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ABSTRACT

According to the document, learning the English language is comparable to learning a foreign language for the American Indian child. Thus, a brief history of the Indians of New Mexico is given in order to emphasize language differences and problems arising in learning a new tongue. As pointed out, second-language learning requires a change in pattern of intonation, stress, rhythm, and meanings in addition to the phonemes. Major linguistic families of the American Indians in New Mexico are discussed, thereby pointing up problematic areas which could relate to academic difficulties for the American Indian. It is believed that the monolingual Indian 6-year-old, entering school for the first time, is at a great disadvantage when compared with an English-speaking 6-year-old entering the same school and having a listening vocabulary of perhaps 8,000 to 10,000 English words. (EL)

PSYCHO-PHYSIOLOGICAL PROBLEMS OF THE INDIANS OF NEW MEXICO LEARNING A SECOND LANGUAGE

by

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CONTENTS

I. INTRODUCTION

It was the purpose of this study to review the problems encountered by the Indians of New Mexico who learned to speak their native language in childhood and later try to learn American English as a second language and to inform the reader about these particular groups of people with a brief review of their history.

Therefore, before we begin we must know who these people are, what the problem is and why they have this problem?

II. THE PEOPLE AND THEIR HISTORY

The original natives of present day New Mexico were the Pueblo Indians. The early Spanish Conquistadores, looking for the seven cities of gold and hoping to claim land for Spain, found these people living in highly organized villages. They gave the name "Pueblo", meaning city, to these villages, which has since become the means of referring to them. The historical period dates from 1540 as written records are available from that date from the Spaniards.

Pueblo Indians migrated from Mesa Verde to several areas in New Mexico and Arizona (Hopis). Existing ruins like Puye and the ruins in the Jemez mountains indicate that they did not migrate directly to present day Pueblo sites. However, there could be exceptions like Acoma and some of the villages of the Hopis in Arizona. Also, judging from bits of legends and descriptions from native religious songs, they came from the North, further than Mesa Verde. Many katchinas, or masked gods, are revered for the parts they played during the journey of the people southward.

The languages of the Pueblos of New Mexico have been determined to belong to three major linguistic families. (See Index A).

The other natives, the Athabascan speaking Apaches and Navajos arrived in the Southwest at a later date. When they arrived is also unknown. The date may be as early as about A. D. 1000; it may be later, or even earlier.

III. THE ATHABASKAN LANGUAGE

Let us examine the language which is spoken by the Apache and the Navajo. Although today, there may be a slight difference in some of the words, due to geography and time, the language is still basically the same.

The Navajo language is essentially monosyllabic, not in the sense that its words are all of a single syllable, but rather that they are composed of grouped monosyllabic elements, each of which contributes its individual significance to the whole (10). A word final stem defines, in a more or less unmodified manner, the act, state or quality denoted by the verb, while monosyllabic elements prefixed to the stem modify it in ways analogous to those by which the pronoun, adverbs, etc. of English modify the English verb.

Gender is not expressed by special forms in Navajo, even of the third person pronoun. Of course, there are nouns such as man, woman, girl, etc. which, by virtue of their meaning, are concerned with gender, but there is not a special word form to make such distinction.

When a Navajo speaker expressly designates the sex of an animal, this is accomplished by means of the counter parts of English

male, female or by specific names distinguishing the male and the female of the species. In English we could say male sheep and female sheep; although we generally use the specific names ram and ewe.

The differentiation or distinction in sex as denoted by the variant forms of the English third person pronoun gives rise to considerable confusion among Navajo school children learning the new language. One often hears the pronoun "he" used in reference to a woman, "she" of a man, etc.

Robert W. Young (9) noted that the English phonemes---v, gl, d, g. p, f, and ng---have no corresponding sounds in Navajo, except for the partial equivalents for d, g, and b. (See Index B, Navajo Phonology). The Navajo has to learn to aspirate and voice the b, g, and d, and the sound "p" is entirely new to him. For this reason Navajo children will have much trouble learning English. In learning English, Navajo children may transfer phonemes from their language to English, whether they are closely related or not. Once a faulty pronunciation habit becomes established this way, it is difficult to break.

As specific example, the word "girl" comes out as "gə", and the name Paul usually comes out as "Pajl". The word "fujl" is used for both "full" and "fool". In saying Shiprock, New Mexico they often leave out the "p".

Robert W. Young continues that there are at least five consonant sounds appearing in Navajo which are not found in English (9). They are dz, dl, ts', tl', and ch'. He also states that there are also vowel sound differences between the two languages. In English long and short vowels are distinguished with different sounds while in Navajo,

long and short are used to refer to duration in time and distance in pronouncing the vowel. One is likely to hear a Navajo child say, "Shirock, New Mexico is wa-a-a-y, wa-a-a-y far away," or "lon-n-ng time ago".

And like the Pueblo speaker, but unlike the English speaker, the Navajo distinguishes meaning by changing the pitch of a vowel, by lengthening or shortening the duration of the vowel sound, or by denasalizing the vowel.

IV. THE PUEBLO LANGUAGES

The Pueblo languages and dialects are made up of tones and stresses. These may serve as important role as the vowels and consonants of other languages. Relative pitch on each syllable in the Pueblo tone language plays an equally important role. Changes in pitch or tone, stress, and even the social situation may serve to vary the function and effect the meaning. As an example, in the Towa language, "give me one" may also mean "give me a kiss".

A recent study indicated that there may be four tonal accents: high, falling, breathy and glottal (3). Another study made at Taos indicated that there is a three fold distinction of tone, high, normal and low (8). The study showed that stress is a phonemic feature of Tiwa, existing in the form of loud stress, medial stress and weak stress. The first two may be combined with any one of the three tones. Here again, as in the Navajo and other Pueblo languages, the vowel length was found to vary with stress.

Linguists may one day determine the frequency of occurance of the "I" sound (as in bit) in the various languages and dialects of the Keresan and Tanoan language speaking. Either due to their unfamiliarity with the sound or the influence from the Spanish language background, the "I" sound is usually mistaken for the "i" sound of International Phonetic Alphabet. Consequently, the word "live" is commonly pronounced "leave".

In a study of the Tewa language the "E" sound, (as in get'), was found to be very rare (6). Most of its occurance are in the nasalized forms.

Whether these pronunciations are due to their absence in the native language of the speakers or the historical incidence of the Indian learning Spanish and the models of speech passing the speech problem to the next generation is problematical. This writer did not become aware of the difference until he was a freshman in college, having learned to speak English at the Santa Fe Indian School.

It might be stated that, like the Navajo designation of sex, the Pueblos, both Keresan and Tanoan, do not have specific words for male nor female animals. In this case the male is called by its animal name like "deer" in English. The doe is called female deer and the fawn is called young deer. Other specific words have been borrowed from the Spanish language, or describe the animal if the borrowed word is not suitable. For instance, a stallion may be "horse with testis". The horse in Pueblo languages is a variation of the Spanish "caballo" and the mare is "llewa", also Spanish.

With this background, you can imagine the problems of the second language learner trying to master the ABCs, the numbers, the speech pattern sounds, a strange way of communicating in a strange environment.

V. NAMES OF THE PROBLEMS

The main problem of these second-language learners may be categorized under barbaralalia, describes as the habitual use of the speech sounds and rhythmo-melody of a native language when learning to speak another. And, dyslalia, which is defective articulation due to faulty learning, as a result of poor models or examples of speech.

The problem may be closely akin to functional articulation disorders but having many cultural implications, both native and maybe, as a result of the Spanish culture imposed before the coming of the Anglo-European culture.

As a comparison, here is a contrasting observation. When the average English speaking child enters Public School, he has had five to six years of pre-school at home with parents who speak English. Then, with a great deal of experience in the English language in listening, speaking, reacting, evaluating, and making judgements in the language, he enters school. He has had a listening vocabulary of perhaps 8,000 to 10,000 English words, a speaking vocabulary of 5,000 to 7,000 English words, and several years of continuous practice in using thousands of speech patterns in the English language (11).

With this preparation, the normal, mono-lingual six year old presents his teacher and other contacts relatively little difficulty in the art of communication.

VI. THE PROBLEMS ENCOUNTERED

But for the Indian student, he must now repeat consciously what had taken place in childhood automatically, that is, listening, discriminating, associating and recognizing distinctive sound patterns of the speech of that other language.

In this endeavor of learning a second language, the student is further hampered by linguistic noise. This noise is used here as a generic term and may be applied in such other forms as physical noise, psychological noise, semantic noise, physiological noise, and neurological noise. In each of the stated relationship the term noise will refer to the reduction of efficiency in communication created by this linguistic noise (1).

It might be further stated that psychological noise is the reduction in efficiency created by the psychological state of the producer or receiver. The attitude which accompanies a speech inferiority is as real as the segregation that accompanies the prejudice.

Many Navajo students attending the Albuquerque Public Schools report that they feel insecure, even inferior, in class. This feeling of insecurity seems to be the greatest contributing factor toward an attribute or character credited to them and identified as "shyness".

The students are afraid to speak up fearing oral inaccuracy. The minority complex in a bilingual society is a serious one, socially and personally.

After years of using familiar sound patterns and then having to move to the sound patterns of a second language, the student becomes

trapped in the maze of grammatical inflections, both structural and vocal, as he changes from one language to another.

Second language learning requires a change in pattern of intonation, stress, rhythm, and meaning in addition to changes in the phonemes. Whereas a child acquires his habits of structures in his native language before he has reached school age, his imitations of adults and his hearing and repeating of inflectional patterns of voice makes the changing forms come easily. He never cares or thinks about the rules.

The second language learner cannot depend upon his ear as the child does. He must match each new phoneme and allophone with every other phoneme and allophone in his native language, as well as with every other in the new language, before he can be confident that he has the system of his second language under control.

A child acquires the process of auditory matching automatically in his native language during the mother's "bombardment" period, thus any interference is minimal. Besides the mother's language, the dominant or vernacular language appears to be accepted without any damage or overlap if exposed early enough to bilingual or multi-lingualism.

There are a few instances where an Indian child is trilingual. This generally comes about when the mother of language A is married to father with Language B. Because A and B are not common language C or English is usually spoken. And if the family is residing at the home of the father where language B is spoken, the trilingual child learns language A from the mother, language B from the father, paternal grandparents, and later peers; and English from both the parents.

Other trilinguals come about as a result of close living with the Spanish speaking as in the case of the five villages to be mentioned in the following pages. Many non-Indians married to Indians have learned Indian languages from their children, if they happen to live on the Indian Reservation where the vernacular may be an Indian language.

There has been much work in the field of bilingualism. However, their interests have mainly been in the abilities and achievements of bilinguals. Nevertheless, a brief statement is included to report that speculative thinking has attributed great advantages as well as disadvantages to bilingualism. Some writers say bilingualism sharpens a child's mind, extends his mental horizons, and makes it easier for him to learn a third or more languages.

Others point out the evil effects of bilingualism which they believe results in mental confusion, an inadequate master of either language, and in cultural uprootedness (7).

This writer would tend to believe in the first statement while the latter statement would be contingent on the general mental ability of the person. Furthermore, accounts of any Indian students whose learning of a second language, after becoming bilingual are unknown.

As has been stated, if exposed to a second language or languages early enough, speech in that language also becomes spontaneous, because his habits of language have not become set.

The adult tends to relate to his native or first language sound system all the sounds he hears. He must be taught methods for discrimi-

nating the difference which appears blurred at first hearing. He has difficulty because of his first language listening habits.

Another problem envisioned is the training of the inner language to the second language. In this report it is called inner language but it could be self-conscience, inner personna, etc. Whatever it is, most persons who have learned a second language know that before the language is mastered the symbols of language or communication are merely a fleeting experience, soon to be forgotten. In other words, when a student listens to speech of a second language he hears new sound symbols, strange signs that do not fit his experience. The sounds are perceived by the patterns are unfamiliar. Therefore, no meaning is conveyed to them. Those of you who have learned a second language know that prior to total conception of a second language, there is a period when one may be able to understand the language when spoken by others, but are unable to produce the speech patterns in a way comprehensible to a native speaker of the language.

However, if the symbols are to be retained and acted on, many a second language learner has no doubt translated the information to the inner language or inner personna for action or storage which we know as perceiving.

Indian children think in their native language and thus the translations in English come out according to their native sentence structure or speech patterns. There are numerous examples of these from elementary school teachers.

Speech and writing depend upon patterning for their usefullness. Inversion of words and substitutes of sounds or letters, by accident or

because of language background, can produce embarrassing or humorous changes or alterations in meanings.

This is what the Navajo students in the Albuquerque Public Schools fear and is the negative stimulus for their shyness. Shyness may result in careless, lazy and sluggish speech. At this time in some cases movements of the articulators are fairly accurate but are slow, weak or under energized, so that contacts are made but they are not tight or firm, and the sluggish speech may result.

We make sound symbols to meet our needs. These symbols, when arranged in patterns and given significance by experience, form the matrix of speech (1). By adding variations in melody to these patterns we make it possible to change the functions and meaning of the words so formed. By changing stress from the first to the second syllable, one changes the function of the word. In English, such words as record, the noun, and record, the verb, illustrate the principle used in innumerable words in English. Others are con'test and contest', ob'ject and object', pro'duce and produce'. And unless the speaker is familiar with the stress or accent there is much stimulation on the part of the student to remain quiet.

VII. PROBABLE CAUSATIVE FACTORS

The Spanish language was learned by the Indians of New Mexico in the 15th century. A majority of the Apache, Navajo and Pueblo people spoke the Spanish language as a second language for several centuries before English was known.

Today, it might be safe to say that of the Pueblo people, men and women of sixty or over speak Spanish and their native language; those between forty and sixty years of age speak English, Spanish and their native language, the English improving as age decreases and the Spanish correspondingly deteriorating.

As a result, the Indian people have also acquired the speech habits of the Spanish speaking. The same errors that are common to the Spanish speaking are obvious to many Indians especially along the Rio Grande Pueblos.

Of the nineteen or more Pueblo villages in New Mexico, the following still use Spanish to a greater extent than others. These are listed in order of the amount of Spanish spoken. Pojoaque, only a few families may speak their native Tewa language; Nambe, a majority may speak both Spanish and their native Tewa language; Isleta, a majority of the people also speak Spanish fluently along with their Tiwa language; Picuris, a good majority also speak Spanish and Tiwa; San Juan, many residents speak Spanish along with their Tewa language.

These elders being the speech models, the succeeding younger generation in many instances have continued with the speech habits.

Then there is the problem of created colloqualism. A few years ago the majority of Apache, Navajo and Pueblo students in New Mexico received their junior and senior high school education at Indian Boarding Schools, segregated from non-Indian students. Cliches or colloqual expressions were established and obviously models were copied from the polyglots on campus.

In their speech there is much omission in the final sounds, such as "ball" for "bald". Here we may find some analogy. When the word bald is ever used it is used in connection with bald-head and the word substitution is then ball-head, for a person with no hair on his head. Other common errors are "bad" for "bed", "steady" for "study" and much omission and substitution for the "th" sound by the "d" sound, i.e., this, those, there.

VIII. SUGGESTED METHODS FOR LEARNER A SECOND LANGUAGE

It would have been an ideal learning situation for the student of the second language if all the theories and advocates by the various authorities could be applied. The visual association of a foreign word with its English cognate is said to be by far the most useful aid to student recall (5). English words often contain derivations from the same source if it is of European origin. In this case the etymological treatment of words utilizing student knowledge of Latin or another European language is occassionally useful. However, the Indians of New Mexico do not have written languages, so this idea is ruled out for the Indian student.

The direct method (2) which believes that direct association in the mind between the new word and the idea it represents would work marvelously if some early text books were printed with the material known or familiar to the blossoming reader. As according to one argument, the elements of vocabulary, forms, and syntax may be extended by reading (4). However, literature usually deals with subjects foreign to the young Indian learner of a second language. And unknown subjects in an unknown language

will not stimulate intensive reading. Furthermore, after the reader began to establish some measure of success the advanced material or so-called classical literature usually dealt with the inferiority of the native American culture. This idea of reading about forefathers who could not adjust to the environment created by the advancing new power is detrimental to extensive reading. This last statement is a remaining problem with some Indian tribes who had a history of conflict with the American military.

In New Mexico, the Apache and the Navajo both met the American military in conflict, while the Pueblos did not. So the teacher familiar with Apache, Navajo and Pueblo children may readily observe the attitudes learned from the parents and the grandparents. Many Indian students have said that literature written by one opposing a culture is found hard to read by natives trying to learn to read and simultaneously learn a second language.

And if it were possible to have good speech models at all times during the learning period, the natural method (2) would be extremely desirable. Mingling with people who speak the language and having the learner pick up the new language incidentally from them is much faster, according to the opinion of this writer. Nevertheless, the greater majority of the Pueblo and Apache children have to return home by bus to their parents where they are most likely to associate with poorer language models a greater part of the day. The students spend only from 6 to 7 hours in a school situation, classroom, shop and physical education. In many cases the second language learner may not hear the new language again until the next day when he or she is exposed again for another six hours.

The Navajo students were not mentioned because the majority of Navajo children attend Indian Boarding Schools or Public Schools while residing at Indian Boarding Schools and they have a chance to speak and hear English a majority of the day.

IX. CONCLUSION

Man is a creature of habit and his speech production reflects this nature. When patterns of native language have been learned, their use becomes automatic and unconscious. Among 127 million inhabitants of the earth, more than twenty-five hundred (2,500) languages have become habituated (1). A speaker of any one of these language finds it very difficult or impossible to understand a speaker or another language due to the habit patterns he has developed. When this same man attempts to learn to speak a second language the habits of the first will generally create interference.

This interference then, is called barbaralalia and akin to dyslalia, the problem of the Indians of New Mexico covered by this study.

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INDEX A

MAJOR LINGUISTIC FAMILIES OF THE 19 PUEBLOS OF NEW MEXICO:

FAMILY	TANOAN		KERESAN	ZUNIAN
BRANCHES	TEWA	TIWA	TOWA		
PUEBLO	Nambe	Isleta	Jemez	Acoma	Zuni
	Pojoaque	Picuris		Cochiti	
	San Ildefonso	Sandia		Laguna	
	San Juan	Taos		San Felipe	
	Santa Clara			Santa Ana	
	Tesuque			Santo Domingo	
				Zia	

(B)

COMPARATIVE PHONOLOGY *

Consonants -- Navajo-English
(Simplified)

	LABIAL		DENTAL		ALVEOLO-PALATAL		PALATO-VELAR		GLOTTAL	
	English	Navajo	English	Navajo	English	Navajo	English	Navajo	English	Navajo
1. STOPS										
a. Voiced	b	--			d	--	g	--		
b. Unvoiced										
Unaspirated	--	b			--	d	--	g		
Aspirated	p	--			t	tx	k, kw	k, kw		
Glottal					--	t'	--	k'		
2. AFFRICATES										
a. Voiced					j	--				
b. Unvoiced										
c. Unaspirated					--	dz, dl, j				
Aspirated					ch	ts, tl, ch				
Glottal					--	ts', tl', ch'				
3. SPIRANTS										
a. Voiced	v	--	dh	--	z, zh	z, zh	--	gh, ghw		
b. Unvoiced	f	--	th	--	s, sh	s, sh	--	x, xw	h	h
4. LATERALS										
a. Voiced					l	l				
b. Unvoiced					--	--				
5. NASALS	m	m			n	n	ng	--		
6. INVERTED				r	--					
7. SEMIVOWELS	w	(ghw)					y	y		

* From: THE NAVAJO LANGUAGE by Robert W. Young

DEFINITIONS:

BILINGUAL usually refers to a person who has the ability to speak two languages. The true bilingual has such a command of both languages that he is able to converse in either language, as the occasion demands and can "think" in either language without translating.

INTERFERENCE This may result from the overlap of two speech systems, a primary language pattern and a secondary language pattern. The character and amount of interference present will depend upon the language involved, the genetic inheritance of the individual, and certain other variables as yet undefined.

OVERLAP The term is used to describe the condition that exists when two or more languages are learned by the same person. Degrees of interference in language overlap will vary from zero in the case of the true bilingual, to any percentage which makes the interference a factor in learning the second language.

ORAL INACCURACY To understand general oral inaccuracy it might be helpful to consider briefly what the motor requirements are for accurate articulation. First, there must be precision of movement. Contacts or approximations of parts of the speech mechanism must be made at the right place, in the right direction, must involve the right amount of contact surface, and the right shape. Second, articulatory movements must be made at the right speed. Third, they must be made with sufficient energy or pressure. Finally, there must be synergy of the sequential movements of speech.

POLYGLOT This is a person who has a confusion of languages.