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Metalinguistic Abilities in Preschool Children
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During the past fifteen years, the study of metalinguistic abilities in preschool children has become widespread, involving those interested in measuring what young children know about language. Definitions of "metalinguistics" range all the way from "the ability to view language as a disembodied entity"¹ to "the ability to make language forms opaque and attend to them in and of themselves."² The disagreement on the definition and the apparent need to supply a definition in every study suggest that the study of metalinguistics in children is still in very early stages. There is general agreement, though, that metalinguistic ability has something to do with the ability to view language as a disembodied entity and make related judgments. Metalinguistic abilities have been tested by measuring a person's ability to articulate a metaknowledge of language.

It has been assumed in the studies that metalinguistic abilities are not available to infants and toddlers who have not yet developed the cognitive abilities necessary for such a task. This is most probably a good assumption and will be accepted for this study. This paper questions another assumption that researchers have made in their studies of metalinguistic abilities: that is, that metalinguistic abilities are a result of natural language development. Metalinguistic abilities not only require the development of the necessary cognitive abilities, but they also require some sort of teaching to be articulated by native speakers.

In a study which I conducted in 1983, three children were interviewed using Hakes' methods of testing for metalinguistic abilities. The results showed that, eventhough the judgments of young children were quite accurate, the ability to explain the judgments progressed very slowly until the age when they would have started school.³ More details of the study will be presented later, but with this brief summary it is interesting to note that judgments were at a high level of accuracy at an early age, yet the ability to explain the judgments was not as accurate. (see Table 1)

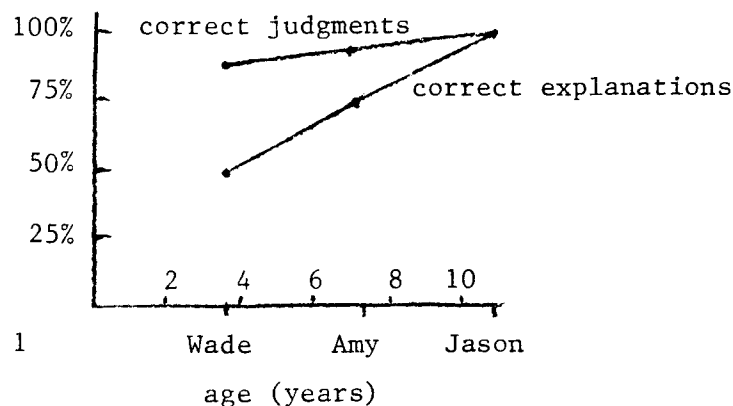


Table 1

A look at a theory of language will help explain why children begin to develop the ability to articulate metalinguistic awareness about the time they start school.

In their paper on second language acquisition, Brown and Williams discuss the transparency theory of language as described by Michael Polanyi. They point out how the fact that language is an instrument and not an object of the speaker's attention makes a difference in second language learning as opposed to second language acquisition.⁴ The same principles can be applied to a child's first language acquisition. To show this we can go back to Polanyi's discussion.

In Personal Knowledge, Polanyi describes skills and the thought processes involved in them:

The aim of a skilful performance is achieved by the observance of a set of rules which are not known as such to the person following them.⁵

Bicycle riding is a skill that involves rules that the bicyclist is almost never completely explicitly aware of, but that he is tacitly aware of. In order to ride a bicycle, the person must provide a curvature of each winding that is inversely proportional to the square of the speed for a given angle of imbalance.⁶ A bicyclist must obey this rule if he is to avoid falling.

Language is a skill, also. There are certain rules of grammaticality, meaning and other essential elements that the speaker must obey if he is to succeed in communicating.

If a person were tested for his knowledge of how to ride a bicycle by having him watch someone else fall down and then being questioned as to why the person failed, it probably would not yield a good evaluation of the person's own skill in riding a bicycle, and it would probably yield no reference to the rules that are only tacitly understood. The person being tested for meta-bicycle-riding ability could be very capable of following the rule given above for maintaining balance, but only those who were taught exactly what the rule is would be able to indicate that the person who fell off the bicycle failed at a given point to provide the curvature of the winding that would be inversely proportional to the square of the speed. Not knowing this rule explicitly and being expected to give a reason for the failure, a person might even resort to irrelevant answers, such as the cyclist's going too fast or the bicycle's poor quality.

Language is transparent. We are able to use language, as a skill, following the rules, even though we may be unable to articulate those rules. If we are asked if something has been said correctly or incorrectly, we can give a description of the rules broken only if we have been taught how to articulate those rules, whether it be through formal schooling or some

other mode of education. Questions involving metalinguistic explanations for incorrect utterances can yield irrelevant answers. Although the person being questioned may have a tacit awareness of the rules that are being violated, without being taught how to articulate the rules, the person would not have an explicit knowledge of the rules.

In my study already briefly summarized, Wade (3;10) was able to judge whether sentences were formed correctly 83% of the time, while his explanations for his judgments did not reflect a good metalinguistic awareness. When asked to judge the sentence "Any men ate lunch," he stated that the sentence was "bad". When asked why, Wade paused for a few seconds with a perplexed look on his face and finally came up with the explanation, "If the men, don't eat lunch when it's time, they'll get in trouble."⁷ It is highly unlikely that Wade could make correct judgments at a rate of 83% with this type of logic. It is much more probable that Wade, realizing that he was unable to articulate his reason for making the judgment, found another explanation that he could articulate. This new explanation was not correct, but it did fulfill the need to give the interviewer an explanation.

It appears that Wade was tacitly aware of the rules being violated because he was able to judge incorrect sentences as such, but it also appears that he was incapable of articulating those rules. This fits well with Polanyi's definition of a skill. A look at the studies that have been done on metalinguistic abilities in small children will reveal that the researchers have assumed that the ability to articulate metalinguistic awareness is a result of natural language development. If language is a skill, though, then the ability to articulate metalinguistic awareness would have to be taught by supplying the speaker with the understanding and vocabulary necessary to vocally analyze language, just as it is necessary for a person to understand some physics and the jargon involved in order to articulate the reasons why a person has failed at riding a bicycle.

The studies of metalinguistic development in children did not begin until the 1970's. The biggest reason for the late start was the lack of an effective way to measure the metalinguistic abilities in young children. A study done by Brown, Fraser and Bellugi in 1964 proved unsuccessful because of the difficulty encountered in eliciting judgments from the children.

In 1970, Gleitman, Shipley and Alloway suggested a possible way of eliciting acceptability judgments from two-year-olds. They used simple imperatives, such as "Throw the ball" or "Ball the throw" to elicit judgments of "good" or "silly" from the children. The young children were also asked to repeat the "good" sentences and to correct the "silly" sentences. This proved to be an effective way of measuring the children's abilities in judging the acceptability of the

sentences presented to them. With the development of Gleitman et al.'s new method, others began to study metalinguistic abilities in children.

The early studies claimed that most judgments made by young children are based on semantic acceptability rather than syntactic acceptability. In other words, the children were apparently unable to disassociate the words from their meanings. Vygotsky had written that, to a child, a word is an integral part of what it denotes.⁹ The young children were unable to articulate any recognition of a syntactic aspect of language. De Villiers and de Villiers claimed that semantic corrections were made by the two and three-year-olds, while syntactic corrections proved to be beyond their capacity. Since children use language to convey meaning, it seems reasonable that semantic explanations would be available to them as far as ability to articulate them goes. The children in the study were asked to judge simple imperatives and correct them (e.g., "Cake the eat" to "Eat the cake"). Only the most linguistically advanced of the eight children was able to make direct word order corrections on more than 50% of the attempts. Three consistently changed the word order, but also changed the meaning (e.g., from "Doggie the find" to "Pat the doggie").¹⁰ For adults it may seem obvious that "Doggie the find" is really just an inverted form of "Find the doggie", but it may not be as obvious for young children. These researchers claimed that the child's changing of "Doggie the find" to "Pat the doggie" is evidence that the child was unable to focus on problems of syntax. On the contrary, the syntax was, in fact, corrected. There is no evidence that the researchers ever indicated to the children that the meaning could not be changed, if "Doggie the find" does really have meaning.

Gleitman et al. also attempted to show the dominance of the semantic basis for the elicited judgments of young children. The study included three children between 26 and 30 months old. Their main data for evaluation of the metalinguistic abilities in these children were the corrections the children made of simple imperatives that they judged as "silly". Only two of the three children in the study made any corrections at all. One child made nine corrections. Three of the nine corrections merely repeated the sentence to be corrected, two of which were reversed order. Four of the corrections made semantic changes. The second child made ten corrections of sentences judged as "silly". Half of these "corrections" changed word order that was already correct. Seven of the ten corrections changed the imperative semantically.¹¹ Again, it is never doubted in this study that children would know from natural language development that "Ball me the bring" would be recognized as a reversed form of "Bring me the ball". This study does not list all the sentences that they used in testing the the metalinguistic abilities of the 26 to 30 month old children, but they give a few examples

including "Ball me the bring" of sentences that the children were asked to correct. The researchers comment on the children's inability to correct the sentences. They did not seem to notice, though, that this sentence of four words is twice the length of the average two-year-old's mean length of utterance. It appears that the sentences may have been above the children's linguistic performance level which would most likely make it difficult to propose metalinguistic corrections.

Hakes claimed that metalinguistic abilities do not begin to emerge until age four, corresponding to the cognitive development changes which Piaget has called the emergence of concrete operational thought. Hakes studied one hundred children ranging in age from 4 to 8 years. He included conservation, comprehension, synonymy, acceptability and phonemic segmentation tasks to test the correspondence of metalinguistic abilities and the progression of cognitive development as outlined by Piaget. In his study, Hakes concentrated on the onset of syntactic judgments, rather than the content-oriented (semantic) judgments. The acceptability tasks showed a distinct trend going from semantic to syntactic judgments which he calls "adult judgments", although he admits that adults who are looking for something wrong in a sentence "will seize upon blatant falsity if there is nothing else wrong."¹²

Again, Hakes has made the assumption that "adult judgments", or syntactic judgments, are a result of natural language development. Some kind of indication that these judgments do not result from natural language development would create the need for an explanation for why the change takes place, since the data does show a definite shift in how the judgments are explained. The shift does coincide with the age at which most children begin school. Let us explore how schooling affects metalinguistic abilities.

If the transparency theory of language is valid in the case of metalinguistic abilities - that is, if metalinguistic abilities are present only if they are taught - then in adults there should be a difference between those who have received schooling and those who have not. In papers written by Mary Hamilton and David Barton, literacy and schooling are shown to have some effect on the metalinguistic abilities of adult native speakers. In Barton's study, it was found that adults of low literacy levels do make a high amount of errors in segmental awareness.¹³

In Mary Hamilton's paper, the literacy of the adults was found to have some effect on their metalinguistic abilities, but the "differences between literacy levels were blurred."¹⁴ She concludes that schooling, more than literacy, affects the metalinguistic abilities and cites recent work done by Cole in which literacy and schooling were separated as independent

factors. Cole worked with the Vai-speaking people of Africa, some of whom were literate and others non-literate. Very few had received formal schooling. Literacy did not seem to have an effect on the people's metalinguistic abilities, but responses varied "according to whether or not people received formal schooling."¹⁵

Hakes states that "metalinguistic abilities show their greatest development during middle childhood, roughly, 4 to 8 years."¹⁶ This coincides with the child's entry into the formal schooling atmosphere.

In light of the transparency theory of language, the studies showing the onset of the ability to articulate metalinguistic awareness as the child begins school and the absence of metalinguistic abilities in unschooled adults as opposed to schooled adults, it would appear that metalinguistic abilities do result from schooling. Although the awareness of metalinguistics seems to be present in preschool children and unschooled adults, they are unable to articulate the awareness. This would account for the fact that preschool children are very capable of judging sentences as right or wrong but are incapable of explaining many of their judgments or correcting incorrect sentences. Future studies on the effects of schooling on metalinguistic abilities in young children will be instrumental in proving whether or not the ability to articulate metalinguistic awareness must be taught or if it is acquired through natural language development.

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