

Final Report

to

The National Endowment for the Humanities

Tojolabal-Maya Texts and Dictionary

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Traditionally, there fall to one working with an unfamiliar language three primary tasks in providing the basic research materials for that language: (1) writing a descriptive grammar, (2) editing a selection of texts, and (3) compiling a reference dictionary. Tojolabal-Maya is such an unfamiliar language, spoken by approximately 35,000 Indians living in the state of Chiapas, Mexico, near the Guatemalan border. A basic grammar of Tojolabal¹ was published in 1976. This project sought to provide text and dictionary materials for Tojolabal.

Tojolabal, one of the least well-known of the Mayan languages, is one of the most important for determining answers to several important questions in comparative Mayan linguistics. In addition to the uncertainty of Tojolabal linguistic and cultural prehistory, the circumstances of Tojolabal during the colonial period are also very little known. Thus, the text materials gathered in Tojolabal in particular provide cultural documents from which much of earlier thought and lifeways may be reconstructed.

Project Activities

The research reported on here was planned for three phases, running from September 1, 1976, through September 1, 1977. During Phase I (September 1, 1976-January 1, 1977) the computer programs were written and tested; previously collected text materials were processed using the new programs. In January, 1977, the project director and a field research team traveled to Chiapas to collect and preliminarily process

¹Louanna Furbee-Losee, *The Correct Language, Tojolabal: A Grammar with Ethnographic Notes*. New York: Garland Publishing Company, 1976.

additional texts. They returned to Columbia, Missouri, June 1, 1977, with a Tojolabal speaker, and continued the translating and coding of texts in the United States until August 15, 1977, when the Tojolabal native speaker returned to Mexico, and when final editing of the dictionary materials and report preparation started.

On October 27, 1977, the research building in which the Tojolabal Text and Dictionary Project was housed burned. Losses to the dictionary were enormous, but some reconstruction was possible. The National Endowment for the Humanities kindly granted the project a supplement to support the project director's second field trip to Chiapas in June and July, 1978, during which period some destroyed materials were reprocessed or replaced. Thus, the substantive accomplishment of the project rests on a data base much reduced from the original one and partly reconstructed from those materials that were only damaged by the fire, not destroyed by it.

Results

The results of the project are of two sorts. There are the techniques developed for text analysis and dictionary construction, and there are the substantive results--the dictionaries and the collections of texts.

Techniques for Text Analysis and Dictionary Construction. -- The method illustrated here was among the first integrated efforts at text analysis and dictionary construction. It was an immediate precursor to methods in use today for these tasks using small computer facilities linked to larger ones for text editing. The methods as developed by

the Tojolabal Project allow a linguist to augment and code the text collection in the field, mailing copy to a major computer center for processing and receiving, in return, up-dated intermediate versions of the dictionary for use in the field work. As long as the Postal Service performs expeditiously, the process is very satisfactory.

In Appendix I are listed the programs developed for this project. Appendix II gives an illustration of their operation. Appendix II.a gives the Coding Conventions by which texts were prepared for computer processing. Notice that there are four lines to each text: Line A is a transcription of the text in Tojolabal; Line B is a morpheme-by-morpheme glossing of Line A; Line C is a word-by-word glossing of Line A; Line D is a relatively free translation of Line A into English.

In Appendix II.b are presented the Glossing Conventions for The Tojolabal Dictionary. Here one can find the meanings of all abbreviations used, a list of the character set (the alphabet), delimiters such as morpheme boundary and compound-word boundary markers, and the code for the type of text, e.g., a folk tale, a myth, and so on.

The remainder of the items in Appendix II illustrate the operation of the programs (given in Appendix I) on a sample text prepared using the Coding Conventions (Appendix II.a) and Glossing Conventions (Appendix II.b). The sample text is a short selection from a ritual speech used in Carnival. Appendix II.c shows a listing of the coded text. Appendix II.d is the output from the formatting and error-checking program. That program prepares texts for submission to the dictionary up-date program, results from which are given in Appendix II.e--the Tojolabal-to-English Word Dictionary, the Tojolabal-to-English Morpheme Dictionary, and the English-to-Tojolabal Dictionary.

These sample "dictionaries" in Appendix II.e, like all the illustrations in Appendix II, are constructed using only the sample text listed in Appendix II.c. Appendix II.f is a concordance of the sample text. With the final run of the concordance program, there was to be listed under a word or morpheme every sentence in which that word or morpheme occurred for the entire body of texts processed. Appendix II.g shows the sample text in Appendix II.c after it has passed through the glossing program (see Appendix I). In coding texts, we used the convention of a dollar sign (\$) as a gloss in Line B or Line C when the item was already in the up-dated dictionary, thus we had to code an item only once. The glossing program filled out the dollar signs with items from the dictionary. In later editing, selections had to be made from the glossed material (due to homophony, there are often several different words or morphemes of the same form). The text from Appendix II.c is shown in Appendix II.h after it has been edited.

Substantial Results. -- The project has produced a dictionary (really three dictionaries) for professional linguists, a research tool to be used especially in comparative work in Mayan languages, not a general dictionary for native speakers or language learners. Since the inception of this project, there has been published the first part of a dictionary of the second sort--a speakers' dictionary.²

Copies of the research tool dictionaries produced through this NEH-sponsored research are being submitted with this report. The first of the three is The Tojolabal-English Word Dictionary, in which each Tojolabal word listed carries an indication of its component morphemes,

² Carlos Lenkersdorf, B'omak'umil tojol ab'al-kastiya l/Diccionario tojolabal-español, idioma mayance de los Altos de Chiapas, volumen 1, Editorial Nuestro Tiempo, Mexico, 1979.

its part of speech function, its morphological derivation and inflection, and its various meanings. The second is the Tojolabal-English Morpheme Dictionary, which lists each morpheme (meaningful part of a word) encountered in the body of texts with information on its grammatical function and its meanings. There are two parts to the Tojolabal-English Morpheme Dictionary; the first lists lexical morphemes, the second derivational and inflectional morphemes. Finally, there is an English-to-Tojolabal Dictionary in which all the English glosses are given with Tojolabal equivalents.

In addition to the dictionaries submitted with this report, there are two other items of substance: the body of texts themselves, a list of which will be found in Appendix III, and the Grand Concordance of the texts.

Status and Dissemination

The project as described thus far has produced computer software, dictionaries, a collection of texts, and a concordance, all of which are of utility to scholars. The computer software is available to those who wish to use it, but in many ways it has been superseded by the recent increase in use of mini-computers. The dictionaries are also available upon request. Ideally, they would be revised to include examples of usage drawn from the grand concordance. The texts themselves have all been glossed and some have been edited. Some few have been published,³

³ Louanna Furbee and Manuel Aguilar Gómez, "Tojolabal Texts." IJAL-Native American Texts Series, Mayan Texts III (IJAL-NATS Monograph No. 5), edited by Louanna Furbee, 1980, pp. 197-16. Two copies of this publication are ordered for NEH.

but it is the Project Director's intention to complete the editing of a group of these texts for later publication as a monograph, perhaps during her sabbatical year of 1982. Meanwhile, copies of the glossed texts are also available upon request. The Grand Concordance remains a useful instrument for editing and for study of word usage and frequency. Because the Grand Concordance is a massive document, no plans exist at present for its publication although it is available as a research tool to scholars. Notices of the availability of these materials will be published in the Mayan Linguistics Newsletter.

At least two additional lines of research have arisen from this research. First, Jill Brody, a research assistant for the project, chose to write a dissertation on Tojolabal syntax after her association with the language gained working in the field and in the United States on the texts and dictionary. She obtained a Fulbright-Hays Dissertation Research Abroad Fellowship for 1979-80, and is now completing her dissertation. Second, the subject matter of many of the texts involved witchcraft and illness. Pursuit of those topics led the project director to a parallel investigation of beliefs about disease held by the Tojolabal-Maya. She, and a colleague, Robert A. Benfer, have prepared a series of papers on that topic.

Additional Information

The research team that aided in this project was outstanding. Two of the research assistants used the first-hand experience as training for further work on Mayan languages. Both received fellowships to do

⁴Dictionary and concordance have been published in microfiche: Tojolabal-Maya Text Concordance (Museum of Anthropology, Misc. Publ. in Anthro. #16), Columbia, MO: University of Missouri, 1981; and Tojolabal-Maya English Dictionary (Museum of Anthropology, Misc. Publ. in Anthro. #15), Columbia, MO: University of Missouri, 1981.

⁵See Louanna Furbee and Robert A. Benfer, "Cognitive and Geographic Maps: Study of Individual Variation Among Tojolabal Mayans," American Anthropologist, 85(1983):305-34.

dissertations on Mayan; Brody, as mentioned previously, is writing a dissertation on Tojolabal (for Washington University-St. Louis), and Susan Knowles (at Tulane University) is completing the field research (supported by a Shell Fellowship) for a grammar of Chontal, a Mayan language spoken in Tabasco, Mexico. Robert Freund, another research assistant on the project, later wrote an M.A. thesis at the University of Texas at Austin on the editing of American Indian language dictionaries and is employed at present by an American Indian tribe in an applied linguistics program. John Pappas, the research assistant who wrote the computer programs, completed his M.A. in Computer Science at the University of Missouri-Columbia presenting some of his work for this project as part of his degree requirements. It is hard to measure the value we all derived from having Alejandro Aguilar Gómez, the primary informant for this project, visit and work in Columbia, Missouri, during June 1 - August 15, 1977. He enriched our educational community enormously.

To become acquainted with a society very different from ones own is a rare and special experience. Tojolabal is such a society, and their language, the window through which we will know that society, is only just beginning to be understood. Yet, understanding the Tojolabal and people equally different or remote is no longer merely a privilege offered the adventurous or the iconoclastic. The Tojolabal people live in a place where oil is recently discovered, where a civil war erupts across a national border, and where the pressure on the land thrusts the residents into bloody competition with both the national government and the local large landholders. They have a shorter life

expectancy than any reported for any other people. They are no longer a local curiosity.

Yet, these are a people whose ideology encompasses a famous volcanic eruption of the early part of the century, visits to saints' shrines, and a discussion between Saint Thomas and Saint Matthew about a new creation for the world in a single story. These are people who class all diseases as either from God (curable) or from men (difficult to cure because associated with witchcraft). Apart from the linguistic importance of knowing more about the Tojolabal language, there is urgent need to understand the life and thought of minorities such as the Tojolabals because they are now at the center of international concerns.

Summary

The Tojolabal-Maya texts and Dictionary Project has developed software (Appendix I) and techniques (see illustrations given in Appendix II.a-h) for computer-assisted text analysis and dictionary construction. The project has as well produced a large body of edited Tojolabal texts (listed in Appendix III), a Grand Concordance of those texts, and a set of research dictionaries (submitted along with this report) in Tojolabal and English, which is being used by linguists interested especially in problems of comparative Mayan linguistics. The dictionaries include a Tojolabal-to-English word dictionary, a Tojolabal-to-English morpheme dictionary, and an English-to-Tojolabal dictionary. The body of texts from which these dictionaries derive is smaller than originally collected due to losses incurred when the university building it was housed in burned.