

1945

Need of understanding the preschool child's personality and development behavior patterns in medical practice

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The Need for Understanding
The Preschool Child's Personality
and
Development Behavior Patterns
in
Medical Practice

Edward E. Shev

Senior Thesis Presented to The
College of Medicine, University
of
Nebraska
1945

"Treat man not as an end to a means, but as an entity
within himself."

--Kent

PREFACE

The author wishes to thank the Pediatrics Department of the College of Medicine, University of Nebraska, and the Hattie B. Munroe Convalescent Home, Omaha, Nebraska, for allowing the tests to be given to various children at these institutions.

E. E. Shev

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INTRODUCTION

The subject to be discussed in this paper is the need for understanding developmental behavior patterns and the personality of the preschool child in medical practice. The preschool child in medical work, both from the clinical and academic points of view, is an important part of general practice, for this is the age of greatest growth, both mentally and physically (Levy, 1917). Therefore, the appreciation of the preschool age is of utmost importance to both the specialist and general practitioner. However, in medical school, we see the emphasis placed upon the physical growth of the child, and with very little emphasis placed upon the child as an entity.

This paper will attempt to show the need for medical personnel to appreciate that a child of the preschool period is a distinct entity, and must be so treated. It will contain a review of the available American and English literature on the subject of behavior, personality, and other related subjects other than that directly connected with actual organic pathology of the child. A test will be presented correlating the mental, physiological, and anatomical growth. This test may be used by any medical person--doctor, nurse, or medical

student, to establish the relative age of the child in the four fields of development; Motor, Adaptiveness, Language, and Personal-Social behavior. These four fields of development go to make the child a distinct entity, and to establish whether the child is retarded mentally, physiologically, or anatomically. This test will also present a basis for judging mental achievements, and indicate the ability to learn.

Wile (1935) writing in the medical records summed this situation up with the following statements,

"Unfortunately the traditions of medicine have placed primary concern not upon the child, but upon the physical problems peculiar to childhood. Thus, we find the physician, pediatrician well trained with regards to signs and symptoms, but completely at loss to understand the total child as an entity."

The problems to be solved before an adequate understanding of the preschool child as a complete entity are (1) education of the medical students and doctors, (2) a method of study by which the child as a whole can be revealed, and (3) the education of the parents in the proper appreciation if the problems are inherent in the preschool child.

The child is born with a negative personality. This child is equipped with certain innate responses which will

allow it to respond to the external stimuli of the environment and develop a personality of its own. The personality developed by the child will serve to identify it the same as the physical features. The child develops a personality from his environment and is only limited by his heredity. Therefore, the more stable both factors are, the more stable an individual will be produced. That is a personality stable enough to withstand the disappointments and frustration of the environment. Therefore, the child must be evaluated as to the limits of his heredity, and the limits of his environment in order to view the child as an entity (Farnell, 1936). Thus Levy (1917) states "To properly evaluate this period would prevent many institutional cases, both mental and organic." The understanding of the preschool child is more difficult for the child cannot express himself nor can the adult inquire of the child the problems it must have.

The medical reasons for understanding the preschool child are the relationship between the early behavior patterns, and personality development, with adult neurosis, (Kanner, 1941), (McInnes, 1943), the making of a

diagnosis of certain types of feeble-mindedness or amentia (Gesell, 1943), and knowing the level of intelligence, personality, and organic ailment of the preschool child will lead to a "more properly understanding and the more intelligent applying or giving medical therapy" (Foote, 1923).

HISTORY

The earliest discussion of child study was probably done during the days of the Greeks. This was really not in the medical sense, but from the social position of the child. The preschool child was not considered in the male society, but was part of the women's. At the same period we see the Chinese detail the job of early childhood education to the old men of the villages--this has carried over to our present day. Since the advent of modern catholicism, that is about the last 500 years, we find such a statement as "Give me the child the first seven years, and the mother may have him the rest, but his heart remains with me." attributed to the priest, whether this is true cannot be proved at this time, but will serve to illustrate how important this period of life has been considered in the past.

In American and English writing, this period of life doesn't come under serious consideration until approximately the turn of the century when Baldwin (1900) discusses infant development and attempts to correlate the child as the basis for adult society.

Chapin, (1915) wrote his article on the problem of loneliness as a factor in the recovery from illness of infants. This was about the first article in American Medical literature dealing with the problems of the preschool child. Since then, sporadic articles appeared dealing with this age group--the greatest amount of literature appearing during the past decade. However, the majority of these articles do not deal with the medical problems but with detailed study of child characteristics in the name of purepsychology.

III ANALYSIS OF EXISTING LITERATURE

The literature has been limited to American and English articles. The literature which directly deals with the subject of treating with understanding the preschool child is inadequate, and some articles which start out to deal with the subject will concentrate on some particular point forgetting the original intent of the article. How-

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ever, they serve to illustrate two important points. One, that the medical profession, as a group, is still overwhelmed by the pathology of the preschool child to consider him as an individual; two, the other point is that they concentrate on an isolated condition such as a personality distortion like Autism, or they speak with such generalities to make any conclusion invalid. Thus, the following articles are reviewed under the following groupings: growth-maturation, personality-mental development, and the correlation of the two.

The term growth-maturation, refers to the articles which discuss physical and mental maturation, and growth as a basis for building an individual. Personality-mental deals with articles involving theories of mental and personality developments and controls over their processes. The last group are articles which attempt a correlation of these two groups, and emerge one complete picture of the individual.

The literature on growth-maturation is vast, and only a few articles will be referred to. The literature on the personality — mental development of the preschool child as it is related to medicine is relatively small. The

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articles which relate to the personality-mental development of the child and growth of the child are even fewer in number than those on the personality-mental development of the preschool child or growth-maturation.

GROWTH-MATURATION

The first group to be discussed will be that of growth-maturation preschool age. The articles, which have been referred to treat the subject in generalities and only the general facts about this period will be discussed.

The need for studying growth on the broad bases of physical and mental development was discussed first by Levy (1917). Levy discussed the advances that had been made in the New Jersey school children, with regards to their physical health, by the establishment of clinics for the preschool child.

In conjunction with these clinics he suggests they include means by which these children's personalities may be studied so that proper knowledge could be obtained to further these children in making proper adjustments in school and society. In this manner Dr. Levy felt many more stable citizens could be developed, and the individuals could grow with fewer mental and physical handicaps.

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The next few articles deal with the mental achievements of the infant and preschool child, one must establish a criteria by which intelligence can be recognized. This criteria must be established on the basis of adult activity; thus intelligence is merely a behavior pattern, as judged by the society, of what is accepted as being average of development at a given age (Irwin, 1942).

The child develops slowly from a mechanical child to one of voluntary action, however, all activity is limited by growth, and the infant slowly changes to maturity. Thus in each infant the ancient stages may be witnessed in the process of maturing (Aldrich, 1943).

The following statements indicate how early in life infant responses can be appreciated. Taylor-Jones, (1927) studied the responses and reaction in one day old new born for learned reactions to stimuli, also the special senses--smell, hearing, sight. These experiments were conducted upon seventy-five (75) children, and under the most controlled of condition. Her conclusion was that most of the special senses are used immediately after birth.

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Each baby presented an individual personality, this was shown by their varied responses to the stimuli. Babies learn from the first day of life, this she illustrated by the following description of a response to stimuli, "Child would be pinched on the toe; it would cry and then withdraw the foot. The next day the child's toe would be pinched, it would withdraw the foot and start crying." This also serves to illustrate that at one day of life, growth and development has been reached by the infant to learn from experience. Her final conclusion that to study the child at this age might give a clue to mental capacity and future development.

Dennis, (1941), concluded after studying two twins, from thirty-six days to fifteen months, for autogenous activity, by restricting their activity to a minimum, and by removing all excess stimuli, that "Practically all responses of the first year of life may be developed autogenously, without encouragement, instruction, reward, or example. Prior to the first year of life, sociogenous responses are few and relatively unimportant, if the well being of the infant is assured. His behavior and development will take its normal course. Maturation is a major factor in infant development, its importance lies chiefly in

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making learning possible. Maturation in and of itself seldom produces new developmental items, maturation of structures when accompanied by self directed activity leads to new infant responses.

Morgan and Morgan, (1944), in an original article, studies and observed eighteen infants from one day to seventy-five days. They recorded these responses as accurately as possible, and under controlled conditions. They made no attempt to conjecture about possible future relation with education progress or personality development. Their findings can best be summed up by the following chart (I) or developmental scale.

In interpreting child activity, it must be remembered that for the child to give a perfect performance at peak efficiency, the central nervous system and the physical growth must be at equal levels, and matured to the chronological age. Therefore, it is senseless to force the child into any activity before it becomes ready for that particular response, and can obtain the greatest learned pattern with the least loss of concentration to exclude other responses. (Anderson 1935).

Language is the best illustration of the above statement. The child cannot speak efficiently until central

AGE OF IN- FANT	REACTION
<u>Days</u>	
1-10	Fixate on object
11-15	Follows horizontally short distant
21-25	Follows vertically short distant
26-30	Passive attention to visual regard
26-30	Passive attention to playing
31-35	Follows circularly short distance
31-35	Passive attention to talking
36-40	Follows person short distance
36-40	Follows vertically all the way and reverses
36-40	Follows horizontally all the way and reverses
46-50	Follows horizontally continuously
46-50	Follows moving person backward and forward some
51-55	Follows vertical continuously
51-55	Follows circular all the way
56-60	Smiles to examiner
61-65	Follows moving person continuously
66-70	Active attention to visual regard
66-70	Active attention to talking
66-70	Cooing
71-75	Unbroken circular following
71-75	Active attention to playing by examiner

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nervous system and physical growth has reached the proper levels, but speech may be guided and developed by the stress of society. (Adams, 1932) (Hill-Young, 1944)

In concluding this section on growth of the pre-school child, it seems fitting to evaluate whether early pubertal maturation will affect mental growth, quoting from Gesel, (1926) who studied two cases of early pubertal activity for this purpose. "The findings suggest the existence of certain emotional and mental traits, not measurable by intelligence test, which are influenced by physiological development."

THE PERSONALITY-MENTAL DEVELOPMENT OF THE PRESCHOOL CHILD

The study of the personality-mental development of the preschool child, one is struck by the vagueness of both information and techniques of study. Thus, it is necessary to make references which are based on incomplete knowledge and based on assumed premises. The basic principle in understanding or studying the pre-school child is the understanding the child for his benefit and in his own environment at his own developmental level, (Bridgeman (1923)). Bridgeman, (1923) discusses

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the psychology of the normal child as attempting to impress the general practitioner with the fact that the "Child lives in the present and builds for the future, and has memory for the past."

Personality development of the preschool child, which includes many aspects of the child, can best be summed up as being based upon two basic principles. They are heredity, controlling growth and environmental stimuli, with adult suppression (Farnell, 1936). Types of personality which may be encountered are varied and many, but can be described as the excessive inhibited individual with internal conflicts who becomes the neurotic. This person has repressed himself due to home environment, and they are the nailbiting, shy individual with tics and sleep disturbances.

The second group is the inadequate inhibited with external conflicts. This individual is very unsocialized; he is very cruel, aggressive, a bully, boastful, and jealous, but he must not be confused with the psychopathic inferior personality.

The third group is the pseudo social type with inhibition toward the group.

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He has some group conflicts, but this individual is the more normal type than the other two, and this individual will become the good follower. The formation of these personality types can be looked toward the maternal-paternal control and their attitude toward the individual. (Jenkins and Hewitt, 1944).

The process of infantile thinking is an obscure subject, for the exact mechanism of mental process is not understood in the adult. However, insight to infantile thought was discussed by Abrahams, (1923) in which he felt all thinking was based upon the pleasure motive, but also aided by growth and inborn instincts. He thought that sex and heredity had to be considered before the complete picture would be understood. Line, (1929), states that a method that may be used in attempting to understand the preschool child's thinking is "by watching the child play with such simple articles as a set of dolls or other toys."

Pearson, (1931), refers to the personality developing on the basis of the psycho-sexual stimulus, and the mechanism of infantile thinking on the stimulation of the erogenous zones, i.e. mouth, lips, arms, genitals.

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He feels that even the learning of such things as bladder and rectal control is to satisfy a love interest in the mother or father. That is better bladder control will bring more love from the particular parent. However, these conclusions were not based on any controlled studies, but merely from casual observation of the author, Dr. Pearson.

One pattern of childhood behavior which develops at the time when the child begins to make discreet decision, is that of negativism. This is an important period for it marks a transformation from the dependent personality to the independent. The child has learned to say "No". Reynold, (1928), after making an extensive study of the period of negativism, came to the following conclusions: negativism of the preschool child, consist of an aggregate of refusals to comply with understood request. It is expressed by various forms of behavior, and the type of behavior is socially conditioned. The cause for this condition is not of one etiology, but has many contributory factors, such as, the struggle of child to establish his own personality; the apparent conflict of the child with the parent, or adult, as the time of

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request due to the adult being stubborn, or negativistic in not recognizing the justice of the child's refusal. Then probably as great a factor as the others is the lack of language knowledge, both in understanding it and the lack of vocabulary of the child to express the refusal in a more detailed manner. The peak age of negativism is about two years, and the older child who expresses himself in such a behavior pattern is acting accordingly. This period must be managed by understanding and treating the child as a discreet personality.

The practical significance in studying the psychology of the preschool child are manifold, but an implication of such a use can be seen in being able to predict future maladjustments and neurosis.

Kanner, (1941) points out five cases of early behavior problems, in which follow up histories were obtained, with the following results, two cases no aid was given, and they remained maladjusted; two cases extensive aid was given, and fairly good adjustments were made, the remaining one, only little aid was given with only partial adjustment made. However, with only five cases presented, this does not give a significant conclusion, but serves

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to illustrate how significant this may become. McInnes, (1943), in a talk before the Psychiatric Social Service students, at Oxford, felt that to study the relationship between adult and child neurosis, the complete study of the child had to be made before the complete picture could be understood to quote him on the subject,

"In the first place, although one would have thought that the work of Freud, on the all important matter of the mother-child relationship, would have affectively directed attention not only in theory, but in practice to the enlightened management of the early days and weeks of the infant's life, there is as yet remarkably little evidence that such a development has taken place to any save the slightest degree. In fact, it seems to me that the management of infant and young children, mothers, nurses, and even doctors, have not yet reached the stage where the application of sound principles arising from analytic experience is yet a practicable proposition.

Thus, he concluded by stating that stability in childhood depends upon the "child's needs of love and its love to be accepted", by the adult, "as good". He recommends that love should be bestowed with intelligence and poise and not showered on in a slushy manner. The other factor being the parent's loss of the child's love.

The place to study the psyche of the child is in

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the office of the pediatrician, general practitioners, and in the medical schools by the students and the nurses... (Foots, 1925) Yahr, 1927). Conklin, (1929), describes certain principles which can be followed by any practitioner, and taught in the medical schools to the students. They are, gain the child's confidence, make friends with the mother, and other relatives, and try to treat the child medically at his level, remembering that he is an entity within himself, and not as a means to an end.

In view of the preceding statements, the psychological behavior of the preschool child must be studied to complete the picture of his personality. Behavior may be defined as the reaction of the individual to a given situation at a particular time, and a particular location. The principles which underlie behavior are basic for all age groups, and particularly applies to the preschool group. They are given in any outline without discussion of these principles are listed below:

- (1) Desire to create attention, good or bad.
- (2) Imitativeness--this may be good or bad.

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- (3) Curiosity--wanders away, investigates body organs, etc.
- (4) Imaginativeness--this goes with curiosity.
- (5) Gregariousness--wishes to be part of the group.
- (6) Hoarding--"This is mine, I won't give it up" attitude about possession of goods.
- (7) Hero worship--this may be a good thing, but also child may have the wrong hero.
- (8) Superstition--this occurs in the older child, and will be limited.
- (9) Love for adventure--this must be considered with curiosity and imagination.
- (10) Complete honesty--this is true before the child becomes acquainted with adult society.
- (11) Pleasure--love responses and feeling of well being comes under this heading.
- (12) Intense grief--over happening which the child has no understanding.
- (13) Fear--this is taught to the child.
- (14) Hate and jealousy seen very early in the child with subsequent results which are bad i.e. enuresis, encopresis, etc.

These fourteen headings cover the main points basic to a behavior pattern (Jahr, 1932).

Emerson, (1917) reviewed hundred cases of so called well children at the Children's Wanders Home of Boston in which special emphasis was made to evaluate their I.Q's.

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The results showed most were resistant to examination, but once the barrier of strangeness to the environment was broken, physical exams became easier to be given, and the general I.Q. levels were higher. He makes no prediction, but stresses the importance of meeting the child at his level, and that certain behavior patterns will give a false evidence of the true character of the child. Birren, (1944) reviewed thirty-eight mental cases, in which childhood psychological records were known for evaluating any similarity of behavior in childhood with their adult life. Birren, concluded from the results of the study "it appears improbably that with clinical methods usually employed, the general group of children destined to be institutionalized, can be distinguished from other children who may be referred." However, he goes on to state "within the group of prepsychotic cases,

- (a) Children who later become schizophrenic tended to be more apathetic in childhood and are more intelligent than those of the constitutional mental disease group.
- (b) The constitutional mental disease group tends to be more excitable and of lower intelligence.

In either case, the behavior reaction of apathy or

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excitement appears to be relatively permanent in cases studied. The cases regarded as excitable, or over active were hospitalized at a later age than the apathetic group. Therefore, in the final analysis, he felt that personality characteristics and behavior patterns are stable and evidence of these conditions in patients which became psychotic and needed institutional care, can be recognized in childhood and such a personality could be watched developing from even the preschool age. (Birren, 1944).

To further evaluate the preschool child's personality and behavior attitudes, little devices may be resorted to such as the testing of the verbal memory of the child. This ability increases with chronological age, and the extent of memory is definitely a guide to the mental age of the child. (Foster, 1928). Overstatement by the youngster as to his abilities to accomplish certain activity will give information as to the child's imaginative powers, and thus indirectly give a clue to his personality. (Woodrow and Bemmels, 1927).

The question of whether the child will destroy more things or be more constructive if he comes from an environment which leaves him maladjusted, the findings of

Ackerman, (1937) on 160 children, both from normal and maladjusted backgrounds, showed no significant differences between the two groups, however, the tendency in the maladjusted group was toward that of being more constructive.

Easel painting of the child can serve as an index to personality expression. The child is allowed to paint with any color on paper, after he finishes it, he is asked to tell what he painted. Thus from the color of paint used, and the interpretation given by the youngster, his particular personality can be revealed, however the interpreter must be sufficiently acquainted with the child to get his cooperation. (Alschuler and Hattwick, 1943).

A definite problem of medicine that is directly related to the subject of the preschool child is obtaining the complete recovery of the child from organic disease without prolonging the condition and with the least psychological scars. This problem was recognized as early as 1915 by Chapin who noted that children placed in large institutions, away from their parents, and under strict medical supervision, would not recover from chronic illness as rapidly as when they were at home, or under

home conditions. This, Chapin, attributed to the psychological upset of the child, and his loss of feeling secure. Edelston, (1943), further pointed out the trauma of separation from parents, by presenting forty-three case histories of child anxiety, each with a definite history of hospitalization and complete family separation. His conclusions were that in the very young child, the Adlerian view of spoiling the child from too much attention due to illness is not true, this he bases on his work with evacuated children in this present war, family reports, and psycho-analysis of adults. The feelings of rejection and insecurity will occur in most children, but under proper home stimulus this feeling will pass unnoticed by the parent. Edelston, (1943) recommends combating this situation by having the parent adequately instructed in handling the child before coming into the hospital, plus knowing the level of intelligence of the child, so that an adequate explanation can be made at his level.

Children being separated from parents without explanation will create the feeling of being rejected more rapidly than any other action. Thus, when a child is to be separated from the parents, particularly the

mother, a clear and adequate explanation must be made for the separation. The older the child, the easier to explain, so that a clear picture may be grasped by the child, and one which will result in a better mental and physical adjustment to the new change. Therefore, when separation is to take place in the life of a young child, he should be prepared and aided in making an adjustment to the new situation. (Kestenberg, 1943)

The factor of ambivalent sympathies of the young child, must be considered before moving the child to a new environment. This plays a greater part in home placement for orphans and children who do not have adequate homes, and is more of a social service question rather than medical, so will not be discussed. (Gardner, 1942).

Loneliness as a factor in recovery from illness has been discussed earlier, but to summarize, Bakwin, (1942), reviews a number of cases over the years at Bellevue Hospital, New York City. This showed that in allowing parents to see children, and having the interns and nurses play with the children, especially the infants. This factor was counteracted to a great extent. The effect on mortality or morbidity record showed no in-

crease of either, but showed a decrease in morbidity and mortality. Bakwin, (1942), concluded "Pediatricians and others must recognize the fact of infant failure in institutions is dependent on lack of motherly care and home stimulation. Infants in hospitals are lonely."

The other point of view of too much attention from parents, relatives, and medical personnel as fostering psychoneurosis in infants and children must be considered. The point of view being that training to withstand rebuffs, and major tragedies must be started at the time the child lies in its crib alone.

They feel the child that was never taught to withstand the rebuffs of life or dwell much on his own rights, will in manhood not claim, expect friendship, confidence, reputation, position, or develop attractiveness, kindness, persuasiveness, capacity to win rewards from an always niggardly world. The infant who was taught quietly to bear his discomforts and is given the rewards in a fair and just manner, disciplines in a fair and just method, will develop a personality which is able to cope with misfortunes, disappointments, and fair and unfair competition with his rivals. Thus the seeds to adult psychoneurosis was planted (Woods, 1926). The

physician often in his zeal to treat the child, and impress the mother, will overtreat it. This aids in furthering the tendency of the parents to "spoil" the child because of the illness. In avoiding this situation, the physician must have an adequate knowledge of the psychological effect on both mother and child when he prescribes. He also must be well enough trained to handle such minor psychological mishaps, and to be able to identify the retarded child. His greatest duty is to be able to recognize the severe cases, and recommend proper treatment. He also is expected in treating the child to have the child recover to the maximum degree with the least psychological trauma. (Bartemier, 1931).

Some signs that are seen in early personality disturbances, especially below the age of two and which are probably due to rejection feelings are; (1) a hostile aggressiveness, (2) very violent temper tantrums, (3) enuresis, (4) speech defects, (5) demanding personality, (6) food difficulties, (7) stubborn, negativism, (8) over activity, love, hate, always wishing to please and fear, (9) the last and probably the more serious, the deliberate retarding of mental process resulting in an apparent feeblemindedness.

These signs are not constant or appear in every child who is rejected, but in a series reviewed by Lowery, (1940), they appeared in 75% of his cases.

Another type of personality behavior pattern which may develop from rejecting the child, and it presents a serious medical problem, is that of infantile Autism. Autism is the shutting out the environment by the child with resulting that often the child cannot speak. The child's history usually is as follows:

- (1) Parents are very intelligent.
- (2) The child's heredity is very good.
- (3) The family relationship to the child usually reveals one of neglect and very little love showered upon it. Parents are usually too occupied with other things.
- (4) The intelligence quotient shows these children to be of superior minds and not feeble-minded.
- (5) The child speaks, if at all, in the third person.
- (6) The child maintains himself in the third person refusing to attach any objectiveness to any act done by it or to it.
- (7) Child is very preoccupied and intent at all times. They appear self sufficient.
- (8) Usually a history of very early mental training in such complicated acts as talking or dancing by its parent.

The above findings were principally taken from an article of Kanner, (1944) The treatment of these cases are difficult, and demand the extreme care of not causing further injury. (Kanner, 1944).

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The psychology of the preschool age is vast and has many important medical implications. The few points that were emphasized are, to understand and practice the best medicine for the child, the general practitioner, and specialist must know enough about the child psyche to be able to help the mild and uncomplicated case and prevent psychological trauma. This can only be done through careful study, and being able to consult and guide the parents. (Huenekens, 1925)

GROWTH-MATURATION AND PERSONALITY-MENTAL DEVELOPMENT

The third and last group to be discussed is that on the correlation of growth and psychology. The literature on the subject is not extensive, and only an introduction into this field can be made for only in the past twenty years has the literature contained any reference to this subject.

The earliest reference to this subject appeared as an abstract in 1925, by Borrino. She attempted to call the attention of the medical profession to this problem by insisting that when doing a physical exam on the child an emotional development level should be ascertained at the same time. There appeared no des-

cription of a routine for doing just such an exam in this article, but such an exam will be discussed later in this paper.

The problems of correlating and studying the child as an entity of both growth and psychological development falls to the medical profession, especially the general practitioner and the pediatrician. These men must depend upon the trained psychologist to give them the understanding, and the stimulation in the medical schools to cause an awareness to this problem and its study. From the psychologist, they must obtain the knowledge of human behavior. The psychologist contributes to the medical profession in both special and general knowledge. The first are techniques of study such as I.Q. tests and developmental test. The second contribution is that of a concept of background and terminology with understanding of the general picture. The psychologist must be given sympathetic understanding of the basic principles of child life, and the means of modifying child behavior, by the medical profession. Thus, through contacts with children in school, at home, in the office of the doctor, the forward looking medical person can supple-

ment his contacts with children as patients in such a way as to become an intelligent and wise counselor on all aspects of child life (Anderson, 1930).

As an illustration of the lack of knowledge on understanding this gross picture of the child, Sherman, (1927), conducted a simple experiment on whether a group of observers could agree as to the emotional characteristic of an infant's response to a stimulus. He was curious as to what the observers based their answer, whether they would base it on, observable differences in the infants responses, upon the knowledge of the stimuli employed, or the previous training and experience of the observers. Their observers were divided into the following groups: medical students in their junior year, graduated trained psychological students, graduate nurses, and first year normal student. The types of stimulation used were, hunger brought about by not feeding infants on time, fear produced by dropping infant, anger by restraining the child, and pain by sticking child with a pin. The experiments were conducted under controlled conditions and the conclusions were, the various groups were influenced by their training, and that none could differentiate with any degree of accuracy.

However, the first year normal students did the best in making differentiation of responses to stimuli. Sherman, (1927), concluded that adult interpretation as to why an infant who couldn't talk cried, is greatly over estimated, and that only through more intensive study could this be done with any degree of accuracy.

The preschool age presents many interesting aspects of the child and his behavior. We see in his society such activity which can be compared to adults. Parten, in a study of leadership in this age group disclosed many interesting facts. Probably the most interesting one is the description of the leader of groups. They are divided into two types, the bully, and the diplomate type: the former rules by force, the latter by artful indirect suggestion. Another statement to tendency of the children of all ages to play independently, but the older child will play in groups more readily. Parten found that leader's I.Q.'s exceeded non-leaders, however this was not a great abyss. Social participation varies directly with age of the child. (Parten, 1932-33). Jenkins, (1931), studied eight cases of hyperactivity for organic causes. His results showed that only two

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out of the eight could there be shown any organic basis for this activity, and even those two had enough socio-psychological disturbance to warrant not excepting of the organic condition as true disease-processes. The remaining six¹ hyper-activity could only be traced to the socio-psychological disturbing factors. Jenkins drew no conclusions from this study, but felt that the problem of early children must include the study of the child as a complete picture, and not only as medical pathology.

In closing this section of the review of the literature, and especially this section on growth and psychology, it seem fitting to give a definition of what can be considered the normal child mentally. This definition is not the best, for there is no definition of what can be called normal, but this will serve to guide us in our study of the preschool child.

"A normal child mentally is the child who has normal native intelligence, who has lived in an environment in which he has understood, and has understood himself, in which he has had the opportunities to develop his mental interest and abilities, in which the emotional forces have been properly balanced with the formation of correct attitudes toward life and toward work." (North,

IV MEDICAL NEED FOR STUDY OF THE PRESCHOOL CHILD AND METHODS OF APPROACH

The preschool child presents many medical problems, other than those which deal directly with the inherent pathology of the child. The problems of enuresis, autism, malnutrition, over-activity, and actual mental development are but a few of these patterns. The answer to these problems must come from the medical profession plus those of the social sciences especially that of psychology. In treating the child medically, it must be done at the level of the child, both mentally and physically. Thus we see medical men calculating carefully a dose of medicine to fit the child, but proceed to treat him at the adult level. To correct this so that both the medicine and the treatment regime are at the same level, the doctor, nurse, and medical student, must be taught that the child is an entity with its mental processes at certain levels.

A method of approach to make a study of the child can be done through an organized clinic, as those described by Thom (1924) of the Boston clinics, in which not only the child but the child's parents come under specific study. Another method of study, which can be done more easily by the general practitioner or pediatrician, is that of giving development behavior pattern

test, which will reveal the level of development in the four major fields of development, motor power, mental, social, and language development. The major advocates and developers of such tests are Arnold Gesell at Yale, Harry and Rose Bakwin at New York University College of Medicine, and Aldrich at Minnesota. A discussion of one such test will be given in second part of this paper.

PART II

THE GESELL DEVELOPMENTAL BEHAVIOR PATTERN TESTS

A test which will give the necessary information for a complete picture of the preschool, will be discussed in the following paragraphs. The test was developed by Gesell, and his coworkers at the Yale Clinic of Child Development. These tests are simple to give, and can be used to evaluate the mental, developmental, and social age of the child. The best name for this test, or series of routines comprising this test, would be a Developmental Behavior pattern test.

Gesell, started developing this test in the early twenties in answer to a need for an adequate description of this group. Most tests are of the psychometric type,

and depends upon learned knowledge of the child and will only disclose the relative I.Q. which means very little.

This present test is the result of many observations and much work at his clinics. They do not represent the ultimate and each person who gives this test must adapt it and interpret it to fit the circumstances.

The basis of the test is the concept of the child being a progressive growing human individual, and stresses the child's "intelligence" as a "dynamic end product of multiple, changing factors; his abilities are all relative to one inclusive ability, namely, the ability to grow". (Gesell et al, 1940).

The test will be divided into four heading which will characterize ascending levels of maturity in terms of typical behavior patterns. The four headings are listed and defined below:

- (1) Motor Characteristics-include postural reaction, prehension, locomotion, general bodily coordination, and specific motor skills.
- (2) Adaptive Behavior- is a convenient category for those varied adjustment, perceptual, orientational, manual, and verbal, which reflect the child's capacity to initiate new experiences and to profit by past experience. This adaptability includes alertness, intelligence, and various forms of constructiveness and exploitation.

- (3) Language-embraces all behavior which has to do with soliloquy, dramatic expression, communication, and comprehension.
- (4) Personal-Social Contact-embraces the child's personal reactions to other persons, and to the impacts of culture; his adjustments to domestic life, to property, to social groups, and community convention. (Gesell, et al, 1940).

In using the above four groups of characteristics as a guide, the preschool child can be examined at his level, mentally, physically, and socially. However, it must be emphasized that in conducting this examination, a liberal and humane application of psychological methods must be carried out during the entire exam, and the interpretation of the results. The total child ceases to be an academic abstraction as soon as we try to ascertain the grouping of his behavior traits, his parent and family ties, his environment, and his total ability to adjust to life situation, must of necessity be part of the examination, and the examiner must utilize this information to complete the picture.

The tests are not proving the child's psychological levels, but the child's ability to make adjustments. To make the test feasible, it must be done at the most humane and understanding levels of the examiner, and getting full cooperation of the parent.

The use and needs of this type of test have been discussed in other portions of this paper, but the manner of conducting them will be discussed here.

The test may be conducted or given anywhere, but the ideal would be given in a prepared clinic. Instruments and personnel necessary to carry on these tests are simple and few. The personnel need only be the examiner and one assistant, the assistant can be the mother, or another relative, or nurse. The instruments are at space where the exam can take place, small table: if child is in older age group, two sets of blocks (square type) one large and one small, cup with handle, small pellets, writing pad, pencil or crayons, list of vocabulary for each age level, and a good history of the child's play activities with his playmates, brothers, etc.

Next to be discussed are the various things to be looked for at each age level. I will present them in the form of an outline. Method of conducting these tests can best be explained with case studies which will be presented later in the paper accompanied by pictures.

The following key age groups which will be outlined are six (6) month, one year, two years, three years, four years, and five years. It must be remembered that these

outlines are just that, and for more detailed studies in the four fields of these age groups, the reader is referred to the source material, The First Five Years, Gesell, et al, 1940.

I The six month old child (26 weeks) is older and has graduated from the bassinet to the chair.

A. Motor Characteristics

- (1) Half way mark, chronologically and developmentally, to the full attainment of the upright posture.
- (2) Sits alone holding trunk erect approximately one minute.
- (3) His prehensory approach upon objects are less
 - (a) Reaches for cube upon sight of it.
 - (b) Grasps with hand tilted, the thumb participating in the action.
 - (c) He will transfer cube from one hand to the other and then retransfer it.
 - (4) Ocular movements are more advanced than normal adjustments--
He perceives a string but is inept to pluck it.
 - (5) He consistently regards a pellet but will fail to secure it.

B. Adaptive Behavior

- (1) Eyes lead all action in adjustment, but eyes and hands function in close interaction, each reinforcing and guiding the other.
- (2) Inspects all objects within sight and reach.
- (3) Hands are versatile--he can grasp with them.
 - (a) Senses, surfaces and edges of a cube as he grasps.
 - (b) Brings object to mouth, rotates in hand upon inspection, transfers and retransfers block or cube in making examination.

C. Language

- (1) Crows and squeals.
- (2) Spontaneous production of vowels, consonants, and even syllables.
- (3) May say mu, ma, da--leads to first words.
- (4) More concerned with physical objects, tones of voices, inspection rather than words.

D. Personal--Social Behavior

- (1) Relatively self contained.
- (2) Takes keen delight in exercise of his new won neuro-muscular achievements.
- (3) He can exploit a single toy contentedly for a long period of time.
- (4) His postural level is sedentary.
- (5) Utilizes social contacts as they reflex him and their import to him.
- (6) He cannot squander himself for investigating environment, he is too interested in his activities.

II The One Year Old Child--this period leaves one with the impression that the infant is attempting to make up its mind as to whether it shall be a biped or quadruped.. This is preparation for future activity.

A. Motor Characteristics--more complicated.

- (1) The child creeps, varies in position, dual type.
- (2) Has inexpressible desire to stand erect.
- (3) He can pull himself to a standing position unassisted, independent equilibrium is reached about four weeks later.
- (4) Moves sidewise as he holds to a support.
- (5) Walks with support.
- (6) Prehensory patterns are reaching adult facility.
 - (a) Almost acquired the capacity of voluntary release.
 - (b) The flexor, or gripping component of prehension is now offset by an inhibitory

extensor component of release--a comparable inhibitory control makes it possible for him to release a ball with a throwing thrust.

B. Adaptive Behavior

- (1) He is appreciative of form and number.
- (2) He can place a cube into a container.
- (3) He can geometrize space and can place one cube over another momentarily, this type of orientation presages tower building.
- (4) He can crudely expell a pellet from a bottle or cup.
- (5) He has a rudiment genetic form of counting, ie: places one cube after another on the platform or table top.
- (6) Imitates very readily now, scribbles with crayons on paper.
- (7) His social ball pay improves under the stimulus of give and take.

C. Language-indication of intelligence as well as personality.

- (1) Listens to and repeats accustomed words under stress of repetition and imitation.
- (2) Beginning to suit action to the words.
- (3) Has added some words, 10-15, to his vocabulary.
- (4) Still uses squeals and cries to attract attention.
- (5) Will vocalize in front of mirror of self images.

D. Personal-Social Behavior--has acquired considerable social status to family circle, after the very center of his group.

- (1) Repeats a performance of a well received action.
- (2) Begins to feel his own identity which will become the nucleus of growing sense of personality.
- (3) He is now capable of unmistakable fear, anger, affection, jealousy, anxiety, sympathy.
- (4) He begins to have esthetic sense, responds to music.
- (5) Has a primitive sense of humor--for he laughs at surprise sounds and startling incongruities.
- (6) He is more self dependent, ie, feeds own self with fingers, expresses satiety by gesture.
- (7) His bowel movements are regularized.

- (8) Cooperates on dressing.
- (9) Has social reference by attracting attention.
- (10) He displays considerable perceptiveness of the emotions of others, and a growing capacity to influence and to adjust to these emotions.

III The Two Year Old Child--every period is a transitional period. Weight 23-30 lbs, Height 32-35 inches, dentition ly. He sleeps some 13 hours per day, has one nap. His legs are short, head large, there is a residual stagger in step, a spread in his stance, and a forward lean in his body posture, a total resemblance of primitive man. He, however, is far advanced in speech, emotional depth, and sensitiveness must be handled with considerable consideration.

A. Motor Characteristics

- (1) Motor minded--motor activity greatest joy.
- (2) No longer needs personal assistance in walking up or down stairs, but has to shift in marking time at each tread.
- (3) Can walk up to a ball and kick it on command.
- (4) Can hasten steps without losing equilibrium, but cannot dart about or make short turns and sudden stops.
- (5) Likes rough and tumble play.
- (6) Accessory muscle very active, he can wiggle his thumb and tongue.
- (7) Masticates automatically.

- (8) Turns pages in books with precision.
- (9) Builds a tower of six blocks.
- (10) Can use scissors and can string beads.
- (11) Hold glass of milk in one hand easily, but other hand held in sympathetic opposition.
- (12) Hold spoon with thumb and radical fingers in a supinely position (palms up), as well as by an overhand grasp.
- (13) Remains seated for longer periods.

B. Adaptive Behavior

- (1) Builds tower of six blocks.
- (2) Has memory for recent events, can find missing toys, remembers where they were placed.
- (3) His perceptual and mature behavior shows finer discrimination than at any other age period. Identifies many pictures, and can identify some letters in the alphabet and black and white.
- (4) He thinks with his muscles--acts what he is talking.
- (5) Can not move his hands freely in any direction however all activity is limited by neuro-muscular maturation.
- (6) Has control of movements in the horizontal as well as in the verticle.
- (7) Can build a train as well as a tower.
- (8) Can not build a bridge yet--needs a year of maturing.
- (9) He is a deductive reasoner, in a mass-muscle plane--moves a chair to the point where object wanted is out of reach and climbs up and retrieves object.

C. Language

- (1) The average vocabulary at this age is 300, the words are of unequal value to him. He may use one word for a whole sentence or the words may be only of novel use.
- (2) Type of words are mostly nouns, proper nouns, verbs, and some pronouns as mine, me, you.
- (3) Refers to self in form of proper name.
- (4) Same sentence expresses intention and action.
- (5) He sing songs his sentences.
- (6) Enjoys simple sound patterns.
- (7) Likes to listen for reasons of language as well as of sound.
- (8) Relates experiences in the present tense for the past tense has not been learned.
- (9) Uses words singly, in three or fours for a sentence, but never thinks or speaks or thinks in paragraphs.
- (10) Intellectually has formed negative judgment (knife is not a fork).

D. Personal--Social Behavior

- (1) Very much self-centered, has a sense of self importance.
- (2) Use of differential pronouns is rudimentary. Indicates at a latter day that he will be able to distinguish others from himself.
- (3) Refers objects to his mother in quasi-social manner.
- (4) Has solitary and, or parallel play only.

- (5) Not easily led by strangers.
- (6) Helps to dress and undress himself--he cannot untie or tie his shoes.
- (7) Uses a spoon without excessive spilling.
- (8) He can sleep without wetting the bed. Day time 'accidents' rare--makes verbal distinction between bladder and bowel control.
- (9) Hides toys to have at a later time, sense of possession.
- (10) More socialized--obeys simple commands and has spontaneous love desires.
- (11) Shows symptoms of pity, sympathy, modesty and shame, pouts, smiles when praised. may show signs of guilt and disgrace over some activity--not often sincere.
- (12) Dawdling is quite normal and characteristic.
- (13) He is negativistic. The extent depending on circumstance around, of tension present.
- (14) He has a distinct sense of status in the social hierarchy--displays an unmistakable attitude of seniority toward younger children.

IV The Three Year Old Child: The age of definite growth with better rationalizing ability and the unsophistication of the younger child goes to make this age a delightful one.

A. Motor Characteristics

- (1) Indulge in sedentary play for longer periods of time.

- (2) Likes to use crayons and is interested in finer play materials.
- (3) Prefers to solve problems.
- (4) Drawing shows definite strokes with less speculative strokes.
- (5) Builds tower of eight or ten cubes vertically.
- (6) Can fold a piece of paper lengthwise and crosswise but not diagonally even with the aid of a model.

Runs more smoothly, accelerates and decelerates with ease, turns sharp corners, and negotiates sudden stops.

- (8) Climbs stairs and goes down unaided--umps from bottom tread with both feet together. Can jump up about twelve inches.
- (9) Can ride a tricycle--age two cannot.
- (10) Walks with less sway and toddle to gait, and can stand on one foot for a precarious second.

B. Adaptive Behavior

- (1) Displays sense of order and arrangement even tidiness in action--great advance in discriminating values.
- (2) He likes symmetry of color, form and balance.
- (3) Spatial relation still depends upon gross postural and normal adjustment.
- (4) He must have a model to copy bridge building, making a cross, or copying a circle.
- (5) Can piece a picture cut in half together.
- (6) Much practical geometry is still body--postural and not eye manual---so works with might and main to solve problems.

- (7) Readiness to respond and conform to the spoken word is an outstanding characteristic of the psychology and maturity of the three year old. The three year is charming, serious about all his activities.

C. Language

- (1) Three year olds use words for designation of perception, conception ideas.
- (2) Vocabulary consists of about one thousand words-- however the greatest share are meaningless and he will only use a small percentage.
- (3) He uses acting to perfect his talk.
- (4) His line of chatter is apparently meaningless but it all goes to make the child an individual.
- (5) Can suit action to words.
- (6) He learns to listen and listens to learn.
- (7) He begins to appear maturing and resembles the older age group.

D. Personal-Social Behavior

- (1) He knows the existence of others beside himself and a reciprocal trade agreement may be made with him.
- (2) He has a great desire to please and will usually cooperate.
- (3) He uses words to express his problems and desires. He will do errands on request.
- (4) He will be disdained with such simple questions as "where is your nose?".
- (5) He still has a great sense of personal achievement, etc.
- (6) Makes direct affectionate reference to persons he likes.

He has definite fears, can be angry at definite objects and jealous of people, animals and other objects.

- (8) May have well defined night terrors.
- (9) He will try and influence others to approve his activity.

He is a bit more social but still definitely prefers the solitary and parallel play activities.

- (11) He is well domesticated, feeds himself, spills very little, may even wish to set the table.
- (12) Has fewer temper tantrums and is less rebellious.
- (13) Thumb sucking less noticeable.
- (14) Can almost completely dress and undress himself.
- (15) Has almost complete bladder control and is fairly well trained in toilet facilities.

This is a coming of age sequence leaving infancy behind and preparing for school age.

V. The Four Year Old Child: The dogmatic time of pre-school age because of his amateur command of words and ideas.

A. Motor Characteristics

- (1) More agile runner, can make a running broad jump and a standing broad jump.
- (2) Can skip but cannot hop.
- (3) He can balance himself on one foot for a considerable length of time.

Can ~~walk~~ on a six centimeter board without significant loss of balance.

- (3) He is protective toward younger playmates and siblings. He shares the responsibility for infant care.
- (4) He is naive in manner of being afraid and innocent to certain emotions.
- (5) He will display seriousness, purposefulness, patience, persistence, carefulness, generosity, outgoing sociability, friendliness, poise, pride in accomplishment, pride in going to school, pride in possession.
- (6) He plays in groups more than other ages.
- (7) He is very sociable and talkative at meals.
- (8) Tricycle and sled are favorite outdoor toys.
- (9) He likes to go on excursions; starts his collections, at about this age of objects not useful to adults.
- (10) He likes clothes and likes to masquerade in them.
- (11) Begins to evaluate companions for honesty.
- (12) Begins to show outward signs of sex recognition.
- (13) Has unreasonable fears.
- (14) Typically he is stable emotionally and can adjust to his emotional life.

Thus with the preceding outlines of the various age levels, one can conduct a Behavior Pattern Test. It must be remembered that before the test is given a history of the child's growth and social activity must be had. The reason for this is because the child cannot be watched for play activities and a history of growth indicates the amount environment plays, and is therefore valuable

in the final scoring or interpretation of the test.

The following case studies will serve to illustrate several points. They are as follows: ease with which the test can be given, relative accuracy of the test, and the amount of knowledge obtainable from these tests.

The test cases cited were given to four children of two age levels. Thus the cases will be discussed from the point of view of age. Each level has two children. The children of each age level will be compared only. The reader is again asked to remember that these tests are not for confirming Gesell's work, but to illustrate the ease of giving the tests and also the results.

The test given was modified to fit the time and situation, however, the basic principles were maintained.

The first two cases to be discussed are at the two year old level.

Case I.

K. W.--age two, height 39", weight 29#. Entered University Hospital on 8/44 with the following complaints: does not talk, stumbles when attempting to walk, sleeps with head extended, does not handle solid foods and cries considerably.

Past History --negative, birth history normal, full term, no illnesses.

Physical Examination--showed only an internal strabismus, no other findings.

Examined by a modified Gesell test. Child was placed by a nurse on the floor, and attempts to walk were made by the child. Child crawled, but when forced to walk did so with splay type of walk. When playing with blocks uses only three of them, but does not build with them, instead throws them aimlessly about. Cannot follow demonstration. Cannot place pellets into a bottle nor retrieve them.

Language--Makes no attempt at sounds and only squeals and makes throat noises.

Adaptiveness--it placid not curious and only responds to personal needs. Has no bladder or rectal control, and cannot aid in dressing herself.

Social-Personal--has no curiosity and does not seem to respond to play activities, uses own motor responses for amusement and with the history this case shows that the child compares favorably with the six month to one year old child, therefore, his developmental age is less than one year and compared to his chronological age he is retarded. His retardation is in every field, therefore this is a true Primary Amentia or Retardation.

Case II A Comparison Case

S. K. is a two year old white girl who entered the University Hospital on 8/44 because of possible head injury. Past history reveals that the child has been neglected by the mother. The child is malnourished, weighs 27# 8oz.. The mother is a prostitute and very neglectful of the child.

The test given to the child was the same as that given in Case I, and the results are as follows:

Motor--built tower of blocks (6 high), followed instructions, walks with assurance and has good balance, prehension with hand flexed and grasped with a smooth motion--over hand grasp.

Adaptive--built tower of six blocks, held cup in one

hand, could tell color, learned and followed instructions very easily.

Language--spoke simple sentences, answers questions and repeats words, counts up to three.

Personal-Social--plays by self and has feelings of being alone, because will cry until someone comes near him, and then he reacts with a pleased smile, draws circle in clockwise position, has bladder and rectal control, but accidents do occur, has some fear symptoms and is very shy.

This pattern of growth in all three fields compares very favorably to the two to three year level, thus she is developmentally equal to her chronological age and can be said to be normal, however, her history and shyness indicate a beginning behavior problem based on being neglected.

The test given these two were followed out in the following routine. The child was played with and his acquaintance made in presence of a nurse. The nurse was a friend of the child. Then the child was presented with ten blocks, $1\frac{1}{2}$ inch cubes. He was shown and then instructed to build a tower, train, or bridge depending on age level. He then was presented with a cup, noted how he grasped it and then asked to remove the pellets from within the cup, if he couldn't he was shown. He was given a crayon and asked to draw a man, results ~~was~~ were noted. The language part was not on a formal basis as the trend of conversation and responses to command served to indicate language level. Personal-social be-

- (5) He likes to try motor stunts of impossibility; he likes accomplishment
- (6) Has much more maturation and control of muscles.
- (7) He can button his clothes and lace his shoes with ease.
- (8) Appreciates fine movement.
- (9) Gestures with more refinement and precision.
- (10) Drawing is more refined and often detailed beyond necessity.
- (11) Circumscribed circle is either clockwise or counter-clockwise depending on hand dominance. Pellet playing etc. shows no signs of unilateral activity.
- (12) Can make an oblique fold in paper.

B. Adaptive Behavior

- (1) Has power of generalization and abstraction.
 - (2) Ask multiple question, not for curiosity, but to get a concept of the multiplicities of nature and the social world.
- Has definite consciousness of kind and his own kind.
- (4) He can count by rote up to four, number concept is 'many'.
 - (5) Tends to have imaginary playmates.
 - (6) His play and his questions are not organized and tend to make rapid changes.
 - (7) Four has a busy rather than a profound mind.
 - (8) He is literal in mind and analogies will confuse him.

- (9) He listens to stories with his body and tends to reenact in his body postures and gestures what he is told.
- (10) His drawing of man is very incomplete.
- (11) Builds a 10 block gate. Builds in the horizontal and vertical dimensions by intuition first.

C. Language

- (1) Level of questioning reaches a peak at this age.
- (2) Still infantile characteristics of speech.
- (3) Uses language for attention, and makes humorous statements intentionally.
- (4) He uses why and how and is only interested in fitting the answers to the though.
- (5) He always attempts to strengthen his command of words.
- (6) Four is verbal rather than verbose. He tends to include more in an answer than the direct answer itself. (an activity pardonable in the preschool child alone).
- (7) He will not repeat things.
- (8) About 1,200 word vocabulary.

D. Personal-Social Behavior

- (1) Has independence and socialability.
- (2) Four is more stable--will not leave the table of examination.
- (3) Will allow separation from mother more readily.
- (4) He is more careful in his activities.

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- (5) He may ask and pursue his own questions to the examiner that oft the examiner will become the examinee.
- (6) His home life shows him needing very little if any physical care, but still cannot tie shoes.
- (7) Combs own hair under supervision.
- (8) Eats without interference and often talks throughout the meal.
- (9) Goes to the toilet without aid.
- (10) Likes to go to the bathroom with others to satisfy new curiosities which are awakening.
- (11) Likes associative play and plays less alone than the three year old.
- (12) He shares possession more readily.
- (13) He will make 'silly sallies' from orderly play less frequently, and often purposely perpetuates wrong behavior.
- (14) Enjoys being bossy.
- (15) Very talkative--refers to the first person considerably.
- (16) Has good ability to supply alibis.
- (17) Four year olds also criticize.
- (18) Four year olds have so-called unreasonable fears of dark, cotton feathers, and other such objects.
- (19) Four is unable to make realistic distinction between truth and fable.
- (20) Four years is the adolescence of the pre-pubertal age.

VI. The Five Year Old Child: He is a little man and is no longer an infant. He has completely cut the ties to his family's apron strings.

- (1) Skips smoothly and jumps as well.
- (2) Can balance on his toes and one foot.
- (3) Well developed sense of equilibrium.
- (4) Has an attitude of completeness and relative finish.
- (5) He can deftly pluck a dozen pellets one by one and drop them into a bottle within twenty seconds and with a preferred hand.
- (6) Can wield a brush for teeth and a comb for hair.
- (7) He can wash his face.
- (8) He draws with assurance and deftness. His picture of man is complete.
- (9) His straight strokes show good command, in the vertical, horizontal and oblique.
- (10) Can copy squares and triangles.
- (11) Show a competence in washing dishes.
- (12) Can keep time to music when he dances.

B. Adaptive Behavior

- (1) Solves relatively simple problems of geometry and spatial relations in a free and adaptive manner.
- (2) He has perceptiveness for order, form and detail.
- (3) He has completeness in his drawing of man. He draws realistically.

- (4) Likes to finish what he is doing.
- (5) He can count intelligently to ten.
- (6) He can tell his age.
- (7) He can tell time better, has sense of continuity and can carry a project over from day to day.
- (8) Can remember events, rather remote of time.
- (9) Names what he is about to perform or draw.
- (10) Vein of seriousness which prevents him from being fooled by fables and fairy tales.

C. Language

- (1) Talk without infantile manner.
- (2) Answers questions direct and to the point.
- (3) His own questions are fewer and more relevant.
- (4) Five really wants to know.
- (5) Talks in finished sentences and uses most techniques of adult writing.
- (6) Average vocabulary about 2,200.
- (7) His dramatization of life is accurate and in detail.

D. Personal-Social Behavior

Within his capacities he is relatively independent and self-sufficient.

He is dependable and obedient in the household. Normally, he give little trouble in sleep, toilet habits, dressing and other duties.

havior was obtained from history, nurses charts and talking with parents. Thus in this manner the test was given, and results could be obtained which gave a fairly clear picture of the child's developmental age. Adaptiveness was learned from chart and some observations.

The last two cases are those of two children at a convalescent home. The test were given there. The routine followed was the same as described above, and the test same as for the younger children but modified for the age level.

Case III

B. J. age four, height, 35 inches, weight 26 pounds. Placed in home because of poor home environment, and the child was malnourished. Mother is a prostitute, and the child was raised by maternal grandparents. No home life; the child was neglected. Entered home 11/44.

Results of test--

Motor--builds 8 block tower, builds 3 block bridge, grasps cup with hand in full prehension, walks smoothly, agilely runs and stops suddenly, has complete confidence in action.

Adaptive--follows commands, plays with group, prints and draws rather incompletely.

Language--uses four word sentences, has good vocabulary, can identify all objects presented to him which he uses.

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Social-behavior--dresses self--cannot tie shoes,
toilet habits good, learns rapidly, very active,
constantly wished to please.

Summary of case shows child age of development
equal or above chronological age and must be con-
sidered normal four year old.

The fourth and last case has a similar background.

Case IV.

B. M. R. age 4 years 5 months--history mother is
a paranoid schizophrenic--father unknown. Was
fed on a bottle till brought to convalescent home
12/44. Stature and weight of a two year old child.
Birth history and past history of illness is un-
known. Was given the Gesell behavior test as other
cases.--

Results on 12/21/44.

Motor--builds tower of 9 blocks with oral instruction,
cannot build bridge, but must be shown and demon-
strated hand movements--good grasp without flexor
retention, grasps objects as she would a bottle to
be placed in mouth.

Adaptive--has no bladder or rectal control, cannot
dress self--must be aided, has no play activity, but
seems to stand and stare.

Language--seems to comprehend but uses cuss words
with infantile articulation, cannot or will not re-
peat words--writes only with scratching movements.

Social-behavior--doesn't play with other children
nor have any inclination for own activity, cannot
learn responses to words, learned to sit at the
table after four days of instruction, but still
cannot eat with utensils. The child seems in a
dream.

The results show the child in the motor field equal
to her chronological age but in the rest she appears

retarded to the level of a two year old or later, however with the known history, the retardation may be one of suppression and nutritional degeneration. Thus for a true evaluation further studies will be required.

With presentation of the above case histories, the ease of giving this type of test is illustrated, in an effective of determining, at an early age, the level of development is also presented.

This test, the Gesell Behavior Pattern tests, can be used by the pediatrician or general practitioner very effectively in the following manner. That is, in the cases of mental deficiency which come, with some frequency, to their offices, can be treated before the child reaches school levels; when, the Stanford-Benet test may be used. The practitioner can give the above test (the Gesell Behavior Test) and can establish with accuracy as early as six months to eighteen months the child's mental and physical age. The same is true for motor retardation, for illustration of these points the reader is referred to Cases I and IV. The other reasons are more academic, they are with the aid of this test, a clear picture of the child is obtained,

so the medical personnel can truly understand the personality and mental development of the child. Thus with the added understanding, he can recommend therapy to fit the child, and not try to fit the child to the therapy. Also, these tests serve to illustrate how much of an individual the infant and the preschool child is within himself. The last reason for pediatricians and general practitioners to use and know this test, is to judge intelligence of the child, and also to know intelligence of the child and also to know the level of development, and that the child cannot learn any faster than he develops in the four fields discussed, by the test, Motor, Adaptiveness, Language, Personal-Social behavior.

SUMMARY

The purpose of writing this paper was to shed some light and try to show just how important the understanding of the personality and development of the preschool child is to the practice of good medicine. In so doing, it was discovered early that the literature contained very little about this subject. The few articles which even carried

a thought along this line were read and only those reviewed could be considered appropriate to be included in this paper. Another reason, was to make an attempt to show how little the average medical person knows about the complete infant and how backward his application of therapy is when applied to this age group of children.

It was found that our literature was small in quantity and inadequate in quality. The foreign language writers have been doing a great deal of research, however their purposes are, and do serve a different point than ours. Theirs places the emphasis on the child being fit into their peculiar society, while ours emphasizes the child as an individual. The American and English literature has maintained an air of generalities or discusses some isolated behavior-personality problem. This is very inadequate, but shows the way to future study. In studying the preschool child, a method of study has to be followed and it must be accurate in its description of the preschool child. The only true method is following the natural trend of development. The test presented in this paper is an example, and probably the best to date.

Some very important work which must be forthcoming in the future is that of establishing a routine of medical therapy, which specifically fits the preschool child. This routine must come from the psychologist, social workers, and the medical profession.

CONCLUSION

The purpose of this paper was to emphasize the importance of the preschool period in medical practice with an attempt to evaluate the literature on the subject. A test based upon the developmental progress of the child was reviewed for evaluating the child. Four case studies reviewed with the purpose in mind to illustrate this test under actual clinical conditions.

The conclusions were, the preschool age is not emphasized enough; the child is not appreciated as an entity and medical therapy is based upon adult levels. The only type of test valid in studying the preschool child's intelligence is the developmental behavior pattern test, based on growth and comparison with other children of similar ages and backgrounds resulting in a total picture of the child.

The literature is very inadequate and very few

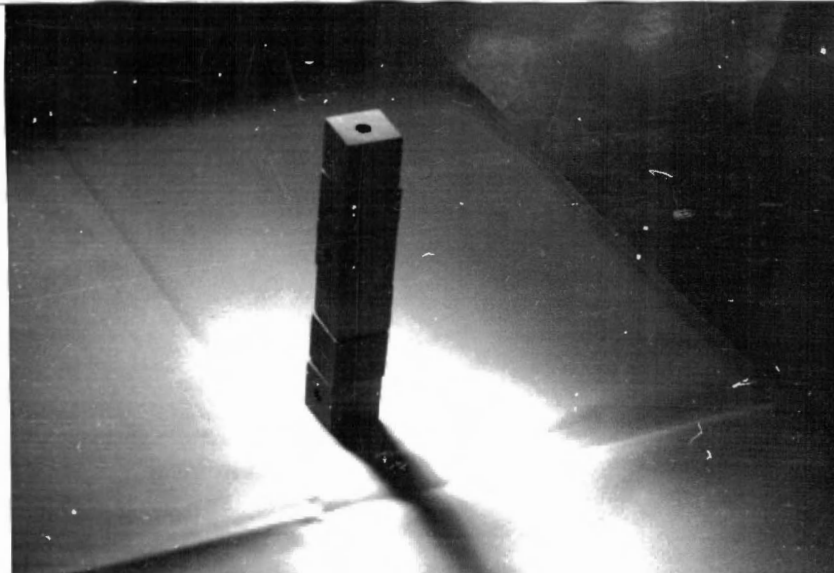
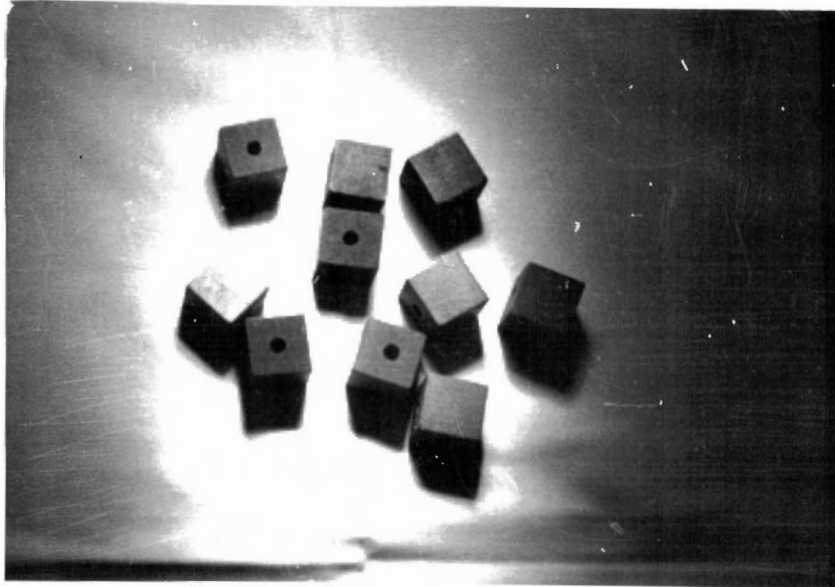
actual statistical studies have been done. The majority of the articles have the tenor of generalities. The information on the preschool child is very incomplete and this field of study remains to be pioneered.

APPENDIX

I

The following pictures serve to illustrate several points in the giving of the Gesell Behavior-development Pattern tests. These pictures were taken of two children at The Hattie B. Munroe Home for Convalescent Children, Omaha, Nebraska.

II



Figures 1 and 2 illustrate the type of blocks used,
and what is meant by a tower.

III

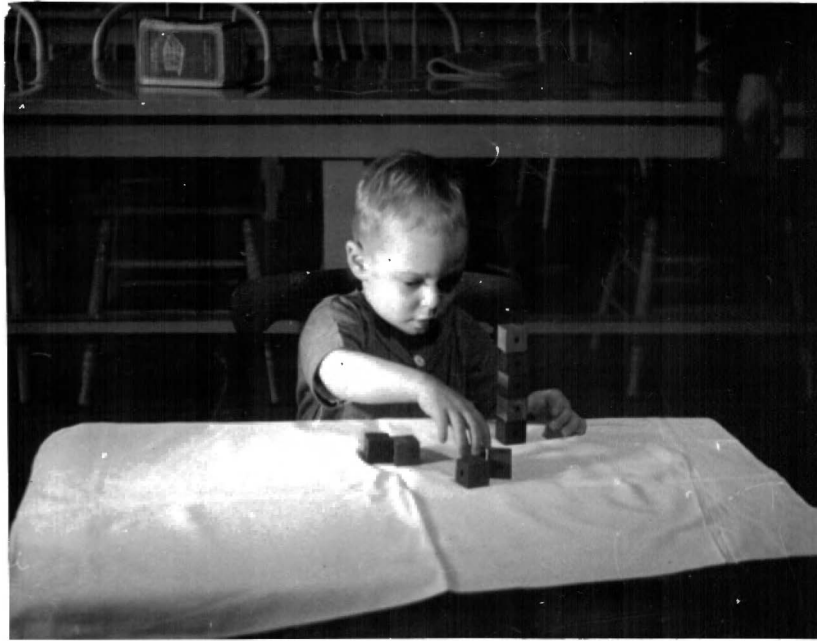


Figure 3 illustrates the prehensive movements in grasping and building of a tower of a child aged four.



Figure 4--same four year old child emptying and re-
trieving pellets from a cup--also not how cup is held
by the child.



Figure 5--four year old child writing--note how pencil is held in hand. Note the position of the head. This is the typical position of the body when the child writes.



Figure 6--five year old child illustrates the building of a seven block bridge.

VII



Figure 7--five year old child illustrates how this age child grasps a bell--note the full prehensive grasp and use of one arm.

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