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ABSTRACT

In its broadest sense, metalinguistic awareness refers to the study of or reflection upon language as an object--the form and structure of language rather than the content, the way in which the form expresses or relates to the message. One value of research on metalinguistic awareness lies in its potential for testing adult notions about the ways in which children try to think about spoken and written language. Metalinguistic research reveals that young children are capable of generating structurally logical written language before they are able to reflect analytically on language, suggesting a tacit awareness of the symbolic function of print. Although metalinguistic awareness implies explicit awareness, by comparing whatever explicit knowledge young children have with what they can do but cannot explain (tacit awareness, such as their early attempts at "writing"), one can understand better the full range of their abilities. Hence a practical task of metalinguistic awareness research is to establish criteria of explicit awareness by which educators can say a child is ready to deal with the demands of formal or systematic reading instruction. Turning to adult metalinguistic awareness, researchers could focus on understanding as a function of what individuals have been exposed to, where they have been, and where they might yet go in their linguistic explorations. (RL)

Beyond the Psycholinguistic Vise of Competence/Performance Theory: Why Study Metalinguistic Awareness?

by

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Beyond the Psycholinguistic Vise of Competence/Performance Theory: Why Study Metalinguistic Awareness?

Several researchers in metalinguistic awareness are excited about words because these linguistic units afford a handy way of obtaining psycholinguistic information. They are, of course, also significant in the enterprise of acquiring literacy. Those of us who like to study words, however, for whatever motivation, must exercise a certain wariness of or at least a healthy skepticism toward prevailing theoretical winds. The transformationalists' distinction between competence and performance took us at first away from what we could directly observe to an "ideal" language user who "instantaneously" acquires language. The inevitable reaction swept us back to the "surface." The resulting theoretical and empirical vise obscured the joint contributions of an individual's competence, or potential, and the individual's actual performance. Investigations of metalinguistic awareness help better to conceptualize this interaction, to free us from the "v[illegible]" of either-or orientation, and most important, help us to understand how individuals are capable of structuring knowledge about words.

In order to characterize our notion of competence, we shall borrow an argument from evolutionary biology (Gould,

1980) and apply it to the child's language and developing linguistic (word) awareness: On the one hand, everything human beings do can be related to a material notion of utility. In terms of language, this means that the functions of and the processes underlying language all aim toward oral communicative utility. On the other hand, there is the "nonadaptive" position which holds that the original function of those aspects of the brain involved in language use does not necessarily determine or constrain future use: "Evolved 'for' one function, [they] can perform so many others as nonadaptive consequences of [their] architecture" (Gould, 1980, p. 47). If we take this latter perspective as characterizing competence, we allow for a considerable array of abilities that, as we shall see, invest children's learning about words with an impressive degree of sophistication.

In this paper, we intend to set some rather high standards for metalinguistic awareness research. After declaring our area of metalinguistic concern; we will address the issues raised above in two sections. The first assesses the probable determinants and consequences of awakening to metalinguistic thought vis-a-vis words; the second briefly discusses how metalinguistic research might identify the possible means by which words or lexical items, once understood as linguistic abstractions, develop and function for the older individual.

In its broadest sense, metalinguistic awareness refers to the study of or reflection upon language as an object. One is primarily concerned with the form and structure of language rather than with the content--the medium rather than the message--and the way in which the form expresses or relates to the message. Degree of awareness ranges from the young child who delights in the repetition of a good nonsensical rhyme to the adolescent scanning an exercise in Warriner's in agitated search of restrictive and nonrestrictive clauses to a clutch of transformationalists at Cambridge feverishly revising the Revised Standard Theory.

Most psycholinguists are intrigued by children's metalinguistic awareness because it allows them valuable glimpses into the ways in which children come to understand the communicative function of language (Sinclair, Jarvella, and Levelt, 1978; deVilliers and deVilliers, 1979). Specifically, children acquire an awareness of audience expectations and point of view and adjust their utterances accordingly. As deVilliers and deVilliers note, this primary function of metalinguistic awareness is epitomized by the ability to tell lies effectively. However morally disquieting this phenomenon may be, one can appreciate how the art of prevarication requires the fine tuning of a host of metalinguistic skills. Our concern here, of course,

is with the relationship between metalinguistic awareness and the linguistic unit of the word. While some psycholinguists may dismiss this concern as lying in the periphery of metalinguistic investigations (Levelt, Sinclair, and Jarvella, 1978), it is of seminal importance in cultures where literacy depends upon an understanding of the many levels of information represented by an alphabetic orthography.

Metalinguistic Awareness and Words: Young Children

McLuhan (1964) suggested that phonetic alphabets have the potential to extend those initiated into their mysteries beyond the collective consciousness of the tribe and in so doing bestow a sense of individuality. This is a mixed blessing, McLuhan believed, for with individuality and formal, logical thought come separation from an appreciation of the immediate experience. McLuhan's insights regarding the nature and consequences of a phonetic alphabet, although recently challenged by cross-cultural investigations (e.g., Scribner and Cole, 1977), may at least be appreciated for their early focusing of attention on print as the "medium," the mover of specific if not general cognitive and cultural events. As we discuss below, for young children print may indeed effect the crystallization of language and render it amenable to conscious exploration. The consequences of examining

written language as an object in itself may or may not transfer appreciably to other cognitive activities, but even if such activity is limited only to language it is of value for a society so dependent on and enamored of the written word.

McLuhan spoke of the segmenting, "temporalizing" of language as a consequence of a phonetic alphabet. And of course this is a very basic notion which we believe children must acquire. One value of metalinguistic awareness research, therefore, lies in its potential for testing such adult notions about the ways in which children try to think about spoken and written language. We believe that children must segment speech before learning very much about reading and writing. When we begin to attend to children's perceptions of words, however, we may be a bit startled. Supposedly phonetic or alphabetic orthographies are second-order abstractions from the real world, spoken language being a first-order abstraction. This degree of abstraction reflects the historical picture; but we may ask ourselves how accurately it reflects children's conceptualizations of language. Certainly most children learn to talk before they gain much familiarity with written language, but in terms of interacting with written language and learning some of its logic, it appears that children may not necessarily need to think first about

the structure of spoken language before they are ready to think about the structure of written language. Here then is a curious paradox: if alphabetic orthographies are conceptually "tougher" than spoken language, how come children are capable of approaching them so logically before dealing in similar analytical fashion with spoken language? Metalinguistic research, soft and sophisticated alike, reveals that young children are capable of generating structurally logical written language before they are able analytically to reflect on language. Given the knowledge of the names of the letters of the alphabet, the children are able to segment the stream of speech for the purpose of writing (Read, 1971; C. Chomsky, 1979; Ferreiro, 1980). We can question the five-year-old who writes the word "monster" as MSTR about his or her choice of letters, but we will most likely not get very far. There is little evidence of a conscious or explicit awareness of the symbolic function of print; the child's spelling suggests, however, that a tacit awareness exists.

After a fashion, then, young children can handle the second-order abstraction of alphabetic orthography before they are able to analyze the first-order abstraction of speech. Our curious paradox dissolves, however, if we admit the value of tacit awareness. Although metalinguistic awareness implies explicit awareness, by comparing whatever

explicit knowledge young children have with what they can do but cannot explain (such as their early writing), we understand better the full range of their abilities. We are not trapped, as some investigators in word knowledge have been, by attending only to what the children can verbalize, thus emphasizing the gap between what they seem to know and what they have yet to learn. Instead, we consider the enormous array of capabilities the children have about which they are unable to verbalize.

To clarify this relationship between explicit and tacit linguistic awareness, let's consider some findings from Read's research (1975). Depending on their purpose, children group different phonemes, or phonetic properties, together. For example, for six-year-olds the relation among the lax vowels /I/ (short i), /ɛ/ (short e), and /ae/ (short a) is judged to be stronger than the relation between /I/ and /i/ (long e), /e/ (long a) and /ɛ/. To illustrate, in an X:A,B paradigm, children make similarity judgments such as /ɛ/: /e/, /ae/. In this particular case, the children are likely to judge /ɛ/ and /ae/ to be more similar than /ɛ/ and /e/. And yet, when six-year-olds set about the task of spelling sounds, they readily establish a relationship between /I/ and /i/, /e/ and /ɛ/. Short i, for example, is often spelled with an e (/i/). In other words, children do not seem to approach

speech in a monolithic, purely phonemic fashion: they categorize, and spelling apparently exerts different demands than do other types of phonetic judgments (see Figure 1).

The way in which these six-year-olds categorize or group sounds together for purposes of writing may have little to do with whatever categorization is actually involved in their production and comprehension of speech. These various categorizations, however, are necessarily abstract, and may well be one of the "nonadaptive consequences" (Gould, 1980) of language ability. This type of linguistic performance highlights potential knowledge, or competence, and if we were to limit ourselves solely to investigating the immediate pragmatic, "utilitarian" functions of language, we could very well overlook this potential for word knowledge.

A practical task of metalinguistic awareness research is to establish criteria of explicit awareness according to which we can say a child is ready to deal with the demands of formal or systematic reading instruction. Should these criteria include the ability to segment words phonemically? If so, what cognitive and linguistic prerequisites are necessary? Must we allow this ability to emerge "naturally" or must we teach it? If we opt for the latter, will teaching five-year-olds, for example, to

segment phonemically lead to a transfer of this ability to productive reading behavior? Solid metalinguistic research, however, provides a perspective from which these abilities may sensibly and validly be related to literacy acquisition.

At present, it appears that the analysis of words that involves explicit attention to more than one feature at a time probably depends on the attainment of a level of cognitive development corresponding to Piaget's concrete operational stage (e.g., Papandropoulou and Sinclair, 1974; Templeton and Spivey, 1980). For example, the perceived regularity among word patterns such as fat-mat-bat and, at a more abstract level, repel-expel-propel and crescendo-crescent presupposes some type of role of the spelling system of English, but in order to appreciate this role one must "decenter" (Zutell, 1979) from only one feature of words. For the young child, a necessary beginning distinction is that between the word as an independent abstraction and its referent and, later, its meaning. In this century, Vygotsky (1962) first noted the tendency of the young child to confuse signifier with signified; a few recent studies have borne this out (Papandropoulou and Sinclair, 1974; Sulzby, 1979; Templeton and Spivey, 1980). What pries the two apart? We believe an interaction between cognitive level and print seems to be

involved; print is a stable, "objectified" representation of spoken language which, unlike the fleeting presence of spoken language, can be attended to and "studied." Later on, the role of words as linguistic constituents of larger structures and, in turn, their own constituent structure can both be appreciated and studied.

Before moving on to metalinguistic awareness and more "advanced" word knowledge, we need to mention another aspect of our criteria of explicit awareness that few metalinguistic awareness studies have addressed. "Segmentation" ability usually refers to the form rather than to the content of language. Surely the ability consciously to segment implies an understanding of meaning and some of the correspondences between structure and content. The current preoccupation with word structure--probably a function of our prevalent biases about early reading instruction--needs to admit the study of the developing understanding of lexical meaning, of the "acoustic to semantic shift" that occurs over time. How does this shift operate within words, and within and between word categories? Where instructional implications are concerned, metalinguistic awareness research that investigates the several components of a language construct should tell us more than research that isolates one or two components. Because segmentation of words and segmentation of phonemes

are important for learning to read, we have seen a plethora of studies investigating these abilities and have noted the significant positive correlation between reading achievement and such abilities. Diminishing empirical returns have resulted. A shift in research paradigm should correct this orientation. With respect to words, the prospects are exciting: we are now engaging the same child in tasks ranging across both structure and content of words and, better yet, following this child over time (Morris, 1980).

Metalinguistic Awareness and Words: The Older Student

As we have noted, future metalinguistic research should tell us more about the degree to which conscious word analysis influences the structure and development of lexical representations and the relationships among structures in our lexicons. Although the investigation of tacit awareness of letter patterns boasts a long and at times distinguished history--for example, the work of Eleanor Gibson and her students--explicit awareness of the different levels of orthographic representations and their productivity for lexical growth has received comparatively little attention. There is evidence to suggest that, at least for good spellers, orthographic structure becomes a salient feature of lexical representation; many

individuals come to organize lexical information psychologically around an orthographic base (Templeton, 1979). Such representations probably do not exist at as abstract a level as that suggested by Chomsky and Halle (1968), but they are farther removed from the surface phonetic level of speech--therefore less variable and more economical--than several theorists have proposed (e.g., Hockett, 1968; Stampe, 1973). Rules based on and operating across these orthographic lexical representations may facilitate the learning and application of higher-order morphophonemic rules such as vowel alternation (native-natural) and vowel reduction (compete-competition). In other words, for the older individual the correspondence between speech and print is reversed from that of the beginning reader: The beginning reader must learn how orthographic structure corresponds to an existing phonological system; the older individual must learn how the more unfamiliar, higher-order morphophonemic rules relate to a more familiar orthographic system. Future research needs to determine how aware individuals are of these morphophonemic patterns. If individuals are not explicitly aware of them, are these patterns nevertheless productive in reading, writing, and speaking?

One way of addressing the preceding question is to investigate the way in which older individuals deal with

derivationally-related words such as sane-sanity and deride-derision. As we admonished at the outset, however, we must be wary. One phonological theorist (Leben, 1979) suggests a procedure for "recovering" verbs that end in [$\overset{y}{s}$], [s], [t] and [d] from their derived nominals abolition, confession, assertion, and apprehension. For example, if we wish to recover the pronunciation of the base word for apprehension, Leben suggests we try running through an "orderly chain of segments" (for this category of words, the four referred to above) until we get to the one that fits. Apparently this means we first try apprehensh, move on to apprehense and apprehent, and finally try apprehend. We will not go into why Leben has ordered the segments this way--they are, however, "theoretically" ordered in the best manner--but we must ask how realistic such a procedure actually is. In this case, while the theorist is busy spinning hypothetical phonological procedures, others suggest shortcuts. Part of the theorist's problem may be the narrowness of focus we have decried. Why limit ourselves to sound? Recall that the orthographic structure may be more familiar. Occasionally all that may be required for individuals to incorporate awareness of derivationally-related words is to point out to them a few patterns of relationships as represented visually in the spelling system and send them

about their business with a powerful new way of consciously organizing their lexicons (C. Chomsky, 1970; Templeton, 1979b). For others, more systematic instruction may be necessary. Our teaching experience informally validates these aspects of more explicit metalinguistic awareness; we need, however, more refined studies to determine more precisely how and when the appreciation of these more abstract features of words occurs.

At the risk of belaboring a point, we offer a word of caution. If we interpret individuals' performance with regard to word knowledge from too narrow a perspective, underlying competence may be obscured. So long as children's early writing was seen as random scribbling only vaguely foreshadowing eventual mastery of the English orthographic system, we lost valuable insights into their ability to handle the correspondence between speech and writing. Analogously, so long as we limit our considerations of older individual's word knowledge simply to the "effects of instruction" (Baker, 1980) we will lose understanding of the limits to which that knowledge is capable of expanding. In terms of competence, Gould's "nonadaptive consequences"--the potential for continued development within and among words--are as relevant here as at earlier levels.

What It Means:

Metalinguistic Awareness and "Word-ness"

In The Tempest, Prospero says to Caliban: " . . . I endow'd thy purposes with words, which made them known." The consequences of Prospero's gift to Caliban may have been bittersweet, but it is engaging to speculate that, for young children, perhaps the beginning appreciation of words may indeed render their own communicative purposes and intents explicit. As soon as the child provides evidence that he or she understands that words are multi-featured constructs then the purposes and functions of language are open for exploration. Words are the logical map from which to begin this exploration: they "segment" concepts from events or propositions yet are greater and more "real" than the pieces of sound--phonemes--which adults often presume are so easily accessible to children.

Just as the young child's syntax appears to be dependent upon logical relationships in the environment (agent, action, object, etc.), so might the grammar of printed language depend at first on features of intended referents: number and order of letters increase, for example, depending on quantitative variations in the referent (Ferreiro, 1980). Without wishing to strain the parallel between spoken and written language development much further, it bears noting that tacit knowledge or awareness reflects children's capability to generate a "grammar" of printed language and of words before they are

capable of consciously parsing word boundaries and analyzing intraword relationships. This "grammar," which in its earliest stages Ferreiro has termed an "internal organizing mechanism," will approach the "standard," that is, the orthographic pattern of English, once conscious reflection begins. In this case, as in the many other aspects of linguistic and cognitive functioning, the ability to explain lags behind the ability to perform. Unfortunately, much beginning literacy instruction seems to be predicated on the notion that it is possible to teach children conscious awareness right along with performance. In noting the written/spoken language parallel, we wish to emphasize that children's performance with regard to printed language and the consequent awareness of printed words should not be regarded as some kind of anomaly in their development to be reined in through the reassurance of scope and sequence. Rather, this development is a much more natural phenomenon than is often assumed. The villain in young children's "cognitive confusion" to which Downing (1976) refers is not linguistic abstraction; more likely, it is mis-or uninformed pedagogy.

The metalinguistic research being undertaken investigating what individuals know about words should afford sharper focus on their understanding as a function

of what they have been exposed to, where they have been, and where they might yet go in their linguistic explorations. Although we may have in the past been given to idealizing the cognitive power afforded individuals by virtue of their knowledge of words, we cannot remain unimpressed by the indirect glimpses of competence with respect to words which our research is allowing us. And, if one wishes to be pragmatic--as is the fashion nowadays--at least in primarily literate societies explicit word knowledge is highly valued. The more we understand both the process of acquiring the concept of "word-ness" and the nature of structural and significatory aspects of words, the more we may hope to ensure not only minimal competency levels but excellences as well.

In the investigation of word knowledge from a metalinguistic perspective, freeing ourselves from the psycholinguistic vise of competence/performance theory does not entail discarding the distinction outright. Rather, it entails a proper redefinition of the distinction. Performance raises the questions "What do individuals do, and why do they do it?" Competence responds by suggesting what individuals are capable of doing and how they can realize this capability.

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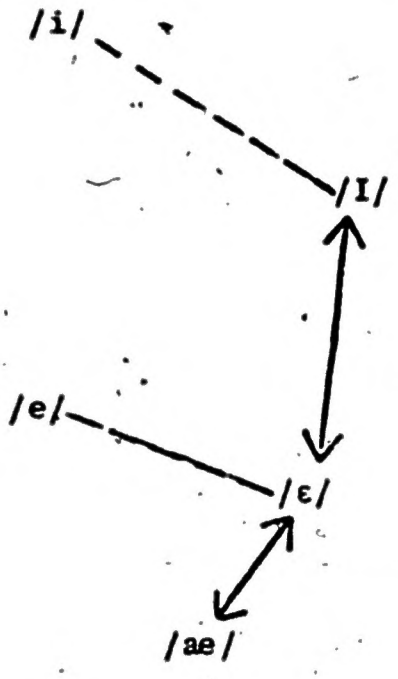

Figure 1. Children's judgments of relationships among front vowels in English. (After Read, 1975. Bold arrows indicate stronger similarity relationships; dotted lines indicate spelling relationships.)