

5-1-1931

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BEHAVIOR PROBLEMS OF CHILDREN

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## BEHAVIOR PROBLEMS OF CHILDREN

"Behavior, common to every living thing, is the culmination, in some overt form, of the response of the individual to his environment. It is an intrinsic phase of existence, an expression of life and vitality of cellular protoplasmic activity----an expression of a psychobiologic unity" (1). To completely understand behavior one must be cognizant of the environment in all its aspects and in possession of all available facts concerning the biologic equipment and physiologic activity of the individual.

Civilization, through a long process of cultural, intellectual and ethical evolution has gradually built up certain standards of behavior. By such standards are responses of the individual members of society to environment judged as social or antisocial. Just as there has been a phylogenetic social development, so there must be an ontogenetic development. In other words, the individual human being is expected to evolve socially in the short space of two decades to the same

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point where it has taken the whole human race many thousands of years to arrive.

Social behavior is transmitted from generation to generation by precept and example, but it is not inherited through any biologic mechanism. The human being born into the world today must depend upon his biologic equipment and the factors within his environment for his evolution into a being acceptable and able to meet the demands of society.

Misbehavior trends and patterns are to be regarded as symptoms of failure of the individual in the harmony of living (2). Behavior, per se, is neither good or bad. Scarcely a vice can be mentioned, which, under certain conditions, has not been deemed a virtue. Goodness may be pathologic and abnormal behavior also. Abnormal behavior may then be defined as a variation from those standards socially acceptable to a group of people as a result of their traditions and experience.

How successfully the individual will adjust

himself to his environment depends upon two groups of factors --- those concerned with his biologic equipment and those concerned with his environment. It is through the interplay of these groups of factors that the child eventually develops a technic for establishing outlets for his inherent drives which are both personally satisfactory and socially acceptable. In many instances individuals fall so far short of this ideal, either because of defective or damaged biologic equipment, or faulty environment, that certain abnormal behavior phenomena appear. In such instances we see what is known as antisocial behavior, neuroses and personality defects and not infrequently a combination of both.

Education in its broadest sense is the only process we know of by which the new-born infant, endowed with only the rudiments of self-preservation and race-preservation instincts, may eventually learn to adjust his wants, demands, instinctive cravings, etc., in a word his behavior, to meet the requirements of society. One of the

most generally accepted and profoundly held teachings of modern psychology is that the years preceding the sixth are those in which habit formation is accomplished with the greatest permanence; and, in which the set of the character of the man that is to be, is formed, never to be fundamentally altered no matter what the experiences of later years may be (3). Thome of Boston points out that young children, because of their plasticity, suggestibility, imitateness and love of approbation, are very susceptible to training (4). Because of this the child's personality can be moulded and remoulded for good or bad, and his future adult personality will depend upon his training during that tender formative period of his life.

The antisocial acts perpetrated by these children, which places the stigmata of a behavior disorder upon them, may be produced by a number of widely different causes, and conversely many widely different antisocial acts may be produced by a single cause. For example, enuresis may be due

to faulty training or lack of training, to a pathological disturbance of the genito-urinary tract, to a glandular disturbance or to a dietetic error. Again, such widely different conduct disorders as stealing, lying, sexual delinquencies and truancy may merely represent different symptoms of one pathological process, such as an endocrine disturbance.

To the student interested in the methodology of behavior study it is desirable to set up some plan by which these maladjustments may be classified and interpreted. The ultimate object of all scientific study is prediction, for which prediction we can have control. In the case of the exact scientist, who can prepare his situations, introduce his materials and get uniform reactions, prediction and control are possible. His materials are simple and static while the behaviorist must deal with material which is constantly evolving (5). The total situation of behavior constitutes much which cannot easily be measured. It evolves both the

individual as an individual, the environment as an environment, the individual as a part of his own environment, the individual as projecting himself upon his environment and the environment as introjecting itself upon the individual.

Consider a fourteen year old boy undergoing adolescent expansion with a readjustment of his skeletal muscular and visceral systems, with the unfolding of his emotional life incidental to gonadal activity. As an individual we should know concerning his physical health and intellectual capacity. From the view point of his environment we should know about his family, home, neighborhood, school and various other factors constituting the world in which he lives. The individual boy however, living in vacuo is an impossibility and yet his situation is immediately altered when he finds himself a part of his own environment. He constantly tries to dominate, affect, modify or inhibit some of the environmental forces. He projects his personality and as a result brings about certain mod-



ifications of his environment, some real and some that exist only in his thoughts and attitudes towards his environment. This would represent the environment as he is projecting it. Then there is that final phase in which the environment reacts upon him and social customs and traditions seek to thwart and influence him (1).

One can appreciate at once how these situations must vary in the presence of marked physical disabilities. It is evident that fixing any one of these elements would lead to a large variety of behavior reactions, but with all these variables acting simultaneously the range of human activity is intensified to the nth power. Hence arises a large measure of the unpredictability of human behavior. All that may be hoped for is an ability to determine that in certain situations certain reactions may usually follow. Inferences may be made but no laws can be established. This would imply then, not a complete but an adequate causal explanation of behavior.

Of the causes of abnormal juvenile behavior

much has been written and numerous classifications have been made. They are all essentially the same. That of Lurie, based upon five-hundred cases, seems most adequate.(6).

A. Endogenous---embracing all physical causes both functional and organic.

1. Somatic diseases.
2. Diseases of the Nervous System.
3. Endocrine disturbances.
4. Psychoneuroses.
5. Constitutional Psychopathic States.
6. Psychoses.
7. Mental retardation.

B. Exogenous-

1. Home environment.
2. Neighborhood environment.
3. Combined.

C. Heterogeneous---due to a combination of endogenous and exogenous factors.

Of the five-hundred cases, sixty-five percent fell in the first group, twenty percent in the second group and fifteen percent in the third group.

There seems, however, to be some controversy as to how much some of these conditions are responsible for maladjustments of children. Especially is this so of physical disease. Carter in a study of three-hundred cases makes the following report as to the physical findings in so many problem children.

1. Defective nutrition -----	36%.
2. Overnourished -----	14%.
3. Endocrine imbalance -----	8%.
4. Irregularity and adventitious heart sounds --	12%.
5. Well defined heart lesions -----	4%.
6. History of previous illness -----	95%.
7. Enuresis -----	28%.
8. Defective posture -----	46%.
9. Defects of vision -----	14%.
10. Defective hearing -----	3%.

11. Defective teeth ----- 98%.  
 12. Speech defects ----- 12%. (7).

In contrast is the report of Eisler who, in a study of one-hundred cases, found only a few suffering from physical illness that the child or his family were aware of (8). In fact some of the worst behavior problems and most marked delinquencies occurred in robust children who were thought to be physically sound. Of this group it was possible to demonstrate a direct relationship between the physical condition and the behavior problem in but four cases, two epileptics, one who had had encephalitis and one boy with diabetes insipidus who showed characteristics which could be associated with his marked thirst and frequent urination.

In a study of four-thousand children in Boston and Chicago Thomas makes a report as to their physical condition.

1. Good physical condition ----- 32.7%  
 2. Marked general overdevelopment ----- 4.7%  
 3. Very poor general development ----- 12.6%

4. Premature puberty -----	9.3%
5. Delayed puberty -----	3.2%
6. Overdeveloped sex characteristics ----- (girls only)	4.6%
7. Sensory defects	
a. vision -----	20.0%
b. hearing -----	2.5%
8. Nose and throat ailments -----	23.5%
9. Otorrhoea -----	2.1%
10. Signs of nervous disease -----	3.4%
11. Syphilis ----- (girls only)	3.8%
12. Gonorrhoea ----- (girls only)	10.5%
13. Stigmata of degeneracy -----	3.1%
14. Somatic signs of congenital lues -----	3.6%
15. Signs of head injury -----	5.8%
16. Carious teeth -----	52.9%

In comparing the findings of this group of children with another group which presented no delinquent tendencies Thomas concludes that generally, the delinquent group is closely similar to the general group of children and that physically, the delinquents do not form a separate group (5).

These physical handicaps or deformities, according to Orgel, cannot be regarded simply as anatomic deviations, but as bound up most thoroughly and totally in an individual's conscious and subconscious life. As such it affects his intellectual actions, emotional stability and social equilibrium (9). "A child loses his right thumb---- a simple physical fact. But is it only the thumb that is gone? Something has been subtracted from the personality of the child. He is now different, an abnormal physical being. There is a loss of equality requiring compensation in many ways. He will be unable to indulge in many manipulations permitted to the others of his age and sex, and he may derive a sense of incapacity or inferiority which may lead to patterns of action which are distinctly antisocial."

"John has a cleft palate, but the failure of union of the bones has resulted in a cleft in his being. The operative procedutes with the resultant pain and distress, his consciousness of an unpleasant voice, and his painful attitude toward those who mimic it brings an aggressively defensive,

pugnacious, resentful, sensitive and unhappy personality".

Again let us be reminded of the words of Wile that behavior in man is the expression of a psychobiologic unity. He states further that "normal function grows out of and tends to preserve normal structure, and normal structure grows out of and tends to preserve normal function; an idea may paralyze movement, and a movement may paralyze ideas." (10). It is the opinion of Hamill that a person may carry his mental and social adjustments more satisfactorily because of his good health, but on the other hand there are many that are deformed who seem to be made rather than ruined by their deformities (11). Often weakness is the spur to effort, and the mental side is made strong because the physical is weak.

The statistics compiled by Thomas as to the intellect of his group are interesting (5).

	Chicago %	Boston %
1. Normal mentally -----	73.8	72.0
2. Clearly feeble minded -----	12.0	16.2

	Chicago	Boston
3. Subnormal mentally -----	10.6	7.7
4. Psychoses -----	1.0	1.1
5. Psychopathic personalities --	2.6	3.0

This would indicate that there is probably not as great a range of abnormal behavior trends among mental defectives as among children of normal or supernormal intellectual power. Intelligence, in so far as it affects behavior does so by reason of its adequacy or inadequacy in special situations; and its adequacy or inadequacy is affected by some things favorably and by other things unfavorably. Although a child's behavior may be conditioned by his intelligence, it cannot be explained by it alone, there being many other elements entering into behavior which are of at least equal importance. Quoting Wile again, "Behavior mirrors far deeper springs of action than well up into the plane of human intellect (12)." One cannot forget, however, that asocial and antisocial trends do occur with lowered mentality or congenital idiocy which



may have been the result of a meningitis, skull fracture or birth trauma, particularly arising from the faulty use of obstetrical forceps.

" B. was recognized as being psychotic and it was strongly recommended, three years before he committed murder, that he be taken care of as a mental case. It was not only that he was showing schizophrenic symptoms, but also he was already showing definite and serious delinquent trends. When first seen, at fifteen years, he was an excessive runaway, had been in burglary, and was associating much with bad companions. He came from a very decent family, and his mother's appeals for him always awakened sympathy. He was at the correctional school for boys for a time, but soon returned to old associations. At the trial for murder, the judge decided he was sane; later, however, he was transferred from the penitentiary to the state hospital in a catatonic stage of dementia precox.

D. came from a family in which there was much feeble-mindedness and tendencies to criminality. From the time he was first seen at the age of nine years, the Mother was

repeatedly urged to have him permanently committed as a defective but it was never done. He was sent to correctional schools three times. At fifteen he killed a peddler whom he attempted to rob and then disappeared." (5).

Hamill says, "the child with the violent temper who later grows up as an incorrigible, recidivist or moral pervert may owe his antisocial mentality to small brain destruction in infancy." (13) In a large number of children at the Institute of Juvenile Research in Chicago, one-hundred and forty-six were classified as having infantile cerebral palsy and seventy-nine who showed signs of cerebral injury at birth. The mental age of this group was found to be much lower than the total clinic group (14).

Strecker and Ebaugh have studied and reported the results of head injury on the behavior of thirty children. In these children there was often a history of explosive outbreaks in school or at home, frequently of such severity as to make the child a menace to its associates. Several children made threats to kill. One boy threatened to kill

his mother and frequently struck her. In another boy there was a total change of behavior reactions. He was uncontrollable, destructive, and at times had wild temper tantrums, during which he destroyed furniture or anything which came in his path. He enjoyed pinching and scratching his schoolmates, and tortured animals. The overactivity in these cases was definitely related to an impure affect or tension state. In some patients, as in the case of a boy aged seven, the mental reactions simulated a manic state with great psychomotor drive. This boy was also sexually precocious. The entire group of patients were unmanageable in school, and many had had extensive court experiences (15).

If the report of Ernfest be correct, the incidence of intracranial birth injuries is much larger than is generally believed. Clinical studies, by him, of new-born infants and anatomic investigation made on stillborn infants and those dying a few days after birth revealed some startling facts.

1. Nystagnus was found in 3.5% of all babies born after normal labors.

2. Nystagnus was found in 80% of all first born.

3. Nystagnus was present in 100% of cases where there were abnormal presentations.

4. Retinal hemorrhages were discovered within the first twenty-four hours of extra-uterine life in 12% of infants.

5. Smaller and larger hemorrhages in the substance of the brain outside of the fairly common pial and tentorial hemorrhages, were found at autopsy in about 65% of all young infants.

6. Lacerations in various dural folds, with or without an accompanying hemorrhage, were revealed in 50% of such autopsies. (16).

In considering the exogenous conditions constituting the environment which influence behavior, it should be borne in mind that many cases are also complicated by numerous endogenous factors. The home and parental conditions are of paramount importance, for it is there that the earliest impressions are implanted and those first impressions are not easily changed.

Thomas gives the following information, concerning the home, taken from his studies (5).

	Chicago	Boston
1. Good home conditions -----	10.3	11.1
2. Extreme lack of parental control -----	51.0	39.5
3. Extreme parental neglect -----	18.6	25.5
4. Poverty -----	19.0	16.7
5. Excessive quarreling at home -----	14.8	14.8
6. Alcoholism, immorality or criminalism in the home -----	19.7	15.8
7. Mentally abnormal parent in the home -	.7	1.3
8. Of illegal parentage -----	2.0	2.8
9. Both parents living at home -----	58.0	57.0
10. Both parents dead -----	2.9	3.5
11. One parent dead -----	29.0	27.7
12. Parents separated -----	10.0	12.0
13. Stepfather or stepmother in home ----	10.3	16.0
14. Mother working away from home -----	22.6	20.9

Oversolicitude, special likes and dislikes, favoritism, fault finding, bad examples, pampering and lack of dis-

cipline on the part of parents are all positive factors which cause a mental deviation of the child and contributes to his delinquency.

The following cases studied in the Behavior Clinic of the University of Nebraska College of Medicine, illustrate the influence of environment upon the child.

Case 1. S.W. Male Age 7. Since an early age this boy has been running away from home, many times staying all day. only recently he was found at the postoffice, after nearly a days absence, trying to get a job. Since starting to school truancy has become a problem. At school, he shows more than average intelligence but his written work is very poor. He is a bully around the other children, loves the center of the stage and enjoys telling stories of his adventures. Although a very disturbing element both at home and at school, there is apparently no malice in his attitude, no unkindness, cruelty or awareness of selfishness.

He has an optic atropy of his right eye, being blind in that eye since birth, and a loss of muscular power of the

right arm. These are attributed to a birth injury. He is left handed.

Conditions at home show extreme parental neglect. The father is home at rare intervals only. Even when he is there the mother persuades him to take her to dances and shows so that the father has entered practically not at all into the scheme of the boy's existence. The mother is an extremely extravagant and unstable person. When the parents are gone the boy is left with either the maternal or paternal grandmother who are constantly at swords point.

It usually happens that during the day when the child cannot find desirable companions for play or other purposes, he runs away from school or work. A poverty-stricken or unhappy home with bad surroundings may lead the boy to abandon it temporarily and repeat the act so frequently that a habit becomes established. Restlessness, nervousness, and especially discontentment with home or school causes these children to find a way whereby they can obtain satisfaction or at least relief and an outlet for their pent-up emotions. These

truants eventually become associated with a gang of boys who are generally organized for adventure but who soon end in delinquency and a start towards a criminal career.

Case II. K. C. Male Age 8. This is an overweight, hypersensitive boy whose difficulty is a failure to make a good school adjustment although there is apparently sufficient ability to enable him to do so. He has made fair grades in everything except writing but he has repeated grades several times. When at school he is restless and inattentive and inclined to magnify trifling difficulties. He has never had boy friends because he could not enter into the vigorous activities of boys of his age.

The boy's home is fairly comfortable and both parents are of average intelligence. In his infancy the mother would keep him awake until ten o'clock at night so that his father might play with him when he returned home from work. Since starting to school the mother has kept a "complete" record of all his grades in which A's and B's appear frequently. She censures the teachers severely for Kieth's failures and



spends much time annoying either the school principle or the supervising nurse at the office of the Board of Education. Recently he was absent from school nearly every day for two weeks, presumably to be cared for through the Behavior Clinic when, in reality, he had been requested to be present at the Clinic only on Wednesday afternoon, Friday morning and Friday afternoon after school. The mother's only reason for not sending him to school was "because she disliked awakening him in the morning when he was sleeping so soundly."

This boy has become a lazy over-indulged-in child who is content to bask in his mother's solicitious nature. His school troubles would soon be at an end if this attitude of his mother were changed to one which would instil a feeling of self-confidence in the boy.

Case III. J. D. Age 6. Male. This boy was a healthy full-term baby born at the University Hospital. At the age of one month he was brought back to the hospital with ophthalmia neonatorum which was treated for four or

five weeks at which time he was placed in the Child Saving Institute where he remained until he was two years old. The mother's story follows: "John has been unmanageable ever since his return from the Child Saving Institute. All attempts to discipline him have been of no avail so he is now permitted to come and go as he wishes. In January he was dismissed from a parochial school because of some 'sex irregularity'. He has been known to attempt intercourse with his eight year old sister. He also goes to stool behind the furniture in the house, lies, steals, runs away and is destructive to property." The mother has had the boy to the Juvenile Court for disciplinary aid.

The home is located in a respectable neighborhood, is fairly well furnished and is clean. The father, an ex-service man, has been out of work a great deal but he receives compensation from the government. At present he is at the County Hospital receiving "blood treatments". The mother is apparently a cheerful, tidy and cooperative woman. However, she contradicts herself continuously in her story, exaggerates the

child's symptoms and criticizes the doctors to the child. She thinks the boy has been severely abused by his father. A Family Welfare Association worker reports that the mother masturbates to excess.

It will become readily apparent that this boy's trouble is mainly one of mistaken parental control. Punishment for his offenses is all that he has ever known. In a young child this often arouses a resentful type of anger which may be thought of as the reaction of the ego to its forced adjustment. Resentment and anger show themselves in many ways, and where they can make no impression upon the superior individual, fear is the result. This accounts for many of the emotional elements entering into maladjustments, behavior disturbances and mental disease.

Many children are brought to the pediatric or behavior clinics with the sole or predominant complaint of bed-wetting. The enuresis cannot be considered as a disease but rather a symptom of a disease. It may be caused by organic or physical disturbances, the more prominent among which are

diseases of the central nervous system such as idiocy, cerebral palsy, spina bifida and tumors; internal glandular disturbances, such as diabetes insipidus; urinary changes where the urine is too acid or of too large a quantity; diseases of the bladder and kidney such as infections, calculi and nephritis; local irritations in neighboring organs, such as a narrow meatus, phimosis, pin-worms, fissures and vulvo-vaginitis. These many defects are only infrequently the cause of enuresis and even when present, their correction does not always control the bed-wetting because the habit has been too strongly established.

Fully two-thirds of all enuresis cases are those functional cases which are due to a large variety of conditions.

There is a small group of cases in which frequency and urgency are prominent symptoms. This pollakiuria is hereditary, more common in females and generally persists into adult life (17).

A strong desire for attention is widespread among children and is particularly manifest in the first-born or only children, who remain the center of their parents' attention for longer or shorter periods of time. They become accustomed to their dominant position and, enjoying it, resent any division of this affection which they believe to be due them alone. The child, feeling himself neglected, wets the bed in order to again attract attention toward himself and to avenge himself on his parents. Children also love emotional scenes which make them the center of attraction and bedwetting often serves to keep them in the limelight. Over-affection on the part of parents may also lead the child to continue the period of infancy and enjoy maternal care.

There are high-tensioned, emotionally unstable, nervous, restless and very active children of the hyperkinetic type who often suffer from enuresis. Their oversensitive nervous system probably tends to respond too quickly to impulses sent to it from the bladder. Over-

stimulation of this highly sensitive nervous system by overwork in school, strenuous play, quarrelling in the home, especially when these extra stimulations occur late in the day, certainly contributes as a cause of enuresis (18).

There are other obvious psychic etiologic factors in producing enuresis. Making the toilet a battle ground for discipline may cause the child to wet merely to annoy and to get his own way. Fear concerning the ability to control the bladder brought about by punishment, shaming and segregation because of bed-wetting concentrates the child's mind on the difficulties of bladder control; the fear and attending anxiety of committing the act and the suggestion acting on the child's mind that he has failed to control the situation is a cause of the difficulty and, according to Calvin (18), may progress to the point of even becoming an obsession.

"Robert was troubled with both diurnal and

nocturnal enuresis. He was a healthy normal boy living in a comfortable home with intelligent, understanding parents. Robert had none of the boyhood ambitions to be a policeman, engineer or fireman but always emphatically insisted that he wanted to be a minister. His trouble was peculiar for a case of enuresis. He would go dry on Saturday and Sunday and then for the remainder of the week the enuresis persisted. Christmas vacation came and he went dry for the entire period. The enuresis again stopped at Easter vacation, but during the time he was attending school the trouble would be ever present. Upon investigation, it was found that Robert was attending a Seventh Day Adventists School presided over by a veritable likeness of Irving's Ichabod Crane. No other disturbing element could be found to account for the enuresis which stopped when he was transferred to another school.

Out of one-hundred and twenty-six cases studied in the Behavior Clinic of the University of Nebraska there were thirty whose major complaint was enuresis. Of this

group only five had physical disturbances which could be called a contributing factor to their trouble. Three were definitely attributed to lack of proper training. The remaining cases all had a background of some parental or other environmental disturbance.

The habit of masturbation is important in its relation to behavior disturbances and delinquency. This is mainly because of the break-down of morale which is often obvious where masturbation has been indulged in excessively. In other instances where the habit is not so severe, undue thinking about it and over-conviction of its bad effects sometimes leads to a mental attitude that is conducive to delinquency.

"John was an orphan, raised by an aunt, and a masturbator and exhibitionist at four years of age. When first seen he was a sneaky looking, undertoned boy, the victim of long standing masturbation. He was leud of speeçh and objectionable to little girls. He associated with bad companions and soon developed a long record for forgery, steal-



ing and assault with the intent to rob. He was early immoral, married and divorced. Finally with a companion, while burglarizing a store, he shot and killed a policeman. In the penitentiary he was found to have a mental rating of the average adult (5)."

This tragic outcome could have been avoided if the specific needs of the case had been handled early by patient treatment.

"A. B. at eleven years was not only an excessive masturbator but she had numerous sex affairs with boys. By her step-mother and neighbor she was declared to be disobedient, immodest, and very obscene in her language. Physically she was in good condition except for somewhat defective vision. Mentally she was diagnosed as sub-normal but not definitely feeble-minded. The father was reported as alcoholic; the mother, a quick-tempered woman, who died six years earlier. The step-mother was intelligent but more devoted to her own child than this girl. The girl was sent to the Refuge for three years until it was

felt certain that her old habits had been corrected and new and better interests established. From there she went to her grandmother for two years, working steadily and having good supervision. Later she went to live with a friend of the family, of whom she was very fond, worked regularly as a machine operator, earned quite well and was considered industrious and neat. She visited her relatives frequently and seemed content with little else in the way of recreation (5).

The situation in this case closely parallels that of the preceding case but the marked contrast as to outcome is evident, due to intelligent supervision.

Masturbation is very common among young children of both sexes, but consideration of the habit, as such, is relatively unimportant. The habit is very frequently started from a genital irritation as a result of uncleanliness, highly acid urine, gonorrhoeal vaginitis in girls and phimosis in boys. Scratching the irritated parts, they soon experience a pleasant sensation new and different to them. They con-

tinue to seek this pleasure and soon a habit is formed. So long as the habit is kept a secret no ill effects result, but as soon as a parent discovers the masturbation it becomes a crime. The child is told of the evils of the act which will invariably lead to insanity and suicide. If the child is threatened he may continue his pleasure seeking for revenge, or, not fully realizing the possible serious outcome, he may continue. Finally, however, he awakens to the inevitability of the 'crime'. He attempts to stop but has no success and worrying continuously, is beset with the importunity of the situation. It is this break in morale which must be prevented if a further contributing factor in delinquency is to be avoided.

The relation of endocrinopathic states to conduct disorders is very definite. Lurie found in a study of five-hundred cases of behavior difficulties that sixty percent of them were of endogenous origin and of this sixty percent, sixteen percent or ten percent of the total were endocrinopathic (19).

Disturbances of the endocrine glands not only produce definite physical and mental abnormalities but may affect the mental attitude which the individual assumes towards his own abnormality. This attitude as a rule determines his entire outlook on life and furnishes the motif for the individual's behavior. It is not difficult to understand why the adolescent boy, suffering from eunuchoidism as a result of gonadal insufficiency, should develop a marked feeling of inferiority which in turn leads him to shun his companions, to become morose and shut-in, to feel that he has been cheated and that life is not worth living.

Other possibilities exist, in so far as endocrine disturbances are concerned in relation to behavior (1). Endocrine dysfunction may be termed one of the modes of expression of behavior without being responsible for its origin. The child who steals food because of a compelling appetite of diabetes mellitus is manifesting behavior in response to the urge of hunger and the diabetes cannot be

regarded as responsible for the tendency to steal. Further, the endocrine disorder and the behavior dysfunction may co-exist and both be determined by the same underlying cause. Consider tuberculosis of the adrenal gland or a congenital syphilis that involves the entire being of the child. Under these circumstances both behavior and the glandular activity may be codependent upon the tubercle bacilli or the spirochetæ rather than having any causal interdependence.

Timme (20) describes a certain group of cases in which the chief complaints were those of incorrigibility, non-amenability to discipline and pugnaciousness and which presented a close resemblance to one another in several important particulars. To these he gives the name of pluriglandular syndrome. Practically all cases showed the physical signs of myotatic irritability and myoidema. In some, the myotatic irritability would be increased to the point that a Chvostek reaction of moderate degree was obtained. Basing his investigations upon the work of McCallum and Voegtlein, who demonstrated that muscle irritability and

excitability is due largely, if not entirely, to a diminution in the utilization of calcium, he examined the calcium content of the blood in this group. Nineteen of twenty-three showed deficient blood calcium. Four cases that showed apparently normal blood calcium were of interest because treatment was just as efficient in them as it was in the other nineteen cases, showing that deficient calcium in the blood was not the chief factor in the disturbance, but rather it was an inability to utilize the blood calcium present. In many cases with a low blood calcium content there was an increased deposit of calcium in various portions of the body producing thick skull tables and in particular there were calcium deposits in the pineal gland. In fourteen cases showing pineal calcification, five showed either an enlarged clitoris and breasts, pubertas praecox or enlarged genitalia in the case of boys. In several others psychosexual precocity was pronounced. This would rather indicate a possible pineal involution process. Of nineteen cases, six were normal as to stature and fourteen were from two to six inches below average

height for their age, showing a tendency toward dwarfism. It was found that the blood sugar ran an inverse ratio to the calcium content of the blood, ranging from one-hundred to one-hundred and forty milligrams per cubic centimeter. The blood pressure was also high in all cases. In fourteen cases it was above one-hundred, in ten above one-hundred and ten, in five above one-hundred and twenty and in one it was above one-hundred and forty. In all, except one case which had an Intelligence Quotient of sixty-eight, there was evidence of normal or super intelligence. Many were exceedingly precocious. Using calcium as treatment in these cases was of no value. Collip's parathyroid extract containing the active principle of the parathyroid gland was then used in hypodermic doses of from five to seven minimums. The tenseness, myotatic irritability, and the conduct disorders were rapidly ameliorated, growth increased in speed, and the calcium content of the blood became increased to normal ratios.

Speech disorders should receive mention as one of the endogenous factors contributing to abnormal behavior.

They have been classified into four main groups, from a behavioristic standpoint, by Blanton (21).

1. Delayed speech due to lack of mental development, prolonged illness during infancy, deafness, lack of necessity for speech, extreme negativism or a hysterical condition on the part of the child.

2. Letter sound substitution and lispings due to protruding lower jaw. But mainly, this is a type of infantilism where the child continues to talk in an infantile way because he does not wish to detach himself from his infantile surroundings, a bond between him and his early environment.

3. Oral inactivity, slurring or indistinctness of speech from lack of development or paralysis of the speech organs.

4. Stuttering. An emotional difficulty and a symptom that expresses a lack of adjustment to the group. It is caused by fear partly conscious and partly unconscious of meeting the group.



Speech defects are among the more common factors where physical characteristics stamp the individual as being different. This sense of being different causes a feeling of being inferior to others in the group and places a barrier in the road to healthy attainment of self-respect and self-confidence. Of the inferiority complex Lawry (22) says, "differences real or imagined, which the individual sees or feels between himself, and his own ideals or what he conceives to be the ideal of the group, occurring in any aspect of the physical, mental, or social life, may and do produce profound emotional conflicts and all the various types of disturbing behavior, the latter representing an attempt at compensation such that the individual will have a satisfied ego and a feeling of security in the group."

Probably no single disease has been more devastating in its effects upon personality and thus upon behavior than encephalitis lethargica. The profound alterations of the nervous system are by no means limited to the more or less tangible paralysis, strabismus, and the later Parkin-

sonian syndrome. Even the disturbances of the circulatory or respiratory rhythms is a minor factor compared with the moral and social deterioration which so often occurs.

The onset of acute encephalitis is marked by numerous signs and symptoms. There is no classical syndrome which can give an adequate picture of the symptomatology of this disease. In a study of fifty cases Strecker (23) lists the signs and symptoms occurring most frequently into what he calls a typical syndrome:

1. Sleepiness; found in 41 cases.
2. Definite fever; found in 24 cases.
3. Signs of eye involvement such as diplopia, strabismus and ptosis; found in 23 cases.
4. Influenza-like manifestations; found in 15 cases.
5. Delerium; found in 14 cases.
6. Headache; found in 14 cases.

Other less common signs were nervous restlessness, muscular twitchings and incoordinate movements, vomiting, paralysis and paresis exclusive of those of the eye muscles,

dysphagia, reversal of the sleep rhythm, vertigo, nausea and severe pains in the joints.

A list of the individual acts of these encephalitic children such as disobedience, tantrums, stealing, restlessness, running away, homicidal trends, truancy, teasing, lying, destructiveness, cruelty, sexual deviations and personal filthiness shows the same wide variety as is found in the psychopathic or problem child but those acts taken together present an entirely different picture. The behavior disorders of encephalitis seem to have a fairly definite clinical course in fairly definite phases, of different duration in different patients, but apparently not determined by external influences.

These children characteristically develop a period of extreme restlessness, overactivity with emotional irritability and impulsiveness, coming on suddenly or gradually after the acute phase of the disease and persists for months or years (24). They seem driven by a constant nervous stimulation or irritation, are constantly annoying those

about them, fighting impulsively, and running wild about the house and in the street. This motor overactivity closely simulates an attack of mania of the manic depressive type (25). The emotional factor seems somewhat different, but this difference may be one of degree, or modified by the earlier age of the patient. After a period of months or years ~~and~~ this restless activity subsides, but the emotional disorder, impulsiveness and various other things persist.

During this second phase the behavior is more comparable to that of the psychopathic children, but some fairly definite characteristics remain. Many of these children have begun to steal, lie, run away and do most of the other things that psychopathic children do. But as compared with the latter their behavior is more simple, open, impulsive and without malice, cunning or regard for consequences (25). There is no hidden meaning in their behavior, it represents no inferiority compensation or striving for leadership. These children have few friends and seldom belong to groups, but are avoided and called

crazy by their fellows.

Some form of emotional disorder appears to be the most constant clinical factor in encephalitis cases. This emotional disturbance seems to be the activating force of much of the behavior. It seems to be the basis of the impulsiveness, and of the characteristic friendly, obtrusive, and often extremely affectionate attitude of these children (26). Temper outbursts, crying spells, and various manifestations of emotional instability are common clinical features. The explosive outbursts of temper most frequently come out of a clear sky and are not apparently temper tantrums with a motive. Some cases present less characteristic features such as sexual perversions, erotic tendencies and delinquency, criminal traits, hebephrenia, and mental deficiency all more distinctly psychopathic in type.

Mental tests show that the apparent precocity of these children is not accompanied by a high intelligence quotient. On the other hand it is exceptional for one of

them to have an intelligence quotient below eighty-five. Nothing in the nature of a secondary dementia is ever seen even when the disorder has lasted so long as nine years. All that may be said about them is that their mental powers do not mature (25).

The relation between the behavior and emotional disorder on the one hand and the neurologic signs and organic pathology on the other is of great importance. At first the behavior disorder and persisting neurological signs were looked upon as residuals of encephalitis in children and Parkinsonism was considered the chief residual in adults. There has since developed, however, good evidence and opinion that the late neurological manifestations of encephalitis are the expression of a persisting inflammatory process in the nervous system. In studies of eight cases of Parkinsonism by McAlpine, the histological findings show the cells of the substantia nigra as the only group being constantly affected. "Subacute and inflammatory changes" were present in all the cases, being

especially marked in the midbrain, even when the duration of the illness had exceeded twelve months (27).

In discussing the pathogenesis of the behavior disorders Hill reminds us that the thalamus is the seat of affective life and probably has some action in the origination, in itself, of primitive and instinctive behavior. The pathology is organic and is an encephalitic process, "causing exhaltation of thalamic function either by thalamic release through loss of cortical inhibition or by chronic irritation and excitation." This is supported by the known predilection of the encephalitic virus for the thalamo-striatal level, and by the preservation of memory and intelligence, indication that the cortex cannot be seriously involved (28).

That the occurrence and the clinical course of the behavior disorders in children are to be associated with a persisting active process in the brain is indicated by the evidence presented from a study of one-hundred and fourteen cases by Gibbs (29). In the first place, the

occurrence of the behavior disorder showed a close relationship to the onset of the encephalitis in practically all cases. Every case except one had a history of a definite attack or onset of encephalitis at a definite time. Nearly all cases had a history of a typical febrile onset with delirium or marked lethargy which left no doubt of encephalitis. Many of the children had been in bed for weeks or months and a number had been in hospitals. In very few cases could the acute attack be classed as mild or ambulatory, and there was little opportunity for confusing it with influenza. In six cases there was a history of a definite onset of neurological manifestations without a history of a previous acute febrile attack. In four of these the onset was marked by the appearance of spasmodic twitchings and in two by typical respiratory disorders. In each of these six cases the behavior disorder appeared with or soon after the appearance of the neurological disturbances.

Behavior and emotional changes followed the acute



phase or onset without a definite interval of complete recovery in all but eight cases. The frequency with which the acute delirious or lethargic onset in children merged into or was followed immediately by emotional irritability, impulsiveness, and a restless overactivity indicates that the beginning of the behavior disorder was a further manifestation of a still active process rather than of a secondary or residual nature.

Not only was the occurrence of the behavior disorder closely related to the onset of the encephalitis, but also the persistence of the behavior disorder was associated in a large majority of cases with persisting organic signs. Nearly all cases showed some neurological signs such as cranial nerve palsies, tremors, tics, respiratory disorders or persisting sleepiness, and in some cases a definite Parkinsonism two to five years after the onset of the encephalitis. The most definite evidence of a persisting brain process in these behavior cases was that fifty percent of the children showed varying degrees of Parkinsonism eight to ten years

after beginning his study. In many of these it had been definitely and in some rapidly progressive. In those cases failing to show definite Parkinson signs, there seemed to be an improvement of the behavior disorder along with a tendency for the neurological signs to disappear. This would indicate a cessation of the organic process. In a number of cases there existed a close relationship between the respiratory disorder and the emotional factor; in these as the respiratory disorder improved the behavior improved also, giving further evidence that the behavior improves as the organic process subsides. From this one would suppose that the respiratory disorder is due to involvement of the respiratory mechanism in the process going on in the brain.

Jelliffe, in a resume' of case studies of post-encephalitic respiratory disorders which included tachypnea, bradypnoea, dysrhythmias and respiratory tics such as yawning, spasmodic coughing and sniffing adheres to the thalamic hypothesis, as to their origin, in which the

afferent stimulus is thought to be blocked. In contradistinction to this others assume these disorders to be peripheral in origin producing thoracic rigidity of a nature allied to Parkinsonian rigidity; while still others believe them to be due to higher medullary involvement (30). In view of the great diversity of respiratory phenomena and their complexity it seems that their pathogenesis is purely speculative and any monistic interpretation would be no more than hypothetical.

The following case history described by Hill (28) shows a fairly typical development of a behavior disorder and other sequelae of an acute attack of epidemic encephalitis.

"Female Age 13. Before her illness the patient was a 'sweet-tempered, bright and happy child.' She had been very clever at school and there was no neuropathic history. In March, 1924, at the age of nine, she had an acute attack of epidemic encephalitis of sudden onset, with headache, fever, weakness of limbs, delirium and

and complete insomnia for three days and nights. Then for a fortnight she remained in bed, very drowsy, sleeping for hours and hours. She then got up but continued to suffer from great nocturnal restlessness and diurnal lethargy. Five months later she seemed to have recovered and to be almost herself again. For one year she remained at school, never missing a day. Then she began to get very drowsy again during the day, had no life, and did not want to go out at all. She slept all night and on arising would fall asleep over her breakfast, go to school and promptly fall asleep as soon as she got there, not being able to do her work. She developed at the same time frequent bouts of 'deep-breathing' and had 'queer turns', during which she would go quite rigid for a few moments. Tonsillectomy was performed in the hospital and immediately following the operation her condition became much worse. She started habits of spitting at and pinching other people, grinding her teeth, and used to cry a great deal (October, 1925). For the next four months, until admission to the hospital, she was unmanageable at

home, not only because of these impulsive actions, but because of other abnormal conduct, such as taking articles of her parents out of the house and giving them away.

After admission to the hospital in Feb., 1926, the patients behavior and mental condition were reported as normal, except that she was apt to hang her tongue out frequently (a tic) and had bouts of noisy tachypnoea when excited. She ate and slept well and was good at school. Seven months after admission a change gradually appeared. She became constantly restless, more pert than usual to adults, was incessantly grinding her teeth when unoccupied, and developed numerous impulsive actions. She would suddenly tear her clothes, or smack someone in the face, or, if nobody were near, smack herself on the head, and she took to blowing at people who went near her and attempting to spit at them, and was constantly spitting when walking about. She was quite conscious of her sins and ashamed and tearful on being spoken to about them, but said, "I can't help it," or "something makes me do it," and added that it "helped" her

to smack someone and that it gave her the same satisfaction to smack her own head if no one else were present. She began to smash chinaware whenever she could, and to tear her bedclothes. She appeared to improve slightly after a quinsy thirteen months after admission, showing more powers of control. However, two months later she was as bad as ever, developing much crying, frequently throwing her meals on the floor or fire, and even getting out of bed at night and pinching and biting another child who was asleep. Many uncontrollable actions then took place daily. She jumped suddenly out of bed and hurled a marble locker-top through a window (she said she felt dizzy and did not know what she had done until she saw the damage); she struck without warning or reason a nurse who was bathing her; picked up a chair and broke a large window; hurled a chamber through a ward window; hit a stooping person on the head, etcetera. Eighteen months after admission she developed a strong desire to have her head covered day and night, as it "stopped her from spitting." She was very fond of school but attendance was often impossible, as

suddenly she would bang on her desk for a few moments with her fists and then rapidly fly at and strick another girl or the teacher. It would be over in a few minutes, and she would then cry; "Its no good. I can't stick it any longer."

During her stay at the hospital she remained impulsive and uncontrollable. Her behavior for a single day was never normal. Her intelligence was normal. A Binet-Simon test showed her at least up to her age-standard, and a similar test done at the age of nine years gave her mental age as eleven plus. Physical development was normal. There was at one time some mutual masturbation with another girl. There is no nocturnal restlessness. During the last four months she has shown the development of slowly advancing Parkinsonism. She has a slight Parkinsonian mask, slight cog-wheel rigidity in the legs, and a somewhat Parkinsonian attitude and gait."

## CONCLUSION.

An intelligent approach to behavior difficulties means more than a physical and psychological examination of the child. It calls for an evaluation of the child in his social setting. Investigation of the life history of the child, not as an isolated individual, but as a biological social organization, is imperative. Until society recognizes its own degree of participation as a factor in behavior difficulties, the most adequate approach to this subject will be delayed. The main behavior difficulties of children are largely those of society and are due to social activity or inactivity. The difficulties of behavior that so frequently end in delinquency must be attacked while the child's habits and character are in the formative period. The preventive phase is of paramount importance and calls for care when these young children are most plastic, most suggestible and most responsive.



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