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ABSTRACT

It is the task of educational linguistics to describe and analyze language education in all aspects. With respect to the Navajo Reading Study, it is within the realm of educational linguistics to develop and make available information that will permit the Navaho people, working through their own institutions, to make informed decisions about educational language policy. Two main questions are posed in planning educational policy for Navaho language education: (1) What is the communicative competence of children entering schools? and (2) What is the nature of the language used by children? From consideration of these and related questions, language education planning can be conducted. (VM)

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The Navajo Reading Study: An Illustration  
of the Scope and Nature of Educational Linguistics

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Considering how complex language is, and how central it is to human behavior, it is no wonder that there are so many different ways of studying it, and so many academic fields concerned with it. (1) The language sciences form not a single area, but a cluster of varied approaches. Among these, pride of place traditionally and logically goes to linguistics, with its concern for the general theory of language and its application to the description of specific languages. Some of the other language sciences, like phonetics and stylistics, seem at times to be virtually independent of the central field; others, like historical linguistics and psycholinguistics, remain close enough to the core to deserve Voegelin's title for them, 'hyphenated linguistics'. Sometimes, their proponents fight for closer union, as when Labov argues that what is called sociolinguistics is simply an approach to linguistic theory that accounts for patterned variation; (2) at other times for autonomy, as when Fishman suggests that the same field is really an independent sociology of language. (3)

The position of applied linguistics among the language sciences is complex, as is shown by the various ways in which the term is used. These range from the most inclusive, covering all the fields represented at this Congress (and some omitted from its program), to the narrowest: a

common United States practice is to use the term to refer only to the theory of teaching foreign languages. There is value in the wider use of the term. Following it, I would suggest that we define applied linguistics as the cluster of fields embracing all studies of language intended to be directly and immediately relevant to some social, educational, political, literary, or commercial goal. If it were not presumptuous, the field might better be called relevant linguistics. For the narrower use of the term, second language pedagogy or language didactics seem preferable substitutes.

Within applied linguistics, there is a sub-grouping that is worth recognizing as a logical unit. This set of activities, for which I propose the title "educational linguistics", forms a coherent and logically unified field. The scope of educational linguistics is the interaction of formal education with language. It is concerned with describing and analysing language education in all its aspects. This involves the assessment of a child's communicative competence at the time he enters school at subsequent stages in his education, and the whole range of activities undertaken by the educational system to bring about changes in its pupils' linguistic repertoires. Such changes may be to enrich, suppress, alter the use of, or add one or more styles, varieties, or languages.

While the various parts of educational linguistics, such as mother tongue teaching (language arts), second language pedagogy, language testing, and the teaching of reading, are often and usefully treated separately, there is much value in recognizing the underlying unity of the field and principles common to them all. Rather than attempting to do this in abstract or general terms, I have chosen in this paper to describe a single project, the Navajo Reading Study. The same effect could have been served by describing in detail any approach to language education that similarly recognizes its relation to the full sociolinguistic and educational pattern. (4)

The primary task of the educational linguist is to offer information relevant to the formulation of language education policy and to its implementation. The establishment of policy is however properly the concern of the political bodies responsible for the educational system. The Navajo Reading Study has therefore no direct role in establishing policy; its aim is to develop and make available information that will permit the Navajo people, working through their own institutions, to make informed decisions about language education policy. A first question to be answered in this is the nature of the communicative competence of children coming to school. On what foundations

must the school build? Can the child coming to school communicate with his teacher and his class mates? And what sort of language does he use?

Among the earliest projects undertaken by the Navajo Reading Study were attempts to answer these two questions. In 1969 and again in 1970, surveys were carried out of the language situation as it showed up in the language use of six-year-old Navajo children beginning school. (5) The method adopted for the surveys was to send a simple questionnaire to all teachers with six year old Navajo children in their classes. Replies to the 1970 survey gave us data on 3653 six-year-old children, 79% of the Navajo children born in 1964 and 84% of those actually in school. The questionnaire was tested for reliability and validity, which were both satisfactory. (6) The results of the survey were similar for both years. In 1970, 29.8% of the children were reported to have come to school knowing no English at all, a further 39% were said to know a little English but to be incapable of doing first grade work in it, 20.7% were reported equally at home in Navajo and English, 5.7% to be speakers of English who knew a little Navajo, and 4.8% to be monolingual in English. In brief, over two-thirds of the children would be in serious trouble faced with a monolingual English teacher.

Our second question concerned the nature of the language the children used. We decided not to rely on the existing descriptions of adult Navajo, but to try to find out what we could about the Navajo spoken by six-year-old children. In recent years, there have been a number of studies of child language, any one of which might have served as a model. Considering our special needs and limitations, we chose to collect a corpus of the six-year-old children which would permit a study of graphemic problems, lexical frequency, and morphological complexity, and a start on syntactic analysis. The limitations of the corpus are clear. The texts were collected in free conversations between adult Navajos and children; the sample is thus restricted in style, situation, and topic. And of course a corpus is limited to the forms that occur in it: it does not show the full range of potential forms.

Between October 1969 and June 1970, twenty-two different adult Navajo interviewers, most of them teachers or teacher aides, recorded on tape conversations with over two hundred Navajo children at ten different locations on the Navajo Reservation. All the interviews were transcribed, in normalized orthography, by one transcriber who herself key-punched them for computer processing. Altogether, a total of 11,128 sentences were processed. The complete

corpus consists of 52,008 words (tokens), representing a total of 8,775 different words (types). The computer processing produced a number of statistical measures, a complete concordance giving every word in the context of each sentence in which it occurs, a list of all the different words in alphabetical order giving frequency and range, a reversed alphabetical word list to permit study of suffixes, a frequency list, a number of spelling lists, data on grapheme and letter unit frequencies, and a concordance of English loan words. With this, we have been able to publish four studies which give a first picture of aspects of the language of young Navajo children. (7) Studies of lexicon and syntax continue, and there are plans for an investigation of lexical availability.

These two approaches have provided first some basic picture of the general language situation, making it possible to outline for the Reservation as a whole or any part of it the relative likelihood or the children knowing Navajo and English, and secondly, a first description of the kind of language spoken by the children. Given knowledge of the communicative competence of the children concerned, it is possible to move towards the selection of a language education policy. While there are many factors that go into the analysis of all the possibilities

of language education policy<sup>(8)</sup>, four main types emerge; one monolingual and three bilingual.<sup>(9)</sup> Type M (monolingual, middle class) language education policy is possible when all the pupils come to school speaking the same standard variety of a world language. In cases where this is not so, some variety of bidialectal or bilingual education is necessary. Type A occurs when the school chooses as medium of instruction a language of wider communication that is not the mother-tongue of any of its pupils, or when a school uses a single dialectal variety when its pupils do not speak that dialect; it is in other words a type M policy in an inappropriate situation. The general policy for BIA Navajo schools has for long been Type A; while most children coming to BIA schools speak Navajo, all teaching has been in English.<sup>(10)</sup> Type B policies are more permissive; they imply emphasizing one language for main use, but recognise local and limited use of others. While a type B policy calls for teachers of the standard language for full use, it does provide a reasonable transition period for instruction in the vernacular, and makes some effort to preserve the vernacular for restricted use. Official BIA and Tribal policy is moving in theory (if not altogether in practice) towards a type B policy.<sup>(11)</sup> A key motivation for support of the

Navajo Reading Study is the possibility of developing the teaching of reading in Navajo, such policy being normal in type B approaches. Type C language policy occurs when two or more languages in a country are both recognised as fully suitable for all uses; children are educated in their own language, and learn another for link purposes. There has been no suggestion of such a policy for Navajo.

The choice among these policies is clearly a matter for the Navajo people themselves, whether at the Tribal or the local school level. (12) But if it is to be valid, such a choice should take into account the general sociolinguistics situation in which it occurs. The studies referred to above have in fact produced some data on the general picture of Navajo language maintenance, for the language use of six-year-old child when he comes to school is very good evidence of home language use and of parental attitude. In 10% of the cases, we found a nearly complete switch to English, and in another 20%, a kind of bilingualism that can only result from extensive use of English in the home. In the remaining 70%, however, it is clear that parents at home are speaking only Navajo to their children. behind these total figures are two major divisions, one

demographic and the other sociolinguistic. The demographic dimension reveals a distinction between traditional rural Navajos, whose children for the most part attend BIA schools, and progressive 'urban' Navajos who live in the growing semi-urban communities or on the edge of the Reservation and whose children attend public schools. (13) Among the traditional group, Navajo maintenance is much higher, while the progressive group shows increasing tendencies to know and use English as well. The sociolinguistic division shows up as a diglossia affecting the spoken and written channels of communication, and reflecting the weakness of literacy in Navajo. Virtually all written activities are conducted in English. Tribal council meetings and business are mainly in Navajo, but all records and legislation are written in English. Chapter meetings use only Navajo, but minutes are kept in English. Participants in tribal court sessions speak in Navajo, but the records are in English. The communication media show a similar distinction. There is a great deal of broadcasting in Navajo: most radio stations on the peripheries of the Reservation broadcast at least an hour a day in Navajo, and there are some Navajo-only stations. The official Tribal newspaper, on the other hand, is entirely in English, and even the more recently established unofficial papers make almost exclusive use of English.

It is clear from these data that any monolingual language education policy is quite out of place for the Navajo. It is also clear that any development of teaching material in Navajo will involve overcoming doubts about the suitability of Navajo as a written language, fears that teaching in Navajo is really a neo-colonial policy aimed at preventing the people from gaining access to progress, and serious language planning for modernization and standardization. (14)

I have so far sketched the role of educational linguistics in permitting the establishment of sound language education policy. Its function in the implementation of a policy is more well known and needs less attention here. I shall therefore, considering the time available, restrict myself to outlining the main areas involved, going into slightly more detailed for those parts in which the Navajo Reading Study has been or plans to be active. When talking about implementation of language education policy, it is useful to follow the general curricular divisions (mother tongue enrichment, second language pedagogy, teaching of reading, and language testing).

Language testing has a special place in educational linguistics, for it calls for a basic definition of the discipline that is not the case with other fields. Thus

while testing of most school subjects is considered the domain of experts in testing and psychometrics, with occasional advice from subject matter specialists, there is a clearly defined field of language testing, its work amply represented in the literature and in conferences such as this. (15) The Navajo Reading Study found it necessary to develop its own testing instrument in order to validate the results of the questionnaires used to study language use. We developed a functional test, an interview designed to check a six-year-old child's ability to use Navajo and English. (16) Further language testing will be needed as we move to evaluate curricular innovations.

The enrichment of a child's mother tongue involves a number of specific areas. The main one is the learning of new styles and modes of language use. Especially important here is probably the encouragement of the kind of autonomous speech style considered desirable for formal education. The study plans to carry out some exploratory work in this area, providing oral language development alongside its reading materials.

The teaching of reading is one of the key activities of modern education. After some overenthusiastic claims for its relevance, the specific contribution of educational linguistics is becoming clearer. (17) The Navajo Reading

Study has as its central purpose the exploration of the feasibility and effect of teaching Navajo children to read in their own language first. We have therefore developed a number of small reading books, our concern at this stage being to explore various approaches and obtain teacher's reactions rather than to propose a set system or publish a basal reader. The material are as Navajo as possible; they are written in Navajo by Navajos, and not translated from English.

One of the most well developed fields of educational linguistics is second language pedagogy, to which it is unnecessary for me to refer in any detail here. Our own concern being with mother tongue teaching, we have not become involved in it, except to the extent that some of our non-Navajo research staff have wanted to learn the language. I should like to refer to a project in second language pedagogy connected with the Navajo, Wilson's development of a complete first year curriculum for Navajo children in which the teaching of English as a second language is an integral part of an innovative curriculum and not just an extra school subject. His is an exciting and sensitive attempt to provide teaching in English from the beginning to children who do not know the language. (12)

Two other areas with which we have become involved pointed up the wider scope of educational linguistics. The first is in teacher training. A key part of the work of the Navajo Reading Study has been to provide a core of qualified Navajo speaking expert teachers. While we have some linguist studying Navajo, we try to put emphasis on having Navajos study linguistics. Secondly, we have become involved in observing processes of language modernization and standardization. While the Navajo dictionary<sup>(19)</sup> did much to standardize Navajo orthography, there remain many areas of question;<sup>(20)</sup> indeed, the greater number of writers of Navajo is itself a force for variation. In publishing textbooks, we find it necessary to make tentative decisions on these points, but we try to avoid dogmatism.<sup>(21)</sup> Our study of the speech of Navajo children showed up a great number of English loanwords.<sup>(22)</sup> We are observing carefully the problems faced by the small group of teachers who are starting to try first and second grade work in Navajo, noting the kinds of decisions they make when they need a new word, and hoping to study the pressure that lead to the acceptance or rejection of their suggestions.

While this description of the scope of educational linguistics has been far from exhaustive, some of the main

aspects of the field have hopefully emerged. It has been made clear, for instance, how it is closely related to many of the language sciences; a single project like the Navajo Reading Study has connections with many fields. Work has been needed in phonology, graphemics, syntax, and semantics. The loan word study depends on principles of historical linguistics. The language maintenance studies might be labelled sociolinguistics. The teaching of reading and the testing draw on psycholinguistics. The vocabulary study involved computational linguistics. And the connections are not one way only: educational linguistics is not just a consumer field, but provides scope for serious scholarship in the relevant language sciences.

This last point is important. We have not been applying linguistics. We cannot make direct applications of linguistic scholarship to our problems. Though phonological theory casts light on problems of orthography, it does not provide clear guidelines for the design of a practical orthography<sup>(23)</sup> nor does linguistic theory explain how languages are to be taught.<sup>(24)</sup> Educational linguistics must be a discipline in its own right, drawing on the various language sciences for the implications of their work, but not expecting to find easy answers to the complex problems of language education.<sup>(25)</sup>

Notes

- (1) Preparation of this paper was made possible by a John Simon Guggenheim Memorial Foundation Fellowship. The work of the Navajo Reading Study is supported by the Ford Foundation and the Bureau of Indian Affairs (U.S. Department of the Interior).
- (2) "In recent years, there has developed an approach to linguistic research which focuses upon language in use within the speech community, aiming at a linguistic theory adequate to account for this data. This type of research has sometimes been labelled as 'sociolinguistics', although it is a somewhat misleading use of an oddly redundant term... In what way, then can 'sociolinguistics' be considered as something apart from 'linguistics'." Labov, 1970:30.
- (3) "All in all then, the sociology of language is concerned with language varieties as targets, as obstacles and as facilitators, and with the uses of language varieties as aspects of more encompassing social patterns or processes... While continuing to use the adjectival or adverbial modifier sociolinguistic it is now clearer to me than it was in the past that the sociology of language has a path of its own to follow." Fishman, 1971a:9.
- (4) For instance, the St. Lambert bilingual project, which would have permitted giving greater weight to second language teaching than the present approach. See Lambert and Tucker 1972.
- (5) Full details are reported in Navajo Reading Studies Progress Reports 5, 13, and 14.
- (6) Test-retest reliability (187 pupils reassessed at ten schools six months later) was .78. Correlation with scores given by trained bilingual judges (194 children interviewed at eighteen schools) was .67. The instrument used in the interview is described in Spolsky, Murphy, Holm and Ferrel (to appear).
- (7) Full details are reported in Navajo Reading Study Progress Reports No. 9, 10, and 12.

- (8) For one such analysis, see Mackey (1970)
- (9) The three types of bilingual education policy are based on Fishman 1971b.
- (10) There have been minor exceptions - the use of bilingual readers in the post-war period, for instance - but all attempts were handicapped by the lack of trained Navajo-speaking teachers
- (11) The first steps towards this were the programs at Rough Rock Demonstration School, Rock Point School, and the BIA Bilingual Kindergartens at half-a-dozen locations; all of these preceded the Bilingual Education Act, since when a number of other schools have started some teaching in Navajo.
- (12) There is strong local control of schools at Rough Rock, Rock Point, and Ramah, all of which are committed to bilingual education.
- (13) A third group, not included in our studies so far, is the relatively large number of Navajos living off the Reservation in cities like Albuquerque, San Francisco, Los Angeles and Chicago. The children of this group are likely to be monolingual speakers of English.
- (14) These aspects of applied sociolinguistics were discussed by Joshua Fishman (1971c) at the last Congress.
- (15) See the papers by Eugène Brière, Clare Burstall, E. F. Chaplen, Alan Davies, Bernard Spolsky, and John A. Upshur in Perren and Trim 1971.
- (16) See (6) above.
- (17) See Venezky (to appear), and Wardhaugh 1971.
- (18) See Wilson (1969).
- (19) Young and Morgan 1963.
- (20) There is a full discussion in Holm 1972.
- (21) For instance, while one of our readers spells the word for cat as "mósi", another spells it "mási"; each spelling was the choice of the author.

- (22) See Holm, Holm, and Spolsky (1972).
- (23) As at one time there were linguists who argued that all orthographies should be purely phonemic, there are now some who seem to believe that all should have the morphophonemic complexity of English.
- (24) I argue this more fully in Spolsky 1969. A welcome recent exception to the tendency of direct application is Diller (1971) who uses the implications of current linguistics theory to support some earlier practical approaches to language teaching.
- (25) Nor, for that matter, expecting language educations to solve social problems. See Spolsky 1971.

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