

CHAPTER V*

LEARNING AND PERSONAL ACTUALIZATION

1. INTRODUCTION

In the four previous chapters, it is shown how psychopedagogics proceeds from its point of departure in the **reality of educating** and establishes a scientific **structure** in terms of which a child's becoming adult or **personal actualization** in an educative situation is understood. It is noted that personal actualization occurs because a child is **accompanied** in this by adults **and** because of his unique participation through **self-actualization** by **giving meaning**. With respect to a child's unique participation in his becoming adult, it also is indicted that he gives meaning through learning and thus through actualizing his psychic life. Actualizing his psychic life has been discussed fully and because of its meaningful and inseparable relationship to learning, a brief exposition of the latter has already been given.

Since learning plays such an important role in a child's personal actualization as well as in the school situation (see Chapter VI), a more complete reflection on learning is required.

Essentially, learning is the search for the sense and meaning of the contents of reality and it also is a child's personal exploration, conquest and mastery of reality by attributing sense and meaning to it (Sonnekus and Ferreira, 1987, p 99 and Landman, 1983, p 17). This is accomplished by means of a number of **different modes of learning**. However, actualizing these modes is a totality-act in the sense that they are inseparable and a child-as-totality is involved. Consequently, learning is not merely an isolated "function" of a person but rather it is a way of being human.

2. A PSYCHOPEDAGOGIC PERSPECTIVE ON LEARNING

The following discussion of learning is based primarily on Sonnekus and Ferreira (1987) and Sonnekus (1985). According to these authors, the ways in which learning occurs are differentiated into

* The modes of learning were edited slightly and partially rewritten by GDY.

affective (sustaining or accompanying) and **cognitive** (knowing) modes as follows:

* **Affective (sustaining or accompanying) modes:**

** sensing

** attending

* **Cognitive (knowing) modes:**

** perceiving

** thinking

** imagining and fantasizing

** remembering

2.1 Affective (sustaining) modes of learning

2.1.1 Sensing

What is the function or meaning of sensing in human learning? Sensing is the beginning or onset of learning in that it precedes all of the other modes. It is primarily **emotional** in nature and manifests itself as a child's "attunement" to the world in and through his (bodily) sensing of it. This attunement is strongly supported by the seeing-, hearing-, touching-, tasting- and smelling-images that he experiences (Basson et al., 1983, p 34). Thus, sensing is a child's **first becoming aware of and being involved with** particular contents of reality and it provides the possibility for him to encounter this reality and take the initiative to learn it (Sonnekus, 1973, p 76). However, he cannot learn to know or understand reality only by sensing it. This is because sensing essentially is **fore-knowing**; that is, via sensing, a child only can have a vague, inarticulate and mostly affective "sense" (i.e., feeling) of what the contents are about. On this level of learning, explicit (cognitive) knowing or understanding is not yet possible but rather it still is intuitive (felt), vague, diffuse and unstructured (Sonnekus, 1973, p 109) and a child only has a global notion of the contents (Basson et al., 1983, p 34). This implies that, through sensing, he cannot yet determine **what** the nature of the contents are but, at most, he can experience that there **are** contents (Sonnekus, 1973, pp 130-131).

This beginning or onset of learning can arise in two ways. One, it can begin because of an **intention to learn** (Sonnekus and Ferreira, 1987, p 86) when, e.g., a child is motivated **purposefully**

to **search** for particular contents. Two, it can begin more **incidentally** on the basis of the **valence-values** (e.g., attraction or repulsion) of the learning materials (Sonnekus and Ferreira, 1987, p 89) or even as a consequence of a **physical phenomenon** such as a light, a sound or a smell rousing the learners sensing (Nel, Sonnekus and Garbers, 1965, p 182).

On an emotional level, sensing awakens feelings such as **wonder**, **excitement**, **interest**, and **curiosity** but feelings such as **shock**, **fear**, **anxiety** and **tension** also are possible. Hence, it is evident that sensing largely determines the **quality** (e.g., **stability**--rest, certainty, security-- or **lability**--anxiety, tension, uncertainty) and **level** (e.g., **pathic** or **affective**) of a child's emotional life at any given moment. Thus, even though, in itself, sensing does not lead to knowing, it influences a child's emotional life which, in turn, influences whether he is willing to **initiate** and **sustain** the further course of learning that **guides** and **accompanies** (i.e., sustains) the cognitive modes of learning until the desired knowledge is achieved. In short, those instances of sensing that awaken a feeling of **affective stability** can promote the further course of learning and elevate its quality. However, when sensing is characterized as **pathically labile**, anxiety, tension and uncertainty are present which can block and impede the course of effective learning.

Van Dyk (1973, p 134) indicates that the positive emotional flavor of sensing is best typified as **wondering**. The amount and quality of wondering awakened in a child is an indication of how effective his learning will be. The quality of wonder is related directly to sensing a matter as something, e.g., unexpected, unknown, or different (Van Dyk, 1973, p 134). Thus, sensing is the basis for cognitive learning to arise because, in wondering, a child discovers his ignorance and this initiates (motivates) his desire to **want to know** or to search for knowledge. In agreement, Straus (1963, p 316) says, "The first step [to] knowledge is the awareness of not knowing". [As will be discussed later, and explicitly in Chapter VI, in a lesson situation wondering can be purposefully initiated by a good question or a challenging problem]. This **wanting to know** sustains and guides the cognitive modes of learning until the contents are unlocked by a teacher and made accessible to a child in such a way that he experiences **satisfaction** with the meaning **he attributes** to those contents (Sonnekus, 1973, p 77). As he gradually acquires greater control of and insight into the lesson contents, he experiences even more affective stability (and

confidence) and this promotes the further course of his cognitive learning.

Consequently, sensing is a pre-condition for learning to occur. To repeat, sensing is an accompanying or sustaining mode of learning since, on the one hand, it provides the **emotional base** on which all learning rests and, on the other hand, it **sustains** and "**directs**" the cognitive modes of learning until the desired knowledge is achieved.

From the above, the **functions** (sometimes called **modalities**) of sensing in human learning are: it initiates all learning and it is the foundation of the other modes of learning (and thus always sustains or accompanies cognitive learning); qualitatively, sensing is affective, pre-cognitive and subjective in nature.

2.1.2 Attending

The emotional foundation provided by sensing influences the degree to which a child **wants** (is willing) **to learn**. This degree of willingness then modifies whether or not he will **attend** further to the contents. If he does attend further, his **becoming aware** and **concerned involvement** via sensing lead to him **remaining actively aware and involved** with the contents (Sonnekus, 1973, p 80). Since attending is preceded by a definite choice, it is an activity of deliberately **remaining by** the contents (Van Niekerk, 1971, p 21). From this, it should be clear that a stable sensing promotes a child's willingness to know and this motivates him to attend. If he is willing or motivated to attend, there arises **an intention to learn** or a being **directed** to the specific learning contents. The original learning intention, on the level of sensing, now is **sharpened** because of a child's willingness to master the contents. Attending, as a mode of **willing**, takes up and makes explicit the "direction" implicit in the original sensing. For this reason, attending does not occur automatically but always is preceded by a willful choice. Consequently, it is not a **reaction** or **response** to an external **stimulus**. By attending, a child not only directs himself to the contents but, in doing so, he also **unlocks or opens** himself to those contents in order to make them his own by learning them and thus incorporating them into his possessed experience.

Of course, **attending cannot be actualized apart from the other modes of learning** because the moment a child begins to attend to what he is sensing, all of the cognitive modes of learning become **directed** to those contents. Thus, in attending, something specific becomes a child's **point of focus** and surrounding data temporarily recede into the background (Sonnekus and Ferreira, 1987, p 114). In other words, attending is a **selective** activity because a child chooses to "focus" on something in his total situation and, consequently, all other particulars are left "out of focus". Because all of the modes of learning are directed to what is being attended to, he is able to learn it. In this connection, Behr (1980, p 65) says, "The act of attention requires the selection or singling out of certain stimuli in the environment, to the exclusion of the others. As a result of such selection, the situation...becomes clearer in definition or contour". Attending means that from the total data in a particular situation only specific contents are **selected, delimited** and placed in the **focal point** of his involvement in the situation. That which is selected in this way now becomes the central point of his interest (Sonnekus and Ferreira, 1987, p 114) and, thus, is at his disposal for further exploration by means of the cognitive modes of learning. "Attentive performance means a convergence instead of a scattering of mental energies" (Behr, 1980, p 406). In this way it now is possible for a child to really learn to know the learning contents since moments such as **identifying, delimiting, analyzing, comparing, ordering, and integrating** are put into play (Sonnekus and Ferreira, 1987, p 114). Although attending alone cannot be viewed as learning, it is the **means** by which a child knowingly participates in the contents and ultimately learns them.

The cognitive modes of learning, namely, **perceiving, thinking, imagining and fantasizing, and remembering** all are actualized and sustained by **attending** (as well as **sensing**).

Attending means that a child **remains aware** of the contents and this allows him to stay cognitively involved with them. However, with diminished attending there also is a reduction in the quality of a child's cognitive modes of learning (Sonnekus and Ferreira, 1987, p 113).

In summary, the **functions** (or **modalities**) of attending are: it is a **sharpened intention** to learn; it is **selective** of content; it, along

with sensing, **supports and sustains** the cognitive modes of learning.

2.1.3 Actualizing the affective modes of learning in the classroom

As affective or sustaining modes of learning, sensing and attending are the **foundation** for an adequate course of cognitive learning. This means that these **affective** modes of learning are basic to **effective** learning.

For the **effective** actualization of learning in the classroom, it is **necessary** that a teacher makes sure that sensing and attending are adequately actualized. The question, however, is how?

Since **wondering** is an essential (Van Dyk, 1973, p 134) characteristic of sensing, a teacher should try to point out to a child what, e.g., is strange, odd, different, surprising about the contents. A child can be **stimulated** by this and, by wondering, a stabilized emotional stratum for adequate cognitive learning is created (Van Dyk, 1973, p 135).

In this way, a teacher awakens a child's **willingness** to learn and he also guides him to an intensification of his intention to learn. By **pointing out**, e.g., the strange and the odd, a teacher has already **selected** certain learning contents for a child. Consequently, he guides and facilitates a child's selection of content and he tries to insure that his attending is directed to the **relevant** contents. In other words, for adequately actualizing cognitive learning, a teacher, in designing his lesson, needs to take into account the **functions** (modalities) fulfilled by the particular modes of learning that he wants to be actualized.

2.2 Cognitive (knowing) modes of learning

Although the particular nature of each of the cognitive modes of learning are considered next, it should be remembered that the course of learning is a unity and that the individual modes of learning and their modalities are intertwined.

2.2.1 Perceiving

Clearly, the emotional impact that sensing has on a child is extremely important since it influences his **willingness to attend** which in turn allows him to become involved with the learning contents on a **cognitive** level. Here there is a move from a subjective and preponderantly emotional sensing of the contents to a more **objective** and **distanced perceiving** of them. (Sonnekus and Ferreira, 1987, p 115). Indeed, a stable sensing and a sharpened attending are preconditions for adequate or effective perceiving. After the more **casual** first becoming aware of the contents via sensing, that often is a consequence of **external factors**, perceiving is a **purposive** activity where a child **directs himself** to the contents of reality that speak to him.

The initially vague nature of the learning object experienced by seeing, touching, smelling, hearing and tasting on the level of **sensing** is now, via **attending**, experienced by looking, feeling, sniffing, listening and savoring on the more active, explicit (cognitive) level of perceiving.

In perceiving, real knowledge can be attained since now **meaning** is given to the contents of reality on a **cognitive** or knowing level. Behr (1980, p 61) says that perceiving allows a person to give **meaning** and to **interpret**. According to Ferreira (Sonnekus and Ferreira, 1987, p 115), and in agreement with Straus (1963), perceiving, in comparison, with sensing establishes a more distanced and objective relationship to reality. That is, perceiving is directed to and grasps reality "as a moment in a universal, general chain of events" (p 317). It involves the **universal** and the **objective** as they are found, e.g., in the matter, the learning material, the object itself. [As we know from Goldstein's (1940) classic research, grasping is to sensing as pointing is to perceiving; this analogy is understood as follows: grasping constitutes a subjective, concrete, immediate field of "sense" while pointing gives rise to and requires an abstract, cognitive, objective field of meaning. To paraphrase Sonnekus (1974), although pointing is pathically (affectively) rooted in grasping, in fact, it is a cognitive act. The essential difference between grasping and pointing is the objective space required to point that is constituted by attending. Temporally, grasping has to do with the present and pointing with the future. That is, I can grasp what I want that is present but I only can point to what I want to get. But let's move on]. The vagueness, lack of clarity and the lack of structure still existing in the **sensed** contents are reduced

considerably during perceiving and the **essentials** of a matter itself are brought to the fore (Sonnekus and Ferreira, 1987, p 115).

It is important to keep in mind that the different functions or modalities of perceiving are actualized as a **unity** and that necessarily they presuppose each other. Knowing by means of perceiving is possible only when the initial global identification of the perceived object is filled in by analyzing, synthesizing and ordering. In this way, a child **gives** cognitive **meaning** to what he perceives and thus really learns to know it.

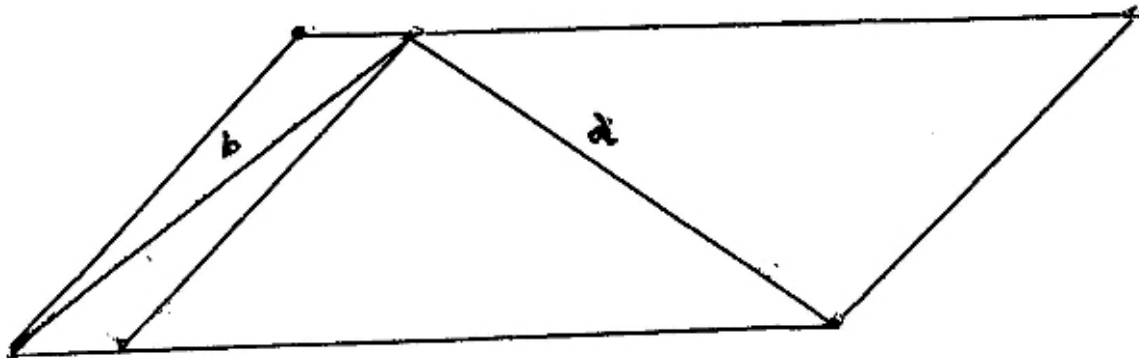
What are the functions (modalities) required for perceiving to occur? Or, what learning functions are fulfilled by perceiving? When a child perceives, he is directed to reality itself. Through attending, his perceiving is directed to something specific and he determines its **identity**. Thus, in a Geography class when a map is shown to him this immediately is identified in its **totality** as a map of the world. Only later will he distinguish the continents, islands, etc. Thus, at first perceiving is directed to the **whole** with the sole purpose of determining its **identity**. This function of perceiving is called **global identification**.

To perceptually identify an object, matter or learning content, it has to be placed in the **foreground** (by means of attending) while all other data in the particular situation temporarily recede into the background. This figure-ground dialectic is an essential structure of perceiving (Merleau-Ponty, 1962, p 13). Already, with this first **global identification**, a child is reducing the vagueness and lack of structure of his sensing, and he begins to order and structure the perceived content so he can learn to know it. [This function of perceiving is a good example of the fact that the distinguishable modes of learning are actualized as an inseparable unity. That is, **global identification**, the beginning of perceiving, still has a strong character of **sensing**; however, it is more than sensing--it is perceiving--because of **attending**].

To learn about a particular matter, mere global identification or recognition is not sufficient. **Analyzing** is an additional and necessary function of perceiving. According to Ferreira (Sonnekus and Ferreira, 1987, p 116-117), the object of learning is stripped of its global quality during analysis by decontextualizing it. Paradoxically, analysis allows a child to perceive the details or finer particularities by ignoring the whole and thus strengthen his grasp

of the larger whole. The "solution" to this seeming paradox is this: although analysis is directed to **detail**, at the same time, by this focus, the **structure of the whole** becomes more clear and understandable (Sonnekus and Ferreira, 1987, p 117). That is, through analysis the **essential** characteristics of the learning material are disclosed and, therefore, a better insight into and understanding of the whole is acquired. However, these first two functions of perceiving are not actualized separately. During analyzing, **identification** occurs again but on a different, more cognitive level. For example, when a child perceives a table, first he **globally identifies** it as a "table" and then by **analysis** he **identifies** a base or leg and a surface as characteristics of a table.

The following exemplifies the different and unique functions that globalizing and analyzing fulfill as modalities of perceiving:



(Behr, 1980, p. 64)

If **someone asks** about the relative lengths of lines **a** and **b**, at first glance (**global identification**) it appears that line **a** is longer than line **b**, but with a more discerning look (**analysis**) it seems that they are of equal length. It is clear that analyzing presupposes an explicitly focused **attending** to details or parts. Indeed, there is a sense in which analyzing decontextualizes the details on which it is focused; lines **a** and **b** are measurably equal only in an abstract non-perceptual space. That is, in their embeddedness in concrete perceptual space, the two lines are neither equal nor unequal. They simply are what they are and the question of length does not arise there (Merleau-Ponty, 1962, p 6).

In perceiving, **synthesizing** is closely related to the initial global-identifying and the subsequent analyzing. Synthesizing places the

crown on what a child globally-identifies and analyzes during perceiving. Through synthesizing, the different parts of the greater whole disclosed by analysis again are united into a whole, but now this whole is more than the mere sum of its parts (Sonnekus and Ferreira, 1987, p 117). Thus, synthesizing accomplishes a better understanding of the whole of the matter that was **not** explicitly present in the initial globalizing because now the relationships of the separate parts to each other **and** to the whole are explicitly understood. Consequently, synthesizing is not merely the **re-uniting** of separate parts. Since the separate parts are related to each other via the whole, qualities now arise that were not initially evident in each part analyzed and this is why the whole, through synthesis, is experienced as **more** than the sum of its parts.

The functions or modalities of perceiving described above as **global identification**, **analysis** and **synthesis** must be fulfilled for something to be perceived. But perceiving also involves an **ordering** function.

By perceiving something, a person also orders it. For example, by **naming** (descriptive language), what is perceived no longer is limited to the data surrounding it but an explicit identity of it is disclosed from a point of view. Thus, in calling "X" an ashtray, I am ordering (contextualizing) reality in a different way than if I call "X" a paperweight. Thus, perceiving is a way of ordering in and through descriptive language (Sonnekus). However, this descriptive language, on the level of perception, is concrete in the sense that the "name" of the object barely is more than a sound that belongs to this object as does its shape, for example. In other words, descriptive naming (and ordering) on the level of perceiving, is **not necessarily** conceptual naming [Goldstein (1940) refers to this as pseudo-naming in contrast to a more conceptual "real" naming].

In fact, most of the time in daily life, when we use words, they are concretely descriptive and not conceptual. For example, when we go to a supermarket and ask the clerk, "where are your apples?", we do not mean the concept "apples" under which any apple whatsoever can be subsumed but rather the word "apples" is used to indicate "those tangible, round, red, juicy things that we want to buy and eat". The point is that descriptive naming on the level of perceiving is a different mode of ordering than naming on the level of thinking (i.e., the conceptual level).

By naming an object or matter, a person also orders reality for himself. In naming, **meaning is given** to reality and that aspect of reality, as abstracted by language, also becomes ordered within a learner's possessed experience. In addition, on a perceptual level, one can order physical objects (e.g., blocks) in terms, say, of height as viewed within a concrete perceptual relationship (attitude) to them. That is, one **sees** in a concrete, immediate way that block **b** is tallest, block **a** is shortest, and block **c** is middle-sized. And they can be **ordered** from tallest to shortest on the basis of these **perceived** differences. As will be noted below, ordering on the level of thinking is based on a different relationship to the reality experienced, namely, on an abstract/conceptual one.

2.2.2 Thinking*

Thinking is an activity that involves a **total** person and is actualized in accordance with the **relationship** he establishes with his world. In this light, Sonnekus (1974, p 68) states that thinking is a **goal-directed** activity that is a child's **answer** to an appeal arising from **reality as a problem**. This problem is experienced, e.g., as an

* In the past a great deal of research has been done on thinking, most notably by the so-called German Psychology of Thought and by Gestalt Psychology. For example, the Cologne School distinguished three layers or levels of thinking (see Nel et al., 1965, pp 249-250):

- *The level of individual images;
- *the level of schematic images;
- *the level of abstract concepts.

Regarding their contents, the level of **individual images** is based on individual images experienced directly from sensory perception. This is the level of concrete experience. On this level there is no notion of the abstract, conceptual or of relationships. [I have an image of my friend's face]. On the **schematic** level, the original images of sensory perception are elaborated into more general or schematic images. On this level connections among things are noticed; the original images themselves are classified, schematized, systematized and ordered into more meaningful relationships that are **preparatory** for abstract thinking. [I take my image of my friend's face as similar to my other friend's]. On the **abstract** or imageless level, thinking functions mainly by explicitly using concepts and categories for ordering and this involves relationships such as cause-effect, similarity-difference, means-end. On this level, the perceptual images are absent and there is only imageless knowing. [I am thinking of my friend as an example of the concept "friendship"]. (See Nel et al., 1965, pp 249-250).

Otto Selz (see Nel et al., 1965, p 252) of the Wurzburg School of Thinking elaborated on the imageless nature of thinking and particularly emphasized its **directed** and **ordered** character. Since it is not the aim here to present an historical review of the research on thinking, these few comments will suffice.

However, to understand thinking as a human way of being, it has to be viewed as a phenomenon within the relationship of a person to his world. Although the German schools of thinking mentioned above have contributed greatly to the study of thinking, especially as an isolated **cognitive function**, it seldom has been studied within the **comprehensive relationship** of person and world.

obstacle, a resistance or a challenge. A person responds to this situation by thinking (Sonnekus, 1974, pp 68-69). However, thinking also can be motivated by wondering about something that is not directed to the solution of any practical problem. Thinking as contemplation will be briefly discussed below.

As already mentioned, the different modes of learning are not brought into play separately but rather as a unity. In this light, thinking, to a large degree, usually is an extension of perceiving. This is because it is through perceiving that the problematic aspects of the contents of reality often are **discovered**, demand a solution and thus motivate thinking.

Most of the time thinking is directed to **ordering, understanding** and achieving **solutions**. Then it is initiated by a problem and this confrontation with the problematic compels a child to search for solutions by means of activities such as planning, analyzing, comparing and ordering (Sonnekus and Ferreira, 1987, p 119). Behr (1980, p 78) also mentions that "thinking involves reasoning, judging, conceiving and problem solving". Thus, thinking has a character of **breaking-through** (Sonnekus, 1974, p 69) whereby reality as a problem is **transformed** in order to **understand** and **control** it (Sonnekus, 1973, p 85). In this activity of breaking-through, thinking does not stand alone as a mode of learning. All of the other modes of learning, as it were, are at the service of thinking; for example, in thinking, "use" is made of perceiving, remembering or imagining and fantasizing in the search for a solution.

It is relevant to mention that there is a particular and indissoluble relationship between **thought** and **language**. For example, Nel refers to the "developmental parallelism" that exists between language and thought (Sonnekus, 1974, p 69). According to Sonnekus (Nel, Sonnekus and Garbers, 1965, p 254), "language development" is not identical with "thought development" but they are closely related and especially in the way language "develops" from more **perceptual** forms of (descriptive) language to more **abstract** symbols and **concepts**. In addition, language is the **medium** within and by which a person usually thinks (Swan-Liat, 1966, p 28). In this context, language supports thinking and is the footing or bedrock on which it rests (Nel). In this regard, the importance of language is not in its system of sounds but rather in its system of symbols. Language also is an abstract symbol system

by which a person, by thinking, is able to **abstract** from and to **order** reality (see Nel, Sonnekus and Garbers, 1965, p 254). There also is a relationship between language and intelligence as well as between language and concept formation such that language, thought, intelligence and concept formation constitute a unity without which a child's effective learning would be unlikely.

At this point, thinking as **contemplation** is considered in order to circumvent the possibility of a too instrumentalist/pragmatist view of thinking that easily can result from an over emphasis on it as a continuation of perceiving, which very often it is, and on it as an activity exclusively directed to solving a practical problem. That is, thinking as contemplation may occur in the absence of experiencing a practical problem to be solved. Above it was noted that wonder can arise because of some "surprise" in the ordinary course of things, but wonder also can arise out of a theoretical interest in the nature of something for the very sake of pursuing that interest and not to find a solution to a motivating problem. In other words, as Dreyfus (1991, p 253) writes regarding Heidegger: "Unlike the pragmatists, Heidegger accepts the Greek view that human beings are capable of getting in the mood of pure equanimity and wonder in which they can form theories (**i.e., think about things**, my addition--G.Y.) that do not have any necessary relation to their needs and purposes". Straus (1966, p 173) also is in agreement with this position when he writes "...the essential point for an understanding of human inquisitiveness is that man (sic) is able to suspend all direct action toward his environment..."

A final point about the above comments on **contemplation** is that it is on a different level than the functions of thinking to be considered below. That is, it has to do more with the **motivation** for thinking than with the functions of thinking itself. In other words, all of the functions of thinking to be discussed next also are relevant to contemplative thinking, say, as the pursuit of "theoretical" problems, some but not all of which may indeed be motivated by perceptual experiences.

A person continually is in contact with concrete reality. To command this reality he has to learn to know it and this is furthered by the **abstracting/conceptualizing** function of thinking. What is available during perceiving can become abstracted to symbols by thinking. During thinking, the concrete is exceeded and dealt with in terms of symbols, concepts or thoughts. Thinking "elevates"

perceivable objects to the world of concepts and this means abstracting them from reality. The act of thinking thus involves reconstructing, transforming and symbolizing some contents of reality into a symbol-image or "unreal" reality (Nel, Sonnekus and Garbers, 1965, pp 260-261).

Abstracting also essentially is distancing. That is, in his thinking, a child loosens himself from the concrete but continues to relate to it in terms of symbols or thoughts (Sonnekus and Ferreira, 1987, pp 120-121). Through this abstracting, distancing and objectifying there is a progression to the **conceptual** level. According to Van Parreren (Nel, Sonnekus and Garbers, 1965, p 255), concept formation always presupposes a degree of abstraction. Thinking transforms the concrete-perceptual world into a world of concepts that involves an abstracting and ordering of reality. Thus, in thinking, a child deals with reality on a conceptual level (Sonnekus and Ferreira, 1987, p 121).

Ordering also was mentioned as one of the functions or modalities of perceiving. According to Ferreira (Sonnekus and Ferreira, 1987, p 121), it also is an inherent function of thinking not only because perceiving often is the beginning of thinking but because thinking itself involves ordering.

Thinking is a more distanced, decontextualized mode of learning than perceiving and it requires an abstract/conceptual relationship with reality. When discussing perceptual ordering above, it was noted that in buying apples in a supermarket, ordinarily the apples are related to in a concrete visual way by focusing on their singular characteristics (e.g., size) and not on their "apple-ness". However, in thinking, our interest changes from the particular to the category or concept of apples as such. This shift is an intellectual feat whose importance should not be underestimated because without it conceptualizing could not occur. This **ordering** of a multiplicity to a unity will be mentioned again below. In addition, on the level of thinking, ordering can be accomplished symbolically. For example, return to the three blocks of differing heights. Perceptually, one can order these items only if they are present. Their differences in height have to be seen. By means of symbolic thinking, these blocks can be ordered without their physical presence. If one understands the symbols involved, then if it is indicated that $a < b$, $a < c$, and $b > c$, one can, by thinking, order the blocks from tallest to shortest by means of the symbols representing their perceived relationships.

Thought achievements such as analyzing, schematizing, synthesizing, comparing and generalizing also are ways of ordering (Sonnekus and Ferreira, 1987, p 121). Because of this **ordering character** of thinking, a child continually explores and discovers reality and orders it from a **multiplicity** (e.g., triangles, squares, rectangles) to a **unity** (e.g., geometric figures). Ordering reality from a multiplicity to a unity means that, by thinking, one arrives at a more cognitive understanding of it (Nel, Sonnekus and Garbers, 1965, pp 260-261).

Thus, thinking is directed to a possible order that reality itself allows. However, a child needs to disclose and order this reality **himself** to truly understand it. Without such ordering, he will very likely stagnate on a visual and concrete level and the abstract, conceptual or symbolic will remain relatively inaccessible to him (Sonnekus and Ferreira, 1987, p 122).

Some of the most important functions or modalities of thinking (Sonnekus and Ferreira, 1987, p 120-122) are **abstracting/ conceptualizing, ordering and solving problems**.

2.2.3 Imagining and fantasizing

As modes of learning, the difference between imagining and fantasizing is one of degree. For the sake of clarity, they will be treated separately, but the relationship between them will remain clear. The following elaboration relies greatly on Sonnekus and Ferreira (1987, pp 122-126).

To understand **imagining** as a cognitive mode of learning, it is necessary briefly to indicate the difference and connection between imagining and perceiving. Perceiving is a way a person directs himself to the **real** world. The perceived object is itself present and directs an appeal to the perceiving person. Regarding imagining, its object is not really present but by an act of imagining it is **represented**. Perceiving is an involvement with the real world while imagining constitutes an **irreal** world (Swan-Liat, 1966, p 200). In an imaginary world, a person experiences an object in another mode or way of being. Compared with perceiving, the imagined is an unreal, fictive image; it is less clear, not sharply defined, less stable, not clearly localizable and has no unique size. In addition, a person is free to transform or change the image by a

spontaneous act of imagining. Thus, the acts of perceiving and imagining embody two different relationships to reality (Nel, Sonnekus and Garbers, 1965, p 200).

On the other hand, no matter how "irreal" imagining might be, it is necessarily connected to previous perceptions since it is a person who imagines something himself and this imagining has its origin in what he has found (experienced) in reality. This implies that what is imagined, in one way or another, leads back to reality. This does not mean that imagining always is "reproductive" because it can contain creative moments (aspects). In this respect, imagining can **exceed** the data of perception by adding something new or additional to the original perception. However, it is possible that imagining can be true to or foreign to reality. Whether it is faithful to reality or not depends, among other things, on previous perceptions and the sense and meaning that have been attributed to them. That is, the quality of a child's possessed experience is a decisive factor in whether or not imagining is faithful to reality.

With regard to **fantasizing**, in comparison with imagining, it is an even more distanced relationship with reality. Fantasy exceeds the limits of reality and is a creative activity by which a person enters a fantasy world. (Compare, e.g., a child's fantasy play). Consequently, fantasizing is an activity by which a child can "escape" reality and "lose" himself in a world where feelings, wishes and desires are rampant. On the other hand, it also embraces the possibility of proceeding to a cognitive level in order to think and live creatively.

Although imagining and fantasizing have a strong emotional side, in the course of learning, both primarily are directed to activities such as knowing, planning, and creating.

In light of the above, the following functions or modalities are distinguished (Sonnekus and Ferreira, 1987, pp 125-126): imagining and fantasizing make it possible to go beyond or **exceed** reality; imagining is an activity by which reality can be **represented**; and imagining and fantasizing both contain a **creative** aspect.

2.2.4 Remembering

As with every mode of learning, remembering is actualized within a person's relationship to his world. Therefore, it is not merely

registering, storing and retrieving information (Sonnekus, 1974, pp 80-83). Remembering is a conscious activity and demands personal effort; therefore, effective remembering requires an **intention to learn** (Nel, Sonnekus and Garbers, 1965, p 294).

First, remembering is being-conscious of the past and this implies **recalling** the past in the **present**. Things, events or persons from the past that are recalled are not necessarily present but by the act of remembering they are placed in the present (Sonnekus, 1977, p 47). Thus, it is an activity by which "the effects of past learning manifest themselves in the present" (Behr, 1980, p 70). Previously learned contents that have been given **sense and meaning** in the past are made present by remembering them (Behr, 1980, p 127). In this way, already acquired contents are "stimulated" and a child then is able to relate these possessed contents to the new contents. The quality of recalling largely is determined by a child's current emotional condition as well as by the quality of past learning. As a first function of remembering, recall is a pre-condition for the second, integration.

Remembering is not only an act by which a child recalls existing possessed experience, it also is an activity by which the new contents are **integrated** into his possessed experience. In this way, a child's possessed experience or stock of knowledge continually is expanded, broadened and deepened. Thus, the two functions or modalities of remembering are to **recall in the present some past contents** and then to **integrate** new learning contents into these recalled past contents [or to integrate the old into the new].

In light of the above explication of learning, it is clear that it is a unitary event that occurs within a child-world relationship. Although learning is actualized in terms of a number of modes and their modalities, they are not actualized apart from each other. In the course of learning, each of the modes of learning has a particular contribution to make and this can be executed only within the interdependent and close relationships that exist among them.

The different modes of learning--sensing, attending, perceiving, thinking, and imagining and fantasizing [let's "forget" remembering for the moment]--are different ways of relating to reality. Sensing as the beginning of learning is our first "seeing" of something. Attending allows us to break out of our sensory horizon of **how**

things appear here-and-now to **what** it is that appears. That is, attending allows us to distance ourselves from our pathic/gnostic sensing to an affective/cognitive level of knowing; here, for example, hearing via attending becomes listening, seeing becomes looking, touching becomes feeling; thus, Straus (1963, p 317) calls perceiving the second seeing in that it is a more distanced, cognitive relationship to the world than is sensing, the first seeing. Thinking is an even more distanced relationship than perceiving because one can only perceive what is present but one can think about what is absent as well as what is present. Imagining and fantasizing are even more distanced modes of learning because they allow one to push and exceed the limits of reality in creative ways. Finally, remembering is the crowning of learning in that it makes our past learning present so newly learned contents can be integrated into the old. Without remembering no learning would be possible.

2.2.5 Actualizing the cognitive modes of learning in the classroom

To adequately actualize the cognitive modes of learning in the classroom, it is necessary that they be supported by a stable sensing and a sharpened intention to learn (attending). Although all of the modes of learning function as a unity, still, at a particular time, some modes of learning are more prominent than others. For this reason it is necessary that a teacher have a thorough knowledge of the functions fulfilled by the different modes of learning and that he link up his teaching with these different modalities or functions that he wants a learner to actualize. Thus, a teacher should first determine which modes of learning are to be actualized at which stage of the lesson and then plan his teaching activities accordingly (see Chapter VI).

Regarding the actualization of the cognitive modes of learning, when **perceiving** is actualized, a teacher should provide for **globalizing, analyzing, synthesizing** and **ordering**. For example, a thing, model or theme might first be presented to a pupil in its **totality** and after that **details** or essentials can be shown and then be **synthesized** or unified into a whole. By means of linguistic expression and naming, **ordering** occurs. Consequently, a poem might first be read or recited to the pupils as a totality until it is formally dissected or **analyzed**. When all facets of the poem are clear to the pupils and the relationships are shown, it can again be read to them as a **whole** because only then will there be an

understanding and appreciation of the whole. Ordering continually occurs by means of language. According to Basson et al. (1983, p 34) the purposive implementation of teaching aids in conjunction with perceiving is particularly important. A meaningfully ordered chalkboard scheme, visual model, real example, etc. can be used so relationships and concepts are clearly perceived.

Thinking will most naturally arise when a child's perceptions confront him with a **problem**. This implies that a teacher needs to make the pupils aware of a problem or problems in the learning contents if he aims to stimulate thinking. This can be done by asking purposeful and clearly formulated **questions**. These questions have to be **real** for the pupils and they have to recognize that answering them is **meaningful** to them. In answering a question, a teacher needs to guide a pupil in his thinking and take care that it does not stagnate on a concrete-perceptual level but that it also proceeds to an **abstract** level of thinking. In this connection, language provides the **concepts** for **ordering** and **abstracting** the contents.

With respect to **imagining and fantasizing**, a teacher should provide the pupils with an opportunity for **creativity**. From what is known of a child, assignments can be formulated so the pupil can exceed reality and design or create "new" realities. Here one thinks of free assignments in art, essays and science projects.

Also, regarding **remembering**, a teacher has the task of helping the pupils. He cannot merely assume that the pupils can **remember** a particular matter, circumstance or content; therefore, he should stimulate and illustrate their existing possessed experience. He also needs to guide them to **integrate** the new contents into their already existing possessed experience. Pupils are not always able to do this themselves and, therefore, a teacher should help them establish relationships and point out interconnections between the old and the new contents. With respect to remembering, two important aims are distinguished. First there is **practice** of an earlier achievement, skill, technique, or mental representation by often **repeating** the subject contents. Second, the subject contents need to be deepened by joining together loose and disconnected aspects into a meaningfully integrated whole (Basson et al., 1983, p 35).

For effective learning in the classroom, it is extremely important that a teacher continually supports the pupils' learning and that he does this by directing his teaching to the modes of learning and their modalities. Thus, it is clear that a teacher should plan his lesson so that **learning activities** are in **harmony** with **teaching activities** and that they are both directed to achieving the lesson's **learning aims**. This matter is treated more comprehensively in Chapter VI.

3. LEARNING AND CURRICULUM PLANNING

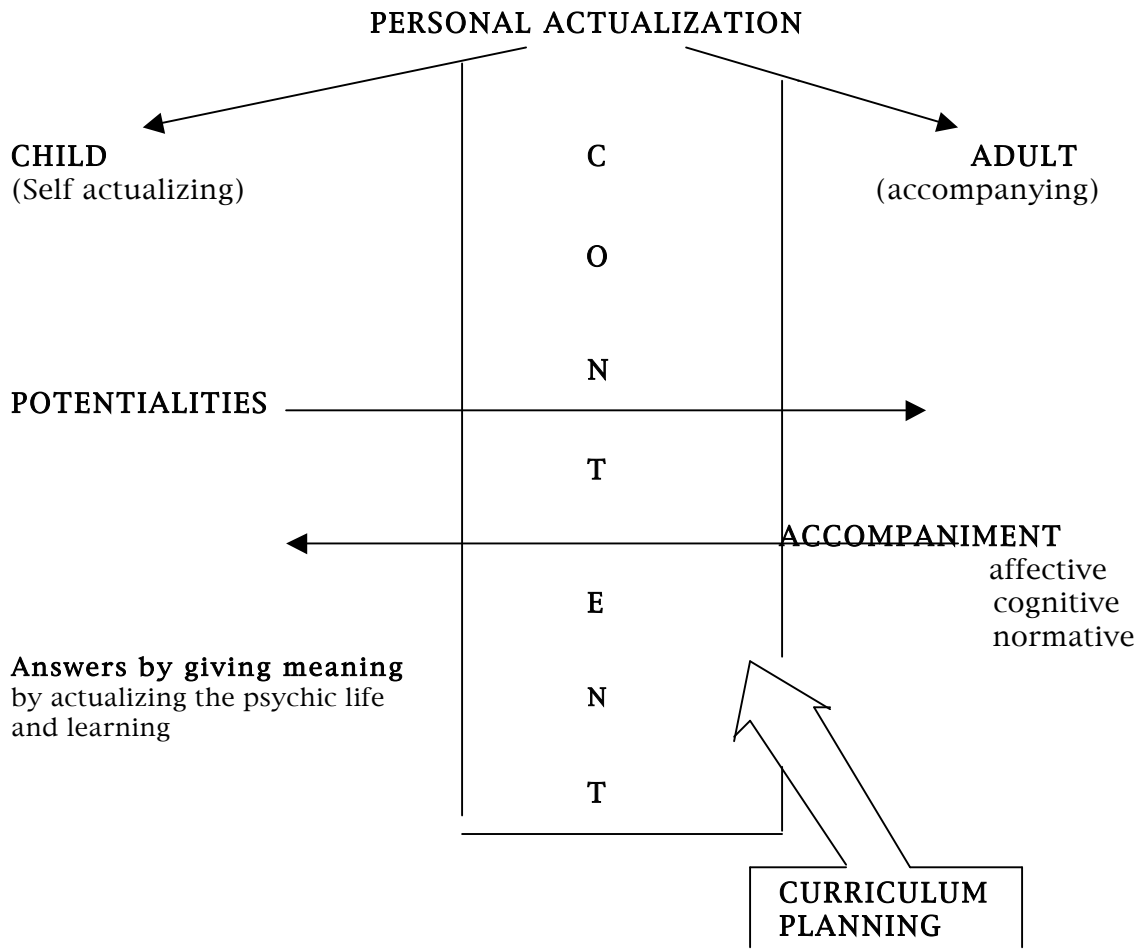
Curriculum planning involves **selecting, ordering and evaluating** learning contents for a didactic-pedagogic situation in order to reach specific aims (See Hill, 1975, pp 17 and 22).

During curriculum planning, selecting and ordering contents are closely related to the specific aims to be achieved. Within an educative perspective, the ultimate aim of curriculum planning is a child's **proper adulthood**. The contents **representative** of adulthood have to be selected and ordered by curriculum planning in such a way that a child can attain a better understanding of them. This ultimate aim usually is kept clearly in mind. However, a **child** for whom the curriculum is designed is not always kept in mind. Sometimes curriculum planning merely involves selecting and reducing existing subject matter contents and then ordering them from "easy" to "difficult". Whether a child, as one who is becoming adult, can achieve a better grasp of **reality** from this and can learn to maintain himself adequately in this reality is totally irrelevant. Such curriculum planning where a child is not taken thoroughly into account is untenable. The fact is that **proper adulthood** can only be attained in terms of adequate **personal actualization** by a child **giving meaning** to the curriculum contents. Thus, it is not the curriculum, per se, that leads a child to adulthood but the ways he gives **sense and meaning** to it.

From the above, it is clear that educative curriculum planning is a matter of a child attributing sense and meaning to contents. In this connection, Sonnekus (Sonnekus and Crous, 1981, p 10) says that as far as a child is concerned the curriculum planner has to take into account the **preconditions** set by the nature of the learner himself regarding the **sense and meaning** the particular curriculum contents can have for him. Because of the sense and meaning he has attributed to the learning contents of a curriculum, a core question for curriculum design and development is how should this

or that learner attribute sense and meaning to this particular piece of the curriculum, irrespective of the level on which or the situation in which he finds himself. More simply, the curriculum contents have to be of such a nature that a child is able to learn them in a **meaningful** way.

It is clear that actualizing a child's learning is a comprehensive matter and also has far-reaching implications for curriculum planning. The curriculum is not a goal in itself but is aimed at a child's eventual proper adulthood. Therefore, one needs to guard against a curriculum that merely makes subject matter contents available that have been arranged from "easy" to "difficult". Really, the curriculum aims at a child having subject knowledge at his disposal without which he would not be able to enter the lifeworld of the adult. The systematic subject contents are the **means** for unlocking reality for a child in ordered ways. These subject contents or **learning contents** are really **contents of life** for a child if he experiences them as **meaningful**. Thus, curriculum planning is viewed as falling within the scope of learning and personal actualization. Schematically, this matter is represented as follows:



From these brief remarks, curriculum planning is a **matter of a child giving sense and meaning** to the contents (Sonnekus and Crous, 1981, p 10). Thus, the ways a child gives meaning as well as the ways he learns and actualizes his psychic life in each stage of life (see Chapter VII) continually have to be kept in view. Therefore, a curriculum has to be planned so that it promotes **effective learning** and the **adequate actualization of his psychic life** in each period of his life. In addition, some of the conclusions drawn by Hill (1975, p 232) with respect to influencing a child in the teaching situation are indicated:

* For optimal learning in the curriculum, an opportunity has to be offered for a differentiated encounter with the contents, i.e., an encounter within which different psychic moments, modes of learning and becoming can be optimally actualized;

* meaningful curriculum planning can only occur if the pupils' level of development (becoming) is taken into account;

* the acquisition and command of language has to be emphasized across the entire spectrum of the curriculum.

Hill (1975, p 203) also indicates that **curriculum planning** provides the **contents** for **teaching** and together the two lead to **learning**. Thus, teaching and curriculum planning jointly lead to a child's effective learning.

Van der Stoep (1972, p 116) indicates that the only appropriate **point of departure** for formulating a theory of teaching is the original experience of teaching as it is embodied in the reality of educating (upbringing), the aim of which is a child's adulthood. Thus, curriculum planning also has to take a child in his original educative situation as its point of departure. In this original situation, there are educating and teaching; obviously, neither can occur without contents. This implies that the parent, as educator in this primary situation, has to **select** and **order** contents, i.e., he has to **plan a "curriculum"**. The question is what criteria does he use to do this? Actually, his curriculum planning is on a different level than that of the schoolteacher or curriculum expert. The fact is, he does not plan a curriculum or use particular criteria. His planning occurs more intuitively and, therefore, he is not guided by scientifically established criteria but rather more by the **needs** and **characteristics** a child shows at a given age. In this regard, Hill (1977, p 142) indicates that it is the parent or educator who notices a child's needs and then selects and orders contents to meet them. An example is how a parent guides his child when he learns to walk or talk. He doesn't harass his child with norms about an outlook on life when he is learning to walk but takes him by the hand and helps him step by step. Also, he doesn't present the eighth grade Mathematics curriculum to his child when he learns to say "mama" and "papa" but helps him word by word. Although mainly intuitive, the parent selects contents that are appropriate for his child's **needs for becoming**. Within the primary educative situation (at home), the nature of the contents and the ways they are presented are extremely important for personal actualization.

These original ways of planning a curriculum also hold for the secondary educative situation (at school) in the sense that there has to be an attempt to select contents in keeping with a child's **level of becoming** within a particular **phase of life**.

In the pre-primary school, the levels of becoming and particular characteristics of the toddler are thoroughly taken into account in "curriculum planning". Particular attention is given to physical and creative activities as well as to play and language development--all matters that are characteristic of toddlers and that, therefore, will be **meaningful** to him. This matter is closely related to a child becoming ready for school.

Curriculum planning for the primary and secondary levels of schooling also have to take into account the needs and characteristics of each age group of children. A child's desire to learn to read and write, his attunement to reality, sexual development, religious preferences, forming gangs, involvement with the opposite gender, vocational interests, etc. (see Chapter VII) are a few of the topics that have to be addressed during curriculum planning.

4. SUMMARY

Adult accompaniment and personal actualization in the classroom occur in terms of contents made available by means of curriculum planning. However, the preconditions are that these contents are such that the adult (teacher) can order them effectively and that a child can learn them as something meaningful to himself. This is possible only if a child's level of becoming (development), with all that this includes and as this appears in each of the phases of life, is thoroughly taken into account during curriculum planning.

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