

# CHAPTER V THE PRACTICE OF ORTHOPEDAGOGIC-ORTHODIDACTIC EVALUATION

J. M. A. Kotze

## 1. General introduction

In the previous part of this book, the focus is on the theoretical founding of orthopedagogic-orthodidactic activities, and it concludes with a justification for orthopedagogic-orthodidactic evaluation and assistance. In this part of the book, an additional facet of orthodidactics is discussed, i.e., orthodidactic action or practice, which includes evaluating and assisting a child with learning difficulties. As explicated in Chapter II, this enables the orthodidactician to seek a harmony between theory and practice.

The specific course of the remainder of this orientational book is an explication in this chapter of the orthodidactic evaluation of children with learning difficulties by means of certain evaluative media. Chapters VI and VII deal with evaluating and assisting children with language and with arithmetic problems, respectively.

The present chapter is related to Chapter IV in that it is specifically concerned with establishing a learning image, as image of the lived experiencing\* of a child with learning difficulties. In other words, it is concerned with using certain learning media to penetrate to the essentials of the learning world of a child, seen as an experiential world. With respect to establishing an orthodidactic image (see Chapter IV), the reader is referred to the two following chapters.

Depending on the subject or subjects in which the learning difficulties appear, the investigator will be directed to the language and/or arithmetic system for establishing an orthodidactic image. A study of a child's language is accomplished by using conversation, spelling, dictation, reading aloud, comprehension tests, compositions, etc. to try to obtain an orthodidactic image of a child.

---

\* See footnotes in Chapter I regarding the translation of "beleweniswereld" and "belewing".

Concerning the investigation of arithmetic, such an image also is obtained by means of different arithmetic media. However, it is emphasized that the issue here is not testing or merely analyzing errors, but as expressed in the previous chapter, "a search for derailments in particular activity structures or activity forms according to particular orthodidactic media such as language and arithmetic media."

Since establishing an orthodidactic image is discussed in the following two chapters, it is not considered further here. Rather, an additional explication is given here of using possible procedures to obtain an orthopedagogic image (learning image as image of the lived experiencing) of a child with learning difficulties. Of course, the learning media discussed can be used differently depending on a child's problem. What follows is not a rigid application of the media; it is merely a consideration of media which lend themselves to establishing a learning image. It is readily acknowledged that other media possibly lend themselves equally well to this end.

Attention now is given to compiling learning media for establishing a learning image of a child with learning difficulties.

## **2. Compiling media ("tests") for obtaining a learning image, as image of the lived experiences of a child with learning difficulties**

### **a. Particular aims of implementing the media**

The use of exploratory media for obtaining a person-image is well known in the research and investigations conducted at the Child Guidance Institute of the Faculty of Education at the University of Pretoria.<sup>(1)</sup> The particulars are not repeated here, although this research takes place against the background of the child's total situation.

The aims of implementing exploratory media, as learning media, are:

1. to try to obtain an image of the learning world of the child with learning difficulties, in terms of the learning relationships he has constituted on his own initiative; and
2. to try to obtain an image of the modes of actualization by which the child with learning difficulties announces himself within these learning relationships in the learning situation.

Thus, the results of each investigation is not so much a person-image as it is a **learning-image**; for this reason, it is necessary to consider and explain the different learning media which are going to be used.

## **b. Description of the learning media**

### **1. Learning historicity or image of the learning past as revealed by a historicity-image**

For a human being (a child), no deed, word, or expression comes from the blue, and to understand a child, he must always be viewed from within his temporal horizon. He has a pre-history of relationships. All that he does and says is co-defined by the horizon of his personal history of relationships with the world.

To gain entry in the learning world, as experiential world of the child with learning difficulties, it is necessary to study his learning past or historicity, i.e., the learning relationships which he has established in the past, and which not only co-define the present, but always point to the future. Hence, use is made of a hetero- as well as an auto-historicity, which is described as an exploratory conversation regarding this learning historicity. (The former is conducted with parents, teachers and other interested persons, and the latter with the child himself).

**a) The hetero-historicity.** Since the concern is with the learning world, as experiential world (i.e., with the modes of learning and the learning relationships established in the past), as far as possible, there is a search for important aspects of the course of the child's becoming. This is done by conversing with the parents, as primary educators, but also, where possible, with teachers, as secondary educators. To this end, first, certain aspects of becoming must be taken into consideration (e.g., physical, affective, and normative aspects, together with the child's acquisition of language). Then, a thorough study must be made of the nature of the primary educative situation (i.e., the family structure, the nature of family relationships, the humanization of the child--e.g., the degree to which norms or cleanliness, orderliness, reasonableness, and esthetic considerations are being obeyed--and the quality of affective, cognitive, and normative educating). However, since the learning situation also manifests itself in school, as a second order

pedagogical situation, aspects such as school readiness, progress, teacher-child relationships must be explored.

Within the aspects of becoming, as well as within the pedagogic and didactic-pedagogic situations, it is important to attend to the nature of the child's primordial learning situation because it plays an extremely important role in his learning world, as experiential world. This is because it includes the possibility of providing the pathic-affective and gnostic-cognitive foundation for all learning and, thus, insight into the modes of learning by which, in the act of learning, the child proclaims himself as someone who wants to learn.

Questions which arise here are, e.g., what is the nature of the scope of the child's learning, what is the extent of his identification with his parents, what is the quality of parental normative intervention and interference by their teaching, what is the general climate of the affective and the pedagogic? In other words, in what ways are provisions made for a secure pathic base from which the child can spring to the gnostic-cognitive, and venture within his relationships to things and others (e.g., other children, and adults--parents, teachers)? Thus, the learning historicity is concerned with a search for the learning world, as experiential world, which the child has actualized during his becoming within different learning situations, and by means of different modes of learning.

**b) Auto-historicity.** The child takes a central position in this conversation in that it is about his situation as a learning situation. Naturally, the conversation covers his relationships with learning materials, with other children (brothers, sisters, other pupils), and with his own parents and teachers, etc.

## 2. The Wiggly Blocks <sup>(2)</sup>

Especially as an observation medium, the Wiggly Blocks "test" provides a good opportunity for obtaining insight into the learning world, as experiential world, of the child with learning difficulties. On this task, the child first enters a direct learning relationship with the blocks (things) but, second, he enters a relationship with the adult (investigator). Within both these relationships, it can be established by means of observation which modes of learning are actualized by the child with learning difficulties.

By observing the block building activity, the pathic-affective and gnostic-cognitive aspects, or moments of the learning relationship between child and things (blocks) is first considered. Here it is important to attend to how the task is tackled. For example, does the child merely remain stuck on a trial-and-error level, which indicates a strong pathic **lived experiencing** by means of sensing. On the other hand, if he can arrive at an adequate structuring of the building activity by planning and insight, this is evidence of a cognitive **lived experiencing**, and of actualizing perceiving and thinking, as modes of learning. Thus, systematizing and schematizing occur which finally, by means of insight, lead to an integration of the block-building activity.

Moreover, according to Van Gelder,<sup>(3)</sup> the work-attitude can be observed as being uncertain, tense, persistent, playful, optimistic, dependent, active, industrious, or paired with self-confidence wherein, once again, pathic-affective and gnostic-cognitive aspects of **lived experiencing** can be indicated. Also, this task gives rise to a work-level, which is characterized by one of the following: coordinated, abstract (the performance of building is preceded by a plan), concrete (the plan grows with the building up of the material), stereotyped (the child remains at the same level of trial-and-error) and chaotic (he cannot arrive at an insight into the whole).

Second, this building activity takes place in relationship with the other, as adult, within which a learning relationship also is shown. For example, here it is important to notice if the child learns when the building task is explained verbally, thus, on a cognitive level, or if he can only understand when the activity is explained concretely by using the blocks themselves. The latter again points to the pathic within the adult-child learning relationship. This learning relationship remains one of sympathy and commiseration whether the child stagnates on a pathic level, or, after explanation, if he moves to a cognitive level; in other words, in his relationship with others, does he learn on a cognitive level?

### 3. Graphic self-expression media

a) **Drawing the human figure**<sup>(4)</sup> According to Nel and Esterhuysen,<sup>(5)</sup> "the drawing of the human figure can be seen as a reflection of the drawer's image of himself with reference to his

surroundings." As far as the child is concerned, it reflects his situation (also learning situation) and of his relationships with reality (of his relationships to things and others), as learning relationships.

Because the child's learning orientation stems from his body, as its center, his relationship to his own body-ness can be attended to by means of his drawing of a human figure, and, especially where a child with learning difficulties is concerned, there must be a search for possible indications of **lived experienced** body-ness. If there is such an indication, it can be assumed that he is being thrown back to a pathic **lived experiencing** of his own body-ness which then can severely impede and restrict his cognitive relationship to things and others.

Further, by interpreting particulars within the drawing, one can get an indication of pathic-affective aspects of **lived experiencing** (e.g., the position of the figure on the paper, the use of certain lines, the size of the figure, its orientation, perspective). These can provide a view of phenomena such as life uncertainties, or certainties, affective lability or stability, feelings of anxiety, dejection, the **lived experience** of security. Thus, this allows one to view whether the pathic-affective **lived experiences**, which are preconditions for **lived experiencing** on a gnostic-cognitive level, are stable, or if the cognitive, as it were, is flooded by pathic lability.

Finally, these drawings are a means for determining the quality of the relationships with others which appear there, and, in this respect, there must be a search for positive and negative aspects for establishing learning relationships with others. For example, important are indications of the presence or absence of identification, especially with the parents as well as an openness or closedness to others.

**b) The Wartegg-drawing medium (Picture Completion Test of Kinget) <sup>(6)</sup>** From the Wartegg-drawing medium, it also is possible to gain insight into the learning world of the child, and particularly to notice its pathic-affective, and gnostic-cognitive aspects, as well as the learning relationships (to things and others) which are shown by means of this medium.

First, the nature of experience-types called **extratensive**\* and **introversive** are illuminated. As a gnostic-cognitive experience-type in relation to reality, the extratensive child is oriented to the external world and, thus, is ready to break through his pathic **lived experiences** and direct himself to the cognitive. On the other hand, the introversive indicates an orientation to the self in a mainly pathic-affective association with things and with others.

Additional pathic-affective and gnostic-cognitive aspects can be brought to light by noticing the **affinity** or **insensibility** the child shows for the **organic** and the **technical-constructive quality** of the drawings of this medium. For example, **scribbles** used for drawing point to a disturbed learning relationship with things and others because of pathic flooding.

**Animal nature** (humans, animals, or combinations) points to an identification with the organic world, and is always an indication of the pathic-affective as a preformed field (i.e., as stable); in addition, where human figures dominate, this points to identifying with the possibility of entering learning relationships with others. A lot of animal life without human life has the same meaning here as does its occurrence on the Rorschach, i.e., a deviation or a disturbance in relating to others (also as learning relationships with others). With respect to the drawings of the human figure, it pays to consider the **physiognomy** expressed in the drawing, such as gender, age, and especially facial and bodily expressions. The latter is a good indication of whether the affective is available as a preformed field for the cognitive (i.e., whether the pathic-affective is stable or labile). When the entire body or parts of it are conspicuously cut off, this can be an indication of **lived experienced** body-ness.

**Inanimate nature** brings to the fore a pathic relating to reality. Here it pays to notice the **atmosphere** which the drawings of inanimate nature "breathe", because this also indicates a pathic-gnostic **lived experience** of things. In addition, **closure of objects** is a good indication of the child's learning relationship to things, especially his involvement with concrete, practical matters, and meanings. However, exclusively drawing objects is bad because it indicates a one-sided relationship to things.

---

\* **Emphasized** words in this section are technical terms defined in Kinget's book (except for **experience** which is my translation of "belewe" or lived-experience).

Further, the Wartegg-drawing medium gives a good indication of actualizing fantasizing as a distanced, remote, cognitive **lived experience** of things by which the tangible world is broken through. Also, the execution of the drawings gives additional insight into the different modes of learning on pathic-affective and gnostic-cognitive levels. For example, an extremely high **form-level** is usually characteristic of children where the affective furnishes a preformed [stable] field for the cognitive. Also, the nature of the lines, i.e., their intensity, their type (straight, bowed, etc.), and the stroke of the lines are further indicators of the pathic-affective and gnostic-cognitive.

Of additional importance is the **covering**, in other words, the amount of space taken up by the drawing. So, the drawing can be "empty" and, thus, contain no or only a few internal details, or show a slight structure but great dispersion; this points to apathetic **lived experiencing**, while very small drawings can be an indication of pathic flooding, e.g., anxiety, depression. When approximately 3/4 of the space is filled, along with good structuring, animated nature, and a high form-level, this is a good indication of the actualization of the cognitive modes of learning based on an affective **lived experience** of security. Also, **expansion** is a favorable indicator which points to a cognitive boundary of the learning horizon, which is always being extended.

**Shading** points mainly to the pathic-affective and this can be positive or negative according to its nature and intensity. As far as **composition** of the drawing is concerned, it points to the cognitive modes of learning. Here it pays to attend to the **whole and parts, context and isolation, details, repetitions** (which point to perseverations), **variety**, etc. Other aspects of importance are **originality** and **popularity**, which have the same meaning they do on the Rorschach (see below).

Viewed globally, the Wartegg-drawing medium also gives a very good indication of actualizing intelligence with responsibility as a gnostic-cognitive way of being.

c) **Tree drawings**<sup>(7)</sup>. Koch takes the growth of a healthy tree as the basis for this exploratory medium, and he emphasizes the spatial symbolism expressed in the drawing of a tree. To this end, he



divides the tree into roots, trunk, and the crown, and he attaches meanings to each.

As a rule, the roots are not drawn, but when they are, this points to a strong dependency, and a search for support; as far as the modes of learning are concerned, this is an indication of **lived experiencing** on a pathic level. Further, Koch sees the trunk as the center, and points to the child's relationship to himself, to his body, also to his historicity and, thus, learning historicity. However, the past also refers to the present and future and, rightly, Koch views the crown as an indication of the nature of his contact with or relationship with reality (things and others). In terms of the aim of this medium as contributing to the learning image of the child, the crown can give an indication of the nature of his primordial learning relationships within which the pathic-affective and gnostic-cognitive can be pointed out.

According to Koch, an accentuation of the crown to the left points to an introvertive, pathic **lived experiencing** of things and others, and will be an indication of the degree to which the cognitive modes of learning possibly are restrained. An accentuation to the right points to an extratensivity, and an acting toward things and others; also, it points to actualizing the cognitive modes of learning in relation to things and others. An upward inclination of the crown also is an indication of an orientation to the future on a cognitive level, while a flattening or a downward inclination point more to a pathic **lived experiencing**. Koch <sup>(8)</sup> also sees these phenomena as follows: "Real striving, going out of oneself, appears far more clearly in the rising of the tree to a point, and the lack thereof (feeling oneself under pressure) rather in the flattening of the crown of the tree, in crushed short forms, also in shortness of the trunk."

Such phenomena as shading, line strength, plasticity, differentiation, outlining will not be given an interpretation here in terms of the modes of learning and learning relationships; still, it must be emphasized that these phenomena are interpreted always with reference to their occurrence in the different parts of the tree drawing--seen symbolically with respect to the relationships to self, things, and others, as learning relationships.

#### 4. The intelligence medium as a learning medium

As noted by Sonnekus, as far as his intelligence is concerned, a child presents himself as a totality in different ways of being-in-the-world, and, more particularly, as ways of **lived experiencing** on pathic-affective and gnostic-cognitive levels. It is precisely his intelligence which enables a child to distance himself to a gnostic-cognitive level and design relationships (also learning relationships). Actualizing intelligence as a power to break through, thus, as a cognitive mode of being, is subject to a child's intentionality, as directedness, his **lived experiencing** on a gnostic-cognitive level, but backed up by pathic-affective **lived experiencing** as a readiness to participate; pathic flooding leads to restricting the gnostic-cognitive. He also indicates that language is a **medium** for actualizing intelligence, and it also is subject to the same pathic-affective and gnostic-cognitive **lived experiences**. In his going out to reality, a child is continually faced with problematic situations which he must break through by thinking and intelligence is precisely the power to do so. Hence, **impoverished language** essentially leads to **impoverished thinking** and, thus, his intelligence will not be adequately actualized. A child who manages his language efficiently, and who expresses in language the non-visible and the abstract will be able to actualize his intelligence effectively; otherwise, it will stagnate on a concrete level (i.e., on the level of pathic **lived experiencing**). On a cognitive level, a child is directly supported in breaking through his situation to the acquisition of language which, in its turn, serves as the foundation or primary precondition for continued thinking.

To study the learning relationships within which intelligence is actualized, use is made of intelligence exploratory media, such as the **New South African Individual Scale**,\* as compiled by the National Bureau of Educational and Social Research in 1964. Now the concern is to describe the modes of learning by which a child tries to break through his situations. The following is a descriptive analysis of the modes of **lived experiencing** (as modes of learning) with respect to each of the subtests:

**a) The verbal subtests (media)**

**i) Vocabulary.** The child is asked to indicate to which of four pictures on a card a word refers (there is a series of five cards). Here the concern is not only with the words in the child's vocabulary, but especially if he controls their meanings, and if this

---

\* This medium is similar in design and rationale to the various Wechsler tests of intelligence.

control is primarily on a pathic-affective or gnostic-cognitive level. The latter can be established by letting the child define a particular word, and by noting whether the language for such a definition is available. When his language moves on a pathic level, his definitions will tend to be rigid and concrete. Although most of the words appearing on this medium can be connected to a concrete object in the picture (e.g., "bed", "bus"), some items refer to the abstract, and are related to general concepts (e.g., "symbolic", "astronomy", "courteous", "illusion").

With respect to the Vocabulary medium, it is necessary to observe the level on which the child enters relationships with things and others by means of language. Some of the questions which should be answered are, e.g., does he control the concrete, but stagnate at an abstract level of **lived experiencing**? on what level is the language at his disposal, and is it actualized by him?

Moreover, within the learning relationships brought to the fore here, attention can be given to the modes of learning which are actualized. Regarding this medium, first, there is a strong appeal to **perceiving**, as a mode of learning, because ascribing a word to a picture requires that the object or situation be perceived correctly. Further, as **lived experiencing** the past in the present, **remembering** plays an important role. Also, **thinking** has its place here because a decision must be made concerning which picture best fits a particular word.

ii) **Comprehension.** Here ten questions referring to everyday situations, and which vary from easy to difficult, are presented to the child. As an aid or means, language is closely related to the thinking and formulating required. Once again, from the answers, it can be established on which level of **lived experiencing** the child is involved with things by means of language. To arrive at an abstract concept requires that the child **lived experience** on an abstract, cognitive level, but sometimes the insight is poor, thought is confused, and the modes of linguistic expression are meager in scope. To comprehend requires verbal **judgment, thought, and remembering** (especially remembering previous verbal **lived experiences**), thus, **lived experiencing** on a cognitive level.

iii) **Verbal reasoning.** The first two items of this "subtest" are analogies to be completed, and on the following eight items, the similarities between two things or matters must be indicated. Here,

it is especially **thinking**, which is required and, depending on the availability of language, it can be evaluated as moving on concrete (pathic) or abstract (gnostic-cognitive) levels. Abstract conceptualizing is the ideal, and the usual awarding of points is according to whether the answer is abstract, functional, concrete, or incorrect.

When one further analyzes the ten items, it appears that, on the first seven, the child is expected to categorize the named concrete pairs of things, such as shirt and coat, spade and pickax under concrete concepts (such as clothes, gardening tools). The words on the last three items are already abstract (i.e., honesty and loyalty, wealth and poverty), and they must be categorized under entirely abstract concepts, such as virtue, and financial status, respectively. That the child must indicate an abstract similarity to pass, demands an excellent availability of language and a **lived experiencing** on a cognitive, distanced level. Thus, a child whose learning world is predominantly **lived experienced** pathically, is mainly on a concrete level because the non-visible and abstract are not in his grasp.

**iv) Problems.** This "subtest" consists of fifteen arithmetic problems, of which the first nine are presented orally, and the remainder are on printed cards, which are placed before the child. Regarding the connection between language and arithmetic, Van der Stoep<sup>(9)</sup> points out that, "The entire transition from a concrete counting operation to an abstract arithmetic concept, is a matter of language because it makes available to the child schematized knowing and knowledge for the act of calculating. Thus, arithmetic requires an interpretation of the language-value of the system of arithmetic symbols. Thus, a good insight into and understanding of arithmetic problems is always guided by a good insight into and understanding of language."

On this "subtest", the child also is verbally confronted with a multiplicity of data characterizing the problem which he must unify through insight. The problems presented in the remaining items are not immediately obvious, so the child must discover and unravel them; this requires abstract reasoning. Here he is confronted with thought problems which are abstract, and which demand an anticipation of relations for which language must be continually available. All this requires a loosening and distancing from a pathic **e** **Lived experiencing** of the data, thus a total cognitive way of being.

v) **Memory.** A short "story" is read to the child, after which he is asked to repeat what he can remember. This involves **remembering** and **recalling**, as modes of learning. This subtest demands, first, correctly **remembering** the auditorily **perceived**, thus, a distanced **lived experiencing** of the learning material on a cognitive level. Second, it demands **recalling** (**lived experiencing** the past in the present), **thinking**, **schematizing**, and **ordering**--all of which are cognitive modes of being.

**b) The non-verbal subtests (media)**

i) **Pattern completion.** Partly finished patterns must be completed by the child using a pencil. There are four practice items on which help can be given, and twelve additional ones. The solutions to the practice items and to the following six are reasonably obvious, while the remaining six are more complicated. This subtest demands, first, correct visual **perception**, sustained **attending**, and **thinking** (leading to insight into the connections and relations). In addition, **conceptualizing** and **logical reasoning** (hence, a cognitive mode of being) about the visual data are required. Perseverations, as an inability to distance himself from the situation because of pathic **lived experiencing**, might appear here, so that the same method of solution is used with each item.

ii) **Block design.** This medium is like the Kohs blocks. Patterns are to be constructed with the blocks according to examples. The first three are practice items, with concrete demonstrations and assistance. The five remaining items each require constructing a design from a card.

This subtest requires that the child use his abilities to analyze and synthesize to solve problems of spatial relationships. Thus, he is required to see the pattern as a totality, analyze it, and plan how it can be synthesized. Here he must engage in **thinking** (as concept formation), and the global pattern must be broken up (analyzed), and then put together again (synthesized). This especially requires abstract thinking and concept formation as distanced, cognitive ways of being. Thus, a child who mainly **lived experiences** things pathically will have difficulty synthesizing the separate parts.

An analysis of these items reveals the following: The first three patterns are demonstrated **concretely**, while the fourth must be constructed from an example of the same size as the blocks. From the fifth item on, nine blocks must be used to construct a pattern, but now the (pictured) examples are much smaller than the resulting pattern (i.e., the blocks). Thus, each type of item requires a further distancing and lived experiencing on a gnostic level.

**iii) Absurdities.** A series of pictures (two examples and fifteen items) are placed before the child, and he is asked to indicate the absurdity (what is strange or amiss) which appears.

First, this subtest is concerned with the keenness of perceiving ordinary life situations, and with the ability to effectively see details against a global background. Second, the answers are given verbally, which requires that the language necessary for verbally expressing the absurdity be available. Thus, these items require putting aside a pathic **lived experiencing** of the situation by sensing, and they require a more cognitive **lived experiencing** by **perceiving**.

**iv) The formboard.** This consists of a board (12" x 10") with recesses into which 21 colored wooden blocks (17 triangles, 4 rectangles) are placed. The child must place the pieces into six other recessed forms of different colors (three triangles, two rectangles and one parallelogram). For each item, 3 or 4 pieces are fitted as quickly as possible into the recessed form with the corresponding color.

Qualitatively, this subtest provides a good opportunity for observing the child's approaches, and it also indicates the extent to which he proceeds by planning (cognitive activity) or merely by trial-and-error, i.e., by means of sensing (pathic dependence). Also, it is important to ascertain what he does when he stagnates. Does he remain pathically bound, and continually make the same error, or does he look for other solutions; in other words, does he finally achieve [i.e., break through to] an insightful solution (which is evidence of planning, thinking, etc. as cognitive ways of being)?

## 5. The Rorschach inkblot medium

The Rorschach is used especially to obtain a view of the structure of the pathic-affective and gnostic-cognitive moments of lived experiencing

within learning relationships. Within the current interpretation of this medium, there is a search for the different modes of learning, and for an indication of the learning world of the child with learning difficulties. There also is an attempt to interpret the symptomatic values, as well as phenomena such as refusals, and shock experiences in terms of the modes of learning within learning relationships.

a) The symptomatic values

i) The manner of approach

Whole (W) responses. W+ responses refer to the ability to combine, abstract, and generalize. According to Bohm,<sup>(10)</sup> this is an indication of systematic thinking, especially when W occurs with the clear perception of form (F+). The W+ response is an excellent indication of perceiving and thinking, as cognitive modes of learning. To establish the learning relationships within which these modes of learning will be actualized, the content is taken into consideration. However, when W+ responses are coupled with mainly popular (P) responses, this is an indication that the child is mainly attuned to grasping ordinary, everyday concepts. W+ responses which also include good original (O+) responses, indicate an extremely cognitive lived experiencing, which includes insights into connections and relations.

Confabulation W (DW, DdW). Bohm<sup>(11)</sup> views DW and DdW responses as "the tendency to confabulation and unreliability in the thinking and in recall." With respect to learning, this can point to thinking and remembering being restrained by pathic moments of lived experiencing. However, W+ responses point to a more constructive mode of thinking.

White-space responses (Figure-ground responses) (SW, WS). These responses are generally an indication of opposition and aggression and, thus, of lived experiencing on a pathic level. With an SW response, the opposition is against the self, which often takes the form of self-criticism or self-doubt and, thus, the child is thrown back on pathic lived experiencing, such that the gnostic-cognitive is seriously restrained. A WS response points to treating the outer world mainly with distrust. Here, perceiving a situation as it is (objectively on a cognitive level) is subjectively colored by sensing. With respect to perceiving, through pathically lived experiencing the background, the child is diverted and led away from the object and from the situation.

Detail responses (D). This is an indication of a grip on the immediate, the simple, and concrete and, therefore, it also often indicates pathic lived experiencing. To a certain extent, D responses also are an indication of social contact, thus, of entering learning relationships with others. On the

other hand, a striking number of Dd (unusual detail) responses, at the expense of D responses, point to a dulling of or avoiding contact with others. As such, a good number of Dd responses point to a pathic lived experiencing, which is of such a nature that the gnostic-cognitive is restrained by it. Oligophrenic details (Do), especially paired with poor form (F-) responses, point to low cognitive potential, while Do with good form (F+) responses point to anxiety, as a pathic flooding.

## ii) The determinants

Form responses (F+, F-). F+ responses are an indication of accurate perception, good directedness, and sustained attending, all lived experienced on a cognitive level. On the other hand, F- responses are an indication of sensing, as a pathic lived experience of things. This pathic lived experiencing restrains the ability to differentiate, integrate, and create.

Movement responses (M). M+ responses point to a preference for thinking over feeling, and to creative potential by means of fantasizing. As such, an M response points to gnostic-cognitive lived experiencing. As Bohm<sup>(12)</sup> views it, "Within this realm of the creative life, two tendencies are to be distinguished. One is a fantasy still based on reality, which is directed towards refashioning the outer world; the other is a fantasy alien to reality, an escape or flight from the world." The first can be seen as a mode of learning by means of fantasy, as an overstepping of reality and a distancing, not only from a pathic experiential world, but also from the tangible world, with the aim of creating a new one; the second is seen as an escape into a world which remains predominantly pathically colored. Of interest with respect to establishing learning relationships are flexor and extensor movement (kinesthetic) responses where the first is directed from and the second directed toward others. Viewed as a learning relationship, the latter then points to the child as not only readily learning from others but also as throwing himself open for assistance.

The M response points to a fantasizing which completely pushes reality aside, and it means the same as confabulation (see above).

Color responses (C). FC+ responses indicate that the affective is under intellectual control and refer to the pathic-affective as a preformed field for learning on a gnostic-cognitive level. It points to the pathic lived experiencing (security and stability) as a readiness to participate in the learning object on a cognitive level by venturing to what is more remote and distanced. This is favorable, not only for the modes of learning, but for entering a learning relationship with others.



FC- responses indicate that there is a search for relationships but, because of certain restraints, they are not yet actualized.

CF responses point to pathic-affective lability which, in turn, usually points to a gnostic lived reexperiencing which is restrained and flooded by the pathic. Here the gnostic might still break through sporadically, but a pure color response (C) shows that this no longer is possible because of a total preponderance of the pathic. The latter also points to a clear defect in distanced lived experiencing, as well as to an inability to enter relationships with others.

Shading responses (FY, YF, Y). These light-dark responses point to the child's central attunement. Thus, FY+ responses indicate an attunement under conscious control and, seen in the light of learning, as lived experiencing, they have the same positive value as FC+ responses. However, FY- responses point to a control which doesn't always succeed; in other words, there will be times when the pathic restrains the gnostic-cognitive.

FY responses are an indication that the child usually is flooded by the pathic (for example, a depressed mood, which usually follows feelings of anxiety), and the gnostic-cognitive will be restrained by this to a great degree. In contrast to this, Y responses point to a totally despondent mood and, thus, to an exclusively pathic lived experiencing, which will limit all cognitive modes of learning.

iii) Content (human, animal, things, etc.). The content of the responses give a good indication of where the modes of learning are directed and, thus, of the learning relationships within which they are actualized. The meanings of only the more general content responses are considered below:

Human (H) and human detail (Hd) responses refer to possible social contact and, thus, to the possibility that the child can enter learning relationships with others. These H and Hd responses, however, must be related to other responses, i.e., popular (P) and P%, FC, D, etc. (viewed later as sociability). Many H, with few Hd responses, point strongly to the ability to identify, a necessary aspect of entering a learning relationship with others.

Animal (A) and animal detail (Ad) responses point to what Bohm<sup>(13)</sup> calls "concrete-mindedness", especially when a large number appear. This is indicative of stereotypic thinking. He<sup>(14)</sup> elaborates further: "The lower the A percentage, the more mobile the thought processes; the higher the A percentage, the more inert they are." A large number of A responses, thus, is an indication of an extremely restrained gnostic-cognitive lived

experiencing. A large number of A responses also is a form of perseveration which, again, points to pathic lived experiencing, and an inability to break through the pathic and enter the gnostic-cognitive. Further, this can be an indication of lived experienced body-ness, by which the child is thrown back on his own body-ness in such a way that the cognitive, as distanced lived experiencing, simply cannot be attained.

Anatomic responses are, according to Bohm<sup>(15)</sup> connected with "a narcissistic investment of the body image." A large number of anatomic responses, thus, is a strong indication of lived experienced body-ness, as well as of perseveration, and it has the same meaning as A responses.

#### iv) Broad responses (P and O)

Popular responses (P). Bohm<sup>(16)</sup> views these responses as "the indicators of intellectual adjustment." An absence of P responses also is an indication of a disturbed contact with reality, which will have a negative effect on entering learning relationships with things and others.

Original responses (O+, O). O+ responses especially are an indication of fantasizing and thinking, as modes of learning, on a cognitive level. O- responses usually occur with poor perception of form (F-) and bizarre thinking and fantasizing. O- responses also point to sensing, as a pathic lived experiencing, which restrains thinking so that a meaningful cognitive lived experiencing cannot be reached.

#### b) Other phenomena

i) Number of responses and response time. These two phenomena must always be viewed in relation to each other, and to the other responses. A long response time, with few responses, generally will point to a pathic lived experiencing of the inkblots, and to weak gnostic-cognitive lived experienced intentionality, especially when occurring with poor whole responses (W-) and poor form perception (F-). Anxiety, color, and aggressive responses are further indications of pathic lived experiencing.

ii) Experience (type) - balance. The relationship between movement and color responses reflects the foundation of the child's relationships to his world and, thus, of the level on which he lived experiences his learning world. The different experience-balances or experience-types are briefly presented:

Introversive experiencing (e.g., 3M : 1/2C). This points to being directed to oneself, and when this occurs with many W+ and F+ responses, it is a good indication of productive and abstract thinking and fantasizing; at the same time, this is related to difficulties with reality. Viewed in the light of the modes of learning, this points to a gnostic-cognitive lived experience of things based on the affective, as a preformed field. However, this usually occurs when there are inadequate bonds with others, and this indicates that the child is not very comfortable in establishing learning relationships with others. The pronounced introversive experience-balance (e.g., 3M : 0C; 3M : 1/2C) is an indication that learning relationships with others appear to be very deficient.

Extratensive experiencing (e.g., 0 to 1M : 4 to 6C). Pathic-affective lability is in the foreground here, and this can have a very detrimental influence on the cognitive modes of learning, as well as on the learning relationships. Here the learning world, as experiential world, fluctuates continually between the pathic-affective and gnostic-cognitive. An egocentric extratensive experiencing points to a complete pathic lability, by which the gnostic-cognitive will be entirely curtailed.

Ambi-equal experiencing (e.g., 3M : 3C, 4M : 3 1/2C). This is an indication that the pathic-affective, and the gnostic-cognitive moments appear together in a balanced manner within different learning relationships and, consequently, the affective provides the required (stable) preformed field for the cognitive.

Coarctated and coarctative experiencing (e.g., 0M : 0C, or 0M : 1/2C, or 1M : 0C). This points to a negative, even apathetic lived experiencing learning relationships with things and others. Thus, within a learning relationship, such a child withdraws himself from others.

iii) Succession. Here attention is given to the regularity or irregularity of the modes of approach, i.e., to the sequence of

the different types of response. The following modes are differentiated:

Severe succession. This is when, for each inkblot, first W, then some D and after that Dd responses are given. First, this points to a degree of perseveration, as pathic lived experiencing of things, by which the gnostic-cognitive, as distanced lived experiencing is strongly restrained. Thus, the child will have difficulty in breaking out of his pathic lived experiences. On the other hand, this points to rigid and stereotypic thinking and, thus, the cognitive modes of learning are not fully actualized.

Ordered succession. This points to an ordered rather than rigid mode of thinking and as such, is a favorable factor for learning, especially for thinking. as a mode of learning and lived experiencing on a cognitive level.

Loose succession. This is an indication of the presence of neurotic aspects, as well as of a fluctuation in attending; consequently, it is mainly a pathic way of dealing with reality.

Inverted succession. Bohm<sup>(17)</sup> sees this as "a sign of an anxiety-laden cautiousness, a fear of being directly concerned with the major task." With respect to learning, this can be interpreted to mean that the venturing relationship and intentionality, as directed to the gnostic-cognitive, are impaired for lack of a distancing from pathic lived experience.

Also of importance are interferences in the succession, e.g., following shock experiences, which also point to a pathic flooding.

iv) Refusal, subject-object criticism, color- and dark-shock, avoidance. All of these phenomena point to sensing as pathic lived experiencing, by which gnostic-cognitive, distanced lived experiencing is restrained.

v) Sociability. Six factors which must be viewed together give an indication of the child's potential for social contact. Sociability is a very important factor within which learning relationships must be viewed, because it points to identification and a readiness to enter learning relationships with others.

The six factors are mentioned briefly:

P and P% are indications of contact with reality, and as such, also of the potential to enter learning relationships with others on a cognitive level.

FC+ is seen as a readiness to participate in reality on a cognitive level on the basis of an affective lived experience of security (pathic-affective preformed field).

A moderate number of D responses is representative of a sense of reality. This is especially an indication of entering learning relationships with things via others.

H and Hd responses point to a degree of kinship with others (adults and children). When this response appears sometimes, or not at all, this points to a disturbed contact and learning relationship with others. Satisfactory H and Hd responses, together with FC+ responses, point to a strong potential for identification, which is extremely important for learning relationships.

Experience (type) - balance also is an indication of contact with others because extratensive children are better able to enter relationships with others than are introvertives, provided the affective is not labile.

The distribution of M responses between flexor and extensor kinesthetic movement also is important for learning relationships. Extensor kinesthetic movements are seen as movements toward the world and others, while flexor kinesthetic movements are viewed as an indication of withdrawing from the world and others.

vi) Actualizing intelligence. The way in which intelligence is actualized can be fathomed by means of the Rorschach in terms of high F% paired with an ordered succession, a large number of W responses, which are qualitatively rich in content, a W, W-D, or W-D-Dd approach type, a low A% (approximately 20 to 25 percent), an O% of approximately 50 paired with some M responses (the latter is viewed as creative potential, especially by means of fantasizing). The number of H should be less than Hd and A more than Ad responses. All the above point to lived experiencing learning on a cognitive level. Further, a few FC responses are necessary, as representative of the affective, as a preformed field necessary for actualizing intelligence as a cognitive mode of being.

A low A% is an indication of suppleness in thinking, as a mode of learning, while a high A% points to an immobility in thinking because of anxiety and uncertainty, thus, because of pathic flooding. Generally, a high A% occurs with an absence of M (thus an absence

of fantasizing as a mode of learning), a decrease in P responses and a weakening of clear form; in other words, there is a predominance of sensing at the expense of perceiving, as modes of learning. O% is an indication of the quality of intelligence, especially since horizons are always broken through by means of actualizing intelligence.

vii) Variants of Intentionality<sup>(18)</sup>

aa) Modes of involvement. The concern here is with an analysis and interpretation of the nature and structure of the contact-relationship, viewed as a child-learning relationship. Kijm calls this the I-piece of work-society-relationship. As an adult-child-learning relationship, the adult-child relationship is actualized in different ways as the child becomes actively involved with the inkblots. These ways of active involvement, as manifestations of the child's intentionality, are:

Work behavior is characterized by adult and child being together, but in such a way that the child avoids an encounter with the adult and works to achieve. Such a child does not enter a learning relationship with the adult; indeed, such a relationship is rejected.

Play behavior originates as the adult joins (thus, is admitted into) the child's imaginary world, as a co-player, which leads to being together as equivalent persons. Here, the child plays in complete surrender and seriousness and, thus, is ready to enter a learning relationship with the adult to form a personal world as our world.

Musing is the condition where the child isolates himself and, thus, is alone in the situation of being-together because he surrenders himself to sensing the inkblots, which is a pathic lived experiencing of things.

Avoidance arises in the research situation when an encounter with the adult is avoided, the instructions are rejected, and the child refuses to respond. This points to a totally negative (learning) relationship with the adult.

bb) Variants Kijm mentions the following variants of intentionality which can be interpreted further in terms of learning modes and relationships:

Interpreting the cards as surface configurations means the child merely gives a description of everything which appears on the surface of the card, e.g., "Here is a card with inkblots on it." First, this points to sensing, as pathic lived experiencing; second, it indicates a limited gnostic-cognitive relationship and contact with things.

Interpreting the cards as pictures, in which case there is mention of an ordering which refers to reality. The child describes what he sees, and the forms of things; e.g., the form of an animal ("This is a horse."). Here is mention of perceiving as a cognitive mode of learning, which can occur by means of globalizing, analyzing, and synthesizing.

Physiognomic lived experiences are characterized by strong emotionality, thus a pathic lived experiencing by means of sensing. Hence, the child is strongly appealed to by the pathic, and his responses especially refer to lived experienced body-ness, e.g., anatomic responses (also, "This is an ugly face.").

Interpreting the cards as symbols, where the child, in his lived experiencing, ventures into his fantasy and dream world and expresses his inner life in the form of symbols. These responses also are affectively loaded and, thus, very pathically colored (e.g., "It looks like death.").

Interpreting the cards as random shapes. Here the child searches for what the inkblots can represent, and establishes an unreal world for himself by fantasizing; thus, he creates a new world on a distanced, cognitive level.

6. Apperceptive media.

The cards mentioned below are chosen especially to bring to the fore particular learning relationships of the child with learning difficulties. Holt<sup>(19)</sup> indicates the general use of these media as follows: "The most important kind of sentimentive content in the T.A.T., for most purposes, is the attitudes towards other persons. Here the subject's characteristic interpersonal relationships make their nature known." These cards not only lend themselves to bringing a child's relationships with others to the fore, but also his relationships with things, both viewed as learning relationships.

First, attention is given especially to how a child with learning difficulties enters relationships with things, but also to the nature of his (learning) relationships with other children in his primordial situation, both in and out of school. Second, the child's relationships with adults are studied. This involves relationships with parents in the primary educative situation, and with teachers in the second order educative situation, both of which give rise to pedagogical and to didactic-pedagogical situations. All these relationships (to things, other children, parents, teachers, other adults) are viewed particularly as learning relationships. Within them, there also is a search for the modes of learning as actualized on pathic-affective and gnostic-cognitive levels.

In summary, with the help of these (learning) exploratory media, the learning (experiential) world of the child with learning difficulties is investigated. To shed light on the above-mentioned learning relationships, pictures from several series are chosen which lend themselves to possibly uncovering the learning world established by the child with learning difficulties. In addition, some cards are selected for use with both boys and girls, while others are selected for use with one or the other gender. Below are brief descriptions of the pictures chosen, as well as some thoughts regarding the learning relationships (and actualized modes of learning) which might be brought to light by them:

a) Pictures for both boys and girls



i) T.A.T., 1 (Violin picture) (Series by H. A. Murray). A young boy is contemplating a violin which rests on a table in front of him. This picture lends itself well to uncovering a learning relationship with things and others within which certain modes of learning, such as perceiving, thinking, fantasizing can be actualized.

ii) T.A.T., 5. A middle-aged woman is standing on the threshold of a half-opened door looking into a room. Here the learning relationship between child and parent can be brought to the fore, and the modes of learning within the primary educative situation can be viewed.

iii) Michigan, No. 3 (Series by Michigan Department of Mental Health). A class situation at school with a woman teacher and several pupils. One pupil is standing, apparently with a book in his hand, while the others are sitting and looking at him. Possible learning relationships which can be brought to the fore within a second order educative situation are those between the child and women teachers, between the child and other pupils, and between the child and the learning material (things). Within these learning relationships, different modes of learning, such as thinking and remembering can be actualized.

iv) Michigan, No. 8B. A boy looks, gazes, with hand under chin. He is alone, and the picture can refer to learning relationships with things, as well as to thinking (meditating), imagining, fantasizing, etc.

v) Michigan, No. 8G. A schoolgirl sits at her desk in class with her head supported by her hand. A boy sits in front of her and is only partly visible. Possible learning relationships of importance are those between the child and the learning material (things) and between the child and other children. Also, relationship to teachers possibly can come to the fore within which diverse modes of learning can be actualized.

vi) Michigan, No. 11G. A schoolgirl finds herself at her desk in an empty classroom. She sits with a pencil in her hand; a book lies in front of her, but she isn't writing. Possibly the most important learning relationship which can be present here is that between the child and things. This is because the teacher and other pupils are

absent. Still, it is possible that other learning relationships might arise.

vii) S.A.P.A.T., IIBG. (Series by Nel and Pelsler). Two boys in school uniforms on the way to school can be seen in the background. An adult (teacher?) approaches the school from another direction. Again, a study can be made of the learning relationships between child and teacher, as well as between the child and other children within the school situation.

viii) Boat picture. (Columbus series by Langeveld). A boy is standing with his hands behind his back. In front of him is a little boat moored on the shore of a stream. This points to a child in a primordial situation in a learning relationship with things within which an exemplary attitude might especially come to the fore.

ix) The four-picture medium. (By D. J. van Lennep). According to van Lennep<sup>(20)</sup>, this medium deals with the following relationships:

- aa) Being together with one other person
- bb) Being personally alone, thus, in relation to oneself
- cc) Being socially alone
- dd) Being together with many others in a group.

Van Lennep sees the potential of this medium as follows: "It is chiefly the subject's attitude towards life, emerging from the protocol, that may be interpreted."<sup>(21)</sup> This medium lends itself well to bringing to light possible learning relationships with things and others, as well as the different modes of learning which can be actualized within these relationships.

With respect to the above, it also is important to notice the different themes which might come to the fore (such as friendship, work, cooperation, aggression, submission), the beginning of the story (e.g., is the central figure connected with a group, speaking with a friend, isolated, or dreaming of lost chances), the end of the story (where the child's relationship to the immediate future can come to light), the situations or places where the events occur, the sequence of the pictures, the way the four pictures are integrated into one story, the nature and availability of language, etc.

b) Pictures for girls

i) T.A.T., 2. Country scene: in the foreground is a young woman with books in her hand; in the background is a man working in the field and an older woman is looking on. This picture can lend itself to shedding light on the learning relationship between child and parents within which certain modes of learning might come to the fore.

ii) Michigan, No. 10G. An adult (father?) and girl are sitting in a room. The adult is looking at the girl, but she is looking at the book or sheet of paper on her lap. Possibly a good study can be made here of the relationship between the child and parents (as a learning relationship) as well as between the child and things. Here the pedagogical can strongly enter the foreground.

iii) Symonds, A5. (Series by P. M. Symonds). A girl sits alone in a field with some books lying beside her. The fact that she is alone can point to learning relationships between child and things, within which certain modes of learning such as pondering (thinking) and fantasizing are actualized.

iv) Symonds, B7. A girl (apparently in evening gown) is ascending a flight of stairs in the house. An adult woman (mother?) can be seen faintly at the top of the flight of stairs. According to a clock against the wall, it is about 3:25 a.m. Here one can try to deal with the primary educative situation which also can be constituted as a learning relationship. The normative ought to clearly come to the fore here.

v) Picture of a girl. (Constructed by Sonnekus, unpublished). A girl is lying on her side with her head supported in her left hand. Possible learning relationships which can be uncovered here are those between child and things, possibly also between child and adults, within which modes of learning such as thinking, fantasizing, recalling (as experiencing the past in the present) might appear.

c) Pictures for boys

i) Michigan, No. 4B. An adult (father?) is sitting and looking at a boy standing with head bowed. This points more to learning relationships within the primary educative situation, but also the relationships between child and things and between child and teachers might arise. The picture might also lend itself to studying the normative.

ii) Michigan, No. 10B. An adult (principal?) stands behind his desk and looks at a boy standing beside the desk. Possible learning relationships that might come to the fore point to the second order educative situation and particularly to the child-teacher relationships within which diverse modes of learning can be actualized.

iii) Symonds, A1. A boy with a bag in his hand stands between tall buildings. Here learning relationships between the child and things (and possibly between the child and parents or teachers) can come to the fore and within which diverse modes of learning can appear.

iv) Symonds, A6. A boy enters a room in which a reading lamp burns on a piece of furniture. An adult (mother?) is vaguely visible in the darkness of the background. Once again, diverse learning relationships within the primary educative situation can be brought to light.

v) Symonds, B6. An untidy boy is sitting on a chair with hands in pockets and legs outstretched. He is alone in the room. This picture especially can lend itself to illuminating learning relationships

between child and things. Even relationships with adults can arise here within which the modes of learning can be actualized.

vi) Boy on a hill. (Columbus by Langeveld). A boy lies against a tree on a hill in a field. A house is seen in the distance. This points to a child in a primordial situation where he is alone with things and in which diverse modes of learning (especially thinking and fantasizing) can be actualized.

In all the pictures mentioned above, the child is expected to tell a story, and this itself puts certain demands on him, and also gives a further indication of his learning world as an experiential world. To tell a story about each picture requires, in the first place, accurate perception of the depicted situation, thus, a cognitive way of being. This can correlate with a high F% on the Rorschach.

In addition, constructing a story requires a further distancing from mere perceiving and has to do with fantasizing of which Holt<sup>(22)</sup> says: "Without creative imagination, ingenious and original stories cannot be written." He continues further: "... something of what constitutes a 'good W' in the Rorschach test is required to integrate what is given in the picture into a consistent story." Thus, it requires schematizing, systematizing, and integrating into a meaningful whole; consequently, thinking is required for coming to a synthesis of reality. Finally, verbalizing a story requires the availability of language as an expression of thought, all of which are cognitive ways of being and which require that the child distance himself from his pathic experiencing as a sensing of the situation depicted by the pictures.

## 7. Incomplete sentences

This medium is constructed with reference to the Incomplete Sentence Test of Rotter. As with other media, this one is used to shed light on the learning (experiential) world of the child with

learning difficulties. For this reason, the sentences are constructed to illuminate the modes of learning within the learning relationships. With this medium, an attempt is made to acquire a view of the child's learning relationships with things and with other children within and outside the school situation, and the relationships between child and adult, both within the primary pedagogical situation of the family and within the second order didactic-pedagogical situation of the school.

Since one's own body-ness is the center and point of departure for all modes of learning, some sentences are written to shed light on the relationship of the child to his own body-ness, i.e., his relationship to himself. Within these learning relationships, we must gain an insight into the different modes of learning, as actualized on a pathic-affective and gnostic-cognitive level.

As previously indicated, the media described above are used to obtain an orthopedagogic (learning) image of the child with learning difficulties. This evaluation is supplemented further using specific orthodidactic media (language and/or arithmetic media) to attain an orthodidactic image of the child. The result of this orthopedagogic-orthodidactic evaluation is a total image of the child's learning world. The following two chapters are concerned with evaluating and assisting pupils with language and with arithmetic problems, respectively.

## REFERENCES

1. See: a) Nel. B. F. and Sonnekus, M. C. H.: Psigiese beelde van kinders met leermoeilikhede, Opvoedkunde Studies, UP, No. 33, 1962.
- b) Kotze, J. M. A.: Affektiewe momente in die

gemoedsvorming van kinders soos blyk uit hulle  
persoonsbeelde, *Opvoedkunde Studies*, UP, No, 52, 1966.

c) Kock, J. C.: 'n Pedagogiese ondersoek na die  
persoonsbeelde van epileptiese kinders, *Opvoedkunde  
Studies*, UP, No. 45, 1965.

2. Van Gelder, L.: *Ontsporing en correctie*, op. cit., p. 141.

3. Ibid.: op. cit., p. 25.

4. Nel, B. F. and Esterhuysen, C. H.: Die tekening van die menslike  
figuur as 'n "prjeksie"- tegniek, *Opvoedkunde Studies*, UP,  
No. 22, 1958.

5. Ibid.: op. cit., p. 25.

6. Kinget, G. M.: *The drawing completion test*, Grune and Stratton,  
New York, 1952.

7. Kock, C.: *The tree test*, Hans Huber, Bern, 1952.

8. Ibid.: op. cit., p. 8.

9. Van der Stoep, F.: *Algemene taal- en leer-probleme by  
ondersoeke na probleme in rekene*, op. cit., p. 5.

10. Bohm, E.: *Rorschach test diagnosis*, Grune and Stratton,  
New York, 1958, p. 43.

11. Ibid.: op. cit., p. 44.

12. Ibid., op. cit., p. 49.

13. Ibid., op. cit., p. 80.

14. Ibid., op. cit., p. 81.
15. Ibid., op. cit., p. 53.
16. Ibid., op. cit., p. 127.
17. Ibid., op. cit., p. 82.
18. Kijm, J. M.: De varianten deer intensionaliteit bij de  
Rorschach-test, Dekker and Van de Vegt, Nijmegen, 1951.
19. Holt, R. R.: The Thematic Apperception Test, in Anderson, G. L.:  
Projective Techniques, Prentice-Hall, Englewood Cliffs,  
1956, p. 197.
20. Van Lennep, D. J.: The Four Picture Test, in Anderson and  
Anderson, op. cit., p. 158.
21. Ibid., op. cit., p. 179.
22. Holt, R. R., op. cit., p. 199.