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ABSTRACT

Metalinguistic knowledge, or linguistic awareness, involves the ability to focus attention upon the form of language in and of itself, rather than merely as the vehicle by which meaning is conveyed. This ability to analyze language structures lags behind spontaneous speaking and listening performance because of the additional cognitive skills required. In this paper, the proposal that the learning of two languages should require and promote linguistic awareness is considered. Previous empirical research relevant to the hypothesis is reviewed briefly, and some experiments which would test several predictions related to the hypothesis are outlined. (Author)

METALINGUISTIC DEVELOPMENT AND BILINGUALISM[1]

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Whereas the child with non-English mother tongue tends to be viewed as handicapped within a traditional monolingual/monocultural educational framework, I believe that such a child has the potential to attain levels of proficiency in and knowledge of his two languages much beyond the grasp of the typical English-speaking American. The most frequently mentioned advantage of children from language minority groups concerns the opportunities they have for becoming truly bilingual. If the children are encouraged and assisted, they have a much better chance of becoming literate and fluent in two languages than the Anglo child whose only contact with a non-English language is in the classroom. In this paper, I would like to develop the proposition that bilingual children should acquire metalinguistic knowledge more quickly and to a higher degree than monolingual children and to suggest some techniques for empirical investigation of this hypothesis.

Metalinguistic knowledge, or linguistic awareness, involves the ability to focus attention upon the form of language in and of itself, rather than merely as the vehicle by which meaning is conveyed. Vygotsky (1934/1962) and, more recently, Cazden (1974) have proposed that this ability to analyze language structures (phonological, lexical, syntactic, and semantic) lags behind spontaneous speaking and listening performance because of the additional cognitive skills required. In particular, metalinguistic tasks require conscious knowledge and manipulation of the

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rules which are employed unconsciously in spontaneous conversation. In a previous paper (Ryan, in press), I have reviewed evidence indicating that children's metalinguistic skills improve significantly during the preschool and school years in syntax-oriented tasks requiring word segmentation, identification of parts of speech, processing of distorted sentences, sentence repetition, direct judgments of sentence acceptability, and deliberate corrections of sentence structure. Furthermore, it has been suggested that certain levels of linguistic awareness may be prerequisites for learning to read and that learning to read, in turn, leads to greater awareness of the phonological, lexical, and syntactic systems of one's language.

In a manner similar to the acquisition of literacy, the learning of two languages should require and promote linguistic awareness. Knowing two language systems for communicating the same ideas should provide for a more objective, conscious view of one's own language as well as of language in general. In fact, learning about one's native language has often been a motivation for foreign language study in school (in particular for the study of Latin). Several investigators (Cazden, 1974; Chukovsky, 1963; Weir, 1962) have noted that young children play with their newly acquired language in syntactic pattern practice, rhyming games, and topsy-turvy talk and that such play apparently promotes the child's deliberate control of language. It seems reasonable to expect that contrasts between the two languages being learned by the bilingual child would promote more intensive and varied language play and, thus, greater awareness of syntactic and phonological structures.

As part of an excellent review concerning the antecedents and consequences of bilingualism, Segalowitz (in press) has listed the reasons

given in the literature for effects of bilinguality upon intellectual functioning as well as summarized evidence to support the notion of superior verbal and cognitive flexibility for bilinguals. Similar arguments can be expected to apply to metalinguistic development as to other aspects of cognitive development since the development of linguistic awareness (or metalinguistic knowledge) is essentially the intellectualization of spontaneous language knowledge.

Although it is possible that confusion between a bilingual child's two languages might interfere with his thought processes, several arguments have been advanced in support of enhanced intellectual development. First of all, as Leopold suggested twenty-five years ago, knowledge of two symbols for the same concept should enable the bilingual child to separate the sound from its meaning sooner. Secondly, to whatever extent an individual's perception of the events in the world is limited by his language (a la Whorf), a child with two languages should not only possess two perspectives but also more easily conceive of the existence of many perspectives. Thirdly, the richer linguistic and cultural experiences typical of the bilingual child should provide greater opportunity for conceptual development. In particular, he is likely to undergo a variety of cognitive conflicts (a la Piaget) earlier than his monolingual peer and thus be forced to make the appropriate cognitive resolutions at an earlier age. Of course, demands on cognitive abilities that are too insistent and too early could be debilitating and make a child anxious and ill-adjusted. The situations under which the learning of two languages can have these negative consequences deserve study. Fourth, the task of acquiring a learning set to switch from one language to another as necessary should lead to greater cognitive flexibility.

Several studies (Balkan, 1970; Ben-Zeev, 1972; Cummins & Gulitsan, 1974; Ianco-Worrall, 1972; Peal & Lambert, 1962) provide supporting evidence for the bilingual's advantage in a variety of tasks. Vygotsky's symbol substitution task, which involves the use of sentences with one word (e.g., 'cat') replaced by another (e.g., 'dog') clearly is a measure of the child's ability to play deliberately with the form of language. In the one study using this task where no difference was obtained between monolinguals and bilinguals (Ianco-Worrall, 1972), the bilinguals showed a greater ability to verbally explain the arbitrary relationship between a symbol and what it represents. Along the same vein, in a Piagetian test for concrete operational thought, Ben-Zeev (1972) found that bilinguals were better able to provide explanations of the correct solution although the two groups performed equally well on the task. In the area of cognitive flexibility, bilinguals have excelled in terms of number of interpretations of repeated auditory stimuli and number of diverse uses produced for a common object.

On the other hand, Macnamara's, (1966) evaluation of Irish national schools and a recent study in an American school in Japan by Tsushima and Hogan (1975) appear to support the hypothesis that bilingualism is associated with impairment in certain aspects of verbal functioning and academic learning.

Contrasting the procedural and societal differences among these studies will illustrate the great variety of factors that may influence the outcome of any research regarding the consequences of bilinguality.

Peal and Lambert (1962) attempted to control for sociocultural differences between their two groups by selecting both monolingual and bilingual ten-year-olds from the French Catholic schools of Montreal.

Defining bilingualism as a genuine ability to perform equally in both English and French on a series of tasks, the monolinguals were thus differentiated from bilinguals by performance rather than by the social-cultural circumstances into which they were born. On the contrary, although parental report of some bilingual ability was required by Tsushima and Hogan (1975), the bilingual children all had Japanese mothers and American fathers while both parents of the monolinguals were required to be American. There are difficulties with both of these definitions. On the one hand, investigations of groups differing socially and culturally from each other do not allow one to attribute performance variations between monolingual and bilingual groups to language experience alone. On the other hand, insistance upon genuine (balanced) bilingual abilities introduces a selection factor. The children classified as monolingual by Peal and Lambert were the unsuccessful second language learners and perhaps also the least intelligent initially. Thus, the advantages found for the bilingual children could have been due to selection factors rather than to the intellectual boost provided by bilinguality. To avoid this difficulty, Tsushima and Hogan followed the suggestion by Macnamara (1966) that the children be matched on nonverbal intelligence scores before differences in verbal skills are investigated. However, such a matching procedure is not applicable for studies focusing on general cognitive development. It should be noted here that, although the bilingual children performed more poorly on several verbal tasks in Tsushima and Hogan, they were equivalent on nonverbal IQ.

Obviously the level of dual language ability of the bilinguals would affect the degree of influence of bilinguality as would the context and age of acquisition (e.g., one parent for each language, two languages used

interchangeably in the home, home language vs. school language).

Furthermore, the age and type of testing are certainly very important variables. Clearly, if children are introduced to their second language in school, one would expect weak performance in the second language as well as small effects of second language learning on performances in the first language in the early primary grades. As Tsushima and Hogan noted, if academic achievement or intelligence tests are employed, the tests for upper grades emphasize increasingly complex language functions. For example, reading tests in the first two or three grades focus on word identification skills while comprehension of more and more elaborate texts is measured from the fourth grade on. Thus, it is important to distinguish between age trends due to developmental differences and those due to differences in the skills tested. In addition, varying interests of researchers have led them to investigate different types of abilities, and the results may be quite specific to these.

Of particular importance is the fact that many studies (e.g., Peal & Lambert, 1962; Tsushima & Hogan, 1975) have measured the bilingual's abilities only in one language, which may or may not be his dominant language. Thus, if some of the children with Japanese mothers in Tsushima and Hogan (1975) spoke predominantly Japanese before beginning school, the reported deficit of bilinguals in English verbal skills may be a function of measurement in the weaker language rather than in any more general ability. Some recent studies (Ianco-Worrall, 1972; Lambert & Tucker, 1972) have employed two monolingual control groups as well as tested the bilingual group in both languages. This procedure seems to provide for a more objective assessment of the bilingual's cognitive and verbal abilities. In fact, for some purposes an alternative method

of analysis might involve dividing the bilingual group into two language-dominant groups and comparing each with the relevant monolingual group.

Finally, studies employing precisely the same procedures in different language contact situations may very well produce apparently inconsistent results. For example, where a child's native language is denigrated by the dominant society, the negative attitudes may themselves engender barriers to intellectual development. Where bilingualism is viewed as an asset, or even as a necessity, second language learning opportunities and training will be quite different from situations where knowledge of two languages is viewed as potentially damaging or as indicating loss of loyalty to one's own group.

As far as I know, only one study has attempted to investigate the bilingual's potential advantage in terms of awareness of syntactic structures. Ben-Zeev (1972) compared, among many other tasks, abilities to analyze syntax but obtained no differences between bilingual and monolingual children. In order to explore the course of the bilingual's development of syntactic awareness, one must first identify tasks requiring deliberate control of syntax which have yielded developmental differences among monolingual children across a relevant age span. Since educational programs customarily begin at age 5 or so, the emphasis naturally falls upon the early school years. Improvement during those years has been demonstrated for a variety of tasks. The abilities to judge grammaticality and detect ambiguity have been singled out by linguists and psycholinguists as particularly indicative of a speaker's competence. In two studies conducted at Notre Dame (Scholl & Ryan, in press and Scholl, 1975), we have shown that the ability to distinguish between grammatical and immaturely formed sentences improves between ages 5 and

10. Moore (in press) found that 12-year-olds could judge degree of grammaticality but not with the sophistication of the adult. Studies of children's ability to detect ambiguity (Politzer, 1975; Shultz & Pilon, 1973) have also indicated improvements through age 12. Furthermore, tasks requiring children to give two sentences distinguishing between the different uses of an ambiguous word or phrase (Carroll, 1971; Politzer, 1975) have yielded quite dramatic developmental differences, extending beyond adolescence. Gleitman and Gleitman (1970) have even observed striking individual differences in adults' abilities to paraphrase various expressions with unusual syntactic structures.

Once a metalinguistic task has been chosen, the groups of children to be compared must be selected. Since the difference between the performances of monolingual and bilingual children across a developmental period is of particular interest, several age groups would probably be involved. For example, suppose one chose to study monolingual and bilingual children in first, third, and fifth grades on a task involving judgments of grammaticality. These groups should be matched on a variety of important factors so as to ensure that whatever differences are observed can be attributed, as specifically as possible, to bilinguality rather than to some other uncontrolled distinguishing characteristics. Thus, the ideal comparison would involve members of the same ethnic group (e.g., Mexican American) and of the same social class (e.g., lower middle class) with equivalent oral proficiency in the language of the judgment task. To the extent that a child is <u>not</u> a balanced bilingual, he should of course be tested in his dominant language. Thus, the study might involve two bilingual groups (e.g., English dominant and Spanish dominant), each of which must then be compared to a monolingual group in the appropriate language.

For practical reasons in the typical American setting, all testing might be accomplished in English using only English dominant or balanced bilinguals. In some American regions, one could compare the effect of bilinguality for children of several ethnic groups. For example, some San Francisco Bay Area schools offer Spanish-English or Chinese-English bilingual education to Anglo, Mexican American, Chinese American, and Black children.

CONCLUSION

With experiments designed along these lines, one would be able to test several related predictions: (1) that the bilingual child will show a greater awareness of language structures than his monolingual peer; (2) that the earlier an individual first confronts his two languages the greater the impact on his level of cognitive functioning; and (3) that the linguistic awareness of a bilingual child from a language minority will be greater if he participates in a bilingual education program than if he attends a more typical English-only school.

Empirical investigation of these predictions could have considerable impact upon educational planning for language minority children. If lasting intellectual advantages of bilinguality can be demonstrated, the promotion of bilingual/bicultural education for children of monolingual parents will gain momentum. Furthermore, specification of the language learning contexts within which the development of both bilingualism and intellectual abilities thrive may eventually be possible.

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