THE AUTISTIC CHILD: AN APPROACH TO HANDLING

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> 'If a child has a body, but one that will not do what he wants it to—if he has eyes that see, but do not see things the way other eyes see them—if he has ears that hear, but that have not learned to hear the way other ears do—he cannot tell anyone what his difficulty is, it just seems to him he is always wrong.'[16]

Autism is a syndrome of disturbance, the origin of which is not clear. First described by Kanner in 1943, autism was considered as a specific form of childhood psychosis characterized by non-goal directed behaviour, lack of speech and communication, emotional withdrawal and unresponsiveness to the social environment and a fixation with inanimate objects.[10] Today, two main schools of thought still exist as regards etiology—the organic and the sociological. As a result, manifold theories have been expounded which in turn have provided the blue prints for various approaches in regard to the handling of these children. For many years workers in the field of exceptional children have known therapeutic failure with the non-verbal autistic child, and to date there is little available in the literature in regard to therapeutic handling. The time has come to stop fighting about terminology and labels and to try to understand the problem.

The efforts and results of a group of therapists over the past few years are recorded here in the hope that those working in the field of re-education will find constructive, usable techniques with which to try to help the 'autistic' child.

Working Principles

1. Principle of Perceptual Orientation. Observing the behaviour of the 'autistic' child, we note that he appears to be 'perceptually disorientated'. We think that his 'use' of mannerisms, i.e. rocking, head banging, etc., and his preoccupation with the sameness of objects is an attempt to investigate and stabilize the environment, as opposed to his reaction to people, who, in an ever-changing situation appear to be a threat to him. It is as if the child cannot organize and attribute meaning to sensory stimuli, and thus behaves in a bizarre manner.

2. Principle of Child Development. A wealth of information has been gathered about normal child development, and we know that maturation is dependent upon physical, mental and emotional growth which proceeds in a well-ordered sequence of events.[7, 15]

Piaget[14] stresses the interaction between the child (genetic endowment) and his environment, and the wholeness of the learning situation. Dewey[2] stresses the fact that the child's development requires a development of experience. The problem of direction of the desired experience is one of adult selection of appropriate stimuli for instincts and impulses selected for use in the gaining of the new experience. Therefore, a structural setting must be provided with selected stimuli for the child. Mowrer[13] states that all learning is conditioning, of which problem-solving is a derivative. He stresses the emotional nature of conditioned responses and views behaviour as a continuous on-going function of the informational feedback from all the senses—a function of the total psychological field.

3. Principle of Brain Function. We studied the child within a neurological framework, and applied the techniques one would use for an individual handicapped by:

(a) Agnosia: All types are characterized by loss of ability to comprehend the meaning, or to recognize the importance of various types of stimulation; these are receptive defects. (Nielsen, Brain, de Jong).[1a]

(b) Aphasia: A non-functional impairment in the reception, manipulation and/or expression of symbolic content of language. (Osgood).

(c) Apraxia: The inability, as a result of an organic brain lesion, to execute familiar, purposive, more or less automatic movements, when there is neither motor paralysis, sensory disturbance, ataxia or any intellectual impairment. (Worster-Drought).

The sense modalities must function efficiently in order to receive the stimuli, which in turn must be taken via the neuronal pathways to the specific areas for integration and interpretation, before one can respond in the correct way to a situation.[1]

These principles were used as the foundation for our study project and as the starting point to study each child.

Perception is a learned process—we learn to see, to hear, to move and to feel in varying stages. The child experiences a situation and reflects back on this experience and so the sequential steps to learning are founded.

Knowledge of our environment is invaluable to us, as it creates a stability by enabling us to react appropriately. This knowledge is obtained through a spontaneous process of reception of all the sensations, i.e. sensory, motoric, proprioceptive and integrative, of the stimuli in the areas of the brain for concept formation.[6, 17] (Fig. 1.)

Study Project

Ten children between the ages of fourteen months and five years were seen for initial evaluation. They were tested on all the developmental patterns necessary for the acquisition of learning. A complete history was taken as part of the routine procedure and the following factors (Table 1) were listed: age, sex, position in family, siblings, socio-economic back-

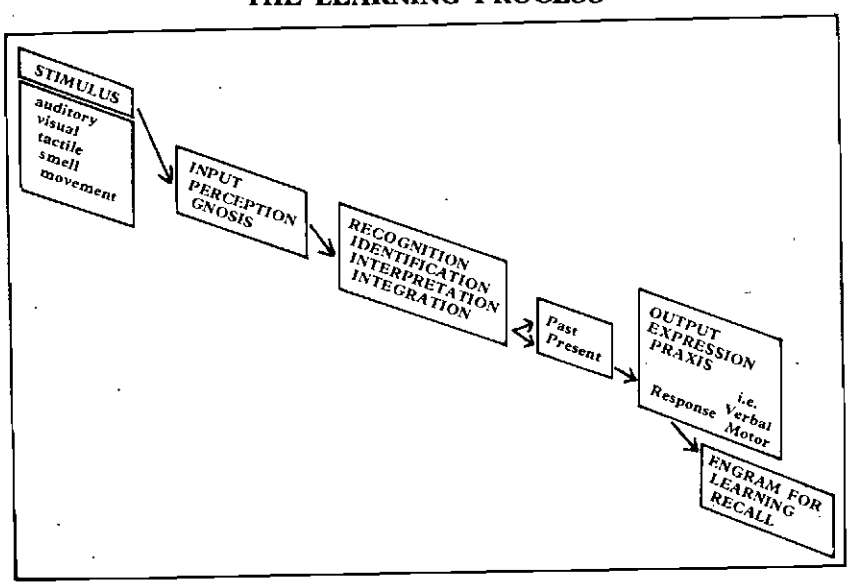


Fig. 1.

ground, birth trauma, milestones of development, speech development, difficulty with eating.

Symptoms. All the children displayed the following symptoms to some greater or lesser degree:

(a) Lack of emotion and contact with people;

(b) little or no reaction to sound;

(c) inadequately developed speech repetoire ranging from mute to a few words used inappropriately;

(d) non-goal directed behaviour, i.e. odd mannerisms—whirling around, twisting, flicking movements of hands, head banging, rocking;

(e) attachment to objects and perseveration in play;

(f) upset at change of routine;

(g) non-establishment of laterality and/or cerebral dominance;

(h) no body concept or realization that body parts belonged to themselves and that they could control actions;

(i) inability to chew or swallow correctly.

The ultimate objective was to develop communication and to alter the reinforcing environment so that adequate behaviour was learned and inadequate behaviour eliminated.

Therapeutic Procedure. The following procedure was used for all the children, with slight variations for the individual child:

(a) the stimuli to be presented were carefully selected and presented within a developmental framework;

(b) operant conditioning procedures were used: food was used as a reinforcer; the children were fed at the school and taught a hard-food orientation programme. Punishment was used for any unacceptable

behaviour i.e. non-goal directed behaviour such as twirling, head-banging, rocking. Effective new behaviour was rewarded and reinforced.[9]

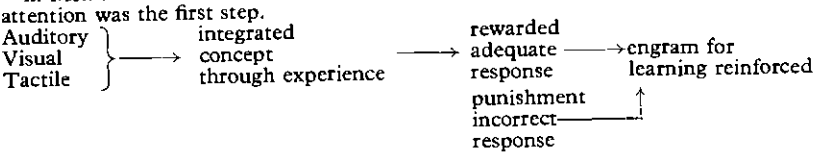
(c) As it was difficult to determine the stimulus and perceptional repetoire when the child responded to a complex situation, and as we were unable to determine what aspect he was responding to, or what was controlling his response, all the sensory areas were stimulated together in a holistic setting.

(d) Verbalization was used continually, following the principles of Luria, i.e. that perception can be controlled and modified through speech.[12]

(e) i. *Aim:* The child was made aware of every situation visually, tactually and auditorally e.g.

visual attention: the door;
tactile: the shape of the door;
movement: need to get to, reach out, open and close the door;
auditory: the closing sound, the banging sound;
speech: continual verbalization was reinforced.

ii. *Method:* This was based on increased stimuli: acquisition and maintaining of attention was the first step.



iii. *Result:* A combination of—look (see) hear (say) feel (move) which led to response reinforced positively or negatively

(f) The children were 'blinkered' visually for commands and both rewarded and punished according to behaviour.

(g) One therapist worked with the child, together with an aide—they had to adapt to the child and approach him on his level in order to develop a relationship.

(h) Concrete real-life objects were used—not toys or pictorial representations.

(i) Conditioned positive reinforcement was immediate.

(j) The fixation on objects or visuo-motor perseveration was used constructively and as a starting point for therapy. The child was made actively 'aware'.

The Holistic Approach to Therapy

1. Language Development. The prerequisites are that the child must hear sounds and locate and attend to the source. Therefore the child was made aware of all sounds, what made the specific noise and from what direction the sound came. Speech was moulded on whatever noises the child made which were immediately put into a meaningful context and conditioned positive reinforcement was used. To establish the auditory feedback system, the motor-kinaesthetic technique was used in front of a

mirror to make the child aware of the various movements made by the oral-peripheral mechanism and to draw his attention to the speaker's face and imitate her movements. The train-ear, speakers and recorders were used to increase the intensity of the sound and to channel the sound directly to the ears. Whole words were used at all times.[4, 5]

2. Visual Development. The child was 'blinkered' and through the aid of torches was taught to fixate visually on any object, follow specific movements, in pursuits and to locate objects. The beam was then discarded and the objects only were presented to him and he was made to feel each one and follow the placement visually.

Whatever the child responded to visually was the starting point to illuminate with a torch beam. The original object was then removed and the child would follow only the beam. The beam was then focused on another object.

3. Movement Development. He was taught how to move all body parts and how to negotiate spatially. The therapist moved his hands and arms through the required movements. He was taught movements along a developmental pattern of crawling, leading through to skilled activities.[3, 11]

4. Tactile Develop ent The child was made to feel all surfaces and to recognise them through continuous "rubbing". He was taught to reach and grasp objects and move them into required positions and to differentiate between objects through touch alone.[3]

Observations

The following interesting factors were noted:

1. Speech Development. This followed the normal developmental sequence:

(a) Mouthing of words with or without sound;

(b) echolalia, i.e. repetition of what was said to the child, e.g. Where is the ball?—where is the ball?;

(c) repetitions and hesitations, similar to stuttering behaviour;

(d) reversal of word order;

(e) reversal of pronouns;

(f) some difficulty in pronunciation—substitution of his own words;

(g) difficulty with abstract thought and logic—transference of reasoning;

(h) speech without 'communication';

(i) spontaneous speech in interaction with the environment.

2. Behaviour.

(a) Emotionally they were highly sensitive and anxious.

(b) They progressed from passive, still children to hyperactive and destructive, to children with acceptable behaviour.

(c) They realized that body parts were attached to themselves and were responsible for specific movements, e.g. full functioning of pencil control, ball playing, etc.

(d) They showed spontaneous reactions with peers in play.

TABLE 1.

Case No.	*Age*	*Sex*	*Position in Family*	*Siblings*	*Socio-Economic Background*	*Birth Trauma*	*Milestones of Development—Physical*	*Speech Development*	*Difficulties with Eating*
1A	14 months	M	Third	2 Boys	Middle class Jewish Mother in Father's business	Induced; Anoxia	Normal	Silent baby Delayed speech Thought to be hard of hearing Mute	Present
2R	4 years	M	Second	1 Boy	Middle class Jewish Mother—Typist Father—Salesman	Caesarean section	Normal	Silent baby Delayed speech Thought to be hard of hearing Odd words	Present
3M	5 years	M	Third	1 Boy 1 Girl	Middle class Christian Mother—Housewife Father—Businessman	No apparent defects	Normal	Silent baby Delayed speech Thought to be hard of hearing Odd words	Present
4A	5 years	F	First	2 Sisters	Low income Father—Labourer Mother—Housewife	Caesarean section	Normal	Silent baby Delayed speech Thought to be hard of hearing Random noises	Present
5P	2 years	M	Second	1 Boy	Middle class Catholic Educated	Cord around neck	Normal	Silent baby Delayed speech Thought to be hard of hearing Mute	Present

Case No.	*Age*	*Sex*	*Position in Family*	*Siblings*	*Socio-Economic Background*	*Birth Trauma*	*Milestones of Development—Physical*	*Speech Development*	*Difficulties with Eating*
6B	5 years	F	Second	2 Boys	Middle class Jewish Father— Businessman Mother— Housewife	No apparent defects	Normal	Silent baby Delayed speech Thought to be hard of hearing Mute	Present
7D	2 years	M	First	Adopted	Middle class Jewish Father—Educated Mother— Housewife	Unknown	Normal	Silent baby Delayed speech Thought to be hard of hearing Mute	Present
8L	4 years	F	Middle	2 Boys	Low income Working parents	Caesarean section Premature	Normal	Silent baby Delayed speech Thought to be hard of hearing Noises	Present
9J	4 years	M	First	Adopted	Christian Low Socio-economic	RH-Negative Trans-fusions	Normal	Silent baby Delayed speech Thought to be hard of hearing Noises	Present
10A	2 years	M	First	Only	Christian	Breech presenta-tion	Normal	Silent baby Delayed speech Thought to be hard of hearing Mute	Present

(e) Their behaviour was modified through reinforcement and punishment and there was no symptom substitution.

(f) They responded spontaneously in situations, and not only to a specific stimulus in a conditioned manner.

The children could be handled by more than one person as long as the methods were the same and handling was consistent.

It was significant that the four children who progressed the most were the children who were never given the label of 'autism' and therefore were treated as 'normally' as possible, but with increased stimulation. Parents of autistic children are as varied in their personalities and the way they deal with children as is any other group of parents.

Case History

Child X was 4 years old when we first saw him. He was generally unresponsive to his environment, rocked himself, curled up in the foetal position, masturbated continually, and had not developed speech. He had previously been diagnosed as deaf, aphasic, retarded and autistic. At the age of three years he was enrolled in a nursery school class where he would not communicate, acted in a bizarre manner at times and had to have a constant supervisor. He made no progress and was subsequently referred for speech therapy which was discontinued as X again failed to show any improvement.

When he was first assessed by a team of specialists, no firm conclusions were drawn, except that his primary difficulties were consistent with a picture of autism, and that he needed help.

Salient Points from Case History. Normal pregnancy, but an emergency Caesarean section was performed at $7\frac{1}{2}$ months, as there was foetal distress. He was the second child in the family—the sibling being a boy aged 6 years. The parents were educated, middle-class people. Physical milestones of development were normal. Speech was undeveloped and behaviour bizarre. X was observed daily for a few weeks and a programme was drawn up for him as follows:

(a) He was to be punished for masturbating;

(b) as he drooled slightly and could not eat hard foods, but was living on slops, he was to be given meals at the school and taught how to chew and swallow and eat correctly;

(c) his only interest was hub-caps—so all teaching was to be done through hub-caps at first, leading to the reward of a hub-cap for the correct response.

This proved very successful, and he was taught visual pursuits, movement, size, shape, colour, number and reading in this manner. All the previously described techniques were applied.

Today, X at the age of 6 years, is reading at second grade level in an Adjustment Group. He has spontaneous speech and spontaneous reaction to people and situations in the environment. He no longer masturbates and only occasionally has a temper tantrum. His vocabulary and speech

are two years above his chronological age, but when upset, he rambles into nonsense jargon, e.g. *schoolage* for school and garage, and loses logical thought processes.

Emotionally, he still withdraws, but these periods are few and far between. He plays with other children and reacts spontaneously, laughs, cries and is affectionate to people. He still has a long way to go, and at present we are teaching him logical thought processes through reading. We have learned much from our successes and our failures, but know far too little and have a great deal to learn. There is no specific treatment for autism, but much can be achieved using the above methods.

In reviewing the present situation, we can only arrive at the following conclusions:

(a) The necessity for a more holistic approach.

(b) The need to treat the cause rather than the symptom.

(c) The importance of following the sequence of normal child development within a neurological framework.

(d) The need to provide maximum sensory stimulation in all areas in a structured systematic way and to select the stimuli.

(e) The need to modify the behaviour through operant conditioning.

(f) We are dealing with the problem of labels. It was significant that three of the children who displayed symptoms in keeping with autistic behaviour, when given a maximum sensory stimulation programme were found to be minimally brain injured.

Summary

Autism has been considered within a neurological framework of child development. A study has been carried out on ten children. Etiology, frequency of symptoms and aspects of therapy have been described. A case study of one child has been presented.

Opsomming

Outisme is hier beskou binne die raamwerk van die kind se ontwikkeling. 'n Studie is uitgevoer op tien proefpersone (kinders). Die etiologie, frekwensie van simptome en aspekte van terapie is beskryf, en 'n gevallestudie van een kind is voorgedra.

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