Teresa McFarland Laniado
California State University, Fullerton

The Derivational Morphology of Totonac

Background

Totonac is an indigenous language spoken in the central eastern part of Mexico. As with many languages of the Americas, attempts to classify Totonac were first undertaken in the 1920s, 30s and 40s by such notable linguists as Edward Sapir, Benjamin Lee Whorf, and Morris Swadesh. To the present day, however, uncertainty and controversy continue to surround the classification of Totonac. Part of the difficulty relates to the fact that the languages of Meso-america historically formed a *Sprachbund,* and therefore share many areal traits. Currently most, but not all linguists, group Totonac and its close relative Tepehua together with language families such as Mayan and Mixe-Zoquean.

Totonac is currently the native language of a dwindling number of speakers in three states-Puebla, Veracruz, and Hidalgo—on or near the east coast of central Mexico. It has four main dialects, called Papantla, North-Central, South-Central and Misantla Totonac. Sadly, as with so many languages around the world, it is quickly being replaced by the dominant language (in this case, Spanish) as roads are built into formerly isolated areas in order to gain access to natural resources. This language, once spoken by the culturally influential people who built the pyramids of Teotihuacan outside Mexico City, is now spoken by fewer than 200,000 according to the 1990 census(1).

Perhaps the most interesting aspect of Totonac for linguists is its morphology. It is an agglutinative language with quite complicated and productive word formation. Most of the roots

are monosyllabic and fall into three main categories: verbs, statives and nominals. Inflection and derivation are accomplished primarily through affixation, although compounding is also common, and reduplication sometimes occurs with nominals. One important grammatical element, second person inflection, is marked by suprasegmental laryngealization (laryngealized vowels are a distinctive feature of Totonac).

The inflectional categories for verbs are person (both subject and object), number, tense, aspect and mood. Third person singular, subject or object, is always marked with a zero morpheme. For nominals, number inflection is optional except with human nouns, and possession is obligatorily marked with body parts but is optional in all other cases. Neither case nor gender is marked. Inflectional affixes are added to the periphery of a stem, which is composed of the root plus any derivational affixes. Two clitics, the past tense marker /-stan/ and /-cu/, meaning *already,* may appear at the rightmost edge of any class of word without affecting the stress pattern of the word(2).

Overview of Derivational Morphology

This paper will focus on the complex derivational morphology of Totonac, using examples primarily from the Misantla dialect. As mentioned above, most word formation is achieved through prefixation, suffixation or compounding, with a few cases of reduplication. A very large number of productive affixes exists, many with uses that would be handled syntactically (through case marking or prepositional phrases) or lexically in other languages. Long words may be built up out of many affixes on a root, expressing meanings that would require whole sentences in English. Phonological rules such as assimilation and deletion can make it difficult to analyze these morphologically complex words. A particularly noteworthy characteristic of Totonac is its widespread use of body part prefixes in word formation.

<u>Compounding</u>

All three main categories of words—verbs, statives and nominals—participate in compounding. Verbs may be created from verb+verb, verb+stative, or stative+verb. Compound verbs have only one set of inflectional affixes on the periphery, like simple verbs, and the normal stress pattern of primary stress on the last syllable applies to them. Examples include:

Verb+Verb

/ut ciiq-laqan/
s/he hidden-see X
's/he spies on X'

Stative+Verb

/hun-ciwis tu-nuu-maa-lal/
DET-stone INCHOATIVE-inside-supine-PERFECTIVE
'the stone is inside'(3)

Compound nominals may be formed from two other nominal elements. It should be noted that nouns and adjectives are not formally distinguishable. Compounds can be differentiated from sequences of nominals by their treatment as single words by phonological and stress rules.

Nominal+Nominal

/saasti-kaat/ 'New Year'

/kastalan-ca/ 'bread (Castillian-tortilla)'(4)

/kil-tuu-/ ' jaw (mouth-foot)'(5)

There are numerous examples of the last type of compound shown above, that of combined body part morphemes. Some of them are common calques throughout the Mesoamerican *Sprachbund*.

Reduplication

Reduplication occurs only with nominals and is not very productive. It often produces a repetitive or intensifying meaning, although sometimes it has the same general meaning as the unreduplicated form. In most cases the entire word is reduplicated rather than a single morpheme. Examples:

/tuql-tuql-wan/   /kaat-kaat/
hiccup-hiccup-become   year-year
's/he has the hiccups'   'yearly'(6)

/cutuqs-cutuqs ik-taawan/
lame-lame 1SUB-walk
'I limp'(7)

Affixation

Word formation via affixation is an extremely productive process in Totonac. There is a large number of both prefixes and suffixes, many of them with one or more variants, with prefixes seeming to predominate in verbs and suffixes in nominals. In the Misantla dialect, there are roughly six major verb prefix categories, and three verb suffix categories. Nominals have approximately five major suffix categories. There are numerous minor affixes as well. Because of space limitations, I will focus entirely on morphology and ignore the phonological complications of these affixes.

This system is possibly best described in terms of template morphology, a theory used by Young and Morgan in 1980 to describe the Navajo verb(8). Instead of viewing complex words as having a constituent structure with affixes added one by one to the root, this theory posits different categories of affixes, both obligatory and optional, slotted into a string in a particular order. For Totonac derivational verb affixes, this theory would yield the following template with 11 positions:

COM- BPP- INS- LOC- CAU- INC- BPP- -ROOT-   -TRANS -APP -APP

The abbreviations used in the chart above are comitative (COM), body part prefix (BPP), instrumental (INS), locative (LOC), causative (CAU), transitivizer (TRANS), and applicative (APP). The nine categories of inflectional verbal affixes would need to be added to the eight above to give a full description of the verbal template.

As in Navajo, only one affix (sometimes a zero morpheme) may appear in each of the positions, and there are restrictions on which of the affixes can co-occur with others, e.g. causative prefix /maa-/ does not generally occur with the inchoative /ta-/. Also as in Navajo, discontinuous dependencies among affixes are found, that is, certain affixes in one position may require a certain affix in another non-adjacent position. For example, the causative prefix must be accompanied by a valence-increasing suffix, such as applicative /-ni/ or transitivizing /-ii/. This kind of dependency is not found in morphologies with a constituent structure, sometimes called layered morphologies. This dependency feature and other features shared by Totonac (e.g. lack of headedness) have led linguists like Simpson and Withgott (1986) to argue that template morphology is typologically distinct from layered morphology(9). It would be interesting to further study Totonac in light of this theory. This has not been done as far as my review of the literature shows.

Verbal Derivational Affixation

Examining each of the major verbal affix categories in the order in which they occur in the position string, I begin with the **comitative**. Since this prefix has the meaning of 'PRONOUN with PRONOUN', as in 'I with them' or 'you with him', it has multiple forms corresponding to the different possible combinations of pronouns. Some of these prefixal forms require a suffix in addition. For example:

/kit ik-laa-caala-yaa-na wis/
I 1SUB-COM-run-IMPERFECTIVE-COM you
'I run with you' or 'you run with me'(10)

The **body part prefixes** (BPP) are extremely productive, especially with verbs. These

prefixes are reduced forms of the free morphemes for body parts. McKay gives a partial list of

39 BPPs. The BPPS can occur in the second position in the template or immediately before the

verb. Illustrating just a few of these prefixes, some of them giving a clever and delightful

meaning to the verb, are the following:

/ut kil-kacii/
s/he mouth related-know X
's/he tastes X'(11)

/kit ik-maka-ta-uka-lal kin-reloh/
I 1SUB-hand related-INC-be above-PERFECTIVE 1POSS-watch
'I put on my watch'(12)

/ut laq-caqaa-ciyan/
s/he eye related-laugh
's/he laughs with her/his eyes'(13)

The **instrumental** prefix /lii-/ adds an oblique argument interpreted as an instrument or

cause. It is obligatory unless the all-purpose preposition /laka, naka/ (the only preposition in

Totonac) is used, in which case it is optional.

/kit ik-lii-laqan-yaa-na kin-lii-laq-caqaa-ta-yaa-at/
I 1SUB-INS-see X-IMPERFECTIVE-2OBJ 1POSS-INS-eye related-INC-standing
'I see you with my glasses'(14)

The **locative** prefix /puu-/ licenses an object argument which specifies location. It appears

to derive from the body part prefix /puu-/ meaning 'relating to the inside'. As with the

instrumental, the locative prefix becomes optional if the preposition /laka, naka/ is used.

/ik-puu-min-lal hun-kamyon/
1SUB LOC-come-PERFECTIVE DET-bus/
'I came on the bus'(15)

The **causative** prefix /maa-/ is the most productive one and can affix to almost any verb. As previously noted, it must be accompanied by a valence-increasing suffix.

/Juan maa-pupu-ii hun-skaan/
Juan CAUS-boil-TRANS DET-water
'Juan boils the water

/Juan maa-caqaa-ni hun-laqaat hun-Pedro/
Juan CAUS-wash X-APP DET-clothes DET-Pedro
'Juan makes Pedro wash the clothes'(16)

To express the meaning of 'becoming' or 'entering into the state of', the **inchoative** prefix /ta-/ is employed.

/kit ik-ta-kaks/
I 1SUB-INC-silent
'I become quiet'(17)

The **transitivizer** suffix /-ii/ is used with the causative as discussed above. The **applicative** suffix may occur in the last two derivational positions to license up to two additional object arguments. It may be interpreted as a goal, source, or benefactive, as in:

/kit ik-yaawan-ni-lal-na tun-karta/
I 1SUB-send X-APP-PERFECTIVE-2OBJ one-letter
'I sent a letter to you'(18)

Besides these major affixal categories there are many others that can be added to a verb root to give a seemingly endless variety of meanings. These meanings include: 'wants to do X'; 'goes, does X, and returns'; 'continues doing X'; 'leaves having done X'; 'has just done X'; 'undoes X'; 'does X first'; 'does X a second time'; 'does X in vain'; 'does X once and for all'; 'does X alone'; 'does X by hand'; does X reciprocally'; and 'does X against his will'(19).

Nominal Derivational Morphology

It should be recalled that although nouns and adjectives can sometimes be distinguished semantically, they can almost never be distinguished morphologically, and they are therefore grouped together as nominals. Many of the affixes to be discussed in this section are

nominalizers added to verbs to form related nominals, although there are other types as well. Only very productive affixes are included below. While the focus is on the Misantla dialect, some differences with the South-Central dialect are noted.

A common suffix **/-ta/** is affixed to nominals to give the meaning 'place of X'. For example /calan-ta/ 'hot place' is derived from the word for 'hot', and /kiwi-ta/ 'forest, place of trees' is derived from the word for 'tree'(20). In the South-Central dialect, the prefix /ca-/ is used with the same meaning, and also to indicate 'time of X'(21).

'Having the quality of' is the meaning conveyed by the addition of the suffix **/-la?/**. Thus /ciwis/ 'stone' becomes /ciwis-la?/ 'stony' , /cici?/ 'dog' becomes /cici?-la?/ 'dog-like'. It can also be added to verbs along with a nominalizer to give the same sort of meaning: /cuh-at-la?/ 'drooley' derives from /ut cuh/ 's/he spits'; /ltata/ 's/he sleeps' becomes /ltata-at-la?/ 'sleepy'; and /maa-sanan-at-la?/ 'shameful' derives from /ut maa-sanan/ 's/he is ashamed'(22).

The rest of the major affixes are nominalizers that attach to verbs to form deverbal nominals. They are very productive. Many of them affix to verbs with one of the specific verbal affixes described above.

The **agentive** suffix **/-na?/** can be added to any verb (but not statives). The resulting nominal refers to a person who habitually or customarily performs an activity, much like agentive –er in English. Examples include:

/hun min-na?/   'DET one who comes'

/hun-tii-na?/   'DET dancer'

/hun-pas-na?/   'DET bather'

/kucuu-na?/   'curer, doctor'(23)

Another productive deverbalizer is **/-ni/** which is usually added to verbs that have a valence-changing affix. When it is applied to verbs without other affixes, the resulting nominals have the meaning of 'that which has undergone the action of the verb'.

/ut mas/ 'X rots'   /mas-ni/ 'rotted'

/ut nii/   's/he dies'   /hun nii-ni/ 'the dead'(24)

When /-ni/ is added to verbs with the inchoative prefix /ta-/, the nominal created has the meaning of 'that which is Xed', e.g. /min-ta-caqaa-ni/ 'your clean/washed X' from the inchoative verb 'to become washed'.

The deverbalized nominal formed by /-ni/ from a verb with the instrumental prefix /lii-/ refers to that which is required to perform the action of the verb:

/ut lkaa/ 's/he measures X'   /kin-lii-lkaa-ni/' my tape measure'(25)

A nominal formed with /-ni/ and the comitative prefix /laa-/ has the meaning of 'what you X with', for example /kin-laa-cuq-ni/ 'my pencil/pen' from the verb 'to write'(26). In combination with the locative prefix /puu-/, /-ni/ gives the meaning of 'where you do X':

/puu-pas/ 's/he bathes in X'   /min-puu-pas-ni/ 'your washroom' (27)

Finally, the deverbalizing suffix, usually realized as **/-at/**, creates a nominal referring to the result of an action.

/sana/ 'X flowers'   /sana-at/ 'flower'

/skiti/ 's/he grinds corn'   /skiti-it/ 'cornmeal'(28)

In the South-Central dialect, the prefix /ta-/ appears to be used very productively to create abstract and other types of nouns from verbs, such as /ta-kaanahla?/'belief' from /kaanahlay/ 's/he believes X'(29).

Numeral Classifiers

A special set of prefixes is employed with numerals when counting from one to ten to indicate the shape or type of noun being counted. There are a large number of these; at least thirty are noted in the sources I consulted. These appear to vary greatly among dialects; most of my examples come from the Misantla dialect.

There is a generic or default classifier /maa-/ or /maq-/, the latter interpreted as 'times'. These are used when details about the objects counted are not relevant.

More specific classifiers include /a-/ 'another'; /qiin-/ 'related to rolled or cylindrical objects' (/qiin-taat lamaqsqul/: 'four candles'(30)); and /tii-/ 'related to rows' (/tii-taat saawat/ 'four cornfields'(31)).

Many use body parts to indicate shape; there are prefixes related to the ear (/qaqa-taat saaluh/ 'jar with four handles'(32)); the mouth; the body or trunk(/caa-taat skaan/ 'four branches of the river'(33); the face; necks or bunches /pis-taat sana-at/ 'four bunches of flowers'(34); the insides; the middle or belly (/paa-taat boso/ 'four sacks'(35)); the head /kaak-taat nipsi/ 'four squash'(36); and the foot, among others.

In the South-Central dialect there are also classifiers for categories such as trees, flowers, and plants /a?ka-tu?tuu sa?nat/ 'three flowers'(37); for less than three persons or for chiles; for objects with a smooth surface /mak-tu?tuu scuh/ 'three tortillas'(38); for groups of people or animals; for objects that can hold liquids /paa tum lumiitaa liiku?cu?n/ 'a bottle of medicine'(39); and many more.

Conclusion

This paper has attempted to give an overview of the complex derivational morphology of the indigenous Mesoamerican language Totonac. This complexity enables a language with a

relatively small lexicon and few grammatical categories to express a large variety of meanings, primarily though its system of affixation. It would be interesting to ascertain whether an analysis of the verbal derivational affixes using template morphology theory would shed further light on the intricacies of the Totonac morphological system.

Notes:

(1) MacKay, p. 9

(2) MacKay, p. 123

(3) Both examples from MacKay, p. 225

(4) These two examples from MacKay, p. 372

(5) MacKay, p. 241

(6) MacKay, p. 374-5

(7) Adapted from MacKay, p. 224

(8) Spencer, p. 209

(9) In Spencer, p. 212

(10) MacKay, p. 288

(11) MacKay, p. 227

(12) MacKay, p. 233

(13) MacKay, p. 241

(14) MacKay, p. 274

(15) MacKay, p. 285

(16) These two examples from MacKay, p. 308-9

(17) MacKay, p. 255

(18) MacKay, p. 265

(19) Aschmann, p. 161 (my translation)

(20) MacKay, p. 377

(21) Aschmann, p. 166

(22) MacKay, p. 378-80

(23) These examples from MacKay, p. 382-3

(24) MacKay, p. 384

(25) MacKay, p. 386

(26) MacKay, p. 387

(27) MacKay, p. 388

(28) Both examples from MacKay, p. 389

(29) Aschmann, p. 15 (my translation and transcription in IPA)

(30) MacKay, p. 399

(31) MacKay, p. 401

(32) MacKay, p. 398

(33) MacKay, p. 399

(34) MacKay, p. 400

(35) MacKay, p. 400

(36) MacKay, p. 401

(37) Aschmann, p. 147 (my translation)

(38) Aschmann, p. 149 (my translation)

(39) Aschmann, p. 149 (my translation)

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