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7A. Classical Nahuatl

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INTRODUCTION

1. SOURCES. The first grammar of Nahuatl, that of Padre Fray Andrés de Olmos (1547), was published only 26 years after Cortés shattered the power of the Aztec empire by capturing the city of Tenochtitlan. During the century that followed, four more Nahuatl grammars were composed by Spanish friars who were serving their church in the New World.

This linguistic activity stemmed from a European tradition which was scarcely a half-century old. Antonio de Nebrija's Gramática Castellana (1492) was the first treatment of any European vernacular. Only Latin, Greek, and Hebrew had previously been worthy of the attention of grammarians. So unprecedented a venture as Nebrija's needed justification. When Queen Isabella, on being presented with the Gra-

mática Castellana, inquired with some puzzlement what its purpose was, Nebrija is said to have replied that language was always "the companion of rule"; foreign peoples under Spanish rule must be given the language of Spain along with its laws (Trend, 1953, p. 118). To this political argument was added a humanistic one, potent at a time when Spain was seething with patriotic and religious zeal. Nebrija's grammatical procedure of comparing Spanish with Latin, point for point, was an attempt to determine wherein the language of his country had resources comparable to Latin and wherein it lacked the expressiveness of the Roman tongue. Only by being measured against the Latin standard could a vernacular be sufficiently ennobled and enriched to make it a worthy vehicle for the expression of lofty thoughts.

It was in this linguistic climate that the friars dedicated their grammatical efforts to the glory of Spain and the spread of the faith. Even before the first grammar appeared, some Nahuatl sermons had already been published.[1] The guidance of a grammar, wrote Molina, would enable other servants of the church to learn the language of the aborigines and thus to confess them, to preach to them, and to administer the holy sacraments to them. He also gave recognition to the humanistic motive. Like any other vernacular, he stated, the Nahuatl language was spoken badly by some natives and perfectly by others; his grammar, based on the speech of the most learned Aztecs, presented a language that was rich and eloquent (Molina, 1571a, p. 222). When he and other grammarians discussed the Nahuatl principles in -dus (i.e., Nahuatl forms functioning somewhat like Latin amandus, etc.), they were following the humanistic precept of measuring the Indian vernacular against the Latin standard (Olmos, 1547, p. 53; Molina, 1571a, p. 189; Galdo Guzmán, 1642, p. 355).

[1] Sahagún's Sermones en Mexicano were published in 1540, according to Viñaza (1892, p. 3).

From the point of view of modern linguistics, the early grammars of Nahuatl were most deficient in their treatment of phonology. Sounds were conceived in terms of orthography. Nearly all the discussions of Nahuatl sounds began with a list of the letters missing in the language of the Aztecs, and careful attention was paid to the spelling rules derived from Spanish orthography. The few attempts to describe sounds were largely based on likenesses to other languages: Nahuatl tz was like the Hebrew Tzade; Nahuatl -ll- was like the Latin rather than the Castillian -ll-. Fortunately, the sound system was relatively simple and transparent. The Spanish orthography, though not an ideal script for Nahuatl, conveyed most of the phonemically relevant distinctions, and the combined efforts of several missionaries served to direct attention even to such unfamiliar features as vocalic quantity and the glottal stop. From their discussions of spelling and pronunciation, and from the modern dialect data, it has been possible to arrive at a fairly reliable picture of Classical Nahuatl phonology.

Morphology was treated more adequately. It was presented, of course, in terms of a preconceived scheme. For example, the entire morphological description was organized by discussing in turn each of the eight parts of speech. Similarly, the conjugation of the verb tended to follow the classical categories: in order to tailor Nahuatl to fit such categories as the future perfect or the present subjunctive, the grammarian might state that the future perfect was the same as the preterit perfect, or he might illustrate the present subjunctive paradigm with a phrase containing the present indicative verb forms preceded by a particle meaning "if." Despite these and other reflections of a classical model, the outlines of Nahuatl morphology, particularly its inflectional system, could not fail to emerge. Most of the grammarians knew the language through long and intimate contact. With a laudable respect for examples they provided copious illustrative

material. Most of them, also, tried conscientiously to convey the fine shades of meaning expressed in the examples, for such nuances were matters of primary importance to the writers of the early grammars.

They did not regard the mechanics of sentence building as a rubric of grammar. Forms larger than words or phrasal inflections were discussed in terms of idioms and styles of expression, in brief chapters entitled "On the Mexicanisms Which Are Some Ways of Speaking the Language Properly" or "On Some Ways of Common Speech." Up to the present time the syntactic structure has been given less attention than the other aspects of the language. The body of Classical Nahuatl texts still remains to be analyzed syntactically.

From the middle of the 17th century until nearly the end of the 19th, this grammatical tradition continued with little change, though with diminishing activity. Beginning in 1885 the re-publication in Mexico of the early Nahuatl grammars was symptomatic of a new and revitalized interest in *la lengua mexicana*. The European tradition of literary scholarship, primarily in its French version, became merged with the older grammarian tradition. The new approach produced Nahuatl specialists whose broad field of interest encompassed Nahuatl antiquities, history, and literature as well as language. This trend is represented in the twentieth century scholarship of Dávila Garibi (1938, 1948) and Garibay (1940a).

Finally, the tradition of structural linguistics was brought to the study of Nahuatl in Whorf's sketch of the Milpa Alta dialect (1946). Other structural descriptions of modern dialects are those of Croft on Matlapa (1951, 1953a, 1954), Harold and Mary Key on Sierra Nahuat (1953, 1960), Pittman on Tetelcingo (1954), Hasler on dialectology (1954–55a,b,c), and Law on Isthmus Nahuat (1958).[2]

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[2] The basic sources used for the present article were the dictionary of Molina (1571b) and the five grammars written between 1547 and 1645—Olmos

PHONOLOGY

2. PHONEMIC UNITS. The following symbols are employed to represent the 23 segmental phonemes of Classical Nahuatl: *a, aˑ, ch, cu, e, eˑ, i, iˑ, k, l, m, n, o, oˑ, p, s, t, tl, tz, w, x, y, ?*. The heavy stress is indicated by ′ only when it occurs on the final syllable of the word, but it is unmarked when it falls on the penult; the weak stress is always unmarked.

2.1. VOWELS. The eight vowel phonemes were patterned in a system of four positions, each containing a short and a long vowel: high front position, short *i* and long *iˑ*; mid front, *e* and *eˑ*; low central, *a* and *aˑ*; and mid back, *o* and *oˑ*.

Apparently the quality of most of these vowels fluctuated only slightly or not perceptibly. The *i* and *iˑ* were both close vowels, having the quality of Spanish *mi* or English *meet*. The short *e* may have varied between a close vowel, as in French *fée*, and the more open sound of English *bet*; but *eˑ* was always close. Both the *a* and *aˑ* were unvarying open vowels in the low central position, as in Spanish *lana*. The *o* and *oˑ* probably fluctuated between the close mid quality of the vowel in French *beau* and the open high vowel of English *put*.[3]

(1547), Molina (1571a), Rincon (1595), Galdo Guzmán (1642), and Carochi (1645). These materials were supplemented by modern studies, both of the classical language and the present-day dialects, and my own work with a Nahuatl dialect of central Mexico during the 1940's.

[3] Olmos and Molina employed the five vowel letters of the Spanish alphabet in writing Nahuatl. Both noted that the Indians made very little differentiation between the *o* and the *u*, sometimes confusing these letters in the same word. But these two earliest grammarians of Nahuatl undoubtedly contributed to the confusion by using the letter *u* to represent, not only *o* and *oˑ* on occasions, but the *w* consonant phoneme as well. Their practice, however, suggests that the *o* and *oˑ* vowels must have been higher than the Spanish *o* phoneme. Whorf described the short *o* in the Milpa Alta dialect, one of the dialects presumably close to the classical language, as sometimes "open, but less open than [ɔ]"; he indicated that both *o* and *oˑ* were close vowels, under some conditions *o* being "very close, practically [u]" (1946, p. 372).

The phonemic distinctiveness of the two quantities is illustrated in the following word pairs: *xiwitl* 'year', *xi·witl* 'comet'; *metztli* 'leg', *me·tztli* 'moon'; *tlatia* 'to burn', *tla·tia* 'to hide'; *toka* 'to follow', *to·ka* 'to bury'.[4]

2.2. CONSONANTS. Among the stop consonants the bilabial *p*, alveolar *t*, and velar *k* were unaspirated voiceless sounds, like the Spanish *p*, *t*, *k* in *pelo*, *tiro*, *kilo*. Following *n*, *k* was sometimes voiced to [*g*]. The labialization of the phoneme *cu* was voiced or partially voiced in syllable initial position, like the Spanish *cu* in *cuarto*. But in syllable final position *cu* was pronounced as a voiceless labialized stop, paralleling the pattern of *w*. The pronunciation of *?*, the glottal stop, when it appeared within the word, seems to have been a glottal closure followed by an aspirated release. But in word final and especially in utterance final position the glottal catch was only partially actualized or was omitted entirely, leaving the aspiration as the main perceptible feature of this phoneme.[5]

The fricatives and affricates were consonants with no clearly variant pronunciations. The *s* was an alveolar fricative, as in English *see*; the *x* was an alveo-palatal, pronounced like the *sh* in English *she*. Corresponding to these fricatives in position were the alveolar affricative *tz*, like the *ts* in English *cats*, and the alveo-palatal affricate *ch*, like the *ch* in English *church*. The *tl* was always a voiceless lateral affricate.

The nasal consonants were invariably voiced. The *m* was always bilabial. The *n* was articulated as a velar [ŋ] before *k* or *cu*, like the first-syllable *n* in Spanish *cinco* or *cincuenta*; it was alveolar elsewhere. The *l* was a lateral consonant, voiced in syllable initial position, like the *l* of Spanish *lana*; but it was voiceless when it appeared in syllable final position preceding a consonant other than *l*. Similarly, the semivowel *w* was voiced at the beginning of a syllable, as in English *water*, but it was voiceless in syllable final position. There appears to have been a difference between men's and women's speech in the syllable initial actualization of *w*: men pronounced it as a bilabial, women as a labio-dental.[6] The semivowel *y* was invariably voiced.

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[4] Rincon was the first to report the quantitative distinctions in Nahuatl vowels. Although he did not mark these distinctions in his transcription, the final chapter of his grammar contained a list of word contrasts, illustrating forms which, though spelled identically, differed in "accent." Rincon's five accents attempted to cover the phenomena of stress and the glottal stop as well as quantity. Carochi provided a much clearer treatment of vowel quantity. His accents, recorded in his transcription, were confined to showing quantity and the glottal stop. For a recent discussion of the accent problem, see Barrett (1956) and Bright (1960).

[5] There can be little doubt concerning the phonetic character of the glottal stop in Classical Nahuatl, for nearly all of the early grammarians attempted to describe the sounds of this phoneme, which became known as the *saltillo*. Some of the writers, like Olmos, treated it as a consantic phenomenon; others, like Rincon and Carochi, included it among the syllabic accents.

Olmos used the letter *h* for this phoneme, apparently perceiving the aspiration of the preconsonantal *?* as its most characteristic feature. He related this phonetic feature to the voicelessness of preconsonantal *l* and *w*, which he wrote *lh* and *uh*. He also added an *h* at the end of certain plural forms, in most cases where the plural morpheme *-?* (§8.42c) would be expected; but he stated that he followed this practice in order to distinguish the plurals from the singulars, even though the natives might not pronounce the *h*. With evident asperity he observed that the Indians sometimes pronounced this letter forcefully and at other times seemed to swallow it (1547, p. 107).

Rincon reported that the *saltillo* was pronounced differently in various parts of Mexico; he noted that the Tlaxcalans gave it a particularly strong and harsh pronunciation (1595, p. 264). Carochi, phonetically the most perceptive of the early grammarians, used the grave accent to indicate the distinct closure of the *?* in word medial position; he wrote the circumflex accent for the pre-pausal *?* to indicate its weaker closure and more aspirated pronunciation (1645, p. 402). These were essentially the phonetic features of the glottal stop phoneme in the Milpa Alta dialect, as described by Whorf (1946, p. 372).

[6] The first of the Nahuatl grammarians, Olmos, reported the difference between men's and women's pronunciation of *w* (1547, p. 107), an observation repeated by the remaining early writers. His *lh* spelling of the voiceless allophone of *l* was not followed by subsequent grammarians, but his convention of writing *w* as syllable initial *hu*

2.3. STRESS. Except for nouns in the vocative (see §7.1.5.2a), which were stressed on the final syllable, words of more than one syllable took the heavy stress on the penult. A weaker degree of stress characterized the remaining syllables.

3. DISTRIBUTION OF PHONEMES. Only the following four combinations of consonant (C) and vowel (V) formed the syllable unit.

V: *a* 'ah!' the first syllable of *i·a·maw* 'his book'

VC: *ok* 'yet'; the first syllable of *ompa* 'there'

CV: *ka* 'with'; the first syllable of *teo·tl* 'god'

CVC: *wa·n* 'and'; the first syllable of *tlaxkalli* 'bread'

Words were composed of any combination of these syllabic structures. The word unit, consequently, could begin in a consonant or a vowel and could end in a consonant or a vowel. Sequences of vowels could occur anywhere in the word, each vowel counting as a syllable. The combination of syllables permitted no more than two consonants to be juxtaposed within the word; elsewhere, in word initial or final position, consonants appeared singly, never in clusters.

On the basis of the consonant allophones determined by syllable position, such as the voiceless *l* or *w* in syllable final position, it is possible to describe the division of the word into structural syllables. When two consonants were juxtaposed, the syllable division was always made between them. A consonant occurring intervocalically belonged with the following syllable. When two vowels appeared in sequence, a syllable division was made between them.

In word initial position any phoneme could occur except *l* or *ʔ*. In word final position any phoneme but *m* was permitted.

(sometimes merely *u* between vowels) and syllable final *uh* has become part of the literary tradition of Nahuatl.

4. MORPHOPHONEMICS. Several types of phoneme changes took place. Only a few changes were automatic throughout the language (§4.1). Others were applied selectively to the phonemes of certain prefixes (§4.2.1), suffixes (§4.2.2), or stems (§4.2.3). There were also unique changes affecting only one morpheme; these will not be discussed here but will be described under the appropriate morpheme. Besides these phonologically determined changes, stems underwent additional alterations determined by morphological conditions (§6.3).

4.1. AUTOMATIC CHANGES. The nasals, *m* and *n*, were in contrast only before vowels. Under other conditions *n* became *m* before *p*, and *m* became *n* before all other consonants and in word-final position: *i·m-* 'their' in *i·m-a·maw* 'their book' but *i·n-tlan* 'near them'; *nemi* 'to live' in *ni-nemi* 'I am living' but *o·-nen* 'he lived'.

The sequence *l* and *tl* became *l* and *l*: *tlachia* 'to see' in *ni-tlachia* 'I see' but *xi-wa·l-lachia* 'look this way'.

4.2. SELECTIVE CHANGES. More common than automatic changes were the changes which, under given phonological conditions, selectively affected certain morphemes but not others. For example, many prefixes ending in a vowel elided their final phoneme before the initial vowel of the following morpheme (§4.2.1). But the vowel of *ki-*, 3rd person object, was dropped under unique conditions (§8.3.5), and *tla-* 'something, things' did not undergo elision under any conditions (§8.3.1).

4.2.1. IN PREFIXES. In some prefixes having the shape CV-, the vowel was dropped before a following vowel. This change applied to the possessives (§7.1.3), the subject prefixes (§8.3.6), and the reflexives (§8.3.2): *no-* 'my' in *no-tlatki* 'my household goods' but *n-iʔiyo* 'my breath'; *mo-*, reflexive for second and third persons in *tik-mo-machiltia* 'you know it' (reverential) but *o·ti-m-aʔxitiko* 'you arrived' (reverential). The elision of the prefix vowel was cancelled, however, before a stem beginning in *i-* followed by two

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consonants, for under these conditions the stem vowel was dropped (see §5.2.3a).

The *i* vowel of subject prefixes was assimilated to *o* before *on-* 'thither': *ni-*'I' in *ni-kochtika* 'I am sleeping' but *no-k-on-ittatiw* 'I am coming to visit him'.

4.2.2. IN SUFFIXES. Some suffixes beginning in *y-* assimilated their initial consonant to *l* after a stem terminating in *l* (§7.1.5.2d, 7.1.5.2f, 7.1.5.3c): *-yo·*, abstract noun, in *ta?-yo·-tl* 'paternity' (*ta?* 'father') but *tlakael-lo·-tl* 'anxiety'.

4.2.3. IN STEMS. In contact with certain prefixes or suffixes, the initial or final phonemes of the stem underwent the following types of change:

(a) *-VizCC*. The stem-initial *i* was zeroed if it was followed by a consonant cluster. This change took place after prefixes which dropped their final vowel (see §4.2.1) in contact with other types of vowel-beginning stems. Examples of this process of stem elision are: *no-sti* 'my fingernail' (*isti* 'fingernail'), *tik-mo-tztili?tika* 'you are looking at him' (reverential) (*itztili?tika* 'to be looking at').

(b) *VVz-*. Before certain suffixes the final stem vowel in a two-vowel cluster was zeroed: *-lis*, abstract noun, in *tla?cuilo-lis-tli* 'writing' (*tla?cuiloa* 'to write, to paint'), *tla?tla·tlawti-lis-tli* 'an oration' (*tla?tla·tlawtia* 'to orate').

(c) *V·-*. The final vowel of the stem was lengthened before certain suffixes: *-ni*, imperfective agent, in *tlacua·-ni* 'one who is eating' (*tlacua* 'to eat'), *tla?tlakoa·ni* 'sinner' (*tla?tlakoa* 'to make a mistake, to commit a sin').

(d) *V·Vz-*. In a two-vowel cluster at the end of a stem the final vowel was zeroed and the preceding vowel lengthened before certain suffixes: *-s*, future, in *ni-te·machti·-s* 'I will preach' (*te·machtia* 'to preach'); *-skia*, conditional, in *mokoko·-skia* 'he would be sick' (*mokokoa* 'to be sick').

(e) *CyVi-*. Before certain suffixes the final vowel of the stem was changed to *i*, and a preceding *tz* or *t* was palatalized to *ch*, a

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preceding *s* to *x*: *-lia*, applicative, in *nik-wetzki-lia* 'I am laughing at it' (*wetzka* 'to laugh'), *tine·ch-no·chi-lia* 'you are calling him for me' (*no·tza* 'to call'), *nimitz-machi-lia* 'I know about you' (*mati* 'to know').

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5. TYPES OF PROCESSES. Classical Nahuatl was primarily a suffixing language. A large part of the inflectional system (§7.1.4, 8.4) and most of the huge derivational apparatus (§7.1.5.1–7.1.5.4, 8.6.1) were controlled by suffixes. Prefixes also carried part of the inflectional load (§7.1.3, 8.3): pronominal inflections, both for noun and verb, were expressed by prefixing techniques. Compounding (§7.1.5.5, 8.6.2) was extensively used; it was one of the formal resources of the language which became elaborated in the poetic style of religious discourse that flourished in early post-conquest times.

Besides these additive processes, reduplication of stems (§7.1.2.1, 8.2) and of one group of suffixes (§7.1.2.2) was also employed. All reduplicative patterns repeated the initial consonant, if any, and the first vowel of the morpheme.

Internal change was another process affecting stems. Contraction and augmentation produced modified stem types which, though distinctive in function for the noun (§7.1.1) and the verb (§8.1), were somewhat alike in form for the two word classes (§6.3).

6. MORPHOLOGICAL CATEGORIES.

6.1. INFLECTIONAL WORD CLASSES. On the basis of their inflections, words could be classed as nominals, verbs, or particles. Depending on their subclass, nominals were inflected for number (singular or plural), or status (absolutive or possessive), or both. Verbs were inflected for tense, aspect, mode, and subject or subject-object. Particles were uninflected words.

The inflections were formed by prefixes and by those suffixes on the outermost layers of the inflected word.

6.2. DERIVATIONS. In contrast to inflections, the derivations were inner formations,

produced by the compounding of stems or by the attachment of suffixes close to the stem. The addition of one or more derivational layers resulted either in a complete word of the particle class or in a noun or verb stem which required the necessary inflectional treatment for completion as a word.

Derivations were often marked by the inclusion of *-ti* or *-ka·*, termed "ligatures" in the grammatical tradition of Classical Nahuatl. The conditions determining the usage of these morphemes cannot be precisely defined, for in some derivations the ligatures were among the optionally varying elements in Nahuatl morphology: *tla·l-pan* or *tla·l-ti-pan* 'on the ground'. In other derivations, however, they appeared consistently. They were employed in derivations of all kinds—those formed by suffixation or by compounding, and those resulting in derived nouns, verbs, or particles.

The ligature *-ti* was used in verb compounds before certain stems, such as *ka* 'to be' or *nemi* 'to go about', which were highly frequent and sometimes semantically specialized as second-position stems: *koch-ti-ka* 'to be sleeping' (*kochi* 'to sleep'), *patlan-ti-nemi* 'to go about flying' (*patlani* 'to fly'), *ki·s-t-e·wa* 'to start to leave' (*ki·sa* 'to leave', *-t* contracted from *-ti*, *e·wa* 'to start, to rise'). The same ligature appeared between a noun stem and certain derivational suffixes, as in *te-ti-k* 'hard' (*te* 'stone', *-k*, qualitative). It also occurred before certain postpositions when they were combined with noun stems though not with pronominal elements: *tepe·-t-ikpak* 'on top of the mountain' (*tepe·* 'mountain') but *no-kpak* 'on top of me' (*no-* 'my'), *xa·l-ti-pan* 'on the ground' (*xa·l* 'ground') but *i·-pan* 'on it' (*i·-* 'its, his, her').

The *-ka·* ligature joined two verb stems in which the first functioned as a modifier of the second: *cuala·ni-ka·-itta* 'to look at ... angrily' (*cuala·ni* 'to be angry', *itta* 'to look at'), *tlatziw-ka·-ka·wa* 'to leave ... through negligence' (*tlatziwi* 'to be negligent', *ka·wa*

'to leave'). The non-final alternants of some noun-forming suffixes required the addition of *-ka·*: *-e?* varied with non-final *-e?-ka·* 'possessor of,' as in *to·pil-e?* 'constable' (*to·pil* 'the staff of office'), *to·pil-e?-ka·-tla·lia* 'to appoint ... as constable' (*tla·lia* 'to place, to appoint'), *to-to·pil-e?-ka·-w* 'our constable' (*to-* 'our', *-w*, augment for possessive); *-wa?* varied with non-final *-wa?-ka·* 'owner of', as in *a·xka·-wa?* 'person of property' (*a·xka·* 'property'), *a·xka·-wa?-ka·-tzin-tli* 'the person of property' (reverential) (*-tzin*, reverential, *-tli*, singular absolutive), *a·xka·-wa?-ka·-ka·wa* 'to leave ... as a person of property' (*ka·wa* 'to leave'). Other noun-forming suffixes had non-final allomorphs manifesting a fusion with the *-ka·* ligature: *-k* varied with non-final *-ka·*, qualitative, as in *chipa·wa-k* 'clean (thing, person)' (*chipa·wa* 'to clean'), *chipa·wa-ka·-yo·-tl* 'cleanliness' (*-yo·*, abstract noun, *-tl*, singular absolutive); *chika·wa-k* 'strong' (*chika·wa* 'to strengthen'), *chika·wa-ka·-tlaso?tla* 'to love deeply' (*tlaso?tla* 'to love'); *-ki* varied with non-final *-ka·*, perfective agent, as in *teo·-pix-ki* 'priest' (*teo·* 'god', *pix-*, modified stem of *pia* 'to have'), *no-teo·-pix-ka·-w* 'my priest' (*-w*, augment for possessive).

6.3. STEM TYPES. An inflected word was built upon any one of the four structural types of stem, as illustrated in the following table.

	SIMPLE	MODIFIED[7]
Basic	*pa·ki* 'to be happy'	*pa·k-*
	teo· 'god'	*teo·w-*
Thematic	*pa·k-tia* to make happy'	*pa·k-ti?-*
	teo·-pia 'to have god'	*teo·pix-*

The basic stem, or base, contained only one morpheme; the thematic stem, or theme, was polymorphemic. Either of these stem types could occur in the simple (unmodified) form or in the modified form proper for that

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[7] In the presentation of stems throughout this grammatical description, a modified stem will be identified by the terminal hyphen. A stem presented without a hyphen will be the simple stem.

base or theme. The modifications added no increments of meaning to the stem: the simple stem was used for certain inflections and derivations, the modified stem for others. Some modified stems were formed by contraction, as *pa·k-* from *pa·ki*; others were augmented, as *teo·w-* from *teo·*; and others underwent more complex types of change, as *pa·k-tiʔ-* from *pa·k-tia* or *teo·-pix-* from *teo·-pia*. The forms of the modified stem will be described separately for the noun (§7.1.1) and the verb (§8.1.1).

7. NOMINALS. Of the three subclasses of nominals (nouns, pronouns, and postpositions), nouns had the most extensive set of inflections. The following forms of *petla* 'mat' will illustrate the four inflectional categories of the noun:

	SINGULAR	PLURAL
Absolutive	*petla-tl* 'mat'	*petla-meʔ* 'mats'
Possessive	*no-petl* 'my mat'	*no-petla-wa·n* 'my mats'

Nouns, then, were inflected for number and status, the possessive status being further inflected for the person of the possessor.[8] Independent pronouns were inflected for number only in the absolutive. Some pronominal forms took singular and plural endings similar to those of the noun. Postpositions, expressing relational concepts primarily, had only the possessive inflection. The pronominal elements prefixed to postpositions were the same as those appended to the possessive stems of nouns.

7.1. NOUNS. Among the selective, or variable, features of noun inflection were those affecting the stem: vowel-ending nouns formed various types of modified stem for

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[8] Olmos and subsequent grammarians noted that in some provinces, though not in others, nouns referring to inanimate objects lacked the plural (Olmos, 1547, p. 20). Such forms should be classed as defective nouns, in that they did not take plural suffixes. However, these nouns did not lack the number category, for they carried the formal mark of singular number: to illustrate the absence of a plural noun in a context requiring a plural meaning, Olmos used the example *wapalli* 'board,' which contained *-li*, one of the singular absolutive suffixes.

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the singular possessive (§7.1.1), and some nouns underwent reduplication for the plural absolutive (§7.1.2.1). Also selective were the singular (§7.1.4.1) and the plural (§7.1.4.2) absolute suffixes.

Other inflectional features of the noun were uniform. All consonant-ending nouns appeared in the simple stem for the singular possessive. To form the plural possessive, one plural suffix was added to the simple stem of all nouns (7.1.4.2e). And the same set of possessive pronouns was prefixed to all nouns (7.1.4.1).

7.1.1. STEM MODIFICATIONS AND THE POSSESSIVE SINGULAR. Noun stems underwent the following two types of modification for the possessive singular:

(a) The contracted stem. Some vowel-ending nouns dropped their final vowel: *amo-cuik* 'your (plural) song' (*cuika* 'song'), *i·m-pan* 'their flag' (*pani* 'flag'), *i·-toka* 'his name' (*tokai* 'name').

(b) The augmented stem. Other nouns ending in a vowel were augmented by *-w* to form the possessive singular stem: *no-tew* 'my stone' (*te* 'stone'), *to-teo·w* 'our god' (*teo·* 'god'), *te·-tla·kaw* 'someone's slave', literally 'someone's man' (*tla·ka* 'man').

Some vowel-ending nouns and all consonant-ending nouns used the simple unmodified stem for the possessive singular: *mo-chiʔchi* 'your (singular) saliva' (*chiʔchi* 'saliva'), *no-tlaxkal* 'my bread' (*tlaxkal* 'bread').

7.1.2. REDUPLICATION. Initial reduplication could be applied to basic stems of the noun or to one group of derivational suffixes occurring in thematic stems of the noun. This process expressed either the plural or the distributive.

7.1.2.1. Two reduplicative patterns affected noun stems:

(a) *(C)V·-*. Repetition of the initial consonant, if any, and the first vowel of the stem, with lengthening of the vowel, formed the plural absolutive stem of some nouns. To this stem was added one of the plural absolutive suffixes (§7.1.4.2). In most in-

stances the reduplicated stem took the plural *-ʔ*: *cue·cueya-ʔ* 'frogs' (*cueya* 'frog'), *mo·mo·yo·-ʔ* 'mosquitoes' (*mo·yo·* 'mosquito'). In some instances this formation was a variant plural of the simple stem with the suffix form *-meʔ*: *ko·koyo·-ʔ* or *koyo·-meʔ* 'coyotes' (*koyo·* 'coyote'), *o·ose·lo·-ʔ* or *ose·lo·-meʔ* 'ocelots' (*ose·lo·* 'ocelot'). The reduplicated stem occurred with other plural suffixes, which also formed variant plurals with simple stems: *i·ichka-meʔ* or *ichka-meʔ* 'sheep' (plural) (*ichka* 'sheep', singular), *cua·cuaw-tin* or *cuaw-tin* 'eagles' (*cuaw* 'eagle'), *ka·kalpix-keʔ* or *kalpix-keʔ* 'majordomos' (*kalpix-ki* 'majordomo').

(b) *(C)Vʔ-*. Repetition of the initial consonant, if any, and the following vowel, with shortening of the vowel and insertion of a glottal stop, formed a special derivation expressing the distributive. This type of reduplicated stem was inflected only in the singular, for both the absolutive and the possessive: *aʔa·wil-li* 'various acts of levity' (*a·wil* 'act of levity, frivolity', *-li*, singular absolutive), *kaʔkapollaʔ-Ø* 'cherry orchards here and there' (*kapollaʔ* 'cherry orchard', *-Ø*, singular absolutive), *mo-xiʔxicuinyo* 'your various gluttonies' (*mo-* 'your', *xicuinyo* 'gluttony'), *i·n-chaʔcha·n* 'their separate houses', i.e., each of the houses belonging to each one of them (*i·n-* from *i·m-* 'their', *cha·n* 'house').

7.1.2.2. In thematic noun stems containing one of the affective suffixes, the suffix itself was reduplicated as part of the plural formation. The reduplicative pattern, *CV-*, involved repetition of the first consonant and vowel of the suffix, with shortening of the vowel. Of the four affectives, two could appear with or without the absolutives, *-tli* in the singular and *-tin* in the plural. The reverential *-tzin* or *-tzin-tli*, expressing respect, affection, or compassion, was pluralized as *-tzitzin* or *-tzitzin-tin*: *ilama-tzitzin*, plural of *ilama-tzin* 'respected old lady', *tla·ka-tzitzin-tin*, plural of *tla·ka-tzin-tli* 'poor little man'; reduplication of the stem as well as the suffix could take place, as in

pi·pil-tzitzin-tin, plural of *pil-tzin-tli* 'dear little boy'. The diminutive of scorn or contempt, *-to·n* or *-to·n-tli*, had the plural form *-toto·n* or *-toto·n-tin*: *chichi-toto·n*, plural of *chichi-to·n* 'puppy', *atoya-toto·n-tin*, plural of *atoya-to·n-tli* 'rivulet', *pi·pil-toto·n-tin*, plural of *pil-to·n-tli* 'mischievous little boy'.

The other two affectives occurred without the absolutive suffixes. The pejorative *-po·l* appeared as *-popo·l* in the plural: *tlaweli·-loka·-popo·l*, plural of *tlaweli·loka·-po·l* 'rogue'. The diminutive of approval, *-pil*, was reduplicated to *-pipil* for the plural: *siwa·-pipil*, plural of *siwa·-pil* 'beautiful woman, fine woman'.

7.1.3. INFLECTIONAL PREFIXES. Only one group of inflectional prefixes was employed with nouns. The singular (§7.1.1) and plural (§7.1.4.2e) possessives were formed with prefixes indicating the person and number of the possessor: *no-* 'my', *mo-* 'your (singular)', *i·-* 'his, her, its', *to-* 'our', *amo-* 'your (plural)', *i·m-* 'their', and *te·-* 'someone's'. These prefixes were also appended to postpositions (7.3).

7.1.4. INFLECTIONAL SUFFIXES. The suffixes marking noun inflections indicated the singular (§7.1.4.1) absolutive and the plural (§7.1.4.2) absolutive and possessive.

7.1.4.1. The following suffixes of the singular absolutive, added to the simple stem, were selectively distributed among nouns:

(a) *-li* (after *l*), *-tli* (after other consonants), *-tl* (after vowels). Examples are: *kal-li* 'house', *tla·koʔ-tli* 'slave', *siwa·-tl* 'woman'.

(b) *-in*, as in *to·tol-in* 'hen', *mich-in* 'fish', *to·ch-in* or *to·ch-tli* 'rabbit'.

(c) *-Ø*. The absence of an overt suffix was characteristic of the singular absolutive of a few noun bases, especially quantifiers such as *miek-Ø* 'much' or *we·y-Ø* 'large'. This inflectional category was also marked by the zero suffix in noun themes derived by certain suffixes: *-k*, qualitative, as in *toma·wa-k-Ø* 'fat (animal, person)' (*toma·wa* 'to fatten'); *-waʔ* 'owner of', as in *a·xka·-waʔ-Ø* 'person of property' (*a·xka·* 'property'); *-eʔ* 'possessor

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of', as in *kal-e?-Ø* 'one who possesses a house' (*kal* 'house'); *-ki*, perfective agent, as in *kokox-ki-Ø* 'sick person'; *-tzin*, reverential, as in *ta?-tzin-Ø* 'father' (reverential) (*ta?* 'father'). Although these words were not overtly identified for the absolutive singular, they were marked like other nouns for the possessive and plural inflections (§7.1.4.2d).

7.1.4.2. Plural suffixes could be attached either to the reduplicated stem (§7.1.2.1a) or to the simple stem. Like the singular absolutive suffixes, the plural absolutives were selectively distributed among nouns:

(a) *-?*, as in *tla·ka-?* 'men', *siwa·-?* 'women', *po·chte·ka-?* 'merchants'. This plural occurred only with vowel-ending stems.

(b) *-me?*, as in *pitzo-me?* 'pigs', *ichka-me?* 'sheep (plural)', *cui·cui·tzka-me?* 'swallows'. This suffix was attached primarily to vowel-ending stems.

(c) *-tin*, as in *ta?-tin* 'fathers', *okich-tin* 'males', *cuaw-tin* 'eagles'. Principally consonant-ending stems took the *-tin* plural. Some nouns had variant plurals with either *-me?* or *-tin*: *to·tol-me?* or *to·tol-tin* 'hens', *tepotzo?-me?* or *tepotzo?-tin* 'hunchbacks'.

(d) *-ke?*, as in *toma·wa-ke?* 'fat (animals, people)', *a·xka·wa?-ke?* 'people of property', *kale?-ke?* 'people who have houses', *kokox-ke?* 'sick people'. This plural was used with derived nouns whose singular absolutive was *-Ø* (§7.1.4.1c). Somewhat like the *-ka·* ligature (§6.2), the *-ke?* plural was fused with derivatives in *-k*, qualitative, and *-ki*, perfective agent; it was simply added to other derivational suffixes.

Only one unvarying suffix, attached to the simple stem of nouns, was employed for the plural possessive:

(e) *-wa·n*, as in *mo-to·tol-wa·n*, 'your hens', *i·m-pil-wa·n* 'their sons'. Some derived nouns took the ligature *-ka·* before *-wa·n*: *no-cua·cuawe?-ka·-wa·n* 'my cows' (*cua·cuaw-e?* 'cow', literally 'one who possesses horns').

7.1.5. NOUN-FORMING DERIVATIONS. Suffixes which formed nouns could be added to verb stems (§7.1.5.1), to noun stems

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(§7.1.5.2), to either verb or noun stems (§7.1.5.3), and to either nominal or particle stems (§7.1.5.4). Derived nouns were also produced by compounding (§7.1.5.5).

7.1.5.1. The following suffixes converted verbs into nouns:

(a) *-ni*, imperfective agent, as in *kochi-ni* 'one who is sleeping' (*kochi* 'to sleep'), *tla·ka-wapa·wa-ni* 'one who rears human beings' (*tla·ka* 'person, man', *wapa·wa* 'to rear, to nourish').

(b) *-?*, imperfective agent, as in *tla?cuilo-?* 'one who is writing' (*tla?cuilo-*, *VVz-* stem (4.2.3b) of *tla?cuiloa* 'to write', to paint'), *te·-yo·lla·li-?* 'that which consoles people' (*te·-*, indefinite personal object, *yo·lla·li-*, *VVz-* stem of *yo·lla·lia* 'to console').

(c) *-ki*, perfective agent. This suffix indicated the agency of a completed action or the habitual agency of the specialist; it also referred to the quality or result of a completed action. Examples are: *pala·n-ki* 'rotten, that which is rotten, that which has rotted' (*pala·n-*, modified stem of *pala·ni* 'to rot'), *mik-ki* 'corpse' (*mik-*, modified stem of *miki* 'to die'), *kak-chi·w-ki* 'shoemaker' (*kak* 'shoe', *chi·w-*, modified stem of *chi·wa* 'to make').

(d) *-l* (after some stems ending in a vowel) or *-Ø*. Because this morpheme expressed the passive agent, or recipient, of the verb action, it was added only to transitive verbs. Most of these formations contained one of the indefinite object pronouns, either the personal *te·-* or the non-personal *tla-* (§8.3.1). Examples are: *pixki-Ø-tl* 'the harvest' (*pixki-*, *CyVi-* stem of *pixka* 'to gather the harvest', *-tl*, singular absolutive), *tla-i·-l-li* or *tla-i·-Ø-tl* 'a drink', such as pulque or wine (*i·* 'to drink', *-li* or *-tl*, singular absolutive), *te·machti·-l-li* 'that which is taught to people' (*machti·-*, *V·Vz-* stem of *machtia* 'to teach'), *tla-ke·n-Ø-tli* or *tla-ke·mi-tl* 'clothes' (*ke·n-*, modified stem of *ke·mi* 'to put on clothes'), *tla-i·na·x-Ø-tli* or *tla-i·na·ya-l-li* 'that which is hidden' (*i·na·x-*, modified stem of *i·na·ya* 'to hide').

(e) *-ka*, verbal noun, as in *i·-tzope·li-ka* 'its

sweetness' (*i·-* 'its, his, her', *tzope·li-*, *VVz-* stem of *tzope·lia* 'to sweeten'), *to-pala·n-ka* 'our rottenness, our corruption' (*to-* 'our', *pala·n-*, modified stem of *pala·ni* 'to rot').

(f) *-ya*, instrumental, as in *no-tlachia-ya* 'my vision' (*no-* 'my', *tlachia* 'to look at'), *no-tla-teki-ya* 'my knife' (*tla-*, indefinite non-personal object, *teki* 'to cut').

(g) *-lis*, abstract noun, as in *yo·li-lis-tli* 'life' (*yo·li* 'to live', *-tli*, singular absolutive), *tla-cua-lis-tli* 'the act of eating' (*tla-*, indefinite non-personal object, *cua* 'to eat').

(h) *-ya·n*, locative, as in *no-kochi-ya·n* 'my sleeping place' (*no-* 'my', *kochi* 'to sleep'), *tlaxkal-chi·wa-lo·-ya·n* 'place where bread is made' (*tlaxkal* 'bread', *chi·wa* 'to make', *-lo·*, passive).

7.1.5.2. The following derivational suffixes were added to noun stems:

(a) *-é*, vocative. This morpheme, always the final syllable of the word, was given the heavy stress.[9] Examples are: *siwa·-tl-é* 'woman!' (*siwa·* 'woman', *-tl*, singular absolutive), *te·machtia·ni-me?-é* 'preachers!' (*te·machtia·ni* 'preacher', *-me?*, plural absolutive). The vocative suffix could fuse with the absolutives *-li* or *-tli* to form *-lé* or *-tlé*, and with the reverential *-tzin* to become *-tzé*: *pilto·n-tlé* 'boy!' (*pilto·n* 'mischievous boy'), *no-pil-tzé* or *no-pil-tzin-é* 'my son!' (*no-* 'my', *pil* 'boy, son').

(b) *-e?* 'possessor of', as in *yo·li-lis-e?* 'one who has life' (*yo·li* 'to live', *-lis*, abstract noun), *tla·ltikpak-e?* 'the one who possesses the earth', one of the names given to Our Lord (*tla·ltikpak* 'the surface of the earth').

(c) *-wa?* 'owner of, possessor of', as in *ilwika-wa?* 'owner of the sky', one of the names given to Our Lord (*ilwika* 'sky'), *tilma?-wa?* 'one who owns a cloak' (*tilma?* 'cloak').

(d) *-lo?* (after *l*), *-yo?* (elsewhere), intensive descriptive. This suffix indicated a

quality or an entity characterized to an intensive degree by the reference of the underlying noun: *si·tlal-lo?* 'starry, something full of stars' (*si·tlal* 'star'), *a·-yo?* 'watery, something which contains much water', such as soup (*a·* 'water'), *ti-naka-yo?-ke?* 'we (are) things made of flesh' (*ti-* 'we', *naka* 'meat', *-ke?*, plural absolutive).

(e) *-tla?*, intensive locative, as in *te-tla?* 'stony place' (*te* 'stone'), *xo·chi-tla?* 'flower garden' (*xo·chi* 'flower'), *xal-la?* 'sandy place' (*xal* 'sand').

(f) *-lo* (after *l*), *-yo* (elsewhere), inalienable. This element was used only with the possessive forms of nouns: *no-naka-yo* 'my flesh', i.e., the meat of my body, in contrast to *no-nak* 'my meat' (*no-* 'my', *nak-*, modified stem of *naka* 'meat'), *i·-xo·chi?cual-lo* 'its (the tree's) fruit' (*i·-* 'its, his, her', *xo·chi?cual* 'fruit').

(g) *-tika*, distributive, as in *se·sen-metz-tika* 'every month' (*se·sen-*, reduplicated stem of *sem-* 'one', *metz* 'month'), *ma·ma·cui·l-ilwi-tika* 'every five days' (*ma·ma·cui·l-*, reduplicated stem of *ma·cui·l* 'five', *ilwi* 'day').

(h) *-ko* (after consonants), *-k* (after vowels) 'in, into', as in *a·kal-ko* 'in the boat' (*a·kal* 'boat'), *ko·mi-k* 'inside the pot' (*ko·mi* 'pot').

(i) *-tew* 'in the manner of', as in *cha·lchiw-tew* 'in the manner of jade' (*cha·lchiwi* 'jade'), *ketzal-tew* 'in the manner of beautiful feathers' (*ketzal* 'beautiful feather').[10]

7.1.5.3. Only a relatively few suffixes could be added to either noun or verb stems.

(a) *-ka·n*, locative, as in *mich-wa?-ka·n* 'place where people have fish' (*mich* 'fish', *-wa?* 'owner of'), *ye·k-ka·n* 'a good place'

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[9] Because the vocative was loosely attached to the outer layer of nouns, following the inflectional suffixes, it could be classed as an enclitic rather than a suffix. However, no other morpheme seems to have behaved in this enclitic manner.

[10] In the traditional treatments of Classical Nahuatl, *-ko* and *-tew* were classified with the postpositions (§ 7.3), which they resembled in being attached to noun stems and in expressing relational, or "prepositional," meanings. The present classification, however, is based upon inflectional features: the postpositions took the prefixed pronouns to form the same possessive inflection as nouns; *-ko* and *-tew*, on the other hand, manifested the structural characteristics of suffixes, in that they formed words in conjunction with noun stems, not with pronominal or other prefixes.

(*ye·k* 'good (thing)'), *te·-pa⁷pa·kilti⁷-ka·n* 'place which brings happiness to various people' (*te·-*, indefinite personal object, *pa⁷pa·kilti⁷-*, modified reduplicated stem of *pa·kiltia* 'to cause . . . to be happy'), *ko·n-chi·w-ka·n* 'pot-making place' (*ko·n-*, modified stem of *ko·mi* 'pot', *chi·w-*, modified stem of *chi·wa* 'to make').

(b) *-k*, qualitative, as in *tlil-ti-k* 'black' (*tlil* 'dye', *-ti*, ligature), *ista-k* 'white' (*ista* 'salt'), *chipa·wa-k* 'clean' (*chipa·wa* 'to clean'), *tla-namaka-k* 'one who sells things' (*tla-*, indefinite non-personal object, *namaka* 'to sell').

(c) *-lo·* (after *l*), *-yo·* (elsewhere), abstract noun, as in *tlil-lo·-tl* 'blackness' (*tlil* 'dye', *-tl*, singular absolutive), *teo·-yo·-tl* 'divinity' (*teo·* 'god'), *yo·l-ka·-yo·-tl* 'the sustenance necessary for living' (*yo·l-*, modified stem of *yo·li* 'to live', *-ka·*, ligature), *teo·pix-ka·-yo·-tl* 'priesthood' (*teo·pix-*, modified stem of *teo·pia* 'to have god').

7.1.5.4. The reverential *-tzin* was distinctive in its distribution, for it could be attached to particles and independent pronouns as well as to nouns: *ke·ma⁷-tzin* 'no' (reverential) (*ke·ma⁷* 'no'), *te⁷wa-tzin* 'you' (singular, reverential) (*te⁷wa* 'you', singular), *ame⁷wa·n-tzitzin* 'you' (plural, reverential) (*ame⁷wa·n* 'you', plural), *ikno·-tzin* 'orphan' (reverential) (*ikno·* 'orphan'). For additional examples, see §7.1.2.2 and 9.

7.1.5.5. Derived nouns could be formed by combining noun stems; in noun compounds the final stem functioned as the head term, the preceding stems operating as modifiers. Compounds consisting of two nouns were extremely common: *tepos-meka-tl* 'iron chain' (*tepos* 'metal', *meka* 'chain, rope', *-tl*, singular absolutive), *teo·-tla⁷tol-li* 'divine word' (*teo·* 'god'. *tla⁷tol* 'word', *-li*, singular absolutive). In the elaborate religious style developed after the conquest, longer compounds were favored: *tla·ka-tzintilis-tla⁷tlaso·l-li* 'the original sin' (*tla·ka* 'man, person', *tzintilis* 'beginning', *tla⁷tlaso·l* 'sin'), *xiw-tlapal-la⁷cuilo·l-a·mox-tli* 'a book painted in colors' (*xiw-*, modified stem of

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xiwi 'green', *tlapal* 'red', *tla⁷cuilo·l* 'painted', with automatic change of *tl* to *l* after *l*, *a·mox* 'book', *-tli*, singular absolutive).

7.2. PRONOUNS. The independent personal pronouns were inflected for number in the absolutive. The pronouns included abbreviated or short forms which lacked the inflectional suffixes of number. But the full form for each person carried the singular *-tl* or the plural *-tin*, which were among the absolutive suffixes also appended to nouns.

ne⁷, *ne⁷wa*, or *ne⁷wa·tl* 'I'
te⁷, *te⁷wa*, or *te⁷wa·tl* 'you' (singular)
ye⁷, *ye⁷wa*, or *ye⁷wa·tl* 'he, she, it'
te⁷wa·n or *te⁷wa·ntin* 'we'
ame⁷wa·n or *ame⁷wa·ntin* 'you' (plural)
ye⁷wa·n or *ye⁷wa·ntin* 'they'

Using different absolutive plural suffixes, the indefinite and interrogative pronouns were also inflected for number: *aka⁷* 'someone', *aka⁷me⁷* 'some people'; *a·kin* 'who?' (singular), *a·ki⁷ke⁷* 'who?' (plural).

7.3. POSTPOSITIONS. Limited to the possessive inflection, postpositions employed the same set of pronominal prefixes as nouns. Some postpositions could appear either with these prefixes or, as second-position stems, in composition with nouns: *to-tza·lan* 'between us', *kal-tza·lan* 'between the houses'; *i·-pan* 'on it', *tla·l-pan* 'on the ground'; *amo-tlan* 'near you' (plural), *a·-tlan* 'near the water'; *i·m-i⁷tik* 'inside them', *teo·pankal-i⁷tik* 'inside the church'. Other postpositions occurred only with the possessive prefixes: *no·pal* 'for my benefit', *mo-tlok* 'near you', *te·-ikampa* 'behind somebody'.

8. VERBS. The selective features of the verb, like those of the noun, included inflectional modifications of the stem (§8.1); for the verb these modifications were primarily associated with the preterit. In addition, the verb was selectively identified as either transitive or intransitive: the intransitive was limited in its pronominal inflection to the subject prefixes (§8.3.6); the transitive was inflected for object (§§8.3.1., 8.3.4.,

8.3.5), or reflexive (§8.3.2) as well as for subject pronouns.

Most of the inflectional machinery of the verb, however, revealed a striking uniformity. All verbs took the same pronominal paradigm of subject prefixes. There was only one set of object pronouns and one of reflexives. With the exception of the preterit, all tense, aspect, mode, and subject-number inflections (§8.4) were constructed in the same manner for all verbs.

8.1. STEM MODIFICATIONS AND THE PRE-TERIT. Unlike the noun, whose simple stem could end in either a vowel or a consonant, the simple stem of the verb always terminated in a vowel. The verb underwent modifications of contraction and augmentation which were comparable, therefore, only to those of the vowel-ending noun. For the noun these modifications formed the stem of the possessive singular; for the verb they resulted in the stem of the preterit; and the possessive singular and preterit functions, associated with the modified stem of some nouns and verbs, were performed by the simple stem of other nouns and verbs (§7.1.1).

8.1.1. Verb stems underwent the following types of modification:

(a) The contracted stem. To form the modified stem, the final vowel of some verbs was zeroed: *o·-ni-kis* 'I left' (*o·-*, past, *ni-* 'I', *kisa* 'to leave'), *o·-n-a·n* 'I hunted' (*a·mi* 'to hunt').

(b) The contracted sibilant stem. Some verbs whose simple stem ended in *-ya* or *-ia* dropped the final syllable—the total syllable *-ya*, the final *-a* of *-ia*—and added *s* or *x*: *o·-istas* 'it became white' (*istaya* 'to become white'), *o·-ni-k-yo·kox* 'I invented it' (*k-*, 3rd person object, *yo·koya* 'to invent'), *o·-ti-sis-ke?* 'we agreed' (*ti-* 'we', *sia* 'to agree', *-ke?*, preterit subject plural), *o·-ni-k-pix* 'I held it' (*pia* 'to hold, to have').

(c) The contracted glottal stem. Some verbs with their simple stem ending in two vowels dropped the final vowel and added ?: *o·-ti-te·-machti?-ke?* 'we taught people' (*te·-*, indefinite personal object, *machtia* 'to

teach, to cause ... to know'), *o·-ni-tekipano?* 'I worked' (*tekipanoa* 'to work').

(d) The augmented stem. Some verbs augmented the simple stem with ? to form the modified stem: *o·-tla-cua?-ke?* 'they ate something' (*tla-*, indefinite non-personal object, *cua* 'to eat'), *o·-ni-no-soma?* 'I frowned' (*no-*, 1st person reflexive, *soma* 'to frown').

8.1.2. For some verbs the preterit was formed from the simple stem, to which was added *-k*, preterit subject singular (§8.4.1b), or *-ke?*, preterit or future subject plural (§8.4.2b). Alternative preterit formations occurred for some verbs: from *selia* 'to sprout', preterits could be based on the contracted sibilant stems, *selis-* or *selix-*, or the suffixed simple stem, *selia-k*; from *toto·nia* 'to become hot', preterit formations could be constructed from the contracted sibilant stem, *toto·nix-*, or from the suffixed simple stem, *toto·nia-k*; from *no·tza* 'to shout at', preterits could be formed from the contracted stem, *no·tz-*, or from the suffixed simple stem, *no·tza-k*.

8.1.3. In addition to the preterit formation, the modified stem was used in several derivational formations. The perfective agent, *-ki* (§7.1.5.1c), was added to modified verb stems: *ichtek-ki* 'thief' (*ichtek-*, contracted stem of *ichteki* 'to rob'), *teo·pix-ki* 'priest' (*teo·pix-*, contracted sibilant stem of *teo·pia* 'to have god'), *te·-yo·lla·li?-ki* 'one who gives people consolation' (*te·-*, indefinite personal object, *yo·lla·li?-*, contracted glottal stem of *yo·lla·lia* 'to give consolation').

Before the ligatures *-ka·* or *-ti* (§6.2), the modified stem of verbs having such a stem was employed in derivations formed either by suffixation or compounding: *koch-ka·-yo·-tl* 'supper, that which permits sleep' (*koch-*, contracted stem of *kochi* 'to sleep', *yo·-*, abstract noun, *-tl*, singular absolutive), *ni-no-kokox-ka·-neki* 'I imagine myself sick' (*ni-* 'I', *no-*, 1st person reflexive, *kokox-*, contracted sibilant stem of *kokoa* 'to be sick', *neki* 'to imagine, to want'), *xi-k-mo-cui·li?-ti-wetzi* 'take it quickly' (reverential) (*xi-*, imperative subject, *k-*, 3rd person ob-

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ject, *mo-*, 2nd or 3rd person reflexive, *cui·li?-*, contracted glottal stem of *cui·lia* 'to take', reverential, *wetzi* 'to do quickly, to attack'), *tla-sese·x-ti-mo-tla·lia* 'it is getting cool' (*tla-*, indefinite non-personal object, *sese·x-*, contracted sibilant stem of *sese·ya* 'to become cool', *tla·lia* 'to put'). Similar derivations were constructed with the simple stem of those verbs which, lacking a modified stem, formed their preterit with the simple stem and *-k* or *-ke?*: *tla-yowa-ti-mo-mana* 'it is getting dark' (*yowa* 'to become night', *mana* 'to lie on the ground').

8.2. REDUPLICATED STEMS. Reduplication of the verb stem, like that of the noun, involved the repetition of the initial consonant, if any, and the first vowel. Unlike the noun, which used reduplication for the plural inflection, the verb employed reduplication solely for derivational functions. The following reduplicative patterns were applied to verb stems:

(a) (*C*)*V-*. Simple reduplication of the first consonant and vowel of the stem occurred only in conjunction with the frequentative suffixes, *-ka* and *-tza* (§8.6.1.1): *popolo-ka* 'to speak barbarously' (*polo* 'to stutter'), *kokomo-tza* 'to clatter with one's feet' (*komo* 'to fall with a thud').

(b) (*C*)*V·-*. Verbs with this reduplicative pattern, which included vowel lengthening, expressed an intensive, habitual, or continuative action: *cho·cho·ka* 'to weep loudly' (*cho·ka* 'to weep'), *i·ichteki* 'to rob a place habitually' (*ichteki* 'to rob'), *te·teki* 'to slice' (*teki* 'to cut with a knife'), *mo-no·no·tza* 'to consult with one another' (*mo-*, reciprocal, *no·tza* 'to shout at').

(c) (*C*)*V?-*. Reduplication with an inserted glottal stop indicated a distributive or interrupted repetitive action: *i?ichteki* 'to rob several places' (*ichteki* 'to rob'), *te?teki* 'to cut something up into pieces' (*teki* 'to cut with a knife'), *cho?cho·ka* 'to weep repeatedly' (*cho·ka* 'to weep').

(d) (*C*)*V?*(*C*)*V?-*. A doubling of the glottal reduplicative pattern expressed an intensification of the repetitive notion: *ne?ne?nemi*

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'to walk up and down, stopping intermittently' (*nemi* 'to walk'), *m-a?a?a·wiltia* 'to amuse oneself in various places' (*m-*, contracted from *mo-*, 2nd or 3rd person reflexive, *a·wiltia* 'to pass the time in levity').

8.3. INFLECTIONAL PREFIXES. Verb inflections expressed by prefixes were concerned primarily with pronominal references; they included, in addition, one tense element and two morphemes indicating direction. This system of prefixes occupied seven positions.

8.3.1. In the first position adjacent to the stem were two indefinite object pronouns: the personal *te-* 'someone, people' and the non-personal *tla-* 'something, things.' These indefinites were either used in place of the definite objects of the fifth position (§8.3.5), or, with verbs taking two objects, they functioned as secondary objects in conjunction with the definites: *ni-te·-a?wa* 'I am scolding someone' (*a?wa* 'to scold, to quarrel with'), *ni-tla-cua* 'I am eating something' (*cua* 'to eat'), *ni-k-te·-maka* 'I am giving it to somebody' (*k-* 'it, him, her', *maka* 'to give'), *ni-k-tla-maka* 'I am giving something to him', *ne-tla-cuitlawi·-lo* 'one is on one's guard against things' (*ne-*, indefinite reflexive, *cuitlawi·-*, *V·Vz-* stem of *cuitlawia* 'to guard', *-lo*, passive).

8.3.2. The following reflexive or reciprocal pronouns comprised the prefixes of the second position: *no-*, first person singular, *to-*, first person plural, *mo-*, second or third person singular or plural, and *ne-*, indefinite singular or plural. Examples are: *ni-no-cuepa* 'I am turning around' (*cuepa* 'to turn'), *ti-to-tlaso?tla-?* 'we love one another' (*tlaso?tla* 'to love', *-?*, general subject plural), *ne-po·walo* 'one becomes proud of oneself' (*po·walo* 'to become proud). Besides conveying a reflexive or reciprocal meaning, these pronouns were also used with reverential forms (§8.6.1.2c): *o·-mo-mikili?* 'he died' (reverential) (*o·-*, past, *mikili?-*, modified stem of *mikilia*, reverential of *miki* 'to die'), *ti-m-a·miki·tia* 'you are thirsty' (reverential) (*a·miki·tia*, reverential of *a·miki* 'to be thirsty'). As the examples indicate, subject

pronouns (§8.3.6) accompanied reflexives referring to the first or second persons.

8.3.3. The third position was filled by the directionals, *on-* 'thither, away, go and do' and *wa·l-* 'hither, come and do': *no-k-on-itta* 'I am visiting him' (*no-*, from *ni-* 'I' (§4.2.1), *itta* 'to see'), *xi-wa·l-lachia* 'look this way' (*xi-*, imperative subject, *lachia*, from *tlachia* 'to look').[11]

8.3.4. The plural third person object, *im-*, was the sole member of the fourth position slot. When the verb had only one object, *im-* was attached to a preceding *k-* (§8.3.5) to form the plural of the third person object: *k-im-pa·ktia* 'he makes them happy' (*pa·ktia* 'to cause ... to be happy'). When two objects occurred, one could be expressed by *im-* and the other by any fifth position pronoun: *xi-ne·ch-in-maka* 'give them to me' (*ne·ch-* 'me', *maka* 'to give'), *ni-mitz-im-pialia* 'I am keeping them for you' (*mitz-* 'you', singular object, *pialia* 'to keep for').

8.3.5. The fifth position from the stem was occupied by the definite object prefixes: *ne·ch-* 'me'; *mitz-* 'you', singular; *te·ch-* 'us'; *ame·ch-* 'you', plural; *ki-* (preconsonantal in either word initial or in postconsonantal position), *k-* (elsewhere), third person. Examples are: *o·-ti-ne·ch-cui·li?* 'you took it away from me' (*o·-*, past, *cui·li?-*, modified stem of *cui·lia* 'to take away from'), *n-ame·ch-miktia* 'I am beating you' (plural) (*miktia* 'to beat, to kill'), *an-ki-miktia-?* 'you (plural) are killing it' (*-?*, general subject plural).

8.3.6. In the sixth position were the subject pronouns: *ni-* 'I', *ti-* 'you', singular, *ti-* 'we', *am-* 'you', plural, and *xi-*, imperative subject. The absence of a pronoun in this slot indicated a third person subject. Sub-

[11] Although Carochi included examples to illustrate the directional meaning of *on-*, he noted that in some expressions it merely "serves as an ornament and adds a certain gravity to one's speech" (1645, p. 445). Wherever this prefix is found in modern dialects, it most commonly carries a directional denotation (Croft, 1953, p. 275; Whorf, 1946, p. 384). In Sierra Nahuat, however, Key identifies *on-* as a prefix indicating respect (1960, p. 139).

ject plural was indicated by suffixes: *ti-tlapo·wa* 'you (singular) are counting' (*tlapo·wa* 'to count'), *ti-tlapo·wa-?* 'we are counting' (*-?*, general subject plural), *tlapo·wa* 'he is counting', *tlapo·wa-?* 'they are counting', *xi-tlapo·wa* 'count!' (singular imperative), *xi-tlapo·wa-ka·n* 'count!' (*-ka·n*, imperative subject plural).

8.3.7. The outermost prefix position, the seventh from the stem, contained only one morpheme, the past tense *o·-*. This prefix was used most frequently with the preterit formations (§8.1) and the remote past suffix, *-ka* (§8.4.1a): *o·-ni-tlapo·w* 'I counted' (*tlapo·w-*, modified stem of *tlapo·wa* 'to count'), *o·-ni-tlapo·w-ka* 'I had counted, I used to count'. The past prefix also occurred, though rarely, with the imperfective *-ya* (§8.4.1d): *o·-ni-tlapo·wa-ya* or *ni-tlapo·wa-ya* 'I was counting.'

8.4. INFLECTIONAL SUFFIXES. The verb complex ended in two inflectional layers of suffixes.

8.4.1. The first position after the verb stem was filled by suffixes of tense (remote past, preterit, future), aspect (imperfective), or mode (conditional). The absence of a first-position suffix indicated the present tense, the simple stem of the verb being employed for this function: *ki-paka* 'he is washing it' (*paka* 'to wash'), *ni-nemi* 'I am living' (*nemi* 'to live').

(a) *-ka*, remote past, attached to the modified stem, if the verb possessed this stem type: *o·-nen-ka* 'he lived long ago' (*o·-*, past, *nen-*, modified stem of *nemi* 'to live'), *o·-ni-tlacua?-ka* 'I had eaten, I had been eating' (*tlacua?-*, modified stem of *tlacua* 'to eat'), *o·-cuicawitz-ka* 'he came to sing' (*cuicawitz-*, modified stem of the compound *cuica* 'to sing' and *witze* 'to come'), *o·-ni-k-paka-ka* 'I used to wash it' (*paka* 'to wash', the simple stem of a verb having no distinctive modified stem form).

(b) *-k*, preterit, with the simple stem of verbs which had no modified stem: *o·-ni-k-itta-k* 'I saw it' (*itta* 'to see'), *o·-se·wa-k* 'it was cold' (*se·wa* 'to be cold'). For verbs having

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a modified as well as a simple stem, the preterit was constructed with the modified form instead of the preterit suffix (§8.1).

(c) -s, future: *tlapo·wa-s* 'he will count' (*tlapo·wa* 'to count'). Verbs ending in two vowels used the *V·Vz-* stem with the future suffix (§4.2.3d): *ni-tlatekipano·-s* 'I will work' (*tlatekipanoa* 'to work').

(d) -ya, imperfective, referring to an incompleted or durative action in the past: *ni-nemi-ya* 'I was living, I have been living' (*nemi* 'to live'), *ti-no·tza-ya-ʔ* 'we were calling' (*no·tza* 'to call', *-ʔ*, general subject plural).

(e) -skia, conditional: *aya·k miki-skia* 'nobody would die' (*miki* 'to die'). Like the future, the conditional was suffixed to the *V·Vz-* stem of verbs terminating in two vowels (§4.2.3d): *ni-mitz-tlaxtla·wi·-skia* 'I would pay you' (e.g., if you would serve me), 'I would have paid you' (e.g., if you had served me) (*tlaxtla·wia* 'to pay'). Although this suffix expressed a conditional event in the past or present, the prefixing of *o·-*, past, resulted in an unambiguous past conditional: *o·-ni-mitz-tlaxtla·wi·-skia* 'I would have paid you'.

8.4.2. The second and final position of the inflected verb was occupied by suffixes expressing plurality of the subject; each of these suffixes was associated with certain tense, aspect, or mode categories of the verb.

(a) -ka·n, imperative subject plural: *xi-no·tza-ka·n* 'call!' (plural imperative) (*no·tza* 'to call'). The *V·Vz-* stem of verbs ending in two vowels was employed with this suffix: *xi-te·machti·-ka·n* 'preach!' (plural imperative) (*te·machtia* 'to preach'). The suffix *-ka·n* always formed the plural of verbs containing *xi-*, imperative subject, but it was also used with other subject prefixes to convey a hortatory force as well as to denote a plural number: *ti-tlapo·wa-ka·n* 'we must count' (*tlapo·wa* 'to count').

(b) -keʔ, preterit and future subject plural: *o·-an-tlapo·w-keʔ* 'you (plural) counted' (*tlapo·w-*, modified stem of *tlapo·wa* 'to

count'), *tlapo·wa-s-keʔ* 'they will count' (*-s*, future). When added to verbs which formed their preterit with the simple stem and *-k* (§8.4.1b), this suffix coalesced with *-k* to result in *-keʔ* rather than the expected **-k-keʔ*: *o·-ti-k-to·ka-keʔ* 'we buried it' (*to·ka* 'to bury').

(c) -ʔ, general subject plural, added to verbs in the present, remote past, imperfective, or conditional: *t-a·miki-ʔ* 'we are thirsty' (*a·miki* 'to be thirsty'), *o·-ti-k-pix-ka-ʔ* 'we used to have it' (*pix-*, modified stem of *pia* 'to have', *-ka*, remote past), *an-po·walo·-ya-ʔ* 'you (plural) were being counted' (*po·walo·* 'to be counted', *-ya*, imperfective), *no·tza-skia-ʔ* 'they would call' (*no·tza* 'to call', *-skia*, conditional).

8.5. IRREGULAR VERBS. A few verbs had stems and inflectional formations which did not follow the prevailing patterns. The verb 'to be' was inflected with the suppletive stems *ie-* and *kat-*, the latter giving rise to several irregular variations: *n-ie-s* 'I will be', *katki* 'he is', *ti-kate-ʔ* 'we are', *an-katka-ʔ* 'you (plural) are'. Other irregular verbs had unique though obviously related stem forms, such as *iʔka-* and *iʔkak* 'to be standing', *iaʔ-*, *ia·-*, *iaw-*, and *wia-* 'to go'.

With the irregular verbs should be classed the two directional auxiliaries, which were employed only as final-position stems in verb compounds. A defective paradigm of inflections as well as unique stem forms characterized these auxiliaries; the present tense was based on *ti-* 'to go in order to' and *ki-* 'to come in order to', the preterit on *to-* and *ki-*, and the future on *ti·w-* and *ki·w-*, singular subject, and *ti·wi-* and *ki·wi-*, plural subject. The general subject plural, *-ʔ*, was used in all inflections of the auxiliaries: *ti-tlapo·wa-to-ʔ* 'we went to read' (*tlapo·wa* 'to read, to count'), *ti-tlapo·wa-ki·wi-ʔ* 'we will come to read'.

8.6. VERB-FORMING DERIVATIONS. Verb themes could be constructed by the addition of suffixes to verb stems (§8.6.1.1– 8.6.1.3) and to noun or particle stems

(§8.6.1.4). In addition, compounding (§8.6.2) was a productive process in the formation of verb themes.

8.6.1. DERIVATIONAL SUFFIXES. Of the enormous range of suffixing processes which produced derived verbs in Classical Nahuatl, only a highly selected sample can be presented. Many of these processes were clustered into derivational subsystems.

8.6.1.1. One subsystem was composed of the following three suffixes, added to verb stems which referred to specific kinds of sounds and movements:

(a) *-ni*, medio-passive momentaneous, attached to a *V·-* form of the stem: *tecui·-ni* 'to burst into flame', *tzaya·-ni* 'to rip' (of cloth), *polo·-ni* 'to stutter'.

(b) *-ka*, medio-passive frequentative, added to a reduplicated stem (§8.2a): *tetecui-ka* 'to rush noisily' (of a river), 'to make the noise of a blazing fire', *chichipi-ka* 'to fall in a large quantity of drops' (of any liquid) (*chipi* 'to fall in drops').

(c) *-tza*, active frequentative, added to the same type of reduplicated stem as *-ka*: *tetecui-tza* 'to make a clattering noise with one's feet'. Of the three suffixes, *-tza* was the only one forming transitive verbs which required an object: *xi-k-kakapatz-ti-wetzi* 'make the tortillas rapidly', literally 'make frequent slapping sounds on it rapidly' (*xi-*, imperative subject, *k-*, 3rd person object, *kakapatz-*, modified stem of *kakapa-tza*, containing the reduplicated stem of *kapa* 'to make a slapping sound', *-ti*, ligature, *wetzi* 'to do . . . rapidly, to fall').

8.6.1.2. Several sets of transitivizing suffixes comprised another subsystem of verb derivations. This was a formally intricate subsystem. Each transitivizing morpheme had several allomorphs: e.g., the causative was formed by *-a*, *-wia*, *-tia*, or *-ltia*. Similar allomorphic forms overlapped different morphemes: e.g., *-wia* was one of the allomorphs of the causative, the applicative, and the reverential. Although the suffix allomorphs were selectively distributed among most

verbs, and although the simple unchanged stem of the verb was employed most commonly, many verbs had optionally variant forms of stem and suffix entering into the transitivizing derivations: e.g., the causative *-tia* was suffixed to the unchanged stem of *yo·li* 'to live' in *yo·li-tia* 'to give life', to the *CyVi-* stem of *icusi* 'to get cooked' in *icuxi-tia* 'to cook', and to the modified contracted stem of *pa·ki* 'to be happy' in *pa·k-tia* 'to cause . . . to be happy', the latter varying optionally with *pa·ki-ltia* as a causative.

(a) *-a*, *-wia*, *-tia*, *-ltia*, causative: *koto·ni-a* or *koto·n-a* 'to break' (*koto·ni* 'to be broken'), *temo-wia* 'to take down' (*temo* 'to go down'), *pa?i·-tia* 'to give medicine to drink' (*pa?i·* 'to drink medicine'), *chi·wa-ltia* 'to cause . . . to make' (*chi·wa* 'to make'), *miki-tia* or *mik-tia* 'or *miki-ltia* 'to kill' (*miki* 'to die'), *itti-tia* or *itta-ltia* or *itzti-ltia* 'to make . . . see' (*itta* 'to see').

(b) *-lia*, *-wia*, *-lwia*, *-alwia*, *-ilwia*, applicative. This morpheme, when added to an intransitive verb, produced a transitive which demanded an object; when suffixed to a transitive verb, it directed the verbal predication to a second object. Examples are: *miki-lia* 'to die for' (*miki* 'to die'), *chi·wi-lia* 'to make . . . for' (*chi·wa* 'to make'), *tla?cuil-wia* 'to write to' (*tla?cuiloa* 'to write'), *tlapo-lwia* 'to open . . . for' (*tlapoa* 'to open'), *i?t-alwia* 'to talk about' (*i?toa* 'to talk'), *pach-ilwia* 'to press . . . for' (*pachoa* 'to press').

(c) *-a*, *-lia*, *-wia*, *-tia*, *-ltia*, *-alwia*, reverential. The reverential formation always included the reflexive prefixes (§8.3.2), a pattern indicated by *mo-*, second or third person singular or plural reflexive, in the illustrative examples below. Apparently the transitivized manner of expression, "you cause yourself to do so-and-so" or "you do so-and-so for yourself," conveyed respect for the person addressed or spoken about. Examples are: *mo-kalaki-a* 'to enter' (reverential) (*kalaki* 'to enter'), *mo-cho·ki-lia* 'to

weep' (reverential) (*cho·ka* 'to weep'), *mo-chi·walti-lia* 'to cause ... to make' (reverential) (*chi·walti-*, modified stem of *chi·wa-ltia*, composed of *chi·wa* 'to make' and *-ltia*, causative), *mo-chi·wili-lia* 'to make ... for' (reverential) (*chi·wili-*, modified stem of *chi·wi-lia*, composed of the *CyVi-* stem of *chi·wa* and *-lia*, applicative), *mo-tla?pal-wia* 'to greet' (reverential) (*tla?paloa* 'to greet'), *mo-nemi-tia* 'to live' (reverential) (*nemi* 'to live'), *mo-tolo-ltia* 'to swallow' (reverential) (*toloa* 'to swallow'), *on-m-e·wi-tia* or *on-m-e·wa-ltia* 'to depart' (reverential) (*on-* 'thither', *e·wi-*, the *CyVi-* stem of *e·wa* 'to rise'), *i?t-alwia* 'to talk' (reverential) (*i?toa* 'to talk').

(d) *-tzinoa*, reverential for reflexive verbs: *mo-teo·chi·w-tzinoa* 'to pray' (reverential) (*mo-teo·chi·wa* 'to pray'), *mo-tlalo?-tzinoa* 'to run' (reverential) (*mo-tlaloa* 'to run'). Unlike the other suffixes of the transitivizing subsystem, *-tzinoa* occurred as a single allomorph and it was consistently added to the modified stem form of the verb. In phonemic shape it also differed from the other reverential suffixes, which it resembled in function. It constituted a minor subsystem with *-po·loa*, pejorative, which was likewise added to modified verb stems: *i?to?-po·loa* 'to confess one's sins' (*i?toa* 'to talk'). Both *-tzinoa* and *-po·loa* had a formal resemblance to two of the affective suffixes added to nouns (§7.1.2.2).

8.6.1.3. Somewhat like the transitivizing elements, a set of passivizing allomorphs, *-o·*, *-lo·*, *-wa*, was suffixed to variable verb stems to form derived verbs: *te·x-o·* 'to be ground' (*te·si* 'to grind'), *machti-lo·* 'to be taught' (*machtia* 'to teach'), *a·xi-wa* 'to be reached' (*a·si* 'to reach'), *a·n-o·* or *a·na-lo·* 'to be taken' (*a·na* 'to take'), *itk-o·* or *itki·-wa* 'to be raised' (*itki* 'to raise'), *so-lo·* or *so-wa* 'to be punctured' (*so* 'to puncture').

8.6.1.4. Verbalizing suffixes were attached to nouns or particles to form either intransitive or transitive verbs.

(a) *-a*, *-ti*, *-tia*, intransitive verbalizer: *te·nyo-a* 'to become famous' (*te·nyo·* 'fame'),

tla·ka-ti 'to be born' (*tla·ka* 'man'), *ne·n-ti* 'to be frustrated' (*ne·n* 'in vain'), *te-tia* 'to become hard' (*te* 'stone').

(b) *-lia*, *-tia*, *-wia*, transitive verbalizer: *o·me-lia* 'to make two from' (*o·me* 'two'), *tla·ka-tia* 'to give birth to' (*tla·ka* 'man'), *po?-tia* 'to make ... similar' (*po?* 'like'), *ista-wia* 'to salt' (*ista* 'salt'), *achtopa-wia* 'to be first in doing' (*achtopa* 'first').

8.6.2. COMPOUNDING. A compound was identified as a verb by the presence of a verb stem in the final stem position. In special usages, certain verbs required inflectional affixes between the compounded stems: verbs preceding *neki* 'to want' took the future suffix, *-s*, as in *ti·tlani-s-neki* 'to want to send' (*ti·tlani* 'to send'); when employed as final-position stems with specialized meanings, some half-dozen verbs, among them *tla·lia* 'to put', were inflected with reflexive prefixes, as in *sese·x-ti-mo-tla·lia* 'to get cool' (of the weather) (*sese·x-*, modified stem of *sese·ya* 'to get cool', *-ti*, ligature, *mo-*, reflexive second or third person singular or plural). Outside of these special instances compound verbs were inflected as units, the prefix inflections appearing before the first stem and the suffix inflections after the final stem, as in *o·-ni-mitz-mik-ka·-toka-ka* 'I had imagined that you were dead' (*o·-*, past, *ni-* 'I', *mitz-* 'you', singular object, *mik-*. modified stem of *miki* 'to die', *-ka·*, ligature, *toka* 'to imagine', *-ka*, remote past).

In verb compounds the final stem could be preceded by a verb, a noun, or a particle. Verb-plus-verb combinations were freely formed: *cuika-witze* 'to come to sing', *tlaokox-cuika* 'to sing sadly' (*tlaokox-*, modified stem of *tlaokoya* 'to be sad'). Some verb stems assumed specialized meanings as second-position elements in compounds: *mati* 'to know' meant 'to think that, to seem' in compounds; *wetzi* 'to fall' took on the meaning 'to do ... rapidly'; *e·wa* 'to rise' could mean 'to try' as a second-position stem.

Noun stems were incorporated within the verb compound. Before transitive verbs the incorporated noun stem functioned as an

object or as a verb modifier: *xo·chi-pe?pena* 'to pick flowers' (*xo·chi* 'flower', *pe?pena* 'to pick, to select'), *tle-watza* 'to roast, to dry (e.g., meat) in the fire' (*tle* 'fire', *watza* 'to dry'). With intransitive verbs the noun stem acted either as subject or as verb modifier: *kech-koto·nalo·* 'to be beheaded' (*kech* 'neck', *koto·nalo·* 'to be cut'), *tle-watzalo·* 'to be roasted' (*tle* 'fire', *watzalo·* 'to be dried').

Particles having a modifying function were also compounded with verbs: *a?kopa-tlachia* 'to look upward' (*a?kopa* 'upward, above', *tlachia* 'to look'), *ne·m-pe·waltia* 'to abuse without cause' (*ne·m-* from *ne·n* 'in vain, without cause', *pe·waltia* 'to abuse').

9. PARTICLES. The lexicon of Classical Nahuatl was rich in particles, whose nuances of meaning intrigued the early grammarians (Olmos, 1547, pp. 98–106; Carochi, 1645, pp. 493–529). The expressive force of the numerous particles was augmented by the stylistic device of using clusters of them in syntactic combination (§10.2).

Among their derivational potentialities, particles shared only a few of the derivational suffixes which formed nouns (§7.1.5.4) and verbs (§8.6.1.4). They had no unique derivational morphemes of their own. Reduplication was applied to some particle stems: *se·sen-yowal* 'every night' (*se·sen-*, from *se·sem-*, reduplicated form of *sem-*, combining stem of *se* 'one', *yowal* 'night'). The particle *we?kaw* 'a long time' occurred in a reduplicated form in *we·we?kawtika* 'from time to time'.

Particles were profusely compounded. Two particles with similar meanings were often joined: *ok* 'yet', *no?ma?* 'yet', *okno?ma?* 'yet'. Modifications of meaning were conveyed by the compounding of particles: *intla·-k-ay-ai·k* 'if never until now' (*intla·* 'if', *-k*, elided from *-ka·*, ligature, *ay-*, elided from *aya* 'not yet', *ai·k* 'never'). Some particles appeared either in compounds or in syntactic combinations of the same type, such as *ka*, a particle having reverential force, in *ke·ma?-ka* or *ke·ma? ka* 'no' (reverential) (*ke·ma?* 'no'), *ka a?mo·* or *ka a?mo·-*

tzin 'yes' (reverential) (*a?mo·* 'yes', *-tzin*, reverential), *achti?-tzin-ka* 'in a little while' (reverential). The analysis of many derived particles was obscure, particularly the groups of particles which were formally related and had similar meanings, such as *achto, achtopa, akachto, akachtopa, akatto, yakatto, yakattopa*, all meaning 'first'.

SYNTAX

10. UTTERANCE TYPES. In Classical Nahuatl an utterance could be formed with or without a verb.

10.1. NON-VERBAL UTTERANCE. A noun in the vocative (§7.1.5.2a) or a single particle, such as *iyo* 'alas' or *ke·ma?* 'no', constituted a complete utterance. Morphemes or words joined in a copular relationship also formed utterances without verbs. One of these constructions was the combination of a subject pronoun prefixed to a noun: *ni-tla·ka* 'I am a man' (*ni-* 'I', *tla·ka* 'man'), *ti-no-pil-tzin* 'you are my son' (reverential) (*ti-* 'you', singular, *no-* 'my', *pil* 'son', *-tzin*, reverential). Another type of copular utterance was the sequence of two or more nouns, with or without modifying particles: *nakatl in i·tlacual cuawtli* 'meat is the food of the eagle', literally 'meat the its-food eagle'.

10.2. VERBAL UTTERANCE. A sentence was an utterance containing a verb. The minimal simple sentence was composed of an independent clause expressed by a single verb (§11.1). When two or more independent clauses were closely linked, they comprised a compound sentence. The complex sentence was made up of one or more dependent clauses in addition to the independent clause or clauses.

In the great majority of instances the status of the clause was overtly marked by a particle functioning as an introducer. Among the many particles signaling the independent clause were: *aw* 'and', *axka·n* 'now', *kil* 'it is said that', *ma·*, affirmative with the imperative form of the verb, *ma·ka* or *ma·kamo·*, negative with the imperative, *ni·man* 'then', *san* 'only, but', *ye* 'certainly,

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already'. Some of the subordinating parti-
cles which introduced dependent clauses
were: *inik* 'in order that', *intla·* 'if', *intla·ka* or
intla·kamo· 'if not', *i[?]cua·k* 'whenever, at the
time that', *i·man* 'when', *i·pampa* 'because',
ma·nel 'though', *okik* 'while'. Each of these
particles had a wide range of meanings and
usages, which were further extended by their
frequent occurrence in compounded forms
(see §9) and in syntactic sequences, such as
san achi[?]ton 'nearly', *san cue·l* 'in a very
short time', *san ika in* 'in a short time, pres-
ently', *san i·pan* 'moderately', *san mach*
'not only that', *san sen* 'together', *san wel
achi·k* 'almost', *san ye* 'on the contrary',
sa san 'anyhow', *sa sankenin* 'more or less'.

Although the clause was often formally
labeled as dependent or independent by the
introducing particle, it could also appear
with no formal indication of its status.
Juxtaposed clauses might be implicitly in-
dependent or dependent: *mesentlalike[?] mono-
notzke[?] in teteo·* 'the gods assembled; they
deliberated', literally 'they-assembled they-
deliberated the gods'; *awel onmomayaw in
tleko* 'he was unable to throw himself into the
fire', literally 'he-was-unable he-threw-him-
self the into-fire'.

11. COMPONENTS OF THE SENTENCE. The
sole obligatory component of the sentence
was the predicate. The substantive, func-
tioning as a subject or an object, was an op-
tional unit of sentence structure. A predicate
or a substantive occurred either in the sim-
ple form of a single word or in the expanded
form of several words. The words of an ex-
panded unit were linked either in a parallel
construction or in a complex construction
made up of a nuclear term with its modifyng
satellites.

11.1. PREDICATE. The minimal sentence
was the independent clause containing a one-
verb predicate: *o·chika·wak* 'it was strong',
o·nikcuik 'I took it'. In such sentences the
subject and the object could be expressed
by inflectional prefixes (§8.3) or by in-
corporated noun stems (§8.6.2).

Parallel predicative constructions, particu-
larly those composed of a redundant se-
quence of verbs with similar meanings, were
a favorite stylistic device of Classical Na-
huatl: *wewenton i·pan mocuep i·pan mixew
i·pan mokixti o·welkoliw o·welkaistak o·mo-
cuastapon* 'he changed himself into an old
man, he transformed himself into one, he
took on the appearance of one, he became
completely bent, he became completely
white-headed, he became completely gray-
headed'. Parallel verbs were sometimes
linked with the conjunctive particle *i·wan*
'and': *intla· tikmi·ti·s motech kisas i·wan
kiyamawili·s in monakayo* 'if you will drink
it, it will enter and heal your flesh', literally
'if you-will-drink-it into-you it-will-enter and
it-will-heal the your-flesh'.

In addition to parallel linkages, the predi-
cate was also expanded by subsidiary modi-
fying words and by complementing words or
phrases. Innumerable particles and particle
combinations functioned as adverbs of time,
place, and manner: *ya·lwa* 'yesterday', *awi·k*
'here and there', *iw* 'thus', *iw in* 'in this
way', *iw on* 'in that way', *wei iwi* 'in an ex-
treme manner', *san ye no·iw* 'in the same
way'. Another form of adverbial modifier
was composed of a noun, usually a noun hav-
ing a qualitative reference, followed by the
particle *ik*: *cualli ik* 'in a good manner, well'
(*cualli* 'good, good thing'). Many kinds of
complementive expansions could be formed.
One commonly used type was the secondary
verb which followed the nuclear verb:
o·nipe·w nitlacua 'I began to eat', literally
'I-began I-eat'; *nikmati nitla[?]cuilo·s* 'I know
how to read', literally 'I-know-it I-will-
read'. When the complement followed a
nuclear verb of thinking or believing, or
when it was a direct quotation after a verb
of saying, it was introduced by the linking
particle *ka* 'that': *sekintin momatke[?] ka
miktlampa in kisaki·w* 'some thought that it
(the sun) rises in the north', literally 'some
they-thought that from-the-north the it-
comes-to-rise'; *kilwi in wewenton ka nika·n*

katki in paʔtli 'the old man said, "Here is the medicine" ', literally 'he-said the old-man that here it-is the medicine'.

11.2. SUBSTANTIVE. Independent personal pronouns were employed as substantives with subject or object functions, but their occurrence was rare. They appeared primarily in copular expressions, with or without verbs: *cuix aʔmo· teʔ* 'might it not be you?' literally 'maybe? not you'; *kaʔ neʔwa·tl* 'it-is I'. Elsewhere they served to emphasize the pronominal references expressed in the verb complex: *ka aʔmo· o·nimitzmiktiʔ yeʔ teʔwa·tl o·tine·chmiktiʔ* 'I certainly did not hit you; it was you who hit me', literally 'certainly not I-hit-you it you you-hit-me'. The interrogative and indefinite pronouns also functioned as substantives: *a·kiʔkeʔ o·wa·llaʔkeʔ* 'who came?' literally 'who-(plural)? they-came'.

In most instances the simple substantive was a noun in the role of subject or object. Although word order was flexible, a subject substantive usually followed the predicate verb and preceded an object substantive: *kicuito in askatl in tlaolli* 'the ant came to take the maize kernel', literally 'it-came-to-take-it the ant the maize-kernel'.

Nouns in parallel construction, representing a type of expanded substantive, were either linked with *i·wan* 'and' or were merely juxtaposed: *i·a·matzon i·wan i·a·maneapanal* 'his-paper-mitre and his-paper-stole'. The juxtaposition of two nouns was a metaphorical device, which produced new lexemes by attaching extended meanings to certain combinations: *noma· noksi*, literally 'my-hand my-foot', meant 'my body'; *in xo·chitl*

in cuikatl, literally 'the flower the song', meant 'the poem'.

Expanded substantives were also composed of a nuclear noun with its modifier or its complement. The head noun usually followed its modifying term, which was a particle or another noun: *wel aʔmo· cualli* 'it's not a very good thing', literally 'very not good-thing'; *in cualtin tla·kaʔ* 'the good men', literally 'the good-ones men'. The sequence of a nuclear term preceding the modifying noun, however, was the normal possessive construction. In this type of syntactic construction a possessed noun or postposition was followed by a noun functioning as the possessor: *i·tzacual tonatiw* 'the pyramid of the sun', literally 'its-pyramid sun'; *i·nmasawa·n in te·teoʔ* 'the gods' deer', literally 'their-deer the gods', a metaphor meaning 'the Spaniards' horses'; *i·kampa in tepe·tl* 'in back of the mountain', literally 'its-rear the mountain'; *i·pan kalli* 'inside the house', literally 'its-interior house'. The complementive type of expanded substantive was composed of a nuclear noun followed by a relative clause, usually with the intervening particle, *in* 'the, this': *totechiwka··wa·n in o·nemikoʔ in tla·ltikpak* 'our ancestors who came to live on the earth', literally 'our-ancestors this they-came-to-live the on-earth'. A relative clause could also function as the complement of a subject or object expressed, not only by a noun, but also by a pronominal prefix: *kinmotlasoʔtilia in tote·cuiyo dios in kimotlayekoltilia* 'Our Lord God loves those who serve him', literally 'he-loves-them-(reverential) the our-lord god this they-serve-him- (reverential)'.

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