"Perversely, having seduced us with such analytic simplicity, Tzotzil proceeds to betray. The harsh light of breakfast reveals that many roots fail to fall cleanly into one of three categories."

"Ta xa setel xulem" [The buzzards were circling], 1994

John Haviland

"It is often forgotten that [dictionaries] are artificial repositories, put together well after the languages they define. The roots of language are irrational and of a magical nature."

El otro, el mismo, 1969

Jorge Luís Borges

Chapter 3

Mayan roots

The classification of Mayan roots has received a great deal of attention in recent literature (cf. Haviland 1994, Lois and Vapnarsky 2003). The nature of roots in Mayan languages has been argued, for example, to call into question the continuum between open and closed classes (cf. Haviland 1994) and even to defy (to some degree) the supposedly strong universal distinction between nouns and verbs (cf. Lois and Vapnarsky 2003, Seler 1887, Tozzer 1921). In this chapter, I will begin in §3.1 with a description of basic properties of Mayan roots. In §3.2 I will discuss traditional Mayan root classifications, and evaluate one such classification proposed by Vásquez Alvarez (2002) for roots in Chol based on formal properties of the stems they form. After summarizing the different surface stem forms in which these roots appear, I will examine some of the problems present in such current root classifications in §3.3. In this section I will look at the claim proposed earlier by Seler (1887) and other "traditionalists", that Mayan languages are "nominal" in nature and that a distinction should not be made between nouns and verbs. I will argue that the distinction between nouns and verbs in Chol must be maintained at the stem level, but is unwarranted at the level of roots.

3.1 The CVC template

Root forms in Mayan languages are characteristically monosyllabic and of the form CVC,[1] illustrated in the forms below.

'ab	'hammock'
k'iñ	'day, sun'
ch'äx	'boil'
ts'i'	'dog'
ja'	'water'
tyuch'	'point' (with a finger)

Furthermore, it has been claimed (cf. Attinasi 1973, Lois and Vapnarsky 2003) that while some Chol words of the form CV'VC are CVC roots with a -VC suffix, others have a "vowel nucleus which is a long and broken vowel" (Attinasi 1973, 106). Lois and Vapnarsky (2003, fn. 3) also analyze the intervocalic glottal stop in Yucatec roots as a "glottalized vowel" since it behaves phonologically as a single syllable nucleus.[2] According to this analysis, we may consider the first two words in the right-hand column of the table below to be CVC forms with -Vl suffixes, whereas the final two words, *ja'as* and *cha'añ* are in fact CVC roots with a "glottalized" vowel. No morpheme internal V'V sequences exist, to my knowledge, where the two vowels are not identical.

bu'	'bean'	*bu'ul*	'beans' (in quantity)
ja'	'water'	*ja'al*	'rain'
		ja'as	'banana'
		cha'añ	'for'

[1] Recall that the symbols /ts/, /ts'/, /ch/, /ch'/, /ty/, and /ty'/ each represent a single consonant sound.

[2] Similarly, V'V sequences have been analyzed as glottalized long vowels or "broken" vowels in Mixtecan languages (Matt Pearson, p.c.).

Root forms that do not follow the standard CVC shape often turn out to be loanwords or compounds (Campbell 1999, 64-65). For example, the Chol words *wakax* and *sandiya* are borrowed from the Spanish *vacas* 'cows' and *sandía* 'watermelon'.[3]

The Chol word for egg, *tyumuty,* is actually a compound of the two CVC forms *tyuñ* 'rock' and *muty* 'chicken'. Similarly, the word *matye'* 'jungle' is probably a compound formed from *mal* 'inside' and *tye'* 'tree' or 'wood'. In each of these compounds, the final consonant of the first CVC form is dropped, resulting in the form CVCVC, which reflects Chol's tendency to avoid consonant and vowel clusters. A still larger compound may be formed from *matye'* and *muty* 'chicken' by dropping the final consonant of *matye'*, resulting in *matyemuty* (CVCVCVC) 'bird' (lit.: 'jungle chicken').[4]

Exceptions from the CVC root template certainly exist. Frequently-used nouns such as *wiñik* 'man', *'ixik* 'woman', and *'ixim* 'corn', for example, do not conform to the canonical CVC root pattern. It is likely, however, that they have been created from morphological processes (note the identical *-ik* endings of the first two) which are no longer productive.[5] Certainly, it is safe to say that CVC roots form the base of Mayan languages.

3.2 Root classifications

Mayan roots have traditionally been classified based on the kinds of morphology they take and the different stems they produce. Root classes are sometimes further justified by appeal to semantic properties (cf. Haviland 1994). Traditionally, Mayan roots have been divided into at least two categories: nouns and verbs. Verb roots are

[3] *sandiya*, interestingly, is often forced into the CVC shape and pronounced simply as *sañ*.

[4] But what came first, the chicken or the bird? Most likely *muty* simply meant bird until chickens arrived with the Spaniards. Once *muty*s became a more integral part of everyday life, birds that were not chickens had to be qualified as such.

[5] Also recall that many suffixes, often of the form -VC, contain harmonic vowels, and that the vowels in non-harmonic suffixes frequently undergo distant assimilation to the root vowel (see §2.2.5). The fact that both vowels are identical in the non-CVC forms listed above, lends credit to the idea that these forms were formed from CVC roots.

further classified into transitives, intransitives, positionals, and sometimes what have been called "affectives" (see §3.2.1). Other root classes proposed include adjectives, particles,[6] expletives, numerals, and onomatopoeia (Lois and Vapnarsky 2003, 13). Below, I will evaluate a traditional classification of verb roots in Chol as proposed by Vásquez Alvarez (2002). I hope to show that a number of his divisions are unwarranted and then go on to question the applicability of notions of grammatical category to Chol roots in general.

3.2.1 A previous classification of verb roots in Chol

Vásquez Alvarez (2002, 35) identifies four basic verbal classes in Chol, with additional subclasses: "Taking as formal criteria pronominal inflections, derivational inflections, the imperative, the morphological causative, the marks of passive, and the presence of auxiliary verbs, we find *three types of intransitive, three transitives, one type of positionals, and one of affectives*" (emphasis my own).[7] Throughout his thesis, Vásquez Alvarez (2002) refers to the "thematic vowels" and "status suffixes" which appear suffixed to the root and vary depending on the verb stem's aspect and argument structure. Though presented as formal criteria for various classifications, he does not provide an explanatory account of the presence of these post-root suffixes. In the following chapter I will argue that the so-called thematic vowels are in fact most closely related to derivational suffixes, used to create a verbal stem from a nominal root. Most of what he calls "status suffixes", on the other hand, appear on various non-verbal constructions. In this section I will simply summarize their distribution.

[6] Lois and Vapnarsky (2003, 13) note that the so-called particle roots "represent a very heterogeneous group that mainly includes initial deictics, adverbs, interrogative and relative pronouns," but that "a finer analysis should treat these as distinct classes."

[7] My translation from: "Tomando como criterio formal las flexiones pronominales, las flexiones derivativas, el imperativo, el causativo morfológico, las marcas de pasiva y la presencia de verbos auxiliares, encontramos tres tipos de intransitivos, tres transitivos, uno de posicionales y uno de afectivos" (Vásquez Alvarez 2002, 35).

Transitives

The three subclasses into which Vásquez Alvarez (2002, 48) divides transitive roots are listed in (3.1). In this section I will argue that no such division is necessary.

(3.1) Transitive root classes

i. CVC forms with a final fricative consonant (/s/, /x/, or /j/)

ii. CVC forms with a non-fricative final consonant

iii. forms which take the "status suffixes" *-ä* and *-Vñ* to form the stem

The only basis for the division between classes (i) and (ii) is found in "passive" formation. In example (3.2), the fricative-final class (i) root, *mos* 'cover' takes the suffix *-le* to form an intransitive perfective construction. The notional agent, *x'ixik*, may appear as an oblique argument following the preposition *tyi*.

(3.2) *tyi* *mos-**le**-y-oñ* (*tyi* *x-'ixik*)
PERF cover-PASS-EPN-1A PREP CL-woman
'I was covered (by the woman).'

On the other hand, class (ii) non-fricative final roots like *mek'* 'hug', according to Vásquez Alvarez (2002, 54), "passivize with the infix *-j-* in any aspectual form,"[8] as shown by example (3.3). Again, the notional agent may appear as an oblique.

(3.3) *tyi* *me**j**k'-i-y-oñ* *(tyi* *x-'ixik)*
PERF hug.PASS-VI-EPN-1A (PREP CL-woman)
'I was hugged (by the woman).'

As I argued above in §2.2.4, however, *-j-* should not be thought of as a consonantal infix, but as a process of vowel lengthening, analogous to a strategy for creating intransitive stems in languages of the Yucatecan family (Lois and Vapnarsky 2003, 19). Since vowel lengthening forms an intransitive stem, it is not surprising that the stem *mejk'* in (3.3) inflects like any other intransitive. Compare, for example, (3.3) with the simple intransitive in (3.4).

[8]My translation from: "pasivizan con el infijo *-j-* en cualquier forma aspectual" (Vásquez Alvarez 2002, 53).

(3.4) *tyi* *jul-i-y-oñ*
PERF arrive-VI-EPN-1A
'I arrived.'

I argue that the fact that CVC roots which terminate in a fricative consonant may not form intransitive stems in this way should be considered a phonological constraint, and not as evidence for two separate classes of transitive verbs. Support for this comes from the fact that (as Vásquez Alvarez (2002, 53) himself acknowledges) "[t]ransitive roots with an ending different from *s*, *x*, *j* possess basically the same properties as described [for roots that end in *s*, *x*, *j*]."[9] That is, in all respects except for passive constructions, they take the same inflectional and derivational morphology, and possess the same structural characteristics. Both proposed classes take no suffix in active imperfective forms (3.5), and take a harmonic "thematic vowel" in the active perfective (3.6).

(3.5) a. *mi* *i-mos-oñ*
IMPF 3E-cover-1A
'She covers me.'

b. *mi* *i-mek'-oñ*
IMPF 3E-hug-1A
'She hugs me.'

(3.6) a. *tyi* *k-mos-**o**-y-ety*
PERF 1E-cover-VT-EPN-2A
'I covered you.'

b. *tyi* *k-mek'-**e**-y-ety*
PERF 1E-hug-VT-EPN-2A
'I hugged you.'

Based on these similarities, we have now reduced our division of transitive roots to two subclasses:

[9]My translation from: "Las raíces transitivas con una terminación diferente a *s*, *x*, *j* poseen básicamente las mismas propiedades descritas en 2.2.1" (Vásquez Alvarez 2002, 53).

(3.7) Transitive root classes, version 2

(i.) CVC forms

(ii.) forms which take the "status suffixes" (discussed below) -*ä* and -*Vñ* to form the stem

While transitive stem-forming CVC roots of class (i) take no "status suffix" in the imperfective, roots of our new class (ii) appear with a -*Vñ* suffix. The vowel in the -*Vñ* does not harmonize with the root vowel. While Vásquez Alvarez (2002, 361) gives examples of -*Vñ* suffixes for each of the six vowels, my data include primarily -*añ* and -*iñ* forms.

kip-añ	'pull'
'il-añ	'see'
chu'-iñ	'nurse'
pech-añ	'make tortillas'
mul-añ	'like'

In some cases the CVC root appears to have first formed an intransitive stem through vowel lengthening, as in *pajliñ*. Other forms, like *bä'ñañ* are of the form CVCC-Vñ, where the first C after the vowel is a /'/. For example:

bä'ñ-añ	'fear'
ña'ty-añ	'know, think'
pajl-iñ	'peel'
ts'ijb-uñ	'write'
xejty-añ	'vomit'

In perfective forms, these roots take the "status suffix" -*ä*. Examples of both perfective and non-perfective forms are shown below.

(3.8)

mi	*a-pech**añ**-Ø*	*kabäl*	*waj*
IMPF	2A-make.tortillas-3A	lot	tortilla

'You make a lot of tortillas.'

(3.9) *tyi* *aw-il-**ä**-y-oñ*
PERF 2E-see-VT-EPN-1A
'You saw me.'

(3.10) *mi'* *bä'ñ**añ**-oñ* *jiñi* *ñeñe'*
IMPF.3E fear-1A DET baby
'The baby fears me.'

(3.11) *tyi* *k-ts'ijb-**ä**-Ø* *a-k'aba'*
PERF 1E-write-VT-3A 2E-name
'I wrote your name.'

In some cases, they appear to retain the vowel from their *-Vñ* suffix, as in example (3.12) from *cha'leñ* 'do' or 'make'.

(3.12) *tyi* *k-cha'l-e-Ø* *soñ*
PERF 1E-do-VT-3A dance
'I danced.'

Though there exist clear differences between the CVC forms discussed above and these *-Vñ* forms, Vásquez Alvarez (2002) fails to note that many members of his proposed latter class may be clearly analyzed as derived from nominal (noun and adjective) stems. Take, for example, the semantic similarities between the nominals on the left and the verbalized stems on the right:

ñox	'old'	*ñox-añ*	'become old'
k'am	'sick'	*k'am-añ*	'become sick'
chu'	'nipple'	*chu'-iñ*	'nurse (a baby)'
ch'och'	'throat, neck'	*ch'och'-oñ*	'peck'
ts'ijb	'letter'	*ts'ijb-uñ*	'write'
k'ay	'song'	*k'ay-iñ*	'sing'
p'ip	'intelligent'	*p'ip-añ*	'be intelligent'
mul	'sin'	*mul-añ*	'like'

Other derivations have been obscured by regular phonological processes, as in the examples below:[10]

tyikäw	'hot'	*tyikw-añ*	'become hot'
tsäwañ	'cold'	*tsäwñ-añ*	'become cold'

Loanwords from Spanish, which generally enter Chol as nouns, may also verbalize using a *-Vñ* suffix. For example, the Spanish infinitive verb *dibujar* 'to draw' is verbalized in Chol with the suffix *-iñ*, in example (3.13).

(3.13) *chuki mi a-dibujar-**iñ**-Ø*
what IMPF 2E-SP.draw-VT-3A
'What are you drawing?'

Although in many cases no clear relationship may be drawn between a *-Vñ* stem and a corresponding noun or adjective, the above speculations should provide a sufficient basis for the claim that the stems in this "root class" are formed (using the *-Vñ* and *-ä suffixes*) from nominals. Once we take this into consideration, an explanation of the suffixes *-Vñ* and *-ä* becomes clear: these are the same two suffixes used respectively in non-perfective and perfective "inchoative" constructions to form verbs from nominals, as shown in examples (3.14) and (3.15) below.

(3.14) *mi k-säk-**añ***
IMPF 1E-white-INCH
'I become white.'

(3.15) *tyi säk-**ä**-y-oñ*
PERF white-INCH-EPN-1A
'I became white.'

[10]Evidence that this is still a regular derivational process may perhaps be found in the pair *wiñik* 'man' and *wiñik-añ* 'employ', where *wiñik-añ* has not yet lost the second vowel of the root. This phonological evidence, coupled with fact that most rural Chol speakers are subsistance farmers and have only recently begun to seek wage employment, might suggest that the form *wiñik-añ* is a relatively recent innovation.

Our original division of transitive roots appears now to be unnecessary. The first two CVC classes were shown to behave similarly except for in passive constructions, where variation is phonologically predictable. Above I argued that the members of the proposed verb class which take *-Vñ* and *-ä* suffixes to form imperfective and perfective stems respectively, in fact have their origins as nominals, and thus should not receive a place in the classification of verb roots. A further problem with this final class proposed by Vásquez Alvarez (2002) is that some of the stem forms created from his class of roots are transitive while others appear to be intransitive. More work remains to be done to determine the properties and origins of this group of stems, though it seems clear that as a transitive *root class* they do not hold together very well.

Because the derivational history of many of these forms is no longer apparent (they have been lexicalized), I will continue to gloss the imperfective form as a simple non-morphologically complex verb (rather than a noun with an inchoative suffix), and the perfective *-ä* as a transitivizing suffix, analogous to the harmonic vowel found on regular transitives, as shown in examples (3.16) and (3.17).

(3.16) *mi* *k-mulañ-Ø* *ja'as*
IMPF 1ERG-like-3ABS banana
'I like bananas.'

(3.17) *ta'* *k-wiñ* *koty-ä-Ø* *tyi* *'e'tyel*
PERF 1E-lot help-VT-3A PREP work
'I helped him work a lot.'

Intransitives

Intransitive verbs have a single argument, marked with either an absolutive or ergative agreement affix, depending on the aspect of the event. In example (3.18), the intransitive stem *'uch'i* marks its single participant with the absolutive first person suffix *-oñ*. The imperfective intransitive construction in (3.19), however, uses the ergative first person prefix *k-* to mark its argument.

(3.18) *ta'-ix* *'uch'-i-y-**oñ***
PERF-ALR eat-VIP-EPN-1A
'I already ate.'

(3.19) *mi* ***k**-majl-el* *tyi* *k-otyoty*
IMPF 1E-go-NOM PREP 1E-house
'I'm going to my house.'

Within the category of intransitives, Vásquez Alvarez (2002, 35) again distinguishes three classes based on formal inflectional and derivational properties. These classes are listed in (3.20) below.

(3.20) Intransitive root classes

(i.) unaccusatives

(ii.) unergatives

(iii.) ambivalents

Intransitive verbs are typically divided into two categories, unergative and unaccusative, based on the syntactic position of their single argument. The argument of an unergative is external to the verb (occupying the traditional subject position), while the argument of an unaccusative is VP internal. Typically, unergatives will take an agentive argument, while the argument of an unaccusative verb is generally a patient or a theme (Baker 1988, 88).

The English verb *melt*, for example, is unaccusative while the verb *dance* is unergative. *The ice cream* in the sentence *The ice cream melted* is the patient, rather than the doer of the action. In *The girl danced*, however, *the girl* is the notional agent. One test for this distinction in English is that the perfect participle forms of unaccusatives may be used as adjectives (Radford 1997, 395). An analogous construction with an unergative verb results in ungrammaticality.

(3.21) a. *The melted ice cream dripped off the table.*

b. **The danced girl took off her shoes.*

Baker (1988) argues that unergative verbs are actually *denominal* predicates, that is, they are derived from nouns which originate in the verb's complement and then incorporate into a phonologically null verb head, as shown in Figure 3.1. Support for this type of analysis comes from the fact that many English unergatives have nominal counterparts: *to dance a dance*, *to laugh a laugh*, *to walk a walk*, *to swim a swim*, etc..

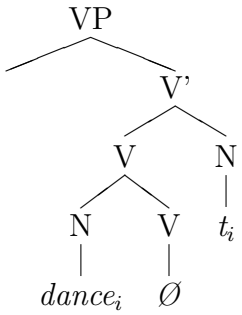

Figure 3.1: Unergative incorporation in English

With this in mind we now return to the proposed classification of Chol intransitives. Vásquez Alvarez (2002) classifies the root *'och* as unaccusative (3.22) and the root *soñ* as unergative (3.23).

(3.22) *tyi* ***'och****-i-y-oñ* *tyi* *'otyoty*
PERF enter-VI-EPN-1A PREP house
'I entered the house.'

(3.23) *tyi* *k-cha'l-e-Ø* ***soñ*** *tyi* *eskwela*
PERF 1E-do-VT-3A dance PREP SP.school
'I danced at the school.'

In contrast to English constructions, I argue, the noun of a Chol unergative construction does *not* incorporate into a verb head. The roots in the class labeled by Vásquez Alvarez (2002) as "unergative verbs" are really *not verbs at all*. Rather, they are *nouns* serving as the object of the semantically empty transitive light verb *cha'leñ* 'to do' or 'to make'. This is illustrated in Figure 3.2.

The root *k'ay*, for example, analyzed as an unergative verb meaning 'to sing' is actually a noun: 'song'. As a noun stem, *k'ay* is able to take determiners and serve as the subject of a sentence, as shown in example (3.24).

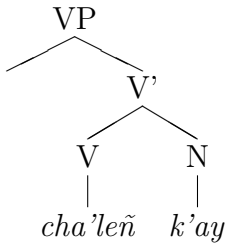

Figure 3.2: Unergative construction in Chol

(3.24) *weñ-äch* *jiñi* *k'ay*
good-AFF DET song
'That's a good song.'

The constructions in which such roots have been identified as verbal, as in example (3.25), are formally no different than constructions in which they have been identified as nominal, as in example (3.26). The confusion seems to lie in the fact that many notions conveyed by *verbs* in well-known languages like English and Spanish are expressed by a combination of a light verb and *a noun* in Chol. In other words, *all intransitive verbs in Chol are unaccusative*, while Chol handles unergative-type constructions with a light verb and a noun. We may thus altogether eliminate the category of "unergative" from the classification of verbs.

(3.25) *mi'* *cha'leñ-Ø* ***'alas***
IMPF.3E do-3A play
'She plays.' (lit.: 'She does playing.')

(3.26) *mi'* *mulañ-Ø* ***'alas***
IMPF.3E like-3A play
'She likes playing.'

Having reduced the first two proposed classes of intransitive roots, we move to the third. The class labeled as "ambivalents", according to Vásquez Alvarez (2002, 43) "either may or may not take the light verb to inflect for person."[11]

[11]My translation from: "puede o no tomar el verbo ligero cuando se flexiona con persona"(Vásquez Alvarez 2002, 43).

That is, the root may inflect like a regular intransitive stem, as shown in example (3.27), or, as in example (3.28), the verb may appear in its nominal participle form as the direct object of the light verb *cha'leñ*. To my knowledge, all roots which form intransitive stems (previously "unaccusatives") have access to both of these constructions, leaving this final category unnecessary.

(3.27) *tyi* ***'uk'-i-Ø*** *jiñi* *ñe'ñe'*
PERF cry-VI-3A DET baby
'The baby cried.'

(3.28) *tyi* *i-cha'l-e-Ø* ***'uk'-el*** *jiñi* *ñe'ñe'*
PERF 3E-do-VT-3A cry-NOM DET baby
'The baby cried.'

I have argued here that a further division within the class of intransitive roots is unnecessary. What Vásquez Alvarez (2002) labels as unergatives are simply nouns, and his class of "ambivalents" are nominalized verbs appearing in light verb constructions. After weeding out these last two categories, the actual class of intransitive stems (not formed by overt intransitivization) in Chol is relatively small. This is expected, as Haviland (1994) notes that of 855 verbal roots analyzed in Tzotzil, only 45 are clearly intransitive (Haviland 1994, 700).

Most of the intransitives in Chol are verbs denoting motion or direction, such as *lok'* 'go out' and *lets* 'ascend'. Many frequently used instransitive stems appear to be the result of a vowel-lengthening (intransitivization) process: *majl* 'go', *sujty* 'return', *yajl* 'fall', and *wejl* 'fly' to name a few. Both "true" and derived intransitives take the "status suffixes" *-i* in the perfective and *-el* in the non-perfective aspects, as shown in examples (3.29) and (3.30) below. However, note that the "verb" form in (3.30) is the same as the nominal form in the light verb construction in (3.28) above. This will be analyzed below in Chapter 4.

(3.29) *tyi* *majl-**i**-y-oñ* *tyi* *tila*
PERF go-VI-EPN-1A PREP Tila
'I went to Tila.'

(3.30) *mi* *k-majl-**el*** *tyi* *tila*
IMPF 1E-go-NOM PREP Tila
'I'm going to Tila.'

Positionals

Mayan languages exhibit what Haviland (1994) calls a "preoccupation with space, shape, position, and configuration, which pervades all aspects of normal language use" (Haviland 1994, 691). This is especially apparent in the large classes of so-called positional roots these languages exhibit. Positionals have been recognized as a formally distinct lexical class within Mayan languages (cf. England 1983, 78; Haviland 1994, 725) whose meanings range over semantic notions of shape, position, surface, grouping, and substance (Haviland 1994, 725-6). Formally, positional roots "characteristically surface as one-place predicates that denote result-like states, or that characterize their absolutive arguments as prototypical patients that have arrived at (or been put in) such states" (Haviland 1994, 711). They may be distinguished from intransitive stems where the single argument "may range from prototypically agentive to prototypically patient-like" (Haviland 1994, 711).

Unlike in Tzotzil, so-called positional roots in Chol may appear in verbal stems with a distinct set of "status suffixes": *-le* in the perfective aspect and *-tyäl* in the non-perfective aspects, as shown in examples (3.31) and (3.32).[12]

(3.31) *tyi* *buch-**le**-y-õn*
PERF sit-VI-EPN-1A
'I sat.'

(3.32) *choñkol* *k-wa'-**tyäl*** *tyi* *paty* *'otyoty*
PROG 1E-standing-NOM PREP outside house
'I'm standing outside of the house.'

Positionals in Chol may also appear in non-verbal forms preceding the aspectual auxiliary, in which case they take the harmonizing suffix *-vl*, as in example (3.33).

[12]In §4.2.1 I will argue that these suffixes are not really so distinct, but in fact are the same as the homophonous "passive" suffixes.

(3.33) *xity-**il*** *tyi* *'och-i-Ø* *tyi* *ja'* *jiñi* *wiñik*
standing.on.head-NOM PERF enter-VI-3A PREP water DET man
'The man entered the water head-first.'

Though still predicative (3.34), these *-vl* constructions may not mark for aspect, as shown by the ungrammaticality of (3.35). In this respect they are formally similar to nouns and adjectives.

(3.34) *xity-il* *jiñi* *wiñik*
standing.on.head-POS DET man
'The man is standing on his head.'

(3.35) **tyi* *buch-ul-oñ*
PERF sitting-POS-1A
'I was sitting.'

The inability of these *-vl* forms to modify nouns, however, rules out the possibility that they are simply adjectives. This is shown by the ungrammaticality of (3.37).

(3.36) *tyi* *'och-i-Ø* *tyi* *ja'* *jiñi* ***chañ*** *wiñik*
PERF enter-VI-3A PREP water DET tall man
'The tall man entered the water.'

(3.37) **tyi* *'och-i-Ø* *tyi* *ja'* *jiñi* ***xity-il*** *wiñik*
PERF enter-VI-3A PREP water DET standing.on.head-POS man
'The head-first man entered the water.'

These *-vl* stems, I claim, behave formally like nouns. Like other nouns, they may serve as predicates by taking an absolutive agreement suffix, as shown in example (3.38).

(3.38) *buch-ul-ety*
sit-POS-2A
'You're sitting.'

Further support for the nominality of positionals comes from the fact that *-el* forms, argued above to be nominal, may appear in the same "secondary predicate"[13]

[13]The label "secondary predicate" has been applied to stem forms which appear preceding the aspect marker to indicate the manner in which the event expressed by the "primary" predicate took place (cf. Vásquez Alvarez 2002).

or focus position as *-vl* positional stems, as shown in examples (3.39) and (3.40). "Regular" nominals, like the adjective in (3.41), may also appear in this position.

(3.39) ***'uk'-el*** *tyi* *majl-i-Ø*
cry-NOM PERF go-VI-3A
'He went crying.'

(3.40) ***buch-ul*** *tyi* *majl-i-Ø*
sit-POS PERF go-VI-3A
'She went sitting.'

(3.41) ***p'ump'um*** *ta'* *kol-i-y-oñ*
poor PERF grow-VI-EPN-1A
'I grew up poor.'

Affectives

"Affective" (also "affect") is a traditional term used by Mayanists to denote a class of roots which "combine verbal and adverbial functions" (England 1983, 65) and which express "sensory qualities or perceptions, such as texture, shape, sound, and . . . repetitive actions" (Lois and Vapnarsky 2003, 12). In Chol this repetitive quality is expressed iconically; affective stems are formed by reduplicating (or partially reduplicating) the root and adding the suffix *-ña*. The root *tyip'* 'jump', for example, forms the affective stem *tyip'tyip'ña* 'jumping' as in example (3.42).

(3.42) *tyip'-tyip'-ña-y-oñ*
jump-jump-AFT-EPN-1A
'I am jumping.'

Presumably these constructions have been considered verbs because of their ability to inflect for person, and because of the "verbal" information they seem to embody. As we saw above with "unergative" roots, however, semantic expectations do not justify formal classes. Additionally, recall that not just verbs in Chol may inflect for person, but nouns and adjectives may do so as well. The affective construction in (3.42) should be compared with the predicate nominal construction in (3.43) below.

(3.43) *chañ-oñ*
tall-1A
'I am tall.'

Like predicate nominal constructions, lone affective stems may not inflect for aspect:

(3.44) **tyi* *tyip'-tyip'-ña-y-oñ*
PERF jump-jump-AFT-EPN-1A
'I jumped.'

However, like other nominals, such as the positional form in (3.45), affectives may appear before the aspectual auxiliary to modify the verbal construction, as shown in example (3.46). Based on formal properties, there is no reason to consider affective constructions as verbal.

(3.45) ***buch-ul*** *tyi* *majl-i-Ø* *tyi* *karo* *jiñi* *ts'i'*
sit-POS PERF go-VI-3A PREP SP.car DET dog
'The dog went sitting in the car.'

(3.46) ***tyip'-tyip'-ña*** *tyi* *majl-i-Ø* *jiñi* *ts'i'*
jump-jump-AFT PERF go-VI-3A DET dog
'The dog went jumping.'

3.2.2 Summary of Chol classification

Above I hope to have shown that a reliance on semantic properties of stems and pre-existing notions of which types of meanings are "verbal" will result in categories not appropriate for the language under investigation. Within the proposed class of transitives we found that an unnecessary distinction had been made within a class of roots that differ only with respect to a regular phonological rule which governs the passive. The third class of transitives was demonstrated to be derived from nominals. The alleged three classes of intransitives were whittled down to one; many roots previously labeled "intransitive verbs" turned out to be simply nouns. Positional roots do appear in verbal constructions, though also as pre-auxiliary

modifiers, formally similar to predicate nominal constructions. Affectives are not verbal at all, but rather also exhibit formal characteristics of predicate nominals. Predicate nominals, as we have seen, do not mark for aspect and require no stem-forming "status suffixes."

Table 3.1 summarizes the suffixes found immediately after the root in each of the stem types discussed.

	Perfective	Non-perfective
Nominals (nouns and adjectives)	(n/a)	(none)
Transitives CVC	-*V*	(none)
"-*Vñ*" transitives and inchoative adjectives	-*ä*	-*Vñ*
Intransitives and inchoative nouns	-*i*	-*el*
Positional	-*le*	-*tyäl*

Table 3.1: Summary of "status suffixes" and "thematic vowels" in Chol

It should be clear at this point that the basis for this root classification has very little to do with the formal properties of the root itself, but rather, roots have been classified based on the types of stems in which they appear. In the following section I will complicate matters further by demonstrating how a single root may appear in a variety of stem guises.

3.3 The harsh light of breakfast

In the above section, I argued that many of the distinctions made between proposed classes of Chol roots are unwarranted. In this section I will call into question the viability of a complete root classification for a language in which a given root may form a variety of different stems. For example a "positional root" can produce either a verbal or nominal stem, and a "nominal root" often carries meaning that we might consider "verbal".

Upon further investigation, it becomes clear that even the proposition that roots may be divided into these categories has been a simplification. As Haviland (1994)

aptly notes, one who expects tidy classes of Mayan roots will be sorely disappointed: "Perversely, having seduced us with such analytic simplicity, Tzotzil proceeds to betray. The harsh light of breakfast reveals that many roots fail to fall cleanly into one of three [i.e. nominal, verbal, positional] categories" (Haviland 1994, 700).

Take the Chol root *wäy*, for example. *Wäy* has been called an intransitive root which means 'sleep' (Vásquez Alvarez 2002). *Wäy*, however, may also appear in a positional construction. This is illustrated in examples (3.47) and (3.48) below.

(3.47) *tyi* ***wäy****-i-y-oñ* *tyi* *'ab*
PERF sleep-VI-EPN-1A PREP hammock
'I slept in the hammock.'

(3.48) ***wäy****-äl* *tyi* *majl-i-Ø*
sleep-POS PERF go-VI-3A
'She went sleeping.' ('went in a sleeping manner')

Additionally, *wäy* may appear as a noun stem which refers to a particular kind of *xibal* or bad spirit; while some people (especially shamans) sleep at night, their *wäy*s, or their sleeping selves, go out in the form of large animals to frighten people and cause trouble in the village.

(3.49) *'añ* *ta'* *aw-il-ä-Ø* *i-****wäy*** *kixtyañoj-ob*
EXT PERF 2E-see-VT-3A 3E-*wäy* SP.person-PL
'Have you seen a *wäy* (of a person)?'

While some roots form only verb stems, differences in transitivity may also exist between stems formed from the same root. For instance, the root *lok'* has been classified as a transitive root which means 'take something out', as in example (3.50), and also as an intransitive root which means 'to go out', as in example (3.51).

(3.50) *tyi* *k-lok'-o-y-ety*
PERF 1E-take.out-VT-EPN-2E
'I took you out.'

(3.51) *tyi* *lok'-i-y-ety*
PERF go.out-VI-EPN-1A
'I went out.'

Figure 3.3: Local shaman, Tío Sebastian (sitting right), takes a break after a curing ceremony in the house, while Irineo and Elmar watch TV

In these two examples the transitive stem should not be considered to be derived from the intransitive, nor vice versa. Instead, they should each be considered to be formed directly from the root. That is, we know that (3.51) is not simply a passivized form of example (3.50), because a separate (semantically distinct) passivized form does *also* exist, as shown in (3.52).

(3.52) *tyi* *lo**j**k'-i-y-ety* *(tyi* *wiñik)*
PERF take.out.PASS-VI-EPN-2A (PREP man)
'You were taken out (by the man).'

Similarly, the intransitive stem in (3.51) may gain an argument through a morphological causative, as shown in example (3.53). Again, a semantic distinction may be drawn between the derived transitive in (3.53) and the underived transitive in (3.50).

(3.53) *tyi* *k-lok'-sä-y-oñ*
PERF 1E-take.out.-CAUS-EPN-1A
'I caused you to be taken out.'

Although Chol has no underived nominal form *lok'*, Tzotzil possesses, in addition to the verb forms, a noun *lok'* which means 'rent' as in 'He paid his rent' (Haviland, p.c.). The different strategies for valence creation and valence modification will be further discussed in Chapter 4.

3.3.1 Nouns vs. verbs?

Due to the ambivalent nature of Mayan roots, it has been argued that the distinction between nouns and verbs (and classes of verbs) is not possible to make at the root level (cf. Stefflre 1972, 83; Lois and Vapnarsky 2003, 17). Rather than being a noun or a verb, a root is simply a bundle of semantic information. Although *wäy* appears in different stem forms above, each is clearly related to the notion of sleeping. Similarly, transitive and intransitive *lok'*s bear a transparent semantic relation. Haviland (1994) calls such roots "semantic portmanteaus" because they contain "several interrelated notions bundled up inside" (Haviland 1994, 716).

Traditionally, two theories have been used to account for single roots which produce different classes of stems: a root is either argued to have separate lexical entries for each type of stem it forms (cf. Laughlin 1975), or a root is thought to create different stems through derivation, often using zero morphemes (cf. Stefflre 1972). One obvious drawback to the proposal that different stems are formed from different (homophonous) roots is that it fails to capture the semantic similarities between *lok'* 'to go out' and *lok'* 'take out', for example, and also leaves us with an unnecessarily large lexicon. On the other hand, Lois and Vapnarsky (2003, 16) criticize accounts that rely on zero derivational morphology to produce different stems from the same CVC root. The use of zero derivational morphology, they argue, is not independently justified. They give the following extreme example from John Lucy (1994) of a Yucatec clause analyzed to contain four zero morphemes: two

derivational and two inflectional.[14]

(3.54) *k-in-síit-Ø-Ø-Ø-Ø*
HAB-A1-jump-DER-DER-INFL-INFL
'I jump.'

In §3.3.3 I will propose a third possibility, namely that roots belong to *no* grammatical category. First, however, I will examine how the problem is further complicated (or rendered irrelevant, depending on how one looks at it) by the fact that even at the stem level, differences between nominal clauses and verbal clauses are simply not outstanding in many languages of the Mayan family, as we saw above in §2.4 (the ability to mark for aspect being the crucial distinction). In the following section we will examine one extreme version of this observation: that there is *no* reason to draw a distinction between nouns and verbs in Mayan.

3.3.2 Traditionalists

The proposition that there is at best a weak distinction between nouns and verbs in Mayan languages, and that perhaps not all "verbs" are as verbal as they first seem, is far from new. Lois and Vapnarsky (2003, 15) note that "Traditionalists like Seler (1887), Tozzer (1921), and more recently Bruce (1968), explicitly highlight the necessity of assimilating [the categories of noun and verb]." Seler (1887, 3-4) for example, writes that "the predicative verbal expressions are identical fundamentally with the nominal expressions designating a possessive relation." For example, the sentence normally translated as 'I have killed thee', should literally read 'My killed one art thou' (Seler 1887, 12). Tozzer (1921, 35) discusses the "essentially nominal character of the Maya", and Lois and Vapnarsky (2003, 15) write that:

> Bruce (1968) also considers the verbal phrase as basically a possessed nominal. He rejects notions such as subject, verb and object for Mayan languages. For him (p. 38-43), a simple Maya sentence should be analyzed as a possessor or "owner" of a phenomenon (action, object, quality

[14]Example from Lucy (1994), glosses from Lois and Vapnarsky (2003).

> or state). The possessor may (in the case of transitives) entertain a relationship with another phenomenon that is expressed by another root that eventually has an explicitly or implicit possessor of its own.

Under this analysis, a Chol phrase like the one given in (3.55) below would mean something like 'You are my hugged one', analogous to the nominal stem in (3.56), 'You are my older sister'.

(3.55) *mi* *k-mek'-ety*
IMPF 1E-hug-2A
'I hug you.' (or 'You are my hugged one.')

(3.56) *k-chich-ety*
1E-older.sister-2A
'You are my older sister.'

However, a closer inspection of these two examples suggests that a distinction *does* need to be drawn between stems in Chol: some roots (like *mek'*) form stems which require aspect, while others (like *chich*) appear in stems which may *not* take aspect marking to form a clause. I call the former type verb stems and the latter type noun stems. In Chapter 4 I will argue that all non-perfective verb stems in Chol are nominal. Note that under this definition there is nothing contradictory in calling a verb stem nominal: by verb stem I mean a stem that takes aspect and by nominal I mean that the stem behaves *formally* like a noun (i.e. has the same distributional properties has nouns).[15]

3.3.3 Under-specification

Thus far we have seen two possibilities for the classification of Chol roots. In the first, a root is considered to have a number of different lexical entries, one for each type of stem it forms. This theory, however, would result in an overly large lexicon, while at the same time fail to capture the semantic similarities between the homophonous

[15]This is not unlike English, where we might consider *running* in *Running is good for you* to be a nominal verb stem.

root entries. The second possibility is to assign a root to a particular grammatical category and claim that stem forms not belonging to this category are derived. Here, the trouble is in deciding which grammatical category to assign to the root. For example, should the root *lok'* be considered basically transitive or intransitive, and how are we to decide? Another problem encountered here is a reliance on zero derivational morphemes, with no outside justification for their presence.

A third possibility, I propose, is to conclude that roots in Chol are not entirely specified for grammatical category. The root *wäy*, for instance, may appear in noun stems, verb stems, and positional stems. Rather than assigning the root to a particular grammatical category (or multiple grammatical categories) we might instead consider it to be just a bundle of semantic, phonological, and morphological information.

These root bundles, however, are not entirely *un*specified. Few (if any) roots may appear in all stem forms, and in spite of the similarities between predicates in Chol, a distinction must be made between those that may not mark for aspect, those that do so obligatorily, and those for which either option is available. While a root is under-specified with respect to semantic and grammatical properties, something in the root must contain information about what types of stems it may form and what types of meanings those stems will have. I will refer to this information in terms of *features*, which will be discussed in greater detail in the chapter that follows.

3.4 Conclusions

In this chapter I have described properties of Mayan roots and looked in detail at one previous account of root classes in Chol. Though confusion remains about what an appropriate classification of Mayan roots might look like (this will be addressed in Chapter 4), a few important points should be taken from this chapter:

- Mayan roots are typically of the form CVC, where in some cases the vowel is a "broken" or glottalized vowel (V'V).

Figure 3.4: Irineo's brother-in-law shows his son how to hit a piñata at a baptism celebration in Salto

- A given CVC root may frequently form stems of a variety of different grammatical categories, often with semantically related but unpredictable meanings.
- Previous classifications of Mayan roots have generally either divided roots into categories based on the types of stems they form, or proposed separate homophonous lexical entries to account for multiple stem formation.
- The distinction between nouns and verbs in Mayan languages is not a strong one and has even been argued not to exist.
- In Chol, however, a distinction must minimally be drawn between stems which mark for aspect (verb stems) and stems which do not (noun and adjective stems).
- The best way to account for roots in Chol is to claim that they are underspecified with respect to semantic features, grammatical category, sub-categorizational

frame, and thematic grid.

- Features of the root are responsible for determining its phonological output, the types of stems it may form, as well as the idiosyncratic meanings these stems will have.