CHAPTER V

THE PRACTICE OF ORTHOPEDAGOGIC-ORTHODIDACTIC EVALUATION

J. M. A. Kotze

1. General introduction

In the previous part of this book, the main 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, namely, orthodidactic action or practice which, of course, includes evaluating and assisting a child with learning difficulties. As explicated in Chapter II, this puts the orthodidactician in a position 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.

81

^{*} See footnotes in Chapter I regarding the translation of

[&]quot;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 will not be considered further here. Rather, an additional explication is given here of using possible procedures to obtain an orthopedagogic image (learning image as image of 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 that 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. The particulars are not repeated here, although it is obvious that this research takes place against the background of the child's total situation.

The particular 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 particular modes of actualization by which the child with learning difficulties announces himself within these learning relationships in the learning situation.

Thus, it is clear that the result 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 briefly the different learning media that are going to be used.

b. Description of the learning media

1. Learning historicity or image of the learning past as revealed by an historicity-image

For a human being (a child), no deed, word or expression comes from the blue, and to understand a child he always has to 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 into 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 also always point to the future. Consequently, use is made of a hetero- as well as an auto-historicity that 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 have to be taken into account (e.g., physical, affective and normative aspects together with the child's acquisition of language). Then, a thorough study has to be made of the nature of the primary educative situation (namely, 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 secondary pedagogic situation, aspects such as school readiness, progress, teacher-child relationships need to 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 hiss 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 worlds, as experiential world, which the child has actualized in the course of 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⁽²⁾

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 of 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 of the learning relationship between child and things (blocks) is first taken into account. 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 **experiencing** by means of sensing. On the other hand, if he is able to arrive at an adequate structuring of the building activity by planning and insight, this is evidence of a cognitive **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, (3) 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 **experiencing** can be indicated. Also, this task gives rise to a work-level that 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 only can 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⁽⁴⁾ According to Nel and Esterhuysen,⁽⁵⁾ "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 is a reflection of 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 bodiliness can be attended to by means of his drawing of a human figure, and, especially where a child with learning difficulties is concerned, there has to be a search for possible indications of **experienced** bodiliness. If there is such an indication, it can be assumed that he is being thrown back to a pathic **experiencing** of his own bodiliness that then can severely impede and restrict his cognitive relationship to things and others.

Further, by interpreting particular phenomena within the drawing, one can get an indication of pathic-affective aspects of **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 **experience** of security. Thus, this allows one to view whether the pathic-affective **experiences**, which are preconditions for **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 needs to 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)⁽⁶⁾ 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 **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 into learning relationships with others. A lot of animal life without human life has the same meaning here as does its occurrence on the Rorschach, namely, 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 take into account the **physiognomy** expressed in the drawing such as gender, age and especially facial and bodily expressions. The latter is a good indication of whether or not 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 experienced bodiliness.

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 **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

^{*} **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).

meanings. However, exclusively drawing objects is bad because it indicates a one-sided relationship to things.

Further, the Wartegg-drawing medium gives a good indication of actualizing fantasizing as a distanced, remote, cognitive **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, namely, 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 **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 on the basis of an affective **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** that 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⁽⁷⁾. 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 particular 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 **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 **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 points more to a pathic **experiencing**. Koch⁽⁸⁾ 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 needs to 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 **experiencing** on pathic-affective and gnostic-cognitive levels. It is precisely his intelligence that 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 intentional directedness, his **experiencing** on a gnostic-cognitive level but backed up by pathicaffective **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 **experiences.** In his going out to reality, a child continually is faced with problematic situations that he has to break through by thinking and intelligence is precisely the power to do so. Consequently, **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 **experiencing**). On a cognitive level, a child is directly supported in breaking through his situation to the acquisition of language that, in its turn serves as the foundation or primary precondition for continued thinking.

In order 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 particular situations. The following is a descriptive analysis of the modes of **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

*

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

vocabulary but especially if he controls their meanings and if this 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 that should be answered are, e.g., does he control the concrete but stagnate at an abstract level of **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 particular picture requires that the object or situation be perceived correctly. Further, as **experiencing** the past in the present, **remembering** plays an important role. Also, **thinking** has its place here because a decision has to be made concerning which word best fits a particular picture.

- 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 experiencing the child is involved with things by means of language. To arrive at an abstract concept requires that the child 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 experiences), thus, 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 have to be indicated. Here, it is especially **thinking** that 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 have to be categorized under entirely abstract concepts such as virtue and financial status, respectively. That the child has to indicate an abstract similarity to pass demands an excellent availability of language and an **experiencing** on a cognitive, distanced level. Consequently, a child whose learning world is predominantly **experienced** pathically, chiefly will be 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⁽⁹⁾ 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. Consequently, a good insight into and understanding of arithmetic problems always is 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 has to unify through insight. The problems presented in the remaining items are not immediately obvious, so the child has to discover and unravel them; this requires abstract reasoning. Here he is confronted with thought problems which clearly are abstract and which demand an anticipation of relations for which language has to be continually available. All of this requires a loosening and

distancing from a pathic **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 experiencing of the learning material on a cognitive level. Second, it demands recalling (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 have to 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, conceptualization 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 experiencing, might appear here so that the same method of solution is used with each item.
- **ii) Block design.** This medium is similar to 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 whole, analyze it and plan how it can be synthesized. Here he needs to engage in **thinking** (as concept formation), and the global pattern has to be broken up (analyzed) and then put together again (synthesized). This especially requires abstract thinking and concept formation as distanced, cognitive ways of being. Consequently, a child who mainly **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 has to be constructed from an example of the same size as the blocks. From the fifth item on, nine blocks have to 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) that 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 **experiencing** of the situation by sensing, and they require a more cognitive **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 has to 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, that is, 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 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 aspects of **experiencing** within particular 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 particular 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⁽¹⁰⁾, 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 within which learning relationships 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 **experiencing** which includes insights into connections and relations.

Confabulation W (DW, DdW). Bohm⁽¹¹⁾ 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 aspects of **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 experiencing on a pathic level. With an SW response, the opposition is against the self that often takes the form of self-criticism or self-doubt, and thus the child is thrown back on pathic 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 **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 **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 **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 **experienced** on a cognitive level. On the other hand, F- responses are an indication of sensing as a pathic **experience** of things. This pathic **experiencing** restrains the ability to differentiate, integrate and create.

Movement responses (M). M+ responses point to a particular preference for thinking over feeling and to creative potential by means of fantasizing. As such, an M response points to gnosticcognitive **experiencing**. As Bohm⁽¹²⁾ 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 that still 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 (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 also 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 that, in turn, usually points to a gnostic **experiencing** that 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 **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 light of learning as **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 **experiencing** that will limit all cognitive modes of learning.

iii) Content (human, animal, things, etc.). The content of

the responses gives 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, have to be related to other responses, namely, 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⁽¹³⁾ calls "concrete-mindedness", especially when a large number appear. This is indicative of stereotypic thinking. He⁽¹⁴⁾ 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 experiencing. A large number of A responses also is a form of perseveration which, again, points to pathic experiencing and an inability to break through the pathic and enter the gnostic-cognitive. Further, this can be an indication of experienced bodiliness by which the child is thrown back on his own bodiliness in such a way that the cognitive, as distanced experiencing, simply cannot be attained.

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

iv) Broad responses (P and O)

Popular responses (**P**). Bohm⁽¹⁶⁾ views these responses as "the indicators of intellectual adjustment." An absence of **P** responses also is an indication of a disturbed contact with reality that 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 **experiencing** that restrains thinking so that a meaningful cognitive **experiencing** cannot be reached.

b) Other phenomena

- i) Number of responses and response time. These two phenomena always have to 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 experiencing of the inkblots and to weak gnostic-cognitive 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 experiencing.
- ii) Experience (type) balance. The relationship between movement and color responses is a reflection of the foundation of the child's relationships to his world and, thus, of the level on which he **experiences** his learning world. The different experience-balances or experience-types are briefly presented below:

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 light of the modes of learning, this points to a gnostic-cognitive **experience** of things on the basis of 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). Pathicaffective 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 pathicaffective 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 aspects 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, experiencing of 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, that is, 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 **experiencing** of things by which the gnostic-cognitive, as distanced **experiencing** is strongly restrained. Thus, the child will have difficulty in breaking out of his pathic **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 **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⁽¹⁷⁾ 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 **experiencing**.

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 darkshock, avoidance. All of these phenomena point to sensing as pathic experiencing by which gnostic-cognitive, distanced experiencing is restrained.
- v) Sociability. Six factors that have to be viewed together give an indication of the child's potential for social contact. Sociability is a very important factor within which learning relationships need to be viewed because it points to identification and a readiness to enter into 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 experience of security (pathicaffective preformed field).

A moderate number of **D** responses is representative of a sense of reality. This is especially an indication of entering into 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 that 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 into 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 of the above point to 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 as a result 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 always are broken through by means of actualizing intelligence.

vii) Variants of Intentionality (18)

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 **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 that 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 that appears on the surface of the card, e.g., "Here is a card with inkblots on it." First, this points to sensing as pathic **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 that 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 that can occur by means of globalizing, analyzing and synthesizing.

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

Interpreting the cards as symbols, where the child, in his **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 irreal world for himself by fantasizing; thus, he creates a new world on a distanced, cognitive level.

6. Apperceptive media.

The cards mentioned below were chosen especially to bring to the fore **particular learning relationships** of the child with learning difficulties. Holt⁽¹⁹⁾ 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 secondary educative situation, both of which give rise to pedagogic and to didactic-pedagogic situations. All of 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 were chosen which lend themselves to possibly uncovering the learning world established by the child with learning difficulties. In addition, some cards were selected for use with both boys and girls while others were 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) that 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 that 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 a number of pupils. One pupil is standing, apparently with a book in his hand, while the others are sitting and looking at him. Possible learning relationships that can be brought to the fore within a secondary 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, his 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., IIIBG. (Series by Nel and Pelser). 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

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⁽²⁰⁾, 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." This medium lends itself well to bringing to light possible learning relationships with things and others, as well as the different modes of learning that 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 vents 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 pedagogic 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 that 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 secondary 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 of the pictures mentioned above, the child is expected to tell a story, and this in itself clearly 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 $\operatorname{Holt}^{(22)}$ 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 was 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 were 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 of the school situation, and the relationships between child and adult, both within the primary pedagogic situation of the family and within the secondary didactic-pedagogic situation of the school.

Since one's own bodiliness is the center and point of departure for all modes of learning, some sentences were written to shed light on the relationship of the child to his own bodiliness, namely, his relationship to himself. Within these learning relationships, we need to 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 by the use of 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 intensionalitieit 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.