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A CRUCIAL PSYCHOLINGUISTIC PREREQUISITE TO READING: CHILDREN'S METALINGUISTIC AWARENESS

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0. In recent years the traditional debate over the optimal method of teaching reading has been bypassed by a widespread realization of the fundamental importance of certain psychological prerequisites in light of a revised version of the old concept 'reading readiness'. The aim of this discussion will be to reconsider the problem of reading prerequisites and principally of language awareness and metalinguistic consciousness, in order to clarify some basic concepts and to propose a more comprehensive model of learning to read in personological terms.

1. LEARNING TO READ: A PROBLEM OF PREREQUISITES

Authors usually consider as essential the development of a number of prereading skills, including the analysis of speech sounds, early production and discrimination of writing, intermodal relations, and cognitive factors. Some programs aiming at developing such skills operate by analyzing reading into component skills, testing these skills, and constructing training programs to remedy deficiencies (Gibson & Levin 1975: 255-261). "Auditory skills (phonetic analysis) stand out as high-priority ones and also as ones that may require training. It was emphasized that, however good the training provided, it cannot be assumed that the reading process is simply a sum of component skills" (Gibson & Levin 1975: 263).

More precisely, John B. Carroll (1976), in analyzing the components of reading skill, has pointed out the following eight requirements:

1. The child must know the language that he is going to learn to read.
2. The child must learn to dissect spoken words into component sounds.
3. The child must learn to recognize and discriminate the letters of the alphabet in their various forms (capitals, lower case letters, printed, and cursive).
4. The child must learn the left-to-right principle by which words are spelled and put in order in continuous text.
5. The child must learn that there are patterns of highly probable correspondence between letters and sounds, and he must learn those patterns of correspondence that will help him recognize words that he already knows in his spoken language or that will help him determine the pronunciation of unfamiliar words.
6. The child must learn to recognize printed words from whatever cues he can use —their total configuration, the letters composing them, the sounds represented by those letters, and/or the meanings suggested by the context.

7. The child must learn that printed words are signals for spoken words and that they have meanings analogous to those of spoken words. While decoding a printed message into its spoken equivalent, the child must be able to apprehend the meaning of the corresponding spoken message.

8. The child must learn to reason and think about what he reads, within the limits of his talent and experience. (Carroll 1976: 13-14).

The framework suggested by Carroll implies decisions about the relevance of a number of factors which can be classified into the following categories:

Language: e.g. What is the relation between language acquisition and the reading process?

Visual Processing: e.g. How are syntactic and semantic variables related to visual processing of printed material?

Perception and Word Recognition: e.g. How does recognition of distinctive features vary with the maturity of the reader? What decoding strategies are used in the reading process?

Cognition: e.g. What role does conceptualization play in acquiring decoding and comprehension abilities?

Affect: e.g. How are affective factors related to the acquisition of reading skills?

Cultural Interaction: e.g. How is the cultural context of the social environment and of the classroom related to the acquisition of reading skills?

Over and above such psychological prerequisites it is more and more commonly agreed that the crucial factor conditioning the outcome of the process of learning to read is to be found in the so-called dynamic state of 'language awareness'. A side evidence of the importance of this 'super-factor' is given by the fact that over the last decade about two hundred studies have been conducted with the purpose of assessing the nature and the role of language awareness in the process of initial acquisition of reading skills. The specific bibliography has been gathered especially by such authors as Tunmer, Pratt, and Herriman (1984) and Downing and Valtin (1984). This concept will then become the focus of attention in the following discussion.

2. Metalinguistic awareness and reading acquisition

The study of metalinguistic awareness in children has attracted lately considerable attention in view of its central importance both in the process of language development in the child's early and later years and in its interaction with the child's cognitive growth. The problem is aptly summarized by an introductory statement formulated by Pratt and Grieve (1984: 2):

> "Metalinguistic awareness may be defined at the general level as the ability to think about and reflect upon the nature and functions of language. It is difficult to be more specific when defining the term, however, because the nature, functions and typical age of onset of metalinguistic awareness are still subject to much debate. An elementary reason for this debate is that psychology, in common with other disciplines, has not yet been able to provide a well articulated account of concepts such as awareness and consciousness which are involved in the study of metalinguistic awareness. At present it is not clear how different types, or different levels, of awareness might be distinguished, nor is it clear how these would

relate to different degrees of consciousness. Furthermore, the attempt to relate such distinctions to the study of cognitive and linguistic processes generally is still in its initial stages, although recent work suggests a heuristic value for it".

2.1 *The development of metalinguistic awareness: from awareness to consciousness*

In developing a conceptual framework for studying the emergence of metalinguistic awareness in children and the following development of metalinguistic consciousness proper, it is essential to define and distinguish a few basic concepts of a strictly psycholinguistic nature: *tacit knowledge, linguistic competence, linguistic intuitions, explicit formulation, language awareness,* and *metalinguistic consciousness.*

Some of these concepts indicate virtual realities, namely abilities which can on occasion and following precise stimulation emerge overtly and produce mental operations like judgements. *Tacit knowledge* refers to the unconscious knowledge, possessed by the speaker of a language, of the set of rules that determines the grammatical acceptability, phonological sequencing, sentence acceptability, synonymy, and structural univocity of different utterances. It is a virtual state of mind. Analogously *linguistic competence* is the linguist's definition of such knowledge, and it appears as a virtual state of mind. On the other hand, to the realm of active performances belong *linguistic intuitions,* i.e., the speaker's judgments on correctness and acceptability inasmuch as solicited either by situational context or by an interlocutor, and *explicit formulations,* which imply both cognition of the distinct form of linguistic features and the ability to define them as such, namely as abstract traits of linguistic units.

Although there is no commonly accepted distinction between *language awareness* and *metalinguistic consciousness,* it is important to attempt a distinct definition of these two psycholinguistic states insofar as they may play separate roles in language acquisition especially with regard to reading ability. *Language awareness,* then, could be defined as implicit, unanalyzed knowledge of language functions and features. It would accordingly include the following traits:

a) It works as implicit knowledge of linguistic operations.
b) It is a form of spontaneous control of such operations in actual performance.
c) It implies intuitive recognition of forms and patterns.
d) It works through immediate, holistic perception of structural features of a language.
e) It implies unreflective realization of language functions.

On the other side, *metalinguistic consciousness* could be defined as formal, abstract, explicit knowledge of language features and functions of language as a sign system. While language awareness refers to and focuses on the concrete operations of one particular language (*langue*), metalinguistic consciousness implies the ability to reflect on the general features and structures of language in general (*langage*), although this formal knowledge is actually transferred from a particular language system. Universal grammar is part of metalinguistic consciousness only. The following traits then can be seen as characterizing metalinguistic consciousness:

a) It is the explicit cognition of the formal features of linguistic operations.
b) It implies deliberate control and choice of language acts.
c) It works as reflective, logically grounded recognition of forms and patterns.

d) It can produce analytic distinctions of formal elements of features.

e) It shows rationally motivated cognition of language functions.

In summary, whereas language awareness is the outcome of mere cognitive maturation, metalinguistic consciousness appears to be the intended effect of formal education or systematic instruction, mainly through the teaching of grammar. The former may be present already in the young child, even before schooling; but the latter is acquired on an advanced level of formal schooling, usually about the age of 12-13 years (cf. Wittwer 1959).

Granted the above distinctions, the question can be raised of how and when metalinguistic consciousness develops. Although the terminology used is different from the one here proposed, the theoretical survey offered by Tunmer and Herriman (1984: 17-35) can be easily accepted.

Tunmer and Herriman (1984: *ibidem*) consider three views on the nature and development of metalinguistic awareness, covering partly what we called metalinguistic consciousness proper.

To quote their final summary,

Our view —a fourth one— proposes instead that while language awareness as defined above is the result of a change in information processing capabilities, metalinguistic consciousness proper is the outcome of metacognitive development brought about by learning to read as well as —jointly— by the learning of grammar. The evidence to this statement is at the moment only, or mainly, theoretical, but we expect more arguments from our newly launched experimental project on the development of metalinguistic abilities in monolingual and bilingual children aged 4 to 13 years.

2.2 *Four questions about the difficulty of learning to read*

A significant number of children —as is known— never learn to read efficiently or effectively, even when they are given instruction in it. The overall question then is: why is learning to read so difficult? The answer can be transformed into four more specific questions.

1. If reading is primarily a visual process, is the major problem in learning to read due to failure to discriminate the visual representations of language, the letters and printed words?

But following the research of several investigators (Calfee 1975, 1977; and others, in Tunmer & Bowey 1984: 144), we now know that visual discrimination is not the central problem it was once thought to be, since there is no evidence to indicate that visual perceptual training transfers positively to growth in reading.

2. Are inadequate methods of teaching responsible for the difficulty encountered by many children in learning to read?

Comparative research demonstrates that there is no compelling evidence that any one method of reading instruction is superior to the others. After all, many teachers tend to be eclectic.

3. Are other factors responsible for this failure, like deficient language comprehension skills, adverse environmental conditions, emotional instability, deficient intersensory integration, minimal brain dysfunction, genetic makeup, etc.?

The answer is that, while some of these factors may indeed contribute to lower reading achievement or reading retardation, available evidence related to these explanations does not fully account for all cases of failure.

4. Why then do some children benefit far more from reading instruction than do others? It has been suggested as an answer that more crucial factors in learning to read may be efficient processing strategies or several dimensions of 'cognitive style', like field dependence-independence and reflectivity-impulsivity. Generally speaking, the factor most directly involved in reading acquisition seems to be *metacognitive control,* which would include such subfactors as metamemory, metalearning, meta-attention, metasocial cognition, metalanguage, this in turn composed by phonological awareness, word awareness, form awareness, pragmatic awareness.

The conclusion following from these observations is of great importance. Again in Tunmer and Bowey's words (1984: 152) it can be summed up as follows:

> "To learn to read, children must bring their knowledge of the spoken language to bear upon the written language. This requires the ability to deal explicitly with the structural features of the spoken language. The metalinguistic ability to reflect upon language should therefore be an important prerequisite for being able to learn to read, since without this ability the child would not be able to discover the properties of spoken language that are central to the correspondences between its written and spoken forms".

To summarize our earlier proposed definitions in a developmental perspective, we may try now to reconsider a model of the developmental sequence of language awareness. R. Valtin (1984: 207ff) starts from a theoretical framework provided by Leontiev and applied by Andresen.

Leontiev (1973, 1975, 1981) differentiates between a 'model of language ability' referring to psycholinguistic processes and representing the implicit knowledge guiding verbal performances and a 'model of language' that represents explicit knowledge as it is interpreted by linguistics. He then organizes the generation of verbal utterances on different levels. Andresen (1982) applies Leontiev's model and differentiates three developmental stages of language awareness levels "from the dimly conscious or pre-conscious speech monitoring which underlies self-correction to the concentrated, analytic work of the linguist", as Slobin (1978: 45) describes it.

These stages can be characterized as:

1. *Unconscious awareness or automatic use of language.* "Early forms of metalinguistic activity are embedded in a communicative situation and serve to establish an effective communication. The child is not aware of his or her speech but can become aware that speech acts fail." (Valtin 1984: 214). We don't like the combined dichotomy 'unconscious'/'awareness': it sounds almost contradictory. We would then propose the use of the terms 'unconscious perception'. Perception indeed is more a sort of an immediate operation, without reflection and delay.

2. *Actual awareness.* It implies the ability to abstract the language form from the action performed and its context, and to think about some of the properties of the form of language. Knowledge of language units is still implicit and related to psycholinguistic units of speech.

3. *Conscious awareness.* It implies the ability to deliberately focus on and manipulate linguistic units. This sort of knowledge is explicit and has a new psychological quality.

Many authors —with whom we agree— suggest that this explicit, deliberate, and systematic knowledge is dependent on formal instruction, and that the acquisition of reading and writing helps to enhance this conscious awareness (Valtin 1984: 215).

We would suggest also that conscious awareness or metalinguistic consciousness is only virtual in the form of a deep psychological state which can be elicited and brought to actual emergence by particular communicative conditions or by explicit request on the part of interlocutors. Conscious control of the performance of utterances is not full except when difficulties in choice of rules or tactics, or needs of interactive adaptation, or also needs for more adequate forms of self-expression, and alike, arise. The '*prise de conscience*' is made necessary and raised whenever automatic processes fail to respond to concrete communicative conditions or to personal expressive needs. Discussing a mistake or adjusting stylistic variants as a deliberate act of choice are certainly manifestations of actual consciousness or conscious manipulations of the language.

In conclusion, to further specify the components of metalinguistic consciousness we can accept the differentiation of three aspects that are closely related, as put forth by Valtin (1984: 216-217):

1. "The ability to focus attention on language forms per se, or the ability to treat language objectively and freeing it "from its embeddedness in events" (Donaldson 1978: 89).

2. The acquisition of concepts of oral and written language, such as phoneme, word, sentence.

3. The ability to make deliberate utilization of phonological, syntactic and semantic structures of language".

Metalinguistic consciousness enlarges into metacommunicative consciousness when the speaker/hearer takes cognizance of pragmatic rules and uses them deliberately.

At this point a further in-depth analysis of the complex nature of metalinguistic/metacommunicative consciousness appears necessary. The issue is open and needs careful exploration.

2.3 *An open question: is metalinguistic consciousness a purely cognitive ability?*

It would seem contradictory to claim that "consciousness" is not reducible to mere cognition. And still, a broader psychological perspective should teach us that cognition and metacognition don't exhaust the full meaning of *consciousness* understood as *activity stemming from and governed by the Ego*. It is then legitimate to suppose that *human* conscious activity must include other components which belong in the sphere of affective ego-centered processes.

Let us gather a few facts and notions.

Reading is an intentional behavior (Hochberg & Brooks 1976: 242-251). Both learning to read and actual reading are purposive processes. Attention to different aspects of the written text is called upon or motivated by changing purposes of the reader. One may read, for example, with intention to extract meaningful content from the printed page, or with intention to pay attention to the letters and the spelling of the words that make up the printed page. These and other tasks, set either by the goals given the reader, or by the relative difficulty or unfamiliarity of the material, affect the reader's visual search patterns and performances. Now purpose is not a mere cognitive

state, but a rational voluntary operation. And therefore it involves the readers's ego taking position vis-à-vis a particular task.

Secondly, reading is clearly related to affective factors. I. Athey (1976: 352-380) has reviewed available research and possible hypotheses on the relationship between success in reading and affective variables. Affect as considered by various personality theories can be shown to play an important role in the process of learning to read. A number of data is already available. For example, self-concept has been found to be consistently related to reading achievement, in spite of the variety of measures used to assess both factors. The implications of self-consistency theory for reading have also been pointed out. But there are more hypotheses than results at present to this effect. Also Erikson's competence theory, viewing competence as the ability to master the environment, could give rise to a number of hypotheses with respect to the relationship of reading to certain aspects of psychosocial development. For instance, good readers may be expected to exhibit strong feelings of self-esteem, a firm conviction of their own worth, while poor readers will display feelings of inferiority and inadequacy, especially in the school (reading) situation. Competence implies autonomy, environmental mastery, accurate perception of reality, favorable attitudes toward learning, low level of anxiety. All these factors could be correlated to reading achievement. Similar hypotheses can be drawn from others theories, like social learning theory, expectancy theory, cognitive style theory, etc. As Athey concludes, probably any theory of personality could be used as a starting point for the derivation of testable hypotheses about some aspect of reading. Boschi (1981) has also brought empirical evidence to the relationship between reading and affective factors. Finally, attitude and motivation, combined into a dynamic set, have appeared to influence the process of learning to read. Matthewson (1976: 655-676) has developed the so-called 'acceptance model' to explain the relationship between attitude and learning to read. Acceptance is based on positive attitude enhanced by a drive to act, that is by positive motivation. Now, as Matthewson states (p. 664), "while the acceptance model was designed to predict reading attention and comprehension at any given instant during the reading process, it may also be used to generate predictions concerning reading achievement. These predictions may be derived from the expected effects of favorable attitude toward reading coupled with appropriate motivation when both persist over an extended period of time". And he adds: "A number of experimental studies tend to support this prediction for reading achievement".

Finally, one could incorporate into the present position also the psychodynamic view issued by Mucchielli & Bourcier (1968) in order to explore the deep roots of dyslexia. Their starting point is the principle that the world and the ego grow up in strict correlation and become organized by reciprocal interaction. Dyslexia would consequently be the result of a specific disturbance of this world-ego relationship at a particular moment of the child's development. The disoriented universe of the dyslexic child is correlated to an ego living in a state of uncertainty and insecurity. In spite of its strict localization the dyslexic syndrome is a complex symptom of a more general and deep-rooted state of ambiguity and ambivalence. On the other hand, reading requires a fixed sequential orientation (left-to-right movements), a precise visualization of forms, a distance from words, their punctuation, and their decoding acts, a mastery of the relationship meaning-sound, the ability of superior cognitive organization in order to

understand syntax, a total synchronization of all reading operations both physical and mental, mastery of verbal communication, the ability to pass constantly from analysis to synthesis and viceversa, and finally affective or emotional stability.

All these conditions are prerequisites for the development of symbolism as a function. Symbolism is the basis of verbal —oral and written— communication.

All this amounts to saying that learning to read implies not only cognitive factors but no less important affective —or, more generally, psychodynamic— factors. The logical consequence that derives from these considerations is that metalinguistic consciousness includes much more than cognition: it demands the active participation of deep psychological factors rooted upon the existential perception of one's own ego, or ego-consciousness. This statement will open the discussion over an integrated model of conscious reading acquisition.

3. Towards an integrated 'person-centered' view of conscious reading acquisition

There can't be any doubt about the fact that human behavior and learning (its adaptative and developmental characteristic) are structurally and dynamically very complex such as to need a multiple analysis approach for their definition. Language behavior and learning do not escape this condition. They appear to be the result of multi-level processes touching on all the structural layers of human personality. Starting from this realization I developed (Titone 1973, 1982) an integrated model designed to explain the stratificational character of language behavior and language learning. It is suggested now that this model applies very fittingly to the analysis of the process of reading acquisition and of reading skills as capable of offering a multidimensional picture of such behavior and particularly a more complete definition of metalinguistic consciousness in its relationship to reading.

The model is called 'holodynamic' because it involves the active participation in behaving and learning of the total personality of the individual learner. More specifically it postulates the convergent activity of three operational levels: *tactic, strategic, and ego-dynamic*. The tactic level is the locus of sensori-motor operations, overt and observable, such as acoustic and/or visual decoding and phonetic and/or graphic encoding. Such operations are by their very nature systemic, or organized, or intrinsically ordered, that is subservient to well-defined goals and governed by rules. These rules, however, inasmuch as they are of a cognitive nature, belong on the upper level, called strategic. This is the locus of generalization and abstraction, of induction and deduction, of analysis and synthesis applied to language performance: in other words, strategy is nothing but the internal grammar developed by the communicator, it is the source of language intuitions, the deposit of tacit knowledge. Feedback mechanisms belong on this level. However, neither strategy nor tactics can work on their own, independently of a higher agent accountable for decisions, responsible —even morally— for whatever is said. This higher agent is the person's ego, an essentially conscious agent, capable not only of being aware of what is going on in behavioral manifestations but of developing deep consciousness, reasoned-out motivations, self-control, rational choices, self-criticism, and creativity in language as well as in any other sort of behavior. The ego is an indispensable entity: alone it can

establish relations and rapport with the world, it can recognize thoughts and feelings as one's own, it can take cognizance of values lying in language and culture, it can decide about acting or not acting. In other words, the speaker's hearer's ego is the locus of consciousness and conscience, of self-control and decisions, in one word, of linguistic self-consciousness. "*Loquor, ergo sum*": I speak, therefore I exist.

According to these three personality levels it is legitimate to distinguish three degrees of language control: namely, *language performance* (on the tactical level), *language awareness* (on the strategic level), and language or rather *metalinguistic consciousness* (on the ego-dynamic level). If indeed metalinguistic consciousness, as hinted at above, implies much more than mere cognition and requires in its full realization the convergent participation of self-consciousness, motivation and affect, attitudes, intentions, deliberate decisions, in sum, total control on the part of the ego, that active state of mind is possible only at the ego-dynamic level.

Reading, as said before, is such a complex and multilateral behavior as to demand the cooperation of all three levels. Tactical fitness and skill, strategic sensitivity and flexibility, conscious control of sensori-motor skills, of motivation and attitudes, of language structures (functions and features) and cultural contents, all are necessary components of mature reading ability.

Particularly it must be repeated that if initial reading is possible because of the concurrence of sufficient language awareness, progressive and mature reading will be made possible by the active influence of developing metalinguistic consciousness. This ultimate condition will transform the reading process not only into a rational activity centered on the reader's personality but into an enlivening and enriching cultural experience.

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