MATLAPA AND CLASSICAL NAHUATL

WITH COMPARATIVE NOTES ON THE TWO DIALECTS

by

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INTRODUCTION

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0. At the time of the conquest of Mexico by the Spaniards, the political center of the Nahuatl-speaking people was at the southeastern end of the Mexican central plateau (within the present political boundaries of the Federal District). Nahuatl-speaking groups extended northward as far as the present state of San Luis Potosí, southward into Morelos and Guerrero, and eastward into Veracruz, thus encompassing groups in the states of Hidalgo, Mexico, Tlaxcala, and Puebla. Detached areas were located in the Mexican states of Jalisco, Colima, Michoacán, Oaxaca, Tabasco, in Guatemala, El Salvador, Costa Rica, Nicaragua, and possibly as far south as Panama. [1] At the present the number of Nahuatl speakers is much smaller, but the language is still spoken over wide areas by nearly a million people. [2]

Nahuatl is a member of the Uto-Aztecan family of languages. [3] The languages of this family are spoken in the southwestern part of the United States, in Mexico, and in Central America. In addition to Nahuatl, the family embraces, according to Kroeber's classification, [4] the following subgroups: (1) the Shoshonean languages, [5] (2) Pima-Tepehuan, (3) Cahita-Opata-Tarahumar. Subgroups also listed by Kroeber, but marked uncertain with regard to their Uto-Aztecan affiliation, are (4) Cora and

(5) Huichol. Additional languages of Mexico are listed tentatively as Uto-Aztecan but marked "unplaced, for lack of evidence". In Sapir's broader classification [6] (his VIth category -- Aztec-Tanoan), Uto-Aztecan is grouped with Tanoan and Kiowa; the grouping of Zuñi with these apparently remains questionable. Whorf [7] called attention to a possible subsequent large-scale grouping of Uto-Aztecan with other language families when more information becomes available. He pointed in particular to Uto-Aztecan resemblances to Penutian, Mayan, Kiowa, and Totonac.

The terms "Nahuatl" and "Aztec" are frequently used interchangeably in the United States with reference to the language. In Mexico "Nahuatl" seems to be more usual than "Azteca" when the language is under discussion. According to the terminology of Whorf and Mason, [8] "Aztec" applies to a group of dialects of the language spoken in Central Mexico, all sharing the phoneme λ. "Nahuatl", on the other hand, applies to λ-dialects plus somewhat scattered additional dialects having t in place of λ. (They give the name "Nahuat" to the latter group of dialects). Then, "Nahuatlan" is an over-all term covering "Nahuatl" plus divergent dialects, including that of Pochutla, Oaxaca (which is probably extinct now).

Nahuatl is one of the few American Indian languages taught academically. Students of anthropology consider the language an important ethnological tool, and classes in Nahuatl, both "Classical" and "Modern", form part of the regular curricula of three institutions of higher learning in Mexico City, namely the National School of Anthropology, the National University of Mexico, and Mexico City College.

A large amount of early historical and ethnological material concerning Mexico was written in Nahuatl. The classic works of Sahagún, for example, contain a wealth of cultural data on the Nahuatl-speaking people with which he worked. There remains also a considerable body of other texts in Nahuatl, including chronicles, annals, poetry, and the like. The writings of the first Catholic priests in the New World provide the principal source of information about the Nahuatl language of the 16th century: in addition to their observations on the language, the manner in which they employed the orthographical symbols of the Spanish alphabet for transcribing Nahuatl leads to many assumptions concerning the structure of the language. The etymologies of Mexican place-names integrated from Nahuatl elements and the many locutions of Nahuatl origin in Mexican Spanish hold considerable interest for academic circles in Mexico.

Students of present-day Nahuatl dialects find the fields for inquiry virtually limitless. The geographical extension of Nahuatl-speaking groups is broad; hundreds of thousands still speak Nahuatl as their "first" language. Research activities in recent years have included analytical work on individual dialects, analytical work based on written records, comparative studies of two or more dialects, comparative studies of a few aspects of "Classical" and "Modern" Nahuatl, Nahuatl loanwords in Spanish and other languages, and Spanish loanwords in Nahuatl. [9]

A considerable portion of Nahuatl speakers are now literate. The literacy campaigns of the last decade sponsored by the Mexican government were notably successful. A number of Protestant missionaries,

located in Nahuatl-speaking regions of Mexico, have been working intensively with the language for several years, producing linguistic studies, Bible translations, primers, readers, etc.; a part of their work is also devoted to literacy activities.

The terms "Classical" and "Modern" Nahuatl have probably never been clearly defined. In a previous paper, the present writer employed the terms loosely, [10] referring to "Classical" Nahuatl as dialects spoken at the time of the conquest, but now extinct, with only written records remaining, and "Modern" Nahuatl as dialects still spoken or recently extinct. It can be determined from recent investigations that present-day spatially distant dialects are divergent in some respects. A reasonable surmise is that dialects of the 16th century were also somewhat divergent; however, almost all extant records of that period now available treat only the closely allied dialects in and around the Valley of Mexico. Whorf found the dialect of Milpa Alta, D. F. very much like 16th century Nahuatl as evidenced in literary works of that time. [11] After a series of studies of certain present-day Nahuatl dialects and an examination of old Nahuatl records, Boas wrote:

"Nahuatl of Mexico has changed in so far as the higher literary style has disappeared and as old ideas have vanished and new ones have been introduced with concomitant change of vocabulary. The syntactic subordination and coordination of phrases have yielded to Spanish types; in all other respects the modern language has not changed." 12

For the purpose of the present investigation, "Classical" will refer to "reconstructions" of 16th century Nahuatl made by the present

writer using as basic reference tools two "artes" (prescriptive grammars) and one "vocabulario" (dictionary) devised by the Spanish priests shortly after their arrival in New Spain. The grammars were cast in a Latin format, and for the most part modeled on the grammatical works of Antonio de Nebrija. The observations on the language made by these Catholic fathers have many shortcomings when viewed according to present-day standards; their linguistic endeavors, however, have merit. Since they did set down their observations in writing, we are able to gain a clearer notion of the structure of 16th century Nahuatl than would otherwise be possible. By comparing the treatments of these early "grammarians" with the treatments of recent field investigators and with first-hand field notes, it is possible to gain considerable information about 16th century Nahuatl forms and their arrangement.

1. A great deal of the field work preceding the preparation of this dissertation was done while the writer held a Rockefeller Foundation fellowship, granted for the purpose of linguistic study and research in Mexico, during the latter part of 1949 and the beginning of 1950. [13] The following extracts from the report of fellowship activities submitted to the Foundation describe the writer's field work during the fellowship period:

"The original plan for my linguistic study and research in Mexico was extensive dialect work on the Nahuatl language. This was undertaken at the suggestion of my sponsor, Dr. C. F. Voegelin of Indiana University and Dr. Daniel Rubín de la Borbolla, Director of the

Mexican National Museum.

"The first step was to acquire a practical command of one dialect of Nahuatl, before proceeding to gather linguistic material in the many regions where Nahuatl is still spoken. With the assistance of the late Mr. R. H. Barlow of Mexico City College, and his assistant, Mr. Miguel Barrios Espinosa, a native speaker of Nahuatl from Hueyapan, Morelos, I was able to gain a good working knowledge of one dialect of the language in approximately three months.

"With the idea of fashioning a pilot study and questionnaire for dialect work, I made use of three informants from other parts of the Nahuatl-speaking area: Mr. Rubén Correo of Tehuacán, Puebla (approximately 36 informant hours), Mrs. Agustina Serán de Sánchez of Cuazimalpa, D. F. (about 50 informant hours), and Mr. Arcadio Sagahón of Matlapa, San Luis Potosí (about 100 informant hours).

"From the samplings of four dialects it could readily be seen that the differences between Nahuatl dialects in the various areas where the language is still spoken were far from negligible, both in phonology and morphology.

"Because of the time limitation on my fellowship, it was decided after consultation with my sponsor that the remaining time should be devoted to gathering field data for a descriptive grammar of a single Nahuatl dialect. Early in January I began to do intensive informant work with the dialect of Matlapa, S. L. P."

The informant work with Sagahón was continued on a part-time basis (approximately 10 hours per week) after the termination of the fellowship until November, 1950. This afforded an opportunity to

check the field data collected previously with the informant as the writing of the Matlapa grammatical sketch proceeded. It also provided an opportunity to expand the corpus, thus enabling the writer to make more inclusive and precise statements concerning the structure of Matlapa Nahuatl.

The writer's interest in Classical Nahuatl was aroused by the fact that students learning to speak Nahuatl today often use basic reference tools which were compiled in the 16th and 17th centuries. This suggested that some present-day dialects at least must be very similar to Classical, so similar, in fact, that a course in Nahuatl, whether designed to equip students to speak the language or to read native ethnographic texts, must have a great deal of transfer value. Once the orthographical system of the 16th century was clarified, such a conclusion became self-evident.

2. This dissertation consists primarily of a structural sketch of Matlapa Nahuatl phonology and morphology. Also included is a structural sketch of Classical Nahuatl phonology and morphology and brief comparative notes on the two dialects with occasional reference to other dialects. The writer had first-hand field data on which to build the Matlapa material, but the Classical was based on written records, supplemented with what the writer considers as probabilities. Both field notes and records were drawn on in the preparation of the comparative material.

The three 16th century documents used as sources of data on Classical Nahuatl provide a corpus as well as prescriptive and des-

criptive statements about the language. They are: (1) Olmos, Andres de. Arte para Aprender la Lengua Mexicana (1547); (2) Molina, Alonso de. Vocabulario en Lengua Castellana y Mexicana (1571); (3) Molina, Alonso de. Arte de la Lengua Mexicana y Castellana (1571). These works are abbreviated hereinafter as OA, MV, and MA respectively. 14

These three works were produced by Catholic priests who came to the New World from Spain. The morphemes of the examples contained in the grammars of Olmos and Molina were indexed by the writer, and this index forms the basis for the morphological material on Classical. There are gaps in the Classical data assembled, some of which have been tentatively filled by reasoned assumption; others could probably be filled from additional data.

One further source of data on Classical Nahuatl, in keeping with the source material mentioned above, is the Sahagún texts. Like Olmos and Molina, Sahagún was a Catholic priest from Spain, and his Historia General de las Cosas de Nueva España (1569) [15] records voluminous information about the history, rites, and customs of 16th century Nahuatl-speaking people. Sahagún's Historia would undoubtedly provide a much fuller corpus on which to build a structural sketch of Classical morphology. The preparation of a morpheme index constructed on these texts in the manner that the writer indexed the two grammars, however, would be a long and arduous task. Nevertheless, a thoroughgoing treatment of Classical morphology will presuppose a morphological analysis of the Sahagún texts.

The morphological material outlined in this dissertation, the writer believes, is sufficient to form a working basis for a future de-

tailed treatment.

An appendix to the phonological and morphological material gives two texts with analytical and free translations: one provides a sampling of Matlapa Nahuatl and the other a sampling of Classical Nahuatl.

Treatments of Matlapa junctures, intonation, and syntax are projects for the future. These will probably be found very similar to Matlapa Spanish types. The writer's informant from Matlapa, S. L. P. speaks Nahuatl natively, but haltingly, in a way which seems to distort some of the natural prosodic features. Thus, it is felt that the available field data does not provide a suitable basis for further analysis of Matlapa prosodics.

Numerous bases of Spanish origin have been found in Matlapa Nahuatl. [16] Introducers and connectives, in particular, are largely Spanish types: para so that, in order to, ke that, ya now, already, poŕke because, asta until, pero but, komo like, as, despwés after, and pwes well, so. [17]

A comparison of Matlapa and Classical texts and their Spanish translations clearly shows that Matlapa word order approximates that of Matlapa Spanish, whereas Classical word order appears to be somewhat removed from that of Spanish.

Footnotes

[1] Johnson, Frederick. Linguistic Map of Mexico and Central America. In The Maya and their Neighbors. New York, D. Appleton-Century Co. (1940). Sapir, Edward. Central and North American Languages. In Encyclopaedia Britannica. Chicago, Encyclopaedia Britannica, Inc. (1952). Vol 5, pp. 138-141. Mason, J. Alden. The Native Languages of Middle America. In The Maya and their Neighbors. New York, D. Appleton-Century Co. (1940). pp. 52-87. Mendizabal, Miguel O. de and Wigberto Jiménez Moreno. Grupos de Lenguas Indígenas de México, 1944. In México Prehispánico. México, D. F., Editorial Emma Hurtado (1946). [Map opposite p. 28]

[2] Mendizabal, Miguel O. de. Distribución Geográfica de las Lenguas Indígenas de México Conforme al Censo de 1930 (Por Municipios). México, D. F., Instituto Panamericano de Geografía e Historia, en Colaboración con el Instituto Mexicana de Investigaciones Lingüísticas de la República Mexicana. México, D. F. (1944).

[3] The following references cover the principal literature on Uto-Aztecan linguistics:

Angulo, Jaime de and L. S. Freeland. Notes on the Northern Paiute of California. JSAP 21.313-335 (1929).

Boas, Franz. El Dialecto Mexicano de Pochutla, Oaxaca. IJAL 1.9-44 (1917).

-------- Phonetics of the Mexican Language. International Congress

of Americanists. Proceedings. 18th session 107-108 (1913).

Croft, Kenneth. Practical Orthography for Matlapa Nahuatl. IJAL 17.32-36 (1951).

Diguet, Léon. Idiome Huichol. JSAP ns 8.23-54 (1911).

Dolores, Juan. Papago Nominal Stems. UCPAAE 20.19-31 (1923).

-------- Papago Verbal Stems. UCPAAE 10.241-263 (1913).

Harrington, J. P. Notes on the San Luiseño Language (Unpublished).

-------- The Phonetic System of the Ute Language. School of American Archaeology. Papers. No. 24 (1911).

Key, Harold and Mary. The Phonemes of Sierra Nahuat. IJAL 19.53-56 (1953).

Kroeber, A. L. The Bannock and Shoshoni Languages. AA 11.226-277 (1909).

-------- Handbook of the Indians of California. BBAE 78 (1925).

-------- Notes on the Shoshonean Dialects of Southern California. UCPAAE 8.235-269 (1909).

-------- Notes on the Ute Language. AA ns 10.74-87 (1908).

-------- Shoshonean Dialects of California. UCPAAE 4.65-165 (1906-1907).

-------- Uto-Aztecan Languages of Mexico. Berkeley, University of California Press (1934).

Liljeblad, Sven. Bannack I: Phonemes. IJAL 16.126-131 (1950).

McIntosh, John B. Huichol Phonemes. IJAL 11.31-35 (1945).

Mason, J. Alden. Classification of the Sonoran Languages. In Essays in Anthropology, ed. by Robert H. Lowie. Berkeley, University of California Press (1936).

-------- The Language of the Papago of Arizona. Philadelphia, University of Pennsylvania Museum (1950). iv, 84 pp.

-------- A Preliminary Sketch of the Yaqui Language. UCPAAE 20.193-212 (1923).

-------- Tepecano, a Piman Language of Western Mexico. New York Academy of Science. Annals 25.309-416 (1917).

-------- N. Tepehuan Notes (Unpublished).

Nida, Eugene A. The Tarahumara Language. Investigaciones Lingüísticas 4.140-144 (1937).

Osborn, Henry and William A. Smalley. Formulae for Comanche Stem and Word Formation. IJAL 15.93-99 (1949).

Pittman, Richard S. Nahuatl Honorifics. IJAL 14.236-239 (1948).

Preuss, Konrad T. Grammatik der Cora-Sprache. IJAL 7.1-84 (1932).

-------- Das Verbum in der Sprache der Cora-Indianer. International Congress of Americanists. 18th session 105-106 (1913).

Riggs, Venda. Alternate Phonemic Analyses of Comanche. IJAL 15.229-231 (1949).

Sapir, Edward. Southern Paiute and Nahuatl, a Study in Uto-Aztecan. JSAP ns 10.379-425 (1913); 443-488 (1914); AA 17.98-120, 306-328 (1915).

-------- Southern Paiute, a Shoshonean Language. American Academy of Arts and Sciences. Proceedings 65.1-296 (1930).

Shimkin, D. B. Shoshone. IJAL 15.175-188; 203-212 (1949).

Sparkman, P. S. Sketch of Grammar of the Luiseño Language of California. AA ns 7.656-662 (1905).

Voegelin, C. F. North American Indian Languages still Spoken and their Genetic Relationships. In Language, Culture, and Personality; Essays in Memory of Edward Sapir. Menasha, Wisconsin, Sapir Memorial Publication Fund (1941). pp. 15-40.

-------- Tübatulabal Grammar. UCPAAE 34.55-189 (1935).

-------- Tübatulabal Text and Grammatical Sketch. 20 pp. Ms. in the Franz Boas Collection.

Waterman, T. T. The Phonetic Elements of the Northern Paiute Language. UCPAAE 10.13-44 (1911).

Whorf, Benjamin L. The Comparative Linguistics of Uto-Aztecan AA 37.600-608 (1935).

-------- The Hopi Language, Toreva Dialect. VFPA 6.158-183 (1946).

-------- The Milpa Alta Dialect of Aztec with Notes on the Classical and Tepoztlan Dialects. VFPA 6.367-397 (1946).

-------- Notes on the Tübatulabal Language. AA 38.343-344 (1936).

-------- The Origin of Aztec TL. AA 39.265-274 (1937).

-------- Pitch Tone and the Saltillo in Modern and Ancient Nahuatl. 54 pp. Ms. in the Franz Boas Collection.

-------- Punctual and Segmentative Aspects of Verbs in Hopi. Lg 12.127-131 (1936).

-------- Some Verbal Categories in Hopi. Lg 14.275-286 (1938).

Whorf, Benjamin L. and George L. Trager. The Relationship of Uto-Aztecan and Tanoan. AA 39.609-624 (1937).

[4] Op cit (1934).

[5] During the first part of this century Kroeber (op cit, 1906-1907, 1925) grouped the Shoshonean languages into dialect branches: (a) the Plateau branch, including the Mono-Bannock, Shoshoni-Comanche, and Ute-Chemehuevi divisions; (b) Kern River branch (Tübatulabal); (c) the Southern California branch, including the Serrano, Gabrielino, and Luiseño-Cahuilla divisions; and (d) the Pueblo branch (Hopi). This seems to be a more valid geographical classification than a linguistic one; Voegelin (op cit, 1941) pointed out that "Whorf has shown that Shoshonean languages do not form a homogeneous group in contrast to the Nahuatl of Mexico: any one Shoshonean language may be more closely related to Nahuatl of Mexico than to another neighboring Shoshonean language." Furthermore, Whorf (op cit, 1935) finds no traits which distinguish Shoshonean from the rest of Uto-Aztecan.

[6] Op cit (1952).

[7] Op cit (1935).

[8] Op cit (1946).

[9] The scope and quantity of Nahuatl bibliography is probably the greatest of all American Indian languages. See Croft, Kenneth. Six Decades of Nahuatl: a Bibliographical Contribution. IJAL 19.57-73 (1953).

[10] Op cit (1951).

[11] Op cit (1946).

[12] Classification of American Indian Languages. Lg 5.1-7 (1929).

[13] Grateful acknowledgement is hereby extended to the Foundation for making my initial studies in the Nahuatl language possible.

[14] The editions of these works which the writer has examined are as follows (the reference editions for this investigation are marked with an asterisk):

OA: Although the manuscript of this work was finished in 1547, it was first printed, with editorial notes and introduction by Rémi Siméon, in 1875 under the title: *Grammaire de la Langue Nahuatl ou Mexicaine. Paris, Imprimerie Nationale. The manuscript was printed again in the series entitled Colección de Gramáticas de la Lengua Mexicana. México (1904). Vol. 1, pp. 1-126.

MV: México, Antonia de Spinosa (1571). Leipzig, B. G. Teubner (1880). Puebla, "El Escritorio" (1910). *Madrid, Ediciones Cultura Hispánica (1944). In the Library of Congress there is also an edition with the catalog entry as follows: Aqui comiença vn vocabulario enla lengua Castellana y Mexicana. Compuesto por el muy reuerendo padre fray Alonso de Molina: Guardiã dl cõuẽto d sant Antonio d Tetzcuco dla ordẽ delos frayles Menores ... Imprimio se ẽ la muy grãde & insigne y muy leal ciudad de Mexico, en casa de Iuã pablos ... 1555.

MA: México, Pedro Ocharte (1571). México, Impr. de I. Escalante (1886). In Colección de Gramática de la Lengua Mexicana. México (1904). Vol. 1, pp. 127-224. *Madrid, Ediciones Cultura Hispánica

(1945).

[15] The text of Sahagun's Historia is being issued now in a bilingual edition -- Nahuatl and English. Two parts of the edition have appeared so far: Florentine Codex: Books 1 and 2. Tr. from the Aztec into English, by Arthur J. O. Anderson and Charles E. Dibble. Santa Fe, The School of American Research and the University of Utah (1950-1951). 2 vols.

The Florentine Codex which contains the complete Nahuatl text will thus be more readily accessible in the future. Some of the better known translations are:

Einige Kapitel aus dem Geschichtswerk des Fray Bernardino de Sahagun, aus dem Aztekischen übersetzt von Eduard Seler; herausgegeben von Caecilie Seler-Sachs, in Gemeinschaft mit Walter Lehmann und Walter Krickeberg. Stuttgart, Strecker und Schröder (1927).

Histoire Générale des Choses de la Nouvelle-Espagne. Traduite et Annotée par D. Jourdanet et par R. Siméon. Paris, G. Masson (1880).

Historia General de las Cosas de Nueva España, que en Doce Libros y Dos Volúmenes Escribió el R. P. Fr. Bernardino de Sahagún ... Dala a Luz con Notas y Suplementos Carlos María de Bustamante. México, Imp. del Ciudadano Alejandro Valdés (1829). 3 vols. (Books 1-11).

Historia de la Conquista de México, Escrita por el R. P. Fr. Bernardino de Sahagún ... Publícala por Separado de sus Demás Obras Carlos María de Bustamante. México, Imp. de Galván a Cargo de Mariano Arévalo (1829). (Book 12).

Historia General de las Cosas de Nueva España, por el M. R. P. Fr.

Bernardino de Sahagún. México, D. F., P. Robredo (1938). 5 vols.

A History of Ancient Mexico, by Fray Bernardino de Sahagún; Translated by Fanny R. Bandelier from the Spanish Version of Carlos de Bustamante. Nashville, Fisk University Press (1932). Vol. 1 (Books 1-4).

Wahrsagerei, Himmelskunde und Kalender der alten Azteken. Aus dem astekischen Urtext übers. und erläutert von Leonhard Schultze Jena. Stuttgart, W. Kohlhammer (1950).

[16] Croft. Op cit (1951).

[17] Cf. Whorf. Op cit (1946).

PART I: THE PHONEMES

1. Phonemes of Matlapa Nahuatl
2. Early 16th century orthography
3. Phonemes of Classical Nahuatl
4. Comparative notes on Matlapa and Classical phonemes

1.0. In the author's previous paper on Matlapa Nahuatl [1] (abbreviated Mpa hereinafter), the phonemes with their principal allophones were treated in some detail, first regarding Nahuatl as a single homogeneous language aside from any foreign influences; then the analysis was reworked to include the many Spanish loanwords found in the dialect. The salient points of the reworked analysis are summarized below.

1.1. Mpa vowels are i, e, u, o, and a. Vowel length (·) is phonemic. Nasalization is treated morphophonemically (see 1.3). Examples: cici·k bitter, pihpilolli earring; wecke·h they fell down, ke·kehcolli heel; u·waλ cane, kipuwas he will read it; iyosto·h his cave, tekolo·λ owl; nawa·λ I, a·kacana thrush. Single vowels occur freely in word initial, medial, and final. Patterns of bivocalic clusters are VV, V·V, VV·, and V·V·. All the possible combinations have been found in word medial; elsewhere, the observed combinations are limited to: e·i in word initial; ei, e·i, and ai in word final. Trivocalic clusters oai, e·ia·, and e·ia have been observed in word

medial; the last of the series also in word final.

1.2. Mpa consonants are p, t, k^w, k, b, d, g, c, λ, č, f, s, š, x, h, m, n, ñ, l, r, r·, w, and y. Examples: pa·palo·λ butterfly, $kik^watope·hke·h$ they pushed it, wa·ktok dry; loboh wolf, pedasoh piece, kastigoh punishment; te·čno·ca speak to me!, čiči dog, λa·katekolo·λ devil; fwer·sah strength, esλi blood, šalli sand, obexas sheep, ihiyo·λ breath; monakas your ear, nihmatki I knew it, pañoh cloth; lala·š orange, λalli earth, tiroh shot, ar·pah harp; λawel a great deal, yowalli night. Single consonants and biconsonantal clusters occuring in word initial are p, t, k^w, k, λ, c, č, s, š, m, n, l, w, y; pr, tr, br, dr, py, by, dy, my, pw, fw, bl. Single consonants occur freely in word medial. Medial clusters are biconsonantal and triconsonantal; they are listed as follows with points of syllable boundaries shown by the plus sign (+): c, č, s, š, h, l + p, t, k^w, k λ, c, č, s, š, m, n, l, w, y; p + t, k; t + k; s + pw; m^2 + p, b, pr; n^2 + p, t, λ, c, č, s, š, m, n, l, w, y; l + d; r· + p, t, d, k, s, m; y + t, l. Single consonants only are found in word final; they are limited to k, λ, c, č, s, š, h, and l.

1.3. Because of the word-medial contrast between the sequence oral vowel nasal consonant (V + N) and nasalized vowels (NV), the morphophonemic symbol $\underline{n}$ was adopted to indicate (1) morpheme-final N, which occurs before another consonant (C), and (2) NV, which occurs before an oral vowel, a semivowel, and in phrase final: in the sequence V + $\underline{n}$ + C, $\underline{n}$ = [m] before p, [ŋ] before k^w and k, [n] before other consonants;

other sequences of V + n = NV. Examples: ninehnemi I walk, niki·nahokʷik I kept them, ini·nwicwan their thorns, ini·npalačwan their turkeys, ini·nλal their land, pan ohλi on the road, pan kalli in the house, λačpanko place swept, λankʷa·iλ leg.

1.4. Stress automatically falls on the penult of Mpa words of more than one syllable. Stress on Spanish loanwords which do not follow this pattern is marked by an acute accent (′). Examples: λape·hke·λ hunter, pastór· shepherd. A few monosyllabic words are stressed; others are unstressed.

2.0. Graphic representations applied to 16th century Spanish were used by the early Catholic fathers in the New World to transcribe Nahuatl. In the opinion of the present writer, our knowledge of 16th century Spanish phonology and the Spaniards' orthographical habits of the time are sufficient to allow reconstruction of Nahuatl phonology in part with considerable accuracy. A comparison of the available linguistic data concerning 16th century Spanish and Nahuatl with those concerning present-day Nahuatl prepared by trained American field investigators throws further light on the phonological picture of Classical Nahuatl (abbreviated Cl hereinafter), which leads to the ultimate formulations set forth in this dissertation. From all indications, the orthographical conventions for symbolizing Spanish became substantially the orthographical conventions for symbolizing Nahuatl. The weaknesses of Spanish orthography were carried over to Nahuatl orthography, and the resulting notations were somewhat removed from a con-

sistent application of a single symbol per phoneme. However, a fairly efficient writing system seems to have evolved. There have been literate Nahuatl speakers ever since the middle of the 16th century. [3] It is perhaps especially noteworthy that the configurations of Nahuatl phonology were such that fairly systematic representations were possible in terms of the orthographical traditions peculiar to Spanish-speaking people.

2.1. The phonological detail of 16th century Spanish for the most part is fairly clear; however, the phonetic values represented by certain letters of Old Spanish writing have been contested issues for many years. Preoccupations have centered, in particular, around the pronunciations symbolized by ç, z, x, h, v, b, j, s, and f. [4]

2.2. Probably the most important source of information on Spanish phonology and orthographical habits of the period is the grammar of Antonio de Nebrija, published in 1492. [5] In his efforts to devise an orthography with systematic sound-symbol correspondences, he recommended separate symbolization of 26 "pronunciaciones". A reasonable supposition, in the writer's opinion, is that at least some Spanish dialects had 26 consonant and vowel phonemes. In describing the weaknesses of Spanish orthography, Nebrija called attention to the fact that twelve letters of the current orthography "sirven por si mesmas": a, b, d, e, f, m, o, p, r, s, t, z; six letters [sirven] "por si mesmas e por otras": c, g, i, l, n, u; and five letters [sirven] "por otras e no por si mesmas": h, q, k, x, y. He proposed orthographical reform

to the extent of utilizing twenty-four single letters and two digraphs for consistent representation of Spanish consonants and vowels: a, b, c, ç, ch, d, e, f, g, h, i, j, l, ll, m, n, ñ, o, p, r, s, t, u, v, x, z.

2.3. Canfield's summary statements [6] on Old Spanish pronunciation are probably the clearest account available of the phonological units. Since this account has not appeared in print, a few extracts bearing directly on the problem are quoted here:

"Knowledge of the former pronunciation of a language comes chiefly from three sources: (1) descriptions of sounds by contemporaries, (2) occasional spellings, and (3) transliterations of other languages.

"For Spanish, we have testimony from all three of these origins, although the thoroughness of the descriptions by Spaniards and by foreigners seems to increase during the sixteenth and seventeenth centuries, with apparent decline in accuracy during the eighteenth and nineteenth, to become actually scientific in the twentieth. Occasional or erroneous popular spellings increase in efficacy as more people write -- people with less knowledge of traditional spelling.

"The main source of information on Old Spanish pronunciation and on subsequent changes is the writing done by Spaniards in other languages, or about other languages, in Spanish with the Spanish alphabet. Thus it is that Arabic, Hebrew, French, English, German, Italian and several Indian languages of America were transcribed or described by Spaniards who applied the means at their disposal -- the Spanish sound system -- to portray the other language. So it is that an aspirate

of several other languages may be depicted by Spanish h, or the pre-palatal sh-sound of many represented by Spanish x.

"... The Spanish vowels were apparently what they are today, with possible differences that were caused by the assimilation of consonantal traits that are distinct today. Most consonants have apparently changed little. Certain ones have undergone major operations.

"b and v apparently represented the former occlusive, the latter fricative, probably bilabial rather than labic-dental. The development of f to h through labialization would indicate this.

"h was an aspirate and although it alternated with f in some spellings of the period, an aspirate or a very 'open' bilabial f is indicated ...

"Perhaps the most interesting phonetic phenomena of the period, due principally to subsequent regional changes, are the x, j, and the s and the ç and z. There is still some discussion about the early values of the last two of these letters, while it is certain that the x and j were pre-palatal sibilants with a possible second set of post-palatal or velar vibrations in the case of x. The Spanish s, a unique apico-alveolar sound, was difinitely of this type in practically all of Castillian territory at the end of the fifteenth century. Its confusion with x and the phrase 'esta lengua no tiene s', which was so often used in the description of other languages which have what most people call s, point to its present value as pronounced in Northern and Central Spain. This s was lost in the Southwest of Spain and in America. Most evidence points to a fine dental s articulation for c and a z corresponding high resonance for written z ..."

The results of Canfield's research are favored here because many of his investigations deal directly with aboriginal languages of Mexico and Central America, and the statements made by Canfield which the writer has had occasion to check have been substantiated by first-hand field data.

2.4. Of the orthographical notations presenting problems -- ç, z, x, h, v, b, j, s, and f -- the last four can be eliminated from the discussion at hand, for neither Olmos nor Molina made use of these letters in transcribing Nahuatl. Capital V was often employed by both Olmos and Molina at the beginning of phrases instead of u which appeared in other positions. This was presumably an orthographical practice rather than an allophonic representation. According to Canfield's testimony above, ç, z, x, and h were apparently [s], [z], [š] (possibly [šx]), and [h] respectively. [7] Canfield noted elsewhere that both ç and z were used to represent [s]: "Indications are that at the time of the conquests in America there were two 's' sounds in Spanish: s, represented by ç and sometimes z, and S (apico-alveolar), represented by s and ss ... " [8] The phonetic correspondences for x and h presumably obtained with consistency.

3.0. According to the writer's reconstruction of Cl segmental phonemes, there were 4 vowels and 15 consonants: i, e, o, a, p, t, k^w, k, c, λ, č, s, l, š, h, m, n, w, and y. In terms of the Spanish orthography these were represented as follows:

	Olmos	Molina
/i/	y frequently in word initial and occasionally in word final; i elsewhere.	y occasionally in word initial, final, and in vowel clusters; i elsewhere.
/e/	e	e
/o/	y occasionally in word initial; o and u elsewhere.	Same.
/a/	a	a
/p/	p	p
/t/	t	t
/kʷ/	qu before /a/; cu elsewhere.	Same.
/k/	qu before /e/ and /i/; c elsewhere.	Same.
/c/	tç occasionally; tz more frequently.	tz
/λ/	tl	tl
/c/	ch	ch
/s/	c before /e/ and /i/; ç before /a/ and /o/; z elsewhere.	Same.
/l/	lh as a prior member of CC and in word final; l elsewhere.	lh before /w/; l elsewhere.

/ǧ/	x	x
/h/	frequently omitted before C and in word final; h elsewhere.	Same.
/m/	m	m
/n/	n	n
/w/	V and u in word initial, the former more frequent; uh as a prior member of CC and in word final; hu often as a second member of CC; o after /h/ and occasionally in other positions; u elsewhere.	V in word initial; uh as a prior member of CC and in word final; u elsewhere.
/y/	y	i occasionally; y elsewhere.

3.1. Examples are noted below along with a few observations of the present writer. Various statements of Olmos and Molina concerning 16th century Nahuatl speech sounds are also given, which provide some information on the phones observed.

Both authors called attention first to the absence of Nahuatl counterparts for various Spanish speech sounds. [9]

3.2. Vowels /i/, /e/, /o/, /a/ were probably voiced in all positions.

Examples: iwiλ (yuitl OA) feather, pihλi (pitli OA) older sister, tepeλ (tepetl OA) mountain, olli (Vlli MV) gum, šokoλ (xocotl OA) apple, kamaλ (camatl OA) mouth. MV transcription cu before a consonant and in word final must have represented /k^{w}/ in some cases, although phonetically it may have been [k] followed by a voiceless off-glide with vocalic timbre. [o] and [u], allophones of /o/, seem to have been in complementary distribution. [10]

All single vowels have been found recorded in word initial, medial, and final. [11] All possible combinations of bivocalic clusters apparently occurred in word medial. Other observed combinations are limited to: ia, io, ei, and oa in word final; ei, ii, ee, oo, oi, and aa in word initial; eoa, eii, eoi, eaa, oae, oai, and aoi in word medial.

There was probably a phonemic distinction between long and short vowels in Cl, although it was unmarked in the data provided by Olmos and Molina. The geminate vowel clusters recorded by these "grammarians" appear to be actual geminates, and iy, recorded by Molina, must have been the geminate /ii/.

3.3. Stops /p/, /t/, /k^{w}/, /k/ and affricates /c/, /λ/, /č/ were probably voiceless; however, Olmos' remarks on the use of g suggests allophonic voicing of /k/ in some positions. [12] Examples: išpopoyoλ (yxpopoyutl OA) blind person, teposλi (tepuztli MV) iron, nikitoa (niquitoa OA) I say it, yank^{w}ik (yanquic MV) new, kokoa (cocoa MV) snakes, contekomaλ (tzontecomatl OA) head, λakočλi (tlacochtli MV) arrow, čičiλ (chichitl OA) saliva. Molina expressed a preference

for writing /c/ as tz rather than ts because of its apparent proximity to the Spanish sequence tz [ts]; ts would presumably have been something like [tṣ]. [13]

Fricatives /s/, /š/, /h/ were probably voiceless; /l/ must have been voiceless and fricative in some positions and voiced elsewhere. Examples: seseya (ceceya MV) it gets cold, toskiλ (tozquitl OA) throat, ikšiλ (icxitl MV) foot, šiwiλ (xiuitl OA) leaf, ihiyoλ (ihiyutl OA) breath, hikošk^{w}awiλ (hicoxquauitl MV) fig tree, nokal (nocalh OA) my house, ilwikaλ (ilhuicatl MV) sky, wiloλ (Vilutl OA) dove. Olmos seems to have found allophonic variations of /š/ among certain speakers: [š] and [ṣ]. [14] /h/ apparently lacks representation at various points in the transcriptions of Olmos and Molina. In various present-day dialects the shape of the absolutive suffix -λ ~ -λi ~ -li is phonologically determined by the end shape of the preceding morpheme: -li follows morpheme -....l, -λi follows morpheme -....(other) C, and -λ follows -....V. If this rule was applicable in Cl, and it probably was; then, a transcription such as patli should be represented pahλi phonemically. Also in various present-day dialects, second person singular verb forms are sometimes distinguished from first person plural verb forms only by the pluralizing suffix, one alternant of which is -h. Although Olmos and Molina often failed to record h in final position, it is very likely that the h, as a plural marker, was present. The combination of letters lh probably symbolized [ɬ], a voiceless allophone of /l/; Olmos called attention to this occurrence in certain positions. [15]

Nasals /m/ and /n/ were probably voiced. Examples: šamiλ (xamitl OA)

adobe, nepanλa (nepantla MV) in the middle. Olmos' comment on the loss of n in certain positions may have been nasalization of the vowel, which could probably be interpreted phonemically as /Vn/ or /Vm/. [16]

Semivowel /w/ was probably voiced and voiceless according to its position, and /y/ was voiced in all positions. Examples: k^{w}awiλ (quauitl OA) tree, wapalli (Vapalli MV) board, noλakaw (notlacauh OA) my slave, ayoλ (ayutl OA) turtle, yaoλ (yaotl MV) enemy. The presence of h before or after u presumably symbolized [W], a voiceless allophone of /w/, in most positions. Olmos, Molina, and later "grammarians" noted the occurrence in women's speech of an allophone of /w/ similar to Spanish v. [17]

Single consonants seem to have occurred freely in word medial. Consonant clusters were word medial, consisting of two members (C_1C_2). C_1 = p, k^{w}, k, c, č, s, l, š, h, m, n, and w; C_2 = p, t, k^{w}, k, c, λ, č, s, š, m, n, w, and y. The evidence indicates that the following combinations occurred: k, c, č, s, š, h, w + C_2; p + C_2 (excluding n); k^{w} + C_2 (excluding k^{w}, k, w); l + l, C_2 (excluding λ); n + C_2 (excluding p, m); t + t; m + p, m. Word initial consonants were restricted to C_2 and word final consonants to p, t, k^{w}, k, c, č, λ, s, l, š, h, n, and w.

3.4. Stress in Cl, unrecorded in the writings of Olmos and Molina, appears to have been regular in most cases. Molina stated that stress on more than one syllable was rare. [18] The usual pattern was apparently a single stress on the penult; however, Molina cited one example with stress on the antepenult and several with stress on the ultima. [19] For purposes of transcription, stress on the penult will be unmarked. Ex-

amples: šikλati (xictlati MA) hide it!, kalli (calli MV) house. Stress on a syllable other than the penult will be marked with an acute accent (´). Example: totaciné (totatzine MA) our Father.

4.1. If we set aside identifiable Spanish loanwords in Mpa momentarily and examine the residual corpus, we find that the number of segmental phonemes in Mpa exactly matches the number in Cl. Moreover, if we chart the consonants according to articulation points and types, and vowels according to tongue position, we find the phonetic picture of Mpa and Cl is substantially the same.

One of the principal differences between Mpa and Cl, then, is a larger number of phonemes in the former caused by the introduction of Spanish loanwords. Most Spanish loanwords show some assimilation to the Mpa phonological pattern, by the addition, loss, or replacement of phonemes. [20] However, complete assimilation, i. e. Mpa phonemes substituted completely for Spanish phonemes, is rare. More frequently, loanwords show only partial assimilation: only some features of articulation introduced from Spanish are accommodated in the native phonological system. Other features from Spanish overlap in distribution with features of Mpa, resulting in an increased number of phonemes, namely u, b, d, g, f, x, n, r, and r· (see 1.1-2 for examples).

4.2. Certain areas of the transcription of Olmos and Molina are suspicious to the present writer. However, the corpus provided by these two authors is inadequate to ascertain conclusively whether these areas are valid or not. In 3.3 it was noted that /h/ probably lacked

representation at various points in the transcriptions. In some dialects of Nahuatl, glottal stop has been found with a distribution comparable to that of /h/ in Mpa. It is conceivable that glottal stop and /h/ were complementarily distributed allophones of the same phoneme in Cl, and only the latter was recorded. It is also possible that /h/ in Cl was an aspirated glottal stop as described in the Milpa Alta dialect of Nahuatl.[21] If the allophones of /h/ in Cl were very similar to those of /h/ in Spanish, we can assume that its frequent lack of representation must have been due to the differences in distribution: /h/ in Spanish was word initial and medial between vowels; in addition to these positions, in Cl, /h/ was also found word medial before a consonant and in word final. Then, perhaps the Spaniards failed to hear /h/ in the last-named positions or considered it unessential in communication.

It was noted in 3.2 that a phonemic distinction probably existed in Cl between long and short vowels, although vowel length was unmarked in the transcriptions of Olmos and Molina. In the four present-day dialects with which the writer has worked, vowel length is phonemic. In many instances, however, additional length is barely perceptible, and the basic quality of long and short vowels appears to be identical. Some linguists, working under the auspices of the Summer Institute of Linguistics, have reported that significant vowel length in certain Nahuatl dialects of Puebla and Veracruz is probably absent. Nevertheless, since phonemic vowel length has been found in the dialects in and around the Valley of Mexico, the writer believes it was also present in Cl.

The number of consonant and vowel clusters found in the transcrip-

tion of Molina exceeds by far the number found in Mpa. The writer questions the geminate clusters of stops and nasals and the occurrence of kk^{W}, in particular, because their occurrence suggests that various morphophonemic alternations found in present-day dialects were not operative in Cl. This may have been the case, but it also focuses the attention of a field investigator on the shapes of certain morphemes which he would check with additional forms elicited from an informant, if that were possible.

4.3. In both Cl and Mpa the usual stress pattern is a single stress on the penult. When stress falls on a syllable other than the penult, it is marked. As yet, no analytical work has been done on Mpa intonation. Whorf prepared a discussion [22] about twenty years ago comparing some of the prosodic features of early Nahuatl with those of the Milpa Alta dialect. Because of recent developments in the treatment of suprasegmental phonemes, Whorf's material should be reworked with a newer approach and additional field data.

4.4. The morphophonemic treatment of nasalized vowels and morpheme-final nasals in Mpa is based on a set of phonetic circumstances which are probably shared with few if any other dialects of Nahuatl. For transcribing other present-day dialects of Nahuatl with which the writer is familiar, the nasal consonants are sufficient. As suggested in 3.3, vowel nasalization in Cl could probably be interpreted phonemically as /Vn/ or /Vm/. [23] Olmos' transcription aualazque, <u>you</u> (pl.) <u>will come</u>, was likely /anwalaskeh/ phonemically; similarly, Molina's transcription

ciciti, rabbits, was probably /sisihtin/.

Footnotes

[1] Practical Orthography for Matlapa Nahuatl. IJAL 17.32-36 (1951).

[2] At the beginning of this study it was considered likely that CC would prove to be a morpheme division indicator, but when faced with the Spanish loanwords in the dialect, this general hypothesis was abandoned. However, in the case of CC with a nasal as the prior member, the transcription n̲C is, in the opinion of the writer, substantiated. The listing here as mC and nC is phonetic.

[3] The various orthographical systems which have been utilized for transcribing Nahuatl over the years are described in Dávila Garibi, J. Ignacio. La Escritura del Idioma Náhuatl a través de los Siglos. México, D. F., Editorial Cultura (1948).

[4] The following contain the principal literature on this subject:

Cuervo, Rufino J. Disquisiciones sobre Antigua Ortografía y Pronunciación Castellana. Revue Hispanique 2.1-69 (1895).

-------- Obras Inéditas. Bogotá, Editorial Librería Voluntad (1944). pp. 353-492.

Menéndez Pidal, Ramón. Manual de Gramática Histórica Española. 6a ed. Madrid, Espasa-Calpe (1941).

Ford, J. D. M. Old Spanish Sibilants. Harvard University. Studies and Notes in Philology and Literature. Vol. 7 (1900). pp. 1-182.

Marden, Charles C. The Phonology of the Spanish Dialect of Mexico

City. Baltimore, Modern Language Association of America (1896).

Espinosa, Aurelio M. Studies in New Mexican Spanish. New Mexico. University. Bulletin no. 1 (1909).

Willey, Norman. C and Z in American Spanish. Philological Quarterly 5.306-324 (1926).

Canfield, D. Lincoln. Spanish Literature in Mexican Languages as a Source for the Study of Spanish Pronunciation. New York, Instituto de las Españas en los Estados Unidos (1943).

-------- Spanish ç and S in the Sixteenth Century. Hispania 33.233-236 (1950).

-------- How Was Spanish Pronounced in 1492? Unpublished paper read before the Fifth University of Kentucky Foreign Language Conference, April 25, 1952.

Alonso, Amado. La Pronunciación de la z y la c en el Siglo XVI. Universidad de la Habana 23.62-83 (1939).

-------- Cómo no se Pronunciaban las ç y Z Antiguas. Hispania 34.51-53 (1951).

[5] Gramática Castellana ... Notas Preliminares por José Rogerio Sánchez. Madrid, Lib. y Casa Editorial Hernando (1931).

[6] Op cit (1952).

[7] Several investigators in the field of Romance philology have expressed the view that c and z represented [ts] and [dz] respectively at the beginning of the 16th century.

[8] Op cit (1950).

[9] "... las letras que les faltan son las siguientes: b, d, f, g, r, s, v consonante." (OA p. 197) "... la pronunciacion que nosotros tenemos destas sillabas ja, je, ji, jo, ju, ellos no la tienen." (OA p. 198) "... esta lengua carece de seys letras, que son b. d. f. g. r. s. ... no tienen ni pronuncian estas sillabas: ja. je. ji. jo. ju. lla. lle. lli. llo. llu. ña. ñe. ñi. ño. ñu." (MA pt. I, p. 5)

[10] "... es de notar que entre estas dos vocales o, u, hazen muy poca diferencia de la prommnciacion y escritura, porque una misma diccion unos la pronuncian con o, y otros con u." (OA p. 198). "... los naturales hagan poca diferencia entre la o. y la u. por quanto vsan ansi de la vna como de la otra indiferentemente." (MA pt. I, p. 5)

[11] The distributional statements given here are based on the entries in MV.

[12] "... quanto a las letras que hemos dicho que no tenian ... parece algunas vezes pronunciar algunas dellas, y una destas es la g ... aunque excriven c, parece que pronuncian g ..." (OA p. 197)

[13] "... esta lengua tiene una letra Hebrayca, que es: tsade. La qual se ha de escreuir con t. y z. y no con t. y s. y hase de pronunciar t. y z." (MA pt. I, p. 5)

[14] "... algunos ... quando excriuan x ... no la pronuncian mucho

la x sino como s." (OA p. 198)

15 "... quando alguna diccion acabare en l, despues de la l se a de escriuir h ... Pero quando se siguiere luego otra diccion que comience en vocal no se escriuira h, porque entonces tiene la l su simple pronunciacion ... Tambien otras vezes en medio de diccion se pondra h despues de la l, porque la pronunciacion lo requiere ..." (OA p. 200)

16 "... es de notar que quando despues de la n se sigue c, tz, u, x, y consonante, se pierde la n del todo." (OA p. 201)

17 "... quando la o estuuiere entre dos vocales se pronunciara y escriuira mejor con u que con o ... en tales dicciones, las mugeres mexicanas y tetzcucanas pronuncian v consonante ..." (OA p. 198) "... los varones, no vsan de v consonante, aunque las mugeres Mexicanas solamente la vsen." (MA pt. I, p. 5)

18 "Es de saber, que comunmente, o por la mayor parte, estos naturales, no alçan mas vna sillaba que otra en su hablar y platicas: salvo de quando en quando o ralamente ..." (MA pt. II, p. 27)

19 "... xictlati yn candela. que quiere dezir. enciende la candela o la vela. alçando la primera sillaba. xic y pronunciandola con accento agudo ..." (MA pt. II, p. 27) "... Y algunas vezes hazen el accento en algunas dictiones, en la ultima sillaba: y esto en los casos de los vocativos. Ex. totatzino: alçando esta sillaba ne." (MA pt. II, p. 28)

[20] See Croft. Op cit (1951).

[21] Whorf, Benjamin L. The Milpa Alta Dialect of Aztec with Notes on the Classical and Tepoztlan Dialects. VFPA 6.367-397 (1946).

[22] Pitch Tone and the "Saltillo" in Modern and Ancient Nahuatl. 54 p. manuscript in the Franz Boas Collection of the American Philosophical Society, Philadelphia.

[23] Cf. Whorf. Op cit (1946).

PART II: MORPHEME SHAPES

0. Some Mpa and Cl morphemes have unique alternants, i. e. they occur in only one shape. Other morphemes occur in two or more complementarily distributed or freely variable alternants. The shape of alternants in complementary distribution is determined by (1) the position of the morpheme in a given sequence and/or (2) other morphemes in the sequence.

Morpheme alternations are of two types: (1) those that occur throughout the language, irrespective of the distribution class of the

morphemes concerned, and (2) those incidental to morphemes of a particular distribution class. We treat the first type of alternations in 1. and 6., stating the conditions under which they are found, without listing the alternants themselves.

Alternations of the second type are dealt with by distribution classes: prefixes in 3. and 8., suffixes in 4. and 9., verb bases in 5. and 10., noun bases in 6. and 11. Where morpheme shapes are predictable in terms of word boundaries and/or other morphemes in the sequence, we use the single alternant sign (~) to indicate morpheme alternants. Where the exact conditions under which alternants occur have not been ascertained, we use the double alternant sign (≈). Where we can only state the conditions of occurrence for certain alternants or certain groups of alternants of a given morpheme, we use parentheses and square brackets in our formulas to keep the two types of alternation separate.

1. Automatic alternations in Mpa.

1.1. In part I of this dissertation, a word medial contrast was noted between the sequences oral vowel + nasal consonant + oral vowel (V + N + V) and nasalized vowel + oral vowel (NV + V). The morphophonemic symbol $\underline{\underline{n}}$ was adopted to indicate (1) morpheme final N, which occurs before another consonant (C), and (2) NV, which occurs before an oral vowel, a semivowel, and in phrase final: in the formula V + $\underline{\underline{n}}$ + C, $\underline{\underline{n}}$ represents a bilabial nasal before p; a velar nasal before k^w and k; a dental nasal before other consonants; elsewhere, V + $\underline{\underline{n}}$ represents

NV. Examples: ki·miktih he killed them, ki·nita he sees them; anpaki·h you (pl.) are happy, ankite·motiyahke·h you (pl.) went looking for it, anisλakatitoya·h you (pl.) were lying, ante·čsa·lohke·h you (pl.) added us, anweckatia·h you (pl.) were laughing, nepa anyahke·h you (pl.) went there; kiwa·li·kah ičan he carried it home.

1.2. Phrase medial Vn and V·n alternate respectively with V and V·; the latter two occur before morpheme initial nasal, the former two before other morpheme initials. We cite alternants showing such variation in only one shape, namely with the nasal; e. g. ki·n-, third person plural goal, represents alternants ki·n- and ki·-. However, we show the alternative shapes in examples: šiki·nčia wait for them! niki·mok^{w}iλwih I looked after them, tiki·namaki·ltia we sell them to them; amo akin kikowas nobody will buy it, aki micλanehti·s who will lend it to you?, amo aki no·ca no one's talking.

1.3. Morpheme final V· and V·n in phrase medial alternate respectively with V and Vn in phrase final. We cite alternants showing this variation with the long vowel; e. g. na·n, mother (noun base), represents alternants na·n and nan. Examples: na·nλi mother, te·nan someone's mother; nelwayo·λ root, monelwayo your root; ka se· λa·kaλ with a man, onkah se there's one; misto·ncicin little cats, miston it's a cat; ikni·nλi brother, tinoiknin you are my brother. (The formula V·n which appears in both 1.2 and 1.3 represents the end shapes of three alternants; e. g. ča·n ~ čan ~ ča·- dwelling place (noun base). Examples: ča·nλi house, ičan his house, ča·men houses).

1.4. Word final k in phrase final alternates with h in phrase medial. We cite alternants showing this variation with the stop; e. g. kamak, mouth (noun base), represents alternants kamak and kamah. Examples: nokamak my mouth, ikamah iwa·n iyakacol his mouth and nose; amo tihneltokak you didn't believe it, tihneltokah λen tikitak you believed what you saw.

2. Mpa affix list.

2.1. Mpa prefixes are listed as follows by decade classes (10-70): [1]

11. ni-	first person singular actor
12. ti- ~ #- (zero)	second person singular and first person plural actor
13. an-	second person plural actor
14. ši- ~ #-	imperative
21. ne·č-	first person singular goal
31. mic-	second person singular goal
32. ki- ~ -k- ~ -h-	third person singular goal
33. te·č-	first person singular and plural goal
34. a·me·č- ~ -me·č-	second person plural goal
35. ki·n-	third person plural goal
41. wa·l-	from there to here
42. on-	from here to there
51. no-	first person singular possessive
52. mo-	second person singular possessive
53. i- ~ iy- ~ #-	third person singular possessive

54. to-	first person plural possessive
55. a·mo-	second person plural possessive
56. ini·n-	third person plural possessive
57. te·-	indefinite possessive
61. mo- ≈ m-	reflexive
62. te·-	indefinite personal goal
63. λa-	indefinite impersonal goal
71. Vh- ~ CVh-	intensifier and repetitive

2.2. Mpa suffixes are listed below by century and decade classes: class 100 (110-190) consists of verbal and verbalizing suffixes; class 200 (210-250), nominal and nominalizing suffixes.

111. -ti	verbalizer
121. -li ≈ -ti ≈ -wi	transitivizer
122. -ti	causative
123. -lti ≈ -·lti	compulsive
131. -li ≈ -·li	benefactive
141. (-ti- ≈ -hti-) ~ (-t- ≈ -ht-)	second verb base marker (?)
151. yah ~ ya- ~ yawi-	go, efferentive [2]
152. wa·lah ~ wa·la- ~ wa·lawi	come, afferentive [3]
153. weci ~ wec-	fall, inceptive
154. nemi ~ nen-	walk, diffusive
155. ki·sa ~ ki·s-	go out, promotive
156. e·wa ~ e·-	raise, premotive
161. -a ~ -wa	undetermined meaning
171. -to ≈ -hto	progressive

181. -ki — action in intraverse direction, non-actualized

182. -ko — action in intraverse direction, actualized

183. -ti — action in extraverse direction, non-actualized

184. -to — action in extraverse direction, actualized

185. -a ~ -ya — imperfective

186. -h ≈ -k ≈ -hki ≈ -ki ≈ -hk- — perfective

187. -s ≈ -·s — future

188. -skia ≈ -·skia — conditional

191. -kan ≈ -ke·h ≈ -e·h ≈ -·h — verb pluralizer

211. -nin — collective agentive

212. -kan ≈ -hkan — locative [4]

213. -ko ≈ -hko — locative

214. -yan — locative

221. (-ke· ≈ -hke·) ~ (-ka· ≈ -hka·) ~ (-ka·h ≈ -hka·h) — agentive

222. -l — participial

223. -lis — nominalizer

224. -yo· ≈ -hyo· ≈ -kayo· ≈ -hkayo· — abstractivizer and generalizer

231. -o ~ -yo — intimate possessive

241. [(-li ≈ -lin) ~ (-λi ≈ -in) ~ -λ] ≈ -# — absolutive

242. -men ~ -wan ~ -ci- — noun pluralizer

251. -cin — diminutive

3. Alternations peculiar to Mpa prefixes.

3.1. In this and sections 4.-6., 8.-12. which follow, the sequences cited do not constitute complete distributional statements. Each

statement should be prefaced by the phrase "Where the distribution is possible ..."; for the present we are dealing exclusively with the the shapes of morphemes in observed distributions. 5

3.2. Prefixes 12 and 14 each occur in two alternants: #- in sequence before prefix 33; ti- and ši- respectively in other positions. Examples: te·čahokʷi you are looking after us, te·čkaki listen to me!; time·hke·h we got up, šiki·sa go out!

3.3. Prefix 32 appears in three alternants: ki- in word initial and after prefix 13; elsewhere in word medial, -k- occurs before morpheme initial V, -h- before other morpheme initials. Examples: kiitato·h they went to see her, ankico·nteki·h you (pl.) cut it, tikahwa·ltia·h we make him bark, nihλahtoltih I filled him with words.

3.4. Prefix 34 occurs in two alternants: a·me·c- in word initial, -me·c- in word medial. Examples: a·me·čλamaka·h they feed you (pl.), nime·čči·wiliti I will go do it for you (pl.).

3.5. Prefix 53 is found in three alternants: #- before morpheme initial i, iy- before other morpheme initial V, i- elsewhere. Examples: istah his salt; iya·yohwan her calabashes; tiita·h you are his father, ikʷawan his sticks.

3.6. Prefix 61 occurs in two alternants: m- before certain morpheme initial V, mo- in other positions. Examples: time·hke·h we

got up, mosiakecase·h they will rest.

3.7. Prefix 71 is reduplication of the first syllable of verb bases + h. Alternant Vh- appears before stem initial V; alternant CVh- before stem initial CV. Examples: niki·nihita I see them constantly, kʷahkʷalanke·λ grouch. In a few instances, prefix 61 figures as C in the formula CVh-. Example: amihmihto·tiaya·h you (pl.) were always dancing.

3.8. Other prefixes are subject only to variations noted in 1. Examples: te·na·npico mother pig, nite·si·h I am a grandmother, te·osto·h someone's cave; ankonpi·kilia·h you (pl.) go from here to wrap it over there.

4. Alternations peculiar to Mpa suffixes.

4.1. Suffix 121: -li ≈ -ti ≈ -wi. Examples: kiče·kilia he cries for her; tihte·mitihke·h we filled it; te·temowihkayo·λ lowering people.

4.2. Suffix 123: -lti ≈ -·lti. Examples: ne·či·to·naltia it makes me sweat, tihλakʷaltihke·h we fed him; λaλehko·ltilisλi what was raised, λaweci·ltihkayo·λ something made to fall.

4.3. Suffix 131: -li ≈ -·li. Examples: te·čwa·li·kili bring it to me!, timicλacoconilia·h we play it for you; nihmati·lia I found it out for him, tihkaki·lihke·h we heard it in her place.

4.4. Suffix 141: (-ti- ≈ -hti-) ~ (-t- ≈ -ht-); the first pair is found in sequence before base initial C (of class 150), the second pair before other base initials. Examples: kino·ctiwecke·h they began to call him, čikiči·htiyah he goes along making baskets; tihmatite·hke·h we found out about it before we left, kʷatite·hki he got tired before he went away.

4.5. Suffix 161 is found in two alternants: -wa follows morpheme final o (see 5.7 for further variation of base final lo), -a follows other morpheme finals. Examples: ki·nsa·lowa he adds them, kiλapowaya·h they were opening it; tihči·wilia·h we are making it for her, niki·nki·štiaya I was taking them out.

4.6. Suffix 171: -to ≈ -hto. Examples: mowawa·ntok he has been scratching; iksitoya it was ripe; nihλamihtos I will be finishing it; weckatoskia·h they would be laughing.

4.7. Suffix 185 is found in two alternants: -ya after morpheme final o and a; -a in other positions. Examples: šolontoya·h they were wet; ne·čλapoliaya he was opening it for me; tiλakakia·h we were hearing something.

4.8. Suffix 186: -h ≈ -k ≈ -hki ≈ -ki ≈ -hk-. The first four of the series are found in word final; the first, second, and last of the series occur in word medial. Examples: nimose·wih I sat down; temo·k she went down; nihpohki I read it; kočki he slept; ankipano·ke·h

you (pl.) passed him; timose·wihke·h we sat down; kipahpa·hke·h they washed it.

4.9. Suffix 187: -s ≈ -·s. Examples: kʷatitos he will be tired; niλailpi·s I will tie something.

4.10. Suffix 188: -skia ≈ -·skia. Examples: kočiskia she would sleep; nihλawiso·skia I would throw it.

4.11. Suffix 191: -kaⁿ ≈ -ke·h ≈ -e·h ≈ -·h. The first of the series appears in sequence with prefix 14; the second after the first alternant of suffix 186; the third after the other two medial alternants of 186 and suffix 187; the last elsewhere. Examples: šihteki-pano·ltikaⁿ make him work! (pl. command); kiλaⁿkečihke·h they bit him; tiki·ke·h we drank it; ki·npohpohke·h they cleaned them; ne·čne·štih-tiki·sase·h they will come out to find me; te·čkalči·htoya·h they have been making us a house.

4.12. Suffix 212: -kaⁿ ≈ -hkaⁿ. Examples: λači·škaⁿ sight-seeing spot; λakalakihkaⁿ place to put things.

4.13. Suffix 213: -ko ≈ -hko. Examples: λano·cko calling place; λamela·hko place to find things.

4.14. Suffix 221: (-ke· ≈ -hke·) ~ (-ka· ≈ -hka·) ~ (-ka·h ≈ -hka·h). The second and third pairs occur in sequence with prefixes

50: the latter in word final; the former in word medial. The first pair appears elsewhere. Examples: te·kʷawila·nke·λ fighter, λaλahko·ltihke·men lifters; tocikʷi·nka·wan our jumpers, tiini·n-te·pahtihka·wan we are their curers; nimoλawi·katihka·h I am your singer, iλape·hka·h his hunter.

4.15. Suffix 224: -yo· ≈ -hyo· ≈ -kayo· ≈ -hkayo·. Examples: ahkiyo·λ swimming; nowe·ilisyo my greatness; ma·ltihyo·λ bathing; asikayo·men arrivals.

4.16. Suffix 231 is found in two alternants: -yo after morpheme final V, -o after other morpheme finals. Examples: noeso my own blood; ihwiyowan its own feather.

4.17. Suffix 241: [(-li ≈ -lin) ~ (-λi ≈ -in) ~ -λ] ≈ -#. The first pair is found after morpheme final l; the second pair after other morpheme final C; -λ after morpheme final V. -# is predictable only after suffix 210. Examples: ka·walli widow, capollin grasshopper; teposλi iron, kayočin fox; λiλ fire; čiči dog, a·košwal turtle; weckanin a laughing group, λawa·cko drying place.

4.18. Suffix 242 is found in three alternants: -ci- before suffix 251; -wan in sequence with prefixes of class 50; -men in other sequences. Examples: tepasolmen nests, teλawi·katihke·men we are singers; nokone·wan my children, ini·nomiyowan their bones; wiccin little thorn, moahkolcicin your little arms.

4.19. Other suffixes are subject only to variations noted in 1. Examples: nikahokʷiti I go to raise it, tiki·nčialtiti·h we will make them go wait, šičo·katotikan go be crying! (pl. command); te·pahtiloyan place where people are cured, kʷatekiya nihne·štia I find the wood-cutting place.

5. Alternations peculiar to Mpa verb bases.

5.1. A number of base initial VC alternate with C: the latter found after prefix 63, the former in other occurrences. Examples: nikočpa·nki I swept it, λačpa·ntoya she was sweeping; ki·nihkʷilohtok he has been writing them, λahkʷilohke·λ writer.

5.2. Certain base final Vwa ~ Vwi ~ V: the last of the series occurs before 141, 171, 186, 212 or 213, 221, 224 (hereafter we refer to this group of suffixes as S); the second before suffix 131; the first elsewhere. Examples: tihkowas you will buy it, ne·čkowaltia he forces me to buy; te·čkowilia·h they are buying it for us; lala·škohtiyawi·h they go away buying oranges, tiλakohtoya·h we had been buying things, kalkohke·h they bought houses, kʷašilokohkan place to buy bananas, ičkakohke·λ cotton buyer, λakohkayo·λ buying; nihmela·wati I go to meet him, šiki·mela·wili meet them for him, te·mela·hko place to meet people.

5.3. Similarly, base final Vwi alternates with V: the latter occurs before S; the former elsewhere. Examples: λakiyawi it is raining, λakiyawiltihke·λ rain-maker, λakiyahtiweci it begins to rain suddenly

λakiyahtok it has been raining, miyah λakiyahki it rained a lot, λakiyahkan rainy place, λakiyahkayo·λ raining.

5.4. Certain base final Vka alternate with Vki, the latter being found before suffix 131, the former elsewhere. Examples: kiwi·kake·h they took her along, nimicwi·kili·s I will carry it for you. Other base final Vka ~ Vki ~ Vk ~ V and base final Vk^{w}a ~ Vk^{w}i ~ Vk ~ V: in each case the last of the series appears before suffixes 186, 212, 221, and 224; the third before 141 and 171; the second before suffix 131; the first in other occurrences. Examples: šihto·kakan plant it! (pl. command), tiki·nto·kilihke·h we planted some things for them, λato·ktinenke·h they went all around planting, moneki tihto·ktose·h it will be necessary for us to be burying him, ičkato·hki he planted cotton, λato·hkan field, λato·hke·λ planter, λato·hkayo·λ planting; tihcak^{w}a·h we close it, ante·čcak^{w}ilihke·h you (pl.) close it for us, ki·ncaktiwa·la·s he will come along closing them, šihtencakto keep your mouth closed, kicahke·h they closed it, a·cahkan water valve, a·cahke·λ person who shuts off the water, λacahkayo·λ closing.

5.5. Similarly, base final Vki and Vk^{w}i ~ Vk ~ V: the last of the series occurs before suffixes 186, 212, 221, and 224; the second before 122, 141, and 171; the first two occur in other positions. Examples: ki·npa·ki·ltia he amuses them, kipa·ktih she liked it, mopa·ktinemi·h they go around pleasing one another, tipa·ktoko·h we came to have a good time, nipa·hki I was glad, pa·hkan place of entertainment, pa·hke·λ happy person, pa·hkayo·λ gladness, nipanihnek^{w}i

I smell bread, ke·soihnekte·hki he smelled cheese before he left, šo·čiihnektoya·h they had been smelling flowers, tiki·nihnehke·h we smelled them, λahnehkan smelly place, λahnehke·λ smeller, λahnehkayo·λ smelling.

5.6. Base final nasal + a (Na) ~ Ni ~ n: the last of the series is found before S; the second before suffix 131; the first elsewhere. Examples: iyačiči·na·h they smoke tobacco, λačiči·nalli what was smoked, nihčiči·nili·s I will smoke it for him, tiλačiči·ntinemise·h he will go around smoking, kičiči·ntoskia he would be smoking it, wa·lλačiči·nke·h they came from over there to smoke here, λačiči·nko place to smoke, λačiči·nke·λ smoker, λačiči·nkayo·λ smoking; λahcoma she is sewing, te·čihcomilia she sews it for us, λahconkan sewing place. Similarly, base final Ni alternates with n: the latter before S, the former elsewhere. Examples: nehnemi·h they are walking, te·čnehnemiltih he made us walk, šinehnentiyah go walking!, nehnentoto he went over there for a hike, šokʷenehnenki he limped along, nehnenko walking place, yowalnehnenke·λ night-watchman (person who walks about at night), nehnenkayo·λ walking.

5.7. Base final lo alternates with lwi: the latter is found before suffix 131, the former in other positions. Examples: niλahkʷiloko I came to write, λahkʷilolli what is written, timicλakʷilwilihke·h we wrote it for you; tiki·nsa·lowaya you were adding them, nihsa·lwili·s I will add it for him.

5.8. Certain base final ti alternate with t: the latter appears before suffixes 186 and 221, the former elsewhere. Examples: k^{w}atia he was getting tired, tik^{w}atitos you will be tired, ikšik^{w}atke·h their feet go tired, k^{w}atke·λ person always tired. One base final ti alternates further with či, the latter found only before suffix 123. Examples: kimati he knows it, te·čmači·ltia·h they compel us to learn.

5.9. Base final Va and Vi alternate with V·š: the latter is found before S, the former two elsewhere. Examples: te·ščia·h they are waiting for us, ne·či·šte·hki he waited for me before he went away, kiči·štos she will be waiting for him, tiki·nči·ške·h we waited for them, te·či·ške·λ guide (person who waits for others), te·či·škan waiting room; we·iaya it was growing, we·i·štiweci it begins to grow suddenly, we·i·štose·h they will be growing, anwe·i·ške·h you (pl.) grew up, we·i·ške·men adults, we·i·škayo·λ growth, we·i·škan fertile field (growing place).

5.10. Two base final ah ~ a ~ awi: the first of the series is found in word final; the second before S, 185, and (191, excluding words in which prefix 14 appears); the third elsewhere. Examples: niyah I am going, wa·lahtoya·h they were coming, tiyawia·h we were going, šiwa·lakan come on!, ya·s he will go.

5.11. A number of base final Ca and Ci have been noted with various alternants in 5.2-10. An additional number of base final Ca and Ci alternate with C, the latter occurring usually before S, and the former two in other positions. (However, a few show further base final varia-

tions which will be indicated below). Examples: koči·h they are sleeping, tikočtiki·sa·h we go to sleep immediately, kočtoke·h they were asleep, niwa·lkočki I came to sleep, kočkan sleeping room, kočke·λ sleepy-head, kočkayo·λ sleep. One base final si ~ ši ~ s, the second of the series appearing only before suffix 123. Examples: tiλaλasiaya·h we were coughing, ne·čλaλaši·ltia it makes me cough, tiλaλastoya you had been coughing. One base final ca ~ či ~ c, the second of the series occurring only before suffix 131. Examples: nimicnohno·ca I am talking to you, tiki·nohno·čilia·h we were talking to them in his place, kino·ctiwecia·h they were beginning to call him. One base final sa ~ š ~ s: one base final si ~ š ~ s: in each case the second of the series appears only before suffix 122. Examples: šiki·sa come out!, šihki·šti bring it out!, ki·skan exit; ne·si it comes in view, nihne·štih I found it, ne·ski he appeared.

5.12. Other verb bases are subject only to variations noted in 1. Examples: λak^{W}a he is eating, kik^{W}ahki he ate it, tihλak^{W}altia·h we feed him, λak^{W}a·lisλi something to eat, te·k^{W}ahke·λ cannibal; šipano come in!, tihpano·s you will pass him, pano·tiyahki he went along passing, niki·npano·k I passed them.

6. Alternations peculiar to Mpa noun bases.

6.1. Some base final h in word medial alternate with hwi in word final. Examples: pahmen medicines, nopahwi my medicine; ohλi road, toohwi our road.

6.2. Some base final mi before suffix 241 alternate with n in other positions (subject to variations noted in 1.2-3). Examples: λake·miλ bed cover, a·moλake·nwan your (pl.) covers, te·λaken somebody's cover, λake·men bed covers. Other base final mi show variations noted in 6.6.

6.3. One base appears in alternants ma·i- ~ ma·- ~ ma·š: the first alternant is found before suffix 241; the second before noun and verb bases; the third in other positions. Examples: ma·iλ hand, ma·šoločλi wrinkles on the hand, nihma·lakanah I dropped it, ini·ma·šwan their hands, moma·š your hand. Elsewhere, base final Vi before suffix 241 alternates with either Vš or Vs in other positions. Examples: kʷei·λ underskirt, ikʷeš her underskirt, kʷešλahcomalli underskirt seam; cihwaiλ comb, nocihwas my comb, cihwasλankočmen teeth of a comb.

6.4. One base appears in alternants kʷawi- ~ kʷah ~ kʷa-: the first alternant is found before suffix 241; the second in word final; the third elsewhere. Examples: kʷawiλ tree, stick, ikʷah his stick, kikʷawiyonihke·h they hanged her, kʷacicin little trees.

6.5. Base final λa in word medial alternates with λ in word final. Examples: meλaλ metate, meλapilma·iλ metate mano, imeλ her metate.

6.6. Base final V has been noted with various alternants in 6.2-5. Most base final V in word medial alternate with Vh in word final. Examples: aškaλ property, ini·naškah their property; siwa·men females,

šiwa·lnosiwa·h come be my wife!

6.7. Other noun bases are subject only to variations noted in 1. Examples: ikšiλ foot, ikši his foot; mičin fish, mičnakaλ fish meat, mowicmič your bony fish, ihiyo·λ breath, ihiyo her breath.

7. An automatic alternation in Cl. Morpheme initial λ in word medial alternates with l; the latter has been found after morpheme final l, and the former after other morpheme finals. We cite alternants showing this variation with λ; e. g. λačia, look (verb base), represents alternants λačia and lačia. Examples: niλačias (nitlachiaz OA) I will look, šiwallačia (xiuallachia OA) look over here!; siwatonλi (ciuatontli MA) little old woman, λaolli (tlaulli MA) corn.

8. Cl affix list.

8.1. We enumerate Cl affixes with italic numbers to distinguish them from Mpa affixes. Cl prefixes are listed as follows by decade classes (10-90):

11. o-	perfective
21. ni- ~ n-	first person singular actor
22. ti- ~ t-	second person singular and first person plural actor
23. an- ~ am- ~ a-	second person plural actor
31. ši-	imperative
41. neč-	first person singular goal
42. mic-	second person singular goal

43. ki- ~ k-	third person singular goal
44. teč-	first person plural goal
45. ameč- ~ ame-	second person plural goal
46. kin- ~ kim-	third person plural goal
51. wal-	from there to here
52. on-	from here to there
61. no- ~ n-	first person singular possessive
62. mo- ~ m-	second person singular possessive
63. i-	third person singular possessive
64. to-	first person plural possessive
65. amo-	second person plural possessive
66. in- ~ im-	third person plural possessive
67. te-	indefinite possessive
71. no- ~ n-	first person singular reflexive
72. to-	first person plural reflexive
73. mo- ~ m-	second and third person reflexive
74. ne-	indefinite reflexive
81. te-	indefinite personal goal
82. λa-	indefinite impersonal goal
91. CV-	intensifier, repetitive, pluralizer

8.2. We list Cl suffixes below by century and decade classes: like Mpa suffixes, class 100 consists of verbal and verbalizing suffixes; class 200 is composed of nominal and nominalizing suffixes.

101. -ti ≈ -wi	verbalizer
111. -li ≈ -wi ≈ -ti ≈ -a	causative and honorific

112. -lti ≈ -lwi	compulsive and honorific
121. -li	benefactive and honorific
131. -ti ~ -t-	second verb base marker (?)
132. -cino	honorific
141. -w ~ -iwi ~ -a	go, efferentive
142. -wic	come, afferentive
143. -weci	fall, inceptive
144. -nemi	walk, diffusive
145. -kisa	go out, promotive
146. -ewa	raise, premotive
147. -ka ~ -kat-	be, continuative
148. -mani	lie, expansive
149. -asi	arrive, adventive
151. -a	meaning undetermined
152. -lo ≈ -o	passive
153. -wa ≈ -oa	collective
161. -to	progressive
171. -kiw ~ -kiwi	action in intraverse direction, future
172. -ki	action in intraverse direction, imperative
173. -ko	action in intraverse direction, past
174. -tiw ~ -tiwi	action in extraverse direction, future
175. -ti	action in extraverse direction, imperative
176. -to	action in extraverse direction, past
177. -a ~ -ya	imperfective
178. (-k ~ -ki ~ -ka) ≈ -#	perfective
179. -s	future

181. -skia	conditional I
182. -ni	conditional II
183. -ka	pluperfective
191. -h ≈ -eh ≈ -keh ≈ -kan	verb pluralizer
211. -ni ~ -ani	agentive and instrumentative
212. -ka	locative
213. -yan	locative
221. -kaw ~ -ka ~ -ki ~ -k	agentive
222. -l	participial
223. -lis ≈ -s	nominalizer
224. -yo ≈ -o ≈ -kayo	abstractivizer and generalizer
231. -ko ~ -k	locative
232. -λa	locative
233. -ka ≈ -teka	inhabitant of
234. -e ≈ -wa	master of, owner of
235. -yo ~ -o	abundantial and collective
236. -o	intimate possessive
241. -cin ~ -cici ~ -cicin	diminutive and honorific
242. -ton ~ -toto ~ -toton	diminutive and despective
243. -pil ~ -pipil	diminutive
244. -pol ~ -popol	vituperative
245. -sol ~ -sosol	abusive
251. (-λ ~ -λi) ≈ -#	absolutive
252. -wan ~ (-tin ≈ -me ≈ -h)	noun pluralizer
261. -e ≈ -λe	vocative

9. Alternations peculiar to Cl prefixes.

9.1. Prefixes 21 and 22 have been found in two alternants each: n- and t- respectively before morpheme initial V, and ni- and ti- respectively before other morpheme initials. Examples: namopilcin (namopilhtzin OA) I am your (pl.) son, tamečλasolλah (tamechtlaçotla MA) we love you (pl.); ninočikawa (ninochicaua OA) I force myself, tik^{w}alli (tiqualli OA) you are good.

9.2. Prefix 23 has been found in three alternants: a- before morpheme initial m (and probably n), am- before morpheme initial p and V, an- before other morpheme initials. Examples: amočikawah (amochicaua OA) you (pl.) force yourselves, amasih (amaci MA) you (pl.) arrive, anλapiaskeh (antlapiazque OA) you (pl.) will guard something.

9.3. Prefix 43 has been found in two alternants: ki- in word initial before morpheme initial C and k- in other positions. Examples: kimati (quimati MA) he knows it, šikčiwa (xicchiua OA) do it!, konitta (conitta MA) he goes to see it.

9.4. Prefix 45 has been found in two alternants: ame- before morpheme initial s, š, and č (and probably c), and ameč- before other morpheme initials. Examples: nameselia (namecelia OA) I receive you (pl.), onamečiw (onamechiuh OA) I made you (pl.), tamečλasolλah (tamechtlaçotla MA) we love you (pl.).

9.5. Prefix 46 has been found in two alternants: kim- before morpheme initial p and V, and kin- before other morpheme initials. Examples: nikimitta (niquimitta MA) I see them, šikinkʷi (xiquincui OA) take them!

9.6. Prefixes 61 and 62 have been found in two alternants each: n- and m- respectively before morpheme initial V, and no- and mo- respectively before other morpheme initials. Examples: new (neuh OA) my beans, mamaw (mamauh MA) your paper, noteč (notech OA) near me, moλaškal (motlaxcalh OA) your tortilla. Prefixes 64 and 65 would probably show similar alternations if examples of their occurrence before morpheme initial V were available.

9.7. Prefix 66 has been found in two alternants: im- before p and V, and in- before other morpheme initials. Examples: nimpilcin (nimpilhtzin OA) I am their son, imamaw (ymamauh MA) their paper, inλaškal (yntlaxcalh OA) their tortillas.

9.8. Prefixes 71 and 73 have been found in two alternants: n- and m- respectively before morpheme initial V, and no- and mo- respectively before other morpheme initials. Examples: oninašiš (oninaxix MA) I urinated, timokičneki (timoquichnequi MA) you want to be a boy; ninoteyolitilia (ninoteyolitilia MA) I revive someone (honorific), timočikawa (timochicaua OA) you force yourself. Prefix 72 would probably show similar variations if examples of its occurrence before morpheme initial V were available.

9.9. Prefix 91 is reduplication of the first syllable of noun and verb bases. Before a noun base it signals plural, and before a verb base it indicates repetition or intensification. Examples: teteo (teteu MA) gods, ninoλaλalia (ninotlatlalia OA) I sit down a lot, nimiconnoλaλawtilia (nimitzonnotlatlauhtilia OA) I beg you (honorific).

9.10. Other C1 prefixes are subject only to the variation noted in 6. Examples: tiλapiatiwih (titlapiatiwi OA) we will go guard something, tiwallapiakiwih (tiuallapiaquiui OA) we will come guard something.

10. Alternations peculiar to C1 suffixes.

10.1. Suffix 101: -ti ≈ -wi. Examples: nikʷaltia (niqualtia MA) I make myself good, niλatewia (nitlateuia OA) I make something hard.

10.2. Suffix 111: -li ≈ -wi ≈ -ti ≈ -a. Examples: nitekʷaltilia (nitequalhtilia OA) I make someone good, ninotemowia (ninotemouia MA) I (honorific) go down, onitemačtik (onitemachtic MA) I taught someone, niλasiotoma (nitlaciotoma OA) I unsew something.

10.3. Suffix 112: -lti ≈ -lwi. Examples: ninoλakʷaltia (ninotlaqualtia MA) I (honorific) eat something, ninoλapačilwia (ninotlapachilhuia OA) I (honorific) cover something.

10.4. Suffix 131 has been found in two alternants: -ti before base initial C (of class 140), -t- before other base initials. Examples:

antemačtitiwiceh (antemachtitiuitze MA) you (pl.) come preaching, ninokectewa (ninoquetzteua MA) I get up and go away.

10.5. Number 141 (an intransitive base treated as a suffix) has been found in four alternants: -iw in word final, -iwi in word medial before suffix 177 or 191, -a in other positions according to the examples afforded by Olmos (-ia in other positions according to Molina's examples). Examples: niλakʷatiw (nitlaquatiah OA) I go along eating, niλapištiwia (nitlapixtiuia OA) I was going along guarding, niλapištas (nitlapixtas OA) I will go along guarding, nitɛλasoλatias (nitetlaçotlatiaz MA) I will go loving. Number 147 has been found in two alternants: -kat- before certain suffixes including 183 and 191, and -ka in other occurrences. Examples: onitɛλasoλatikatka (onitetlaçotlaticatca MA) I had been loving, tɛλasoλatikateh (tetlaçotlaticate MA) they are loving; nitɛλasoλatika (nitetlaçotlatica MA) I am loving. Alternant shapes of 142-146, 148-149 (also intransitive bases treated as suffixes) are presumably covered in 11.

10.6. Suffix 152: -lo ≈ -o. Examples: tipialotiw (tipialotiuh OA) you will go be guarded, nino (nino MA) I am seized.

10.7. Suffix 153: -wa ≈ -oa. Examples: yoliwa (yoliua OA) everybody lives, mikoa (micoa MA) everyone dies.

10.8. Suffix 171 and 174 have each been found in two alternants: -kiwi and -tiwi respectively before suffix 191, and -kiw and -tiw respec-

tively in other occurrences. Examples: tiwallapiakiwih (tiwallapiaquiui OA) we will come guard something, teλasoλakiw (tetlaçotlaquiuh MA) he comes to love someone.

10.9. Suffix 177 has been found in two alternants: -ya after morpheme final o or a, and -a after other morpheme finals. Examples: nitelasolaya (nitetlaçotlaya MA) I loved someone, nikočia (nicochia OA) I was sleeping.

10.10. Suffix 178 has been found in three alternants: -ka ≈ -# in sequence with a prefix of class 60, -k ≈ -# elsewhere after morpheme final V, and -ki ≈ -# elsewhere after morpheme final C. Examples: nokacawaka (nocatzauaca MA) my dirtiness, onisak (oniçac MA) I woke up, onikiski (oniquizaui OA) I went out, onitean (onitean OA) I seized someone.

10.11. Suffix 191: -kan ≈ -keh ≈ -eh ≈ -h. The first of the series has been found in sequence with prefix 24 and in a few other occurrences, the second after suffix 179, the third after certain suffixes including 178, and the last elsewhere. Examples: šimolasolakan (ximotlaçotlacan OA) love each other!, anlapiaskeh (antlapiazque OA) you (pl.) will guard something, otipialokeh (otipialoque OA) we were guarded, titelasolah (titetlaçotlah OA) we love somebody.

10.12. Suffix 211: -ni ≈ -ani. Examples: λakʷani (tlaquani OA) eater, molalcani (motlaloani OA) runner.

10.13. Suffix 221 has been found in four alternants: -kaw and -ka in sequence with a prefix of class 60, the former in word final and the latter in word medial; -ki elsewhere in word final and -k elsewhere in word medial. Examples: notemakištikaw (notemaquixticauh MA) my savior, notemakištikawan (notemaquixticaua MA) my saviors, λaconki (tlatzunqui OA) tailor, λapiškeh (tlapixque OA) guards.

10.14. Suffix 223: -lis ≈ -s. Examples: λamatilisλi (tlamatiliztli OA) knowledge, mikisλi (miquiztli OA) death.

10.15. Suffix 224: -yo ≈ -c ≈ -kayo. Examples: λakayoλ (tlacayutl OA) humanity, piloλ (pillutl OA) nobility, nošiwkayowan (noxiuhcayouan OA) my yearly things.

10.16. Suffix 231 has been found in two alternants: -ko after morpheme final C, and -k after morpheme final V. Examples: λapanko (tlapanco OA) on the terrace, tepešik (tepexic OA) on the stone.

10.17. Suffix 233: -ka ≈ -teka. Examples: mičwakaλ (michuacatl OA) inhabitant of Michoacán, λaškaltekah (tlaxcalhteca OA) inhabitant of Tlaxcala.

10.18. Suffix 234: -e ≈ -wa. Examples: kale (cale MA) master of the house, pilwa (pilhua MA) woman with children.

10.19. Suffix 235 has been found in two alternants: -yo after mor-

pheme final V, and -o after morpheme final C. Examples: istayo (yztayo OA) salty, šalo (xallo MA) lots of sand.

10.20. Suffixes 241 and 242 have each been found in three alternants: -cicin and -toton respectively before the second alternant of suffix 252, -cici and -toto respectively before the first alternant of suffix 252, -cin and -ton respectively in other positions. Examples: siwacicintin (ciuatzitzintin CA) honored women, tepetototontin (tepetototontin MA) little old mountains; naciciwan (natzitziuan OA) my little waters, nocapatctowan (notzapatotouan OA) my little dwarfs; λaškalcinλi (tlaxcaltzintli MA) little tortilla, namaton (namaton MA) my little old book.

10.21. Suffixes 243, 244, and 245 have each been found in two alternants: -pipil, -popol, -sosol respectively before suffix 252, and -pil, -pol, -sol respectively in other occurrences. Examples: okičpipiltin (oquichpipilhtin OA) little men, nosiwapopolwan (nociuapupulhuan OA) my mean women, notilmasosolwan (notilhmaçuçulhuan OA) my old covers; okičpil (oquichpilh OA) little man, awianipol (auianipul MA) prostitute, amasolli (amaçulli MA) old book.

10.22. Suffix 251 has been found in alternants -λi ≈ -# after morpheme final C (cf. 6.), and -λ ≈ -# after morpheme final V. Examples: λaolli (tlaulli MA) corn, sihλi (citli MA) rabbit, λakaλ (tlacatl MA) man, wewe (Veue MV) old.

10.23. Suffix 252: -wan ~ (-tin ≈ -me ≈ -h). The first of the

series has been found in sequence with prefixes 60. Examples: itotolwan (ytotolhuan MA) his eggs; tikʷaltin (tiqualhtin OA) we were good, peλame (petlame OA) petates, teλasoλanih (tetlaçotlanih OA) lovers.

10.24. Suffix 261: -e ≈ -λe. Examples: λapickeé (tlapitzquee MA) flute player!, okičλé (oquichtle MA) boy!

10.25. Certain C1 suffixes are subject to the further variation noted in 7. Examples: kočisλi (cochiztli MV) sleep, λakʷalli (tlaqualli MV) food.

11. Alternations peculiar to C1 verb bases.

11.1. Some base initial iC alternate with i: the latter has been found after prefixes 70 and 80, and the former in other occurrences. Examples: nikilwia (niquilhuia MA) I say it, niknolwilia (nicnolhuilia MA) I (honorific) say it; nikitoa (niquitoa MA) I speak about it, oniλato (onitlato MA) I spoke.

11.2. Base final ma and mi ~ m ~ n: the last of the series has been found before suffixes 131, 178, 183, the second before suffix 153, and the first two in the remaining positions. Examples: nemilisλi (nemiliztli MA) life, nemoa (nemoa MA) everybody lives, oninen (oninen MA) I lived. If examples were available, mi would probably be found in alternation with ma also, the former before suffix 121 and perhaps others. Similarly, base final na and ni ~ n: the latter has been found

before suffixes 131, 152-154, 178, and 183, and the former two usually in other positions. One example, however, shows na alternating with ni in addition, the latter appearing before suffix 121. Examples: niteana (niteana MA) I seize someone, nano (nano MA) I am seized, oniteanka (oniteanca OA) I had seized someone, nikinteanilis (niquinteaniliz MA) I will take them from someone.

11.3. One base has been found in alternants ka and kat, the latter before suffix 183 and the former in other positions: nika (nica MA) I am, tikas (ticaz OA) you will be; katkah (catcah OA) they were, they had been.

11.4. One base has been found in alternants ie and ye, the latter in word initial and after prefixes 11 and 23, and the former elsewhere: nies (niez MA) I will be; ma oyeni (ma oyeni OA) if I had been, anyeskeh (anyezque MA) you (pl.) will be.

11.5. One base has been found in alternants yaw, aw, yawi, awi, ya, and a: the first of the series appears as a free form and in word final after prefix 23, the second elsewhere in word final, the third in word initial and after prefix 23 (in each case before suffix 191), the fourth elsewhere before suffix 191, the fifth in word initial elsewhere and after prefix 11, and the last in other positions. For the third and fourth alternant Molina recorded wi instead of yawi and awi; Olmos recorded yawi and awi as free variants of wi. Examples: yaw (yauh OA) he goes; niaw (niauh MA) I go; yawih or wih (yaui or uih OA) they go; tiawih

(tiaui OA) we go; oyakeh (oyaque OA) they went; tias (tiaz OA) you will go.

11.6. Base final ia and several base final Vya ~ iš and Vš respectively: in each case the latter have been found before suffixes 131, 178, 212, 231, and the former in the remaining positions. Examples: tiλapia (titlapia OA) you guard something, onitepiš (onitepix MV) I guarded someone, kalpiška (calhpixca OA) place where houses are guarded, noλapiškaw (notlapixcauh OA) my guard; niλačias (nitlachiaz OA) I will look, niλačištika (nitlachixticah OA) I am looking, oniλačiš (onitlachix MA) I looked; niλaokoya (nitlaocuya MA) I am sad, oniλaokoš (onitlaocux MA) I was sad. Similarly, a few base final i ~ iš and one base final i ~ is: the available examples show the latter before suffix 178 in each case, and the former in other positions. Further examples would probably reveal additional occurrences of the latter, however. Examples: λapiwia (tlapiuia MA) it grows, oλapiwiš (otlapiuix MA) it grew, niselia (nicelia MA) I acquire new freshness, oniselis (oniceliz MA) I acquired new freshness.

11.7. A number of base final Ca and Co ~ Ci ~ C: examples of the last of the series have been found before suffixes 132, 152, 154, 161, 178, 183, and 212, examples of the second before suffixes 110 and 121, and the remaining examples usually show the first two in other positions. (A few, however, show further base final variations which will be listed and exemplified below). Examples: nikčiwa (nicchiua OA) I make it, temilčiwililo (temilchiuililo OA) fields are made for others, oniλačiw

(onitlachiuh OA) I did something, kakčiwka (cacchiuca MA) place where shoes are made; nipiška (nipixca OA) I gather corn; niλapačoa (nitlapachoa OA) I cover something, ninoλapačilwia (ninotlapachilhuia OA) I (honorific) cover something. One base final sa ~ ši, the latter appearing before suffix 121: nikλasa (nictlaça MA) I throw it, niknoλašilia (nicnotlaxilia MA) I (honorific) throw it. Two base final sa ~ s ~ š, the last of the series occurring before suffix 111: nikisa (niquiça OA) I go out, onikiski (oniquizqui OA) I went out, nikkišťia (nicquixtia MA) I take it out. One base final λa ~ ti, the latter appearing before suffix 121: antečλasoλah (antechtlaçotlah OA) you (pl.) love us, ninoteλasotilia (ninotetlaçotilia OA) I love someone (honorific). One base final ca ~ c ~ či, the last of the series being found before suffix 121: nitenoca (nitenotza MA) I call someone, onitenoc (onitenotz MA) I called someone, ninotenočilia (ninotenochilia MA) I called someone (honorific).

11.8. A number of base final Ci ~ C: examples of the latter have been found before suffixes 111, 131, 132, 152, 153, 161, 178, 183, and 212, and the remaining examples usually show only the former. (A few, however, show further base final variations which will be listed and exemplified below). Examples: mikis (miquiz OA) he will die, niλacopa (nitlatzopa OA) I finish something, nitemiktia (nitemictia MA) I kill someone, mikca (micoa MA) everybody dies, onimik (onimic MV) I died; nikočia (nicochia OA) I slept, nikočtok (nicochtoc OA) I was sleeping. One base final ti ~ t ~ č, the last of the series appearing before 111: λamatilisλi (tlamatiliztli MA) knowledge, onikmat (onicmat MA)

I knew it, temačtiloni (temachtiloni OA) something used to teach with. One base final ci ~ c ~ č, the last of the series occurring before suffix 153: niweci (niuetzi OA) I fall, oniwec (oniuetz OA) I fell, wečoa (uechoa OA) everyone falls. One base final si ~ š, the latter appearing before suffix 153: amasih (amaci OA) you (pl.) arrive, ašoa (axoa OA) everyone arrives. One base final si ~ ši, the latter occurring before suffix 121: niteimakasi (niteimacaci OA) I fear someone, ninoteimakašilia (ninoteimacaxilia OA) I fear someone (honorific).

11.9. One base final aka ~ a: examples of the latter have been found before suffixes 178 and 183, and the remaining examples show only the former. Examples: niλapaka (nitlapaca OA) I wash, otiλapakeh (otitlapacque OA) we washed, oniλapaka (onitlapaca OA) I had washed.

11.10. Certain Cl verb bases are subject to further variation noted in 7. Examples: niλačias (nitlachiaz OA) I will look at something, šiwallačia (xiuallachia OA) look over here!

12. Alternations peculiar to Cl noun bases.

12.1. Some base initial iC alternate with i: the latter found after prefix 61, 62, 64, or 65, and the former in other occurrences. Examples: išwisλi (yxuiuhtli OA) grandson, nošwiw (noxuiuh OA) my grandson; ikšiλ (icxitl MA) foot, mokši (mocxi MA) your foot.

12.2. A number of bases show two alternate endings: one in word

final and the other in word medial. We list and exemplify these alternations as follows.

Certain base final C ~ Cwi: okičtin (oquichti MA), teokičwi (teoquichhui OA) someone's husband; icλi (itztli OA) knife, nicwi (nitzhui OA) my knife.

A few base final V ~ Vš: wiwilome (Viuilome OA) doves, iwiloš (yuilox OA) his dove.

A few base final Ca ~ Ci: koskaλ (cozcatl OA) jewel, nokoski (nocozqui OA) my jewel.

Several base final V ~ Vw: amasolli (amaçulli MA) old paper, mamaw (mamauh MA) your paper; siwaλ (ciuatl OA) woman, tesiwaw (teciuauh OA) someone's wife.

12.3. Some base final Vwi ~ Vw: the latter have been found most often in word final, and the former in other positions. However, a few of the latter have also been found in sequence before another noun base or verb base. Examples: yawiλ (yauitl OA) black corn, noyaw (noyauh OA) my black corn; k^{w}awiλ (quauitl OA) wood, tree, mok^{w}aw (moquauh OA) your stick, k^{w}awnek^{w}asayolli (quauhneucçayulli OA) tree-honeybee. If examples were available showing sequences of 60, N, 252, a further alternant would probably be revealed, namely V, for the geminate cluster /ww/ appears to be extremely rare.

12.4. Certain base final mV ~ n: the latter have been found usually in word final only, and the former in other occurrences. However, a few of the latter have also been found before another noun base or verb

base. Examples: paniλ (panitl OA) flag, nopan (nopan OA) my flag; komiλ (comitl OA) urn, ikon (ycon OA) his urn, nokončiwka (noconchiuhca OA) my place where urns are made.

12.5. A number of base final CV and VV ~ C and V respectively: the latter two have been found in almost all cases in word final, and the former two in other positions. However, in one case the former have been found before suffix 224; in another case the former have been found before suffix 224 and before suffix 252. Examples: peλame (pe ame OA) petates, nopeλ (nopetl OA) my petate; ičk^{w}eiλ (ychcueitl OA) underskirt, močk^{w}e (mochcue OA) your underskirt; k^{w}ikaλ (cuicatl OA) song, nok^{w}ik (nocuic CA) my song, k^{w}ike (cuique OA) master of the song; kašiλ bowl, kaše (caxe OA) owner of the bowls, kaštin (caxtin OA) bowls. [6]

13. Comparative notes on the shapes of Mpa and Cl morphemes.

13.1. The phonemic shapes of numerous morphemes in Mpa and Cl are identical. Examples: Mpa niλakaki I hear, Cl niλakaki (nitlacaqui MA); Mpa čikiwiλ basket, Cl čikiwiλ (chiquiuitl OA). If vowel length had been indicated by Olmos and Molina, many additional morphemes with identical shapes would probably be revealed. Examples: Mpa a·λ water, Cl aλ (atl MA); Mpa čo·ka she cries, Cl čoka (choca MA).

13.2. The other morphemes shared by the two dialects are, for the most part, of similar composition. Examples: Mpa ini·nλaškal their

tortilla, inλaškal (yntlaxcalh OA); Mpa nimoλahλalia I sit down repeatedly, Cl ninoλaλalia (ninotlatlalia OA). Dissimilarities observed are in the matter of zero alternants.

13.3. The Cl counterparts of Mpa n are m and n. Examples: Mpa panpa because, Cl ipampa (ipampa MV); Mpa mičin fish, Cl mičin (michin MV).

13.4. Mpa h and Cl w are frequently found in corresponding positions, especially in morpheme final. Examples: Mpa nosiwa·h my wife, Cl tesiwaw (teciuauh OA) someone's wife; Mpa niyah I go, Cl niaw (niauh OA).

13.5. A number of morphemes found in the Cl data did not appear in the writer's Mpa data, and vice versa. Mpa counterparts for Cl affixes 11, 71, 72, 74, 132, 152, 153, 147, 148, 149, 182, 183, 232, 233, 234, 235, 242, 243, 244, 245, and 261 were not found, as well as many noun, verb, and particle bases. Conversely, Cl counterparts for many Mpa morphemes were not found, namely those which entered the dialect from Spanish. [7]

Footnotes

[1] Mpa and Cl affixes are aligned by morphological index numbers. Other morphological treatments employing index numbers are:

Bergsland, Knut. Kleinschmidt Centennial IV: Aleut Demonstratives and the Aleut-Eskimo Relationship. IJAL 17.167-179 (1951).

Garvin, Paul L. Kutenai III-IV. IJAL 14.171-187 (1948); 17.85-97 (1951).

Osborn, Henry and William A. Smalley. Formulae for Comanche Stem and Word Formation. IJAL 15.93-99 (1949).

Shell, Olive. Grammatical Outline of Kraho. IJAL 18.115-129 (1952).

Voegelin, Carl F. A Problem in Morpheme Alternants and their Distribution. Lg 23.245-254 (1947).

Wolff, Hans. Osage II. IJAL 18.231-237 (1952).

-------- Yuchi Phonemes and Morphemes, with Special Reference to Person Markers. IJAL 14.240-243 (1948).

Wonderly, William L. Semantic Components in Kechua Person Morphemes. Lg 28.366-376 (1952).

-------- Zoque III-VI. IJAL 17.137-162, 235-251 (1951); 18.35-48, 189-202 (1952).

[2] Class 150 consists of intransitive verb bases distributed like suffixes and treated as such. Alternate shapes of these morphemes are dealt with in 5.

[3] At first blush, 152 appears to consist of two morphemes: 41 and

151; the distribution, however, warrants the treatment of 152 as a single morpheme.

[4] Distinctive meaning is postulated for suffixes 212, 213, 214; however, the corresponding English translation for each so far ascertained is "place where ..."

[5] Morpheme distributions are dealt with in part III.

[6] VC ~ V is suggested in certain examples cited by Olmos, the latter occurring before suffix 241, and the former presumably elsewhere. "... tenextli, cal, tenetçintli, calezilla, y auia de dezir: tenextçintli; -- tçqaztli, lazo, tçoatçintli, lazuelo, y auia de dezir tçoaztçintli." (OA p. 202)

[7] It was shown in Part I of this dissertation that a considerable number of Spanish loanwords have been incorporated into Mpa. Spanish elements in Mpa, however, are limited to bases. An open ultima of such bases is usually closed by a fricative, and stressed vowels are frequently replaced by long vowels. Examples: pe·rahmen pears < Spanish base form péra pear, 242; ami·gohyo·λ friendship < Spanish base form amígo friend, 224; ipilto·rowan his little bulls < 53, Mpa noun base, Spanish base form tóro bull, 242.

PART III: MORPHEME ARRANGEMENTS

0. Introductory

1. Development and distribution of stems

2. Distribution of prefixes

3. Distribution of suffixes

4. Comparative notes on the distribution of Mpa and Cl morphemes

0.1. Because of the structural similarities of Mpa and Cl, the same designations are used for bases and stems of the two dialects. However, in citing formulas we indicate Cl bases and stems by italics and Mpa bases and stems with ordinary capital letters. In 0.2, 1., 1.1, and 1.3, such differentiation is unnecessary: the base and stem designations apply to both dialects.

0.2. We group Nahuatl words into three categories: nouns, verbs, and particles. Words of each category contain a word core, consisting of one or more morphemes, which we designate as a stem: noun stem (N); verb stems -- intransitive (I), transitive (T), benefactive (B); particle stem (P). Some I and all P occur respectively as I and P. N, T, B, and other I occur only in sequence with one or more affixes (prefixes and suffixes).

1. Stems contain at least one base. Stems N, V, and P may consist of a single base or a series of bases. Stems N and V may also consist

of one or more bases in sequence with one or more stem-forming affixes. Thus, in some cases, stems are equal to bases; in others, stems may be considered extended bases.

1.1. Verb stems (I, T, B) may consist of a base alone: intransitive base (IB), transitive base (TB), or benefactive base (BB) respectively. They may also consist of bases IB, TB and noun bases (NB) in sequence with stem-forming affixes. Mpa suffixes 111-131 and Cl suffixes 101-121 are found in such sequences.

The observed formations in Mpa are shown by formulas in the following three subsections.

1.1.1. Intransitive stems in Mpa.

IB = I: čo·ka·h they are crying [I = (IB), 191]; tičolo·hke·h we escaped [I = (IB), 186, 191].

NB_1, 111 = I: šok^{w}eti he limps [I = (NB_1, 111)]; niλa·katih I was born [11, I = (NB_1, 111), 186]. (NB_2 in sequence with suffix 111 yields T, see 1.1.2).

NB, IB = I: telpokamihki he died young [I = (NB, IB), 186]; niλamiyaya·wia I become completely black [11, I = (NB, IB), 161].

Some I occur in sequence I; other I in sequences of the following types: ± prefixes, I, ± suffixes. Examples: koči she is sleeping (I); tionpahpaλa·nki you went to fly repeatedly (12, 42, 71, I, 186); tiwectinemi·h we go along falling (12, I, 141, 154, 191); pi·nawaya·h they were ashamed (I, 185, 191); wa·lλaciwi he comes to be lazy (41, I).

1.1.2. Transitive stems in Mpa.

TB = T: nikitas I will see you [11, 32, T = (TB), 187]; šiki·nčia wait for them! [14, 35, T = (TB)].

NB_2, 111 = T: moyoyontia he gets dressed [61, T = (NB_2, 111), 161]; ne·čpahtihke·h they cured me [21, T = (NB_2, 111), 186, 191]. (NB_1 in sequence with suffix 111 yields I, see 1.1.1).

IB, 120 = T: nihweckilia I made fun of him [11, 32, T = (IB, 121), 161]; ne·čne·štihtiki·saya he was going forth to find me [21, T = (IB, 122), 141, 155, 185]; tiki·nλehkoltihtiwa·lahtoya you had been making them come climb [12, 35, T = (IB, 123), 141, 152, 171, 185].

NB_1, 111, 121 = T: kiλa·katilih she gave birth to him [32, T = (NB_1, 111, 121), 186]; nimicšok^{w}etili·s I will lame you [11, 31, T = (NB_1, 111, 121), 187].

NB, TB = T: te·čkalči·htoya·h they had been making us a house [33, T = (NB, TB), 171, 185, 191]; nika·pipina I take water from it [11, 32, T = (NB, TB)]; timok^{w}ato·člokocowa·h we huddle up [12, 61, T = (NB, TB), 161, 191].

Certain T can occur as the ultimate constituent of a verb complex only in sequence with prefix 14. These T plus suffix 161 parallel other T in word final or in sequence immediately before suffix 185 and/or 191: nihši·ma I cut his hair (11, 32, T), nikoli·nia I move it (11, 32, T, 161); ki·nk^{w}apaya he returned them (35, T, 185), ki·nλahpalowaya we greeted them (35, T, 161, 185); ne·čλana·na·h they raised me (21, T, 191), ne·čλankečia·h they bite me (21, T, 161, 191); kiλapa·naya·h they were breaking it (32, T, 185, 191), kiλapowaya·h they were opening it (32, T, 161, 185, 191). Elsewhere, all T are distributed alike. For

economy of statement, we cite T, 161 simply as T in our formulas listing possible occurrences.

Minimum sequences for T are 21, T; 30, T; 60, T: ne·čno·ca she calls me (21, T); kinamaka he is selling it (32, T); λak^{W}a he is eating something (63, T). In a few cases 30 and 60 may be replaced by NB: panihnek^{W}i she smells bread; lala·škowa he buys oranges. Elaborations of these sequences are of the following types: ± 10, 30, ± 40, ± 71, T, ± suffixes; 21, ± 40, ± 71, T, ± suffixes; ± 10, ± 40, 60, ± 71, T, ± suffixes. Examples: tihwa·lmahmačtia·h we come to teach him (12, 32, 41, 71, T, 161, 191); ki·npahpa·cka he milks them (35, 71, T); ne·ččihči·šte·hki he waited for me repeatedly before going away (21, 71, T, 141, 156, 186); ne·čwa·lpa·tiltia·h they come to get rid of me (21, 42, T, 161, 191); šionλahk^{W}ilo go write something! (14, 41, 63, T); mok^{W}aptos she will be returning (61, T, 171, 187).

1.1.3. Benefactive stems in Mpa.

BB = B: tihmakak you gave it to him [12, 32, B = (BB), 186].

TB, 131 = B: ne·čkowilia she buys it for me [21, B = (TB, 131), 161]; šiki·mela·wili find them for him! [14, 35, B = (TB, 131)].

NB_2, 111, 131 = B: ankiyoyontilihtose·h you (pl.) will be dressing him for her [13, 32, B = (NB_2, 111, 131), 171, 187, 191].

IB, 121 or 122, 131 = B: kimačtilih he taught it to her [32, B = (IB, 121, 131), 186]; ne·čne·štilia·h they show it to me [21, B = (IB, 122, 131), 161, 191].

The distribution of B is similar to the distribution of T in that most B can occur in word final only in sequence with prefix 14. These

B plus suffix 161 parallel other B in sequence immediately before suffix 185 and/or 191. All B are distributed alike elsewhere. We cite B, 161 simply as B in our formulas listing possible occurrences.

Minimum sequences for B are 21, B; 30, B: ne·čišλawa he pays me for it (21, B); ki·maka he gives it to them (35, B). Elaborations of these sequences are of the following types: 21, ± 40, ± 71, B, ± suffixes; ± 10, 30, ± 40, ± 71, B, ± suffixes. Examples: ne·čonpi·kilia·h they carried it away for me before leaving (21, B, 141, 156, 186, 191); te·čwa·li·kilikan bring it to me! (pl. command) (14, 33, B, 191); ankionpowiliaya·h you (pl.) were going to read it for him (13, 32, 42, B, 161, 185, 191); ki·nči·wilihtoya she was making it for them (35, B, 171, 185); tihki·štilihtiyahtoya·h we were going to take it away for him (12, 32, B, 141, 151, 171, 188, 191).

1.2. The observed formations in C1 are shown by formulas in the following three subsections.

1.2.1. Intransitive stems in C1.

IB = I: niweci (niuetzi OA) I am falling [21, I = (IB)]; amasih (amaci OA) you (pl.) arrive [23, I = (IB), 191].

NB_1, 101 = I: niλakati (nitlacati OA) I am born [21, I = (NB_1, 101)]; nik^{w}altia (niqualtia MA) I become good [21, I = (NB_1, 101), 151]. (NB_2 in sequence with suffix 101 yields T, see 1.2.2).

Some I have been found in sequence I; other I in sequences of the following types: ± prefixes, I, ± suffixes. Examples: yaw (yauh OA) he goes (I); onisak (oniçac MA) I woke up (11, 21, I, 178); mikis (miquiz

OA) he will die (I, 179).

1.2.2. Transitive stems in Cl.

TB = T: nitenoca (nitenutza OA) I call someone [21, 81, T = (TB)]; onikmat (onicmat MA) I knew it [11, 21, 43, T = (TB), 178].

NB_2, 101 = T: niλateposwia (nitlatepozuia MA) I cut something with a metal instrument [21, 82, T = (NB_2, 101), 151]; nikeswia (niquezhuia OA) I bloody it [21, 43, T = (NB_2, 101), 151]. (NB_1 in sequence with suffix 101 yields I, see 1.2.1).

IB, 110 = T: onitemačtik (onitemachtic MA) I taught someone [11, 21, 81, T = (IB, 111), 178]; niteλatoltia (nitetlatoltia OA) I make someone speak [21, 81, T = (IB, 112), 151]; titomaniltiah (titomaniltia OA) we (honorific) stand [22, 72, T = (IB, 112), 151].

NB_1, 101, 111 = T: niλasetilia (nitlacetilia OA) I make several things one [21, 82, T = (NB_1, 101, 111), 151]; niλaatilia (nitlaatilia MA) I melt something [21, 82, T = (NB_1, 101, 111), 151].

NB, TB = T: niλaλakolkawa (nitlatlacolcaua MA) I leave the sins [21, T = (NB, TB)]; timok^{w}alneki (timoqualnequi MA) you want to be good [22, 73, T = (NB, TB)].

Certain T have been found as the final constituent of a verb complex only in sequence with prefix 31. These T plus suffix 151 parallel other T in verb final or in sequence before suffix 191: niteana (niteana OA) I seize someone (21, 81, T); niλatemoa (nitlatemoa MA) I look for something (21, 82, T, 151); moλaloah (motlaloa OA) they run (73, T, 151, 191). Elsewhere, all T are distributed alike. We cite T, 151 simply as T in our formulas denoting possible distributions.

Minimum sequences for T are 40, T; 70, T; 80, T; T, 152: micλasoλa (mitztlaçotla MA) he loves you (42, T); močikawa (mochicaua OA) he forces himself (73, T); λak^{w}a (tlaqua OA) he eats (82, T); pialo (pialo OA) he is guarded (T, 152). Elaborations of these sequences are of the following types: [1] * ± 11, ± 20, 40, ± 50, * ± 70A, * ± 91, T, ± suffixes; 31, 40, * ± 50, * ± 70A, * ± 91, T, ± suffixes; ± 11, ± 20, * ± 50, 70, ± 91, T, ± suffixes; ± 11, ± 20, ± 50, ± 70A, 80, * ± 91, T, ± suffixes; ± prefixes, T, 152, ± other suffixes. Examples: konilkawa (conilcaua MA) he goes to forget it (43, 52, T); tameč̣λasoλah (tamechtlaçotla MA) we love you (pl.) (22, 45, T, 191); šikink^{w}i (xiquincui OA) take them! (31, 46, T); šikλasoλakan (xictlaçotlacan MA) love him! (pl. command) (31, 43, T, 191); ninoλaλalia (ninotlatlalia OA) I sit down several times (21, 71, 91, T, 151); otimočikaw (otimochicauh MV) you forced yourself (11, 22, 73, T, 178); oniteanka (oniteanca OA) I had seized someone (11, 21, 81, T, 183); tiwallapiakiwih (tiuallapiaquiui OA) we will come guard (22, 51, 82, T, 171, 191); neλasoλalo (netlaçotlalo MA) everybody loves each other (74, T, 152); otipialokeh (otipialoque OA) we were guarded (11, 22, T, 152, 178, 191).

1.2.3. Benefactive stems in C1.

BB = B: nikmaka (nicmaca MA) I give it to him [21, 43, B = (BB)].

TB, 121 = B: niλačiwililo (nitlachiuililo MA) something is made for me [21, 82, B = (T, 121), 132]; ninoλak^{w}epilia (ninotlacuepilia OA) I (honorific) return something [21, 71, 82, B = (T, 121), 151].

NB$_2$, 101, 121 = B: niknoeswilia (nicnoezhuilia OA) I (honorific) bloody it [21, 43, 71, B = (NB$_2$, 101, 121), 151]; omoλakatilicino

(omotlacatilitçino OA) He (extra honorific) was born [11, 73, B = (NB_2, 101, 121), 134, 178].

IB, 111 or *112, 121 = B: ninotemačtilia (ninotemachtilia OA) I teach someone (honorific) [21, 71, 81, B = (IB, 111, 121), 151]; niknoselililia (nicnocelililia OA) I receive it from him (honorific) [21, 43, 71, B = (IB, 111, 121), 151].

Like certain T, most B have been found at the end of a verb complex only in sequence with prefix 31. These B plus suffix 151 parallel other B in verb final or in sequence before suffix 191. Elsewhere, all B are distributed alike. In our formulas denoting possible distributions, we cite B, 151 simply as B.

Minimum sequences for B are 40, B; *80, B: kimaka (quimaca MA) he gives it to her (43, B). Elaborations of these sequences are of the following types: * ± 11, ± 20, 40, ± 50, ± 70A, ± 91, B, ± suffixes; 31, 40, ± 50, ± 70A, * ± 91, B, ± suffixes; * ± 11, ± 20, * ± 50, ± 70A, 80, * ± 91, B, ± suffixes; *(31, ± 50, ± 70A, 80, ± 91, B, ± suffixes). Examples: nimiconnoλaλawtilia (nimitzonnotlatlauhtilia OA) I beg you (honorific) [21, 42, 52, 71, 91, B = (T, 121), 151]; šikwalmottili (xicualhmottili OA) look at him over here! (honorific) [31, 43, 51, 73, B = (T, 121)]; ninoλacak^{w}ilia (ninotlatzacuilia MA) I (honorific) enclose something [21, 71, 82, B = (T, 121), 151]; niλačiwililo (nitlachiuililo MA) something is made for me [21, 82, B = (T, 121), 152].

1.3. Noun stems (N) may consist of a base alone (NB). They may also consist of bases IB, TB, BB, and NB in sequence with stem-forming affixes. Mpa prefixes 60-71, suffixes 111-131 and 210-220 and Cl

prefixes 74-91, suffixes 111, and 210-220 are found in such sequences. We set up two classes of noun stems which differ in their distribution with affixes. One class consists of derived stems, the ultimate constituents of which are suffixes 210 or 210; the other class consists of all others.

The observed Mpa formations are shown by formulas in the following two subsections.

1.3.1. Noun stems, class 1 (N_1) in Mpa.

NB = N_1: teskaλ mirror [N_1 = (NB), 241]; noλan under me [51, N_1 = (NB)].

NB, NB = N_1: tekikalli work house [N_1 = (NB, NB), 241]; moo·waiswawan your straws [52, N_1 = (NB, NB), 242].

NB, NB, NB = N_1: λaltepokmen gusts of dust [N_1 = (NB, NB, NB), 242]; piconakamolli mole made with pork [N_1 = (NB, NB, NB), 241].

± 71, IB, 220 = N_1: tomatka·wan our wise ones [54, N_1 = (IB, 221), 242]; ini·nkokolis their illness [56, N_1 = (IB, 223)]; ahasikayo·men continuous arrivals [N_1 = (71, IB, 224), 242].

60, ± 71, IB, 120, 220 = N_1: λatemowihke·men lowerers [N_1 = (63, IB, 121, 221), 242]; λaλehko·ltihke·cicin little lifters [N_1 = (63, IB, 123, 221), 242, 251]; λawehweciltilli something made to fall a number of times [N_1 = (63, 71, IB, 123, 222), 241]; imomiktilis his suicide [53, N_1 = (61, IB, 122, 223)]; te·asi·ltilismen forced arrivals [N_1 = (62, IB, 123, 223), 242]; te·co·kilihkayo·λ weeping [N_1 = (62, IB, 121, 224), 241].

60, ± 71, IB, 122, 131, 222 = N_1: λane·štililli what was taught

[N_1 = (63, IB, 122, 131, 222), 241].

NB_1, 111, 221 or 223 = N_1: tekitike·λ worker [N_1 = (NB_1, 111, 221), 241]; tekitilisλi work [N_1 = (NB_1, 111, 223), 241].

60, NB_2, 111, 220 = N_1: ite·pahtihka·h his healer [53, N_1 = (62, NB_2, 111, 221)]; te·na·miktihkayo·λ marriage [N_1 = (62, NB_2, 111, 224), 241].

60, ± 71, TB, 220 = N_1: mok^{w}apke·men̲ returners [N_1 = (61, TB, 221), 242]; te·ahkok^{w}illi people guarded [N_1 = (62, TB, 222), 241]; λaickikayo·λ seizure [N_1 = (63, TB, 224), 241].

NB, TB, 220 = N_1: tamalči·hke·λ person who makes tamales [N_1 = (NB, TB, 222), 241]; nosakaco·n̲tikilis my grass cutting [51, N_1 = (NB, TB, 223)].

Minimum sequences for N_1 are 50, N_1; N_1, 240 or 251: moλal your land (52, N_1); ši·čλi owl (N_1, 241); elλapalmen̲ wings (N_1, 242); k^{w}acin̲ little stick (N_1, 251). Elaborations of these sequences are of the following types: ± other prefixes, 50, N_1, ± 242, ± 251; 50, N_1, 231, ± 242; ± 10, ± 40, N_1, 241. Examples: šiwa·lnosiwa·h come be my wife! (14, 41, 51, N_1); tion̲ini·n̲te·pahtihka·wan̲ we go over there to be their healers (12, 42, 56, N_1, 242); moahkolcicin̲ your little arms (52, N_1, 242, 251); noeso my own blood (51, N_1, 231); išiwiyowen̲ its own leaves (53, N_1, 231, 242); tika·walli you are a widow (12, N_1, 241); šion̲ta·hλi go be a father! (14, 42, N_1, 241).

1.3.2. Noun stems, class 2 (N_2) in Mpa.

± 71, IB, 210 = N_2: λahλaλasinin̲ a group of coughers [N_2 = (71, IB, 211), 241]; mokiskan̲ your exit [52, N_2 = (IB, 212)].

60, ± 71, TB, 210 = N_2: mokecanin stoppers [N_2 = (61, TB, 211), 241]; λanahnamakayan place where things are sold continuously [N_2 = (63, 71, TB, 214)].

NB, TB, 210 = N_2: kalči·wanin house builders [N_2 = (NB, TB, 211), 241]; iya·cahkan his water valve [53, N_2 = (NB, TB, 212)].

Sequences in which N_2 occur are of the following types: N_2, 241; 50, N_2. Examples: te·pianin they are caretakers (N_2, 241); mok^{w}apanin returners (N_2, 241); iλape·wanin his hunters (53, N_2).

1.4. The observed Cl formations are shown by formulas in the two following subsections.

1.4.1. Noun stems, class 1 (N_1) in Cl.

NB = N_1: λakaλ (tlacatl MA) man [N_1 = (NB), 251]; teλaškal (tetlaxcalh OA) somebody's tortilla [67, N_1 = (NB)].

NB, NB = N_1: siwamasaλ (ciuamaçatl MA) female deer [N_1 = (NB, NB), 251]; totolteλ (totolhtetl OA) egg [N_1 = (NB, NB), 251].

NB, NB, NB = N_1: k^{w}awnek^{w}sayolli (quauhneucçayulli OA) tree-honeybee [N_1 = (NB, NB, NB), 251].

* ± 91, IB, 220 = N_1: nemilisλi (nemiliztli MA) life [N_1 = (IB, 223), 251].

80, * ± 91, IB, 111 or *112, 220 = N_1: notemakištikawan (notemaquixticauan MA) my saviors [61, N_1 = (81, IB, 111, 221), 252].

*(80, ± 91, IB, 111, 121, 222 = N_1).

*(NB_1, 101, 220 = N_1).

*(80, NB_2, 101, 220 = N_1).

74, * ± 91, TB, 111 or *112, 220 = N_1: nemačtilli (nemachtilli OA) teaching doctrine [N_1 = (74, TB, 111, 222), 251]; nonemačtikaw (nonemachticauh OA) my son (who is taught) [61, N_1 = (74, TB, 111, 221)].

80, * ± 91, TB, 220 = N_1: noλapiškaw (notlapixcauh MA) my guard [61, N_1 = (82, TB, 221)]; tečikawalisλi (techicaualiztli OA) effort [N_1 = (81, TB, 223), 251].

*(NB, TB, 220 = N_1).

Minimum sequences for N_1 are 60, N_1; N_1, 230 or 240 or 250 or 261: mamaw (mamauh MA) your paper (62, N_1); kalwa (calhua OA) master of the house (N_1, 224); weweton (ueueton OA) despised old man (N_1, 242); masaλ (maçatl MA) deer (N_1, 251); okičλé (oquichtle MA) boy: (N_1, 261). Elaborations of these sequences are of the following types: ± other prefixes, 60, N_1, ± 240, ± 250, ± 261; 60, N_1, 230, ± 250; ± 20, * ± 50, N_1, 250. Examples: amoλaškal (amotlaxcalh OA) your (pl.) tortilla (65, N_1); timpilcin (timpilhtzin OA) you are their son (22, 66, N_1, 241); toseltin (toceltin MA) we alone (64, N_1, 252); totacine (totatzine MA) our Father (64, N_1, 241, 261); neso (neço OA) my blood (61, N_1, 236); nostayowan (noztayouan OA) my salty things (61, N_1, 235, 252); totome (totome MA) birds (N_1, 252); nik^{w}alli (niqualli) I am good (21, N_1, 251).

1.4.2. Noun stems, class 2 (N_2) in Cl.

* ± 91, IB, 210 = N_2: λaksani (tlaccani OA) walker [N_2 = (IB, 211), 251].

80, * ± 91, TB, 210 = N_2: teλasoλanime (tetlaçotlanime OA) lovers [N_2 = (81, TB, 211), 252].

80, * ± 91, TB, 152, 213 = N_2: noλakʷaloyan (notlaqualoyan OA) my eating-place [61, N_2 = (82, TB, 152, 213)].

NB, TB, 210 = N_2: kakčiwka (cacchiuhca MA) place where shoes are made [N_2 = (NB, TB, 212), 251].

N_2 has been found in sequences of the following types: N_2, 250; 60, ± 91, N_2. Examples: λatekonime (tlateconime OA) axes (N_2, 252); notemačtiloyan (notemachtiloya MA) my school (61, N_2); nokokončiwka (nococonchiuhca OA) my place where urns are made (61, 91, N_2).

1.5.1. Particle stems in Mpa.

PB = P: ka with (PB); amo no (PB).

PB, PB = P: kanpa where (PB, PB); se·yok another (PB, PB).

1.5.2. Particle stems in Cl.

PB = P: san (çan MV) only (PB); ka (ca MV) because (PB)

PB, PB = P: inik (inic MV) with which (PB, PB); ačto (achto MV) first (PB, PB).

2.1. Prefixes 10-21 appear in word initial only; prefixes 30-71 in word initial and medial.

2.1.1. Prefixes 10:

11. ni- first person singular actor
12. ti- ~ #- second person singular and first person plural actor
13. an- second person plural actor
14. ši- ~ #- imperative

We use the symbol <> to denote that certain affixes require certain other affixes in the same sequence, the symbol >< to indicate mutually exclusive affixes.

Prefixes 10 >< suffixes 210. Prefix 11 >< prefix 13 and <> suffix 191. Prefix 14 >< suffixes 161, 182, 184-188.

Prefixes 10 occur in sequences of the following types: 10, 30, ± 41, ± 71, T or B, ± suffixes; 10, ± 40, 60, ± 71, T, ± suffixes; 10, ± 40, ± 71, I, ± suffixes; 10, ± 40, ± 50, N_1, ± suffixes. Examples: tiki·nwa·lkahka·htose·h we will keep coming to leave them (12, 35, 41, 71, T, 171, 187, 191); nihtemowia I lower it (11, 32, T, 161); ankionpi·kilia·h you (pl.) are going over there to wrap it for him (13, 32, 42, B, 161, 191); šihwa·li·kili bring it to him! (14, 32, B); niλak^{w}ahtinemi I go along eating (11, 63, T, 141, 154); nimošašawa I stick myself (11, 61, T); šionλahλačia go look continually! (14, 42, 71, I); anya·se·h you (pl.) will go (13, I, 187, 191); šionini·niknin go be their brother! (14, 42, 56, N_1); tikone·λ you are a child (12, N_1, 241).

2.1.2. Prefix 21: ne·č- first person singular goal

Prefix 21 >< prefixes 10, 30, 50-60, and suffixes 200.

Prefix 21 occurs in sequences of the following types: 21, ± 40, ± 71, T or B, ± suffixes. Examples: ne·čwa·lnohno·ca she comes to talk to me (21, 41, 71, T); ne·čλaλasi·ltia·h they make me cough (21, T, 161, 191); ne·čak^{w}ilihke·h they closed it for me (21, B, 186, 191); ne·čto·kilihte·waya he sowed it for me before he left (21, B, 141, 156, 185); ne·čwa·lpowilia he comes to read it to me (21, 71, B, 161).

2.1.3. Prefixes 30:

31. mic- second person singular goal

32. ki- ~ -k- ~ -h- third person singular goal

33. te·č- first person singular and plural goal

34. a·me·č- ~ -me·č- second person plural goal

35. ki·n̲- third person plural goal

Prefixes 30 >< prefixes 21, 50, 60, and suffixes 200.

Prefixes 30 occur in sequences of the following types: ± 10, 30, ± 40, ± 71, T or B, ± suffixes. Examples: te·čte·mo look for me! (14, 33, T); nikon̲te·mitia I am going over there to fill it up (11, 32, T, 161); ki·n̲wa·lkahka·htose·h they will keep coming to leave them (35, 41, 71, T, 171, 187, 191); tiki·nohno·čilia·h we speak to them for her (12, 35, 71, B, 161, 191); kiwi·kilihte·waskia she would carry it away for him (32, B, 141, 156, 188).

2.1.4. Prefixes 40:

41. wa·l- from there to here

42. on̲- from here to there

Prefixes 40 >< suffixes 181-184, 210.

Prefixes 40 occur in sequences of the following types: ± 10, ± 30, 40, ± 71, T or B, ± suffixes; ± 21, 40, ± 71, T or B, ± suffixes; ± 10, 40, ± 60, ± 71, T, ± suffixes; ± 10, 40, ± 71, I, ± suffixes; ± 10, 40, ± 50, N_1, ± suffixes. Examples: šikon̲ihita go see it! (14, 32, 42, 71, T); tiki·non̲pahtia·h we go over there to cure him (12, 35, 42, T, 161, 191); kiwa·lpi·kilia he comes to wrap it for her (32, 41, B, 161); ne·čwa·lpowilia he is coming to read it for me (21, 41, B, 161);

tiwa·lλape·wa·h we will come hunt (12, 41, 63, T, 191); onpaλa·nki it went to fly (42, I, 186); niwa·lweci I come to fall (11, 41, I); šionini·nikniwan go be their brothers! (pl. command) (14, 42, 56, N_1, 262); wa·lima·iknin he comes to be her friend (41, 53, N_1).

2.1.5. Prefixes 50:

51.	no-	first person singular possessive
52.	mo-	second person singular possessive
53.	i- ~ iy- ~ #-	third person singular possessive
54.	to-	first person plural possessive
55.	a·mo-	second person plural possessive
56.	ini·n-	third person plural possessive
57.	te·-	indefinite possessive

Prefixes 50 >< prefixes 21, 30, and suffixes 141-191.

Prefixes 50 occur in sequences of the following types: ± 10, ± 40, 50, N_1, ± suffixes; 50, N_2. Examples: šiwa·lnosiwa·h come be my wife! (14, 41, 51, N_1); tite·ta·hwan we are parents (12, 57, N_1, 262); ini·nomiyowan their bones (56, N_1, 211, 262); imeλ his metate (53, N_1); moeso your own blood (52, N_1, 231); iλape·wanin his hunters (53, N_2).

2.1.6. Prefixes 60:

61.	mo- ≈ m-	reflexive
62.	te·-	indefinite personal goal
63.	λa-	indefinite impersonal goal

Prefixes 60 occur in sequences of the following types: ± 10, ± 40, 60, ± 71, T, ± suffixes. Examples: niλakʷahkʷahtinemi I go along eating

(11, 63, 71, T, 141, 154); šiomosewi go sit down! (14, 42, 61, T); wa·lte·i·šitia he comes to wake someone (41, 62, T, 161).

Prefixes 60 also occur in sequences with certain bases in the development of N_1 and N_2: 60, ± 71, IB, 120, 220 = N_1; 60, NB_2, 111, 220 = N_1; 60, ± 71, TB, 220 = N_1; 60, ± 71, IB, 121, 131, 222 = N_1; 60, ± 71, TB, 210 = N_2. Examples: λaλehko·ltilli what was lowered [N_1 = (63, IB, 123, 222), 241]; λapahtilisλi cure [N_1 = (63, NB_2, 111, 223), 241]; te·ihičtehke·men thief [N_1 = (62, 71, TB, 221), 242]; λanamakayan where things are sold [N_2 = (63, TB, 214), 241]. (For further examples, see 1.3.1-2).

2.1.7. Prefix 71: Vh- ~ CVh- intensifier and repetitive

Prefix 71 occurs in sequences of the following types: ± other prefixes, 71, I or T or B, ± suffixes. Examples: λahλači·štoya·h they were staring (71, I, 171, 185, 191); nipahpano I pass continually (11, 71, I); tihwa·lk^{w}ahk^{w}ala·nia·h we come to annoy him (12, 32, 41, 71, T, 161, 191); tiλawahwa·ca you dry something (12, 35, 71, T); nimicnohno·čiliki I will come speak to you for him (11, 31, 71, B, 181); šihwa·li·kili bring it for him! (14, 32, B).

Prefix 71 also occurs in sequence before certain bases in the development of N_1 and N_2: 71, IB, 220 = N_1; 60, 71, IB, 120, 220 = N_1; 60, 71, TB, 220 = N_1; 60, 71, IB, 122, 131, 222 = N_1; 71, IB, 210 = N_2; 60, 71, TB, 210 = N_2. Examples: k^{w}ahk^{w}alanke·λ grouch [N_1 = (71, IB, 221), 241]; λakihki·štilli what was taken out [N_1 = (63, 71, IB, 122, 222), 241]; λaihilli what was drunk [N_1 = (63, 71, TB, 222), 241]; kohkočinin sleepy-heads [N_2 = (71, IB, 211), 241]; te·mehmela·hko

where people are found repeatedly [N_2 = (62, 71, TB, 213), 241]. (See 1.3.1-2 for additional examples).

2.2. Cl prefixes 11 and 31 have been found in word initial only; other Cl prefixes in word initial and medial.

2.2.1. Prefix 11: o- perfective

Prefix 11 <> a suffix of class 170A (i. e. 173, 176, 177, 178, 182, 183). Prefix 11 >< prefix 31, suffix 151, suffixes of class 170B (i. e. 171, 172, 174, 175, 179, 181), and suffixes 200.

Sequences in which prefix 11 has been found are of the following types: 11, ± 20, * ± 50, * ± 91, I, ± other suffixes, 170A, ± 191; 11, ± 20, * ± 50, ± 70A (i. e. 71, 72, or 73), 80, * ± 91, T or B, ± other suffixes, 170A, ± 191; 11, ± 20, 40, * ± 50, ± 70A, * ± 91, T or B, ± other suffixes, 170A, ± 191; 11, ± 20, * ± 50, * ± 91, T, 152, ± other suffixes, 170A, ± 191. Examples: onikoč (onicoch MV) I slept (11, 21, I, 178); oankatkah (oancatca MA) you (pl.) were (11, 23, I, 183, 191); onitelaso\laya (onitetlaçotlaya MA) I loved someone (11, 21, 81, T, 177); oti\lapiškeh (otitlapixque OA) we guarded something (11, 22, 82, T, 178, 191); otimo\lačiwilicino (otimotlachiuilitçino OA) you (honorific) did something [11, 22, 73, 82, B = (T, 121), 132, 178]; otečmočiwilicino (otechmochiuilitçino OA) He (honorific) made us [11, 44, 73, B = (T, 121), 132, 178]; onikilpi (oniquilpi MV) I tied it (11, 21, 43, T, 178); onipialok (onipialoc OA) I was guarded (11, 21, T, 152, 178); oan\lasol\alokah (oantlaçotlaloca MA) you (pl.) would have been guarded (11, 23, T, 152, 183, 191).

In addition, prefix 11 probably occurred in sequences of the following types: *(11, ± 20, ± 50, ± 70A, 80, ± 91, B, 152, ± other suffixes, 170A, ± 191).

2.2.2. Prefixes 20:

21. ni- ~ n- first person singular actor

22. ti- ~ t- second person singular and first person plural actor

23. an- ~ am- ~ a- second person plural actor

Prefixes 20 >< suffixes 220 and 261.

Sequences in which prefixes 20 have been found are of the following types: ± 11, 20, ± 50, ± 91, I, ± suffixes; ± 11, 20, ± 50, ± 70A, 80, * ± 91, T or B, ± suffixes; ± 11, 20, 40, ± 50, ± 70A, ± 91, T or B, ± suffixes; ± 11, 20, * ± 50, 70A, ± 91, T, ± suffixes; ± 11, 20, * ± 50, * ± 91, T, 152, ± other suffixes; 20, * ± 50, ± 60, N1, ± suffixes. Examples: onasik (onacic MA) I arrived (11, 21, I, 178); amonλačiah (amontlachia OA) you (pl.) look from here to there (23, 52, I, 191); niλaλatoa (nitlatlatoa MA) I talk a lot (21, 91, I, 151); oniteanka (oniteanca OA) I had seized someone (11, 21, 81, T, 183); tiwallapiakiwih (tiuallapiaquiui OA) we will come guard something (22, 51, 82, T, 171, 191); ninoλacakʷilia (ninotlatzacuilia MA) I (honorific) enclose something [21, 71, 82, B = (T, 121), 151]; niλačiwililo (nitlachiuililo MA) something is made for me [21, 82, B = (T, 121), 152]; nimiconnoλaλawtilia (nimitzonnotlatlauhtilia OA) I beg you (honorific) [21, 42, 52, 71, 91, B = (T, 121), 151]; onamečiw (onamechiuh OA) I made you (pl.) (11, 21, 45, T); ninoλaλalia (ninotlatlalia OA) I sit down several times (21, 71, 91, T, 151); oninašiš (oninaxix MA) I urinated (11, 21, 71, T,

178); otipialokeh (otipialoque OA) we were guarded (11, 21, T, 152, 178, 191); tinopilcin (tinopilhtzin OA) you are my son (22, 61, N_1, 241); amipilwan (amipilhuan OA) you (pl.) are his children (23, 63, N_1, 252).

2.2.3. Prefix 31: ši- imperative

Prefix 31 >< prefix 11, 71, 72, 74, suffixes 151, 171, 173, 174, 176, 177, 178, 179, 181, 183, 220, and 261.

Sequences in which prefix 31 has been found are of the following types: 31, ± 50, * ± 91, I, ± suffixes; 31, ± 50, * ± 70A, 80, * ± 91, T or *B, ± suffixes; 31, 40, ± 50, ± 70A, * ± 91, T or B, ± suffixes; 31, ± 50, 70A, ± 91, T, ± suffixes; 31, * ± 50, * ± 91, T, 132, ± other suffixes. Examples: šiaw (xiauh MA) go! (31, I); šiwallačia (xiuallachia OA) look over here! (31, 51, I); šiλapiakan (xitlapiacan OA) guard something (pl. command)!; šiwallapia (xiuallapia OA) guard over here! (31, 51, 82, T); šikkakikan (xiccaquican MA) hear it! (pl. command) (31, 43, T, 191); šikwalmottili (xicualhmottili OA) look at him over here! (honorific) [31, 43, 51, 73, B = (T, 121)]; šimoλasoλakan (ximotlaçotlacan MA) love each other! (31, 73, T, 191); šipialokan (xipialocan OA) be guarded! (pl. command) (31, T, 152, 191).

In addition, prefix 31 probably occurred in sequences of the following types: *(31, ± 50, ± 60, N_1, ± suffixes).

2.2.4. Prefixes 40:

41. neč- first person singular goal

42. mic= second person singular goal

43. ki- ~ k- third person singular goal

44. teč- first person plural goal

45. ameč- ~ ame- second person plural goal

46. kin- ~ kim- third person plural goal

Prefixes 40 >< prefixes 80, suffixes 220 and 261.

Sequences in which prefixes 40 have been found are of the following types: ± 11, ± 20, 40, ± 50, ± 70A, ± 91, T or B, ± suffixes; 31, 40, ± 50, ± 70A, * ± 91, T or B, ± suffixes. Examples: konilkawa (conilcaua MA) he goes to forget it (43, 52, T); otečmočiwilicino (otechmochiuilitzino OA) He made us [11, 44, 73, B = (T, 121), 132, 178]; niknolwilia (nicnolhuilia MA) I honorific say it [21, 43, 71, B = (T, 121), 151]; nimiconnoλaλawtilia (nimitzonnotlatlauhtilia OA) I beg you (honorific) [21, 42, 52, 71, 91, B = (T, 121), 151]; šikinkʷi (xiquincui OA) take them! (31, 46, T); šikλasoλakan (xictlaçotlacan MA) love him! (pl. command) (31, 43, T, 191); šikwalmottili (xicualhmottili OA) look at him over here (honorific)! [31, 43, 51, 73, B = (T, 121)].

2.2.5. Prefixes 50:

51. wal- from there to here

52. on- from here to there

Prefixes 50 >< suffixes 220 and 261.

Sequences in which prefixes 50 have been found are of the following types: * ± 11, ± 20, 50, * ± 91, I, ± suffixes; 31, 50, * ± 91, I, * ± suffixes; ± 11, ± 20, 50, * ± 70A, 80, * ± 91, T or *B, ± suffixes; * ± 11, ± 20, 40, 50, ± 70A, ± 91, T or B, ± suffixes; 31, 50, * ± 70A, 80, * ± 91, T or *B, ± *suffixes; 31, 40, 50, ± 70A, * ± 91, *T or B,

* ± suffixes. Examples: amonλačiah (amontlachia OA) you (pl.) look from here to there (23, 52, I, 191); šiwallačia (xiuallachia OA) look over here! (31, 51, T); tiwallapiakiwih (tiuallapiaquiui OA) we will come guard something (22, 51, 82, T, 171, 191); nonλak^{w}a (nontlaqua OA) I go eat (21, 52, 82, T); otonteλasoλakeh (otontetlaçotlaqueh OA) we will have loved (11, 22, 52, 81, T, 178, 191); konitta (conitta MA) he goes to look at it (43, 52, T); nimiconnoλaλawtilia (nimitzonnotlatlauhtilia OA) I beg you (honorific) [21, 42, 52, 71, 91, B = (T, 121), 151]; šiwallapia (xiuallapia OA) guard over here! (31, 52, 82, T); šikwalmottili (xicualhmottili OA) look at him over here (honorific)! [31, 43, 51, 73, B = (T, 121)].

In addition, prefixes 50 probably occurred in sequence of the following types: *(± 11, ± 20, 50, 70A, ± 91, T, ± suffixes); *(± 11, ± 20, 50, ± 91, T, 152, ± other suffixes); *(± 20, 50, ± 60, N1, ± suffixes); *(31, 50, ± 60, N1, ± suffixes).

2.2.6. Prefixes 60:

61. no- ~ n- first person singular possessive
62. mo- ~ m- second person singular possessive
63. i- third person singular possessive
64. to- first person plural possessive
65. amo- second person plural possessive
66. in- ~ im- third person plural possessive
67. te- indefinite possessive

Prefixes 60 >< prefix 11, 40, and suffixes 131-151, 153-191.

Sequences in which prefixes 60 have been found are of the following

types: ± 20, * ± 50, 60, N_1, ± suffixes; 60, ± 91, N_2, * ± 252. Examples: namaton (namaton MA) my little paper (61, N_1, 242); tinotahcin (tinotatzin MA) you (honorific) are my father (22, 61, N_1, 241); amipilwan (amipilhuan OA) you (pl.) are his children (23, 63, N_1, 252); tesiwaw (teciuauh OA) someone's wife (67, N_1); nokončiwka (noconchiuhca OA) my place where urns are made [61, N_2 = (NB, TB, 212)]; noλakʷaloyan (notlaqualoyan OA) my eating-place [61, N_2 = (82, TB, 152, 213)].

2.2.7. Prefixes 70:

We designate prefixes 71, 72, and 73 as 70A.

Sequences in which prefixes 70 have been found are of the following types: ± 11, ± 20, * ± 50, 70, ± 91, T, ± suffixes. Examples: ninoλaλalia (ninotlatlalia OA) I sit down several times; otimočikaw (otimochicauh MV) you forced yourself (11, 22, 73, T, 178); oneteotilok (oneteotiloc MV) it was adored [11, 74, T = (NB_2, 101), 152, 178]; neλasoλalo (netlaçotlalo OA) people love each other (74, T, 152).

Sequences in which prefixes 70A were found are of the following types: * ± 11, ± 20, * ± 50, 70A, 80, * ± 91, *T or B, ± suffixes; ± 11, ± 20, 40, ± 50, 70A, ± 91, *T or B, ± suffixes; 31, 40, ± 50, 70A, * ± 91, *T or B, ± suffixes. Examples: ninoλacakʷilia (ninotlatzacuilia MA) I (honorific) enclose something [21, 71, 82, B = (T, 121), 151]; nimiconnoλaλawtilia (nimitzonnotlatlauhtilia OA) I beg you (honorific) [21, 42, 52, 71, 91, B = (T, 121), 151]; niknolwilia (nicnolhuilia MA) I (honorific) say it [21, 43, 52, B = (T, 121), 151]; otečmočiwilicino (otechmochiuilitzino OA) He made us [11, 44, 73, B = (T, 121), 132, 178]; šikwalmottili (xicualhmottili OA) look at him over here (honorific)!

[31, 43, 51, 73, B = (T, 121)].

Prefix 74 was also found in sequences with certain bases in the development of N_1: 74, * ± 91, TB, 111 or *112, 220. Examples: nemačtilli (nemachtilli OA) teaching doctrine [N_1 = (74, TB, 111, 222), 251]; nonemačtikaw (nonemachticauh OA) my son (who is taught) [61, N_1 = (74, TB, 111, 221)].

In addition, prefixes 70 probably occurred in sequences of the following types: *(31, ± 50, 70A, 80, ± 91, T or B, ± suffixes).

2.2.8. Prefixes 80:

81. te- indefinite personal goal

82. λa- indefinite impersonal goal

Prefixes 80 have been found in sequences of the following types: ± 11, ± 20, ± 50, ± 70A, 80, * ± 91, T or B, ± suffixes; 31, ± 50, * ± 70A, 80, * ± 91, T or *B, ± suffixes. Examples: oniteanka (oniteanca OA) I had seized someone (11, 21, 81, T, 183); tiwallapiakiwih (tiuallapiaquiui OA) we will come guard (22, 51, 82, T, 171, 191); nonoλacakʷilia (ninotlatzacuilia MA) I (honorific) enclose something [21, 71, 82, B = (T, 121), 151]; niλačiwililo (nitlachiuililo MA) something is made for me [21, 82, B = (T, 121), 152]; šiλapiakan (xitlapiacan OA) guard something (pl. command)! (31, 82, T, 191); šiwallapia (xiuallapia OA) guard over here! (31, 51, 82, T).

Prefixes 80 were also found in sequences with certain bases in the development of N_1 and N_2: 80, * ± 91, IB, 111 or *112, 220 = N_1; 80, * ± 91, TB, 220 = N_1; 80, * ± 91, TB, 210 = N_2; 80, * ± 91, TB, 152, 213 = N_2. Examples: notemakištikawan (notemaquixticauan MA) my saviors

[61, N_1 = (81, IB, 111, 221), 252]; noλapiškaw (notlapixcauh MA) my guard [61, N_1 = (82, TB, 221)]; tečikawalisλi (techicaualiztli OA) effort [N_1 = (81, TB, 223), 251]; teλasoλanime (tetlaçotlanime OA) lovers [N_2 = (81, TB, 211), 252]; noλak^{w}aloyan (notlaqualcyan OA) my eating-place [61, N_2 = (82, TB, 152, 213)].

In addition, prefixes 80 probably occurred in sequences of the following types: *(80, ± 91, IB, 111, 121, 222 = N_1); *(80, NB_2, 101, 220 = N_1).

2.2.9. Prefix 91: CV- intensifier, repetitive, pluralizer

Prefix 91 has been found in sequences of the following types: ± other prefixes, 91, I or T or B, ± suffixes; * ± 60, 91, N_1, ± suffixes; ± 60, 91, N_2. Examples: niλaλatoa (nitlatlatoa OA) I talk a lot (21, 91, I, 151); ninoλaλalia (ninotlatlalia OA) I sit down several times (21, 71, 91, T, 151); nimiconnoλaλawtilia (nimitzonnotlatlauhtilia OA) I beg you (honorific) [21, 42, 52, 71, 91, B = (T, 121), 151]; k^{w}ak^{w}awtin (quaquahtin OA) eagles (91, N_1, 252); kokoyo (cucoyo MA) coyotes (91, N_1); nokokončiwka (nococonchiuhca OA) my places where urns are made [61, 91, N_2 = (NB, TB, 212)].

In addition, prefix 91 probably occurred in sequences with certain bases in the development of N_1 and N_2: *91, IB, 220 = N_1; 80, * ± 91, IB, 111 or *112, 220 = N_1; *(80, ± 91, IB, 111, 121, 222 = N_1); 74, * ± 91, TB, 111 or *112, 220 = N_1; 80, * ± 91, TB, 220 = N_1; * ± 91, IB, 210 = N_2; 80, * ± 91, TB, 152, 213 = N_2.

3.1. Mpa suffix 141 appears only in word medial; suffixes 111-131,

151-188, 211-231, 242 both in word medial and final; suffixes 191, 241, 251 only in word final.

3.1.1. Suffix 111: -ti verbalizer

Suffix 111 occurs in sequence after NB in the development of I, T, B, and N_1: NB_1, 111 = I; NB_2, 111 = T; NB_1, 111, 121 = T; NB_2, 111, 131 = B; NB_1, 111, 221 or 223 = N_1; 60, NB_2, 111, 220 = N_1. Examples: tiλa·katihke·h we were born [12, I = (NB_1, 111), 191]; λate·n̲tia he puts a point on it [63, T = (NB_2, 111), 161]; ki·n̲λa·katilih she gave birth to them [34, T = (NB_1, 111, 121), 186]; nihyoyon̲tilihtos I will be dressing him for her [11, 32, B = (NB_2, 111, 131), 171, 187]; tekitike·λ worker [N_1 = (NB_1, 111, 221), 241]; ite·pahtilis his cure [53, N_1 = (62, NB_2, 111, 223)].

3.1.2. Suffixes 120:

121. -li ≈ -ti ≈ -wi transitivizer

122. -ti causative

123. -lti ≈ -·lti compulsive

Suffixes 120 occur in sequence with certain bases in the development of T, B, and N_1: IB, 120 = T; NB_1, 111, 121 = T; IB, 121 or 122, 131 = B; 60, ± 71, IB, 120, 220 = N_1; 60, ± 71, IB, 122, 131, 222 = N_1. Examples: motetilia it gets hard [61, T = (IB, 121), 161]; te·čmači·ltia·h he gives me to understand [22, T = (IB, 123), 161, 191]; micšok^{w}etili·s he will make you crippled [31, T = (NB_1, 111, 121), 187]; kimačtilih he taught it to her [32, B = (IB, 121, 131), 186]; λakih-ki·štihke·λ person who takes things out [N_1 = (63, 71, IB, 122, 221),

241]; λane·štililli what was taught [N_1 = (63, IB, 122, 131, 222), 241].

3.1.3. Suffix 131: -li ≈ -·li benefactive

Suffix 131 occurs in sequence with certain bases in the development of B and N_1: TB, 131 = B; NB_2, 111, 131 = B; IB, 121 or 122, 131 = B; 60, ± 71, IB, 122, 131, 222 = N_1. Examples: tiki·nohno·čilia·h we speak to them for him [12, 34, 71, B = (TB, 131), 141, 191]; nihλahpialilia I look after it for her [11, 32, B = (IB, 121, 131), 141]. (Further examples are given in 1.1.3 and 1.3.1).

3.1.4. Suffix 141: (-ti- ≈ -hti-) ~ (-t- ≈ -ht-) second verb base marker (?)

Suffixes 150:

151.	yah ~ ya- ~ yawi-	go, efferentive
152.	wa·lah ~ wa·la- ~ wa·lawi-	come, afferentive
153.	weci- ~ wec-	fall, inceptive
154.	nemi- ~ nen-	walk, diffusive
155.	ki·sa ~ ki·s-	go forth, promotive
156.	e·wa ~ e·-	raise, premotive

Suffix 141 is found only in sequence before suffixes 150. Suffixes 141 and 150 >< prefixes 50, suffixes 161 and 200.

Suffixes 141 and 150 occur in sequences of the following types: ± prefixes, I, 141, 150, ± other suffixes; 21, ± other prefixes, T or B, 141, 150, ± other suffixes; ± 10, 30, ± other prefixes, T or B, 141, 150, ± other suffixes; ± other prefixes, 60, ± 71, T, 141, 150, ± other

suffixes. Examples: yahtinemi he goes all around (I, 141, 154); tiki·stiyawi·h we go walking out (12, I, 141, 151, 191); ne·čto·kilihte·wase·h they will plant it for me before they go away (21, B, 141, 156, 187, 191); niki·n̲λehkoltihtiki·saya I was making them go out and climb up (11, 35, T, 141, 155, 185); an̲kiki·štilihtiwecia·h you (pl.) were going to take it from him (13, 32, B, 141, 153, 185, 191); niλakʷahtiwa·lah I come along eating (11, 63, T, 141, 152).

3.1.5. Suffix 161: -a ~ -wa meaning undetermined

Suffix 161 occurs in sequences of the following types: ± prefixes, I, 161, ± 185, ± 191; 21, ± other prefixes, T or B, 161, ± 185, ± 191; ± 10, 30, ± other prefixes, T or B, 161, ± 185, ± 191; ± other prefixes, 60, ± 71, T, 161, ± 185, ± 191. Examples: čičia it becomes bitter (I, 161); ticikʷinowa·h we hiccough (12, I, 161, 191); ne·čne·štiaya he found me (21, T, 161, 185); tiki·nohno·čilia·h we speak to them for him (12, 34, 71, B, 161, 191); an̲λailpiaya·h you (pl.) were tying up something (13, 63, T, 161, 185, 191); te·čλapoliaya he opened it for me (22, B, 161, 185).

3.1.6. Suffix 171: -to ≈ -hto progressive

Suffix 171 >< prefixes 50 and suffixes 200.

Suffix 171 has been found only in sequences of the following types: ± prefixes, I, 171, ± other suffixes; 21, ± other prefixes, T or B, 171, 180, ± 191; ± 10, 30, ± other prefixes, T or B, 171, ± other suffixes; ± other prefixes, 60, ± 71, T, 171, ± other suffixes. Examples: miktos he will be dying (I, 171, 187); šičo·katokan̲ be crying! (pl. command)

(14, I, 171, 191); ne·čkalči·htoya·h they had been building me a house (21, T, 171, 185, 191); tihλapolihtose·h we will be opening it for him (12, 32, B, 171, 187, 191); šihtencakto keep your mouth closed (14, 32, T, 171); timokectoskia you would be stopping (12, 61, T, 171, 188).

3.1.7. Suffixes 180:

181. -ki action in intraverse direction, non-actualized

182. -ko action in intraverse direction, actualized

183. -ti action in extraverse direction, non-actualized

184. -to action in extraverse direction, actualized

185. -a ~ -ya imperfective

186. -h ≈ -k ≈ -hki ≈ -ki ≈ -hk- perfective

187. -s ≈ -·s future

188. -skia ≈ -·skia conditional

Suffixes 180 >< prefixes 50 and suffixes 200. Suffixes 181-184 >< prefixes 40; suffixes 185-188 >< prefix 14; suffixes 181-184, 186-188 >< suffix 161.

Suffixes 180 occur in sequences of the following types: ± prefixes, I, ± other suffixes, 180, ± 191; 21, ± other prefixes, T or B, ± other suffixes, 180, ± 191; ± 10, 30, ± other prefixes, T or B, ± other suffixes, 180, ± 191; ± other prefixes, 60, ± 71, T, ± other suffixes, 180, ± 191. Examples: kʷatitose·h they will be tired (I, 171, 187, 191); ničo·kaya I was crying (11, I, 185); ne·čne·štihtiki·saya she went forth to find me (21, T, 141, 155, 185); micahkiltihtinemito·h they went walking around making you swim (31, T, 141, 154, 184, 191); kika·wilihke·h they left it for him (32, B, 186, 191); timosehse·wihke·h we sat down repeatedly (12,

61, 71, T, 186, 191).

3.1.8. Suffix 191: -kaⁿ ≈ -ke·h ≈ -e·h ≈ -·h verb pluralizer

Suffix 191 >< prefix 11 and suffixes 200.

Suffix 191 occurs in sequences of the following types: ± prefixes, I, ± other suffixes, 191; 21, ± other prefixes, T or B, ± other suffixes, 191; ± 10, 30, ± other prefixes, T or B, ± other suffixes, 191; ± other prefixes, 60, ± 71, T, ± other suffixes, 191. Examples: ne·stose·h they will be coming in view (I, 171, 187, 191); tipe·wa·h we begin (12, I, 191); ne·čpahtihke·h they cured me (21, T, 186, 191); šihpihpi·kikaⁿ keep wrapping it! (pl. command) (14, 32, 71, T, 191); tiki·nohno·čilia·h we talk to them in her place (12, 34, 71, B, 161, 191); omokectiyawi·h they go along stopping over here (42, 61, T, 141, 151, 191).

3.1.9. Suffixes 210 and 220:

211. -niⁿ collective agentive

212. -kaⁿ ≈ -hkaⁿ locative

213. -ko ≈ -hko locative

214. -yaⁿ locative

221. (-ke· ≈ -hke·) ~ (-ka· ≈ -hka·) ~ (-ka·h ≈ -hka·h) agentive

222. -l participial

223. -lis nominalizer

224. -yo· ≈ -hyo· ≈ -kayo· ≈ -hkayo· abstractivizer and generalizer

Suffixes 210 and 220 in sequence with TB and BB (and sequences which may comprise T or B, see 1.1.2-3) <> prefixes 60.

Suffixes 210 have been found only in sequence with certain bases in the development of N_2: ± 71, IB, 210; 60, ± 71, TB, 210; NB, TB, 210. Examples: wehwecko falling place [N_2 = (71, IB, 213), 241]; moλape·wanin your hunters [52, N_2 = (63, TB, 211)]; k^{w}ašilokohkan where bananas are bought [N_2 = (NB, TB, 212), 241].

Suffixes 220 occur only in sequence with certain bases in the development of N_1: ± 71, IB, 220; 60, ± 71, IB, 120, 220; NB_1, 111, 221 or 223; 60, NB_2, 111, 220; 60, ± 71, TB, 220; NB, TB, 220; 60, ± 71, IB, 122, 231, 222. Examples: ini·nkočka·h their sleepy head [56, N_1 = (IB, 220)]; λakihki·štilli what was taken out repeatedly [N_1 = (63, 71, IB, 122, 222), 242]; tote·na·miktiliswan our marriages [54, N_1 = (62, NB_2, 111, 223), 242]; λaihilli what was drunk [N_1 = (63, 71, TB, 222), 241]. (See 1.3.1 for further examples).

3.1.10. Suffix 231: -o ~ -yo intimate possessive

Suffix 231 occurs only in sequences of the following types: 50, N_1, 231, ± 242. Examples: ik^{w}iλapilo its own tail (53, N_1, 231); ini·nomiyowan their own bones (56, N_1, 231, 242).

3.1.11. Suffixes 240:

241. [(-li ≈ -lin) ~ (-λi ≈ -in) ~ -λ] ≈ -# absolutive

242. -men ~ -wan ~ -ci- noun pluralizer

Suffix 241 occurs only in sequences of the following types: ± 10, ± 40, N_1, 241; N_2, 241. Examples: ok^{w}illin worm (N_1, 241); niλepa·kiltihke·λ I am an entertainer (11, N_1, 241); šionk^{w}alli go be good! (14, 42, N_1, 241); te·pianin they are caretakers (N_2, 241); λawa·cko drying

place (N_2, 241).

Suffix 242 occurs only in sequences of the following types: ± 10, ± 40, ± 50, N_1, 242, ± 251. Examples: teposmen pieces of metal (N_1, 242); kʷacicin little sticks (N_1, 242, 251); a·moλake·nwan your (pl.) covers (55, N_1, 242); antota·hwan you (pl.) are our parents (13, 54, N_1, 242); timaλakmen we are ten (12, N_1, 242); tionini·nikniwan we go to be their brothers (12, 42, 56, N_1, 242).

3.1.12. Suffix 251: -cin diminutive

Suffix 251 occurs only in sequences of the following types: ± 10, ± 40, ± 50, N_1, ± 242, 251. Examples: tokacin little spider (N_1, 251); moahkolcicin your little arms (52, N_1, 242, 251); tite·iknincin you are a little brother (12, 57, N_1, 251); wa·lkʷalcicin they come to be good little ones (41, N_1, 242, 251).

3.2. Cl suffix 131 has been found in word medial; suffixes 101-121, 141-152, 154-183, 211-245 in word medial and final; suffixes 153, 191, 250, 261 only in word final.

3.2.1. Suffix 101: -ti ≈ -wi verbalizer

Suffix 101 was found in sequence after NB in the development of I, T, and B: NB_1, 101 = I; NB_2, 101 = T; NB_1, 101, 111 = T; NB_2, 101, 121 = B. Examples: niλakati (nitlacati CA) I am born [21, I, = (NB_1, 101)]; nikeswia (niquezhuia OA) I bloody it [21, 43, T = (NB_2, 101), 151]; niλaatilia (nitlaatilia MA) I melt something [21, 82, T = (NB_2, 101, 111), 151]; omoλakatilicino (omotlacatilitcino CA) He (extra hono-

rific) was born [11, 73, B = (NB_2, 101, 121), 132, 178].

Suffix 101 probably occurred, in addition, in sequences with certain NB in the development of N_1: *(NB_1, 101, 220 = N_1); *(80, NB_2, 101, 220 = N_1).

3.2.2. Suffixes 110:

111. -li ≈ -wi ≈ -ti ≈ -a causative and honorific

112. -lti ≈ -lwi compulsive and honorific

Suffixes 110 have been found in sequence with certain bases in the development of T, B, and N_1: IB, 110 = T; NB_1, 101, 111 = T; IB, 111 or *112, 121 = B; 80, * ± 91, IB, 111 or *112, 220 = N_1; 74, * ± 91, TB, 111 or *112, 220 = N_1. Examples: onitemačtik (onitemachtic MA) I taught someone [11, 21, 81, T = (IB, 111), 178]; nitelatoltia (nitetlatoltia OA) I make someone speak [21, 81, T = (IB, 112), 151]; nilasetilia (nitlacetilia OA) I make several things one [21, 82, T = (NB_1, 101, 111), 151]; niknoselililia (nicnocelililia OA) I receive it from him (honorific) [21, 43, 71, B = (IB, 111, 121), 151]; notemakištikawan (notemaquixticauan MA) my saviors [61, N_1 = (81, IB, 111, 221), 252]; nonemačtikaw (nonemachticauh OA) my son (who is taught) [61, N_1 = (74, TB, 111, 221)].

In addition, suffixes 110 probably occurred in sequences with certain IB in the development of N_1: *(80, ± 91, IB, 111, 121, 222 = N_1).

3.2.3. Suffix 121: -li benefactive and honorific

Suffix 121 has been found in sequence with certain bases in the development of B: TB, 121 = B; NB_2, 101, 121 = B; IB, 111 or *112,

121 = B. Examples: ninoλakʷepilia (ninotlacuepilia OA) I (honorific) return something [21, 71, 82, B = (T, 121), 151]; niknoeswilia (nicnoezhuilia OA) I (honorific) bloody it [21, 43, 71, B = (NB2, 101, 121), 151]; ninotemaĉtilia (ninotemachtilia OA) I teach someone (honorific) [21, 71, 81, B = (IB, 111, 121), 151].

In addition, suffix 121 probably occurred in sequence with certain IB in the development of N_1: *(80, ± 91, IB, 111, 121, 222 = N_1).

3.2.4. Suffix 131: -ti ~ -t- second verb base marker (?)

Suffixes 140:

141.	-w ~ -iwi ~ -a	go, efferentive
142.	-wic	come, afferentive
143.	-weci	fall, inceptive
144.	-nemi	walk, diffusive
145.	-kisa	go out, promotive
146.	-ewa	raise, premotive
147.	-ka ~ -kat-	be, continuative
148.	-mani	lie, expansive
149.	-asi	arrive, adventive

Suffix 131 has been found only in sequence before suffixes 140. Suffixes 131 and 140 >< prefixes 60, suffixes 151, and 200.

Suffixes 131 and 140 have been found in sequences of the following types: ± prefixes, I, 131, 140, * ± other suffixes; ± other prefixes, 80, * ± 91, T or *B, 131, 140, ± other suffixes; ± 11, 20, ± other prefixes, T or *B, 131, 140, * ± other suffixes; ± other prefixes, 70A, * ± 91, T, 131, 140, * ± other suffixes. Examples: nikʷalantiwic

(niqualantiuitz OA) I come along angry (21, I, 131, 142); tiλaokoš-tinemi (titlaocuxtinemi MA) you walk along sad (22, I, 131, 144); tentimani (tentimani MA) it is filled and extended (I, 131, 148); niλapištas (nitlapixtas OA) I will go along guarding (21, 82, T, 131, 141, 179); teλasoλatikateh (tetlaçotlaticate OA) they are loving (81, T, 131, 147, 191); nikk^{w}itiweci (nicuitiuetzi MA) I begin to take it away (21, 43, T, 131, 143); okitotikis (oquitotiquiz OA) he said it and went away (11, 43, T, 131, 145, 178); ninokectewa (ninoquetzteua OA) I get up and go away (21, 71, T, 131, 146).

3.2.5. Suffix 132: -cino honorific

Suffix 132 >< prefixes 60 and suffixes 200.

Suffix 132 has been found in sequences of the following types: ± other prefixes, 80, ± 91, *T or B, 132, ± other suffixes; ± other prefixes, 70A, * ± 91, T, 132, ± other suffixes. Examples: omoλaka-tilicino (omotlacatilitçino OA) He was born (honorific) [11, 73, B = (NB$_1$, 101, 121), 132, 178]; otimoλačiwilicino (otimotlachiuilitçino OA) you (honorific) did something [11, 22, 73, B = (T, 121), 132, 178]; ninoyoliticinoa (ninoyolititzinoa MA) I (honorific) revive [21, 71, T = (I, 111), 132, 151].

In addition, suffix 132 probably occurred in sequences of the following types: *(± other prefixes, 40, ± other prefixes, T or B, 132, ± other suffixes).

3.2.6. Suffix 151: -a meaning undetermined

Suffix 151 >< prefixes 11, 31, 60, suffixes 131, 140, 160, 170,

and 200.

Suffix 151 has been found in sequences of the following types: ± prefixes, I, 151, * ± 191; ± other prefixes, 80, * ± 91, T or B, 151, ± 191; ± other prefixes, 40, ± other prefixes, T, or B, 151, * ± 191; ± other prefixes, 70A, ± other prefixes, T, 151, ± 191. Examples: atia (atia MA) it melts [I = (NB$_1$, 101), 151]; nicikʷinoa (nitzicuinoa MV) I hiccough (21, I, 151); niλatoa (nitlatoa MA) I speak (21, 82, T, 151); ninoλakʷepilia (ninotlacuepilia OA) I return something (honorific) [21, 71, 82, B = (T, 121), 151]; anteλayekoltiah (antetlayeculhtiah OA) you (pl.) serve someone (23, 81, T, 151, 191); nikpoloa (nicpoloa MA) I lose it (21, 43, T, 151); niknolwilia (nicnolhuilia OA) I tell him (honorific) [21, 43, 71, B = (T, 121), 151]; moλaloa (motlaloa OA) he runs (73, T, 151); amomaniltiah (amomaniltia OA) you (pl. honorific) stand [23, 73, T = (I, 112), 151, 191].

3.2.7. Suffix 152: -lo ≈ -o passive

Suffix 152 has been found in sequences of the following types: ± prefixes, T, 152, ± other suffixes; ± other prefixes, 80, * ± 91, B, 152, * ± other suffixes. Examples: neλasoλalo (netlaçotlalo OA) everybody loves each other (74, T, 152); otipialokeh (otipialoque OA) we were guarded (11, 22, T, 152, 178, 191); niλamako (nitlamaco OA) something is given to me (21, 82, B, 152); niλačiwililo (nitlachiuililo MA) something is made for me [21, 82, B = (T, 121), 152].

In addition, suffix 152 occurred in sequence with certain TB in the development of N$_2$: 80, * ± 91, TB, 152, 213. Example: noλakʷaloyan

(notlaqualoyan OA) my eating-place [61, N_2 = (82, TB, 152, 213)].

3.2.8. Suffix 153: -wa ≈ -oa collective

Suffix 153 has only been found in sequences of the following types: * ± 91, I, 153. Examples: kočiwa (cochiua MA) everybody sleeps (I, 153); piškoa (pixcoa OA) everybody gathers corn (I, 153).

3.2.9. Suffix 161: -to progressive

Suffix 161 has only been found in sequences of the following types: ± prefixes, T, 161, ± other suffixes. Example: nikočtok (nicochtoc OA) I was sleeping (21, T, 161, 178).

3.2.10. Suffixes 170:

171.	-kiw ~ -kiwi	action in intraverse direction, future
172.	-ki	action in intraverse direction, imperative
173.	-ko	action in intraverse direction, past
174.	-tiw ~ -tiwi	action in extraverse direction, future
175.	-ti	action in extraverse direction, imperative
176.	-to	action in extraverse direction, past
177.	-a ~ -ya	imperative
178.	(-k ~ -ki ~ -ka) ≈ -#	perfective
179.	-s	future
181.	-skia	conditional I
182.	-ni	conditional II
183.	-ka	pluperfective

We designate suffixes 173, 176, 177, 178, 182, 183, as 170A and

other suffixes of class 170 as 170B.

Suffixes 170 >< prefixes 60, suffixes 151, and 200. Suffixes 170A <> prefix 11; suffixes 170B >< prefix 11; suffixes 171, 173, 174, 176, 177, 178, 179, 181, 183 >< prefix 31.

Sequences in which suffixes 170 have been found are of the following types: ± prefixes, I, ± other suffixes, 170, ± 191; ± other prefixes, 80, * ± 91, T or *B, ± other suffixes, 170, ± 191; ± other prefixes, 40, * ± other prefixes, T or *B, * ± other suffixes, 170, ± 191; ± prefixes, T, 152, 170, ± 191. Examples: niλekoya (nitlecoya OA) I climbed (21, I, 177); oankatkah (oancatca MA) you (pl.) were (11, 23, I, 183, 191); onisak (oniçac MA) I woke up (11, 21, I, 178); oanλapiškah (oantlapixcah OA) you (pl.) had guarded something (11, 23, 82, T, 183, 191); tiwallapiakiwih (tiuallapiaquiui OA) we will come guard something (22, 41, 82, T, 171, 191); šikčiwaki (xicchiuaqui OA) come do it! (31, 43, T, 172); pialos (pialoz OA) he will be guarded (T, 152, 179); anλasoλaloyah (antlaçotlaloya MA) you (pl.) were loved (23, T, 152, 177, 191).

3.2.11. Suffix 191: -h ≈ -eh ≈ -keh ≈ -kan verb pluralizer

Suffix 191 >< prefix 21 and suffixes 200.

Sequences in which suffix 191 has been found are of the following types: ± prefixes, I, ± other suffixes, 191; ± other prefixes, 80, * ± 91, T or *B, ± other suffixes, 191; ± other prefixes, 40, ± other prefixes, T or *B, ± other suffixes, 191; ± prefixes, T, 152, ± other suffixes, 191. Examples: tiwih (tiui MA) we go (22, I, 191); oankatkah (oancatca MA) you (pl.) were (11, 23, I, 183, 191); otiλapiškeh (otitlapixque OA)

we guarded something (11, 22, 82, T, 178, 191); titeλasoλah (titetlaçotla MA) we love someone (22, 81, T, 191); anteč̣λasoλah (antechtlaçotlah OA) you (pl.) love us (23, 44, T, 191); šikkakikan (xiccaquican MA) hear it (pl. command) (31, 43, T, 191); otipialokeh (otipialoque OA) we were guarded (11, 22, T, 152, 178, 191); šipialokan (xipialocan OA) be guarded (pl. command) (31, T, 152, 191).

3.2.12. Suffixes 210 and 220:

211. -ni ~ -ani	agentive and instrumentative
212. -ka	locative
213. -yan	locative
221. -kaw ~ -ka ~ -ki ~ -k	agentive
222. -l	participial
223. -lis ≈ -s	nominalizer
224. -yo ≈ -o ≈ -kayo	abstractivizer and generalizer

Suffixes 210 have been found in sequences with certain bases in the development of N_2: * ± 91, IB, 210; 80, * ± 91, TB, 210; 80, * ± 91, TB, 152, 213; NB, TB, 210. Examples: λaksani (tlacçani OA) walker [N_2 = (IB, 211), 251]; teλasoλanime (tetlaçotlanime OA) lovers [N_2 = (81, TB, 211), 252]; noλakʷaloyan (notlaqualoyan OA) my eating-place [61, N_2 = (82, TB, 152, 213]; kakčiwka (cacchiuhca MA) place where shoes are made [N_2 = (NB, TB, 212), 251].

Suffixes 220 have been found in sequences with certain bases in the development of N_1: * ± 91, IB, 220; 80, * ± 91, IB, 111 or *112, 220; 74, * ± 91, TB, 111 or *112,220; 80, * ± 91, TB, 220. Examples: nemilisλi (nemiliztli MA) life [N_1 = (IB, 223), 251]; nemačtilli

(nemachtilli OA) teaching doctrine [N_1 = (74, TB, 111, 222), 251]; tečikawaliśλi (techicaualiztli OA) effort [N_1 = (81, TB, 223), 251]; noλapiškaw (notlapixcauh MA) my guard [61, N_1 = (82, TB, 221)].

In addition, suffixes 220 probably occurred in other sequences in the development of N_1: *(81, ± 91, IB, 111, 121, 222); *(NB_1, 101, 220); *(80, NB_2, 101, 220); *(NB, TB, 220).

3.2.13. Suffixes 230:

231. -ko ~ -k locative

232. -λa locative

233. -ka ≈ -teka inhabitant of

234. -e ≈ -wa master of, owner of

235. -yo ~ -o abundantial and collective

236. -o intimate possessive

Suffixes 230 have been found in sequences of the following types: ± 60, N_1, 230, ± 250. Examples: neso (neço OA) my blood (61, N_1, 236); nostayowan (noztayouan OA) my salty things (61, N_1, 235, 252); aškawa (axcaua MA) owner of property (N_1, 234, 251).

3.2.14. Suffixes 240:

241. -cin ~ -cici ~ -cicin diminutive and honorific

242. -ton ~ -toto ~ -toton diminutive and despective

243. -pil ~ -pipil diminutive

244. -pol ~ -popol vituperative

245. -sol ~ -sosol abusive

Suffixes 240 have been found in sequences of the following types:

* ± 20, * ± 50, ± 60, N_1, 240, ± 250; ± 60, N_1, 240, ± 261. Examples: siwacicintin (ciuatzitzintin OA) honored woman (N_1, 241, 252); amasolli (amaçulli MA) old book (N_1, 245, 251); notilmasosolwan (notilhmaçuçulhuan OA) my old covers (61, N_1, 245, 252); totaciné (totazine MA) our Father (64, N_1, 241, 261).

3.2.15. Suffixes 250:

251. (-λ ~ -λi) ≈ -# absolutive

252. -wan ~ (-tin ≈ -me ≈ -h) noun pluralizer

Suffixes 250 have been found in sequences of the following types: ± 20, * ± 50, ± 60, N_1, ± suffixes, 250; N_2, 250. Examples: tik^{w}alli (tiqualli OA) you are good (22, N_1, 251); timopilwan (timopilhuan OA) we are your children (22, 62, N_1, 252); sihλi (citli MA) rabbit (N_1, 251); λatekonime (tlateconime OA) axes [N_2 = (82, TB, 211), 252].

3.2.16. Suffix 261: -e ≈ -λe vocative

Suffix 261 has been found only in sequences of the following types: ± 60, N_1, ± 240, 261. Examples: okičλé (oquichtle MA) boy! (N_1, 261); totaciné (totatzine MA) our Father (64, N_1, 241, 261).

4. Comparative notes on the distribution of Mpa and Cl morphemes. On the whole, the points of similarity seem to outnumber those of dissimilarity.

4.1. The available evidence indicates that, in general, Mpa bases slightly more freedom of distribution than their Cl counterparts. Mpa

NB, IB, e. g. telpokamihki he died young [I = (NB, IB), 186], is apparently not shared with Cl. NB, TB has been found in both dialects, but with fewer extensions in Cl than in Mpa: Mpa nika·pipina I take water from it [11, 32, T = (NB, TB)]; Mpa tamalči·hke·λ person who makes tamales [N_1 = (NB, TB, 222), 241]; Mpa kalči·wanin house builders [N_2 = (NB, TB, 211), 241]; Cl timok^{w}alneki (timoqualnequi MA) you want to be good [22, 73, T = (NB, TB)]; Cl kakčiwka (cacchiuhca MA) place where shoes are made [N_2 = (NB, TB, 212), 251]. Other distributional limitations of Cl bases are shown in the writer's indications of probable occurrences in 1.4.1.

4.2. The bases and stems of the two dialects are treated in substantially the same fashion; structural similarities make such a treatpossible and, for comparative purposes, desirable. The affixes of the two dialects, on the other hand, call for different groupings of distribution classes. Using numbers alone to indicate affixes of the two dialects, we can show where counterpart morphemes parallel one another and where deviations occur in the alignment of distribution classes. Counterparts are denoted by the double-pointed arrow (⟷) where they exist, and lack of counterparts by ∅.

∅ 11.

11. ⟷ 21.

12. ⟷ 22.

13. ⟷ 23.

14. ⟷ 31.

21. ⟷ 41.

31. ⟷ 42.

32. ⟷ 43.

33. ⟷ 44.

34. ⟷ 45.

35. ⟷ 46.

41. ⟷ 51.

42. ⟷ 52.

51. ⟷ 61.

52. ⟷ 62.

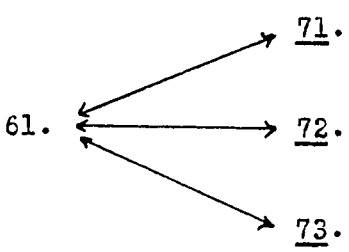
53. ⟷ 63.

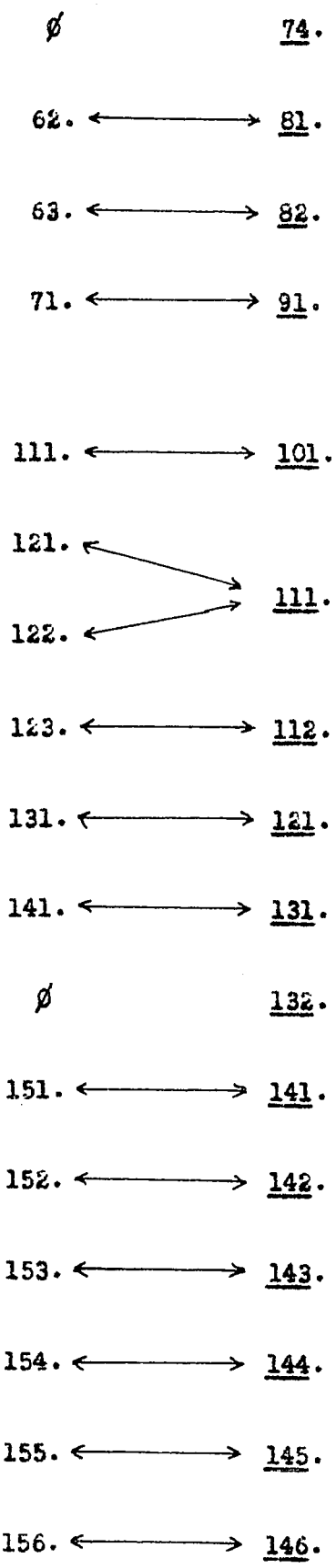
54. ⟷ 64.

55. ⟷ 65.

56. ⟷ 66.

57. ⟷ 67.

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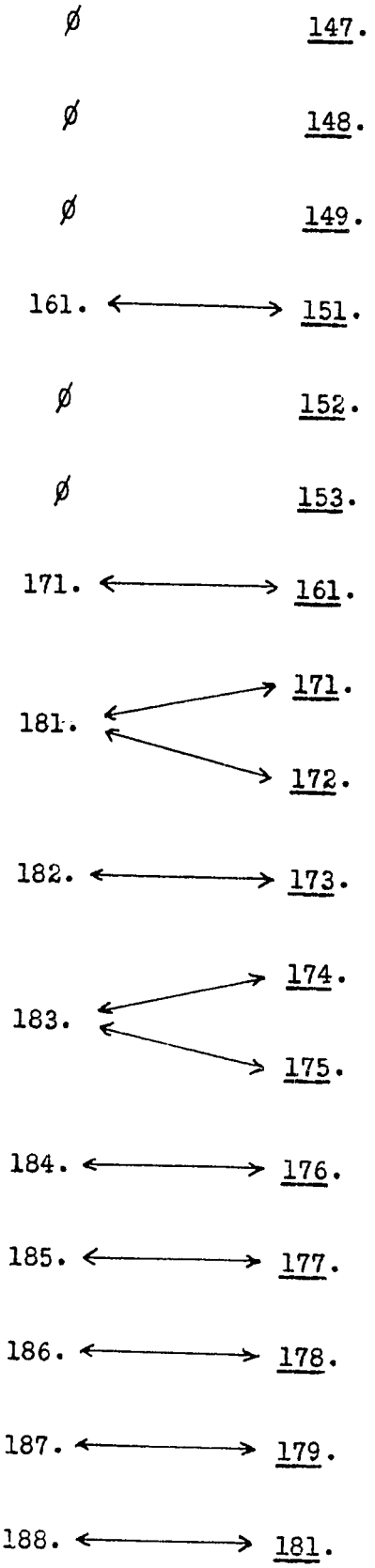
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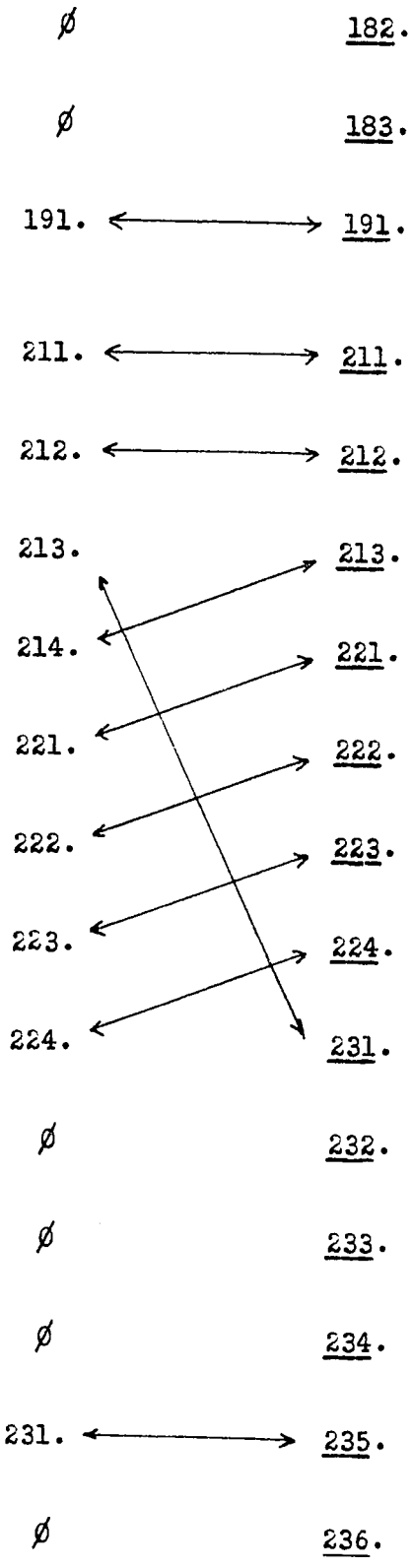
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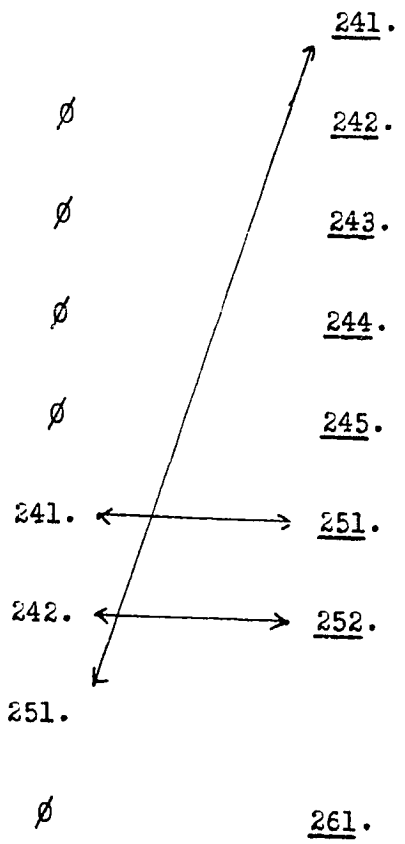

4.3. Mpa affixes are found in more different environments than Cl affixes. This may, of course, be due to the limited Cl data available. By actual informant work possible sequences versus impossible sequences could be accurately determined. Thus it was possible to ascertain which affixes are mutually obligatory and mutually exclusive in Mpa. This type of information for Cl can only be approximated and must necessarily remain incomplete. In Mpa, for example, it is found that prefixes 30 >< prefixes 62 and 63; very likely Cl counterpart prefixes 40 >< 80, but it cannot be shown conclusively.

Footnote

[1] We use the asterisk (*) to denote occurrences which, in the opinion of the writer, are probable, but examples have not been found to substantiate them in the C1 data.

APPENDIX: TEXTS

0. Two texts are presented here as samplings of Mpa and Cl Nahuatl: text I and text II respectively. Text I was taken from the writer's field notes; it was dictated and translated into Spanish by the informant, Arcadio Sagahón of Matlapa, S. L. P., and subsequently into English by the writer. Text II was probably written by a 16th-century chronicler to explain some older pictorial codex. It comprises plate 55 of the Goupil collection and was reproduced with notes and English translation by Whorf in 1928. [1] We give both analytical [2] and free translations of the two texts. In addition, we include a Nahuatl version of text II as it was originally transcribed.

1.0. Each numbered phrase of text I constitutes a brief stretch of speech followed by a natural pause. In brackets after each phrase we give an analytical translation, word by word, of that portion of the text. The words -- nouns (Nn), verbs (Vb), and particles (Pcl) -- are broken into their constituent morphemes which are indicated by the formulaic representations introduced in parts II (2. and 8.) and III (0.2-1.1) of this dissertation. Word boundaries in the analysis are denoted by the symbol &. Analagous to the subclasses of stem class V,

namely 1, T, and B (see Part III, 0.2), we set up subclasses of word class Vb, namely Vb_i (intransitive), Vb_t (transitive), and Vb_b (benefactive). Zero alternants of morphemes are shown by the raised zero (^{o}): čiči dog, Nn (= N { = NB}, 241^o).

In analytical translations, we follow the Nahuatl order of words. Morpheme by morpheme translation is not attempted. In many contexts, one-word English equivalents to Nahuatl words suffice: iwa·n and, nepa there. Where two or more English words are required to make an adequate translation of a single Nahuatl word, we hyphenate the English words and arrange them according to English word order: ito·ka·h its-name, piltecin tiny-stone. Only English morphemes usually equated with Nahuatl morphemes semantically figure in the translation; for example, eltok is translated was or it-was or he-was or she-was or there-was, without regard to suffix 171 (-to ≈ -hto, progressive). To make a smoother translation, we add English morphemes occasionally, even though no semantic equivalents appear in the Nahuatl forms; the latter are not italicized: yaya·wiah they-become-black, ačі a-little.

1.1. Text I: analytical translation. 1. nepa pan altepe·λ kanpa na· nictok [there, Pcl (= P { = PB}) & in, Pcl (= P { = PB}) & the-town, Nn (= N { = NB}, 241) & where, Pcl (= P { = PB, PB}) & I, Nn (= N { = NB}, 241^o) & I-lived, Vb_i (= 11, I { = IB}, 171, 186)] 2. eltoh se· teλ ito·ka·h mak^{w}ilokλi [there-was, Vb_i (= I { = IB}, 171, 186) & a, Nn (= N { = NB}, 241^o) & stone, Nn (= N { = NB}, 241) & its-name, Nn (= 53, N { = NB}) & Mal-de-Piedra, Nn (= N { = NB, NB}, 241)] 3. komo se· λa·kaλ wah to·nayan lokocihtoh

o ihkatok [like, Pcl (= P { = PB}) & a, Nn (= N { = NB}, 241°) & man, Nn (= N { = NB}, 241) & when, Pcl (= P { = PB}) & it-was-day, Nn (= N_2 { = I, 214}, 241°) & it-sat, Vb_i (= I { = IB}, 171, 186) & or, Pcl (= P { = PB}) & it-stood, Vb_i (= I { = IB}, 171, 186)] 4. amo molinia [not, Pcl (= P { = PB}) & it-does-move, Vb_i (= I { = IB}, 161)] 5. pero ke·man λayowa ki·sa noponah paša·lowa [but, Pcl (= P { = PB}) & when, Pcl (= P { = PB, PB}) & it-is-night, Vb_i (= I { = IB}, 161) & it-go-es-out, Vb_i (= I { = IB}) & there, Pcl (= P { = PB}) & it-take-s-a-walk, Vb_i (= I { = IB}, 161)] 6. iwa·n λah kanpa pano [and, Pcl (= P { = PB}) & if, Pcl (= P { = PB}) & where, Pcl (= P { = PB, PB}) & it-pass-es, Vb_i (= I { = IB})] 7. pano·s se· λa·kaλ [he-will-pass, Vb_i (= I { = IB}, 187) & a, Nn (= N { = NB}, 241°) & man, Nn (= N { = NB}, 241)] 8. nimaya yaya·wia [then, Pcl (= P { = PB}) & he-become-s-black, Vb_i (= I { = IB}, 161)] 9. panpa inon ikokolis ma·k^{w}ilokλi [because, Pcl (= P { = PB, PB}) & that, Pcl (= P { = PB}) & his-sickness, Nn (= 53, N { = IB, 223}) & Mal-de-Piedra, Nn (= N { = NB, NB}, 241)] 10. iwa·n para se·mopahti·s [and, Pcl (= P { = PB}) & so-that, Pcl (= P { = PB}) & one, Nn (= N { = NB}, 241°) & he-will-cure-himself, Vb_t (= 61, T { = NB_2, 111}, 187)] 11. moneki se· piltecin de se· mičin [it-i-s-needed, Vb_t (= 61, T { = TB}) & a, Nn (= N { = NB}, 241°) & tiny-stone, Nn (= N { = NB, NB}, 251) & from, Pcl (= P { = PB}) & a, Nn (= N { = NB}, 241°) & fish, Nn (= N { = NB}, 241)] 12. momela·wa pan ico·ntekon [it-i-s-found, Vb_t (= 61, T { = TB}) & in, Pcl (= P { = PB}) & its-head, Nn (= 53, N { = NB, NB})] 13. iwa·n ka ači aseyte iwa·n vinoh [and, Pcl (= P

{ = PB}) & with, Pcl (= P { = PB}) & a-little, Nn (= N { = NB}, 241°) & oil, Nn (= N { = NB}, 241°) & and, Pcl (= P { = PB}) & brandy, Nn (= N { = NB}, 241°)] 14. kemantih momela·wa nopa ma·kʷilokλi kanpa pano·h miyah λa·kamen [sometimes, Pcl (= P { = PB, PB}) & it-i-s-found, Vb_t (= 61, T { = TB}) & that, Pcl (= P { = PB}) & Mal-de-Fiedra, Nn (= N { = NB, NB}, 241) & where, Pcl (= P { = PB, PB}) & they-pass, Vb_i (= I { = IB}, 191) & many, Pcl (= P { = PB}) & men, Nn (= N { = NB}, 242)] 15. iwa· noponah wellis kiihkʷinise·h [and, Pcl (= P { = PB}) & there, Pcl (= P { = PB}) & can, Vb_i (= I { = IB}, 187) & they-remove-it, Vb_t (= 32, T { = TB}, 187, 191)] 16. moneki se· kiiwinti·s [it-i-s-needed, Vb_t (= 61, T { = TB}) & one, Nn (= N { = NB}, 241°) & he-will-get-it-drunk, Vb_t (= 32, T { = TB,} 187)] 17. para wellis se· kiihkʷini·s iwa·n kiwi·kas yoksehko [so-that, Pcl (= P { = PB}) & can, Vb_i (= I { = IB}, 187) & one, Nn (= N { = NB}, 241°) & he-will-remove-it, Vb_t (= 32, T { = TB}, 187) & and, Pcl (= P { = PB}) & he-will-carry-it, Vb_t (= 32, T { = TB}, 187) & elsewhere, Pcl (= P { = PB, PB})] 18. se· tiroh niyahki nikita nopa ma·kʷilokλi [one, Nn (= N { = NB}, 241°) & time, Nn (= N { = NB}, 241°) & I-went, Vb_i (= 11, I { = IB}, 186) & I-see-it, Vb_t (= 11, 32, T { = TB}) & that, Pcl (= P { = PB}) & Mal-de-Piedra, Nn (= N { = NB, NB}, 241)] 19. komo se· λa·kaλ ihkatoya [like, Pcl (= P { = PB}) & a, Nn (= N { = NB}, 241°) & man, Nn (= N { = NB}, 241) & it-stood, Vb_i (= I { = IB}, 171, 185)] 20. kipia ište·yol iwa·n iyakacol iwa·n ima·š noči komo se· λa·kaλ [it-ha-s, Vb_t (= 32, T { = TB}) & its-eyes, Nn (= 53, N { = NB}) & and, Pcl (= P { = PB}) & its-nose, Nn (= 53, N { = NB}) & and, Pcl (= P { = PB}) &

its-hand-s, Nn (= 53, N { = NB}) & everything, Nn (= N { = NB}, 241°) & like, Pcl (= P { = PB}) & a, Nn (= N { = NB}, 241°) & man, Nn (= N { = NB}, 241)] 21. se· nowikal ito·ka·h andrés er·nandes panoh kaⁿpa pano·toya nopa ma·kilokλi [a, Pcl (= P { = PB}) & my-relative, Nn (= 51, N { = NB}) & his-name, Nn (= 53, N { = NB}) & Andrés, Nn (= N { = NB}, 241°) & Hernández, Nn (= N { = NB}, 241°) & he-passed, Vb_i (= I { = IB}, 186) & where, Pcl (= P { = PB, PB}) & it-had-passed, Vb_i (= I { = IB}, 171, 185) & that, Pcl (= P { = PB}) & Mal-de-Piedra, Nn (= N { = NB, NB}, 241)] 22. λamiyaya·wiški iwa·n se·npa kianpa yahki kiitati te·pahtihke·λ [he-became-black, Vb_i (= I { = NB, IB}, 186) & and, Pcl (= P { = PB}) & then, Nn (= N { = NB, NB}, 241°) & so, Pcl (= P { = PB, PB}) & he-went, Vb_i (= I { = IB}, 186) & he-go-es-to-see, Vb_t (= 32, T { = TB}, 183) & the-doctor, Nn (= 62, N { = NB_2, 111, 221}, 241)] 23. iwa·n kimakah se·pahλi ka se·teλ cikite·cin de mičin [and, Pcl (= P { = PB}) & he-gave-him, Vb_b (= 32, B { = BB}, 186) & a, Nn (= N { = NB}, 241°) & medi-cine, Nn (= N { = NB}, 241) & with, Pcl (= P { = PB}) & a, Nn (= N { = NB}, 241°) & stone, Nn (= N { = NB}, 241) & tiny, Nn (= N { = NB}, 251) & from, Pcl (= P { = PB}) & a-fish, Nn (= N { = NB}, 241°)]& 24. aseyte [oil, Nn (= N { = NB}, 241°)] 25. iwa·n winoh [and, Pcl (= P { = PB}) & brandy, Nn (= N { = NB}, 241°)] 26. kianpa kihih iwa· mocika·hki [so, Pcl (= P { = PB, PB}) & he-drank-it, Vb_t (= 71, T { = TB}, 186) & and, Pcl (= P { = PB}) & he-recovered, Vb_t (= 61, T { = TB}, 186)]

1.2. Text I: free translation. 1. There in the town where I used

to live, 2. there is a stone that is called Mal de Piedra. 3. It looks like a man during the day who is seated or standing. 4. It does not move. 5. But when it is night, it goes out to take a walk. 6. And if it passes where 7. a man passes, 8. the the latter turns black, 9. because that is the sickness of (i. e. caused by) the Mal de Piedra. 10. And to cure oneself, 11. one needs a tiny stone from a fish 12. which is found in its head. 13. And with a little oil and brandy. 14. Sometimes that Mal de Piedra is found where many people pass. 15. And they can remove it from there. 16. One needs to get it drunk 17. to be able to take it and carry it elsewhere. 18. Once I went to see that Mal de Piedra. 19. It was standing like a man. 20. It had eyes, a nose, and hands, everything like a man. 21. A relative of mine called Andrés Hernández passed where that Mal de Piedra had passed. 22. He became completely black, and then he went to see the doctor. 23. And he (the doctor) gave him some medicine [made] with a stone from a fish, 24. oil, 25. and brandy. 26. So he drank it and recovered.

2.0. Text II is treated in substantially the same fashion as Text I. The phrase boundaries used, however, are the points marked by periods in the original transcription.

The orthography employed by the author of text II varies slightly from the transcriptions of Olmos and Molina. A vowel or y with tilde superscript denotes a following nasal consonant: tzĩtamalpatlavac, /cintamal paλawak/, Broad-Buttocks; q with tilde superscript indicates a following /eh/: tlapiazq̃, /λapiaskeh/, they-will-keep-something. Many word boundaries are inconsistently marked: ni mã, niman, /niman/ then;

ỹ nonovalca, ynonovalca, /in nonoalka/, the-Nonoalca-inhabitants.

2.1. Text II as originally transcribed (after Whorf).[3] "Ica 1. tec patl xiuitl. Inicacico ỹtollan ynompavallevaque ỹccluacatepec ynitoltecachichimeca ynicxicovatl ỹquetzalteueyac ỹtezcavitzill ỹtololovtzin yvan ynonovalcachichimeca ỹxelhua ynvevetzin ỹquauhtzin ỹcitlalmacuetzin ce xiuhtica ynocpacticatca yni macica ỹtoltecachichimeca. 2. Calli xiuitl. ynipa̅ yyamonetecheua ỹyamochallania yyaquineyxnamictia ynitoca memac. ça quimoteliq̃ ỹtolteca ypiltzintli. auhni mā conmaniliq̃ ycvomtin quizcalltique quivapauhq̃ ỹtolteca. auh tlacaço yveyo Tezcatlepoca çayo ytlachichival yniczinizque inic mayavaz yntoltecachichimeca ivan ynonovalcachichimeca yniimixnamiq̃ ỹtolteca ynimacica y nonovalca. Auh iniquac yatelpochtli ỹmemac ni mā yaquinavatia ynic ychan tlapiazq̃ ynonovalca yn memac. auh ni mā quilhuiq̃ y nonovalca mayvi nopiltzin ma tic iluivacan ỹtlein tocomonequiltia. Niman yaya ychan vallapia. ynonovaltia y vemac. auh ni mā y quimitlaniltia çova quilhuia ynonovalcāa nechmomaquilizq̃ cina namechnonavatiltia yevatl ynaviztetl ynic tzĩtamalpatlavac oquilhuiq̃ yn nonovalca mayvi ma octictemocā campa ticanativi ynaviztetl ynictzin tamalpatlavac auh ni mā quimonanaco yncina navime ynaocavilli ynic veveỹ amoyxquich yni tlato ma chivaloquimilhui yn nonovalca amoyequich ynic nequi amo aci y naviztetl ynin tzintamall ceniavey ynic nequi ni mā cenia oquallantavaq̃ ỹ nonovalca.

2.2. Text II: analytical translation. 1. ika se tekpaλ šiwiλ [with, Pcl (= P { = PB}) & one, Nn (= N { = NB}, 251°) & flint-knife, Nn (= N { = NB}, 251) & year, Nn (= N { = NB}, 241)] 2. inik asikoh

tollan in ompa wallewkeh in kolwakatepek in toltekah čičimekah in ikšikoaλ in kecalteweyak in teskawicil in tololowicin iwan in nonoalkah čičimekah in šelwa in wewecin in kʷawcin in siλalmakʷecin se šiwtika in okpaktikatkah inim asikah in toltekah čičimekah [therewith, Pcl (= P { = PB}) & they-arrived, Vb_i (= I { = IB}, 176, 191) & in-Tollan, Nn (= N { = NB, NB}, 251°) & those, Pcl (= P { = PB}) & thence, Pcl (= P { = PB, PB}) & they-came-out-of, Vb_i (= 51, I { = IB}, 178, 191) & the, Pcl (= P { = PB}) & place-of-the-Colhuaca-mountain-s, Nn (= N { = NB, NB,} 231) & the, Pcl (= P { = PB}) & Toltec-inhabitants, Nn (= N { = NB}, 233, 252) & Chichimec-inhabitants, Nn (= N { = NB}, 233, 252) & no translation, Pcl (= P { = PB}) & Icxicoatl, Nn (= N { = NB, NB}, 251) & no translation, Pcl (= P { = PB}) & Quetzaltehueyac, Vb_i (= T { = NB, TB}, 178) & no translation, Pcl (= P { = PB}) & Tezcahuitzil, Nn (= N { = NB, NB}, 251) & Tololohuitzin, Nn (= N { = NB, NB}, 241) & and, Pcl (= P { = PB}) & Nonoalca-inhabitants, Nn (= N { = NB}, 233, 252) & Chichimec-inhabitants, Nn (= N { = NB}, 233, 252) & no translation, Pcl (= P { = PB}) & Xelhua, Nn (= N { = NB,} 234) & no translation, Pcl (= P { = PB}) & Huehuetzin, Nn (= 91, N { = NB}, 241) & no translation, Pcl (= P { = PB}) & Quauhtzin, Nn (= N { = NB}, 241) & no translation, Pcl (= P { = PB}) & Citlalmacuetzin, Nn (= N { = NB}, 241) & one, Nn (= N { = NB}, 251°) & yearly, Vb_i (= I { = NB_1, 101}, 178) & they-were-above, Vb_i (= 11, I { = NB, IB}, 183) & these, Pcl (= P { = PB}) they-arrived, Vb_i (= I, 183) & the, Pcl (= P { = PB}) & Toltec-inhabitants, Nn (= N { = NB}, 233, 252) & Chichimec-inhabitants, Nn (= N { = NB}, 233, 252)] 3.

ome kalli šiwiλ [two, Nn (= N { = NB}, 251°) & house, Nn (= N { = NB}, 251) & year, Nn (= N { = NB}, 251)] 4. in ipan yah monetečewah in yah močalaniah in akin neišnamiktia in itoka memac [no translation, Pcl (= P { = PB}) & therein, Nn (= 63, N { = NB}) & they-go, Vb_i (= I { = IB}, 191) & they-rise-against-each-other, Vb_t (= 73, T { = TB}) & they-go, Vb_i (= I { = IB}, 191) & they-conflict, Vb_t (= 73, T { = TB}, 151) & no translation, Pcl (= P { = PB}) & who, Nn (= N { = NB}, 241°) & it-go-es, Vb_i (= I { = IB}) & their-strife-cause-s, Vb_t (= 46, T { = IB, 111}, 151) & no translation, Pcl (= P { = PB}) & his-name, Nn (= 63, N { = NB}) & Memac, Nn (= N { = NB}, 241°)] 5. san kimoteyelikeh in toltekah in pilcinλi [only, Pcl (= P { = PB}) & they-caused-him-to-be, Vb_b (= 43, 73, B { = TB, 121}, 178, 191) & no translation, Pcl (= P { = PB}) & the-Toltec-inhabitants, Nn (= N { = NB}, 233, 252) & no translation, Pcl (= P { = PB}) & the-prince, Nn (= N { = NB, NB}, 251)] 6. aw niman kommanilikeh yewantin kiskaltikeh kiwapawkeh in toltekah [also, Pcl (= P { = PB}) & then, Pcl (= P { = PB}) & they-spread-out, Vb_t (= 43, 52, B { = T, 121}, 178, 191) & they, Nn (= N { = NB}, 252) & they-bore-offspring-s, Vb_t (= 43, T { = TB}, 178, 191) & they-established, Vb_t (= 43, T { = TB}, 178, 191) & no translation, Pcl (= P { = PB}) & the-Toltec-inhabitants, Nn (= N { = NB}, 233, 252)] 7. aw λakaso iweyo teskaλi poka sayo iλačičiwal inik šiniskeh inik moyawas in toltekah čičimekah iwan in nonoalkah čičimekah in inim mišnamikkeh in toltekah inim asikah in nonoalkah [and, Pcl (= P { = PB}) & indeed, Pcl (= P { = PB}) & his-greatness, Nn (= 63, N { = NB, 235}) & Tezcatlipoca (Smoking-Mirror) -- mirror,

Nn (= N { = NB}, 251) & it-smokes, Vb$_i$ (= I { = IB}) & solely, Pcl (= P { = PB}) & they-will-ruin, Vb$_i$ (= I { = IB, 179, 191}) & thereby, Pcl (= P { = PB}) & they-will-be-scattered, Vb$_t$ (= 73, T { = TB}, 179) & the, Pcl (= P { = PB}) & Toltec-inhabitants, Nn (= N { = NB}, 233, 252) & Chichimec-inhabitants, Nn (= N { = NB}, 233, 252) & and, Pcl (= P { = PB}) & the, Pcl (= P { = PB}) & Nonoalca-inhabitants, Nn (= N { = NB}, 233, 252) & Chichimec-inhabitants, Nn (= N { = NB}, 233, 252) & no translation, Pcl (= P { = PB}) & these, Pcl (= P { = PB}) & they-fought-together, Vb$_t$ (= 73, T { = TB}, 178, 191) & the, Pcl (= P { = PB}) & Toltec-inhabitants, Nn (= N { = NB, 233, 252) & these, Pcl (= P { = PB}) & they-had-arrived, Vb$_i$ (= I { = IB}, 183, 191) & the, Pcl (= P { = PB}) & Nonoalca-inhabitants, Nn (= N { = NB}, 233, 252)] 8. aw inik^{w}ak ya telpočλi in memak niman ya kinnawatia inik ičan λapiaskeh in nonoalkah in memak [and, Pcl (= P { = PB}) & when, Pcl (= P { = PB, PB}) & he-go-es, Vb$_i$ (= I { = IB}) & youth, Nn (= N { = NB}, 251) & to, Pcl (= P { = PB}) & Memac, Nn (= N { = NB}, 251°) & then, Pcl (= P { = PB}) & he-go-es, Vb$_i$ (= I { = IB}) & he-advise-s, Vb$_t$ (= 43, T { = TB}, 151) & whereby, Pcl (= P { = PB}) & his-home, Nn (= 63, N { = NB}) & they-will-keep, Vb$_t$ (= 82, T { = TB}, 179, 191) & the, Pcl (= P { = PB}) & Nonoalca-inhabitants, Nn (= N { = NB}, 233, 252) & no translation, Pcl (= P { = PB}) & Memac, Nn (= N { = NB}, 251°)] 9. aw niman kilwikeh in nonoalkah ma iwi nopilcin ma tikilwiwakan in λein tikommonekiltia [and, Pcl (= P { = PB}) & then, Pcl (= P { = PB}) & they-said-to-him, Vb$_t$ (= 43, T { = TB}, 178, 191) & the, Pcl (= P { = PB}) & Nonoalca-inhabitants,

Nn (= N { = NB}, 233, 252) & let, Pcl (= P { = PB}) & send-out, Vb_i (= I { = IB}) & my-lord, Nn (61, N { = NB}, 241) & let, Pcl (= P { = PB}) & we-send-back, Vb_t (= 22, 43, T { = TB}, 191) & no translation, Pcl (= P { = PB}) & whatever, Pcl (= P { = PB}) & you-may-wish, Vb_t (= 22, 43, 52, 73, T { = TB}, 112, 151)] 10. niman ya ye ičan wallapia [then, Pcl (= P { = PB}) & his-home, Nn (= 63, N { = NB}) & he-retain-s, Vb_t (= 51, 82, T { = TB})] 11. ye nonoaltia in wemak [he, Nn (= N { = NB}, 251°) & he-is-the-same, Vb_t (= I { = IB}, 112, 151) & no translation, Pcl (= P { = PB}) & Huemac, Nn (= N { = NB}, 251°)] 12. aw niman kimiλaniltia soah kimilwia in nonoalkah ma nečmomakiliskeh sina nameč nonawatiltia yewaλ in nawisteλ inik cintamal paλawak okilwikeh in nonoalkah ma iwi ma ok tiktemokan kampa tikanatiweh in nawisteλ inik cintamal paλawak aw niman kimonanako in sina nawime in aok kawilli wewei amo iškič in niλato ma čiwalo kimilwi in nonoalkah amo iškič inik neki amo asi in nawisteλ inik cintamal senka wei inik neki niman senka okwalantewakeh in nonoalkah [and, Pcl (= P { = PB}) & then, Pcl (= P { = PB}) & they-plead-to-them, Vb_t (= 46, T { = TB, 112}, 151) & women, Nn (= N { = NB}, 252) & they-say-to-them, Vb_t (= 46, T { = TB}, 151) & the, Pcl (= P { = PB}) & Nonoalca-inhabitants, Nn (= N { = NB}, 233, 252) & will Pcl (= P { = PB}) & they-give-it-to-me, Vb_b (= 41, 73, B { = BB}, 121, 179, 191) & maize, Nn (= N { = NB}, 251°) & I-entreat-you, Vb_t (= 21, 45, 71, T { = TB, 112}, 151) & he, Nn (= N { = NB}, 251) & no translation, Pcl (= P { = PB}) & Nahuiztetl, Nn (= N { = NB, NB}, 251) & or, Pcl (= P { = PB}) & Tzintamalpatlahuac (Broad-Buttocks) -- buttock, Nn (= N { = NB, NB}, 251°) & broad, Vb_i (= I { = IB},

178) & they-said-to-him, Vb_t (= 11, 43, T { = TB}, 178, 191) & the, Pcl (= P { = PB}) & let, Pcl (= P { = PB}) & afterward, Pcl (= P { = PB}) & we-seek-him, Vb_t (= 22, 43, T { = TB}, 191) & where, Pcl (= P { = PB, PB}) & we-go-get-it, Vb_t (= 22, 43, T { = TB}, 131, 141, 191) & no translation, Pcl (= P { = PB}) & Nahuiztetl, Nn (= N { = NB, NB}, 251) & or, Pcl (= P { = PB}) & Tzintamalpatlahuac (Broad-Buttocks) -- buttock, Nn (= N { = NB, NB}, 251°) & broad, Vb_i (= I { = IB}, 178) & and, Pcl (= P { = PB}) & then, Pcl (= P { = PB}) & he-came-to-get-them, Vb_t (= 46, 73, T { = TB}, 173) & the, Pcl (= P { = PB}) & maize, Nn (= N { = NB}, 251°) & fours, Nn (= N { = NB}, 252) & no translation, Pcl (= P { = PB}) & no-longer, Pcl (= P { = PB, PB}) & retained, Nn (= N { = IB, 222}, 251) & because, Pcl (= P { = PB}) & old, Nn (= 91, N { = NB}) & not, Pcl (= P { = PB}) & all, Nn (= N { = NB}, 251°) & no translation, Pcl (= P { = PB}) & I-spoke, Vb_t (= 21, 82, T { = TB}, 178) & may, Pcl (= P { = PB}) & it-be-done, Vb_t (= T { = TB}, 152) & he-said-to-them, Vb_t (= 46, T { = TB}, 178) & the, Pcl (= P { = PB}) & Nonoalca-inhabitants, Nn (= N { = NB}, 233, 252) & not, Pcl (= P { = PB}) & all, Nn (= N { = NB}, 251°) & that, Pcl (= P { = PB}) & one-wish-es, Vb_t (= T { = TB}) & not, Pcl (= P { = PB}) & he-attain-s, Vb_i (= I { = IB}) & no translation, Pcl (= P { = PB}) & Nahuiztetl, Nn (= N { = NB, NB}, 251) & or, Pcl (= P { = PB}) & Tzintamal (Buttocks) -- buttock, Nn (= N { = NB, NB}, 251°) & very, Pcl (= P { = PB}) & big, Nn (= N { = NB}, 251°) & like-what, Pcl (= P { = PB}) & one-wish-es, Vb_t (= T { = TB}) & then, Pcl (= P { = PB}) & great, Pcl (= P

{ = PB}) they-raised-anger, Vb_t (= 11, I { = IB}, 131, 178, 191) & the, Pcl (= P { = PB}) & Nonoalca-inhabitants, Nn (= N { = NB}, 233, 252)]

2.3. Text II: free translation (after Whorf).[4] [1] "In the year One Flint, [2] those who had come forth from the Colhuacan Mountains began to arrive in Tollan, and the Toltecan Chichimecs among them were Icxicoatl, Quetzaltehueyac, Tezcahuitzil, and Tololohuitzin; while the Nonoalcan Chichimecs were Xelhua, Huehuetzin, Quauhtzin, and Citlalmacuetzin. That is, those were the ones who held authority for one-year periods over these new arrivals, they being Toltecan Chichimecs. [3] Next is the year Two House. [4] Now is the beginning of contention and conflict, strife having been averted by one who was called Memac, [5] whom the Toltecs had appointed sole monarch. [6] But then they spread abroad, bearing offspring and establishing Toltecan peoples; [7] and indeed by the power of Teztlipoca, and by his doing alone, the Toltecan and Nonoalcan Chichimecs were to fall and be swept away, through fighting between Toltecans, Nonoalcans and these new arrivals. [8] Yet when the Nonoalcan young men went to Memac, Memac advised them how their home might be saved; [9] and the Nonoalcans then said to him, 'Let my lord but convey it, we will render back whatever is his will,' [10] then departed, and so they retained their home. [11] He is the same one as Huemac. [12] And then the women made petition among the Nonoalcans, each saying, 'I entreat you, will no one give me corn?' The Nonoalcans said to one Nahuiztetl surnamed Tzintamalpatlahuac ('broad in the seat') -- 'Let Nahuiztetl Tzintamalpatlahuac be sent, and we will inquire of

him where we may go to get it.' And then it came about that he obtained ears of maize in bunches of four that had not been kept because so old. 'I cannot do all that I promised,' said he to the Nonoalcans, 'nor all that might be wished. Nahuiztetl Tzintamal cannot obtain such very big ears as might be wished' -- and then the Nonoalcans were kindled to great anger."

Footnotes

[1] An Aztec Account of the Period of the Toltec Decline. International Congress of Americanists. Proceedings of the 23d Congress. pp. 122-129.

[2] The term "analytical translation" was used by William L. Wonderly in connection with his Zoque texts. For a discussion of many of the problems encountered in text translation and analysis, see his Zoque VI: Text. IJAL 18.189-202 (1952). The modus operandi used here differs somewhat from Wonderly's.

[3] Op cit.

[4] Ibid.