance of voluntary movements involves a buildup of affective tension, which finds a motor outlet in the form of chaotic movements. If the voluntariness is removed, a movement can be performed without difficulty. For this reason actions requiring special training take a good time to learn, and in severe cases are not accessible to the child at all.

The speech of the autistic child resembles the speech of aphasics in a number of respects. The prosody component suffers: i.e., the pace, rhythm, and, especially, the voice modulations indicate a disorder in the tonic underpinnings of speech.

In the most severe cases we encounter signs of total mutism. Prognostically, lack of speech is considered the most serious symptom. However, the nature of this phenomenon has not been sufficiently studied. It is possible that speech and motor disorders have a common basis. The voluntary speech act is impaired as a result of pathological stress, which throws the tonic foundation of the speech-motor process into disarray. The child is capable of producing only elementary sound combinations reflecting his affective state.[2]

In a number of cases, when the affective condition improves, there is a breakthrough in active speech in the form of echolalia. The mere fact that echolalia emerges indicates that speech-motor patterns have remained intact. But at the same time, the fact that they emerge indicates that active speech is controlled by a mechanism of affective "charge." The appearance of echolalia is a prognostically positive symptom. With the right kind of psychotherapy, a transition from echolalia to communicative speech is possible.

Let us examine the *stages in the genesis of the autistic syndrome.*

1. At a basic level, a set of symptoms caused by sensory pathology appears. The factor of intolerance and painful sensitivity indicates that

[2] The conveying of internal states via discrete sound combinations must be distinguished from autonomous speech, in which a child designates specific phenomena and Ins relation to them by imagic and affective means. Thus, a healthy child who has seen a person hit by a car conveyed this as follows: "Car, dada, babakh, oi oi boo boo." Compare this to a set of sounds such as "Dzh dzh dzh," etc., which an autistic child reproduced with increasing perseverance for hours.

protopathic sensitivity is implicated, with a clearly marked affective component.

Impairment of the affective component is also observed in the motor sphere, where a direct relationship between the severity of motor disorders (tonic) and the autistic child's affective state is found.

The affective disorder causes fixation of earlier forms of orientation (the mouth as the analyzer giving the most affectively saturated information retains its dominant role in the exploration of the environment for a long time). Thus, the lawful process of reshuffling and re-arrangement is delayed; a shift in the balance between contact analyzers and distant analyzers in favor of the latter does not take place in time, and new sensorimotor coordinations do not form as they should. The instability of development gives rise to a tendency toward regression, creation of a cycle, and motor stereotypes.

2. The normal functioning of ethological mechanisms ensuring primary adaptation to the surroundings under normal conditions is impaired as a result of sensory and motor disturbances. One of these mechanisms is completely inactive (it is in a latent state), others are activated with a delay, and still others function in distorted form.

Defensive forms of behavior (basically passive), a striving to minimize contacts with others, and self-isolation become prominent when maladjustment becomes permanent.

Various types of asynchronisms, dead-end lines of development in the formation of complex psychological formations (Lebedinsky, 1980; 1985) arise against this pathological background (depending on the severity of the syndrome).

We have here provided only a rough outline of the genesis of the autistic syndrome. In actual clinical practice, there is a multitude of variants of autistic development, depending on the severity of affective disorders, on the degree of preservation of ethological mechanisms in early infancy, and on the balance between defensive and compensatory forms of behavior.

We should point out that study of the distinctive features of mental development in autistic children has more than just practical significance. The entire range of different symptoms encountered in affective disorders in childhood is most fully represented in this anomaly. Data obtained from study of autism enable us better to understand the contribution of the affective process to a normally developing mind.



The heuristic nature of the model we have outlined is also evident in the fact that it directs the attention of the psychotherapist to the whole set of basic forms of behavior requiring special remedial work.

As the result of the permanent disadaptation protective patterns of behavior play the main role (in most cases they are passive). There is a tendecy to reduce all social activity to minimum, self-isolate.

Different types of disorder of synchronism and deadlock lines in formation of complicated psychological phenomena are based on this pathological soil.

This article contains only the model of establishment of the syndrome of early infantile autism. In the reality the autistic development varies according to the gravity of the affective disorders, to the level of safety of etiological mechanisms at the early age and to the balance of protection and compensation.

It is necessary to point out, that the research of special traits of psychological development with children having autism has more than just practical value. All the variety of affective disordes at early ages can be seen through this syndrome. The results of this research allow to understand the role of affective component in normal psychological development more thoroughly.

This model allows to draw the attention of psychotherapists to the whole group of basic forms of behavior, which requires a special intervention.

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