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Learning Disabilities and Behavior Disorders: How These Problems Can Be Identified Using Standardized Intellectual and Personality Assessments

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LEARNING DISABILITIES AND BEHAVIOR DISORDERS

How These Problems Can Be Identified Using Standardized Intellectual and Personality Assessments

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INTRODUCTION

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VIII. To illustrate, to the reader, the analysis of the major projective techniques that identify emotional disturbance. The analyses are presented in case study form and are actual clinical evaluations.

IX. To inform the reader of the techniques of Behavior Management with children for use in the home and at school.

X. To summarize an oral presentation given at Lindenwood College - February 19, 1977 on the subject of LD/BD.

This paper is written to fulfill the following objectives to this writer:

I. To learn how the major intellectual assessments can be utilized to identify children with learning disabilities.

II. To become proficient in the content and analysis of projective testing instruments.

III. To become proficient in interpreting test results and writing them accurately in professional case study format.

IV. To develop remedial procedures to be used with learning disabled children based on deficit areas of the WISC-R.

V. To develop a behavioral management system, based upon behavior modification criteria, for classroom and home use.

Definitions and Descriptions of Learning Disabilities

The major disciplines contributing to the study of learning disabilities can be grouped into five categories: medicine, language, education, psychology, and other professions. The mingling of professions brings a multi-disciplinary approach to the study of the child with learning disabilities. See Figure 1. Since learning disabilities have developed into a field of study, varied and comprehensive definitions have been formulated. To illustrate the multi-disciplinary intermingling of the professions, a sampling of these theories are listed below.

Neurological dysfunction or brain impairment implies an organic etiology. The concept of psychological learning disability refers to the presence of a neurological dysfunction.[1]

The theory of irregular development of mental abilities implies that these developmental imbalances in children are factors related to education.[2]

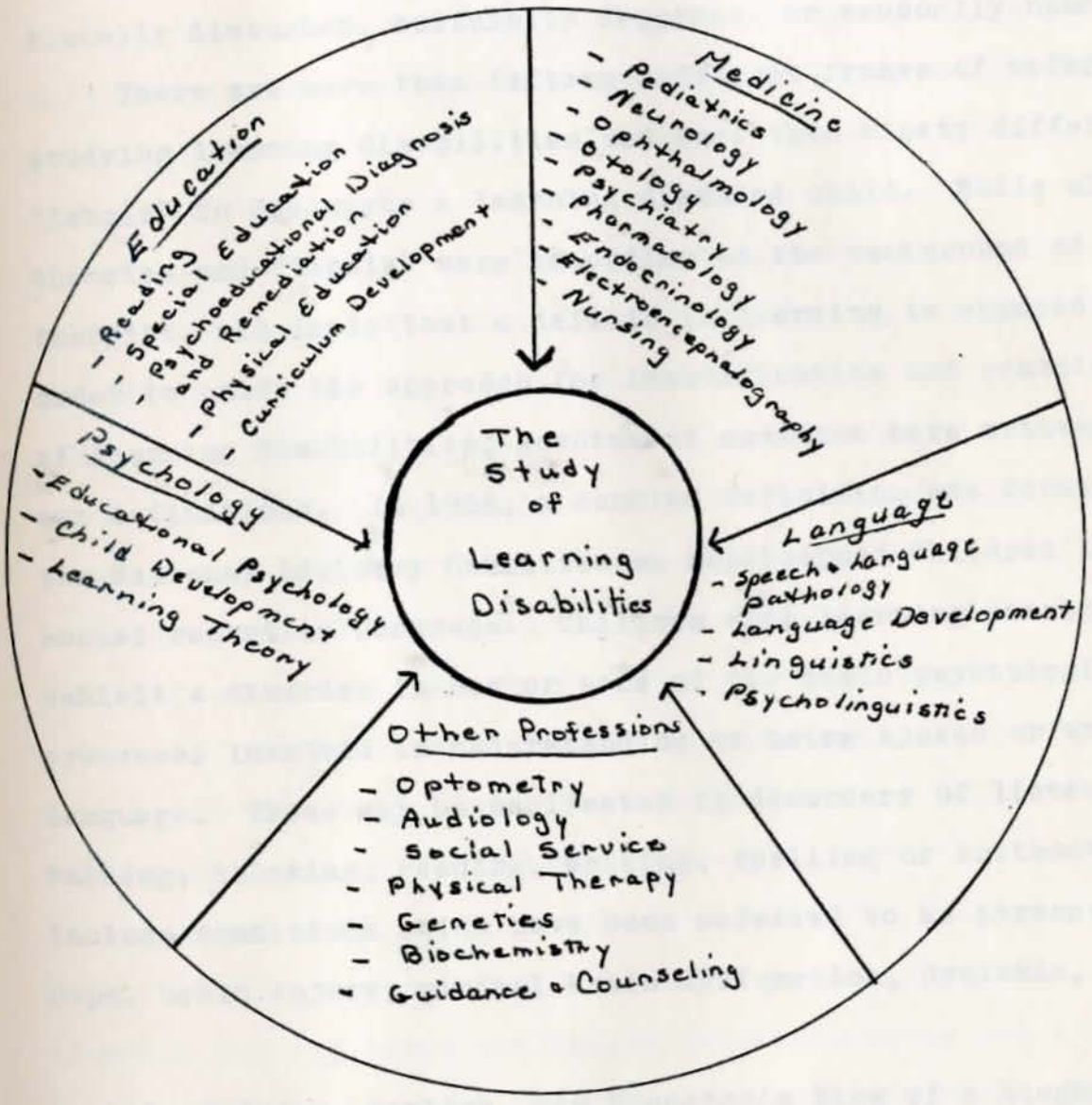
The learning disability may refer to a retardation, disorder, or delayed development in one or more of the processes of speech, language, reading, spelling, writing or arithmetic resulting from a possible cerebral dysfunction and/or emotional or behavior disturbance.....[3]

1 Myklebust, Helmer and Benjamin Boshes, "Minimal Brain Damage in Children," U.S. Public Health Service Contract 108-65-142 (Evanston: Northwestern University Publications, June, 1969), p. 8.

2 Gallagher, James, "Children with Developmental Imbalances," cited in W. Cruickshank, The Teacher of Brain Injured Children (Syracuse: Syracuse University Press, 1966), p. 21.

3 Kirk, Samuel, Educating Exceptional Children (Boston: Houghton Mifflin, 1962), p. 263.

Figure 1



Source:

Lerner, Janet W., Children with Learning Disabilities (Boston: Houghton Mifflin Company, 1971), Page 5 .

Another theory focuses on the identification of a significant discrepancy between what the child is potentially capable of learning and what in fact he has learned.[4]

Another dimension of the definitions is that children under consideration do not primarily fit into any other area of exceptionality. That is, they are not primarily mentally retarded, emotionally disturbed, culturally deprived, or sensorily handicapped.[5]

There are more than fifteen different frames of reference in studying learning disabilities and more than ninety different "labels" to designate a learning disabled child. While all these theories and "labels" vary according to the background of the theorist, all imply that a deficit in learning is apparent. In order to unify the approach for identification and remediation of learning disabilities, government agencies have written their own definitions. In 1968, a concise definition was formulated by the National Advisory Committee on Handicapped Children in their annual report to Congress: Children with learning disabilities exhibit a disorder in one or more of the basic psychological processes involved in understanding or using spoken or written language. These may be manifested in disorders of listening, talking, thinking, reading, writing, spelling or arithmetic. They include conditions which have been referred to as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and

4 Bateman, Barbara, "An Educator's View of a Diagnostic Approach to Learning Disorders," cited in J. Hellmuth, Learning Disorders (Seattle: Special Child Publications, 1965), p. 220.

5 Johnson, Doris and Helmer Myklebust, Learning Disabilities: Educational Principles and Practices (New York: Grune and Stratton, 1967), p. 7.

developmental aphasia. They do not include learning problems which are due primarily to visual, hearing, or motor handicaps, to mental retardation, emotional disturbance or to environmental disadvantage.[6] The definition for specific learning disabilities adopted by the Missouri State Board of Education in 1974 states that educationally, the term learning disability is used to refer to that student who has near average, average, or above average intelligence but who may manifest mild to severe difficulty with perception, conceptualization, language, memory, motor skill and control of attention.

A representative sampling of the specific perceptual deficits referred to in the Missouri definition of learning disabilities and the observable classroom behavior demonstrated by children with these problems are described in the following paragraphs.

Auditory Discrimination is defined as the ability to hear likeness and difference in sounds. It is not to be confused with auditory acuity which is the ability to receive or hear sounds. The ability to discriminate the fine differences between speech sounds is related directly to success in reading and is often associated with articulatory speech disorders. Children with inadequate auditory discrimination skills very often confuse certain similar words, such as "send" and "sand", "bit" and "bet", "pen" and "pin", etc. In addition, these children often cannot identify rhyming words and cannot hear likenesses and differences in the beginning, medial, and final sounds of words. Children with deficits in auditory discrimination skills often fail to

6 National Advisory Committee on Handicapped Children, Special Education for Handicapped Children (Washington: U. S. Department of Health, Education, and Welfare, January 31, 1968).

get spoken assignments and may ask to have the directions repeated. They may also watch the lower part of the face during conversation in an attempt to read lips. These children usually have a very difficult time with the phonics approach to reading and have trouble associating sounds with their visual symbols, which is so important for learning to read and spell.

Auditory Decoding or Reception is defined as the ability to understand the significance of what is seen and heard. It is the obtaining of meaning from sensory stimuli, the receptive understanding of words, gestures, and pictures. An auditory decoding disability means that the child does not understand what is heard even though his hearing acuity and the sensory receptive organs are normal. A child with an auditory deficiency usually does not comprehend the general instructions given to the class by the teacher. He hears, but the message does not get through. When this happens repeatedly he learns to tune the teacher out. Because he does not understand what he hears, he has poor receptive vocabulary, cannot carry out directions, and cannot identify sounds correctly. Since most instruction is oral, adequate auditory reception and the development of these skills is crucial for general learning.

Auditory Association is defined as the ability to draw relationships from what is heard or the ability to manipulate symbols internally. It is the central process of making the association or of relating to what has been stored and responding in a meaningful way. The child with a disability in this area does not manipulate linguistic symbols internally; he does not relate well what is heard to what has been stored. He probably has problems with abstract reasoning, showing poor concept formation in verbal

response. He may raise his hand and give an inappropriate answer. This child tends to be very slow to respond. He needs to have time to mull over a question. He may be poor at comprehending directions.

Children with auditory decoding disabilities are often deficient in auditory association. They may not gain sufficient meaning from what is heard in the first place, and this is what impairs their reasoning about what they hear. With a real disability in either of these areas, there should first be a check on the child's hearing acuity; if there is not a problem in acuity, auditory perception should be checked. If disabilities exist in both decoding and association, remediate decoding first.

Auditory Memory is defined as the ability to reproduce, verbally or symbolically, a sequence of symbols which have been presented orally. This deficit may often include an inability to respond appropriately to verbal instruction. Children with auditory memory problems cannot respond or respond slowly to verbal commands. The child cannot relate words, letters, sentences, numbers, or events in sequence. There is confusion in the sequence of letters in a spelling word or the order of words is confused when writing or repeating them orally. The child may have difficulty recalling and recognizing a word on one page, which was correctly identified on the previous page.

Visual-Motor Association is defined as the ability to comprehend or respond to meaningful visual relationships, which may or may not relate to appropriate motor responses. This child may have poor concept formation on standardized tests. He does not comprehend what he reads but appears to comprehend auditory

presentations. He demonstrates symbol or word reversals such as "p" for "q" or "was" for "saw".

Figure-Ground Relationships relate to the ability to focus attention on a specific part of the total surrounding stimulation and differentiate that part from the total. Children with this problem demonstrate inattention, inability to keep place in reading and number work, distractibility, difficulty drawing a straight line between boundaries and difficulty finding words or objects on a page, when asked to locate a particular one.

Position in Space is defined as the accurate interpretation of an object as being behind, before, above, below, or to the side of. The child is able to recognize the formation and directionality of figures and characters. This ability relates to reading and writing skills in such areas as distinguishing 3 from E, and so on. The concept of position in space is made up of a combination of auditory, visual, tactile, kinesthetic, and to a lesser degree, the other senses. If the senses do not work together properly, a child may not have an accurate perception as to his position in space. He will probably not be able to understand concepts such as up and down. A child with difficulties in perceiving the proper position of an object in relation to his body is likely to demonstrate reversals, inversions, and transpositions. This, of course, makes it difficult for the child to learn to read, write, spell, and do arithmetic.

Form Constancy is defined as the ability to generalize with regard to visual material; for example, to recognize a word if it occurs in an unfamiliar context or type face, or if it is printed entirely in capital letters. It is the accurate interpretation of an object as being the same in spite of being sensed in various

ways. A person with form constancy will recognize an object, word, letter, or number no matter where he sees it. A child with poorly developed shape and size constancy is not only likely to be made anxious by the general unreliability of appearance in his world, but he will also have major difficulties in academic learning. Although he may learn to recognize a number, letter, or word when he sees it in a particular form or context, he may be quite unable to recognize the same symbol when it is presented in a different manner. Such a child is constantly deceived by his senses. A word he knows well in one form or color or size or type of writing or in conjunction with certain other words, may appear new to him when presented in another form, color, size, or context. For a child with such a disability, learning to read or to work with symbols is most difficult.

Spatial Relationships is defined as the ability of an observer to perceive the position of two or more objects in relation to himself and in relation to each other. For example, a child stringing beads has to perceive the position of the bead and string in relation to himself as well as the position of the bead and string in relation to each other. The child who has difficulty perceiving spatial relationships could have trouble with sequential tasks. He may find it impossible to put letters in proper sequence while reading or spelling. For example, he might read the word "string" as "stiring" or spell it "sitnrg". He might have trouble distinguishing between "cold" and "coal", "m" and "n", and "b" and "d". He may be unable to remember the sequence of processes involved in solving problems. This could cause the child to appear inattentive. He probably would have trouble with up, down, front, back, left, and right.

Visual Motor Sequential is defined as the term that is used to describe the ability to correctly reproduce a sequence of symbols previously seen. A child with a problem of this nature has difficulties in remembering things he has seen in a sequence. Such a child will have difficulties in learning to read. The child with a learning disorder of a visual sequential nature might be expected to have difficulties in writing the alphabet and numbers. He might be observed misspelling even his own name after adequate practice. He may recognize a word one day and not the next.

Fine Motor Coordination refers to the ability to synchronize fine muscles and perform detailed motor tasks. A child exhibiting a deficiency in this area usually also suffers a visual perceptual problem. A child with a fine motor coordination problem may demonstrate poor quality written work. This refers to the writing, not necessarily to the content. He may be clumsy when handling books, materials, smaller items, and has poor control with art materials such as in cutting, drawing, or painting. He may have difficulty buttoning buttons, tying shoelaces, and buckling belts. This child may have poor reading skills so far as vision is concerned; an example of this may be frequent arrests of his visual sweep across the line.

Gross Motor Coordination and Body Image is a two part definition. Body image refers to the individual's concept of his physical apparatus, and is important in the development of the self-concept. Gross motor coordination involves the functioning of the large muscles and the child's awareness of body parts and their operations. The frustrations resulting from a poorly developed body image or inadequate gross motor control may precipitate

a wide range of problem behaviors. Some of these are: poor ability to maintain a normally erect position while sitting, standing, or walking; a tendency to run into or bump into objects; inaccurate estimation of body size in relation to other people or to inanimate objects; inability to identify body parts, his own or pictured; and difficulty with imitative movements.

Motor Encoding or Expression is defined as the ability to supply muscular gestures which are appropriate for the manipulation of objects or pictures of objects. Children with problems in motor encoding frequently have difficulty in learning to trace, draw, or write. Their poor coordination makes it difficult for them to imitate others in pantomine type games, and they seldom communicate with gestures. In addition, these children often have stiff or restricted body movements and sometimes lack facial expression and interpersonal responses. This later tendency, along with the tendency for these children to rely heavily on excessive vocalization to avoid acting out a problem, is at times interpreted as being emotional in origin.

Diagnosis and teaching should be interrelated parts of a continuous process of trying to understand a child and to help him learn. Terminology that appears in recent literature emphasizes the interrelatedness of diagnosis and teaching as a total process. The purpose of the diagnosis is to collect information that will help in planning an education program to improve the child's learning. Most authorities agree that the following steps are essential in making the diagnosis:

1. Determine whether the child has a learning disability. Implicit in most definitions of learning disabilities is that a discrepancy exists between what a child is actually learning and

what he ought to be learning. "Quantifying" the learning disability means rating his present level of achievement against his measured potential ability and measuring the amount of discrepancy to determine if it is significant. Three methods used to determine if a discrepancy exists are described below:

A. The mental grade method. The formula is:
(RE (reading expectancy grade)= MA (mental age)-5 years)
To determine RE, five years is subtracted from the child's MA. For example, a boy is ten years, zero months of age with an Intelligence Quotient of 120. Using this formula, his reading expectancy grade is 7.0. If he reads at a 4.0 grade level, he has a three year discrepancy in reading.
(7.0(RE) = 12(MA)-5)[7]

B. The years in school method. This formula suggests that the mental grade method does not take into account the years of teaching exposure and thus may be inaccurate. It may overestimate expectancy with a high IQ and conversely, underestimate a low IQ. The formula is:
(RE (reading expectancy grade)$=\frac{\text{years in school x IQ}}{100} + 1.0$
If the same child as described above is in mid-fifth grade, he has been in school 4.5 years. Using this method: $RE=\frac{4.5 \times 120}{100} + 1.0 = 6.4$. If he reads at a 4.0 grade level, the discrepancy is 2.4 years.[8]

C. The learning quotient method. This takes into account mental age, chronological age, and grade age. The average

7 Harris, Albert, How to Increase Reading Ability (New York: David McKay, 1961), pp. 20-25.

8 Bond, Guy and Miles Tinker, Reading Difficulties: Their Diagnosis and Correction (New York: Appleton-Century Crofts, 1967), pp. 198-203.

of all three tends to minimize errors. The MA is considered separately as a Verbal MA and a Performance MA as measured by the WISC. The formula is:

$$\text{EA (expectancy age)} = \frac{\text{MA} + \text{CA} + \text{GA}}{3}$$

$$\text{LQ (learning quotient)} = \frac{\text{AA (achievement age)}}{\text{EA (expectancy age)}}$$

A learning quotient of 89 or below is one basis for classifying a child as having a learning problem. Again, using the same child:

$$\text{Verbal MA } \frac{11(\text{MA}) + 10(\text{CA}) + 10.7(\text{GA})}{3} = 10.6 \text{ (EA)}$$

$$\text{Performance MA } \frac{13(\text{MA}) + 10(\text{CA}) + 10.7(\text{GA})}{3} = 11.2 \text{ (EA)}$$

$$\frac{9.2 \text{ (AA)}}{10.6 \text{ (EA)}} = .87 \text{ (LQ)} \qquad \frac{9.2 \text{ (AA)}}{11.6 \text{ (EA)}} = .82 \text{ (LQ)}$$

Based on these learning quotients, a disability is indicated.[9]

2. Measure the child's present achievement to detect in what areas he is failing or not progressing.

3. Analyze how the child learns, what are his approaches to learning, such as visual or auditory, and what types of errors he makes.

4. Explore why he is not learning. Data from case histories, clinical observations, informal and formal testing are primary diagnostic methods.

5. Formulate a diagnostic hypothesis.

6. Develop a plan for teaching specifying areas of strengths and weakness and suggesting approaches and techniques for use.

9 Myklebust, Helmer, "Learning Disabilities: Definition and Overview," Progress in Learning Disabilities (New York: Grune and Stratton, Vol. 1, 1968), pp. 294-297.

After surveying the printed material on Learning Disabilities, this writer concludes that there is not a concise definition of the problem that the concerned disciplines agree upon. At present, the Federal Government is in the process of selecting a task force to formulate a universal definition of Learning Disabilities and a formula for determining if such a problem exists. This formula, as do others presented in this section, take into account: intelligence, achievement level, and grade placement. This writer agrees with the many educators who consider a Learning Disability to be a significant discrepancy between potential and actual achievement. Testing to delineate the specific perceptual deficit is useful in order to determine the area and the level to which remediation should be applied.

The Stanford-Binet Intelligence Scale

This section of the paper deals with the diagnostic function of two formal intelligence tests, and their use in identifying learning disabilities.

Binet was a pioneer in the development of mental tests. The schools in Paris asked him to develop a test which would separate the uneducable from the educable. He published the first scale of intelligence with Simon in 1905. The first most popular and widely accepted revision was made in 1916 by Terman at Stanford University. In 1937, Merrill and Terman expanded a better standardized revision. They made the most recent revision in 1960, which combined the best subtest items from the L and M forms of the 1937 scale. The revised scale is referred to as the L-M Form.

The primary purpose of the Stanford-Binet is to be a psychological tool for the measurement of mental abilities. The central concept of the Stanford-Binet is mental age. Test scores are expressed as mental age scores ranging from two years to twenty-two years, eleven months. IQ scores are transformed to standard scores with a mean of 100 and a standard deviation of 16 for each age level.

The Stanford-Binet (L-M) consists of six subtests and one alternative (in case something goes wrong in testing) at each age level. The tests are grouped by chronological age levels in six month intervals from two through five years of age and at yearly levels from five to fourteen years of age. There are four groups of test items at an adult level. At the early levels, the tasks are primarily simple verbal or sensorimotor types; whereas tasks are highly verbal and abstract on an adult level.

A few tests at the earliest ages involve the manipulation of objects and a certain amount of eye-hand coordination. Certain tests of perceptual discrimination also occur at the lower age levels. A relatively large number of tests at the lower levels involve the observation and identification of common objects. Pictures of objects are utilized at later age levels for the same purpose. Here, the subject is required to name objects, complete pictures, or identify missing parts. Several tests call for the recognition of similarities or differences between certain sets of objects. A somewhat related group of tests, which cover a wide age range, may be described under the heading of practical or common sense. Memory tests are found throughout the scale. Several tests of spatial orientation occur at widely scattered intervals. The most numerous type of test, especially at the upper age levels, is that employing verbal content.[10]

The examiner begins by presenting items at an age level below the subject's estimated mental age. This is done to find the level on the "age scale" where the child passes all items. The highest age level at which a subject passes all items on the Stanford-Binet is referred to as the basal age. After locating the basal age, the examiner continues presenting items until the child reaches an age level where all items are failed. This level of performance is called the ceiling age. The mental age is then determined by adding all of the months credit earned between the basal age and ceiling age to the basal age level. Table 1 illustrates how this is done.

10 Anastasi, Anne, Psychological Testing (New York: The Macmillan Company, 1961), pp. 197-198.

Table 1

Computation of Mental Age Score
for a Four Year Old Child

Year Level	Number of Items Passed	Months Credit per item	Total Credits Years	Months
III	6 (Basal Age)	-	3	
III-6	5	1		5
IV	3	1		3
IV-6	2	1		2
V	2	1		2
VI	1	2		2
VII	0 (Ceiling Age)			0
			3	14

Mental Age Score 4-2

Source:

Terman, L.M., Stanford-Binet Intelligence Scale: Manual for Form L-M (Boston: Houghton Mifflin Company, 1960), p. 63.

The Stanford-Binet has often been the object of much criticism, largely because of the inability of many psychologists to fully interpret its results. The "age scale" model results in the presentation of items representing a wide variety of content in a series rather than by content areas, as is done by content scales like the WISC. As a result, when the test is used, the results reported are usually limited to an IQ score.

It is worth the time and effort to transfer the record of items passed and failed on the Stanford-Binet to a special profile prepared in 1965 by Valett.[11] This is a valuable aid in the interpretation of test results. This profile classifies the student's performance on test items into the following six content areas:

1. General comprehension - The ability to conceptualize and integrate components into a meaningful total relationship.

2. Visual-motor ability - The ability to manipulate materials in problem solving situations that usually require integration of visual and motor skills.

3. Arithmetic reasoning - The ability to make appropriate numerical associations and deal with mental abstractions in problem solving situations.

4. Memory and concentration - The ability to attend and retain. This area requires motivation and attention and usually measures the degree of retention of test items.

5. Vocabulary and verbal fluency - The ability to use words correctly in association with concrete or abstract material; the

11 Valett, R., "The Remediation of Learning Disabilities," cited in Larry Faas, Learning Disabilities, A Competency Based Approach (Boston: Houghton Mifflin, 1976), p. 91.

understanding of words and verbal concepts; the quality and quantity of verbal expression.

6. Judgment and reasoning - The ability to comprehend and respond appropriately in specific situations, requiring discrimination, comparison, and judgment in adaption. Refer to Figure 2 for the format of the profile.

Tarczan[12] divides the test items into subgroups listing the problem area (using actual skills tested) and possible remediation implications. The subgroups are listed below:

1. Problem areas in stringing beads, block construction, cutting paper, folding and copying of designs may require remedial activities in fine motor and eye hand coordination and spatial relationships.

2. Problem areas in picture vocabulary and the identification of objects may require remedial techniques in language skills or imply cultural deprivation.

3. Problem areas in vocabulary, digit span and repeating sentences may require remedial techniques in auditory perception and auditory memory.

Sattler's model[13] to be used with the Stanford-Binet offers a profile for purposes of analysis. By analyzing the subtests and classifying them under types of abilities, one

12 Tarczan, Constance, An Educator's Guide to Psychological Tests (Springfield: Charles C. Thomas, 1972), pp. 30-31.

13 Sattler, Jerome M., "Analysis of Functions of the 1960 Stanford-Binet Intelligence Scale, Form L-M," Journal of Clinical Psychology (Vol. 21, No. 2, April, 1965), pp. 174-175.

Figure 2

A Profile for the Stanford-Binet (L-M)
Item Classifications

TEST CONSTRUCTS Year:	2	2-6	3	3-6	4	4-6	5	6	7	8	9	10	11	12	13	14	AA	SA I	SA II	SA II
GENERAL COMPREHENSION	3 A	1 2 6		6	4 6	4 6 A			2 4 5	4 5 A			6	3 6	4	5	5 6 7	6	3	2 4
VISUAL-MOTOR ABILITY	1 4	A	1 3 5 6	2 5			1 2 4 6 A	6	3		1 3	2	1	A	A		A			
ARITHMETIC REASONING								4			5					4 A	2 4	2	4	
MEMORY & CONCENTRATION	2	5	4 A		2 A	5			6 A	2 6	3 6	6	1 4	4 A	3 6			4	6	6
VOCABULARY & VERBAL FLUENCY	5 6 A	3 4	2	4	1		3	1 A		1	4 A	1 3 5	3	1 5 6	2 5	1	1 3 8	1 3 5	1	1 3 A
JUDGMENT & REASONING		1		1 2 3 A	3 4 5	1 2 3 A	5 6	2 3 5 A	1 2 4 5	3 4	1 2 4	2 4 A	2 5 6 A	2	1 4 5 A	2 3 4 5 6 A	2 3 6 7 A	2 6 A	2 3 4 5 6 A	2 3 4 5 6 A

Source:

Valett, R.E., (California: Consulting Psychologists Press, 1965).

can identify a subject's strengths and weaknesses. The model is as follows:

L	Language
M	Memory
(mM)	Meaningful Memory
(nmM)	Nonmeaningful Memory
(vM)	Visual Memory
CT	Conceptual Thinking
R	Reasoning
(vR)	Verbal Reasoning
(nvR)	Nonverbal Reasoning
NR	Numerical Reasoning
VM	Visual-Motor
SI	Social Intelligence

The general abilities measured and identified by Sattler can be examined in the framework of terms common to the study of learning disabilities. For purposes of remediation, the learning disability "clues" are necessary. In Table 2, these factors and their location in the test are indicated at age levels, five years through ten years by subtest number. These ages were selected as most children with learning disabilities should be identified within these ages for the most favorable prognosis.

An analysis of Table 2 and Table 3 clearly demonstrates the predominance of language and verbal reasoning items on the Stanford-Binet. Only at the pre-school levels can as many as half the items be reasonably classified as nonverbal. This is a major criticism by examiners who feel the full sampling of one's abilities using this instrument is limited due to the emphasis on verbal skills.

Sattler[14] has graphed his analysis of categories into a "Binetgram" which indicates which items are tested at specific

14 Sattler, Jerome M., Assessment of Children's Intelligence (Philadelphia: W.B. Saunders Company, 1974), pp. 138-139.

Table 2

Year Levels of the Stanford-Binet
with Learning Components for Each Subtest

Test	Factor	Learning Component
		Year V
1	VM	Perceptual Motor
2	VM	Spatial and perceptual motor
3	L	Auditory reception
4	VM	Perceptual Motor
5	nvR	Visual association and visual discrimination
6	nvR	Spatial relationship and perceptual motor
A	VM	Perceptual Motor
		Year VI
1	L	Auditory reception and expressive language
2	CT	Meaningful auditory discrimination
3	nvR	Spatial discrimination
4	NR	Problem solving
5	CT	Auditory association
6	VM	Perceptual motor
A	SI	Expressive language and visual reception
		Year VII
1	SI	Visual reception
2	CT	Auditory association
3	VM	Perceptual motor
4	SI	Auditory reception
5	CT	Auditory association
6	nmM	Auditory memory and sequencing
A	nmM	Auditory memory for patterns and sequencing
		Year VIII
1	L	Auditory reception and expressive language
2	mM	Auditory memory and sequencing
3	vR	Auditory reception and expressive language
4	CT	Auditory association
5	SI	Auditory reception
6	SI	Auditory sequencing
A	SI	Auditory reception

Test	Factor	Learning Component
	Year IX	
1	VM	Perceptual motor and spatial reasoning
2	vR	Auditory reception
3	vM	Perceptual motor
4	L	Auditory and memory association
5	NR	Problem solving
6	nmM	Auditory sequencing and pattern memory
A	L	Auditory association
	Year X	
1	L	Auditory reception and expressive language
2	NR	Spatial reasoning
3	L	Auditory reception and expressive language
4	SI	Auditory reception and verbal expression
5	L	Word fluency and memory
6	nmM	Auditory sequencing
A	vR	Auditory reception

Source:

Sattler, Jerome M., "Analysis of Functions of the 1960 Stanford-Binet Intelligence Scale, Form L-M," Journal of Clinical Psychology (21, No. 2, April, 1965), pages 173-179.

Table 3

Percentage of Stanford-Binet (L-M) Subtests
Judged as Falling into Seven Content Categories

Age Level	Number of Tests	Percentage of Tests Classified as: Language	Reasoning	Memory	Conceptual
2-5	42	26	21	10	5
6-10	31	19	10	19	16
11-14	23	30	26	17	9
AA-SAIII	26	31	15	12	27
		Naming objects, rhymes	Orientation, verbal absurdities	Memory for sentences, for digits	Similarities, Proverbs

Age Level	Number of Tests	Percentage of Tests Classified as: Social Intelligence	Numerical Reasoning	Visual Motor
2-5	42	17	0	21
6-10	31	16	10	10
11-14	23	9	9	0
AA-SAIII	26	0	15	0
		Comprehension picture absurdities	Making change, ingenuity	Form board, copying a square

Source:

Cronbach, Lee J., Essentials of Psychological Testing (New York: Harper and Row, 1970), p. 214.

age levels. These are the seven basic categories and not the specific functions as given in Table 2. Each item answered correctly is circled on the graph, similar to Valett's profile (Figure 2) but in somewhat different order and categories. It presents a visual picture of the examiner's successes and failures and can be used in a qualitative way to describe the child's performance.

Figure 3 illustrates another profile analysis of the Stanford-Binet. Each vertical line represents a test year and each horizontal **line**, a test factor. Successes and failures are indicated at each age level tested by placing plus and minus signs in the columns of the corresponding test factors. Figure 4 analyzes the results of the scores recorded in Figure 3. It shows that the child has a basal age of eight years; any task prescribed for a child of eight should be within his ability. In Figure 4, there may be dashed lines. These lines reach to the highest year at which the child performed. Failures, however, do occur at or below this line. No dashed line has been drawn for visual-motor tasks as there are no visual-motor tests (except for the Average Adult Alternate) above the ten year level.

This illustration represents a boy, age ten years, five months of age. His IQ is measured to be 112 or an MA of ten years, ten months. His strengths are shown in meaningful memory, visual memory, conceptual thinking, and nonverbal reasoning. Even though these strengths influence his advanced MA, the graphical representation indicates several weak areas.

Various studies have been made trying to associate patterns of performance on the Stanford-Binet with specific learning disabilities. Inadequate readers may demonstrate perceptual difficulty,

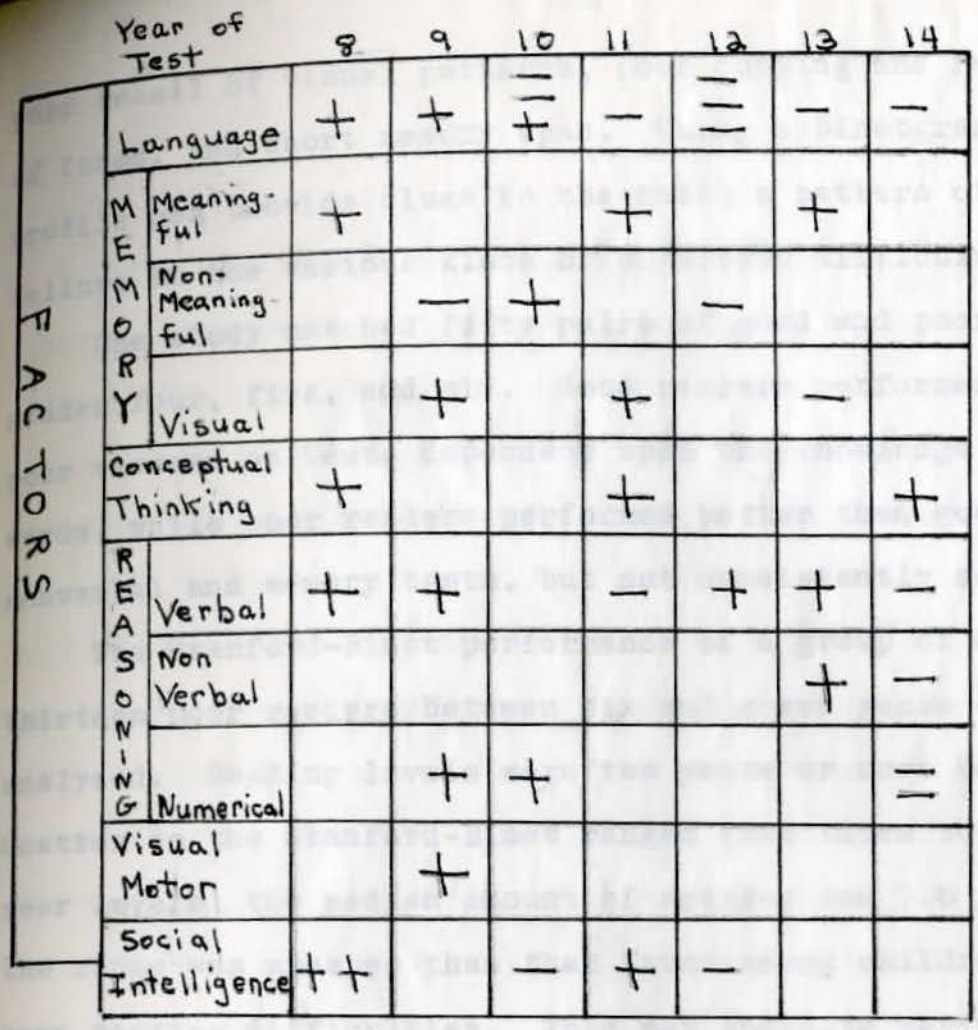


Figure 3

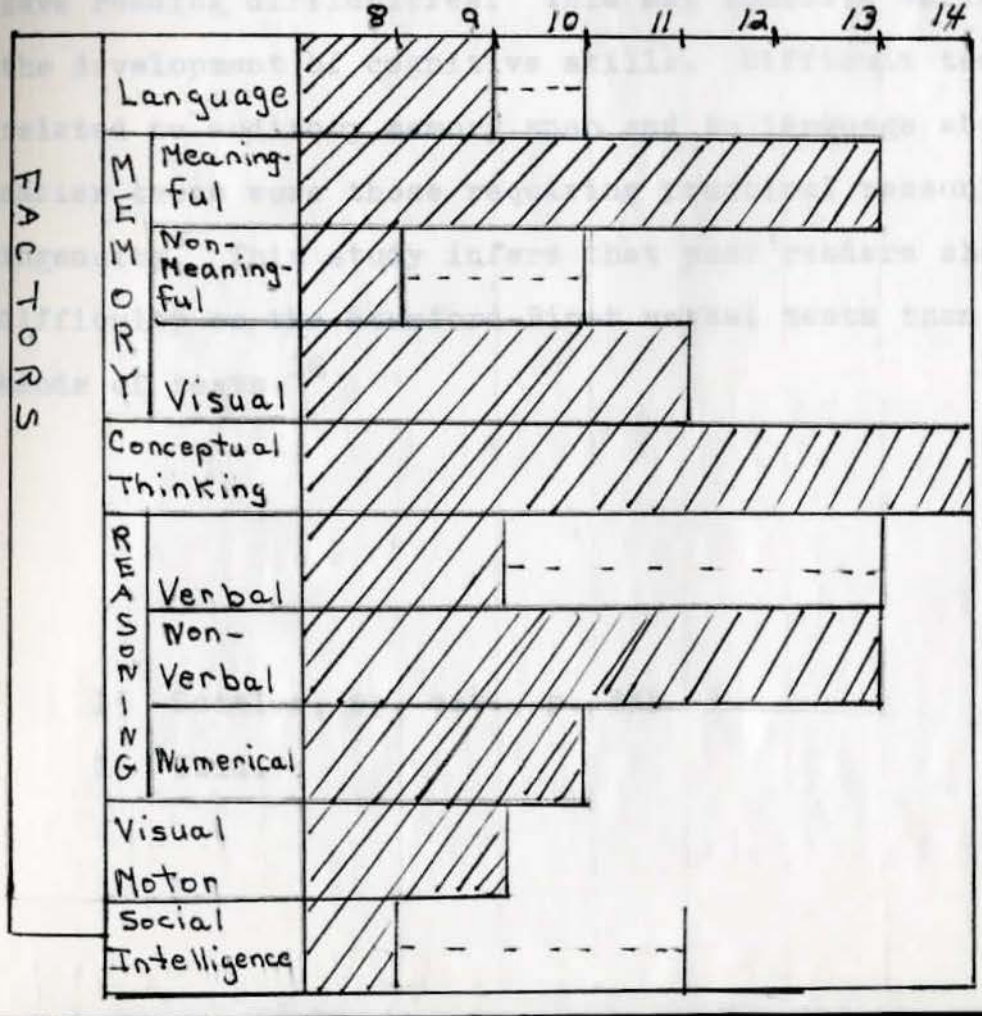


Figure 4

Source:

Waugh, K. and W. Bush, Diagnosing Learning Disorders (Columbia: Charles E. Merrill, 1971), p. 59-61.

poor recall of visual patterns, poor copying and reproductions of forms, and short memory span. Using a Binetgram or Valett's profile can provide clues to the child's pattern of success and failure in the various kinds of cognitive difficulties.

One study matched fifty pairs of good and poor readers in grades four, five, and six. Good readers performed better than poor readers on tests dependent upon the knowledge and use of words, while poor readers performed better than good readers on nonverbal and memory tests, but not consistently so.[15]

The Stanford-Binet performance of a group of one hundred thirteen poor readers between six and seven years of age was analyzed. Reading levels were two years or more below expectancy. Scatter on the Stanford-Binet ranged from three to the eleven year levels; the median amount of scatter was 7.6 year levels. The range was greater than that found among children who do not have reading difficulties. This may indicate variability in the development of cognitive skills. Difficult tests were those related to auditory memory span and to language ability. The easier tests were those requiring practical reasoning and ingenuity. This study infers that poor readers should have more difficulty on the Stanford-Binet verbal tests than with other kinds of tests.[16]

15 Sattler, op. cit., p. 335.

16 Ibid.

The Stanford-Binet, Form L-M has proven of definite value in the assessment of Learning Disabilities; however, profiling procedures are presently somewhat awkward unless one utilizes item classification such as that developed by Valett. The categories measuring visual motor ability are basically somewhat limited on the Stanford-Binet, Form L-M, particularly so beyond the Year-V level. Conversely, it does provide good data relative to deficits in memory and concentration rather consistently through all developmental levels. Although comparatively speaking, its value is considerably less than the Weschler Intelligence Scale for Children-Revised, it can prove a useful tool in the diagnosis of Learning Disabilities.

The
Wechsler Intelligence Scale
for
Children (Revised)

The Wechsler Intelligence Scale for Children was first published in 1949 and was adapted from the Wechsler-Bellevue Intelligence Scale by Wechsler in 1939. The Revised WISC consists of twelve subtests which is consistent with the 1949 WISC. It is a test which measures general intelligence. Subtest items are grouped according to content rather than age level. Intelligence quotients are computed based on five verbal and five performance subtests, equally weighted in the assessment of intelligence. The two scales (Verbal and Performance) tend to correlate by about .80.[17] A large discrepancy between the two scales is considered to be of real diagnostic value.

In the study of the WISC, many attempts have been made to analyze "factors" involved in the subtests. These factors are elements or components of intelligence or the structure of mental processes. The three-dimensional model of this structure was classified by Guilford,[18] and these factors are listed in the description of the WISC subtests. Guilford classified intellectual abilities into three categories, each of which cuts across the other: 1. operations 2. content 3. products

1. Operations - These are the processes involved in thinking. There are five categories.

   A. Cognition - ways of understanding or comprehension

   B. Memory - retention and reproduction of information

   C. Convergent Thinking - bringing together of known facts resulting in one definite outcome

17 Tarczan, op. cit., p. 36.

18 Lerner, Janet, Children with Learning Disabilities (Boston: Houghton Mifflin, 1971), pp. 212-213.

D. Divergent Thinking - utilization of knowledge in new ways to produce solutions or ideas

E. Evaluation - establishment of value system, critical thinking

2. Content - This is concerned with the nature of the information. Information that is concrete is called "figural", information in the abstract form is "symbolic", the meanings symbols represent is called "semantic", and "behavioral" content refers to information about the behavior of ourselves and others.

3. Products - This term refers to the levels of intellectual activities: units, classes, relations, systems, transformations, and implications. This classification is concerned with the products of information. Each level of activity is more complex, requiring a higher degree of mental functioning.

From this three-dimensional model, when the three cross-classifications are combined, the intersection of a certain kind of operation, a certain kind of content, and a certain kind of product is represented by a single cell. There are one hundred twenty separate cells in the structure of the intellect.

The Verbal subtests of the WISC are listed below:

Information - This subtest consists of thirty questions aimed at determining how much knowledge or basic facts the child has accumulated from his environment. Questions ascend in terms of difficulty and tap a broad range of topical areas. A child's interest, alertness at home and in school, and reading background are called into play as important determinants of success on this test. The responses given to the questions may reflect the social circle the person comes from and presupposes a normal or average opportunity to receive information. Briefly stated, this subtest

measures experience, cultural environment and memory (the recall and recognition of ideas).

The psychoeducational concerns (factors that affect school performance) implicit in this test are:

1. Intellectual orientation and efficiency
2. Alertness to the surrounding milieu
3. Functional remote memory
4. Interests and experience at home and in school
5. Reading background and comprehension
6. Receptive and expressive language skills
7. Verbal thinking and fluency of ideas
8. Scholastic achievement motivation
9. Enthusiasm for acquiring knowledge
10. Awareness of appropriate verbal context[19]

Guilford's factor classification[20] in this subtest include the ability to remember isolated ideas or word meanings, the ability to remember the order of symbolic information, the ability to remember meaningfully ordered verbal information, the ability to make choices among semantic relationships based on the similarity and consistency of the meaning, the ability to produce a word or idea that conforms to specific relationship requirements, the ability to comprehend the meaning of words or ideas, and the ability to converge on an appropriate name for any given information.

Similarities - This subtest consists of seventeen pairs of words aimed at determining associative thinking in terms of

19 Cutrona, M. A., A Psychoeducational Interpretation of the WISC-R (Belleville, New Jersey: Cutronics, 1975), p. 5.

20 Sattler, op. cit., pp. 175-176.

qualitative aspects of relationships, verbal concept formation, long term memory, and abstract reasoning. This test measures three levels of abstraction: concrete, functional, and abstract. It also measures conceptualization, ability to form associations, ability to categorize, ability to generalize, logical abstracting ability, remote memory, ability to comprehend, capacity for associative thinking, and the ability to select and verbalize the appropriate relationship between two objects or concepts.

The psychoeducational considerations implicit in this test are:

1. Understanding simple associations and relationships
2. Concrete and abstract thinking
3. Semantic relationships
4. Fluency of verbal expression
5. Expressive language skills
6. Capacity to extract essential concepts
7. Concept formation
8. Use of imagination and fantasy
9. Ability to detect analogies
10. Atypical thought processes[21]

Guilford's factors in this subtest are: associational fluency, items 1-4 and semantic relations and expressional fluency, items 5-16.[22]

Arithmetic - This subtest is composed of eighteen timed arithmetic problems accomplished without the use of pencil and

21 Cutrona, op. cit., p. 6.

22 Glasser, Alan J. and Irla Zimmerman, Clinical Interpretation of the Wechsler Intelligence Scale for Children (New York: Grune and Stratton, 1967), p. 62.

paper. This test aims at assessing quantitative thinking, arithmetic operations, reasoning using complex thought patterns, and computational alertness. The time limits built into this test may have an inhibitory influence on the overall performance and should be considered in terms of clinical significance. This test measures attention, concentration, reasoning, number sense, formal education, and cognitive development.

The psychoeducational considerations implicit in this test are:

1. Knowledge of numbers and number operations
2. Ability to follow directions
3. Mental manipulation of number operations
4. Attention and concentration skills
5. Ability to sequence material
6. Concrete and abstract thinking and learning
7. Short and long term memory of information
8. Affective reaction to time limits
9. Ability to plan time in solving problems
10. Attitudes toward scholastic achievement[23]

Guilford's factors[24] in this subtest are: the ability to remember arbitrary connections between symbols and the ability to comprehend relatively complex ideas.

Vocabulary - This subtest is composed of thirty-two words to be defined. It aims at assessing the child's understanding of words and the ability to draw from a fund of verbal information. This test may be one of the best indexes of overall general intellectual resources. It measures experience and fund of knowledge,

23 Cutrona, op. cit., p. 8.

24 Sattler, op. cit., p. 178.

richness of ideas, kind and quality of language, degree of abstract thinking, character of thought processes, environment and background, and reflects the level of education.

The psychoeducational concerns implicit in this subtest are:

1. The ability to describe selected spoken words
2. General intellectual effectiveness
3. Quality and type of language
4. Ability to use words appropriately
5. Distribution and organization of ideas
6. Verbal comprehension and interest in language arts
7. Range of information
8. Ability to synthesize and analyze ideas
9. Exposure to the American language
10. Quality of thought content[25]

Guilford's factors in this subtest are: general reasoning and symbol facility.[26]

Comprehension - This subtest consists of seventeen questions aimed at assessing the child's ability to express judgments and insights relating to social situations. Drawing upon practical experiences, comprehension of expectations and socially appropriate behavior is important for success on this test. The test measures social judgment, the ability to evaluate past experiences, the ability to make generalizations from old experiences and apply to new experiences, and common sense judgment.

25 Cutrona, op. cit., p. 9.

26 Glasser, op. cit., p. 56.

The psychoeducational considerations implicit in this subtest are:

1. Social insights and practical ideas
2. Logic and appropriateness of thinking
3. The ability to integrate experiences and evaluate them in socially acceptable ways
4. Problem solving approach and style
5. Awareness of appropriate verbalizations
6. An understanding of responsibility
7. Moral sensitivity and judgment
8. Impulsiveness in social situations
9. Verbal comprehension and organization of ideas
10. Ability to deal with the everyday environmental requirements[27]

Guilford's factors[28] in this subtest are: judgment, items 1-5; verbal comprehension and judgment, items 6-7; and sensitivity to problems, items 8-14.

Digit Span (supplementary) - This subtest consists of two parts for repeating digits forward and backward. It is aimed at assessing the ability to attend to simple retentiveness, auditory recall, short term memory, attention, and the ability to manipulate thought patterns. This test measures attention, concentration, auditory memory, auditory discrimination, and hearing deficits.

The psychoeducational concerns implicit in this subtest are:

1. Retention and auditory memory
2. Attention and concentration

27 Cutrona, op. cit., p. 11.

28 Glasser, op. cit., p. 47.

3. Method of grouping mental operations
4. Capacity to associate material
5. Capacity to integrate auditory materials and verbally express it
6. Auditory discrimination
7. Ability to shift a frame of reference
8. Frustration tolerance
9. Willingness to persist at a task level
10. Organized or fragmented thinking under pressure[29]

Guilford's factors[30] in this subtest are: memory span (digits forward) and memory for symbol patterns (digits backward).

The Performance subtests of the WISC are listed below:

Picture Completion - This subtest consists of twenty-six items calling for a visual identification of the missing elements in pictures. The test aims at assessing the ability to determine the essential from the non-essential in problem solving, identifying familiar objects, using visual conceptual skills, and attention skills. This test measures the perception of a whole in relation to its parts. Attention and concentration difficulties are a common source of low scores.

The psychoeducational considerations implicit in this subtest are:

1. Ability to determine part-whole relationships
2. Figure-ground and spatial relationships

29 Cutrona, op. cit., p. 12.

30 Glasser, op. cit., p. 98.

3. Visual cognition
4. Ability to establish a learning set
5. Attention and concentration skills
6. Attention to details
7. Alertness in visual observation
8. Conformity
9. Awareness of the possibilities of a figural context
10. Social alertness[31]

Guilford's factors[32] in this subtest are: visual or auditory cognition, perceptual foresight, and figural relation selection.

Picture Arrangement - This subtest consists of twelve sets of pictures to be arranged into a sequential story. This test measures the ability to comprehend a story line based on visual comprehension, planning of sequential events, and evaluative thinking. Time limits on this subtest may influence the child's performance. This test assesses the anticipation of consequences, planning ability, ability to size up a total situation, ability to pick out essential clues, and the ability to understand social situations.

The psychoeducational concerns implicit in this subtest are:

1. Sequential organization of events
2. Social alertness
3. Visual cognition and comprehension
4. Synthesis of part-whole relationships
5. Figure-ground relationships

31 Cutrona, op. cit., p. 14.

32 Glasser, op. cit., p. 73.

6. Visual retention
7. Attention and concentration
8. Ability to shift a frame of reference
9. Orientation to time concepts
10. Spatial relationships and directionality[33]

Guilford's factors[34] in this subtest are: convergent production and evaluation.

Block Design - This subtest consists of eleven, two-dimensional designs which the child must arrange using blocks to copy the pictorial designs. This test aims at assessing the ability to perceive, analyze and reproduce geometric patterns, plan and organize material in a visual-perceptual context. Time limits are imposed and may be related to performance on this subtest. This test is said to be the best single subtest for an estimate of a non-verbal IQ. It measures the basic cognitive skills of analysis and synthesis, and requires a strong element of visual-perceptual skill and motor coordination.

The psychoeducational considerations implicit in this subtest are:

1. Visual-motor perception
2. Abstract concept formation
3. Synthesizing gestalt relationships
4. Figural discrimination
5. Directionality and laterality
6. Visual organization of designs
7. Fine-motor coordination and dexterity

33 Cutrona, op. cit., p. 15.

34 Glasser, op. cit., p. 77.

8. Spatial conceptualization
9. Flexibility or rigidity in problem solving
10. Compulsive trends[35]

Guilford's factors[36] in this subtest are: figural relations, figural redefining, and figural selection.

Object Assembly - This subtest consists of five picture puzzles of which one is a sample test item. In this test, the child must assemble the parts of each puzzle, and the test aims at assessing assembly skills, visual-motor skills, spatial relationships, part-whole relationships, and visualization skills. Items are timed and this may influence performance on this subtest. This test measures visual memory, synthesis and integration abilities, perception, and visual motor coordination.

The psychoeducational considerations implicit in this subtest are:

1. Visual-motor coordination
2. Tactile kinesthetic skills
3. Organization of spatial relationships in problem solving
4. Size-shape discrimination
5. Awareness of lines and details
6. Compensatory emphasis in object manipulation
7. Concrete thinking
8. Concentration and confidence
9. Utilization of part-whole perception
10. Comprehension of figural inter-relationships[37]

35 Cutrona, op. cit., p. 16.
36 Glasser, op. cit., p. 82.
37 Cutrona, op. cit., p. 17.

Guilford's factors[38] in this subtest are: spatial orientation, visualization, and figural selection.

Coding - This subtest consists of simple and advanced forms requiring that the child record associations between shapes or symbols and numbers within time limits. This test aims at assessing the ability to remember associations, react with alertness, visual-motor dexterity, and the ability to recreate combinations from a specimen or mode. This test measures visual-motor speed, the ability to learn a new task, visual memory, and speed and accuracy in making associations.

The psychoeducational concerns implicit in this subtest are:

1. Psychomotor ability
2. Visual motor and fine motor coordination
3. Associative memory
4. Symbolic facility
5. Spatial relationships
6. Ability to absorb new material
7. Ability to memorize
8. Drive for achievement
9. Compensatory emphasis
10. Loss of task orientation[39]

Guilford's factors[40] in this subtest are: symbolic possibilities and symbolic facility.

Mazes (supplementary) - This subtest consists of nine mazes which require the child to find his way out of the maze. This

38 Glasser, op. cit., p. 88.

39 Cutrona, op. cit., p. 19.

40 Glasser, op. cit., p. 92.

test assesses the child's ability to plan, use forethought, visual-motor skills, and accuracy in pencil manipulation. This is a timed test. The test measures the child's ability to pay attention to instructions, and overall speed and accuracy are assessed.

The psychoeducational considerations implicit in this subtest are:

1. Visual-motor perception
2. Spatial orientation and planning
3. Directionality
4. Fine motor coordination
5. Perceptual foresight
6. Alertness to instructions
7. Attention and concentration
8. Control over impulses
9. Visual organization and figure ground discrimination
10. Visual discrimination and integration[41]

The Guilford factor[42] in this subtest is perceptual foresight.

Tarczan's analysis[43] of the WISC subtests lists remedial implications. Verbal tests, in general, may require remediation in language development and auditory perception. Cultural deprivation can negatively affect verbal subtest scores. Deficits in Digit Span indicate difficulties in auditory memory. Poor performance in Picture Completion may indicate problems in visual perception and visual discrimination. Picture Arrangement

41 Cutrona, op. cit., p. 20.

42 Glasser, op. cit., p. 103.

43 Tarczan, op. cit., pp. 38-39.

is related to spatial visual perception relationships. The Block Design subtest involves form perception, visual perception constancy, and visual-motor integration. Object Assembly implies a connection with visual perception synthesis and visual-motor integration. Finally, Coding suggests visual memory and visual-motor integration.

Clements has isolated three WISC patterns that occur in the subtest performance of children with learning disabilities.[44]

Pattern 1 - The Verbal score is 15 to 40 or more points higher than the Performance score. Children displaying this pattern have difficulty in perceptual motor areas, but they are strong in language areas.

Pattern 2 - A scatter is evidenced in both or either of the Verbal and Performance scores, with a wide range between high and low scores of seven to twelve points. Low scores are frequently in Arithmetic, Block Design, Object Assembly, Digit Span, Coding, and Mazes. Final Verbal and Performance IQ scores are often nearly equal. Such a pattern suggests specific deficits in certain mental processes.

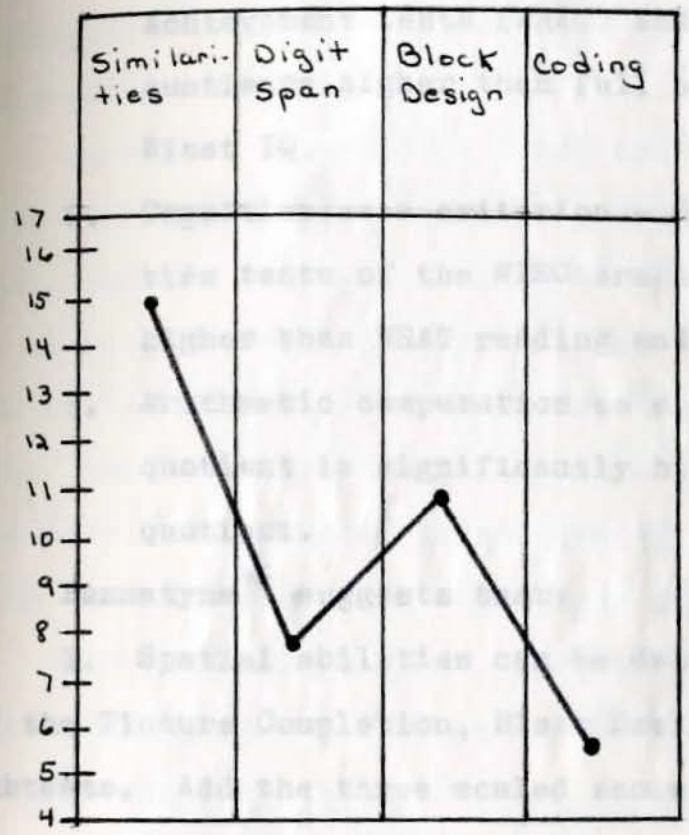
Pattern 3 - The Performance score is 10 to 30 points higher than the verbal score. Children with this pattern are likely to have difficulty in expressing themselves. This is the least frequent pattern.

Waugh and Bush cite a pattern that identifies a specific learning disability. (See Figure 5) Jastak and Jastak, as

44 Clements, S. D. and J. E. Peters, "Minimal Brain Dysfunction in the School Age Child," cited in Lerner, op. cit., pp. 58-59.

Figure 5

Specific Learning Disability Identified



Inferential Reasoning - Good

Development of integrative organization between auditory and visual systems- Impaired

Sequentially presented information - spatial and temporal - Difficult

Source:

Waugh, Kenneth and Wilma Jo Bush, Diagnosing Learning Disorders (Columbus: Charles E. Merrill, 1971), p. 48.

reported in Waugh and Bush,[45] suggests the following possibilities for diagnosing learning disabilities.

1. Intelligence as a criterion - A standard reading score ten points lower than spelling on the Wide Range Achievement Tests (WRAT) and the WISC; performance quotients higher than full scale WISC IQ or Stanford-Binet IQ.
2. Cognition as a criterion - Comprehension and Similarities tests of the WISC are nearly always significantly higher than WRAT reading and spelling quotients.
3. Arithmetic computation as a criterion - WRAT arithmetic quotient is significantly higher than WRAT reading quotient.

Bannatyne[46] suggests that:

1. Spatial abilities can be determined from the results of the Picture Completion, Block Design, and Object Assembly subtests. Add the three scaled scores and divide by three.
2. Conceptual abilities can be determined from the results of the Comprehension, Similarities, and Vocabulary subtests. Add the three scaled scores and divide by three.
3. Sequencing abilities can be determined from the results of the Digit Span, Coding, and Picture Arrangement subtests. Add the three scaled scores and divide by three.

If all the quotients fall below ten (the mean score), a weakness in those areas which the scores represent is obvious.

45 Waugh and Bush, op. cit., pp. 48-49.

46 Bannatyne, Alex, "Diagnosing Learning Disabilities and Writing Remedial Prescriptions," Journal of Learning Disabilities (Vol. 1, No. 4, April, 1968), p. 243.

The lowest quotient designates the greatest weakness. For those who have above average IQ's, calculate the child's mean score for each subtest and use the formula above to demonstrate whether any of the quotients fall below the child's mean. These combinations expose weaknesses in spatial, conceptual, and sequencing abilities.

Money, as reported in Waugh and Bush, lists combinations that expose weaknesses in verbal comprehension, concentration and attention relative to numbers and problem solving.[47] He states that verbal comprehension can be determined by adding the scaled scores from the Information, Comprehension, Similarities, and Vocabulary tests and dividing by four. Freedom from distractibility can be determined by adding the scaled scores from the Arithmetic and Digit Span tests and dividing by two.

Studies indicate that inadequate readers have a somewhat distinct pattern of WISC scores.[48] The four easiest subtests are Picture Completion, Picture Arrangement, Block Design, and Object Assembly, all Performance subtests, while three of the four most difficult subtests are Verbal subtests. They are Information, Arithmetic, and Digit Span. The other difficult subtest is Coding, a Performance subtest. Obviously, Verbal IQ's were lower than Performance IQ's. Adequate readers did not show any distinctive subtest pattern. Poor performance on the Coding subtest may be due to failure to use an effective labeling strategy as a memory aid, resulting in increased time

47 Waugh and Bush, op. cit., pp. 50-51.

48 Sattler, op. cit., p. 336.

taken in checking the code key for each symbol. Low Digit Span and Arithmetic scores may be due to a failure to use subvocal rehearsal as a strategy for keeping the items in mind.

In the opinion of this writer, the WISC-R has proven a valuable diagnostic tool in the identification of Learning Disabilities. It is most often thought of in terms of assessment of visual-perceptual-motor deficits, but it is also of considerable value in profiling Learning Disabilities in the psycho-linguistic domain. It is, in fact, probably the single most valuable diagnostic psychometric tool and numerous remediation procedures have been developed from the profile information it yields.

This section contains 20 cases describing students tested for Learning Disabilities. The actual tests were administered by certified psychological examiners at the Special School District Evaluation Clinic. Test behavior descriptions, scoring and interpretations were done by this graduate student under the supervision of these psychologists and Mr. Robert Haegg, faculty sponsor.

Ten tests were also given by this graduate student to students not referred to Special School District. However, as they do not demonstrate Learning Disability profiles, they are not included in this paper. The tests were administered in order that this student could gain experience and expertise in the actual administration of these instruments.

Case #1

This boy, age 6 years 11 months, was referred by school personnel for evaluation for placement in a Learning Disabled Program. Referral information indicated that the child has difficulty in the auditory areas, specifically with hearing and saying letter sounds. He also has difficulty with fine motor control. He is described as being distractible and being a distraction to other children in the classroom.

During testing, this boy was friendly, verbal, spontaneous and polite. High positive interactions were noted during the evaluation. Conversational skills were seen as somewhat superior for his chronological age. He appeared highly interested in the test materials presented to him and evidenced high levels of attention and concentration throughout the evaluation. Fine and gross motor coordination were somewhat awkwardly developed, and pencil and paper skills were completed in a rather impulsive, rapid manner.

The Wechsler Intelligence Scale for Children (Revised) was administered. Test results were as follows:

Verbal Score IQ 111, Performance Score IQ 108, Full Scale IQ 111

Verbal Tests	(Scaled Scores)	Performance Tests	(Scaled Scores)
Information	12	Picture Completion	13
Comprehension	11	Picture Arrangement	11
Arithmetic	10	Block Design	13
Similarities	14	Object Assembly	12
Vocabulary	12	Coding	7

An analysis of this child's scaled scores indicate this boy evidenced average to high average levels of cognitive development. Abstract verbal concept formations were evident.

This boy evidenced some difficulty with the Coding subtest, with depressed visual memory skills being apparent. He also evidenced some difficulty with his ability to utilize appropriate position in space techniques on the Coding subtest. Testing indicates that his visual perceptual skills are superior to his visual motor abilities, i.e. eye-hand coordination abilities.

Case #2

This boy, age 6 years 8 months, was referred by school personnel for evaluation for placement in a Learning Disabled Program. Referral information indicated that the child needs direct supervision on tasks, has difficulty copying from the board, approaches tasks rapidly, and needs much individual help plus reassurance. He is well-behaved. In kindergarten, he had difficulty with sound-symbol relationships and demonstrated poor visual-motor skills. He seemed aware that his performance was subaverage and would become extremely frustrated with himself, tearing up work or not attempting tasks.

During testing, this boy seemed initially outgoing and cooperative. Shortly thereafter, he displayed impatience and uncooperativeness. He displayed a short attention span, appeared self-distractible and restless. He engaged in playing with a key, a stopwatch, and tore Kleenex papers into shreds. He appeared to be an acting out child as he constantly slammed the table with his fist. He appeared so impatient that he seemed unable to take the time to understand what was being said to him or to talk so that he could be understood. His speech was fast and sloppy. Interest and motivation appeared quite low. It is felt that his uncooperativeness may have depressed his functioning, especially on the Vocabulary and Comprehension subtests of the WISC. On these two subtests he failed to give acceptable answers or sometimes gave part answers, when it was felt he was capable of giving adequate answers. Behavior deteriorated as time passed.

The Wechsler Intelligence Scale for Children (Revised) was administered. Test results were as follows:

Verbal Score IQ 109, Performance Score IQ 85, Full Scale Score 97

Verbal Tests	(Scaled Scores)	Performance Tests	(Scaled Scores)
Information	15	Picture Completion	5
Similarities	10	Picture Arrangement	10
Arithmetic	11	Block Design	7
Vocabulary	12	Object Assembly	4
Comprehension	10	Coding	13
(Digit Span)	(8)		

An analysis of this WISC profile reveals functioning within the average range of intelligence, with a wide discrepancy between Verbal and Performance. It is felt the difference would have been wider due to the fact that the subject was uncooperative on two Verbal subtests. He appears strongest on tasks requiring a general fund of environmental information. A mild depression was exhibited on one verbal task, Digit Span, indicating a mild weakness on short term memory tasks and freedom from anxiety.

In the Performance area, more strength was indicated on a task requiring perceptual-motor speed. He appeared weakest and subaverage on tasks requiring perceptual organizing skills and ability to visually discriminate essential from nonessential details. His difficulty on perceptual-motor tasks was evident as he stacked pieces of puzzles from the Object Assembly subtest on top of each other. He seemed to have little or no idea of part-whole relationships and appeared unaware of errors. Some patterns of blocks were completely inverted and others rotated. He displayed a lack of persistence and gave up quickly. This boy appears to be a learning disabled child

with difficulties in the perceptual motor area, as well as problems with form and space relationships and organization.

Case #3

This boy, age 8 years 0 months, was referred by school personnel for evaluation for placement in a Learning Disabled program. Referral information indicated that the child is experiencing difficulty in learning to read. His teacher reports academic achievement to be at the following levels: reading, readiness stages; arithmetic, first grade level. He is repeating first grade and is only beginning to academically respond anywhere close to what one might expect of a new first grade student. He is enthusiastic toward arithmetic but dislikes reading. He has difficulty working with rhyming words, demonstrates sporadic word recognition skills, and frequently includes reversals and inversions in copying tasks. Attention span is brief and he generally does not respond well to verbal instruction unless it is accompanied by personal contact.

During testing, interest, motivation, and task focus were at appropriate levels and enabled presentation of test materials. Cooperation was good and fatigue was exhibited only during the final minutes of the session. He reacted to failure with age-appropriate behavior. Anxiety affected performance sporadically throughout the examination. Right handed preference was noted on drawing and writing tasks. Coordination was unremarkable.*

The Wechsler Intelligence Scale for Children (Revised) was administered. Test results were as follows:
Verbal Score IQ 86, Performance Score IQ 87, Full Scale Score IQ 85

*unremarkable - refers to behavior that is not significantly deviant

Verbal Tests	(Scaled Scores)	Performance Tests	(Scaled Scores)
Information	5	Picture Completion	13
Similarities	10	Picture Arrangement	4
Arithmetic	7	Block Design	8
Vocabulary	6	Object Assembly	9
Comprehension	11	Coding	7
Digit Span	7		

An analysis of this child's WISC-R profile reveals functioning within the low average range of intellectual functioning. Test performance was somewhat variant and indicative of uneven levels of academic performance. Verbal subtests results indicate that he has assimilated insufficient information from his educational and experiential background. This performance may reflect inefficient retrieval of information, possibly due to organization or associational difficulties. Vocabulary and Arithmetic performance substantiates the existence of an inappropriate fund of information. Arithmetic problems which required more computation than could be achieved with the use of fingers elicited impulsive guessing behavior. He appeared to have poorly developed number fact skills in addition and subtraction, thus lacking computational abilities. This too implies possible processing difficulties which may be affecting decoding or retrieval of information. Successful performance on these items require attention and concentration, and these factors may be an underlying factor restricting learning.

Similarities and Comprehension performance are seen as relative strengths. Also, this subject could select and verbalize appropriate relationships between two objects, it is done largely on a functional level. Responses lacked abstract, associative aspects which were commonly obtained from similar age children with average cognitive ability.

Comprehension items revealed good social and common sense judgment, enabling the child to respond to everyday problems and social situations.

Performance subtest items were largely mental-age appropriate. Picture Completion items revealed good ability to visually identify familiar objects and perceive the "whole" figure in relation to its "parts". However, Picture Arrangement performance indicated poor planning ability and faulty anticipation of consequences. Anxiety resulting from attempts to perform quickly may have depressed Picture Arrangement scores. This is substantiated by good Picture Completion performance. Ability to isolate essential from non-essential characteristics varied considerably over these two subtests. Therefore, this performance may indicate unrealistic Picture Arrangement results and an inaccurate picture of true analytical ability.

Case #4

This girl, age 7 years 5 months, was referred by school personnel for evaluation for placement in a Learning Disabled Program. Referral information indicated that this child has difficulty becoming involved in group activities in school and is functioning below grade level. She knows letter sounds, but cannot sound out words or blend them together. She has developed a sight word vocabulary due to developed memory skills. She is isolated by her peers and has made excuses to avoid going to school. She is on medication (Phenobarbitol) for control of seizures. At times, she appeared very alert, but at other times she seems to be in a daze. This is noted at school and at home.

During testing, this subject appeared outgoing and positive, but after a few questions, requiring a store of background information, were asked, she appeared near tears and obviously frustrated. She responded positively to the examiner's efforts to put her at ease, but needed a great deal of encouragement and constant reinforcement to deter self-defeating behavior during the entire evaluation period. Attention span and motivation were considered fair for testing purposes with some possible tiredness causing poor task focus on the Coding subtest of the WISC. Poor work habits were evident during the administration of this subtest and possibly resulted in a depressed score. Verbal expressive skills were fair but below chronological age expectancy. Thinking was mostly on a concrete level with some difficulty evident in handling abstrac-

tions. Receptive language skills lagged slightly below chronological age. She seemed to confuse sentence sequence and appeared to deal only with the first part of longer verbalizations. This may have been a factor of her weak attention span. Gross motor development appeared to have improved and seemed better developed than fine motor skills.

The Wechsler Intelligence Scale for Children (Revised) was administered. Test results were as follows:

Verbal Score IQ 84, Performance Score IQ 63, Full Scale Score IQ 71

Verbal Tests	(Scaled Scores)	Performance Tests	(Scaled Scores)
Information	7	Picture Completion	4
Similarities	11	Picture Arrangement	1
Arithmetic	5	Block Design	8
Vocabulary	8	Object Assembly	6
Comprehension	6	Coding	2
(Digit Span)	(1)		

An analysis of this child's scaled scores indicate functioning within the Borderline range of intelligence. Her Verbal Score is within the Low Average range and her Performance Score was within the Mentally Defective range. A significant difference of twenty-one points is indicated between Verbal and Performance functioning. This difference is most likely related to problems in the perceptual-motor area.

Verbal strengths were indicated on tasks requiring verbal conceptualization (at age level). She appeared particularly weak on tasks requiring auditory sequencing, auditory short term memory, and concentration. Arithmetic skills and social judgment also lagged. When working on Arithmetic tasks, she had difficulty with the one-to-one concept and seemed quite impulsive on the arithmetic task presented.

In the Performance area, more strength was required for the task testing perceptual analysis. This task consisted of copying block patterns and relating parts to wholes. She appeared quite weak on all tasks requiring the visual-motor-perceptual skills of visual sequencing, perceptual organization and perceptual speed using both eye and hand together. These combined depressions indicated a perceptual-motor lag. The subject's inability to persist on tasks such as the Coding task, which required eye-hand coordination, may have caused some depression of score in that area.

Case #5

This boy, age 6 years 4 months, was referred by school personnel for evaluation for placement in a Learning Disabled Program. Referral information indicated that this child appears to have good potential, but little academic progress. He is reported to be pleasant and cooperative, but has difficulty attending to tasks. In the classroom, he "loses" attention and plays with objects (pencil,eraser). He oftens daydreams. He has difficulty working in any type of group setting and requires close physical presence before understanding is attained. Speech and language skills are reportedly poor. Pronunciation is indistinct and articulation is difficult to understand. Speech is accompanied by nasal sounds and full throat distortions. Medical information implies a probable physiological component as underlying speech disfluencies. The child required an adenoidectomy and polyps were present on his vocal cords.

During testing, the subject was cooperative although interest and motivation were only fair. Task focus was good, especially on tasks requiring manipulative performance. He seemed uneffected by his inability to correctly answer questions, reproduce designs, or successfully assemble manipulative materials. Fine motor coordination was clumsy, and grapho-motor skills were immature. Speech was difficult to understand.

The Wechsler Intelligence Scale for Children (Revised) was administered. Test results were as follows:

Verbal Score IQ 114, Performance Score IQ 120, Full Scale Score IQ 119

Verbal Tests	(Scaled Scores)	Performance Tests	(Scaled Scores)
Information	12	Picture Completion	10
Similarities	12	Picture Arrangement	14
Arithmetic	12	Block Design	14
Vocabulary	11	Object Assembly	15
Comprehension	15	Coding	11
(Digit Span)	(9)		

An analysis of this child's scaled scores reveal functioning within the high-average range of intellectual functioning. These results may be misleading. By virtue of his chronological age, he is currently in the very upper range of his age class in terms of the WISC-R scoring procedures. If he were to be examined two weeks later and perform in precisely the same manner, his new "age-class" would result in lowering the currently attained scores to the extent that he would then be viewed as possessing only average intellectual abilities. This should be kept in mind in determining the severity of his apparent academic difficulties.

Verbal subtests performance show little variability and is indicative of age appropriate ability together with adequate expressive and receptive skills. Digit span performance was exceptional, in a negative sense, and may indicate a short term memory deficit. He could repeat three digit numbers forwards and backwards, but he was unable to successfully repeat sequences involving four or more numerals.

Performance subtests were largely above average in terms of age and grade level expectancies. Picture Completion and Coding tasks elicited relatively weak performance; this may be indicative of poorly developed perceptual, concentration, or processing skills. This performance reflected an inability to

identify and isolate essential from non-essential characteristics of objects.

Case #6

This boy, 5 years 3 months, was referred by school personnel for placement in a Special Education Program. Referral information indicated that this child is functioning at an appropriate level in reading, spelling, and arithmetic for his current kindergarten placement. Behaviorally, he is described as a somewhat hyperactive child in the classroom who will frequently distract others through his inappropriate activities as well as occasional hostile/aggressive interactions. He is not a persistent management problem. His communication abilities appear to be significantly underdeveloped for his chronological age, both expressively and receptively. Serious articulation problems are apparent. Motor development is somewhat disfunctional, and he demonstrates an inability to copy numbers and letters correctly.

During testing, the subject appeared to be friendly and cooperative and interacted with considerable spontaneity. Severe articulation problems made many of his responses unintelligible, particularly out of context. Affectively, he was appropriate, and it did not appear that his disfunctional verbal communication abilities had an adverse affect upon his level of motivation. He maintained good task focus and made more than an adequate attempt to complete the activities presented to him.

This boy's verbal communication abilities appear to be highly disfunctional. Receptive skills were more appropriate, and he appeared to be able to follow verbal directions relatively well. Because of the lack of clarity in his responses,

it was difficult to determine the extent to which he was responding appropriately to a particular stimulus. Inadequate grapho-motor development was apparent during his participation in several activities.

The Stanford-Binet Intelligence Scale, Form L-M, was administered. Test results were as follows:

C.A. 4-3 M.A. 4-6 IQ 76

Test Summary

	Years	Months
III-6	3	6
IV		5
IV-6		4
V		3
VI		0

A basal was established at the III-6 year level and he could carry out all of these activities with a relative amount of ease. These tasks included social judgment, visual organization skills, and verbal fluency. Again, verbal activities were severely affected by his inadequate articulation. At the IV year level, he again, was able to complete all of the activities, except the Picture Vocabulary subtest. Successes on tasks measuring abstract verbal reasoning and visual discrimination abilities were noted. His difficulty with the vocabulary items was again a function of his poor communication skills. At the IV-6 year level, some problems in the area of social judgment were evident. Again, good abstract verbal reasoning skills were demonstrated. At the V year level, difficulties with grapho-motor development as well as visual perception were noted. Nevertheless, adequate vocabulary development and visual-motor coordination were again apparent. A ceiling was established at the VI year level, primarily due to his poor numerical computational abilities, inadequate

vocabulary development, and poor verbal fluency skills. However, it is felt that these weaknesses were probably due more to his inadequate articulation than disfunctional language patterns.

Test results place this boy within the Borderline Defective range according to Stanford-Binet criteria. However, his completion of a substantial number of academically related activities at the IV-6 and V year level seems to indicate that his optimal level of intellectual functioning may be somewhat higher than these data would suggest.

Case #7

This girl, age 8 years 3 months, was referred by school personnel for evaluation for placement in a Learning Disabled Program. Referral information indicated that this child is performing in all areas at the first grade level with the exception of arithmetic, where she is working at the second grade level. She is reticent verbally, and appears to have difficulty interpreting and following verbal instructions. She often works on the wrong page. She is very weak in oral/written expression.

During testing, this girl was quiet and appeared somewhat shy although she smiled continuously. She was cooperative and well motivated. Her task focus was sufficient for the tests, and she was not distractible. Some anxious behavior was noted toward the end of the test session, but it did not appear that these behaviors interfered with the overall results. While she was extremely quiet, what speech and language could be elicited appeared age appropriate.

The Wechsler Intelligence Scale for Children (Revised) was administered. Test results were as follows:

Verbal Score IQ 95, Performance Score IQ 115, Full Scale Score IQ 104

Verbal Tests	(Scaled Scores)	Performance Tests	(Scaled Scores)
Information	8	Picture Completion	13
Similarities	12	Picture Arrangement	15
Arithmetic	10	Block Design	12
Vocabulary	9	Object Assembly	9
Comprehension	7	Coding	12
(Digit Span)	(7)		

An analysis of this child's scaled scores reveal cognitive functioning within the Average range. However, there was

significant scatter between her depressed Verbal scores and more adequate Performance skills. Her main Verbal strengths were found in abstract reasoning and in numerical reasoning abilities. Her only relative weakness was seen in judgment. All Performance scores were average or above with strengths found in her abilities to sequence items pertaining to social situations, differentiating essentials from non-essentials, organizing visually presented abstract designs, and in rapid eye/hand coordination. Pencil/paper visual motor skills appeared age appropriate. This girl was spontaneously quite concrete, and even though she is showing more than adequate cognitive functioning, her academic achievement is quite poor. Auditory problems may be present, which are interfering with school achievement.

Case #8

This boy, age 8 years, 3 months, was referred by school personnel for evaluation for placement in a Learning Disabled Program. Referral information indicated that the child demonstrated a lack of verbal and physical control as exemplified by: out of seat behavior, crawling on floor, yelling out loud. He delays beginning many tasks, and after oral or written instructions, he must be reminded at least three times before beginning a task, and then completes less than twenty-five percent of the assignment. He has some articulation problems, mainly in the area of stuttering. He is working approximately one grade level below his ability level.

During testing, this boy was initially quiet. He gradually became more verbal until about halfway through. He was quite spontaneous, initiating conversation and responding fully to all test items. He began stuttering when he encountered his first difficulty on the Information subtest, and from then on, it was present for most of the test situation. This subject was very appropriate and almost compliant. He sat with his hands folded during Verbal subtests, and after any Performance item, he returned everything to its proper order. Adequate task focus was demonstrated, and no distractibility was noted.

The Wechsler Intelligence Scale for Children (Revised) was administered. Test results were as follows:

Verbal Score IQ 113, Performance Score IQ 98, Full Scale Score IQ 106

Verbal Tests	(Scaled Scores)	Performance Tests	(Scaled Scores)
Information	13	Picture Completion	14

Similarities	13	Picture Arrangement	9
Arithmetic	7	Block Design	10
Vocabulary	13	Object Assembly	10
Comprehension	15	Coding	6

An analysis of this child's scaled scores indicate cognitive functioning within the Average range. However, there was significant scatter between his very adequate Verbal scores falling within the High Average range, and less developed Performance skills, although they were still average. In the Verbal areas, all subtests were consistently found to be in the High Average range with the only weakness found in numerical reasoning abilities. His main performance strength which was also high average, was found in his abilities to differentiate essentials from non-essentials. His only deficit was seen in rapid eye/hand coordination, which was done extremely slowly.

Case #9

This boy, age nine years, four months, was referred by school personnel for evaluation for placement in a Learning Disabled Program. Referral information indicated that he has at least average intelligence, yet he is not achieving at grade levels. Specific problems are in reading and spelling. He performs well in activities when he does not have to use a book or take a test. He does an assignment as he thinks it should be done without asking questions. When reading, he points. He communicates well and relates well to others. He is not a discipline problem.

During testing, this boy appeared anxious and tense. He also evidenced mild eye tics. During the evaluation, the tics lessened in frequency and he appeared comfortable. He displayed some spontaneity and evidenced adequate language skills. Throughout the evaluation, he evidenced much interest and perseverance. He worked almost compulsively and was concerned with detail and accuracy. He worked rapidly on most visual-motor tasks utilizing almost no trial and error efforts and he proved to be extremely flexible in problem solving. He followed directions well and learned new tasks easily.

The Wechsler Intelligence Scale for Children (Revised) was administered. Test results were as follows:

Verbal Score IQ 102, Performance Score IQ 111, Full Scale Score IQ 106

Verbal Tests	(Scaled Scores)	Performance Tests	(Scaled Scores)
Information	13	Picture Completion	9
Similarities	10	Picture Arrangement	13
Arithmetic	12	Block Design	16

Vocabulary	8	Object Assembly	11
Comprehension	9	Coding	9
(Digit Span)	(11)	Mazes	(19)

An analysis of this child's scaled scores indicate performance in the average range of intelligence. In the Verbal areas, he evidenced mild depressions in language. Average skills were demonstrated in abstract verbal reasoning and social judgment. He performed in the bright normal range in awareness of environmental information, numerical reasoning, and auditory short term memory.

In the Performance area, he evidenced low average scores in attention to visual details and in grapho-motor speed. Bright normal scores were evidenced in visual social judgment and in concrete part/whole relationships. He performed in the superior range in visual abstract reasoning and in the genius range in paper/pencil planning.

Case #10

This girl, age 6 years, 2 months, was referred by school personnel for evaluation for placement in a Learning Disabled Program. Referral information indicated that the child responds inconsistently and constantly seeks attention in inappropriate ways. She responds well to praise. Her paper/pencil skills seem less than adequate, and she has difficulty writing on the line, demonstrates poor spacing, and erases a good deal of the time. At times she seems to not be paying attention because she appears to not hear you.

During testing, this girl was rather passive, in that she often sat and stared as if she did not understand what was going on. She gave the distinct impression that she did not "hear" many of the instructions given. On the Vocabulary subtest of the Stanford-Binet, she auditorially misperceived several words presented her. She heard "door" for "roar", and "glass" for "eyelash". Repetition of instructions was constantly necessary, as was refocusing on tasks. Gross motor skills appeared adequate, but fine motor skills were considered somewhat below chronological age expectancy. She was felt to be appropriate in her responses but was passive and flat in her affect, possibly due to her difficulty with auditory perception. When she does understand what is going on, she can respond with very appropriate responses. She can also demonstrate more facial expression and observable affect.

The Stanford-Binet Intelligence Scale - Form L-M was administered. Test results were as follows:

Test Summary

	Years	Months
V	Basal	
VI		10
VII		4
VIII	Ceiling	

CA 6-11 MA 6-2 IQ 84

A basal was established at the V year level. However, she came close to passing all items at the VI year level with the exception of Vocabulary. Although she passed Differences at the VI level, she failed one of the three items presented her where she was to tell the difference between a boot and slipper. She responded to the difference between a boot and "slip", saying that you wear a boot on your feet and a slip under your dress. Again, her auditory perception difficulties were demonstrated. At the VII year level, she copied a diamond so that she could be given credit, but this was done with considerable difficulty. The only other item passed at the VII year level was Repeating Digits and she was able to repeat five digits forward or three consecutive trials with no difficulty whatever. At the VIII year level, her ceiling, she came very close to passing the second test item presented which called for auditory recall of information presented in a story read to her. This seems to evidence that she can recall information and comprehend material given to her auditorially when enough social and contextual are available. She does, however, have extreme difficulty with short phrases and key words in sentences.

Case #11

This girl, age 7 years, 10 months, was referred by school personnel for evaluation for placement in a Learning Disabled Program. Referral information indicated that she is repeating first grade and is not functioning at grade level. She has a poor memory, difficulty following directions, and possible perceptual-motor problems; she also evidences an expressive language problem. This child seems unaware that she is having problems and wasn't upset that she was retained in first grade. She doesn't care that her younger sister is in the same grade.

During testing, this girl appeared to be friendly but somewhat non-spontaneous. Her verbal communication skills seemed somewhat underdeveloped, although not to the extent that it was difficult for her to participate in the testing activities. Her information gathering skills and verbal fluency were slightly depressed. Motor skills were generally inadequate for her chronological age, and she demonstrated specific difficulties on activities requiring the integration of visual and kinesthetic stimuli as well as poor grapho/motor development. Affectively, she seemed somewhat withdrawn and disinterested in many of the testing activities, although no particular instances of any uncooperative behaviors were noted. Nevertheless, her full cooperation in the evaluation procedure was never evidenced, and her level of motivation appeared to be low.

The Wechsler Intelligence Scale for Children (Revised) was administered. Test results were as follows:

Verbal Score IQ 86, Performance Score IQ 86, Full Scale Score IQ 85

Verbal Tests	(Scaled Scores)	Performance Tests	(Scaled Scores)
Information	8	Picture Completion	6
Similarities	8	Picture Arrangement	10
Arithmetic	8	Block Design	9
Vocabulary	8	Object Assembly	5
Comprehension	7	Coding	10
Digit Span	(9)		

An analysis of this child's scaled scores indicate Verbal performance slightly below current age expectancy, with relative strengths in the areas of information gathering skills, abstract verbal reasoning, and short term auditory memory abilities being noted. One relative weakness did seem to be social judgment, although it was not indicative of a significant deficit when compared with her other scores in the Verbal subtest area.

Performance subtest scores were considerably more inconsistent than were her verbal scores, ranging from a scaled score of 5 to a scaled score of 10. Relative strengths in the areas of sequencing skills, visual perception, and visual-motor coordination were apparent. However, both her visual discrimination and her visual organization skills did seem to be performing at a significantly lower level.

Case #12

This boy, age 9 years, 7 months, was referred by school personnel for evaluation for placement in a Learning Disabled Program. Referral information indicated that he is functioning at least two years below his fourth grade placement in reading, spelling, and arithmetic. However, he is a recent transfer into this school district and may not have made an adequate adaption to a more stringent academic program. Behaviorally, he is described as quiet and cooperative in the classroom. It is difficult to engage him in classroom discussions or to elicit responses to direct questions. However, his communication skills do appear to be generally adequate for his chronological age, both in the areas of his expressive and receptive language skills.

During testing, he was friendly but somewhat non-verbal. Affectively, he was appropriate, although some instances of inattentiveness and lack of eye contact were noted. No specific instances of uncooperative behaviors were apparent, but he did seem to be somewhat anxious about participating in some of the testing activities. His responsiveness increased noticeably as the evaluation procedure progressed.

This subject's communication abilities did demonstrate an inconsistent pattern of development. Although his verbal fluency skills appeared to be adequate, deficits in the areas of information gathering skills, vocabulary development, and task focus were also apparent. His ability to interpret and carry out verbal directions did seem to be adequate.

Motorically, he demonstrated good skills on almost all the measures which evaluated his abilities in the visual-perceptual-motor domain. His grapho-motor development appears to be at a level somewhat above his current age expectancy.

The Wechsler Intelligence Scale for Children (Revised) was administered. Test results were as follows:

Verbal Score IQ 84, Performance Score IQ 91, Full Scale Score 86

Verbal Tests	(Scaled Scores	Performance Tests	(Scaled Scores)
Information	5	Picture Completion	11
Similarities	8	Picture Arrangement	8
Arithmetic	9	Block Design	11
Vocabulary	6	Object Assembly	9
Comprehension	9	Coding	5
(Digit Span)	(8)		

An analysis of this boy's scaled scores indicate that Verbal subtest scores were somewhat inconsistent, ranging from a scaled score of 5 to a scaled score of 9. Relative strengths in the areas of abstract verbal reasoning, numerical computation, and social judgment were noted. Significant weaknesses in vocabulary development and information gathering skills were also apparent. Although intratest variation was minimal, a significant amount of intertest variance seems to suggest that the weaknesses that are apparent are relatively specific in nature. As a result, low level of functioning in the area of verbal communication skills is not indicated.

Performance subtest scores were somewhat variant, although not as pronounced as were his Verbal. Relative strengths in the areas of visual discrimination abilities, visual perception, and visual organization skills were noted. A relative weakness in sequencing skills as well as a significant deficit

in visual-motor coordination was also indicated. Again, intratest variation was not significant. However, his abilities in visual-motor coordination do appear to be depressed considerably below current age expectancy.

Case #13

This boy, age 11 years, 11 months, was referred by school personnel for evaluation for placement in a Learning Disabled Program. Referral information indicated that he is two years behind academically. He is seen as a sensitive, nervous child who prefers to spend time by himself. He loves to draw, and his drawings reflect creativity and imagination. He is not a discipline problem, and peer relations are within normal limits. He is often nervous in class and has trouble sitting still. He resents correction and discipline. His speech and oral reading are sporadic and arhythmic. He reverses numbers in math.

During testing, this boy rarely maintained eye contact. He was pleasant and cooperative, and affect was felt to be adequate despite poor eye contact. There was little spontaneity, but verbalizations were excellent. Attention and concentration were adequate.

The Wechsler Intelligence Scale for Children (Revised) was administered. Test results were as follows:

Verbal Score IQ 117, Performance Score IQ 109, Full Scale Score IQ 115

Verbal Tests	(Scaled Scores)	Performance Tests	(Scaled Scores)
Information	13	Picture Completion	10
Similarities	14	Picture Arrangement	15
Arithmetic	9	Block Design	10
Vocabulary	12	Object Assembly	14
Comprehension	16	Coding	8
(Digit Span)	(8)	(Mazes)	(6)

An analysis of this child's scaled scores indicate this boy evidenced performance in the Bright Normal range of intelligence. In the Verbal area, he demonstrated average abilities in numerical reasoning and mild disabilities in short term

auditory memory. He exhibited bright normal ability in awareness of environmental information, abstract verbal reasoning, awareness of environmental information, and language. Social judgment skills were excellent.

In the Performance area, he demonstrated average abilities in attention to visual details and in abstract part/whole relationships. He demonstrated Bright Normal ability in sequencing and social cues, and in concrete part/whole relationships. He demonstrated weaknesses in grapho-motor skills and in grapho-motor execution.

Case #14

This boy, age 9 years, 0 months, was referred by school personnel for evaluation for placement in a Learning Disabled program. Referral information indicated that this child is not functioning at grade level. Gross and fine motor skills were reported to be poor. He is a very timid child with few friends. He apparently works only on a one-to-one basis. He is currently taking Tofranil, an anti-depressant, daily as recommended by his pediatrician.

During testing, this child was very anxious. He spoke only when he had to, in response to a question. His voice level was almost at a whisper, which at times made him difficult to understand. Rapport was adequate; yet he never really relaxed throughout the test session. His frustration tolerance was extremely low, which resulted in his wanting to give up on minimal stress items. He would respond when encouraged which did enable him to complete many items he would not have completed had he been left on his own. He appears to meet or cope with stress by withdrawing both physically and mentally.

The Wechsler Intelligence Scale for Children (Revised) was administered. Test results were as follows:

Verbal Score IQ 91, Performance Score IQ 83, Full Scale IQ 86

Verbal Tests	(Scaled Scores)	Performance Tests	(Scaled Scores)
Information	8	Picture Arrangement	9
Comprehension	9	Picture Completion	8
Arithmetic	8	Block Design	7
Similarities	8	Object Assembly	10
Vocabulary	9	Coding	4
(Digit Span)	10		

An analysis of this child's scaled scores indicated functioning at the low average range of cognitive development. He had difficulties in organization and rapid grapho/motor speed and possibly short term visual memory. Receptive language areas were somewhat depressed. His high anxiety level and depression may be affecting his learning.

Case #15

This boy, age 8 years, 9 months, was referred by school personnel for evaluation for placement in a Learning Disabled program. Referral information indicated that this child is a second grade student after having repeated first grade. He is not able to keep up academically and during class time he tends to have very poor attention. Many times he wanders around the room and does not seem to know what is going on. Handwriting is labored and a consistent difficulty. He is reported to be an occasional distraction to others and sometimes abandons his own work to wander when his teacher is engaged elsewhere. He appears to relate successfully to peers and is generally cooperative with his teacher. Both receptive and expressive communication skills are indicated to be satisfactory.

During testing, this child was friendly and verbal who seemed immediately at ease. Expressive language ability appeared satisfactory for his chronological age. Task focus was generally adequate, but less consistent on verbal tasks. He became more restless as the session progressed, and attention span noticeably diminished towards the end of the period. Some distractibility with test materials was evident, but the child responded well to re-direction. Frustration tolerance was evidenced to be rather low and he was quick to reply "I don't know". Repeatedly, he sought examiner assistance with tasks. Lack of persistence was consistent, and when success was not immediate, the initial response was to quit.

The Wechsler Intelligence Scale for Children (Revised) was administered. Test results were as follows:

Verbal Score IQ 94, Performance Score IQ 74, Full Scale Score IQ 83

Verbal Tests	(Scaled Scores)	Performance Tests	(Scaled Scores)
Information	12	Picture Completion	8
Similarities	9	Picture Arrangement	6
Arithmetic	6	Block Design	5
Vocabulary	10	Object Assembly	6
Comprehension	8	Coding	6

An analysis of this child's scaled scores indicate functioning within the lower limits of the Low Average range of intelligence. With Verbal achievement falling within the Average range and Performance achievement within the Borderline range, the twenty point differential is considered significant. Verbal subtests revealed a considerable amount of intertest variability with scaled scores from 6 to 12. Vocabulary knowledge and usage and the ability to form associative verbal concepts are at age expectancy. Relative weaknesses were seen on measures of social judgment and arithmetic reasoning skills. A strength was evidenced on a measure of general fund of information. An examination of Similarities response reveal generally concrete thought patterns. Finger counting was observed on the Arithmetic subtest, and he was able to answer only the first three problems.

Performance subtests were uniformly depressed and with the exception of Picture Completion, yielded scaled scores of 5 and 6. The ability to differentiate essential from non-essential parts was a relative strength. Limited ability to pick up on visual cues was evident in both Picture Arrangement and Object Assembly. He was often unable to construct logical stories on the former, and the latter brought much frustration and limited ability to associate and assembly parts into

meaningful wholes. Lack of persistence was noted throughout the performance sections. Instead of employing even a basic trial and error approach, he insisted that a puzzle piece was missing, that he needed more blocks, or that there was nothing missing from the picture. Poor speed, sloppy execution, and very heavy pencil pressure was evidenced on a rapid learning visual-motor task.

Case #16

This child, age 7 years, 9 months, was referred by school personnel for evaluation for placement in a Learning Disabled Program. Referral information indicated that he is functional at the readiness level in both reading and arithmetic. He is described as being restless, talkative, and bothersome. He has a great deal of difficulty interpreting and following verbal instructions, and he does not express his ideas clearly. Primary reason for referral was because he is showing little or no progress in all basic first grade skills.

During testing, this child was cooperative and appeared well-motivated. In a one-to-one situation, he remained polite and well-mannered. He responded to conversation initiated by the examiner after becoming accustomed to the situation, being more spontaneous, but on the whole, he was relatively quiet. This subject was not impulsive, and displayed much perseverance. Even when the task was quite difficult, no frustration was noted. He displayed adequate speech and language skills for his age but at times had difficulty finding the right word. He would substitute other words resulting in some unusual combinations, but these verbalizations only occurred when he was having word retrieval problems. Toward the end of the session, more motoric activity was observed, but it did not interfere with testing procedures.

The Wechsler Intelligence Scale for Children (Revised) was administered. Test results were as follows:

Verbal Score IQ 82, Performance Score IQ 82, Full Scale Score IQ 81

Verbal Tests	(Scaled Scores)	Performance Tests	(Scaled Scores)
Information	5	Picture Completion	4
Similarities	10	Picture Arrangement	5
Arithmetic	5	Block Design	5
Vocabulary	7	Object Assembly	9
Comprehension	9	Coding	14
(Digit Span)	(3)		

An analysis of this child's scaled scores indicate cognitive functioning at the lower end of the Low Average range, with little overall scatter present, but some subtest variability found. Verbal strengths were noted in his abstract reasoning abilities and in judgment, which were both average. His major weakness was seen in recent memory for numerals with relative weaknesses found in his general informational fund and in numerical reasoning. On the Digit Span subtest, he had difficulty with four digits forward and was unable to understand the task of reversing the digits.

His strengths in the Performance area was in rapid eye/hand coordination, and it was observed that he memorized the symbols very quickly and found it unnecessary to return to the key. His ability to organize concrete parts into meaningful wholes was also adequate. His major deficits were found in his abilities to differentiate essentials from non-essentials, sequence items pertaining to social situations, and to organize visually presented abstract designs. On the Block Design subtest, he had difficulty ignoring the sides of his productions and concentrating only on the top. This confusion did appear to interfere with the final results.

Case #17

This girl, age 7 years, 1 month, was referred by school personnel for evaluation for placement in a Learning Disabled Program. Referral information indicated that this child is at a pre-primer level; she has problems with memory and difficulty following directions. Some problems with both gross and fine motor skills were also noted. She does not appear to be lacking sufficient motivation to learn but is unable to remember or use any skills of association in transferring information from one lesson to another. Behaviorally, she is a somewhat impulsive child who frequently speaks out of turn in the classroom. However, she is not purposefully disruptive or uncooperative. Communication abilities appear to be somewhat underdeveloped for her chronological age. Her most debilitating area appears to be her inability to successfully carry out verbal or written instructions.

During testing, this child appeared to be pleasant and cooperative. It did appear that her verbal abilities were underdeveloped, and she had a difficult time expressing herself using complete thoughts. Some difficulties following verbal directions were noted, and she appeared unable to benefit adequately from concrete demonstrations. Her level of motivation seemed to be adequate. A considerable amount of psychomotor delay was noted on the Performance activities of the WISC-R, and she was unable to complete these tasks without the frequent assistance from the examiner.

The Wechsler Intelligence Scale for Children (Revised) was administered. Test results were as follows:

Verbal Score IQ 88, Performance Score IQ 78, Full Scale Score IQ 82

Verbal Tests	(Scaled Scores)	Performance Tests	(Scaled Scores)
Information	8	Picture Completion	12
Similarities	10	Picture Arrangement	5
Arithmetic	10	Block Design	7
Vocabulary	7	Object Assembly	5
Comprehension	6	Coding	5
Digit Span	(8)		

An analysis of this child's scaled scores indicate Verbal functioning within one standard deviation of the mean for children of this chronological age. A significant weakness in the area of social judgment was noted, as was a borderline deficit in vocabulary skills and verbal fluency.

Performance subtest scores were significantly lower than her Verbal, although a relative strength in the areas of visual discrimination abilities was noted. Nevertheless, significant dysfunction in sequencing abilities, visual discrimination skills, and visual-motor coordination were also apparent, as was a borderline deficit in visual perception.

Case #18

This boy, age 6 years, 4 months, was referred by school personnel for evaluation for placement in a Learning Disabled Program. Referral information indicated that this child is working in pre-school activities at all levels. He is described as being rather disruptive and distractible. He has problems following verbal instructions and is rather slow in talking. He has learned only two letters. He cannot write any numbers or his name, and is not able to work independently.

During testing, this child was cooperative and seemed eager to please in the one-to-one situation. He was not distractible, although toward the end of the session, focusing became more of a problem as his interest lagged, and the items were difficult for him. Speech and language development appeared somewhat depressed, and eliciting more than one word responses was difficult, although they did occur. Structuring was necessary, and frequently instructions had to be simplified so he could respond, although this was not a consistent pattern. More difficulties were seen with purely verbal items than with performance ones.

The Stanford-Binet Intelligence Test-Form L-M, was administered. Test results were as follows:

CA 6-4 MA 6-4 IQ 94

Test Summary

	Years	Months
VI	6	
VII		2
VIII		2
IX	-	-

An analysis of test results indicate that this boy is displaying cognitive functioning within the Average range with little scatter apparent. He basaled immediately at the VI year level, gained two months credit at the VII year level, two months credit was earned at the VIII year level, and a ceiling was established at the IX year level. At the VI year level, he was able to answer seven vocabulary words correctly and only displayed some difficulty understanding the concept of like and difference, although he was able to gain credit for that subtest. At the VII year level, he was only able to answer Opposite Analogies correctly, gaining no other credit at that level. At the VIII year level, he answered five out of the six questions correctly to gain credit for the story, but gained no other credit at that level. At the VIII year level, he was unable to name more than three days of the week and gained no credit for any check. At the IX year level, he understood rhymes and received credit for two out of the four items. However, it was felt that he may have just been changing beginning sounds, and not completely understanding the task. Because of the constricted test pattern, strengths and weaknesses as such cannot be ascertained.

Case #19

This boy, age 9 years, 9 months, was referred by school personnel for evaluation for placement in a Learning Disabled program. Referral information indicated that he is reading at a fourth grade level and working in all other areas at the third grade level. He talks a great deal and is often silly. He does not seem to care whether he does well or not. He does not seem to have difficulty interpreting or following verbal instructions, but he has a speech problem. Primary reason for referral is because he cannot master handwriting and seems to have very poor retention.

During testing, this boy was initially hesitant to come to the testing room. In fact, he refused, laying on the floor. When he did comply and was told what he would be doing, this boy stated he already knew about it and verbalized a list of problems, such as poor handwriting, speech, and spelling which had prompted the referral. While rather belligerent behavior existed throughout the session, he wasn't resistive since he did respond immediately to the least amount of pressure to do what was requested. His behavior appeared to be almost a formality, and several times after complaining about a task, he would put much effort into it, complete it, and even seemed to enjoy it.

The Wechsler Intelligence Scale for Children (Revised) was administered. Test results were as follows:
Verbal Score IQ 113, Performance Score IQ 92, Full Scale Score IQ 103

Verbal Tests	(Scaled Scores)	Performance Tests	(Scaled Scores)
Information	11	Picture Completion	10
Similarities	13	Picture Arrangement	8
Arithmetic	14	Block Design	8
Vocabulary	10	Object Assembly	7
Comprehension	13	Coding	12
(Digit Span)	(9)		

An analysis of this child's scaled scores indicate cognitive functioning within the Average range. Subtest scatter was apparent. Verbal abilities fell within the High Average range, while Performance skills were found to lie at the low end of the Average range. All Verbal subtests fell average or above with definite strengths seen in his numerical reasoning abilities, abstract reasoning abilities, and in judgment. The only relative weakness was seen in his recent memory for numerals, which was also slightly depressed. Performance strengths were found in his rapid eye/hand coordination and his ability to differentiate essentials from non-essentials. Here, a relative weakness was seen in his abilities to organize concrete parts into meaningful wholes.

Case #20

This boy, age 8 years, 4 months, was referred by school personnel for evaluation for placement in a Learning Disabled program. Referral information indicated that he is functioning over a year below grade level. Behaviorally, he is reported to be quite appropriate.

During testing, this boy appeared to be verbally inhibited and demonstrated considerable anxiety. The specific behaviors were hand wringing, physical restlessness, finger sucking, whispered answers, and minimal eye contact. As the evaluation continued, these behaviors diminished, and he became more verbally spontaneous to the point where he had to be frequently redirected to the task. Mild auditory distractibility was noted. Receptively he was able to follow verbal directions, but at times expressive language communication was incoherent.

The Wechsler Intelligence Scale for Children (Revised) was administered. Test results were as follows:

Verbal Score IQ 80, Performance Score IQ 72, Full Scale Score IQ 74

Verbal Tests	(Subtest Scores)	Performance Tests	(Subtest Scores)
Information	3	Picture Completion	3
Similarities	8	Picture Arrangement	6
Arithmetic	7	Block Design	8
Vocabulary	7	Object Assembly	7
Comprehension	9	Coding	5
Digit Span	(9)		

An analysis of this child's scaled scores indicate functioning within the Borderline range of intelligence. Relative strengths noted were in the areas of verbal concept formation, short-term auditory memory, reasoning, and judgment.

weaknesses were in his general fund of information and his ability to analyze and differentiate essential from non-essential details. The remainder of the subtests were unremarkable depicting this boy's abilities to be below his age expectancy.

The Stanford-Binet Intelligence Test, Form L-M, was also administered. Test results were as follows:

CA 8-4 MA 7-10 IQ 90

Test Summary

	Years	Months
V	5	0
VI		10
VII		10
VIII		6
IX		6
X		2
XI		0

Relative strengths was noted in the area of arithmetic reasoning. He was able to understand verbal concepts and words on a concrete level; he was able to make judgment in adaption. However, verbal discrimination in comparison appeared weak. Memory and concentration skills appeared adequate for his chronological age. A relative weakness was noted in his visual-motor ability.

This section lists remedial activities to be used with children identified as Learning Disabled, based on WISC subtest scores. These activities are both commercial and teacher-made. It is important to bear in mind that these activities are designed not to "teach the test" but to aid in developing academic progress by remediating specific Learning Disabilities.

INFORMATION

Remediation Procedures (General)

Widen the child's experiences in school and in the community via field trips.

Organize interest centers where children can collect, display and discuss projects. Make this an aspect of classroom routine.

Provide a wide variety of books, magazines, pictoral materials, high interest-easy vocabulary reading materials, topical cassettes at a listening center and developmentally appropriate materials in a learning display.

Discuss current events, local interest events and community activities. Plan role playing experiences based on the content of these events.

Note clearly stated facts, grasp a main idea, follow a sequence of events, and organize ideas from a reading selection or film.

Draw inferences and arrive at conclusions in interpreting reading material. Direct questions which encourage thinking and tap creativity.

Provide projects which aim at applying what was read or heard. Encourage the child to verbally express himself to a small group or lead a discussion.

Help the child to organize summaries of stories or television programs by organizing ideas in outline form.

Utilize select educational television programs. Work out a cooperative program with the school librarian to encourage interest reading.

Encourage the discovery of new ideas through directed reading-brainstorm activities.

Teach children to hypothesize, examine judgments, make decisions and create ideas.

Utilize puppet play to emphasize feelings through the use of language.

Visit local industry, public buildings, libraries. etc. to emphasize career awareness. Local professionals are useful resource people.

Utilize audio-visual media aid's, camera work, video tape and tape recorders to explore the environment that surrounds the child.

Provide opportunities for various children to assume leadership roles on selected group activities and projects such as studying other cultures, life styles, dress styles, etc.

Utilize experience charts (work things) for youngsters and emotion charts (coping with feelings).

Encourage independent pleasure study without requiring assignments. Reinforce the development of independent study projects.

To foster self-confidence, call upon the child for oral work which is within his capability range for success. Verbally reward accomplishments.

Remediation Procedures (Primary Level)

"Show and Tell" as a matter of class routine. Structure the session by encouraging the child to bring specific items to tell about (leaves, gloves, toys)

Planned visits to community agencies - fire house, police station.

Have the child discuss local geography, names of streets surrounding the school, street address, etc.

Remediation Procedures (Upper Primary Level)

Review basic concepts such as days of the week, months, time elements, compare distances within city or school, coin values, common concepts of same and opposite.

High interest-low vocabulary reading materials such as Cowboy Sam series can be useful in helping improve the general fund of information.

Discuss names and locations of neighboring communities, teach directions: North, South, East and West.

Directed use of television programs.

Reporting of major current events and discussion of such by using pictures and articles from newspapers and magazines.

Give the child a simple project such as planting flower seeds in a pot, planting a sweet potato, and encourage the child to explain the project.

Remediation Procedures (Intermediate Level)

Motivate interest in surroundings of city, county, state and nation.

Discuss famous community and state leaders.

Motivate the child to take responsibility in an area of interest which would require use of library materials.

Assign the child to group projects selecting the group with care. On occasion, attempt to place the child with children who have a substantial fund of general information and who have displayed the ability to accept a somewhat slower child.

Commercial Materials

Educational Development Laboratories: Study Skills Library

Barnell-Loft, New York: Specific Skill Series

Lippincott, Pennsylvania: Reading for Meaning Series

Bobbs-Merrill, Indiana: Developmental Reading Text and Workbooks

American Guidance Service, Delaware: Peabody Language Kits

CEBCO Standard Publishing: Basic Skills for Everyone

Teaching Resources: Auditory Discrimination In-Depth Program

SIMILARITIES

Remediation Procedures (General)

Provide activities in which the child categorizes according to a common similarity (different objects of the same set, different sounds with a similar relationship).

Develop scrapbooks of pictures in various categories or use a tape recorder to collect categories of sounds.

Use visual, as well as auditory modalities, in various combinations to reinforce associational content in activities.

Encourage game play using verbal opposites and similarities.

Select passages or sentences and have the child evaluate similarities and differences in the samantic use of words.

Utilize simple science experiments in which several unique ingredients can be combined into one unique mixture which can be classified.

Encourage group discussions using abstract social concepts such as freedom, liberty, poverty, equality, etc.

Widen opportunities to listen critically to selected passages, either read aloud or recorded to identify absurdities, similarities, differences, and to draw inferences.

Use picture pairs, geometric designs varying in complexity and differing slightly from each other, in activities requiring that the child identify similarities and differences.

Encourage divergent thinking through problem solving in art, language arts, music, social studies, science, and mathematics.

Analyze differences in the various ways the same word may be spelled; analyze auditory similarities.

Provide experiences in written expression and composing using concepts of same and different.

Use rebus-type games in informal lessons.

Incorporate an active use of audio-visual aids in planning learning experiences.

Utilize phonovisual methods in activities designed to extract associational concepts.

Try to prevent fatugue in learning by providing frequent rest periods.

Consider having the child participate in extra curricular enrichment programs.

Remediation Procedures (Primary Level)

Use dissimilar objects which have a commonality of shape.
Use dissimilar objects which have a sameness of color.
Use dissimilar objects which function in an alike manner.
These exercises aid in showing various relationships.

Have the child make a scrapbook of pictures in broad classifications.

Completion of functional sentences: Rabbits are fast, turtles are _____.

Matching abstract concepts with concrete pictures.

Remediation Procedures (Upper Primary Level)

Teach generalizations. Discussions and illustrations of modes of transportation, types of clothing, and so on.

Teaching of similarities and differences of geometric designs. Circular forms such as the sun and the moon.

Similarities and differences of topography such as lakes, rivers, mountains, hills.

Discussion of zero in arithmetic practice exercises with regards to meaning, such as nothing, nil, void.

Discussion of key determiners in sentences, such as more-less, most-every, less-least, etc.

Remediation Procedures (Intermediate Level)

Deveop and write lists of verbal opposites and similarities.

Classifications of animals such as mammals, land animals, sea animals, carnivorous animals, and so on.

Classification of musical instruments.

Physical properties of simple chemical compounds such as water, ice, steam.

Commercial Materials

American Guidance Service: Peabody Rebus Program.

Developmental Learning Materials: Auditory Discrimination aids

Milton Bradley: Educational association games

Continental Press: Verbal Opposites

Instructo: "We Learn to Classify"

SRA: "Learning to Think" series

Ideal: What Goes Together Lotto

ARITHMETIC

Remediation Procedures (General)

Provide matching and sorting activities which focus upon number recognition, sets of objects, and quantities of objects.

Use puzzles, pegboards, beads, formboards and flannelboards to focus on geometric concepts, matching and pairing.

Utilize tactile number lines to teach concepts of addition, subtraction, first, last, and so on.

Encourage familiarity with sequencing by introducing tasks which use serial order, relationships and time concepts.

Use a tachistoscope or flashcards to improve recognition of sets of objects, symbols, and specifically designed number facts.

Extend numerical concepts into game play with the use of dice, playing cards, puzzle cards, and use of play money or chips.

Tap out number combinations to reinforce auditory discrimination.

Encourage activities which involve planning with the use of money.

Have the child make posters to illustrate mathematics concepts.

Use concrete or manipulative materials when introducing abstract, or symbolic number concepts such as: fractions, percentage, graphs, charts, money, interest, or map reading.

Sequence presentation of time concepts by beginning with a large unit of time such as one hour and breaking time up into intervals such as hours, minutes, seconds, and so on.

Organize the timing and pacing of activities and vary them by ease or difficulty level; short or long time duration to encourage efficient planning of time or working within time limits.

Utilize existing community resources to illustrate practical approaches to mathematics application such as: factory work, assemby lines, ballot counting during elections, simulated investing using the stock page of the newspaper.

Adapt shopwork or industrial arts projects to include arithmetic concepts.

Utilize graph paper to illustrate concepts.

Allow the child to memorize when necessary, but supplement this activity with reinforcement experiences which concretely accent this process.

Remediation Procedures (Primary Level)

Present group of objects (blocks, pencils, etc.) and introduce concepts of more, most, least, less.

Use of picture line - cards with simple pictures and teach concepts of first, last, second, middle, and next to last.

Teach counting numbers by having the child match sets. Child should match similar sets by number and classification.

Introduce geometic shapes and have child trace, copy, match, and name.

Encourage familiarity with time and measurement through the use of clock face, calendar, money, and ruler.

At the end of the primary period, the child should be expected to count from one to one hundred, add sums of ten and under, and have some simple subtraction facts within his grasp.

Remediation Procedures (Upper Primary Level)

Review and reinforce primary level skills.

Extend numerical concepts such as equalities and inequalities, addition and subtraction facts through one hundred and number families. Concrete objects may be used for demonstration. Drill and practice of facts are essential.

Emphasis should be placed upon the concept of zero by use of a variety of arithmetical tasks involving the use of the zero. An abacus may be used to demonstrate place value.

Introduce the concept of halves and quarters. Flannel board material, blocks, and pie cut-outs may be used for demonstration.

Using concrete visual aids, simple multiplication and division facts may be introduced. Flash card material may be made or purchased.

Remediation Procedures (Intermediate Level)

Review and reinforce previous concepts.

Drill and practice of facts is essential. To make drill interesting, children may figure batting averages, grocery shopping lists, home expenses, restaurant menus, etc.

Use of decimals in the four processes can be presented with materials as described above.

Simple graph procedures may be introduced uning graphs made of children's height and weight. The child can measure the classroom or the school building, or the distance a child throws a ball to develop measurement concepts.

Commercial Materials

Cuisenaire Company: Cuisenaire Rods

Houghton Mifflin Company: Montessori Math Aids

Holt, Rinehart and Winston: Happy Ways with Numbers

General Learning Corporation: Judy Clock and Colornumbers

Teaching Resources: Math aids and games

Continental Press: Arithmetic Step by Step books

SRA: Distar Arithmetic Series

Developmental Learning Materials: Math games and kits

The Math Group: Math puzzle books, "Beefing Up Basic Skills" and others

VOCABULARY

Remediation Procedures (General)

Widen experiences in writing dramatizations and stories.

Encourage the use of puppetry, dioramas, stage settings, or shadow screen for building verbal expressive behavior.

Select and prepare a story for sharing orally with a group or with the entire class.

Assemble and edit material for a school newspaper, scrapbook, or class project.

Increase dictionary work as a part of language arts activities.

Weave original stories around personal friends or favorite storybook characters.

Create characters for a continued story and have the child add episodes.

Utilize graffiti as a basis for encouraging the creative analysis and use of words.

Encourage the collection of written words such as folklore.

Use supplementary materials such as National Geographic, Time, Newsweek and encourage self selection of materials.

Use games such as crossword puzzles, Scrabble, password.

Have the children listen to television programs, commercials, or school created programs and make constructive evaluations.

Introduce relationships between languages of various kinds.

Study the differences in style, vocabulary, etc. of different literary periods of different writers.

Analyze words with similar meanings to differentiate shades of meaning.

Express in writing feelings about selections in music, art, and dance.

Listen to recordings of poetry and prose. Have the child create his own.

Devise "Read, Write, Draw" activity cards in various areas of the language arts.

Create games using new words or invent games which call for the use of the dictionary.

Remediation Procedures (Primary Level)

Encourage rebus book reading.

Present various objects in the classroom and require the child to name the different qualities of the objects such as size, shape, color, purpose.

The child should be able to repeat simple stories told by the teacher. The child can be asked to describe a television program.

Grab bag, describing objects in a bag.

Make a picture dictionary.

Have a set of pictures of related objects along with pictures that do not belong. The child classifies the pictures.

Remediation Procedures (Upper Primary Level)

Introduce dictionary work.

Introduce words.

Emphasize parts of speech and the roles words play in our language.

Make use of abstract words.

Insure working vocabulary knowledge for each subject area in science, math, social studies, etc.

Remediation Procedures (Intermediate Level)

Insure a minimum vocabulary key for each subject area.

Place greater emphasis upon written expression and writing abilities.

Assign required readings and involve the child in play-acting the different characters or verbally explaining the materials.

Increase dictionary work whereby the child might be requested to give word origins or trace the development of meanings to current day usage.

Make use of crossword puzzles, scrabble games, analogy games. Have the child make up his own word games and puzzles.

Commercial Materials

Continental Press: Wordland books

Lippencott: Open Court Readers

American Guidance Service: Rebus Readers

Ann Arbor Press: Visual Tracking workbooks

Behavior Research Labs: Sullivan Readers

Barnell-Loft: Specific Skill Series

Wise Owl Publications: Learning Center task cards

Frank Schafer: Learning Center task cards

COMPREHENSION

Remediation Procedures (General)

Utilize incomplete stories that involve social situations and have the child complete the story.

Have the child arrange, in sequence, stories that deal with social matters.

Have the child select magazine photo's depicting various social situations.

Map reading and map making helps to better orient the child to distances in the environment.

Develop self-perception activities such as using pictoral scrapbooks, family booklets, figure drawing and creative writing tasks.

Help to develop a sensitivity to other people with activities such as discussing the meaning of gestures, words, collecting pictures of people in social situations.

Use a "What if" box. This is a file box with situations described and followed by the question, What if---.

Recognize, discuss and role play various combinations of voice and gestures as a form of social behavior.

Divide classroom responsibilities among class members and rotate opportunities for assuming responsible roles.

Help children to appropriately react to social consequences by role playing.

Encourage independent decision making in the planning and execution of projects.

Discuss personal involvement in local events and encourage participation in our-of-school supervised social experiences.

Encourage the planning and implementation of a class trip or event.

Encourage the planning and implementation of class problem solving such as budgeting for a party, etc.

Encourage parent participation in organizing weekend experiences for children that have limited social-companion contacts out of school.

Develop lessons that teach planning, such as budgeting on an allowance, or ordering from a menu with limited expenses.

Consider using strategy games such as Monopoly, chess, etc.

Remediation Procedures (Primary Level)

Children should be asked to give simple explanations to such questions as "Why do we have houses?" "Why do we need firemen?"

Conduct stimulus-response exercises where a certain stimuls leads to a response, such as, "What do we do when it rains?"

Have the child bring in pictures of activities and relate them to other areas. For instance, after viewing pictures of a tractor, ask if the tractor is clearing land for buildings and why.

Practice giving directions and have the child respond to show understanding.

Have the child describe pictures in detail.

Have the child describe his father's job or a job that the child would like to have.

Review basic concepts of up, down, behind, before, after, later, first, last, etc.

Help the child in discussing simple nursery rhymes, fairy tales, and fables.

Remediation Procedures (Upper Primary Level)

Tell a story pausing frequently and have child fill in the missing details.

Continuation of cause and effect questions.

Have the child teach his favorite game and the rules necessary to play it.

Child should be able to explain what to do during various activities such as, library, cafeteria, movies, parties, etc.

School safety rules may be explained by the child with reasons for obeying these rules.

Remediation Procedures (Intermediate Level)

Social studies and arithmetic should be taught with emphasis on cause and effect -- Why does 5+2=7? Why are there ghost towns.

Present projects that the child can do and have him describe his methods to the class.

Use exercises in abstract thinking. Commercially available puzzle books are useful.

Assign composition work. The teacher should assign the topic and be vague with nothing more than the topic title given.

Commercial Materials

Developmental Learning Materials: "Concepts for Communication" tapes and worksheets

Wise Owl: Learning Center task cards

Educational Programmers: Language Concepts Skill Packet

Frank Schafer: "Read, Think, Color" workbooks

Steck-Vaughn: "Reading, Thinking, Reasoning Skills" workbooks

American Guidance Service: Peabody Language Kits

Educational Activities Incorporated: Sound-Sight Skills

Barnell-Loft: Specific Skill Series

Frank Schafer: Learning Center task cards

Digit Span

Remediation Procedures (General)

Encourage activities which reinforce immediate recall such as spelling or math contests.

Encourage auditory awareness and discrimination by training the ability to listen and interpret vocal sounds, radio, etc.

Widen auditory experiences by using modality combinations, such as auditory-visual.

Devise games that build auditory memory such as tongue twisters, hand clapping imitations, sound-picture match games.

Encourage sequential arrangement of material to be learned into a step-by-step operation to avoid fragmentation.

Utilize sentence completion activities in which the child must select from a multiple choice.

Have the child write or say word, letter or number sequences forward, then backward.

Graduate the level of difficulty in presenting verbal directions.

Play two recordings simultaneously and have the child identify certain auditory sounds while eliminating irrelevant auditory sounds.

Use rhymes, poems, and songs to identify repetitions of initial, medial and final sounds.

Develop activities adapting audio or visual equipment such as the tachistoscope or flash-x to build short term visual memory.

Use group games such as "Simon Says."

Games where words, pictures, etc. are to be repeated such as where children sit in a circle and whisper to the next person what was whispered to him.

Add a line to a story repeating earlier sentences each time.

Remediation Procedures (Primary Level)

Have the child listen. Have him name a sound he hears outside, in the room, or in the hall.

Initiate grocery store game where the child is required to purchase certain items named by other children in sequence.

Request the child to repeat teacher prepared number sequences such as phone numbers and addresses.

Child should be encouraged to repeat simple rhythm patterns he hears the teacher or classmates tapping or clapping.

Child should listen to a series of common sounds, name the sound and then attempt to imitate them in sequence.

Remediation Procedures (Upper Primary Level)

Use rhythm exercises involving clapping and tapping.

Require the child to provide missing letters or numbers as he listens to the teacher say them in sequence, such as 1,2,___,4

Have the child provide missing sounds to words presented by the teacher such as bo-le (bottle), da--y (daddy).

Child may be required to memorize simple poems and rhymes.

Have the child repeat number and letter combinations in proper order, then backward.

Remediation Procedures (Intermediate Level)

Have the child repeat tongue twisters.

Require exercises of immediate recall of spelling words. Spelling bees are useful.

Present numbers or letters in sequence and have the child repeat. Attempt to build the skill to seven digit repeating ability.

Participation in a play requiring memorization of lines.

Have the child prepare a list of the many sounds he hears throughout the day.

Commercial Materials

Rheem Califone: Tachistoscope

Radiant Educational Corporation: Expressive Receptive Skills

Ideal: Sound Blending tapes and worksheets

Educational Activities: Sound and Sight Skills

Educational Programmers: Auditory Memory Sequential Skill Packet

Educational Performance Associates: Auditory Stimulator

Developmental Learning Materials: Auditory memory, figure-ground, and imagery tapes and worksheets

PICTURE COMPLETION

Remediation Procedures (General)

Use "hidden picture" activities such as those found in Highlights for Children.

Have the child complete pictures varying in difficulty levels.

Provide opportunities for the child to discriminate visual forms and parts using puzzles, lotto games and color forms.

Encourage independent arts and crafts activities such as leathercraft, ceramic tile work and assembly activities involving sequential procedures.

Using a map, have the child isolate specified cities, cut them out and re-assemble them on a bulletin board.

Encourage leisure time activities such as crossword puzzles and pattern cards.

Utilize the number to number coloring books, dot-to-dot pictures and model building activities.

Utilize group activities which incorporate training in spatial relationships (up-down, top-bottom, in-out).

Evaluate the main idea from selected passages or stories.

Provide science, workshop or cooking experiences in which the child will list the steps or procedures taken and the ingredients used.

Remediation Procedures (Primary Level)

Make use of twenty questions games.

Have the child identify common objects and discuss the details of these objects.

Guessing game where the teacher describes a person in the classroom and the child must guess who it is.

Matching of letters, colors, numbers, geometrical.

Construct compound words through the use of pictures in magazines.

Use simple jigsaw puzzles.

Make use of "how To" exercises. Have the child describe how to tie a show, make a bed, etc.

The child completes simple pictures that have missing lines or parts.

Remediation Procedures (Upper Primary Level)

Dolch crossword puzzle books and map puzzles could be used.

Have the child give oral descriptions in detail of various action scenes in books and magazines.

Analysis and synthesis of compound words. Present compound words and have the child find the small word in the larger element.

Introduce the child to the world map and its major land formations.

Make use of jigsaw puzzles appropriate to the child's age level.

Activities where the child draws and paints by numbers are useful.

Present incomplete geometric chapes that the child is required to complete.

Remediation Procedures (Intermediate Level)

Use road map exercises. Have the child plot a route from one point to another listing the cities passed through.

Have the child present written descriptions of pictures, objects, books, action programs, television, and movies.

Sentence analysis involving compound sentences, complex sentences, and parts of speech that will focus attention on parts of a whole.

Make use of jigsaw puzzles and crossword puzzles at appropriate age levels.

Assign simple science experiments where the child can list in detail the procedures and observations of the experiment.

Give the child exercises in choosing titles and find the main ideas of written selections.

Continue picture completion drawing exercises at an advanced level.

Commercial Materials

Follett: Frostig Program

Allied Education Council: Fitzhugh PLUS Program

Teaching Resources: Parquetry blocks and design cards

Continental Press: Missing parts worksheets

Milton Bradley: "What's Missing Lotto"

SRA: "Learning to Think" series

Teaching Resources: Fairbanks Robinson II

Instructo: "What's Missing Zoo"

Love Publishing: Individualized Order Tasks

PICTURE ARRANGEMENT

Remediation Procedures (General)

Have one child begin a story and have another child continue it using imagination and oral language.

Place pictures out of sequence and have the children place them in order.

Demonstrate and have children perform simple to more complex science experiments, craft projects and cooking activities.

Arrange months of the year, days of the week, etc., in order from a scrambled array.

Select events or characters in a story and make a like-dislike chart.

Review and discuss abstract concepts such as feelings and so on.

Encourage children to participate in school clubs and to develop club guidelines sequentially and systematically.

Utilize role playing using material which is divided into sequences or episodes.

Have the child chart his behavior over a weeks time and devise a sequence of events.

Note important details in a story and list them in an order of importance.

Encourage the organization of ideas into tables of contents, outlining and by arranging topical areas in reports.

Remediation Procedures (Primary Level)

Discuss awareness of safety rules and procedures. Why is order necessary in a fire drill?

Reward good behavior, attendance, punctuality, etc.

Show the children pictures and have them tell a logical story in proper sequence.

Remediation Procedures (Upper Primary Level)

Reading materials where inferences and conclusions are called for.

Place emphasis on sportsmanship and rules of the game.

Work with incomplete set of number sentences, 4 + ___ = 7.

Give the child work with sentences requiring the child to fill in missing words.

Remediation Procedures (Intermediate Level)

Tell a short story. Have the children draw cartoons illustrating the order in which the events happened.

Tell or read an unfinished story and let the children supply the endings.

Have the child illustrate, write, or describe orally the events in his day in sequence.

Let the child retell a story or film.

Tell the children a story and omit an important part. Have the child discover what is missing.

Using puzzles, tell why each part is next.

Play a game where one item is removed at a time and have the child try to remember what is gone. Then see if he can replace the objects in the order in which they were removed.

Commercial Materials

Preston Corporation: Sequential Games Kit

Continental Press: Puzzle Sequences

Developmental Learning Materials: People and Shapes Puzzles

Ideal: Beads and Laces

Barnell-Loft: Specific Skill Series

Ann Arbor Press: Michigan Tracking program

Instructo: "What Comes First? Next? Last?"

Teaching Resources: Dubnoff Program

BLOCK DESIGN

Remediation Procedures (General)

Utilize the chalkboard to copy outlines, pictures, designs, words or to reinforce Kephart chalkboard exercises.

Reinforce visual motor skills with the use of perceptual training aids such as peg boards, cubical blocks, and parquetry blocks.

Use templates, clay and sand aids in tracing exercises.

Utilize "Origami" paper folding activities.

Use mosaic tiles or construction paper cuts to copy or create patterns.

Make use of puzzles, dot-to-dot games and tracing activities.

Provide exercises in typing.

Have the child reconstruct a story from an array of scrambled sentences or passages.

Develop an awareness of form, shape and color using tactile-visual materials.

Encourage model building and other construction activities.

Give directions to the child sequentially stressing the concrete and graduating to more abstract or difficult instructions.

Remediation Procedures (Primary Level)

Make extensive use of concrete materials such as blocks, pictures, pegboards. Use of Cuisenaire Rods in teaching basic math.

Copy figures using toothpicks.

Encourage exercises in tracing and coloring within lines.

Make use of paper cutting and folding exercises.

Present new work sequentially and give ample opportunity to master a new concept before the next concept is presented.

Remediation Procedures (Upper Primary Level)

Extension of exercises and activities from primary level appropriate to grade level.

Make use of puzzles appropriate to chronological age leve.

Use spirogram type games for geometric pattern drawing.

Engage child in sorting exercises by size, texture, color.

Assembling parts of compound words from a master list to which the child can refer can be useful.

Remediation Procedures (Intermediate Level)

Present jumbled sentences that the child has to reconstruct according to a master list.

Make use of advanced jigsaw puzzles.

Emphasize the copying of material from the board and from books.

Require the child to separate real words from nonsense words.

Have the child categorize picture topics or subjects.

Child's desk may be moved close to the chalkboard and he may be requested to work problems from a vertical plane (board) rather than a horizontal plane (desk).

Commercial Materials

SRA: "Learning to Think" series

Educational Record Sales: Developing Body-Space Perception Motor Skills Album.

Developmental Learning Materials: Sequential Picture Cards

Teaching Resources: Erie Program

Milton Bradley: Make a Shape, Make a Word, Make a Letter

Educational Programmers: Visual Motor Coordination Skill Packet

Steck-Vaughn: Puzzles and Patterns

Teaching Resources: Vanguard School Program

Follett: Frostig Program for Visual Perceptual Development

OBJECT ASSEMBLY

Remediation Procedures (General)

Utilize visual-auditory and tactile-kinesthetic approaches to reinforce verbal learning activities.

Have the child reproduce geometric patterns using triangle dominoes and sequence this activity from simple reproductions to more complex designs.

Emphasize part-whole relationships in the execution of tasks, especially in arithmetic, phonics or language arts.

Encourage the use of strategy games such as checkers and chess.

Utilize form or tactile boards to reinforce tactile discrimination.

Utilize the graph paper technique to devise specific visual-motor, part-whole skill building activities.

Use color cubes, selected cylinders and other concrete models to reinforce abstract concepts in learning experiences.

Utilize achievement profiles to plot specific mastery of skills.

Reproduce bead, block and object designs or patterns progressing from simple to complex tasks.

Encourage the use of road maps in pre-planning for day trips.

Design visual completion tasks in which geometric outlines are presented with puzzle pieces for the child to assemble.

Have several children design a poster, each selecting a portion and completing it in the manner of working on a group puzzle.

Encourage the building of models or other sequential learning tasks.

Present incomplete sentences or stories and have the child create additional episodes or conclusions.

Emphasize dictionary work.

Present incomplete pictures of objects, animals, toys, utensils, and geometric figures and have the child complete them.

Arrange an obstacle course for gross motor activities involving visual size, shape and distance discrimination.

Remediation Procedures (Primary Level)

Tracing outlines of familiar objects is helpful.

Make use of simple jigsaw puzzles.

Make use of Popper Words from the Dolch list.

Brief exposure to common objects using a Flash-X and have the child attempt to identify them.

Make use of creative stories and have the child create the story from flannel board characters.

Remediation Procedures (Upper Primary Level)

Make use of giant size poster cards that have missing letters and have the child supply the letter to make the total word.

Make use of flash card work.

Make use of dictionary exercises.

Cut up words and have the child make simple sentences.

Remediation Procedures (Intermediate Level)

Teach the child simple outlining.

Have the child find the key idea in paragraphs or stories.

Make use of cut up sentences that could be arranged to make logical sentences.

Have the child attempt to relate orally and in writing, a story or television program that is familiar to him.

Exercises in Haiku poetry can be utilized.

Commercial Materials

Teaching Resources: Ruth Cheves Program

Developmental Learning Materials: Pyramid Puzzles

Allied Education Council: Fitzhugh PLUS Program

Teaching Resources: Face and Figure Puzzles and Patterns

Preston: Tangram Puzzles

CODING

Remediation Procedures (General)

Introduce graphomotor assignments gradually with opportunity for copy work varying in length.

Consider visual tracking activities.

Incorporate dexterity exercises in activities such as writing, cutting, pasting, tracing, and the use of templates and finger skills.

Encourage games such as "Simon Says."

Use pegboard designs on a fixed and rotating pegboard.

Have the child complete a tile mosaic or paper mosaic picture matching numbers or letters or colors. Devise a color/number key.

Provide opportunities to incorporate game play in associative matching such as card games.

Utilize visual-motor activities such as the Frostig or Fitzhugh materials.

Devise codes like Morse code or picture writing and match this system with selected passages to be identified.

Use dominoes to match and sort dot combinations.

Encourage penmanship exercises.

Devise games modeled after Bingo using alphabet or numbers.

Remediation Procedures (Primary Level)

Use pegboards where the child has to make the pattern from a design card.

Make use of sewing cards.

Copying and matching geometric figures by connecting a dot pattern.

Emphasize good penmanship habits by giving exercise dealing with the making of repetitive ovals, circles, lines, and staying within appropriate limits.

Matching number and letter configurations.

Teach the alphabet using the sandbox, beaded letters, sandpaper, and tracing.

Clapping codes to represent items around the room.

Prepare a paper with various geometric forms. The child is to outline the circles in red, squares in blue, and so on.

Remediation Procedures (Upper Primary Level)

Develop a code whereby geometric figures and numbers are matched.

Make use of map legend by having the child find roads, rivers, cities and so on. Have the child develop a legend of his own.

Simple Simon games.

Penmanship exercises leading toward cursive writing.

Remediation Procedures (Intermediate Level)

Emphasis on written expression with particular attention paid to penmanship.

Make use of typewriter exercises.

Present simple social problems requesting alternative reactions.

Teach the child basic charade code and have the child act out familiar story and song titles.

Make use of time linits when assigning certain classroom activities.

Commercial Materials

Ideal: Perceptual Development Cards

Ann Arbor Press: Michigan Tracking Program

Educational Programmers: Visual Memory Skill Packet

Teaching Resources: Dubnoff School Program

Follett: Frostig Workbooks

Teaching Resources: Perceptual Bingo

Fearon: Valett Handbook

MAZES

Remediation Procedures (General)

Provide opportunities to orient the child to the school physical plant.

Use toy mazes resembling pin ball machines for eye-hand training.

Utilize visual-motor tasks found in Frostig/Fitzhugh type workbooks or similar materials.

Widen graphomotor experiences in copying and tracing.

Encourage map reading and plotting of routes.

Devise practice exercises making up mazes of all types.

Have the child estimate the time involved in specific tasks.

Devise crossword puzzle mazes in which combinations of words can lead from a starting point to a termination point.

Present verbal directions to the child in game form, graduating from simple to complex tasks.

Provide opportunities for the child to discriminate visual form and parts using puzzles, games and colored forms.

Have the child respond to objects and pictures presented in an incomplete form.

Encourage the sequential and orderly arrangement of material.

Construct a maze or obstacle course in the classroom or gym and have the child devise alternate routes through the maze.

Remediation Procedures (Primary Level)

Make use of practical exercises with simple mazes from magazines and other primary educational materials.

Have the child fill in the missing parts of objects.

Child can be asked to connect dots to make a picture or copy a pattern.

Present a series of directions and have the child carry them out.

Child can trace incomplete drawings, completing them.

Remediation Procedures (Upper Primary Level)

Have the child learn the location of rooms within the building by assigning him as a class messenger.

Have the child think about and present alternate routes from home to school.

Present complex directions to physical activities.

Continue with exercises in visual-motor coordination.

Remediation Procedures (Intermediate Level)

Have the child map out alternate routes to well known locations within the community.

Make use of exercises in advanced maze work from published materials.

Have the child make planned, sequential activities for class projects, parties, or plays.

Have the child make rules for a well known game.

Commercial Materials

SRA: Learning to Think Series

Teaching Resources: Dubnoff School Program

Teaching Resources: Vanguard Program

Teaching Resources: Erie Program

Teaching Resources: Ruth Cheves Program

Zaner-Blosser: Trace-a-Bit

Individual Intelligence Tests and Emotional Disturbances

The term "emotionally disturbed" refers to those children who demonstrate any one or more of the following characteristics to a marked extent and over a period of time: an inability to learn, unsatisfactory interpersonal relationships, inappropriate behavior, unhappiness, and repetitive illness.[49] This term will be used interchangeably with the term "behaviorally disordered" which is the state of Missouri label for the same problems. Attempts have been made to determine the effects of emotional disturbance on intelligence and the extent to which specific behavioral problems are associated with the level of intelligence. The studies made lead to the conclusion that nonpsychotic conditions do not seriously affect the overall level of intellectual performance.

Certain behaviors during testing can be indicative of emotional disturbance. Some attitudes displayed during the examination that are suggestive of an emotional problem are: irritability and suspiciousness, restlessness, lack of spontaneity, variable mood, apathy, and euphoria. Language difficulties suggestive of an emotional disturbance include: speech difficulty, rambling, blocking, over-elaboration, and self-reference. It is important to recognize that emotional disturbance cannot be diagnosed from an intelligence test alone.[50]

On intelligence tests, children with a compulsive neurosis may pass some subtests requiring meticulosity and fail other tests because they are either more meticulous than the test requires or too inflexible in their thinking. Performance on memory tasks may be influenced by an urge to be accurate. Tasks

49 Sattler, op. cit., p. 321.

50 Ibid., p. 326.

requiring insight and imagination may be failed by children who are inhibited and who have a fear of not doing well. Failur to answer a question within an allotted period of time may be due to limited intelligence, shyness or timidity, or deliberate intention to be sure. Dependent children may give assured responses to routine materials, but anxious and tentative responses to questions that require judgment and evaluation.

Indications of obsessive tendencies include: four or five explanations of courses of action in reply to the Comprehension test questions of the WISC and the Stanford-Binet; three, four, or more likenesses given to the Similarities questions of the WISC and the Stanford-Binet; and elaborate definitions of Vocabulary words of the WISC and the Stanford Binet. An anxiety state may be shown in test performances by restlessness, apprehensiveness, impaired attention and concentration and bodily expressions (tics, nail biting and so on). Difficulty in finding words, impulsively blurting out unfinished or inappropriate replies, and fumbling about for adequate formulation are also indicative of anxiety.[51]

Some individual tests on the Stanford-Binet may reveal particular behavioral reactions more readily than other tests. However, no systematic pattern has been found. On the Obeying Simple Commands test (year-level 11-6), negativism may be elicited to a greater extent than on other tests. The presence of repetition, compulsion or perseveration in children with a compulsive neurosis may cause them to fail the Paper Cutting test (year-level IX) and other similar tests. Overmeticulous neurotic

51 Ibid.

children may be absorbed in and anxious about details on reasoning tests (Reasoning I at year-level XIV, Ingenuity I at year-level XIV). Aggressive practical children may have an advantage over passive, contemplative children on the Ingenuity tests found at year-levels XIV and above. Children who are dependent on authority and precise tangible accomplishments may have success on precisely defined tasks, but fail tests that require insight. Some able, but neurotic children may have more success with Digits Backward than with Digits Forward, because Digits Backward is more difficult and demands more active effort and attention than Digits Forward; thus, when he performs in this way, the neurotic child may concentrate on the task and lessen his concerns about his ability to do well.[52]

The WISC appears to be a reliable instrument in evaluating emotionally disturbed children. The attempts that have been made to determine whether subtest scores and scales reveal any characteristic patterns that can differentiate emotionally disturbed children from other groups of children have not been successful. Greater variability of scores may be found in emotionally disturbed children. On the Digit Span subtest, clinical experience indicates that some emotionally disturbed children may have more success with Digits Backward than with Digits Forward. On the Block Design subtest, emotionally disturbed children may show rigidity and demonstrate impulsive decisions; however, the distortions are less gross and deviations are less persistent than those observed in brain-injured children. It is possible that Coding subtest scores may be

52 Ibid., p. 327.

depressed in anxious children due to extreme cautiousness and meticulousness. Repressive activity may result in the inability to see certain relationships and may interfere with performance on the Block Design and Object Assembly subtests. On the other hand, a need to please the examiner may facilitate his performance on the Picture Completion, Picture Arrangement, and Comprehension subtests.[53]

In summary, while selected responses on either of the two major individual intelligence inventories may suggest an emotional involvement, there has been no specific pattern recognized in subtest scores to indicate that an emotional problem exists. One would conclude that the WISC and the Stanford-Binet are not appropriate diagnostic instruments to determine the existence of an emotional problem, unless used in conjunction with a battery of projective tests.

53 Ibid., pp. 328-329.

Projective Techniques

The chief distinguishing feature of projective techniques is to be found in their assignment of a relatively unstructured task. In order to allow free play to the subject's imagination, only brief, general instructions are provided. For the same reason, the test stimuli are usually vague. The underlying hypothesis is that the way in which the individual perceives and interprets the test material will reflect fundamental aspects of his psychological functioning.

Projective tests also represent disguised testing procedures, in so far as the subject is rarely aware of the type of psychological interpretation that will be made of the response. Projective instruments are characterized by a global approach to the appraisal of personality. Attention is focused upon a composite picture of the whole personality, rather than upon the measurement of separate traits.

Projective methods originated within a clinical setting and have remained predominantly a tool for the clinician. Most projective techniques reflect the influence of psychoanalytic concepts. The specific techniques need not be evaluated in the light of the particular theoretical slant or historical origin. A procedure may prove to be practically useful or valid for reasons other than those initially cited to justify its introduction.

Standardization of the various projectives was accomplished by selecting sample groups from the various normal and pathological populations. Distinct patterns were revealed by each of the separate populations and comparison of response sets provided the bases for interpretative classifications. The interpretations of the projective tests illustrated throughout this section were developed through this process.

Projective techniques have been classified with reference to the nature of the stimuli presented, method of administration, manner of interpreting responses, and test construction procedures. Anastasi lists a classification of projective techniques in terms of mode of response.[54] A portion of this classification will be presented in this paper. The groups of projective techniques are divided into three categories:

1. Expressive methods, such as drawing, which differ from construction procedures in that the subject's style or method is evaluated as well as the finished product.
2. Construction procedures are techniques requiring the subject to create or construct a product, such as a story.
3. Associative techniques are methods in which the subject must respond to a stimulus by giving the first word or image that occurs to him.

Expressive methods

Drawing analysis, not unlike understanding of other projective techniques, can be used effectively only by the clinical psychologist who possesses a grasp of personality dynamics. This method is particularly vulnerable to misuse, because the administrator may proceed without special materials, and without complicated directions, scoring, or coding to master. The method has many advantages. It is simple to administer, requires no materials beyond a pencil and paper, may be completed in less than an hour, and is interpreted directly from the figures that

54 Anastasi, op. cit., p. 566.

are drawn, without intermediary scoring.[55] The test may be kept indefinitely and analyzed at leisure and it offers direct testimony of the subject's projection, rather than a verbal description of it. Projective techniques are particularly useful with verbally shy or inhibited children and with foreign or illiterate persons. This method has no limitations of age, intelligence, or artistic skill. Although some structuring is introduced in the request for the figure of a person or object, the infinite choices that may be involved, and the variety of patterns of self-expression that may be evoked, give ample confirmation of the potentialities of this type of projective technique.

Underlying the drawing technique is the wide and basic assumption that personality develops not in a vacuum, but through the movement, feeling, and thinking of a specific body. In general terms, the drawing represents the expression of the self, or the body, in the environment. What is expressed may be characterized as a body image which may be regarded as the complex reflection of self-regard - the self-image.[56] When a subject sets out to "draw a person", he must necessarily refer to all of the images of himself and of other persons that crowd into his mind. Since the organization of the self in terms of a central focus and attitudes is essentially selective, it is a product of experiences, identifications, projections, and introjections. It follows that the composite image that constitutes the figure drawn is intimately tied to the self in all of its ramifications.

55 Anderson, Harold and Gladys Anderson, An Introduction to Projective Techniques (Englewood Cliffs, New Jersey: Prentice Hall, Inc., 1951), p. 342.

56 Ibid., p. 348.

The body image is sensitively reactive to influences that disturb the emotional life. In so far as human figure drawing represents a concept of body image as experienced at that time, it will tend to express, unconsciously and symbolically, the hurt that is making the child painfully aware of his feelings. As his thoughts are turned inward, the drawing becomes a more intimately personal statement. Depending upon the degree of turmoil, the body image and its graphic representation may be globally or focally affected, thoroughly disrupted or different from the usual in only a particular, and in any gradient between these two extremes.[57] Among the more pervasive deviations are scatter of body parts, absence of persons in a scene, striking incongruities, defacement of a just-drawn human figure, or rigid robot-like figures. These may be observed in the drawings of seriously disturbed children.

Neurotic behavior and feelings of inadequacy may be expressed by drawing small figures, often at the lower margin of the page where they stand on tiny unstable feet, excessive shading, or emphasis or omission of arms and hands.

Insecure, anxious children tend to draw small figures that occupy only a small area of the available space. In contrast, the secure, well-adjusted child will draw freely, creating a figure that expresses by its size, sweep, and placement on the page, freedom from inhibiting anxiety.

The absence of arms in drawings by children over six may be indicative of timidity, passivity, or intellectual immaturity.

57 DiLeo, Joseph H., Children's Drawings as Diagnostic Aids (New York: Brunner/Mazel, Publishers, 1973), p. 36.

The omission becomes most unusual by age ten when 90% will draw the arms.[58] Hidden hands have been interpreted as an expression of guilt feelings.

The exaggerated size of hands is regarded as symbolic of aggressive tendencies if the figure is a self-portrait. When the figure represents a parent or care-taker, the emphasis on hands may indicate aggression received, anticipated, or feared.

A frequent observation in the drawings of insecure children is the instability of the figure, tottering over the ineffectual support of tiny feet. The child unconsciously and symbolically expresses the instability of a personality structured upon a weak foundation.[59]

When a child's image of a parent is of one who is domineering, overwhelming, aggressive, or frightening, the child will tend to draw that person larger than the others in a family group, regardless of actual physical dimensions. The impressive parent may be portrayed with large hands if viewed as hostile and threatening. The ineffectual parent may be depicted with small or even absent hands.

A human figure drawing in which the parts are scattered with no relation to each other is a deviation from the norm. The failure to produce a unitary figure has been noted in seriously disturbed children and is indicative of their own disorganized personality. With favorable response to therapy, gradual integration of the personality will be reflected in corresponding approximation of body parts in the drawing.[60] Preserving the

58 Ibid., p. 38.

59 Ibid., p. 48.

60 Ibid., p. 68.

drawings will allow comparison with subsequent productions, thus helping to evaluate changes that may have occurred in personality.

Stiff, stereotyped figures are drawn by children who may act out their difficulties in a variety of ways. But though there is no uniformity in the form that the disorder may assume, there is one problem that is common to most of the children: a discrepancy between ability and performance at school. Emotional immaturity is a constant finding. Often the problem can be traced to a home atmosphere marked by excessive tension.

Emphasis on shading parts or the totality of the drawn figure has repeatedly been observed in drawings by anxious children. Many well-adjusted children will brighten their human figure drawings by the addition of a radiant sun. It is unusual for children to add storm clouds and to darken the sun. These ominous signs have been seen in drawings by unhappy children.

Most people draw what is important to them. The human figure has been and continues to be their favorite subject. It is so unusual for young children to omit persons from their drawings that the omission justifies consideration of probable difficulty in interpersonal relationships.

The family drawing can be viewed as an unstructured projective technique that may reveal the child's feelings in relation to those whom he regards as most important and whose formative influence is most powerful. As a projective technique, family drawings are especially revealing during the child's latency period, roughly between six and ten years when expressions are relatively free from the cultural pressures that tend to make them a more conforming, less individual statement.[61] Younger

61 Ibid., p. 105.

children will draw each member of the family standing full-faced and separated from the next, all members lined up in a single row or in two levels. Importance will be expressed by size and location with the lowliest at the end of a row or even omitted. Affinity may be indicated by proximity or similarity of attire. Older school-age children will be able to portray movement, usually after the original full-face orientation has shifted to profile. The result may display pleasant or hostile interaction - or no interaction at all, with each member doing something in isolation. In the family drawing, one may see how the child feels himself to stand in relation to those who count most in his life.

It is unusual for a child to draw the family and not to include all members. Omission of self is seen in drawings by children with feelings of inadequacy or of not belonging. The child may relegate himself to the very end of the series of family members, not through modesty but as an expression of low status. This is significant when all others are in chronological order and the child is not the youngest.

The child will tend to place himself next to the favorite parent or sibling. Affinity may be indicated by distinctive clothes, different from that of other family members but similar only to that of one of the family, usually a sibling, with whom the child has good rapport.[62] The child uses size to express the importance attributed to a person, the awe and esteen in which that person is held.

In drawings by school age children who are able to depict movement, positive interaction between two members of the family

62 Ibid., p.113.

indicates a good relationship or a yearning for a closer relationship. Hostility may be expressed by the use of weapons or other materials directed at the adversary. Lack of interplay among family members is often indicated by depicting each in a separate compartment, doing something alone, in social isolation without reference to any of the others.[63]

In the 1920's, Florence Goodenough showed how drawings mirrored the intellectual development of the child and developed a scale for scoring drawings for mental age in the Measurement of Intelligence by Drawings. Goodenough saw further development and use of drawings to study personality.[64] The Draw-A-Person Projective Technique is based upon Goodenough's original test.

The administration of the Draw-A-Person (DAP) is deceptively simple. Materials include an 8½" by 11" white paper and a sharpened pencil. The child is told to draw a picture of a person. The DAP is based on the assumption that an individual will be forced to structure this unstructured situation in accordance with his basic and unique personality dynamics, revealing essential data about himself through his approach to the task of drawing a person. During the examination, the examiner closely observes the behavior of the subject, recording the spontaneous verbalizations. The entire behavior complex unfolded during the testing situation needs to be studied, evaluated, and interpreted. This awareness of the totality of the personality within the DAP

63 Ibid., p. 117.

64 Urban, William, The Draw-A-Person Catalogue for Interpretative Analysis (Los Angeles: Western Psychological Services, 1963), p. 1.

testing milieu is an important consideration during the interpretation of the DAP test results.

When the first figure is drawn, the examiner asks the subject to draw a picture of the opposite sex. The examiner avoids using the words "male" or "female" permitting the subject to define his first figure as male or female. It is sometimes useful to use two sheets of paper with a carbon sheet between so a duplicate of the original drawing is made. The duplicate sheet clearly reveals erasures. Changes that are made can be compared with the carbon of the original drawing. Such changes indicate areas of concern and/or difficulty. Normal individuals tend to make changes which improve figures; anxiety-ridden persons tend to make changes which reveal poor control, brittleness, and constriction.[65]

Rigid and evasive subjects seek to avoid revealing themselves and attempt to devalue the testing situation by drawing stick figures or minimal representations of people. With these subjects, it is productive to request a drawing of a complete figure. It is valuable to request subjects to draw detailed heads or busts if they have drawn figures which lack head details. The head area is the most reliable indicator of the self-concept and the ability to deal with the social environment. In DAP theory, the head is the focal point of the sense of self.[66]

In order to interpret the DAP, the examiner should study four major areas of the DAP drawings: head; hands, arms, shoulder and chest; torso; and legs and feet. The goal is to identify

65 Ibid., p. 2.

66 Ibid., p. 3.

the areas of conflict, exaggeration, omission, and distortion. These areas are exemplified by shading, size, denial by omission, erasures, dim, wavy, or broken lines, breakdown in motor control, and so on.[67]

The first unit for study is the head. It is the center of the sense of self. It deals perceptively with the outer world. The eyes and ears receive stimuli while the brain interprets the data and provides integration and intellectual control over the response systems. The mouth serves as an inlet for taking things into the body and as an outlet for aggression, friendliness, and other feelings. In the area of the head, intellectual aspirations and frustrations manifest themselves. Glamor aspirations may reveal themselves in the facial detailing. Contempt, hatred, and aggression may be seen in dark, piercing eyes. Oversensitivity and suspiciousness may be seen in unusual ear detailing. The head can provide the examiner with the most valid insight into the subject's interactions with others as well as his self-concept.

The second unit for study is the hands, arms, shoulders, and chest. They combine to form a functional unit to execute the commands of the brain or the impulses of the body. The examiner can note size, shape, strength, degree of reaching out, degree of aggression, and conflictual signs within this unit. The drawings may show the figures reaching out for help or aggression, or pushing away from others to retreat within. The physical strength of the figures in contrast to the physical strength of the subject may be notable.

67 Ibid., p. 4.

The third unit for study is the torso or trunk of the body. The torso indicates strength features similar to those of the hands, arms, shoulders, and chest. However, clothing covers the body and is important symbolically as the facade which the subject presents. Noted here is the midline emphasis of dependent persons. Physical impulses of the body may be open and emphasized, as in nudes or figures in bathing suits, or clothed rigidly. Indicators of control or restraint are ties, belts, or jewelry which cut off impulses symbolically associated with the torso.

The fourth unit for study is the legs and feet. Autonomy, self-movement, self-direction, and balance are indicated. A drawing of a figure with long legs shows strivings for autonomy. A balanced or toppling figure shows emotional stability or instability respectively. Stability or instability may be revealed by symmetry or asymmetry. In male figures, feet are indicative of masculinity or doubts of masculinity; in female figures, legs are indicative of femininity or doubts of femininity.

The interaction of the four major body areas is essential. Discrepancies in interpretation between different body parts should be resolved. The examiner considers the subject's background, family structure, major complaint, spontaneous comments, and descriptions of the drawings. Careful integration of the hypothesis into a total diagnostic picture is vital. Synthesis is the most difficult phase of examination and interpretation.

William Urban, a psychologist, designed a catalogue to be used as a clinical aid for the interpretation of the DAP. It provides the clinician with various classificatory categories and provides hypotheses developed by specialists in the DAP.

The material compiled in this catalogue is derived from the works of Florence Goodenough, Isaac Jolles, J. N. Buck, K. Machover, and other specialists in the field of projective drawings. A sampling of these interpretations of the details in DAP drawings is listed below:

Agression

1. Talon fingers: hostility and aggression toward world.
2. Figure with dark piercing eyes: hostile awareness and suspiciousness of world.
3. Figure with legs wide and arms up in gesture of challenge: may indicate fighting to have own way and/or establish individualism.
4. Flattened nose: aggression; probably aggression was punished in youth and is no longer readily accessible.
5. Emphasized nostrils: unsophisticated primitive anger.
6. Clenched hands: clenched fist of angry man trying consciously to restrain anger.
7. Heavily shaded hair: deep aggression and anger.

Buttons

1. Down midline: may indicate continued dependence on mother, may indicate body consciousness with concern over submission and dependence upon authority.
2. Emphasis: dependency, immaturity, and inadequacy.
3. On cuffs: compulsive detailing with stereotyped, formal emphasis upon control.

Eyes

1. Disproportionately small: desire to shut out world.
2. Unseeing: emotional immaturity and egocentricity.
3. Blind, closed, concealed by hat, or hollow sockets: marked reluctance to view world.
4. Large, accentuated: may be hostile and threatening.
5. Piercing: suspiciousness of motives and behaviors of others.
6. Cockeyed: confused thinking.
7. Large orbit with small eye: strong visual curiosity with guilt conflicts.

Inadequacy Feeling Indicators

1. Very small figures.
2. Very large, weak, grandioso figures.
3. Weak hands and arms.
4. Blind or non-seeing eyes.
5. Club feet.
6. Petal fingers.
7. Thin, weak legs.
8. No feet.
9. Midline emphasis, especially buttons.

10. Pockets emphasized.
11. Inadequate number of fingers on hands.

Normal Indicators

1. Size: figures tend to be about six or seven inches tall; the female figure is slightly smaller or equal to the male, but not larger.
2. Placement: figures tend to be placed in middle of page, toward lower half.
3. Starting Point: most begin with head and facial features.
4. Time: most take 10-12 minutes or less.
5. Spontaneity: figures show some animation, movement.
6. Proportion: figures tend to be realistically-proportioned and lack distortion other than of a minor sort.
7. Aesthetic Appearance: figures tend to be symmetrical and pleasant to look at.
8. Erasures: minimal, but when occurring they improve the drawing.
9. Line Quality: lines tend to be consistent, showing steady pressure.
10. Sex: self-sex usually drawn first.
11. Age of Figures: approximates age of subject.
12. Belt on Male Figure: sign of conventional controls.
13. Eyes: have pupils but not darkly accented.
14. Nostrils are Absent: lack of infantile aggression.
15. Feet: not emphasized.
16. Ears: not emphasized.

Placement

1. High on page: no sound foundation; feels "up in the air".
2. Above mid-point of page: feels is working toward relatively unattainable goal.
3. Center of page: insecurity and rigidity.
4. Below mid-point of page: feels insecure and inadequate with some depression.
5. Left side of page: emotional dominance.
6. Right side of page: emotional control.
7. Upper left corner of page: anxious, desire to shun new experiences and return to the past, or seek fantasy satisfactions.

Stance

1. Feet wide apart: assertive.
2. Tight: rigidity, restriction.
3. Back to viewer: rejection and defiance.
4. Toppling: precarious mental balance.
5. Legs closely pressed together: tense, self-conscious, awkward, resistive to sexual advances.[68]

The House-Tree-Person (H-T-P) Projective Technique, developed by John N. Buck, was first formalized in 1948. It was originally

68 Ibid., pp. 9-55.

a projective technique and an intelligence test. However, the H-T-P is no longer used as an IQ measurement device due to its questionable reliability, ambiguity, and lengthy scoring criteria.

As a projective method, the H-T-P is easy to administer. The subject is asked to draw a house, a tree, and a person in that order. The drawings are then evaluated and analyzed for information relative to personality variables and the interactions of the subject with his environment. The qualitative interpretation is largely dependent upon the clinical experience of the examiner. An inquiry or planned interview is given by the examiner following the figure drawings.

Buck developed the H-T-P as a two phase approach: a nonverbal, relatively unstructured test (drawing) and a verbal, apperceptive, more-structured test (inquiry or interrogation). The basic theory of the H-T-P is as follows:

1. Each of the drawn wholes (house, tree, and person) is to be regarded as a self-portrait as well as a drawing of the specific object named.
2. The subject may indicate that a given detail or combination of details has special significance for him, both positively and negatively.
3. Interpretation of these "significant" details and/or the method of their presentation will provide information concerning the subject's needs, fears, conflicts, strivings, and so on.
4. It is essential that the subject be afforded every opportunity to aid in the interpretation of his productions.
5. Adequate interpretation of a specific point can be made only when it is considered in its relationship to the total configuration.
6. Interpretation must be made with great circumspection and in the light of as complete a knowledge as possible of the subject and his environment.[69]

The house drawing is expected to evoke associations concerning the subject's home and those living with him; the drawing

69 Buck, John N., "The H-T-P Technique: A Qualitative and Quantitative Scoring Manual, Part 2, "Journal of Clinical Psychology (1948) cited in Anderson, op. cit., pp. 520-521.

of the tree evokes associations concerning the life role and the ability to derive satisfaction from the environment; and the person evokes associations dealing with interpersonal relationships.[70] Buck developed a general outline for specific deductions in the assessment of personality:

1. Test situation observations - cooperativeness, stress symptoms, physical disabilities, mannerisms, attention span, empathy, reaction time, orientation.
2. Affect - tone, intensity, appropriateness, control, consistency.
3. Verbalizations - flow, spontaneity, modulation (monotonous), idea content (perseverative, bizarre, inferior).
4. Drive - level, control, consistency (fatigue).
5. Psychosexual - satisfaction levels and their relative dominance, conflicts and their probably sources.
6. Inter-environmental -
   - satisfaction:
     1. reality fantasy
     2. extrasensitive-intrasensitive (does the subject respond to external or internal stimulation?)
     3. Extracathection-intracathection (Does the subject tend to seek external or internal sources of satisfaction?)
     4. Range (Are satisfaction sources, for example, restricted to home, reality level?)
   - goal attainability: Are goals realistic?
   - intensity: How avidly are goals sought?
   - temporal dominance: The relation roles of the psychological past, present and future are to be considered.
   - adaptability: Is the subject flexible or rigid
   - accessibility: Is the subject friendly and sociable or hostile and tense?
7. Inter-personal relationships -
   - intra-familial: affective tone, intensity, permanence, flexibility, identification, conception of subject's position within his family.
   - extra-familial: affective tone, intensity, permanence, flexibility, parental substitute reaction, conception of subject's position in society.

70 Anastasi, op. cit., p. 588.

8. Intra-personal balance - subject's view of the balance of the factors making up his personality as expressed in his drawings and verbal comments.
9. Major needs: autonomy, achievement, social satisfaction.
10. Major assets: flexibility or accessibility.[71]

Isaac Jolles, a school psychologist, compiled a catalogue to be used as a clinical aid for the interpretation of the House-Tree-Person projective drawing and the Post-Drawing Interrogation. The material in this catalogue is derived from the works of Jolles, John N. Buck, and Emanuel Hammer. A sampling of interpretations from the catalogue for the drawings are listed below. Following the descriptions of interpretations, samples of the Post Drawing Interrogation are listed with the implications of possible responses.

Clouds - generalized anxiety referred to situations
Details - subject's awareness of, interest in, and ability to deal with and conform to practical or concrete aspects of life
Details, easily and non-compulsively drawn - good capacity for well-balanced interaction with environment
Details, Essential, Absence of - indicative of onset of intellectual deterioration or severe emotional disturbance in subjects with average intelligence. Indicates a lack of adequate interest in his environment
Details, Excessive - compulsive need to structure situation, over-concern with total environment
Details, Excessive Duplication of Essential - unable to make tactful or flexible relationships with people
Details, Meticulously Drawn - Obsessive - compulsive tendencies
Erasure with Re-Drawing - if redrawing is improved, it is a favorable sign. Erasure with subsequent deterioration implies strong emotional reaction to object being drawn or its symbolization
Erasure without attempt at re-drawing - detail arouses strong conflict over detail itself or what detail symbolizes

71 Buck, John N., "The H-T-P Technique: A Qualitative and Quantitative Scoring Manual, Part 1", Journal of Clinical Psychology (1948) cited in Anderson, op. cit., pp. 522-523.

Groundline - insecurity, provides point of reference to construct whole, provides stability for drawn whole

Groundline - very heavy - feelings of anxiety aroused by relationships at reality level

Groundline - sloping downward and away from drawn whole on either side - feeling of isolation and exposure, maternal dependence.

Groundline - sloping downward to right - feeling future is uncertain and perhaps perilous; degree of feeling seems indicated by degree of precipitancy of line

Lines - Curving - usually healthy sign although may indicate distaste for convention and/or restriction if carried to extreme

Lines, Faintly Drawn for Specific Detail - reluctance by subject to express detail in question because of its real or symbolic representation

Lines, Faintly Drawn Throughout - generalized feeling of inadequacy accompanied by insecurity, indecision and/or fear of defeat. If lines become fainter from House through Person, generalized anxiety and/or depression is indicated.

Lines, Heavy for Specific Detail - Fixation upon object drawn Hostility against item drawn or what it symbolizes.

Lines, Heavy Throughout One Whole - generalized tension assoc ated with aspect of subject's life represented by the drawn whole

Lines, Interrupted and Never Joined - feeling of incipient ego collapse

Lines, Rigidly Straight - internal rigidity

Lines, Scribbled - important indicator of organicity

Lines, Sketchy, Persistent Use of - at best, need exists for exactitude and meticulosity - at worst, patho-formic sign suggesting inability to be definite

Mountains in Background - defensive attitude and need for dependence

Placement of Whole Above Average mid-point of form page - The higher the mid-point of whole above average mid-point - greater is implication: subject feels he's striving strongly and goal is relatively unattainable, subject seeks satisfaction in fantasy, subject keeps aloof (Average mid-point varies with age)

Placement of whole in absolute center of form page - insecurity and rigidity

Placement of Whole below Average Mid-Point of Form Page - farther below average mid-point of page is located mid-point at whole - greater is likelihood: subject feels insecure and inadequate and feeling moves toward depression of mood, subject is reality bound - concrete

Placement of Whole on Left Side of Form Page - emotional dominance, stressing past, impulsiveness

Placement of Whole in Upper Left-hand corner of form page - markedly anxious or regressed, tendency to shun new experiences, desire to return to past and/or remain absorbed in fantasy

Placement of Whole on Right Side of Form Page - tends to seek satisfaction in intellectual areas, controlled behavior, stressing future

Re-Drawing Without Erasure of Original Drawing - negativistic reaction

Shading, Unemphasized Use of - subject is sensitive, not necessarily unhappily sensitive, to relationships with others

Space Construction - feeling of much frustration produced by restricting environment, feelings of strong tension and irritability, feeling of helpless immobility (feet or portion of legs of person or base of tree chopped off by bottom of page)

Whole Constriction - feeling of inadequacy, definite tendency to withdraw, desire to reject whole or what it symbolizes[72]

Post-Drawing Interrogation

House

Is that your house? Whose house is it?

(These questions determine whether the subject is consciously identifying his drawn house with his home. If it belongs to someone else, one must determine whether a positive or negative association exists (through drawing and PDI). The association may indicate a rejection of own home and preference for someone else's home.)

Which room would you take for your own?

(The subject usually interprets the question to mean which bedroom he would want. The position of the room selected with respect to the other bedrooms can indicate the degree of closeness which the subject feels to each family member. When he selects a room farther from parents' room than the room of a sibling, this indicates he feels the sibling is closer to the parents than the subject. If the subject chooses a room upstairs, at the rear, he is indicating a desire to withdraw. Sometimes a room upstairs is selected so that the subject can see outside more easily. This indicates some degree of fearfulness. Occasionally, the subject's reasons for selecting a room downstairs will reveal his feelings of insecurity and possibly his need to be closer to reality.)

What does that house need most?

"somebody to clean it up" - The subject needs help in changing or improving himself to get rid of problems.

"more bushes in the yard" - The need for a more structured environment is expressed.

"windows" - This indicates a need for more social interaction.

"a chimney" - The subject is aware of his castration feelings and would like to develop his masculinity.

72 Jolles, Isaac, A Catalog for the Qualitative Interpretation of the House-Tree-Person (H-T-P) (Los Angeles: Western Psychological Services, 1971), pp. 15-39

"upstairs in it" - The subject is acutely aware of intellectual difficulties and recognizes the need for intelligence.
"paint" - This indicates a need to make a better impression upon others.
"taken care of" - The subject feels neglected and wants the parents to give him more attention.
"cement" - This indicates a need for more ego strength.
"dirt so it will stay in the ground" - A need to maintain contact with reality is expressed.
"roof" - The subject feels he has to have a new brain so he can learn in school.
"summer" - This shows a need for more warmth at home.
"fence around it for protection" - The need to withdraw in order to protect himself from his environment is indicated.

Tree

Is that tree alive?
A response indicating the tree is dead reveals the subject's feelings of utter futility. Also, this response may be associated with feelings of guilt.
Looking at that tree, does it seem above you, below you, or about even with you?
Above - This indicates overstriving and may suggest a desire to seek satisfaction in fantasy.
Below - This response suggests an inferior, defeatist attitude, tendency toward concretivity, and a rejecting attitude toward the person represented by the tree. If the answer is contrary to what is depicted in drawing, there may be some question as to the subject's ability to be realistic.
Is it a strong tree?
The response may pertain to subject's physical strength and is more often an indication of the subject's view of his ego strength.

Person

What is he (she) doing?
"going to school" - This indicates a preoccupation with school in a positive way.
"getting picture taken" - This is indication of narcissism or self-centeredness.
"watching somebody play" - Social isolation is suggested.
"He's laughing at me" - The subject's sensitivity regarding opinions others have of him is demonstrated.
"just walking around in the woods" - The child's lack of goal direction is shown.
"running to the river" - This indicates a need to escape environmental stress.
What does that person make you think of?
Clues to self-concept, identification, attitude towards the person represented by drawing, or what he himself would like

to be are given.
Failure to give a meaningful response can indicate either evasiveness or a general inability to identify with anyone.
Has anyone ever hurt that person?
This indicates whether the subject has had any traumatic experiences in his social relationships.[73]

The H-T-P is one of the most thorough projective techniques of its type; however, this technique cannot be mastered from manuals and journal articles.[74] Most psychologists agree that the analysis shouldn't place undue significance on individual, isolated items or details without consideration of the total constellation of all three drawings.[75] The H-T-P is intended to be used as a procedure to facilitate the clinician's acquisition of diagnostically significant data, and the over interpretation and too literal translation of specific details should be avoided.[76]

The aforementioned psychological tests use akinetic instructions; children are asked to draw a person or a house-tree-person. While useful information may be obtained, akinetic instructions usually result in relatively static, rigid drawings.

The approach of using Kinetic (action) instructions, in asking the child to produce a drawing where figures are moving or doing something, can produce more dynamic material in the attempt to understand the psychopathology of children in a family setting. The Kinetic Family Drawing is administered

73 Ibid., pp. 125-161.

74 Harriman, Philip, "The H-T-P Projective Technique," cited in The Fifth Mental Measurements Yearbook (Highland Park, New Jersey: The Gryphon Press, 1959), p. 140.

75 Haworth, Mary, "The H-T-P Projective Technique," cited in The Sixth Mental Measurements Yearbook (Highland Park, New Jersey: The Gryphon Press, 1965), p. 215.

76 Ibid., p. 216.

using an 11" x 8½" paper and a pencil. The child is asked to draw a picture of everyone in his family, including himself, doing something. The analysis of Kinetic drawings focuses on the action or movement rather than the inert figures. Some characteristics of K-F-D tests and their meanings are listed below:

Styles:

Compartmentalization - children attempt to isolate themselves and their feelings from other family members through compartmentalization.
Underlining - drawing a line across the bottom of the page is characteristic of children from unstable families.
Shading or scribbling - shading in a drawing suggests preoccupation, fixation, and anxiety.

Actions:

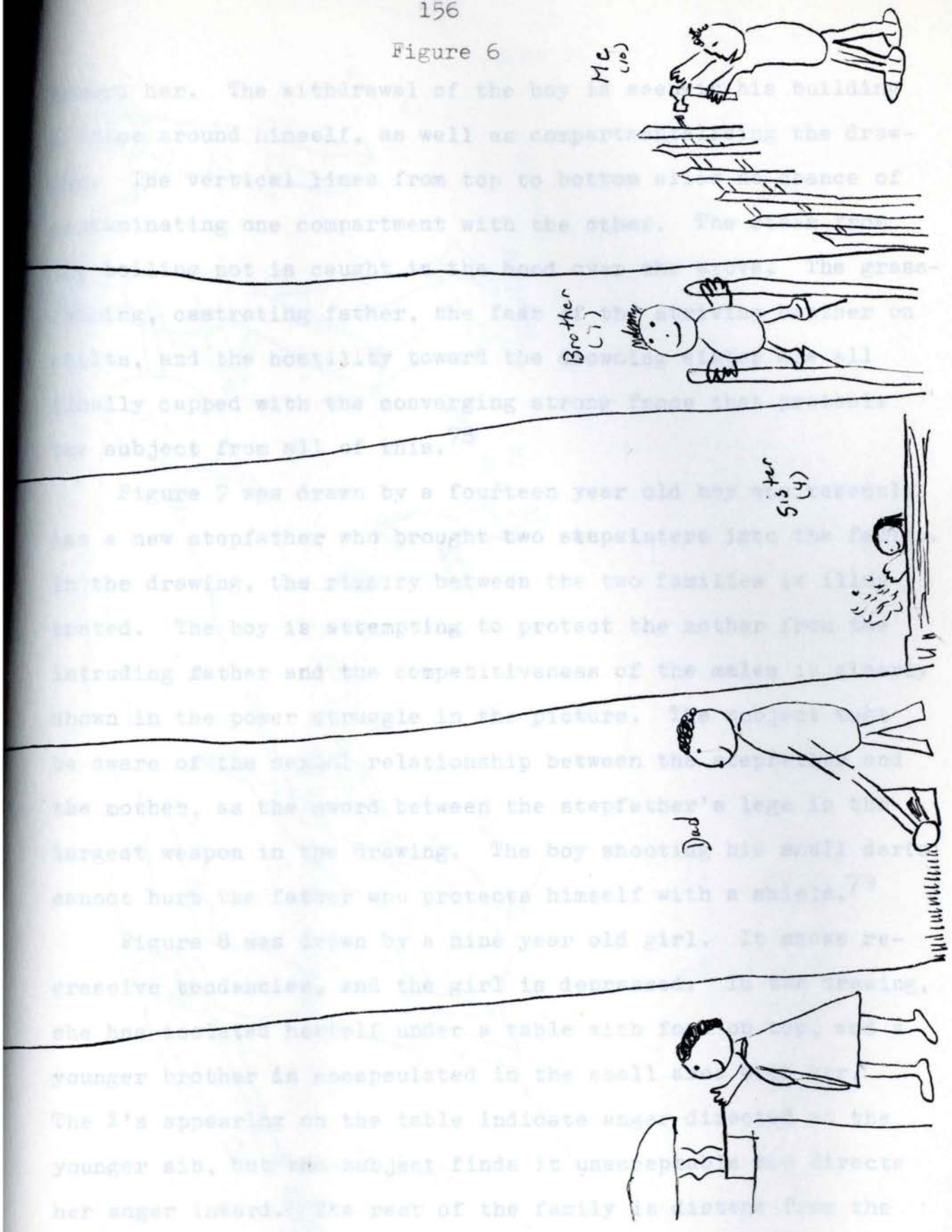
Mothers
Cooking - A frequent action of mother in K-F-D and reflects a mother figure who meets the child's nurturant needs.
Cleaning - This action is found in compulsive mothers who are more preoccupied with the house than with the people in the house.
Ironing - Usually found in the overly involved mother trying too hard to give the child "warmth".
Fathers
Household activities - Reading the paper, paying bills, playing with the children, are frequent activities of normal dads.
Driving to or at work - Usually found in fathers who are thought of in terms of abandonment or being outside of the family.
Cutting - Activities such as mowing the lawn, chopping, cutting and so on are seen with "tough" or "castrating" fathers.

Rivalry - usually depicted as a force or action between members of the family, such as throwing a ball, knife, or airplane. This is seen in highly competitive children.[77]

Figure 6 is an illustration of a K-F-D drawing by a ten year old boy. Shading is seen in the area below the sister. This boy has a rivalry with the sister and anger is directed

77 Burns, Robert C. and S. Harvard Kaufman, Kinetic Family Drawings (K-F-D) (New York: Brunner/Mazel, Publishers, 1970), pp. 29-30.

Figure 6



Source:

Burns, Robert C. and S. Harvard Kaufman, Kinetic Family Drawings (New York: Brunner/Mazel Publishers, 1970), p. 37.

toward her. The withdrawal of the boy is seen in his building a fence around himself, as well as compartmentalizing the drawing. The vertical lines from top to bottom allow no chance of contaminating one compartment with the other. The steam from the boiling pot is caught in the hood over the stove. The grass-cutting, castrating father, the fear of the striving brother on stilts, and the hostility toward the drowning sister are all finally capped with the converging strong fence that protects the subject from all of this.[78]

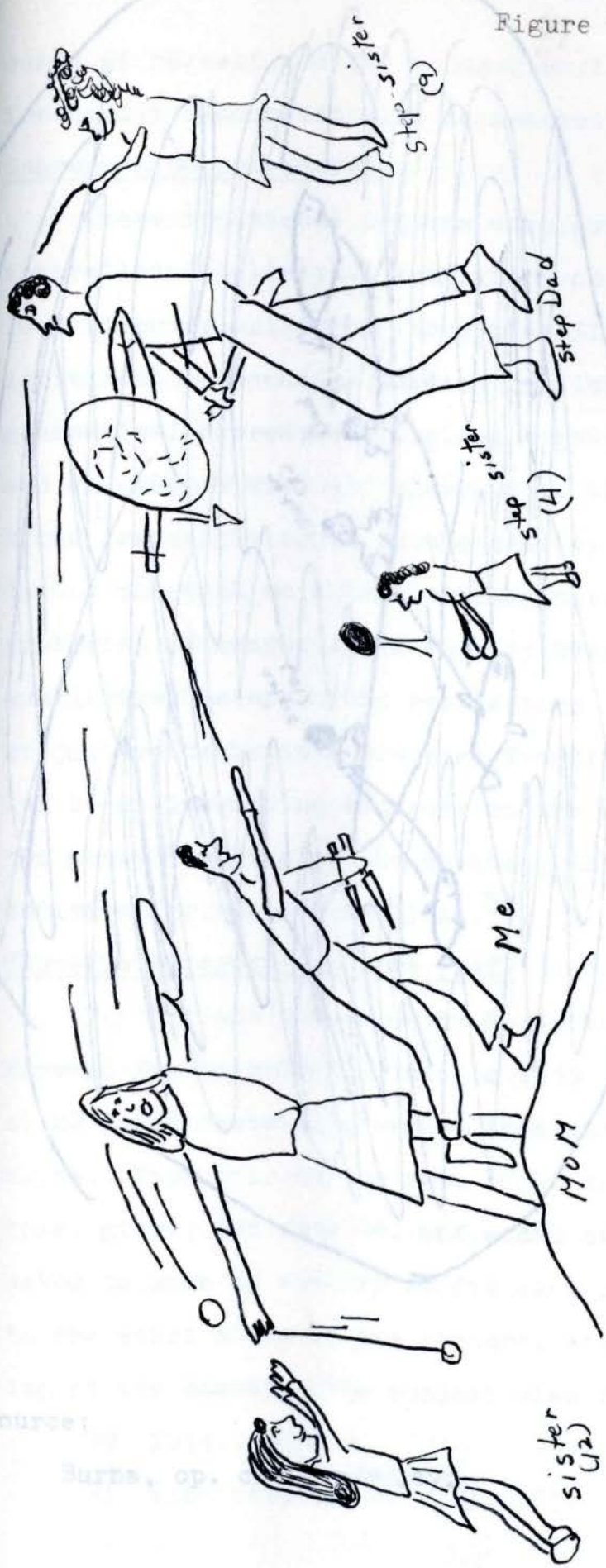
Figure 7 was drawn by a fourteen year old boy who recently has a new stepfather who brought two stepsisters into the family. In the drawing, the rivalry between the two families is illustrated. The boy is attempting to protect the mother from the intruding father and the competitiveness of the males is clearly shown in the power struggle in the picture. The subject must be aware of the sexual relationship between the stepfather and the mother, as the sword between the stepfather's legs is the largest weapon in the drawing. The boy shooting his small darts cannot hurt the father who protects himself with a shield.[79]

Figure 8 was drawn by a nine year old girl. It shows regressive tendencies, and the girl is depressed. In the drawing, she has isolated herself under a table with food on top, and a younger brother is encapsulated in the small area with her. The X's appearing on the table indicate anger directed at the younger sib, but the subject finds it unacceptable and directs her anger inward. The rest of the family is distant from the

78 Ibid., p. 36

79 Ibid., pp. 116-118.

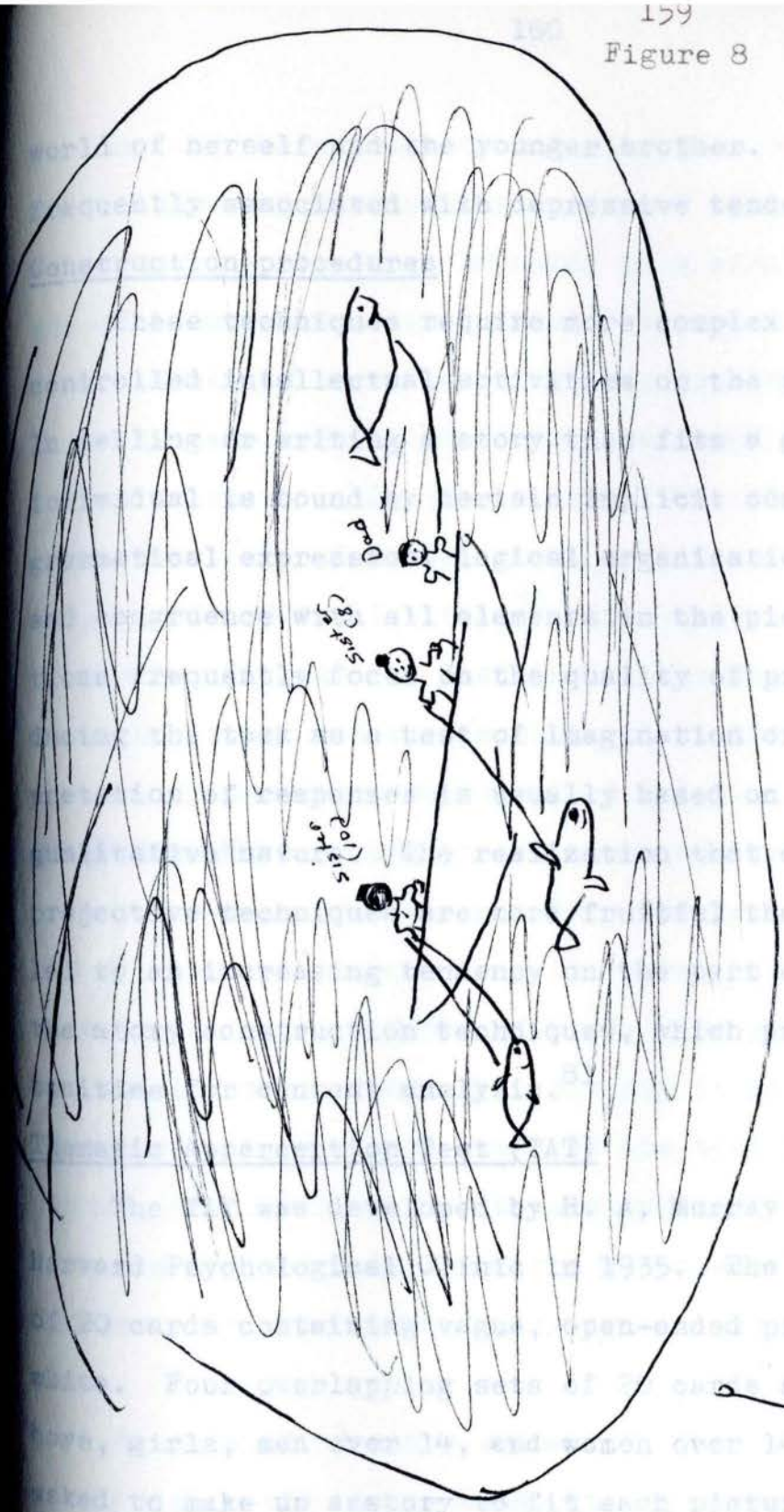
Figure 7

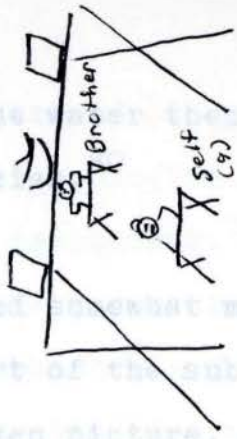


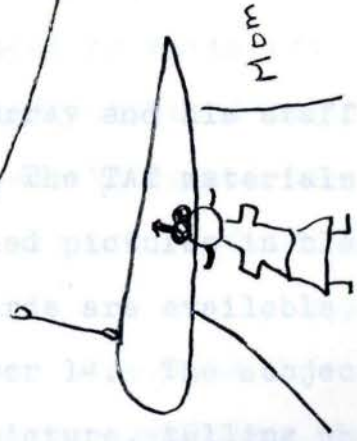
Source:

Burns, op. cit., p. 117.

Figure 8







ource:

Burns, op. cit., p. 147.

world of herself and the younger brother. The water theme is frequently associated with depressive tendencies.[80]

Construction procedures

These techniques require more complex and somewhat more controlled intellectual activities on the part of the subject. In telling or writing a story that fits a given picture, the individual is bound by certain implicit conventions regarding grammatical expression, logical organization, unity of content, and congruence with all elements in the picture. The instructions frequently focus on the quality of production by introducing the task as a test of imagination or intelligence. Interpretation of responses is usually based on content analysis of a qualitative nature. The realization that content analysis of projective techniques are more fruitful than formal scoring has led to an increasing tendency on the part of clinicians to use the story construction techniques, which provide more opportunities for content analysis.[81]

Thematic Apperception Test (TAT)

The TAT was developed by H. A. Murray and his staff at the Harvard Psychological Clinic in 1935. The TAT materials consist of 20 cards containing vague, open-ended pictures in black and white. Four overlapping sets of 20 cards are available - for boys, girls, men over 14, and women over 14. The subject is asked to make up a story to fit each picture, telling what led up to the event shown in the picture, and describing what is happening at the moment. The subject also relates the thoughts and

80 Ibid., p. 146.

81 Anastasi, op. cit., p. 573.

feelings of the characters and gives the outcome of his story. Most clinicians used abridged sets of specially selected cards, seldom giving more than 10 cards to a single respondent.[82] There are certain pictures that should be used in every case because they illuminate those basic dynamic problems which one meets in every case. Those pictures considered essential for testing for males are: 1, 2, 3BM, 4, 6BM, 7BM, 11, 12M, and 13MF, in that order. For females, those considered essential are: 1, 2, 3BM, 4, 6GF, 7GF, 11, 13MF.[83] (M = male, F = female, G = girl, B = boy). In order to familiarize the reader with the content in each picture and the possible theme the picture may elicit, the twenty pictures are described below. It is essential to be aware of the responses the pictures can bring out, in order to select the appropriate cards for administration.[84]

Picture #1 (A young boy is contemplating a violin which rests on a table in front of him). The picture is nonthreatening and induces a feeling of reverie in adults and adolescents. Therefore, it is a good start to the testing situation. This picture usually leads to an easy identification of the subject with the boy and brings out the relationship toward the parental figures. This card frequently brings out the need for achievement.

Picture #2 (Country scene: In the foreground is a young woman with books in her hand; in the background a man is working

82 Ibid., p. 574.

83 Bellak, Leopold, The Thematic Apperception Test and The Children's Apperception Test in Clinical Use (New York: Grune and Stratton, 1954), p. 100.

84 Ibid., pp. 101-111.

in the fields and an older woman is looking on.) This picture offers indications of the subject's family relations. Varying themes of autonomy from the family versus compliance with the conservative, backward existence are extremely frequent.

Picture #3BM (On the floor against a couch is the huddled form of a boy with his head bowed on his right arm. Beside him on the floor is a revolver.) How the object on the floor is perceived gives information about the problems concerning aggression. Picture #3GF (A young woman is standing with downcast head, her face covered with her right hand. Her left arm is stretched forward against a wooden door.) This is a picture which may also bring out depression feelings.

Picture #4 (A woman is clutching the shoulders of a man whose face and body are averted as if he were trying to pull away from her.) This picture elicits a great variety of needs and sentiments in regard to male-female relationships. Themes of infidelity are found, and the male attitude toward the role of women may appear.

Picture #5 (A middle aged woman is standing on the threshold of a half-opened door looking into a room.) This is often perceived as the mother who may be watching different activities.

Picture #6BM (A short elderly woman stands with her back turned to a tall young man. The latter is looking downward with a perplexed expression.) This picture for males reflects all the problems of mother-son relationships and all their derivatives in relation to wives and other women. Picture #6GF (A young woman sitting on the edge of a sofa looks back over her shoulder at an older man with a pipe in his mouth who seems to be addressir

her.) This is meant to be a counterpart of #6BM to reflect the relationship of females to the father.

Picture #7BM (A gray-haired man is looking at a younger man who is sullenly staring into space.) This picture brings out the father-son relationship and all its derivatives (in males in the form of attitudes to male authority. Picture #7GF (An older woman is sitting on a sofa close beside a girl, speaking or reading to her. The girl, who holds a doll on her lap, is looking away.) This picture will bring out the relationship between mother and child in females.

Picture #8BM (An adolescent boy looks straight out of the picture. The barrel of a rifle is visible at one side, and in the background is the dim scene of a surgical operation, like a reverie-image.) The essential themes center on either aggressio or upon stories of ambition. Picture #8GF (A young woman sits with her chin in her hand looking off into space.) This picture may evoke any theme and is rarely useful.

Picture #9BM (Four men in overalls are lying on the grass taking it easy.) This picture offers a general indication of social relationships; namely, which of the figures the subject identifies with. Picture #9GF (A young woman with a magazine and a purse in her hand looks from behind a tree at another you woman in a party dress running along a beach.) This picture elicits the woman-to-woman feeling, particularly in bringing ou sister rivalry or daughter-mother hostility.

Picture #10 (A young woman's head against a man's shoulder This will bring out much about the relation of men to women. If the characters are described as a man and a woman by either males or females, it is interesting to observe whether the

story deals with arrival or departure. The departure theme reflects latent hostile needs.

Picture #11 (A road skirting a deep chasm between high cliffs. On the road in the distance are obscure figures. Protruding from the rocky wall on one side is the long head and neck of a dragon.) This picture operates on a more disguised plane and puts many people off guard. Infantile or primitive fears are brought out.

Picture #12M (A young man is lying on a couch with his eyes closed. Leaning over him is the gaunt form of an elderly man, his hand stretched out above the face of the reclining figure.) This picture indicates the qualities of the relationship of a younger man to an older man. Picture #12F (The portrait of a young woman. A weird old woman with a shawl over her head is grimacing in the background.) This may bring out conceptions of mother figures, but is not notably useful. Picture #12BG (A rowboat is drawn upon the bank of a woodland stream. There are no human figures in the picture.) This picture has not been found to be too helpful, except with suicidal or very depressed subjects.

Picture #13MF (A young man is standing with downcast head buried in his arm. Behind him is the figure of a woman lying in bed.) This picture elicits information disclosing sexual conflicts in both men and women. Picture #13B (A little boy is sitting on the door step of a log cabin.) This picture may prompt stories of childhood. Picture #13G (A little girl is climbing a winding flight of stairs.) This picture has not been found to be useful.

Picture #14 (The silhouette of a man (or woman) against a bright window. The rest of the picture is totally black.) This picture will often bring out childhood fears in relation to darkness, and also possible suicidal tendencies.

Picture #15 (A gaunt man with clenched hands is standing among gravestones.) This is a useful picture in that it may disclose notions and fears of death in the subject. Depressive tendencies manifest themselves clearly.

Picture #16 - This is a blank card and is valuable with verbally gifted subjects who project freely. It is not useful if the subject has indicated difficulty in expressing fantasy material on the previous test cards.

Picture #17BM (A naked man is clinging to a rope. He is in the act of climbing up or down.) This picture may reveal fears in stories of escape from physical trauma. Picture #17GF (A bridge over water. A female figure leans over the railing. In the background are tall buildings and small figures of men.) This card may be useful with subjects suspected of having suicidal tendencies.

Picture #18BM (A man is clutched from behind by three hands. The figures of his antagonists are invisible.) This picture can verify the suspected anxiety in males. Picture #18GF (A woman has her hands squeezed around the throat of another woman whom she appears to be pushing backwards across the banister of a stairway.) This picture gives an indication of how aggression is handled by women. Mother-daughter conflicts may be highlighted.

Picture #19 (A weird picture of cloud formations overhanging a snow-covered cabin in the country.) No notable theme is elicite

Picture #20 (The dimly illuminated figure of a man (or woman) in the dead of night leaning against a lamp post.) Fears may be brought out, but generally no definite theme is implied here.

The TAT has been interpreted in many ways. The simplest procedure is the inspection technique. It is frequently helpful to merely read through the notes taken of the stories and underline anything that seems specific, unique, or significant. When an experienced examiner rereads the stories a second time, he can usually find a repetitive pattern or facets of different stories falling together into a meaningful whole.

The original technique used by author Murray and his co-workers depended on analysis of the stories by the need-press method. Every sentence was analyzed as to the needs of the hero and the environmental forces (press) to which he is exposed. Each need and press received a weighted score. A rank-order system of the needs and presses could then be tabulated. A hierarchical relationship of the needs to each other was developed. The need-press scheme of interpretation has many advantages for use in experiments in which detail is most important and time is no object. The method has not become popular clinically, since it is not easy to master the concept and it takes four to five hours to interpret 20 stories with this system.[85] Therefore, a great number of other ways to interpret the TAT have been developed.

Leopold Bellak designed a TAT Blank and Analysis sheet. (See Figure 9). Using this form it is possible to identify the most important data of a complete 10-story TAT in about half an

85 Ibid., p. 43.

Figure 9

Story No. (TAT Picture No.)

me:

ro: age sex vocation
ests traits abilities
uacy (√, √√, √√√) body image and/or self image

eds of hero:
vioral needs of hero (as in story):

amic inference:
res, objects, or circumstances *introduced:*

lying need for or to:

res, objects, or circumstances *omitted:*

lying need for or to:

tion of environment (world) as:

l figures (m , f) are seen as and subject's reaction is
p. figures (m , f) are seen as and subject's reaction is
figures (m , f) are seen as and subject's reaction is

ant conflicts:

of anxieties: (√)
physical harm and/or punishment of illness or injury
disapproval of deprivation
lack or loss of love of being devoured
being deserted of being overpowered and helpless
her

lefenses against conflicts and fears: (√)
pression reaction-formation rationalization isolation
gression introjection denial undoing other

ty of superego as manifested by: (√)
nishment for "crime" immediate just too severe
delayed unjust too lenient
hibitions stammer delayed initial response or pauses

ation of the ego, manifesting itself in: (√, √√, √√√)
equacy of hero outcome: happy unhappy
realistic unrealistic
solution: adequate inadequate
ought processes as revealed by plot being: (√, √√, √√√)
ructured unstructured stereotyped original appropriate
tional bizarre complete incomplete inappropriate

: (√) superior above average average below average defective

Source:
Bellak, Leopold, The Psychological Corporation, 1951.

hour. The main thing to remember in the interpretation of the TAT is that the pictures are best seen psychologically as a series of social situations and interpersonal relations. Interpretation is the process of finding a common denominator in the behavior patterns of a person. A diagnostic statement should not be made based upon data revealed in only one story. A repetitive pattern is the best assurance that one does not deal with an artefact.[86] The following scoring categories for the TAT Blank and Analysis are listed below:

1. The Main theme is an attempt to restate the gist of the story.
   a. Descriptive level-The theme should be a plain restatement of the summarized meaning of the story.
   b. Interpretive level-The examiner puts the meaning in a generalized form, assuming a meaning beyond the story.
   c. Diagnostic level-The impressions are transformed into a definitive statement.
   d. Symbolic level-Interpretation is made according to psychoanalytic hypotheses.
   e. Elaborative level-The subject's elaboration to any specific data or to names or dates is noted.
2. The Main Hero-The main hero is the one who is most spoken of, whose feelings and subjective notions are most discussed, and the figure with whom the narrator seems to identify himself.
3. Main Needs of Hero-
   a. Behavioral needs-such as aggression, autonomy, and so on.
   b. Dynamic inference-If a subject (hero) is supportive to a number of other figures, the examiner may suspect that these figures are secondary identification figures for the subject, and may indicate a demanding attitude on the part of the hero. Or, if the subject avoids all reference to aggression, he may do so because he has a great deal of aggression which he has to keep under control by denying all of it. (This can be inferred only if there is supportive evidence.)
   c. Figures, objects, or circumstances involved such as weapons or food, or figures such as a pursuer or punisher that are introduced into the stories may be interpreted.

86 Ibid., p. 48.

d. Figures, objects, or circumstances omitted from the stories may be interpreted as repression, denial and so on.

4. The Conception of the Environment may be described using descriptive terms such as hostile, friendly, dangerous, exploiting, and so on.
5. Figures Seen as --- The TAT is primarily an instrument which permits a study of the apperception distortions of the social relationships and the dynamic factors basic to them. Therefore, a study of the hero's attitudes toward parental, contemporary, and younger or inferior persons is an integral part of this analysis.
6. Significant Conflicts-The examiner not only wants to know the nature of the conflict, but also the defenses which the subject uses against it. The resultant behavior should also be specified.
7. Nature of Anxieties-These are listed on the TAT sheet. It is helpful to note the defenses in this content also.
8. Main Defenses-These are also listed on the Analysis sheet.
9. Severity of Superego-The relationship of the nature of the punishment to the severity of the offense gives an examiner an excellent insight into the severity of the superego. For example, a neurotic may have stories in which the hero is killed or dies of illness following an expression of aggression, while a psychopath's hero may consistently receive no punishment in stories of murder.
10. The Integration of the Ego-This tells the examiner how well a subject is able to function. It tells to what extent he is able to stabilize his drives, the demands of reality, and the commands of his superego. Here too, the examiner must consider the distance of the subject from his story.[87]

Psychologists felt that the TAT was not suitable for young children due to the mature content in the pictures, and in 1949 Leopold Bellak and Sonya Sorel Bellak developed the Children's Apperception Test (CAT) for use with children between the ages of three and ten. The CAT does not compete with or substitute for the TAT. The CAT was designed to facilitate understanding of a child's relationship to important figures and drives. This test, similar to the TAT, is primarily concerned with the content of productions. An analysis of apperceptive behavior is usually concerned with what one sees and thinks.

87 Ibid., pp. 51-57.

The CAT uses animals as stimuli on the picture cards. In the development of this test, it was expected that animals would be more readily identified with by children than human figures. This was based on the assumption that emotional relationships to animals are easier to handle than to human beings. The fact that animals are usually smaller than adult humans and are "underdogs", like the children, encourages youngsters to relate to these pictures.[88]

Certain systematic differences exist between the responses of children to the CAT and those of adults to the TAT. The stories to the CAT are shorter and less complex than those of adults. In very young children, three and four year olds, the responses do not occur in clear-cut themes. The structure of children's stories is naturally poorer than those of adults. What would be considered a thought disturbance in an adult is merely a reflection of appropriate immaturity in a child. Instead of revealing the entire character structure, CAT stories may sometimes reflect transitory problems. The most striking aspect of children's responses is the specificity of the children's productions.

Descriptions and typical themes of the CAT pictures are listed below:[89]

Picture #1 - (Chicks seated around a table on which is a large bowl of food. Off to one side is a large chicken, dimly outlined.) Responses center around eating, being or not being sufficiently fed by either parent. Themes of sibling rivalry enter in around who gets more, who is well behaved, and so on.

88 Ibid., p. 153.

89 Ibid., pp. 156-159.

Picture #2 (One bear pulling a rope on one side while another bear and a baby bear pull on the other side.) The examiner observes whether the baby here identifies the figure with whom he cooperates as the father or the mother.

Picture #3 (A lion with pipe and cane, sitting in a chair; in the lower right corner a little mouse appears in a hole.) This is usually seen as a father figure equipped with such symbols as a pipe and cane. The latter may be seen as an instrument of aggression or may be used to turn the paternal figure into an old, helpless one of whom one need not be afraid. The mouse is seen by many children and often is taken as the identification figure.

Picture #4 (A kangaroo with a bonnet on her head, carrying a milk bottle; in her pouch is a baby kangaroo with a balloon; on a bicycle, a larger kangaroo child.) This usually elicits themes of sibling rivalry, or some concern with the origin of babies. In both cases, the relation to the mother is often an important feature.

Picture #5 (A darkened room with a large bed in the background; a crib in the foreground in which are baby bears.) Productions concerning primal scene in all variations are common here; the child is concerned with what goes on between the parents in bed.

Picture #6 (A darkened cave with two dimly outlined bear figures in the background; a baby bear lying in the foreground.) This picture also elicits primarily stories concerning primal scene. It is used in addition to #5 as experience has shown that #6 will enlarge whatever was held back in response to the previous picture.

Picture #7 (A tiger with bared fangs and claws, leaping at a monkey which is also leaping through the air.) Fears of aggression and manners of dealing with them are exposed. The degree of anxiety in the child often becomes apparent.

Picture #8 (Two adult monkeys sitting on a sofa drinking from tea cups. One adult monkey in foreground sitting on a hassock talking to a baby monkey.) Here, the examiner sees the role in which the child places himself within the family constellation.

Picture #9 (A darkened room seen through an open door from a lighted room. In the darkened one there is a child's bed in which a rabbit sits up looking through the door.) Themes of fear of darkness, of being left alone, desertion by parents, significant curiosity as to what goes on in the next room, are all common responses to this picture.

Picture #10 (A baby dog lying across the knees of an adult dog; both figures with a minimum of expressive features. The figures are set in the foreground of a bathroom.) This leads to stories of "crime and punishment", revealing something about the child's moral conceptions.

Analysis of the CAT follows a form similar to that of the TAT. The ten variables are listed below:

1. The Main Theme-The examiner is looking for a trend or behavioral pattern in a number of stories.
2. The Main Hero-This is the figure with which the subject mainly identifies himself as the hero. The hero is the figure about whom the story is woven primarily. He resembles the subject most in age and sex and from his standpoint the events are seen.
3. Figures Are Seen as --- Of interest is the way the child sees the figures around him and how he reacts to them.
4. Identification-It is important to note with whom in the family the child identifies. Also, it should be noted

the role which each parent takes with regard to adequacy, and appropriateness, as an identification figure.

5. Figures or Objects, or External Circumstances Introduced-This can refer to figures or objects which are not at all represented in the picture or can refer to those which are pictorially present.
6. Objects or Figures Omitted-If one or more figures in the picture are ignored in the story, there is a possibility of significance. The simplest meaning is usually an expression of the wish that the figure or object were not there.
7. Nature of Anxieties-The anxieties related to physical harm, punishment, and the fear of lacking or losing love and of being deserted are the most important.
8. Significant conflicts-The examiner should learn the nature of the conflicts and also the defenses which the child uses against anxiety brought on by these conflicts.
9. Punishment for Crime-The relationship between a crime committed in the story and the severity of the punishment given for it gives the examiner an excellent measure of the child's superego development. It should be noted under what circumstances the punishment comes about, and by whom it is given.
10. Outcome of stories-The examiner looks to see whether the story ends happily in fairly realistic terms. This variable informs the examiner of the basic emotional tone of the child.
11. Maturational Level-The developmental state as it appears in the stories can be obtained and compared to the mental and chronological age of the child. The intellectual level of performance can be investigated from the standpoint of language use, conceptualization, and structure.[90]

The question has been raised by psychological examiners as to which of the major tests should be used when a complex psychodiagnostic task is to be performed. One accepted answer to the problem is to use batteries of projective tests. This approach has some merit, as one test may show problems which the other tests do not. The idea of "the more tests the better" should not apply. One principle in assorting batteries should be that the tests included tap the personality structure by different means; such as a verbal test such as the TAT or CAT should be

90 Ibid., pp. 161-164.

combined with an expressive test like figure drawing. The TAT (or CAT) is a content test and shows the actual dynamics of interpersonal relationships. By the nature of the pictures, this test gives basic data on the subject's relationship to male or female authority figures, to contemporaries of both sexes, and frequently shows the basis of family relationships.[91]

91 Ibid., pp. 36-37.

Associative Techniques

In 1921, Hermann Rorschach, a Swiss psychiatrist, developed the inkblot test which bears his name. Although standardized inkblot tests had been utilized by psychologists prior to 1921, Rorschach was the first to apply inkblots to the diagnostic investigation of the personality as a whole. Rorschach experimented with a large number of inkblots which he administered to different psychiatric groups. Through a trial and error method, the psychiatrist gradually incorporated into the scoring system those response characteristics that differentiated between the various psychiatric syndromes.[92]

The Rorschach technique utilizes ten cards, on each of which is printed a bilaterally symmetrical inkblot. Five of the blots are seen in shades of gray and black; two contain additional touches of red; and the remaining three combine several pastel shades. The subject is shown the inkblot and is asked to tell what he sees - what the blot could represent. Following the presentation of all ten cards, the examiner questions the subject systematically regarding the parts of each blot to which the associations were given. During the inquiry, the subject has an opportunity to clarify his earlier responses.

The ten cards are the only part of the Rorschach actually shared by the various techniques bearing that name. Several clinicians have developed their own Rorschach "systems" in which the major differences are in the scoring and interpretation of responses. Among the most widely used of the Rorschach techniques in this country is the one developed by Samuel Beck. This

92 Anastasi, op. cit., pp. 568-569.

method adheres most closely to the original procedure developed by Rorschach.[93]

The most common scoring categories include location, determinants, and content. Location refers to the part of the blot with which the subject associates each response. The examiner notes whether the subject used the whole blot (W), a common detail (D), an unusual detail (Dd), white space (S), or some combination of these areas. The determinants of the response include form (F), color (C), shading (K - k), or "movement" (M). Actually there is no movement in the blot itself, but the subject's perception may indicate that the blot is a representation of a moving object. Further differentiations are made within this category. Human movement, animal movement, and abstract or inanimate movement are separately scored. Similarly, shading may be perceived by the subject as representing depth, texture, or hazy forms. The treatment of content may vary depending upon the scoring system used. Chief among these are human figures (H), human details (Hd), animal figures (A), animal details (Ad), and anatomical diagrams (At). A popularity score (P or O) is often found on the basis of the relative frequency of different responses among people in general. For each of the 10 cards, certain responses are scored as popular because of their common occurrence. The examiner also notes how well the response fits the form of the blot, scoring the form quality + or -.[94] Figure 10 lists the scoring symbols and their definitions for the Rorschach. Figure 11 illustrates a location chart where the examiner can

93 Ibid., p. 570.

94 Cronbach, Lee J., Essentials of Psychological Testing (New York: Harper and Row, 1970), p. 562.

Figure 10

SCORING SYMBOLS

LOCATION (where it is seen)

- **W** : use of whole blot (minor omissions permitted)
- **W^x** : incomplete whole
- **Z** : organization of details with tendency toward a whole; scored in addition to D or Dd
- **D** : usual detail of blot.
- **Dd** : rare, unusual or arbitrarily selected area of blot.
- **S** : white space (DS or WS when used in combination).
- **DW and Do** : abnormal responses.

CONTENT (what is seen)

- **H** : living human being. Score (H) for tendency to dehumanize as in mythological beings, cartoon animals, etc.
- **Hd** : human detail (part of a living human figure).
- **A** : animal (animal skins may imply whole animal form).
- **Ad** : Animal detail (part of a living animal).
- **AObj** : animal objects, fur, skins, skulls, bones, etc.
- **At** : anatomy (X-rays, dissected parts, surgical specimens, anatomical charts, etc; usually these are minus (—) responses.
- **Sex** : sexual objects, genitalia, etc.
- **Obj** : objects, man-made.
- **N** : nature (landscapes, trees, flowers, etc.).
- **Geo** : maps, islands, geographic concepts.
- **Art** : art objects, paintings, sculptures.
- **Arch** : architecture, buildings, structures.
- **Embl.** : emblems, insignia.
- **Clds** : clouds
- **Bld** : blood, wounds.
- **Fire** : fire, flames, smoke.
- **Mask** : masks
- **Abs** : abstract responses.
- **Expl** : explosions, eruptions.

DETERMINANTS (how or why it is seen)

Form

- **F** : response on the basis of contour, outline, or form alone. (In the scoring, F + and F — are considered separately.) The F responses acquire their plus or minus characteristics, as do all other determinants, from the "form-level" rating.

Movement

- **M** : any figure in human-like action or with muscular tension implied, as in posture or active facial expressing.
- **FM** : animals in animal-like action.
- **m** : inanimate movement; natural or mechanical forces; abstract "midline" or balancing forces; non-living, mask-like or "projected" expressions.

Color

- **FC** : definite form with chromatic color.
- **CF** : chromatic color with indefinite form.
- **C F** : color merely used to distinguish areas (anatomical charts, political maps, etc.).
- **C** : color only, form disregarded (water, sky, fire, blood, etc.).
- **Cn** : color naming ("mess of color, two reds", etc.); passing remarks about color are not scored.
- **Cdes** : description of color.
- **Csym** : symbolism (fall, spring, gayety, etc.)

Shading and Surface

- **FK** : shading suggesting a three dimensional object or expanse seen in vista or perspective; mirrored reflections as implied by shading.
- **K** : shading as diffusion (smoke, clouds, etc.) score K if substance, when cut through, would rejoin.
- **k** : shading as a three dimensional expanse projected on a two dimensional plane (x-ray, flat topographical map, etc.).
- **Fc** : shading as surface appearance (hairy fur rug, metal hinge, etc.).
- **c** : shading as texture (furry, shiny, stoney, mud, cotton velvet, etc.) if cut through, would not rejoin.
- **C'** : achromatic surface color used as a color (white, black, icy, dirty, etc.).

Form-Level (how well it is seen)

- **+** : superior form, well seen, with congruence of concept and blot outline; scored on the basis of accuracy, specifications, and organization.
- **—** : poor form, poorly seen, vague or non-conforming to the blot outline.

ORIGINALITY (how commonly seen by others)

- **P** : popular; seen by one out of every five persons; an obvious response.
- **O +** : good original response; occurs about once in every hundred records, shows sharp perceptual articulation.
- **O —** : poor bizarre, though original, response; marked for inaccuracy.

COLOR SHOCK

a sign of widespread, superficial emotional disturbance seen frequently in psychoneurotics but occurring also in other types psychopathology and seen in about 20% of normal persons. occurs particularly on Cards II, VIII, and IX, and less common on Cards III and X. It is manifested by one or more of t following:

1. Increased reaction time.
2. Exclamation of anxiety, tension, or embarrassment.
3. Decrease in number and quality of responses (F —).
4. Rejection of card, often preceded by excess turning, bending, etc.

SHADING SHOCK

a sign of deep rooted personality disturbance, with awareness inadequacy and fear of external contacts. Seen particularly Cards IV and VI but also on VII and occasionally with the ot black and white cards. The reaction characteristics are similar those seen in color shock; there may, however, be an increase the number of responses in which shading determinants are fou

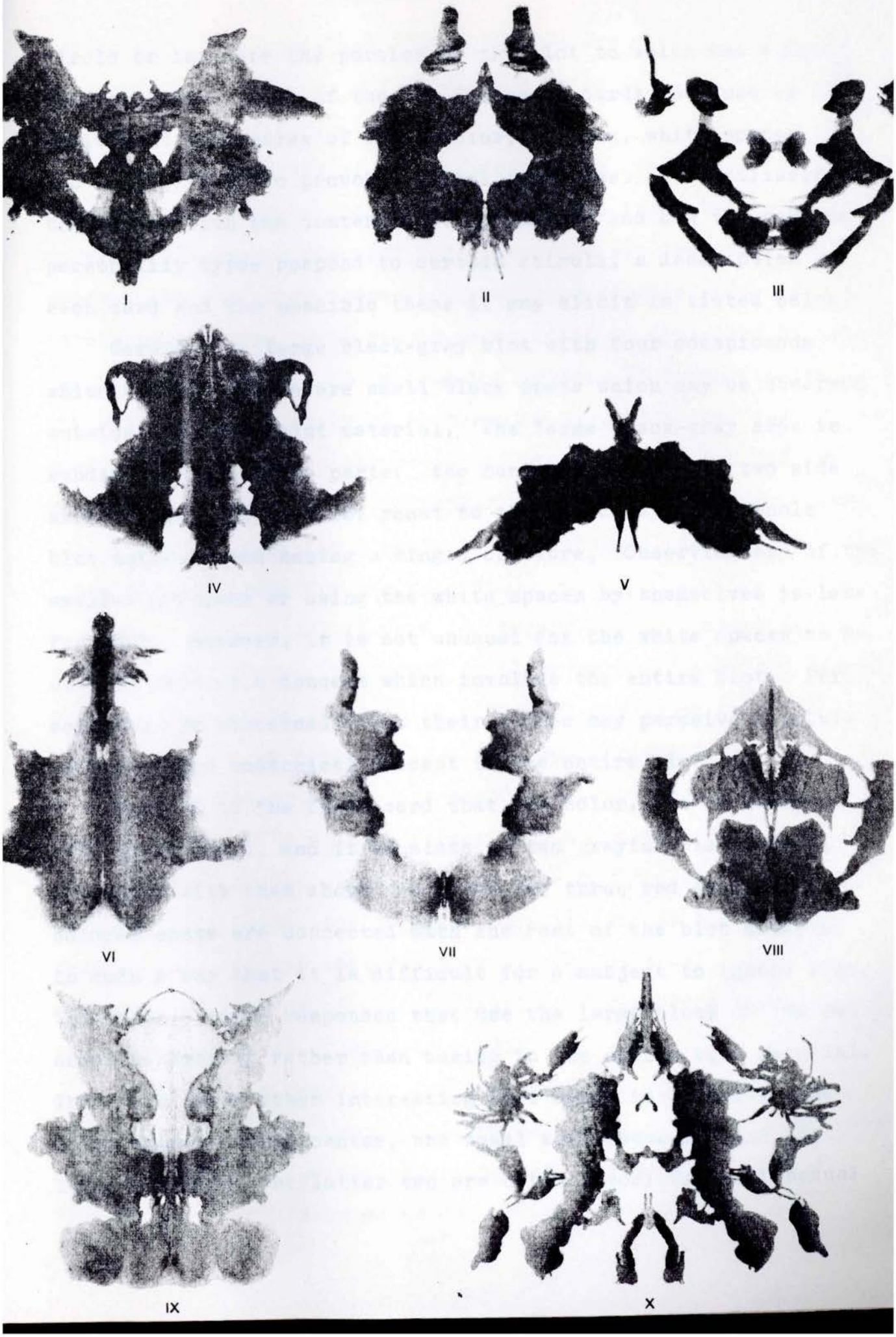
BLOCKING

signifies disturbance. It is significant if the increased time hold ratio of 1.5 or more to the mean reaction time. Usual react time on each card (time till first response) is 30 seconds or l

24 26

Source:
The Special School District Psychology Department

Figure 11



circle or indicate the portion of the blot to which the subject has responded. Each of the ten Rorschach cards, because of its individual properties of form, color, shading, white spaces, and so on, tends to provoke typical responses. To familiarize the reader with the content of the inkblots and how the various personality types respond to certain stimuli, a description of each card and the possible theme it may elicit is listed below:

Card I is a large black-gray blot with four conspicuous white spaces. There are small black spots which may be observed outside the large blot material. The large black-gray area is subdivided into three parts: the center area and the two side areas. Many people first react to this card using the whole blot material and seeing a winged creature. Observing any of the smaller portions or using the white spaces by themselves is less frequent. However, it is not unusual for the white spaces to be used as part of a concept which involves the entire blot. Persons who are concerned about their bodies may perceive a pelvis or some other anatomical concept in the entire blot.

Card II is the first card that has color. It is less compact than Card I, and it consists of two grayish black areas; connected with them above and below are three red spots. The colored spots are connected with the rest of the blot material in such a way that it is difficult for a subject to ignore them. This blot elicits responses that use the large black or the red areas separately rather than taking in the entire blot material. There are three other interesting blot areas in Card II: the white spaces in the center, the small area above it, and the lower red area; the latter two are often associated with sexual

responses. Both human and animal figures are seen in the black areas of this card, the animal figures being very frequently seen in action.

Card III consists of two distinct black-gray areas joined together by a lighter gray portion. Between these two areas is a definitely shaped red spot and above them are two other red spots. The shapes of these blot areas are clearly separate and highly suggestive. Most people react first to this card by using all the black portion to see human figures. If human figures are seen, they are analyzed in terms of sex, clothing, and kind of action that is involved. If the red spots are not ignored, the center one is frequently seen as a bow tie or butterfly. It is unusual for a subject to attempt to use both the black and red areas for one concept.

The blot material of Card IV appears massive, compact, yet indistinct in shape. This card is black-gray all over and highly shaded. Because of its massive structure and dense shading, it appears ominous to some people. Thus monsters, giants, gorillas, or peculiar-looking people are seen sitting or approaching, or the blot looks like a dense forest with mountains and lakes. The frequency of the giant, ape, or monster type of response has prompted some clinicians to refer to this card as the "father card". They believe that attitudes toward paternal authority are revealed because of the combination of masculine aggression and dependent needs related to shading.

Card V is an easy card for most subjects because of its definite outline and nearly allover blackness. Subjects who have been disturbed by the earlier cards have a chance to recover. The most frequent response to the entire blot material is a

winged creature such as a bat or a butterfly. The side extensions are sometimes seen separately as animal heads or human legs. For some subjects, the blackness of the card is disturbing and this phenomenon is referred to as "black shock".

Card VI is known as the "sex" card because the upper part is interpreted by many subjects as a phallic symbol. The shading qualities of the card are also distinctive and more than any other card, elicit responses involving the use of shading. The card is frequently seen as a whole. Some subjects perceive the upper and lower portions as separate units.

Card VII is light gray in color with only a very small darker area in the bottom center portion. Because of this quality, plus the fact that the bottom center suggests a female sex organ, the card has been labeled the "mother card". The card facilitates a response to the entire area of the blot, often involving the perception of human figures in action, especially when held upside down. The light gray color and shading elements of this card suggest clouds, smoke, or maps.

Card VIII is the first in a series of three entirely colored cards, using pastel shades. The blot is rather small; yet there are several definite and distinct areas in it; the bluish gray top, the blue center, the pink and orange bottom, and the two pink side portions. The pink side areas are frequently seen as animals in movement. The other areas are used in many different ways, if not disregarded entirely.

Card IX is large, vague in definite form, with no clearly distinguishable small portions, and with the colors all running into one another. This card is most frequently rejected by the

subject due to the difficulty in responding to the lack of structure, the mixed-up colors, and the shading. Responses to this card are extremely varied.

Card X looks like an artist's palette full of colors. This card has more colors than any other, and they are distributed on many more separate areas than in other cards. Since the blot areas are so separated, subjects tend to use the separate parts on this card, even if they do not do so anywhere else. The card elicits a considerable number of animal responses, many in action. Human beings are rarely seen except in the large pink side areas, where they may be perceived as sucking on something.[95]

The manner in which the Rorschach is traditionally used clinically can best be illustrated by discussing responses that were actually given to one of the stimulus cards. For this purpose, Card IV will be used. The responses were given by a 23 year old woman. The left hand column is the inquiry phase which follows the initial responses.

Free Association	Inquiry Phase
1. Sort of looks like a monster with big feet.	A cute little thing. Such a friendly little guy. Got a big tail though.
2. When it's turned around, it looks like-when you mount an insect it has wings and legs. Sort of a cute insect. Maybe a little moth.	You lay him out flat. Only partially mounted. Person hasn't finished yet. You can tell by the lighter color that its wings are turned over.

The first response would be scored WF+(H), indicating that the location of the percept was the whole blot (W), that the determinant was form or shape (F), that the form perceived was appropriate (indicated by the + sign), and that the content of

95 Klopfer, Bruno and Helen H. Davidson, The Rorschach Technique (New York: Harcourt, Brace and World, Inc., 1962), pp. 9-12.

the percept was human-like, but not distinctly human (H). The second response would be scored W FC'+A, indicating a whole response (W), a realistic form integrated with the perception of color (FC'+), and animal content (A).[96]

Predominance of W or "whole" locations, when combined with a high level of form appropriateness, is usually interpreted as reflecting "the ability to organize material, to relate details, and to be concerned with the abstract and the theoretical. A high degree of form appropriateness is also considered to indicate a concern with the reality situation. The presence of color responses in any quantity is interpreted as indicating either hesitation in responsiveness to external stimuli or an unhappy mood. With regard to content and language, this subject's recognition of a "monster" and the way in which she divests it of its threatening nature (cute, little) could be interpreted as one method of adjustment to perceived threat, by denying and reversing the threatening elements. After examining the second response, in which the percept has been reduced to a dead insect, and the client again calls it cute, one may interpret this as suggesting that the subject still finds it necessary to reassure herself that no threat exists. Pinning it out on the board might be seen as a further attempt to remove the threat. The use of "him" instead of "it" in the inquiry might be taken as a tentative cue that the threat has its basis in interactions involving males. These interpretations should be regarded as tentative hypotheses and must be supported or rejected by the subject's responses to the other nine cards.[97]

96 Lanyon, Richard and Leonard O. Goodstein, Personality Assessment (New York: John Wiley and Sons, 1971), p. 50.

97 Ibid., p. 51.

A basic assumption underlying the Rorschach technique is that there is relationship between perception and personality. The way in which an individual organizes the ink blots in forming his perceptions reflects fundamental aspects of his psychological functioning. Ink blots are suitable because they are relatively ambiguous or unstructured. The subject, when asked to relate what he sees in the blots, reacts in an unlearned, personal fashion since there are no "right" or "wrong" answers. An analysis, by a trained examiner, of an individual's responses should reveal such things as: the nature of the subject's inner promptings, his motivations and drive impulses, the capacity to control his impulses, and the way he attacks problems.[98]

In life situations, a person may avoid relating to people because they make him uncomfortable. Thus, in the Rorschach test, a subject may avoid seeing people or be unable to see people in the blots. Similarly, he may pay attention only to the peripheny of the blot material or to little details surrounding the blot. The part of a blot that a person selects, what is seen or not seen, how the material is organized, how much time is taken to see what is selected are all believed to reveal some of the personality aspects of the subject.

The behavior of an individual in the Rorschach situation differs in one very important respect from the same person's reaction to any unfamiliar situation in life. In life situations, a person tends to behave in a more or less socially acceptable way. Thus, a person's outward, observable behavior may not always reveal his true feelings and attitudes. In the Rorschach process, a person does not know the correct way to respond. In

98 Klopfer, op. cit., p. 14.

his responses, he unwittingly reveals himself. Because the Rorschach reveals a person's unlearned way of feeling and behaving, there may be only a slight correlation between actual behavior and predictions or isolated behavior based on the Rorschach protocol. The primary purpose of the Rorschach is not to predict behavior, but to provide a description of the subject's personality that is clinically meaningful. The Rorschach analysis provides clues for the basic understanding of observable behavior because it reveals the more basic, underlying personality structure. Not all personality traits revealed in the Rorschach will be evidenced in any single individual, either at one moment of his life or possibly in his entire lifetime. The personality aspects are categorized under three main headings: Cognitive (intellectual), Affective (emotional), and Aspects of Ego Functioning. These topics and their subcategories are described below:

Cognitive Aspects:

1. Manner of Approach-This area is concerned with the subject's approach to problems such as a logical approach, inductive and deductive thinking, organization, logic and so on.
2. Power of Observation-The Rorschach can reveal if the subject observes the obvious, attends to minute details, or sees more complex constellations.
3. Originality of Thinking-Considered is the creative ability of the individual and if the creations are based upon reality or if they are bizarre.
4. Productivity-The subject's fund of ideas and quality of productions are considered.
5. Breadth of Interests-The examiner notes the variety of the person's interests, the subject's biases, and overconcentration in one interest area.

Affective Aspects:

1. General Emotional Tone-The technique reveals the spontaneity of the subject as well as aspects of depression, passivity, withdrawal, and aggressiveness. A person's response to immediate emotional challenges

is elicited as well as responses to anticipated emotional situations.

2. Feelings About Self-The individual's response to inner promptings and impulses is revealed.
3. Responsiveness to People-The subject's ability to establish rapport with people and his feelings about social interactions is elicited.
4. Reaction to Emotional Stress-Studied is the person's response to stressful situations and how he copes with it. Also, his reactions to new situations are noted.
5. Control of Emotional Impulses-This aspect deals with the individual's control of his spontaneous tendencies.

Aspects of Ego Functioning:

1. Ego Strength-This area concerns reality testing, self-appraisal, self-confidence, and perceptions of the subject.
2. Conflict Areas-The subject's sexual adjustment relating to sex role and identification is of concern in this category. Also, possible conflicts concerning attitude toward authority, passivity, and dependency needs are revealed.
3. Defenses-The kinds of defenses the individual uses is of concern. The examiner notes if the defenses are repression, denial, or intellectualization.[99]

Rorschach findings are complemented by the results of structured objective tests as well as by findings of other projective instruments. The examiner could obtain a more complete picture of the personality than he could using the Rorschach alone.

99 Ibid., pp. 18-19.

This writer concurs with the impression of the majority of professionals who deal with projective techniques in that no singular instrument should be over-interpreted and that the optimal approach to personality-emotional assessment necessitates the utilization of a battery of projective devices. Instruments such as the K-F-D can provide useful data relative to interfamilial relationships but should not be utilized to diagnose other pathological conditions. The Rorschach technique is basically of little value with children under age ten, but can be of significant worth with older youngsters, adolescents, and adults. This writer, then, would select a variety of better known instruments such as the T.A.T., C.A.T., Rorschach, K-F-D, H-T-P, and the D-A-P and base the final interpretation on the composite information provided by the total battery. Additionally, these instruments necessitate a high level of examiner expertise and should be utilized only by highly trained professionals.

This section contains 15 cases describing children and adolescents tested to determine emotional factors related to Behavior Disorders. The actual tests were administered and interpreted by Mr. Ken Mayfield, faculty sponsor, and this graduate student under his supervision. The tests were given at Mr. Mayfield's private practice, which serves the purpose of evaluating and counseling children, adolescents, and adults. In addition to the projective techniques used, an intellectual assessment was given to each subject. All of the individuals cited in these case studies had measured intellectual ability within the average to above average range.

Case #1

Presenting Problem:

This girl (C.A. 15-3) recently ran away from home for a brief period of time but was picked up along with several of her girlfrier by County Police and turned over to her parents. Increasing conflic with parents and siblings are reported. Overall behavior pattern is suggestive of adjustment reaction to adolescence.

Projective Test Battery:

Draw-A-Person

Word Association Test

Rorschach

Test Analysis:

Projective analysis reveals no significant evidence of thought disturbance, and reality testing is quite adequate at this time. A thinly disguised sexual preoccupation was evidenced throughout the subject's Word Association and Rorschach responses, and strong pass tendencies were indicated. She suffers from feelings of anxiety and guilt relative to her developing heterosexual needs and is confused by parental authority which she perceives as inhibiting her developing femininity. Overall communication with her parents appears limited at present, and the subject has assumed a passive-aggressive posture in her relationship with her parents. In essence, this girl has many unanswered questions regarding her developing femininity and proper expression of same, but finds herself unable to verbalize her questions and frustrations within the home environment. She is quite resentful of her younger brothe and feels that parental attention is focused toward his needs, disallowing her the support necessary at this point in her development.

Case #2

Presenting Problem:

This girl (C. A. 16-5) is reported to have attempted suicide. School attendance is erratic, and she is a discipline problem in the home. Behaviors are described as lying, sexual promiscuity, and disobedience. Mood swings are common.

Projective Test Battery:

Rotter Incomplete Sentences

Rorschach

Test Analysis:

Projective analysis reveals overall affective functioning to b seriously encumbered by the presence of powerful psycho-sexual conflicts. The subject's reaction to these conflicts appears highly labile at this time, ranging from hostile-aggressive to passive-dependent in form. Conflict causation is projected almost solely to parents and accusations range from vague, generalized indignities to specific allegations of attempted incest and materna insensitivity to same. Her acting out of forbidden, anti-social impulses appears directly related to her conflicts with parents, and there does not appear to be a generalized weakness of super ego but rather a situation of super ego lacunae-in all probability pare sanctioned lacunae. The subject displays feelings of guilt and remorse which are rarely observable in the more pronounced character disorders, and her delinquent behaviors are of a neurotic rather than characterological or psychotic variety.

Case #3

Presenting Problem:

This boy (C. A. 11-9) was referred for evaluation because of academic functioning inhibited by hyperactivity, short attention span, and failure to complete assignments. The mother reports chronic enuresis, lying, general disobedience, and frequent crying.

Projective Test Battery:

Draw-A-Person

Rorschach

Test Analysis:

The subject was quite threatened by this phase of the evaluati Efforts to gain DAP drawings were finally aborted due to the high level of anxiety evoked by this task. He did make an attempt to depict a male person but protested his inability to draw the body. His psychosexual conflicts were much in evidence at this point, and he seemed literally overwhelmed at the prospects of producing a male body. He perseverated with the head and shoulders portion for approximately twenty minutes, continually erasing and revising and was unable to even sketch in the lower torso. Introduction to Rorschach stimuli proved equally traumatic and response was quite limited in form. Continual card turning, long periods of silence and protest relative to inability to "see anything" were common throughout this level of inquiry. Reference to human perceptions was in the form of inquiry rather than positive statements. Continuous repression and denial was evidenced. At present, the subject displays little capacity for any valid interpersonal relationship. He perceives both siblings and peers as threatening

rivals, mother as oppressive and punitive, and step-father as passive and remote. He is, as a result, continually immersed in a state of free floating anxiety, characterized by restlessness, apprehensiveness, and depressed moods.

Case #4

Presenting Problem:

This boy (C. A. 9-7) is reportedly experiencing difficulty in all major academic areas. Reading is considered the primary problem, but he is described as failing other subjects as well. Mother reports that this boy is unable to concentrate and is easily frustrated.

Projective Test Battery;

Kinetic Family Drawing

Rorschach

Test Analysis:

Projective analysis reveals a child who suffers from considerat anxiety relative to both peer-group problems and current academic difficulties. The self image is obviously depressed at this point, and the profile is further clouded by the boy's tendency to internalize his conflicts rather than resolve them. The subject does perceive himself as capable and worthy, insofar as home related activities are concerned. He takes great pride in his ability to work jointly with his parents on various projects, and although he is plagued to some degree by rivalry with his younger siblings, this in itself, is not considered a major problem at present. He seems to find little in the way of relief from the inner world of fantasy and tends to over-use the defense mechanisms of repression and denial. He is both fearful and distrustful of peer-group interpersonal relationships, and instead, turns to adults for comfort and security. Reality testing, despite the anxiety factors, is quite adequate.

Case #5

Presenting Problem:

This girl (C. A. 14-11) is currently confined in the St. Louis County Juvenile Detention Center. She has run away from home, threatened older siblings, and there is a suspicion of incest in the family.

Projective Test Battery:

Kinetic Family Drawing
Rorschach
Thematic Apperception Test

Test Analysis:

Projective analysis reveals that the subject is intensely preoccupied with sexuality and is experiencing strong psycho-sexual conflicts. Although reality testing does not appear seriously impaired, there is a decided tendency to turn to her sexually oriented fantasies once frustration thresholds are exceeded.

On the KFD she first depicted father driving the car. "He's holding on to the steering wheel. I know that it looks like a peace symbol, but it isn't." She was intensely involved in this drawing and spent approximately fifteen minutes in shading and revising until finally satisfied with her production. Father is in a face-forward position, with hands firmly in control of the steering wheel and the projecting steering column presents graphic evidence of her conceptualization of father as totally in control of his own sexuality as well as that of others. She then attempted to draw her mother, first producing a table with a cash register mounted atop, stating, "This will be mother at work." After sketching in an oval for the head portion, the subject put down her

pencil stating that it was too hard to draw her. She was then told to draw herself and again became intensely involved with the production. She portrayed herself in a face-forward position with the torso in a provocative posture. Preoccupation with her own sexuality was evidenced by the continual shading and revision of the hips and pubic areas. The facial features were added almost as an afterthought.

On the Rorschach her perceptions were reality oriented; however the intensity of her sexual drives was much in evidence. Responses on the "father card" were in the form of, "It looks like a dragon with a long, powerful tail." Conversely, her response to the "mother card" consisted of, "looks like two guys yelling at each other - perhaps it could be two bunny rabbits." In general, affective controls are seen as tenuous and a high level of emotional lability and impulsivity was evidenced throughout her Rorschach responses.

Response on the TAT was often rather morbid in content and illustrative of the confusion and frustration brought on by this girl's psycho-sexual conflicts. Her heroines engaged in mildly anti-social activities, but for the most part, were perceived as failing in their efforts to attain recognition and/or goals. Despite the fact that reality testing did not appear seriously impaired, tenuous control of primitive affective drives is suspected.

Case #6

Presenting Problem:

This boy (C. A. 12-0) was referred for evaluation because of a possible learning disability. He is reported to be quiet and somewhat withdrawn.

Projective Test Battery:

Kinetic Family Drawing

Rotter Incomplete Sentences

Rorschach

Test Analysis:

Projective analysis reveals an anxious, depressed youngster wit deep rooted feelings of personal inadequacy and social inferiority. The self image is quite nebulous in form and pronounced conflicts related to sex-role identification are indicated. The subject feels rejected by his father and fearful of his ability to live up to his mother's expectations. He also perceives himself as rejected by his peer group and as a result, focuses on withdrawal as the only effective mechanism of defense at present. The inner world does not, however, provide real refuge and fantasies are largely dark and threatening in nature.

Case #7

Presenting Problem:

Parents report that this boy's (C. A. 10-1) history of hyperactive behavior dates back to early infancy. He has been on various types of medication since he was one year of age. He is currently enrolled in a parochial school and is described by his teachers as an underachiever and a conduct problem. His relationship with both siblings and parents is poor and frequent fighting, lying, and verbal challenge of parental authority is reported.

Projective Test Battery:

Kinetic Family Drawing

Rorschach

Thematic Apperception Test

Test Analysis

This boy's reaction to projective analysis was one of mixed anxiety and suspicion. His initial reaction to each of the three devices was essentially negativistic and little more than passive compliance was subsequently gained. Repression and denial were common in his sparce responses, and his reluctance to reveal conflict and needs was quite obvious. He displays little confidence in parents, siblings, or peers and as a result, feels alone and often overwhelmed by the pressures of his unresolved ego conflicts. On the KFD, the family unit was depicted as a rigid, stylized group of individual figures, together in form only. Mother, who is cooking, continues to provide for basic nurturant needs but is perceived as offering little in the way of help in major conflict areas. Father, who is working, is perceived as other-involved and

the overall relationship between father and son appears quite limited. In essence, this subject has not been able to develop a positive identity in the family structure. He is envious and resentful of his siblings whom he perceives as successful in their relationships with parents, tending to interpret this as definitive evidence of his own inadequacy.

Case #8

Presenting Problem:

This boy (C. A. 13-1) was referred for evaluation suspected of impending psychosis. Some evidence of intellectual deterioration is noted, and no academic progress has been made. He is increasingly withdrawn at home and at school.

Projective Test Battery:

Rotter Incomplete Sentences

Rorschach

Draw-A-Person

Test Analysis:

Projective analysis reveals that the inner world affords little in the way of true escape or solace to this troubled boy. His attempts to repress or block out the unpleasantness of his perceptic were manifest by extended periods of muteness prior to the verbaliza tion of his responses but despite all his efforts he was eventually compelled to give way to the negative threatening stimuli. Efforts to restrict his fantasies to pleasureable situations were continually inhibited by the intrusion of his paranoid-like ideation resulting in increased anxiety and thought confusion. Interpersonal relationships, including parental, sibling, and peer, are generally viewed with mixed suspicion and hostility at this point and the resultant hostile impulses are under tenuous control.

The effective utilization of withdrawal as a defense mechanism appears to be deteriorating rapidly at this point and the possibilit of his movement into a even more paranoid state cannot be ruled out.