

The grammaticalization of motion (and time) in Tzotzil

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1. The syntax and semantics of Tzotzil auxiliaries and directionals

Tzotzil is a Mayan language spoken by between a quarter and a half a million people in highland Chiapas, Mexico. The bulk of the material I discuss here comes from the Tzotzil of the *municipio* of Zinacantán, a dialect that is linguistically well described.² I will be concerned with a subset of the resources Tzotzil has for talking about space; how these resources are also used for talking about *other* things (such as time, if this is, indeed, *another* thing); and, in particular, with two devices--auxiliary verbs and directional particles--that are clearly *grammaticalized*, incorporated into the morphology of the Tzotzil clause. I discuss both the lexical and syntactic provenance of these grammaticalized resources, taking advantage of comparative and diachronic material. I also consider how these devices are used conversationally. This grammaticalized subset of Tzotzil spatial resources provides a useful focus to pursue several further questions: first, the contrast with non-grammaticalized, lexically specific mechanisms for describing space; second, opposing processes of (often highly specific) lexical "packaging" and generalized semantic "bleaching" in the evolution of spatial language; and finally, a model of "inferential semantics" that seems to be required to account for the use and understanding of these Tzotzil constructions. I will have occasion, along the way, to mention facts about such things as argument structure and ergative morphological patterning in Tzotzil, the semantics of Tzotzil intransitive verb roots, sentential clitics, and deictic centering and transposition in conversation.

1.1 Basic morphological facts

The Tzotzil clause has a basic VOS order, in which the verb, with affixes that cross-index its arguments, is the only obligatory part. The cross-indexing affixes on the verb follow an ergative pattern, with a set of ergative prefixes (that cross index transitive subjects, in A

¹ The research presented here has two proximate inspirations: first, a workshop on "Spatial conceptualization in Mayan languages, " at the Max-Planck Projektgruppe für Kognitive Anthropologie, Berlin, Sept. 10-20, 1990, where all of the other participants helped me to think through these phenomena; and second, a workshop on "Space, time, and the lexicon, " at the Max-Planck-Institute für Psycholinguistik, Nijmegen, Nov. 6-9, 1990, for which the current draft was prepared. Some of the material on Tzotzil voice in this paper also appears in Haviland (1987b).

² Modern grammars exist in Spanish (Haviland 1981) and English (Aissen 1987), along with voluminous lexicographic materials on both modern (Laughlin 1975) and Colonial (Laughlin 1988) varieties. In addition Laughlin has published collections of stories and other texts (Laughlin 1977, 1988b) from Zinacantán. Sources on other dialects include Delgaty-Ruíz (1978), Cowan (1969), and Sarles (1966).

function³), and two complementary sets of absolutive prefixes and suffixes (that cross index intransitive subjects, and transitive objects, S and O functions). Since the two series of affixes are different, there is a clear test for syntactic transitivity: transitive verbs bear ergative cross-indexes, and intransitives do not. The forms are as follows (eliminating plurals for convenience):

(1) Ergative prefixes:

j-/k- first person

a-/av- second person

s-/y- third person

(The first alternant precedes consonant-initial stems, the second those beginning with a vowel [more precisely, a glottal stop].)

(2) Absolutive prefixes:

i- first person

a- second person

0- third person.

(3) Absolutive suffixes:

-on first person

-ot second person

-0 third person.

The rules for choosing between absolutive prefixes and suffixes need not concern us here; and, indeed, these rules vary between different Tzotzil dialects. Moreover, since the ergative prefixes are also used to mark grammatical "possession," a variety of constructions exist that resemble those of "split ergative" languages, in which grammatical or logical Ss are cross-indexed with what are otherwise ergative prefixes.

In addition, Tzotzil verbs are obligatorily marked for aspect (but not for tense). The aspectual categories include: completive, incompletive, stative (or perfect, denoting a state resulting from an action), and a neutral aspect (that occurs in negatives and several other contexts). I describe these aspectual distinctions later in the essay. The details of form here are not directly relevant, except for the fact that completive and incompletive aspect are realized as prefixes, sometimes as separable particle, that precede person marking; whereas stative aspect is realized as a suffix bound directly to the verb stem (reflecting iconically the more "derivational"--indeed, adjectival--nature of the resulting form). In the normal state of affairs, aspect marking is the criterial diagnostic of Tzotzil verbs. Nominals can serve as predicates, in which case their heads bear absolutive suffixes which cross-index their Ss; but they are not marked for aspect.

Yes-no questions utilize a sentence initial particle *mi*. Negatives are formed with a negative particle *mu* or *muk'* preceding the negated element. The following example sentences⁴ illustrate some of these features.

³ I adopt, for convenience, Dixon's notational convention in which A stands for transitive subject, O for transitive object, and S for intransitive subject.

⁴ All cited examples are drawn from one of two sources: (1) conversational recordings, transcribed by the author; or (2) published Tzotzil tale texts (Laughlin 1977). These sources have different sorts of virtues and reliability: in the first case, the words were actually uttered in context, but no attempt has been made to sort "starred" from "unstarred" "sentences" by probing informant intuitions. In the second case, texts were recorded more or less as monologues, then transcribed and (I presume) linguistically normalized by Laughlin and his informants, who **did** exercise their intuitions. Examples are preceded by an identifier that shows a transcript or text

Intransitive verbs

(4) Mojtulan:52
 ch-0-lok' ch'ail un
 ICP-3A-exit smoke PT
Smoke would come out.

(5) T9006A1:863:
 ch-i-yul ta ora
 ICP-1A-arrive.here PREP hour
I arrive right away.

Transitive verbs

(6) T9006A1:386:
 xi j-mak-oj-0 i ka`e
 thus 1E-cover-STAT-3A ART horse
I blocked (the way of) the horse thus.

(7) T9006A1:1011:
 ta ol ak'ubal t-s-k'ux-0 ixim ka` un
 PREP half night ICP-3E-crunch-3A corn horse CL
At midnight the horses would eat their corn.

(8) ANVASK:113:
 ch-a-j-tik' ta pus o ya`el
 ICP-2A-1E-stick.in PREP sweatbath REL it.seems
I will stick you in jail because of it.

Nominal predicates

(9) T9006A1:927:
 (mi) li`-ot-e totik Xun
 Q here-2A-CL father John
Are you here, father John?

(10) T9006A1:498:
 t'uxul-on tajmek
 wet-1A very
I was very wet.

(11) T9006A1:77:
 mi jamal-0 li balamil
 Q wide-3A ART earth
Is the country open?

In addition to these simple clauses, there are several further clause types that involve different sorts of argument structure. The three important varieties, for our purposes, are

source (examples from Laughlin (1977) are labelled *T_{nnn}*, where *nnn* is the corresponding tale number; all other labels identify conversational transcripts), followed by a line number. In the glosses E stands for ergative, and A for absolutive; thus 2E means "second person ergative." I have not always, in my glosses, bothered to show 3A (3rd person absolutive) affixes, which are always realized as zero. Other abbreviations in glosses include: 1PIE first person plural exclusive; 1PII first person plural inclusivex; ART article; ASP neutral aspect; AUX auxiliary verb; BEN benefactive ditransitivizing suffix; CJ conjunction; CL clitic; CP completive aspect; DEM demonstrative; DIM diminutive; DIR directional; EL deverbal suffix; ICP incompletive aspect; IMP imperative; NAME personal or place name; NC numeral classifier; NEG negative particle; PASS passive; PL 2nd and 3rd person plural; PREP preposition; PT particle; Q question sentential proclitic; QUOT evidential "2nd-position" clitic; REL relational particle; STAT stative (perfect) aspect; SUBJ subjunctive.

reflexive/reciprocal clauses, di-transitive or benefactive clauses, and passives. I will take each in turn.

Reflexives in Tzotzil are formed with a possessed form of *ba*, which as an independent noun means 'face, front, top', and which occupies roughly the syntactic position of the O⁵. The grammatical possessor agrees with the A argument (i.e., it is cross-indexed by a corresponding ERG prefix), and the main verb is marked as for a 3rd person O (that is with zero Absolutive marks).

(12) vanjel: 66
 ay 0-s-poxta s-ba tol la ip-0 un
 went(AUX) (3A+)3E-heal 3E-face too much QUOT sick(+3A) PT
He went to cure himself, he was, they say, too sick.

(13) pan: 31
 ja` tal j-tzob o j-ba-tik
 ! com(AUX) 1e-gather REL 1E-self-PL
We have gathered together for this.

Unsurprisingly, this same reflexive syntax can have a reciprocal meaning as well, with a plural subject⁶.

(14) kuxell:19
 ta j-chi`in j-ba-tik ya`ele
 ICP 1E-accompany 1E-self-PL it seems
[Our Lord really wants us] to accompany one another.

In "ditransitive" constructions, still only two arguments can be explicitly cross-referenced on the verb, ordinarily the logical agent and the logical beneficiary, with the logical patient syntactically stranded, in *chomage*⁷. Such verbs receive an additional suffix *-be* (glossed here as BEN) to mark such ditransitivity.

(15) T9006a1: 254
 kavron ch-a-k-ak'-be arsyal
 bastard ICP-2A-1E-give-BEN whip
Damn, I'll whip you (literally, give you a whip)!

Reflexives can also occur in such contexts.

(16) ja:135
 ep i-s-tak-be s-ba vun li xune
 many CP-3e-send-BEN 3e-self paper ART John
John sent himself many letters.

⁵ There are complications, as the possessed form of *ba*, unlike ordinary direct objects, has to follow tightly after the verb, with only certain "2nd position clitics" possibly intervening, and with no possibility of topical fronting. See Aissen 1987:78, 114. There are also other reflexive constructions involving not verbal heads but nouns and adjectives (see Haviland 1981:318-321 and Ayres 1980); there are also nominalized reflexive verbs.

⁶ Whether or not this plurality is explicitly marked morphologically.

⁷ Aissen 1987: 106ff.

To complete the picture of the Tzotzil paradigm of voice, note that there are rather restricted antipassives, but also quite productive passives, of which (17) is an example for both transitive and ditransitive verbs. The syntax suggests that an underlying Patient has been promoted to a subject (S) position; in the example the underlying logical Agent is not superfluently represented, although such arguments can appear in an oblique construction.

(17) proylan:35
 yu`un muk' x-`ik'-e
 because NEG ASP-marry-PASS
Because she wasn't married [by her lover].
 yech x-`ak'-b-at y-ol-e
 thus ASP-give-BEN-PASS 3E-child-CL
She was just given a child (without recompense).

There is, therefore, a well delimited syntax of voice in Tzotzil that includes the range: ditransitive-transitive-reflexive-(antipassive)-passive-intransitive (see Haviland 1987b).

1.2 Auxiliaries as aspect bearers

Now, what about space? Tzotzil also has a small closed set of what are ordinarily analyzed as auxiliary verbs. All of them are transparently related to ordinary intransitive verb stems (indeed, intransitive verb *roots*); most of these are, again transparently, verbs of "motion." This is the first part of the grammaticalization of motion I want to consider: the incorporation of lexical material denoting motion into the aspect system of the Tzotzil verb itself. Unlike the ordinary verb, which bears both aspect markers and person cross-referencing affixes, a verb in an auxiliary construction bears only person affixes; the aspect marker attaches to the preceding auxiliary. The resulting construction thus distributes the morphology of the single verb in a simple Tzotzil clause over two different elements; and the two elements--auxiliary and main verb--are tightly bound together, being separable only by a small set of "2nd-position" clitics, notably *xa* 'already' and *to* 'still'. (I shall return to these "perspectival" clitics later in the paper.) For example, an auxiliary with a transitive main verb has the form in (18).

(18) **ASPECT-AUX ERG-main.verb-ABS**

(19) LOL2:41:
 ja` xa ch-tal s-kolta-on
 ! already ICP-come(aux) 3E-help-1A
He is the one who is already coming to help me.

(20) LRNACHIJ.TXT:103:
 much'u bat-em s-k'el-ik
 who go(AUX)-STAT 3E-watch-PL
Whom have they gone to watch?

An auxiliary with an intransitive main verb will have the form of (21).

(21) **ASP-AUX main.verb-SUBJ-ABS**

(22) LOL4:186:
 ch-tal `ik'van-uk-0 `un
 ICP-come(AUX) take.person-SUBJ-3A CL
They come to pick (one) up.

(23) T87:77:
 ch-ba yakub-an

ICP-go (AUX) get.drunk-SUBJ+2A⁸
You'll go and get drunk.

We have already met examples of the auxiliary construction with reflexive main verbs, at (12) and (13) above.

Notice that, when they occur with an auxiliary, transitive main verbs bear only ergative and absolutive affixes (cross indexing A and O, respectively), as shown on the schematic diagram (18). Intransitive main verbs, in the auxiliary construction, combine absolutive affixes (cross-indexing the S argument) with *subjunctive* marking, as in (21). Elsewhere in the grammar of Tzotzil, such verbal forms--intransitive subjunctives and bare transitive stems with pronominal cross indexes but no aspect markers--function, usually as complements, with a purposive meaning: "in order to X" or "for X to happen" (see Haviland 1981, Aissen 1987:14, Ch. 11). [An example can be seen at (25) below.] Indeed, Aissen calls the auxiliary construction a "motion-cum-purpose" construction (1987: 16-17, and Aissen(1984)), translating examples like (23) "You'll go to get drunk." An interesting question is how to understand this construction syntactically and diachronically, in light of other devices to express purpose. A further point of interest, as we shall see, is exactly how to construe the motion element encoded in the auxiliary verb, since it is not itself marked for person: who (which argument) is doing the moving?

There are fourteen possible auxiliaries in modern Zinacantec Tzotzil (with one further suppletive imperative), and they fall into a few clear categories. In the list that follows I show, under each notional category, the verb root to which the auxiliary is related, along with the gloss given by Laughlin(1975), and a few illustrative transcript examples.

A. Deictically anchored motion

{1} ba(t), I⁹. "go, go on, elapse, last (time), turn out."

(24) CHID:27:
 j-tak ta k'anele, yu`un ch-ba tal-uk
 1E-send PREP wanting because ICP-go (AUX) come-SUBJ(+3A)
(However much [liquor]) I send for, it's going to come.

(25) T130.TXT:290:
 bat-em s-sa` tal kaxlan-vaj ve`-ik-utik
 go (AUX)-STAT 3E-search come (DIR) tortilla eat-SUBJ-1PLE
He's gone to bring bread for us to eat.

{2} k'ot, I. "arrive there, become, be straight-shooting (gun), reach, happen, come true (dream, omen)."

(26) LOL2:159:
 ch-k'ot j-man tal te ta szellej
 ICP-arrive (AUX) 1E-buy(+3A) there PREP ridge
I used to go there to buy them on the ridge.

{3} tal, I. "come, arrive /here/." Also, the suppletive imperative form *la`'come!*

(27) T92:44

⁸ The suffix *-an* is a portmanteaux combining 2nd person absolutive with subjunctive.

⁹ The letter I, in the root classification of Laughlin(1975), represents an "Intransitive verb root." All but one auxiliary verb belong to this category; the single exception is *lik* which Laughlin assigns indeterminately to the P(ositional) and T(ransitive) root class.

la` k-uch'-tik
 come (AUX)+IMP 1E-drink-1PlI
Come and (let's) drink!

{4} yul, I. "arrive here, return here"

(28) CHICHON:174:
 ja` xa yul s-nup li` to
 ! already (CP+) arrive (AUX) 3E-meet here still
He just arrived here and met it (the volcanic ash, i.e., it was when he arrived back here that he encountered it.)

Laughlin's glosses do not capture the structural relations between these verbs, which fall neatly into a simple deictically anchored paradigm. Given a deictic origo "here" (which may be established in a variety of ways, as I shall later illustrate) there are two intersecting contrasts: motion towards "here" versus motion away from "here"; and emphasis on arrival at a goal, as opposed to setting out towards a goal. Thus *bat* 'go' and *tal* 'come' describe unmarked vectors of motion (away from, and towards "here," respectively); in contrast with *k'ot* 'arrive "there"' and *yul* 'arrive "here"' the unmarked forms can also suggest inception: setting out in one direction or another. Diagrammatically, the roots arrange themselves as follows:

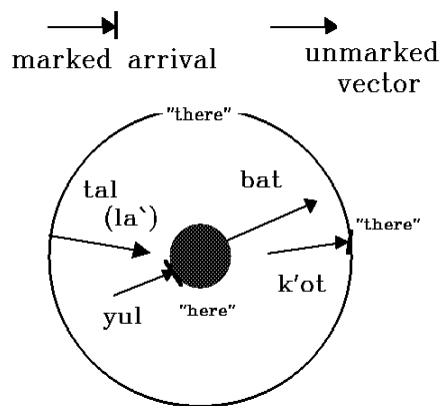


Fig. 1: Deictically anchored motion auxiliaries

B. Point-oriented motion

{5} `ech', I. "pass by, pass (sickness, grief, time, fear), abate (rain), leak (pot, house)"

(29) t9006a1:
 ja` nox `ech' k-ojtikin-tik li toch' `une
 ! only pass (AUX) 1E-know-1PlI ART NAME PT
Let's just pass by and get acquainted with the (place called) Toch', then.

(30) t90006a1:339:
 ech' y-uch'-ik pox un
 pass (AUX) 3E-drink-PL liquor
They passed by to drink liquor.

{6} sut, I. "return, set (moon), subside (skin disease, smallpox, etc.)"

(31) {constructed}
 sut k'el-o l av-ol-e
 return (AUX) watch-IMP ART 2E-child-CL
Return and take care of your child!

{7} `ay, I. "go and return."

(32) LOL6:459:
 `ay-em k-ak' `ali turasnu
 go(AUX) 1E-give PT peach
I had gone to deliver the--uh--peaches.

(33) PETPERES:66:
 mi ramo sivil bu-tik `ay s-melzan s-ba-ik
 Q ramo civil where-PL go(AUX) 3E-fix 3E-SELF-PL
Perhaps it was the civil court where they went to settle the dispute (lit., to make themselves).

{8} kom, I. "stay, remain, be left, be left behind, be left over, be slow (watch), lose one's soul"

(34) LOL1
 ch-kom chonolaj-uk xchi`uk taj me`el `une
 ICP-stay(AUX) sell-SUBJ(3A) with DEM lady PT
He stayed to sell things with that old lady.

Once again, the roots form a structured contrast set. *Kom* 'remain', *sut* 'return', *`ay* 'have been at', and *`ech* 'pass by' denote different sorts of trajectories in relation to an established reference point (which may or may not be the deictic origo "here"). *Sut* adopts that reference point as a goal, presupposing that the overall trajectory has left the same point earlier (so that the current goal represents a "return"). *Kom* suggests staying on at the reference point, presupposing one is already there. *`Ech* suggests a trajectory through the reference point, but with continuing motion starting and finishing somewhere else. *`Ay*, glossed by Laughlin(1975) as "go and return," seems more accurately translated as "to have been in a place [from the perspective of no longer being there]." Laughlin notes that the verb is "restricted to past tense"--in terms of the current analysis, that means that it does not bear incompletive aspect. Given the presupposition that the verb *`ay* denotes a visit to a place where one no longer is, this seems a natural restriction. (And see the discussion below of Tzotzil aspect.) Note further that the place where one (from a given perspective, e.g., now) is, having once *`ay*-ed (been) somewhere else, is not specified; it is, specifically, limited neither to a deictic "here" nor to a "home base" (see Dürr 1990). Diagrammatically, the roots in this group may be represented as follows:

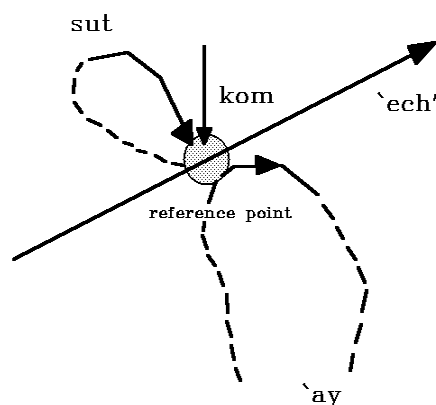


Fig. 2: Point-oriented motion auxiliaries

C. Enclosure or region oriented motion

{9} `och, I. "enter, go in, come in"

(35) petom:22:

ta x-`och j-lok'-be yo s-k'u`
 ICP ASP-enter(AUX) 1E-remove-BEN humble 3E-clothing
I'll enter to remove from them their humble clothing [wedding godfather at marriage ceremony].

{10} lok' I. "exit, go out"

(36) T75:116:
 lok' j-kux k-o`on ti samel
 exit(AUX) 1E-rest 1E-heart ART last night
I went out to enjoy myself last night.

D. Vertical axis motion

{11} muy, I. "climb, rise"

(37) T176:116:
 `ali t'ul `une, muy s-sa` ja`as `un
 ART rabbit CL rise(AUX) 3E-search.for mamey CL
The rabbit climbed up to look for a mamey.

{12} yal, I(2). "descend, climb down, come down (price), fall (frost, rain)."

(38) {constructed}
 ta x-yal j-k'e1 li j-chobe
 ICP ASP-descend(AUX) 1E-look*at ART 1E-cornfield
I will go down [e.g., to the lowlands] to look at my cornfields.

These four roots again involve basic motion, in the case of the first pair, motion into or out of a region or enclosure (or a reference point that can be so construed); and in the second case, motion upwards or downwards with respect to some reference point, now construed as having a vertical axis (or a transverse median).

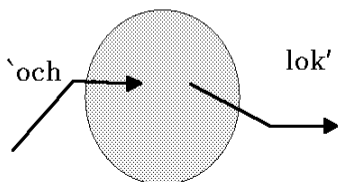


Fig. 3: Enclosure or region auxiliaries

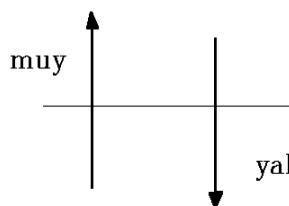


Fig. 4: Vertical axis auxiliaries

E. aspectual auxiliaries

{13} laj, I. "finish, end, die, wear out, be used up, get hurt."

(39) t79:

ja` `o me ch-laj lok'-uk li choye
! REL CL ICP-finish(AUX) exit-SUB(3A) ART fish

The fish [all of them:JBH] come out [when Our Lord passes by there]. (Laughlin 1977:253).

(40) t9006a1:374:

laj y-uch'-ik talel
finish(AUX) 3E-drink-PL come(DIR)

They finished drinking [it] on their way back here.

(41) CHICHON:157:

yu`un laj xi`-uk ta j-moj
because finish(AUX) be.afraid-SUBJ(3A) PREP one-blow

So they got thoroughly frightened all at once.

(42) LOL5:542:

a. l-i-`abtej `oxib canib-uk jabil j-chi`uk li humberto
CP-1A-work three four-DIM year 1E-with ART NAME

b. k`alal laj nupun-k-on-e
when finish(AUX) marry-SUBJ-1A-CL

(a) I worked three or four years with Humberto (b) after I got married.

(43) LRNACHIJ:246:

yech laj j-lajesan j-tak'in
for.nothing finish(AUX) 1E-finish 1E-money

I have just completely wasted my money.

{14} lik, P, T or T(2). "get up, arise, become erect."

(44) anvask1:204:

ch-lik k-ut-tik ch-lik j-maj-tik
ICP-start(AUX) 1E-scold-1PLI ICP-start(AUX) 1E-hit-1PLI

We start to scold and we start to hit [our wives] (when we get drunk).

(45) T81:9:

ch-lik s-k'ux ti vinik une.
ICP-arise(AUX) 3E-crunch ART man CL

[(The man's head) covered up the woman's fire. It left the charcoal heaped up. But you see,] the man got up to eat it. (Laughlin 1977:179)

The last two auxiliaries seem to have a slightly different semantic provenance, and they denote not motion but aspectual nuance. *Laj*, which means 'finish, come to an end' as an ordinary intransitive verb, suggests total completion, often surfeit or exhaustion, when it functions as an auxiliary. (See especially example (43), where the main transitive verb stem, *-lajan*, is itself derived from the root *laj*, suggesting 'finish up many things'.) *Lik*, which can have the motion sense of 'arise, get up (e.g., get up in the morning)', as an auxiliary usually denotes the inception of an action. (However, as Laughlin's translation of example (45) suggests, a possible reading may involve literally getting up.)

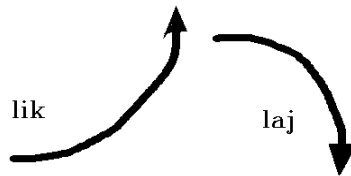


Fig. 5: Aspectual auxiliaries

Verbal constructions with motion auxiliaries

We can begin to explore the syntactic and semantic ramifications of the auxiliaries as devices for incorporating notions of space into Tzotzil verb morphology by arraying the possibilities of the use of auxiliaries against the different clause and voice types that I surveyed to begin with. Recall that all the auxiliaries are relatives of intransitive verbs, which as main verbs accept only single (S) arguments, cross-indexed with Absolutive affixes. As auxiliaries, however, they are paired with main verbs of all transitivity classes and in all voices.

Considering first the auxiliaries that clearly denote motion (or its lack, in the case of *kom* 'stay'), how does one understand the encoded motion? Who is moving? When the main verb of a clause is intransitive, the question seems easily resolved, since there is seemingly only a single argument available: the S, or intransitive subject. The various examples I have given so far of auxiliaries with intransitive main verbs (see examples 22, 23, 34) display exactly this pattern. Similarly, consider the following examples:

(46) CHiCHSPN:78:
 kom to `abtej-uk.
 stay(AUX) still work-SUBJ(3A)
He stayed to work.

(47) T130:329:
 naka xa la ch-k'ot cham-uk z-na.
 just already QUOT ICP-arrive(AUX) die-SUBJ(3A) PREP+3E-house
She just reached home and died. (Laughlin 1977:318)

In these cases there seems to be both a causal and a temporal link between the motion encoded in the auxiliary and the action of the main verb, which follows (or is contemporary with) a preparatory (if not purposive) motion by the same entity/argument. These examples suggest, as a first approximation, a pattern which we might represent as follows:

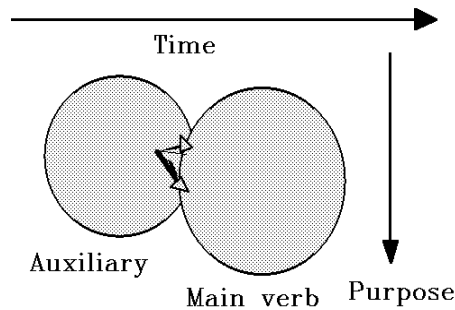


Fig. 6: "Motion-cum-purpose" auxiliary construction

Two problems immediately arise with this analysis. Let me raise them here, leaving a suggested solution for slightly later in the exposition. The first has to do with what I will provisionally label an "extension" from motion to time in the use of the auxiliary verbs. That is, instead of constructing from a complex verb phrase of the form

AUXILIARY[X] SUBJECT[Y]-MAIN*VERB[Z]

a reading of the form "Y (first) moves X in order to (then) do Z," in a number of cases the reading seems to be, instead, something much simpler: "Y *will* do Z." Thus, for example, the auxiliary *ba(t)* 'go'--much like the auxiliary *go* in English or *ir* in Spanish--seems to be used, in the incompletive aspect, with a clear future meaning. There are many examples of such usage, but perhaps the clearest is one we have already met above, repeated here for convenience.

(48) CHID:27:
 j-tak ta k'anele, yu`un ch-ba tal-uk
 1E-send PREP wanting because ICP-go (AUX) come-SUBJ (+3A)
(However much [liquor]) I send for, it's going to come.

Given the mutually inconsistent meanings of *bat* 'go' and *tal* 'come' the only apparently possible reading of the auxiliary construction *ch-ba tal-uk* is, as in the idiomatic English translation, "it's going to (i.e., will) come." As I shall try to show, this temporal "extension" of the motion sense of the auxiliaries is principled and general, part of the process of grammaticalization.¹⁰

A further, somewhat more equivocal, example is the following. Two brothers are discussing food, and how it can often be dangerous. One has told how a friend, after eating strange food offered to him by foreigners, suddenly became violently ill. But, it transpires, the food took a while to have this bad effect.

(49) PRANS:187:
 tz'akal to tal xen-uk `o
 later still come (AUX) vomit-SUBJ (3A) REL
Only later on did he (come to) throw up from it [the bad food].

In the story context there is no suggestion that the unfortunate victim actually *came in this direction* to throw up, only that it happened *later on*, that the event "came upon" him. Diagrammatically, one can posit a temporal extension of the meanings of the auxiliaries *bat* and

¹⁰If not, as argued repeatedly by Leonard Talmy (e.g., in Talmy 1987), a general grammatical fact of language.

tal that exactly parallels their deictically anchored spatial meanings; one must merely replace "here" with "now." This same aspectual/temporal use of auxiliaries characterizes all of the grammatical frames in which these two verbal roots occur, an issue to which I shall return.

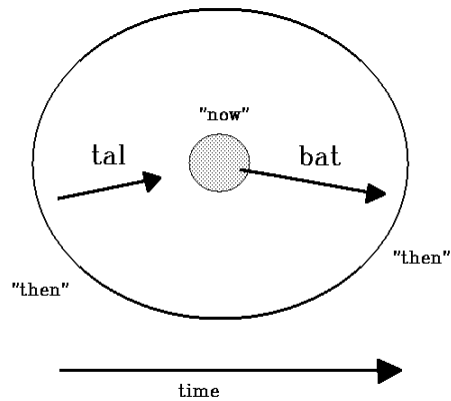


Fig. 7: Deictically anchored time Auxiliaries

The second problem with the simple "motion-cum-purpose" analysis schematized in Fig. 7 has to do with how to understand the relation between verbal arguments, as cross-indexed by pronominal affixes, and the actions or events (including the motion of the auxiliary verb) involved. One would suppose that, when the main verb is intransitive, its subject would be understood as the logical subject of the auxiliary as well. However, consider an example like the following:

(50) MONOL:3:
 ch-ba lok'-uk `akta noxtok
 ICP-go (AUX) exit-SUBJ(3A) document too
(We) will go to have a document issued also.

The free translation here obscures the problem, for the original Tzotzil sentence has no 'we'; instead, *lok'* 'exit, go out' is an intransitive verb, suffixed only by a 3rd person Absolutive (subjunctive) which cross-indexes the Subject, *akta* 'official document.' The sentence

(51) {constructed}
 ch-0-lok' akta
 ICP-3A-exit document
A document will come out (i.e., be issued).

illustrates the normal expression used to describe the issuing of a signed, written declaration which often serves to settle civil grievances in Zinacantán. Again, the sentence is intransitive, *akta* being the grammatical subject of the intransitive verb *lok'* 'exit'. However, it is clearly not possible for such a document *first* to go (to the townhall, in this case), *in order then* to be created and issued. It is the complainants who do the going, with the issuing of the *akta* the proposed result--as is made clear by the wider conversational context: a man is describing his continuing disputes with a relative, and how they ultimately went to the magistrate for settlement.

(52) MONOL:
 (a) pero bwenno mu k'usi
But, alright, there's nothing for it.
 (b) chibatikotik ta jteklum che`e,
We'll go to Zinacantán Center.

- (c) ch-ba j-k'opon-tikotik preserente
ICP-go (AUX) 1E-talk*to-1PlE president
We'll go to talk to the (municipal) president.
- (d) ch-ba lok'-uk `akta noxtok
ICP-go (AUX) exit-SUBJ(3A) documnt too
(We) will go to have a document issued also.
- (e) mi mu xa ssa` k'op bak'in
So that [the relative] won't cause trouble another time.

The sense of the auxiliary paired with *lok'* in (d) is clear, and it derives in part from the auxiliary *ba* occurring in the previous sentence (c), which has a transitive main verb (*-k'opon* 'talk to'). The disputants will go, and have the *akta* issued. The fact remains, however, that there is no syntactic argument available in *chba lok'uk* which corresponds to the "logical subject" of the auxiliary verb 'go'. The problem of how to interpret these seemingly stranded motion auxiliaries will reappear again shortly, so let me leave it for the moment as a syntactic puzzle.

As the "we'll go to talk to the president" example in (52:(c)) shows, when auxiliaries appear with ordinary transitive main verbs, normally the link between the motion of the auxiliary and the main action is the A argument, the transitive subject. The people who go are the ones who (later) talk. This is clearly the case in previous transitive examples (19, 20, 25, 26, 28, 29, 32, 35, 37).¹⁰ Similarly, with reflexive/reciprocal main verbs, the logical subject of the motion auxiliary corresponds to the A argument of the reflexive construction (see examples 12, 13, 33), understood in any case to be coreferential with the reflexive "object." In much the same way, ditransitive main verbs, which may be seen as having three logical arguments (only two of which can be explicitly cross-indexed), admit consistent interpretation in auxiliaries: the A argument, cross-indexed by ergative prefixes on the main verb, is clearly coreferent with the understood Subject of the motion auxiliary. One such example is (35). Here is another:

- (53) ANTPOX:14:
mi laje ch-ba k-ak'-be-0 `antun
Q finish ICP-go (AUX) 1E-give-BEN-3A NAME
When you've finished, I'll go to give (it) to Anthony.

Such facts provide clear evidence for a Nominative/Accusative style Subject relation in Tzotzil, despite the ergative/absolute agreement morphology. As in "Equi" constructions of English, in the normal case both intransitive subjects and transitive subjects are understood to be coreferent with the logical or underlying subjects of the associated auxiliary motion verb.

However, when passive verbs are combined with auxiliaries, the situation is more complex. In the first place, ordinary inflected passive verbs do not easily (or not in the speech of

¹⁰There are interesting complications. How, for example, can one construct a syntactic model of argument structure and control to capture the set composition of the shared logical argument in example (27), where the auxiliary *la`* (a suppletive form meaning 'come+2nd person IMPERATIVE') combines with the transitive main verb *0-k-uch'-tik* '3A-1E-drink-1st Plural Inclusive'? Here the logical structure seems to be:

You come (in order that) **we** drink it.

Where the boldface arguments ought, in the auxiliary construction as we have analyzed it, to be interpreted as "co-referential." For discussion of what I believe is a related phenomenon, see Aissen (1990).

all Zinacantecos) combine with auxiliaries at all.¹¹ Instead, they employ a verbal form suffixed with *-el*, always with an apparent ergative prefix, and also occasionally capable of bearing an absolutive suffix.¹²

There seem to be two syntactic patterns. In the first, an ergative (or formally identical possessive) prefix on the verb form corresponds to the person of the logical patient (the O argument in a full transitive clause). In cases where both (logical) agent and patient are nominals it is of course impossible to tell whether a 3rd person prefix corresponds to one argument or the other.

(54) apastz:465:

a. l-i-bat-otikotik ta jun klinika `un,
CP-1A-go-1PlE PREP one clinic CL

b. yu`un ba s-k'el-el li s-tanal k-e `une
because (CP) go(AUX) 3E-see-EL ART 3E-stone 1E-mouth CL

(a) *We went to a clinic*, (b) *because I went to have my teeth*¹³ *looked at*.

(55) T142:205:

buy `un, tal s-mak-el ta be `un
where CL (CP) come(AUX) 3E-cover-EL PREP path CL

¹¹See Haviland(1981). The construction could be expected to take the following form:

(ASP)-AUX TVStem-PASSIVE-SUBJ-ABSOLUTIVE

and such forms can occasionally be elicited from Tzotzil speakers. In transcript material, however, I have heard no such examples, and Laughlin's tales contain only equivocal cases such as the following (the free translations are Laughlin's):

(**Error! Main Document Only.**) T176:198:

ba `ak'-at `ak'-at-uk vay-uk
CP-go(AUX) give-PASS(3A) give-PASS-SUBJ(3A) sleep-SUBJ(3A)
He was given [the job] of spending the night [in a cave, as we say] (Laughlin 1977:370).

(**Error! Main Document Only.**) T49:65:

a. `ak'-o ba sa`-uk tal si`,
give-IMP go(AUX) (IMP) search-SUBJ(3A) come(DIR) firewood

b. ba sa`-o tal si`
go(AUX) (IMP) search-IMP come(DIR) firewood

(a) *Go and get firewood*, (b) *go and get firewood [to heat the metal] (Laughlin 1977:324).*

In both cases the tale teller appears to have corrected a dubious form--one a passive which is modified by adding the subjunctive marker, the other an aberrant sort of medio-passive subjunctive changed to a normal transitive imperative form--in mid sentence. These textual examples suggest a genuine "competence-level" passive gap in the auxiliary paradigm

¹²On these and other deverbal *-el* forms see Haviland (1981) and Aissen(1984). In the context of this essay I cannot fully justify, on discursive grounds, my claim that the construction under discussion represents the auxiliary construction applied to passive main verbs, except to repeat that otherwise passive forms constitute a notable and inexplicable gap in the paradigm of the auxiliary construction.

¹³ The expression *s-tanal -e*, literally "its stone of [somebody's] mouth" means "teeth."

But you see, they were held up¹⁴ on the way [the Chamulans] (Laughlin 1977:264).

(56) T85:68:
 ba s-ten-el ti bu-tik `a s-ten-el-e
 go (AUX) 3E-throw-EL CJ where-PL been (AUX) 3E-throw-EL
They went to throw him wherever they threw him, [but he didn't die]. (Laughlin 1977:235-6)

(57) t9007a1:393:
 mu to bu ch-tal s-kolta-el
 NEG yet where ICP-come (AUX) 3E-release-EL
Is no one coming to release them yet? [horses whose owners' names cannot be remembered].

Sometimes, however, the ergative prefix is 1st or 2nd person, and it clearly corresponds to the logical patient.

(58) T84.TXT:226:
 tal-em k-ik'-el z-na `a li rey
 come (AUX) -STAT 1E-take-EL PREP+3E-house PT ART king
They're coming to take us to the King's house. [We are going to the dance] (Laughlin 1977:208).

In the second form of the construction, an absolutive suffix appears on the verb, again apparently cross-indexing the logical patient; the ergative prefix in such cases is always 3rd person.

(59) Z8808B26:205:
 `ay y-ik'-el-ik
 been (AUX) 3E-take-PL
Someone went to pick them up [from Tijuana].

(60) T49:91:
 k'al x-tal s-jitun-el-ot-e,
 when ASP-come (AUX) 3E-untie-EL-2A-CL
When they come to untie you [you'll take the girl] (Laughlin 1977:325).

Although many of the free translations show an explicit (often indefinite) agent, it is clear in context that the verb forms are in fact passive, with no agent syntactically present.¹⁵ The auxiliary, however, makes these sentences difficult to translate into English, since there is clearly no match between the syntactic subject of the passive clause (the logical patient) and the logical subject of the motion. Thus, in example (59), the sentence was given, as part of a hypothetical

¹⁴The expression *-mak ta be*, literally "close on the path" means "hold up."

¹⁵ At least not at the surface level. It is also possible for an explicit agent to appear, as in ordinary passive clauses, in an oblique construction, although discursive evidence--the thematic chaining of successive clauses--suggests that the construction remains fully passive. Consider:

(**Error! Main Document Only.**) T72:220:
 a. ba s-sa`-el y-u`un ti y-ajnil une.
 go (AUX) 3E-search*for-EL 3E-by ART 3E-wife CL
 b. Vokol xa la ta-e-0 ...
 difficult already QUOT find-PASS-3A
[On the third day] (a) his wife went looking for him. (b) It was hard to find him... (Laughlin 1977:169)

A more accurate pseudo-English translation that preserves the thematic chain would be something like: "[on the third day] he was gone to be looked for by his wife; he was hard to find."

dialogue, in answer to the question: "And then what happened to them [two young men stranded in faraway Tijuana]?" The answer is that they were picked up--but somebody unspecified (and discursively unidentified) went to do it. The flavor of a better (though unidiomatic) translation is thus: "They were went to be picked up."

Similar phenomena may be observed when passivized ditransitive main verbs combine with auxiliaries.

(61) T143:334:
 ba la s-nop-b-el mul `otro j-ten
 go(AUX) QUOT 3E-think*up-BEN-EL crime other one-time
He went and invented another crime for him. (Laughlin 1977:272). (Literally: He had another crime gone and invented on him.)

(62) T69:211:
 ti s-k'ex-tak ba s-k'an-b-el `une.
 ART 3E-debt-PL go(AUX) 3E-want-BEN-EL CL
They went to recover his debts.(Laughlin 1977:250). (Literally, as for his debts, he had them gone and asked for on him.)

Forms with explicit absolutive suffixes also occur.

(63) T143:352:
 tal y-al-b-el-on `un ti n-a-`elk'aj `une,
 come(AUX) 3E-say-BEN-EL-1A CL CONJ CP-2A-steal CL
[But that's what he] came to tell you [sic]--that you stole (Laughlin 1977:273). (Literally, [that's what] I had someone come and tell me, that you stole.)

If these *-el* forms are correctly analyzed as passives, they present a problem for the analysis of the semantics of auxiliaries comparable to that posed by examples like (50) above. For, insofar as the logical subject of the motion auxiliary--the thing that "moves"--can be assigned to an argument, that argument is not (or not superficially) syntactically present in the clause: it is a logical (often indefinite) transitive subject, a would-be A argument, that has "disappeared" under passivization.

In summary, the motion associated with an auxiliary verb seems to pattern *as if* the "subject" of the auxiliary were controlled by (coreferential with) the logical agent of the main verb, which is normally its subject (A or S). (See Figure 8.) This coincides with an intuitive view of a purposive relation between the motion encoded by the auxiliary, and a goal described in the main verb (although "goal" must be understood in a loose way, as examples like (47)--"she arrived only *to die*"--suggest). The association of auxiliary with main verb also provides a generic action template for the sorts of things that can be main verbs in this construction: actions which can have a purposive agent. However, the interpretation of the motion of the auxiliary cannot apparently be strictly a syntactic matter, as the passive examples and (50) appear to show. Instead, the construction conjures an entire scene, in interaction with the wider discursive context, with motion assigned to arguments (explicit or implicit) by inference rather than by syntactic control.

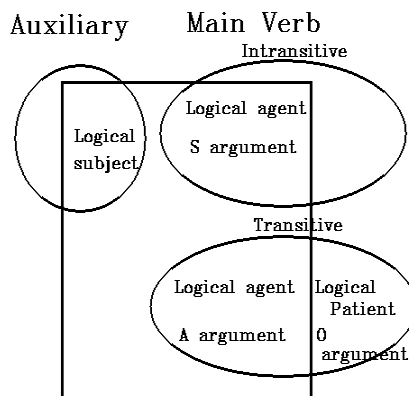


Fig. 8: Co-referential arguments in auxiliary construction

In this survey of verbal constructions with auxiliaries, I have so far ignored the two "aspectual" auxiliaries, *lik* 'arise, start' and *laj* 'finish, complete', both of which figure in the same syntactic environment, but which seem to have a different sort of meaning. For, while the motion auxiliaries combine temporal sequence with purpose, roughly resembling English Equi constructions, as in Figure 8 above, the aspectual auxiliaries more closely resemble those English verbs which take sentential complements, combining with them by Raising. As I argue below, it seems likely, on comparative and diachronic grounds, that the system of Tzotzil aspect marking has evolved precisely from the grammaticalization of such aspectual verbs into auxiliaries and, ultimately, into aspectual prefixes.

It is worth pointing out that the aspectual auxiliaries also combine with the "passive" *-el* forms, as in the following example:

(64) T84:431:
 k'alal `a li lik xa s-k'uxubin-el-ot
 when PT PT arise(AUX) already 3E-care*for-EL-2A
But when you began to be favored, [it seems, then you didn't have to work hard anymore] (Laughlin 1977:211).

The auxiliary *lik* 'begin' seems to take as its notional subject the content of entire main verb ("you were taken care of"), rather than any of the logical arguments of that verb.

Auxiliaries as extensions of the aspect system

I remarked that the normal diagnostic of verbs in Tzotzil is that they bear aspect. In this respect they differ from nominal predicates, which carry absolutive pronominal cross-indexes but which are never marked for aspect. Thus, for example, one says, with an intransitive verb stem in incomplete aspect

(65) (constructed)
 ch-i-choti
 ICP-1A-sit*down
I sit down

but with the corresponding derived adjective, one says

(66) (constructed)
 chotol-on
 seated-1A

I am seated.

without aspect marking. There are several classes of such nominal predicates, including, unsurprisingly, nominals headed by nouns and ordinary adjectives.

(67) LOL5:511:
 komersyante-on xa `ox `une
 businessman-1A already then CL
I was already a businessman by then.

(68) Z8808293:34:
 `ip-on jutuk
 sick-1A little
I am a little sick.

The root in examples (65) and (66) belongs to a class of roots normally called "positionals." The formal characteristic of such roots, in many Mayan languages including Tzotzil, is that they have a canonical CVC shape but do not form stems directly (unlike, for example, CVC transitive verb roots, which can be directly inflected as transitive verb stems). Instead, they require derivational affixes to function as adjectives, verbs, and so on. Laughlin (1975) delimits the positional class in Tzotzil by means of several diagnostic derivations, two of which are exemplified in (65) and (66): viz., an intransitivizing suffix *-i*, and a suffix *-VI* which produces a predicative adjective stem.

Semantically there is some *prima facie* coherence to the rather large class of resulting roots, which are called "positional" precisely because many notions describing the positions of objects (and bodies)--such as *chot* 'sitting'--are denoted by roots in the class. However, other sorts of notions¹⁶ are also included in the class, as formally defined. More problematically, the morphological criteria that pick out the positional class do not pick it out neatly. Instead, they produce a confusion of mixed categories, where individual roots are either derivationally defective or yield a profusion of stem forms characteristic of other non-positional root categories.¹⁷ Still worse, many words with meanings that seem "positional-like" derive from roots which clearly belong to another class. A typical example would be a transitive verb root, which means "perform an action such as to produce an object of a particular shape or position." (For example, from the transitive verb root *boj* 'cut open, gash, fell' one can form a positional-like adjective *bojol* 'cut open, gashed'; or from the transitive *jat* 'tear' one forms *jatal* 'ripped, broken [e.g., a flexible thing like a basket].'¹ Compare, in English, *chop, hack, chip, split, smash*, etc.)

Precisely those surface adjectives which derive from positional roots can combine with auxiliary verbs. Uniquely, such normally stative predicates can in such a construction bear aspect.

(69) t84:274:

¹⁶ See Haviland (1990), Brown(1990) for rough characterizations in Tzotzil and Tzeltal, respectively. In Tzotzil, positional roots figure centrally in all talk about location, position, arrangement, and form. A rough notional list of semantic domains developed by these roots appears later in this paper. The positional roots, on Talmy's proposed cline from the grammatical to the lexical, occupy the lexical end of the spectrum of Tzotzil resources for dealing with (generalized) space, although whether or not they form an open class is not completely clear.

¹⁷ See Laughlin (1975) for an attempt at systematizing derivational criteria for root categories. Similar problems plague the analysis of such related languages as Tzeltal (Brown and Levinson 1990).

mi laj chotl-an-e
 Q finish (AUX) sitting-SUBJ+2A-CL
When you have finished sitting...

(70) T83:32:
 ch-tal chotl-ik-on ta y-olon `one
 ICP-come (AUX) sitting-SUBJ-1A PREP 3E-underneath avocado
I'll come and sit under the avocado tree.

The fact that positionals combine with auxiliaries, whereas other nominal predicates do *not* allow this construction, provides both a syntactic test for the otherwise covert distinction between such derived positional adjectives and other nominals, and evidence that positionals do have a verbal character after all.¹⁸ We shall return to positionals below to contrast them with such grammaticalized devices for spatial description as auxiliaries and directionals.

Directionals: motion, trajectory, and time

The same verb roots from which Tzotzil auxiliaries derive provide the source for a separate class of verbal directional words. Unlike the auxiliary, which comes at the beginning of the verb complex and inflects for aspect, directionals immediately follow the main verb¹⁹ and are free of inflection, verbal or otherwise. Schematically the verb complex in Tzotzil thus takes the following maximal form²⁰:

Aspect+(AUX) ^ Person+VERB ^ (DIR) ^

The symbol "^" here is meant to indicate where "2nd position" clitics may intervene in the resulting structure.²¹

Directionals are normally formed from intransitive roots by suffixing *-el*, and they use the same roots and fall semantically into the same classes as auxiliary verbs. There are, however, some intriguing differences in semantic provenance between auxiliaries and directionals. I shall point them out within each category. Once again, the following list of fourteen forms is intended to exhaust the inventory of possible directionals in Zinacantec Tzotzil.

¹⁸ I am uncertain exactly how productive the use of auxiliaries with positional adjectives is; it is certainly possible with positional adjectives denoting normal human positions (e.g., *va`al* 'standing', *puch`ul* 'lying prone', even *nakal* 'at home, residing'), at least when the subject argument can be construed as itself a volitional agent.

¹⁹ Again, the only intervening elements are "2nd position" clitics like *xa* 'already' or *la* "quotative" and, notably, a reflexive pronoun--a possessed form of *-ba*. See Aissen (1987:10).

²⁰ Strictly speaking, the aspect marker can be both prefixed and *suffixed* (in the case of STATive aspect) to auxiliary or main verb. Similarly, absolutive pronominal cross-indexes may be realized as both prefixes and suffixes.

²¹ In fact, they can intervene between a separate aspect particle and a following auxiliary verb as well, as in the following example:

(**Error! Main Document Only.**) T167:499:
 ta la x-tal va`l-uk ta be `un
 ICP QUOT ASP-come (AUX) standing-SUBJ (3A) PREP path CL
She would come, they say, to stand on the path.

A. Deictically anchored motion

There is a four member set of directionals corresponding semantically to the deictically centered auxiliaries; but one of the roots is different, at least in Zinacantec Tzotzil. Here are the forms:

ech'el: going away from "here." Recall that the auxiliary verb *`ech'* means 'pass by' whereas *ba(t)* means 'go (from "here")'. In some dialects of Tzotzil *ech'el* is shortened to *`el*.

(71) t9006a1:97:
tz-tz'ot-0 `ech'el li maruch `une
IXP+3E-drive-3A go(DIR) ART CL
Maruch will drive the car away (from here).

(72) t9007a1:254:
ta ka` ch-0-muy `ech'el li y-ajval
PREP horse ICP-3A-go*up go(DIR) ART 3E-owner
*The owners (of the horses) will go up from here on horseback.*²²

k'otel: arriving "there."

(73) CHEPCSE4:4:
pero k'ixnaj-em-0 k'otel j-jol
but warm*up-STAT-3A arrive(DIR) 1E-head
But I was drunk when I got there (lit., my head was armed up arriving).

(74) T128:261:
pero kap-em-0 xa la k'otel
but anger-STAT-3A already QUOT arrive(DIR)
But [the awful cow] arrived furiously now (Laughlin 1977:310).

yulel: arriving "here."

(75) T167:158:
kajal xa s-tz'aket yulel ta ka`
mounted already 3A-tied²³ arrive(DIR) PREP horse
They even arrived [home] sauntering in on horseback. (Laughlin 1977:379)

tal, talel: coming towards "here." The short form *tal* alternates with the regular suffixed *-el* form.

(76) t9006a1:241:
0-0-lok' talel li` 0-tal ta mersel
CP-3A-exit come(DIR) here 3A-come PREP NAME
[The market] then came out towards here, it came here to La Merced.

Examples (5) and (6) also show the directional *tal(el)*.

These forms reproduce in the directional slot the same motion distinctions available to auxiliaries--motion towards and away from a deictic origo, and arrival at a point either "here" or "elsewhere." But the root *`ech'* has replaced *bat*, which, as we shall shortly see, is being used

²² Many of the illustrative examples in this section are drawn from conversations recorded while a group of men were building a makeshift corral for their horses--hence the many references to fences.

²³ Laughlin(1977:379) has *stzak'et*, which I have interpreted as a misprint.

elsewhere in the system. As I remark below, despite the deictic anchoring, the directionals *k'otel* and *yulel* have semantic affinities with the group of aspectual directionals of section E.

B. Point-oriented motion

Directionals corresponding to the point-oriented auxiliaries also exist. However, since the directional *`ech'* is used in the deictically anchored set to mean 'motion away from "here"' Zinacantec Tzotzil has exceptionally employed the di-syllabic stem *jelav* 'pass by' in the directional meaning 'passing.' Moreover, there is no directional corresponding to the auxiliary *`a(y)* 'have been [in a place].'

sutel: returning

(77) LOL1:807:
 ta j-k'an sutel noxtok ti j-pasajel `une
 ICP 1E-want return(DIR) again ART 1E-fare CL
I (would) ask for my fare-money back again.

jelavel: passing. (Note that all other directionals are formed from monosyllabic stems.)

(78) T150:82:
 x-lichlon la jelavel ti pepen
 ASP-flap QUOT pass(DIR) ART butterfly
Butterfly flapped by [the barracks door].

(79) T158:448:
 ja` nox y-ak' jelavel tal ... taj mu tz'i` `une
 ! only 3E-give pass(DIR) come(DIR) DEM awful dog CL
That awful dog was just bringing him over.

komel: resting, staying.

(80) t9007a1:449:
 ta j-jip-be komel te` li x-xokone
 ICP 1E-throw-BEN stay(DIR) wood ART 3E-side
I'll leave some branches thrown by its side [of a fence].

(81) LOL6:309:
 ta j-nak' komel
 ICP 1E-hide stay(DIR)
I hide it away [equipment left at a distant market].

C. Enclosure or region oriented motion

The same roots that produce auxiliaries denoting motion in and out of a bounded region, or up and down with respect to some reference point/plane, also yield directionals.

lok'el: exiting.

(82): t9007a1:136:
 mu x-ak' pwersa lok'el a`a yu`van
 NEG ASP(3E)-give force exit(DIR) CL CL
They won't make the effort to get out, indeed [horses which won't try to cross a rough fence].

(83) LOL3:505:
 ta s-pitz lok'el ta j-moj i y-isim te`e
 ICP 3E-pull exit(DIR) PREP 1-blow ART 3E-whisker wood
He'll pull the tree right out by its roots.

ochel: entering.

(84) LOL1:376:
 solel l-i-s-tzak-on `ochel
 only CP-1A-grab-1A²⁴ enter (DIR)
He just just grabbed me (and hauled me) in.

D. Vertical axis motion

muyel: upwards.

(85) t9007a1:805:
 `al-a-ka`-ike `ich'-ik muyel tal `un
 ART-2E-horse-PL take-(IMP) PL ascend (DIR) come (DIR) CL
As for your horses, bring them up.

yalel: downwards.

(86) EXP2B4:164:
 `ali `oxib y-anal te` ja` li tz'uk-ajtik yalel chib
 ART three 3E-leaf tree ! ART inverted-PL descend (DIR) two
There are three leaves, two are upside-down.

E. Aspectual directionals

Corresponding to the auxiliaries with notionally aspectual meaning (*lik* 'start' and *laj* 'finish') are directional elements whose meaning is also related to the temporal structure of action. However, the categories are rather different from those encoded in auxiliaries.

batel: "now and then, off and on" (Laughlin 1975:80). This directional is plainly derived from the same root as the auxiliary *ba(t)* 'go (from "here")'.¹ Instead of the expected meaning of "going away" (which is, in Zinacantec Tzotzil, *`ech'el*), the word now has a clear aspectual sense: "from time to time."

(87) t9007a1:490:
 yech ch-ich' cha'le-el batel
 thus ICP+3E-receive treat-EL go (DIR)
That's the way they get treated sometimes [fences to be constructed out of just leafy branches].

likel: beginning, starting. As in the auxiliary case, the root *lik* 'arise' produces a directional with an explicitly inceptive meaning.

(88) t9007a1:729:
 ch-a-suk-ik jutuk li y-ok xa likel²⁵

²⁴ Note that the first person absolute appears here as **both** prefix and suffix, a construction characteristic of the speech of only some Zinacantecos, and **only** when the absolute cross-indexes an O, or logical patient argument. See Aissen(1977:Ch. 4, fn. 3).

²⁵ Note in this example that the directional word is positioned after the syntactic object--a violation of the normal structure I described earlier. In text it occasionally happens that directionals--particularly aspectual directionals--occur after an object, suggesting first that the directional is added as a kind of afterthought, and second, that at least in some cases syntactic restrictions on directional placement can be relaxed. We shall see a few similar examples in what follows.

ICP-2E-stop*up-PL a*bit ART 3E-trunk already arise(DIR)
Just start stopping up the [fence] poles [with leaves].

(89) T158:383:
 "kere . . .!" xi la likel `un.
 boy! say QUOT arise(DIR) CL
"Boy...!" he started saying (Laughlin 1977:398)

vayel: "at sleeping time, in order to sleep." The intransitive verb root *vay* 'sleep' yields a word that functions syntactically like the other directionals, again with a clearly temporal meaning. The following is a characteristic example of its use, taken from one of Laughlin's tales about the mythical Charcoal Cruncher, a charcoal eating monster.

(90) T81:103:
 s-na`-oj xa buy y-ak'-oj vayel taj s-ton `une
 3E-know-STAT CL where 3E-give-STAT sleep(DIR) DEM 3E-rock CL
She knew where she had put that rock on going to sleep (Laughlin 1977:181).

The parallels and differences between the auxiliary and the directional systems are presented graphically in the following figures.

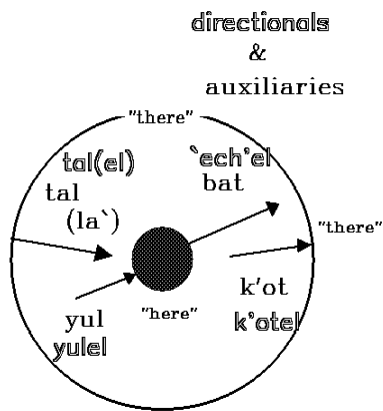


Fig. 9: Deictically anchored directionals

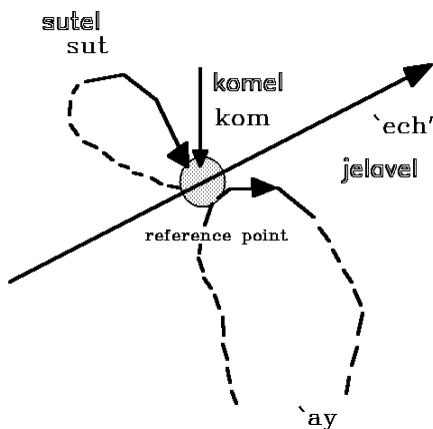


Fig. 10: Point-oriented directionals

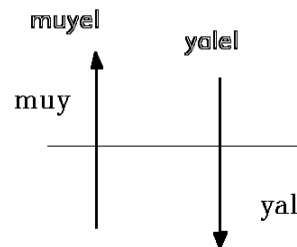
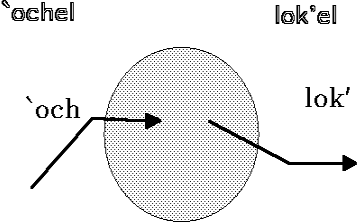


Fig. 11: Vertical axis directionals



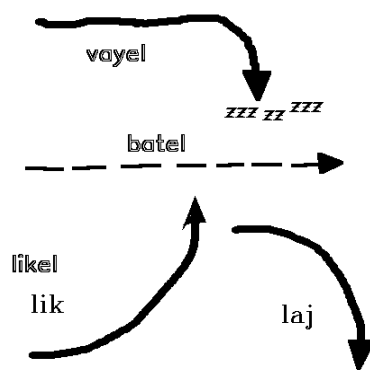


Fig. 12: Aspectual directionals

Compound directionals

The syntax of directionals is complicated by the fact that they can be combined, sometimes in several layers. We have already met such compound directionals as *jelavel tal* 'passing, coming this direction' in (79) and *muyel tal* 'ascending, coming this direction' in (85). In the following example the combination of a main verb of motion (the transitive *-otes* 'insert' derived from *`och* 'enter') with the motion directional *tal* 'coming' and the aspectual *batel* 'now and then' requires an idiomatic English translation that mixes motion and deictic elements in a way strikingly different from the Tzotzil.

(91) t9007a1:791:
 ta x-otes-ik onox tal batel
 ICP ASP+3E-put*in-PL anyway come(DIR) go(DIR)
They in any case bring [their horses] here to put in [the corral] from time to time.

Here are a few further complex examples.

(92) T145:99:
 (a) te la s-jotz'lajet te la x-joyet
 there QUOT 3A-scratching there QUOT 3A-circling

(b) ta ta la s-jam ochel tal ti nae
 ICP QUOT 3E-open enter(DIR) come(DIR) ART house
[H]e was groping about there, walking about, [trying to find a way] into the house (Laughlin 1977:194).

(93) T164:102:
 ja` la s-jip-at yalel tal `un
 ! QUOT 3A-throw-PASS descend(DIR) come(DIR) CL
Then it was tossed down (Laughlin:402).

There is an apparent layering of the different categories (much like the inherent ordering of multiple attributive adjectives in English), with the deictic directionals *tal(el)* and *`ech'el* following all other directionals except the aspectual ones. Although textual examples with more than two directionals are rare, the ideal ordering seems to be as follows:

ENCL.	VERT.	DEIC.	ASP.
ochel	muyel	ech'el	likel
lok'el	yalel	tal	batel
(jelavel) ²⁶	(komel)	(k'otel)	(vayel)
		(yulel)	

Thus, it is apparently possible (though decidedly clumsy) to say things like:

(94) {constructed}
 ta x-ich' lok'el muyel komel tal batel
 ICP ASP+3E-bring exit(DIR) ascend(DIR) stay(DIR) come(DIR) go(DIR) .
Sometimes he brings (something) up (from) out (of somewhere) to leave (here).

The ordering of multiple directionals provides evidence that the notional categories into which I have organized the directional roots have both syntactic and semantic salience in the language. The semantically most general categories (deictically anchored direction or

²⁶ The positions of *jelavel* and other parenthesized directionals in this table are provisional and uncertain.

orientation, and temporal aspect) come last, and they combine with the other directionals in a clearly compositional way.

Directional syntactic contexts

Like auxiliaries, directionals may accompany different sorts of main verbs. I will survey the range of syntactic environments in which directionals appear, subdivided into several notional categories, as a prelude to further discussion of the semantics of these directional verbs. Again, the focus of the discussion will be the following question: insofar as a directional can be construed as a kind of reduced version of the full motion verb from which it is transparently derived, how does one construe its putative logical subject?

The simplest cases are those in which an intransitive main verb of motion is augmented by directionals, as in examples (72, 76) which both display the common pattern: a main verb of motion not explicitly oriented with respect to the deictic origo is so specified by one of the deictically anchored directionals: *muy-* `ech'el 'ascend away from "here"' or *lok'- talel* 'exit towards "here"'. There are also apparently redundant deictic specifications.

(95) T92:89:
i-0-yul la talel `un.
CP-3A-arrive*here QUOT come(DIR) CL
He came back.

In other cases, a verb denoting some sort of specific motion--as in the following example with an "affective verb" meaning 'stagger'--is further specified as to its trajectory, in terms of the topology encoded in non-deictic directionals.

(96) T127:142:
ja` la x-0-kiklaj xa `o lok'el `un
! QUOT ASP-3A-stagger CL REL exit(DIR) CL
He [grabbed that pole by the door and] stumbled out (Laughlin:185).

Not all intransitive verbs derived from the same roots as the auxiliary and directional verbs combine with directionals, or rather, there are a few notable limitations. For example, neither of the two verbs that denote lack of movement, *ay* 'have been' and *kom* 'stay', seems to allow directionals at all--suggesting clearly that the directional is tied to some construal of **motion** in the main verb, contradicted in the meanings of such verbs as *kom* and *ay*. Second, neither *tal* 'come' nor *bat* 'go' seems to combine felicitously with directionals; instead Tzotzil speakers prefer to use the non-deictic motion verb as the main verb, combining it with the general deictic directionals *tal(el)* 'towards "here"' and *ech'el* 'towards "there"'. Thus, while one can say, *chmuy talel* 'she climbs up (coming this way)' it does not seem felicitous to say *chtal muyel* 'she comes (ascending)'. Finally, the main verb *lik* 'arise' which has an aspectual meaning when it functions as an auxiliary or directional, when combined with the deictic directionals also has a clear inceptive meaning: 'set out, start' (in the indicated trajectory or direction).

It is, of course, possible to combine main verbs of motion with aspectual directionals, so that, for example *bat* 'go' as a main verb can take *batel* 'from time to time' as a directional, as in the following example.

(97) T145:105:
ch-0bat la batel tz-0-sut la `ech'el `un
ICP-3A-go CL go(DIR) ICP-3A-return CL pass(DIR) CL
[H]e kept going, returning (Laughlin 1977: 194).

In the case of other motion verb-directional combinations, the motion encoded by the directional is clearly understood to apply to the subject of the main verb. In the following example, the subject will both 'descend' and 'come' all at once.

(98) T9007a1:475
 min ch-0-yal van tal ta ora?
 Q ICP-3A-descend CL come (DIR) PREP hour
Will they be coming down here right away?

In such descriptions of combined motion, the choice between which motion to code as main verb and which as directional, in those cases where both are possible, seems to reflect a perspective or Figure/Ground issue, rather than, say, a different sequencing of events. One can, I believe, say both *chmuy sutel* 'she goes up returning' and *chsut muyel* 'she returns going up,' with little difference in meaning except for a relative emphasis either on the going up or the returning.

A further clue to the semantics of directionals can be found in the usage of *k'otel* 'arriving "there"' and *yulel* 'arriving "here".' The root meanings of both verbs are punctual; they denote "achievements" (or the moments of achievements--arrivals). (See Vendler 1968.) It is not surprising then that as directionals their meanings associate more to the class of aspectual directionals than to the deictics; indeed, they combine the meanings of both, as they have a deictically anchored perspective, but characteristically suggest moments rather than direction. This can be seen most clearly in their characteristic use with verbs of speaking:

(99) T142:148:
 "k-ulo`!" xi la k'otel.
 1E-visitor said QUOT arrive (DIR)
"My Zinacantec!" they said when they arrived (Laughlin 1977:263).

(100) T167:128:
 bat la yaxal vo, te xa la x-0-`i`et k'otel
 (CP+)go QUOT green fly there CL QUOT ASP-3A-buzz arrive (DIR)
Blowfly went. He arrived there buzzing (Laughlin 1977:378).

(101) T86:361:
 "i-j-tae" x-ut la yulel ti y-ajnil `une.
 CP-1E-find ASP+3E-tell QUOT arrive (DIR) ART 3E-wife CL
"I got some," he told his wife when he returned (Laughlin 1977:284).

Directionals, which are in their syntax already less verb-like than either main verbs or auxiliaries, do not raise quite so directly the issue of "underlying argument" as do auxiliaries. Nonetheless, there is in the simplest cases a clear association between the directional verb and the ABSOLUTIVE argument of the main verb: either the S with an intransitive main verb, or the O with a transitive main verb. As we have seen, with simple intransitive verbs, where there is only one argument involved in the first place, that is the argument to which the motion of the directional is presumed to apply. Similarly, with reflexive main verbs, only a single argument is available as the logical "subject" of the directional.

(102) T127:21:
 jun soral li x-chi`in s-ba-ik yalel
 one brush ART ASP+3E-accompany 3E-self-PL descend (DIR)
[The brothers-in-law] walked down [the trail] just a short distance together (Laughlin 1977:183).

Similarly with passive transitive verbs, the syntactic S--the logical patient--is clearly understood to be following the trajectory of the motion (or lack thereof) encoded in the directional.

(103) T154:198

net'-e yalel ta `olon
 press-PASS(3A) descend(DIR) PREP below
[H]e was pursued down (Laughlin 1977:117).

When the main verb is a transitive affect verb (Dixon 1971) involving motion, and the A and O arguments do not move together, the directional again seems to associate with the O argument.

(104) T9007a1:916:
 mas lek mak-o to muyel tal un bi
 more good cover-IMP CL ascend(DIR) come(DIR) CL PT.
It would be better if you would block them [horses, so they will come] up here.

(105) chauk:178:
 sutub `ik'e i-s-jip la muyel ta vinajel
 whirl wind CP-3E-throw QUOT ascend(DIR) PREP heaven
Whirlwind threw it up to heaven.

The same pattern holds when the main verb involves only what we might call metaphorical motion.

(106) t9007a1:964
 mu j-na` tal k-unen anfora
 NEG 1E-know come(DIR) 1E-small watercan
I didn't remember (to bring) here my little water container.

(107) Lol1:588
 l-i-s-tz'ites komel povre mole
 CP-1A-3E-grow stay(DIR) poor old*man
The poor old fellow raised me (and left me).

The following figure illustrates this common pattern of argument matching between main verb and directional.

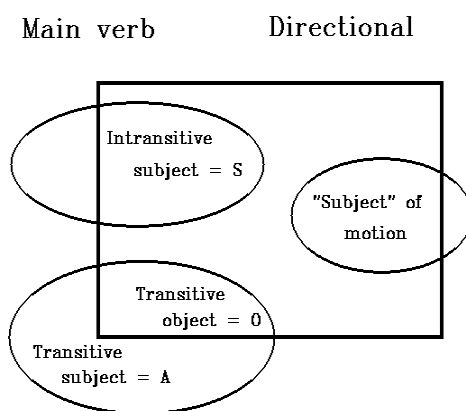


Fig. 13: Directional motion and main verb arguments

Unfortunately, this simple syntactic characterization--that the motion or trajectory coded in the directional accrues to the argument cross-indexed by ABSolutive affixes on the main verb--fails in two classes of construction. First, when a main verb does not itself involve motion, the interpretation of accompanying directionals is often problematic. Second, both ditransitive verbs and certain derived intransitive verbs show systematically different patterns of control. Let me take the second problem first.

From most transitive verb stems in Tzotzil it is possible to derive an intransitive stem by suffixing *-van*. The resulting verb has a specialized anti-passive meaning²⁷; typically, if the transitive stem fits in the frame "X does Y to Z" the suffixed *-van* form fits in a corresponding intransitive frame "X does Y-ing (typically to people)." Hence, from the transitive *-maj* 'hit' one derives the intransitive *majvan*- 'hit, hit someone.'²⁸ What happens when intransitive verb stems in *-van* cooccur with directionals? Here are some examples.

(108) T145:198:

- a. lok' to la tal ti y-ajnilé,
 (CP+3A)exit CL CL come (DIR) ART 3E-wife
- b. ja` xa la tojvan lok'el tal
 ! CL CL (CP+3A)pay+van exit (DIR) come (DIR)
- c. ti y-ajnil bankilal `une
 ART 3E-wife brother CL

(a.) [*The other one*] got a wife. (c) *The wife of the older brother* (b) paid [*the bride price*] (Laughlin 1977: 195-6). Literally (jbh): [*the other one's wife*] came out to "here." *The wife of the older brother* paid [*for the new wife's*] coming out.

The story concerns a man who managed to get a wife only through the good offices of his older brother's own wife. In clause (a) we are told that he got his wife (she "exited" "coming"); in lines (b) and (c), in a single clause we learn that the sister-in-law "paid for [the other wife]," also with directionals "exiting" and "coming." Here, the logical "subject" of the motion encoded in the directionals is clearly the underlying (but syntactically unexpressed) logical patient of the main verb "pay [e.g., brideprice] for someone"--that is, the new wife, who "exits" her old house and "comes" to her new husband's compound.

The following example, somewhat more equivocal (since **both** dog and cat presumably crossed the river), illustrates the same pattern.

²⁷To be distinguished from the syntactically limited but semantically general anti-passive formed with the suffix *-ot*; see Haviland (1981).

²⁸The *-van* forms are characteristically used to disambiguate utterances in which both A and O arguments refer to third person animate entities; the *-van* antipassive form can then be paired with precisely the logical "agent" of the corresponding transitive action. Consider the following hypothetical sequence:

(**Error! Main Document Only.**) constructed

- a. i-0-tal li Xune
 CP-3A-come ART John
 John came.
- b. i-0-s-maj li Antune
 CP-3A-3E-hit ART Anthony
 He hit Anthony. Or: Anthony hit him.

The ambiguity in (b) can be resolved by, for example, (c), which makes it clear that **John** did the hitting.

- c. ja` i-0-majvan li Xune
 ! CP-3A-hit ART John
 It was John who did the hitting.

(109) T158:417:

ja` la kuchvan jelavel li tz'i` ta ta nabe
 ! CL carry pass(DIR) ART dog PREP river

The dog carried (the cat) across the Grijalva River (Laughlin 1977: 399).

In the next example, although Laughlin's translation interprets the directional *muyel* as applying to the pursuers, it could I think equally well be understood to apply to the (syntactically unexpressed) pursued.

(110) T110: 16:

ti j-chop buch'u nutzvan-em muyel `une, ba s-ta-ik
 ART 1-NC who chase-STAT ascend(DIR) CL go(AUX) 3E-find-PL

The army that came up in pursuit was about to reach them (Laughlin 1977: 60).

On my interpretation, a possible translation would be "The army that pursued (them) up..."

These examples suggest that, despite the fact that the main verb is syntactically intransitive and has no syntactic object, the motion of the directional is taken to accrue to a logical patient: the animate entity which is acted upon in the main verb.

Ditransitive main verbs present parallel problems for the interpretation of accompanying directionals.

(111) T131:9:

s-poj-be komele
 (CP+3A) 3E-steal-BEN remain(DIR)

[If they found any little thing, it seems,] they confiscated it. [Sometimes they let (the people) come back and sometimes they killed them.](Laughlin 1977: 297).

Here both the verb for 'find' (*i-s-ta-be* CP-3E-find-BEN, literally 'find [it] on them') and the main verb *spojbe* 'confiscate [it] from them' are ditransitives; the *-be* suffix shows that the syntactic object, cross-indexed with (here zero) absolutive affixes, is not the thing they found and confiscated but rather the people from whom they confiscated it. However, the directional force of *komele* 'remaining' attaches to the confiscated goods, and *not* to the people (as can be seen by the following line of the translation, in which sometimes those people are released to go elsewhere). Similarly, in the following example which quotes a ritual speech couplet style (see Haviland 1987a), the thing that "comes" (corresponding to the directional *tal*) is understood as the candles and flowers, not the argument cross-indexed by absolutive prefixes (in this case first person).

(112) T130:22:

ch-i-sna`-be tal j-nichimal
 ICP-1A-3E-know-BEN come(DIR) 1E-flower
 ch-i-s-na`be tal j-kantelail
 ICP-1A-3E-know-BEN come(DIR) 1E-candle

[My children] remember to bring me my flowers. They remember to bring me my candles (Laughlin 1977: 312).

A similar structure is inherited by passivized ditransitive verbs. Again, the directional seems to apply to the underlying logical patient, which as we saw above is syntactically in *chomage*, and to neither underlying agent nor beneficiary. The following extended passage shows the pattern.

(113) T176:119:

a. tok'on la i-`ak'-b-at tal
 ripe CL CP- (3A)-give-BEN-PASS come(DIR)
 (. . .) {Several Tzotzil lines omitted here.}
 b. ja` sa`-b-at tal bu lek tzotz tze

! search-BEN-PASS come (DIR) where good hard raw
 (a) [Coyote] was given a ripe one. [That Coyote gulped it down too. Still another one. Rabbit] (b) looked for another one that was good and green (Laughlin 1977: 369).

The syntactic subject of both of the passive ditransitive verbs shown here has as its referent Coyote; but the thing that "comes"--corresponding with the directional *tal*--is the unripe *mamey* fruit that rabbit finds to trick him with. Similarly, it is the beating (or perhaps the staves) that metaphorically "stays behind" in the following example.

(114) T131:100:
 benos `ak-te` la `ak'-b-at komel
 good staff QUOT give-BEN-PASS(+3A) stay (DIR)
 He simply got a terrific beating with the staves. (Laughlin 1977: 298).

These facts suggest that the meaning of motion directionals is not syntactically controlled at all in Tzotzil but is rather a matter of inference. The motion or trajectory is encoded in the directional not as a verb with logical arguments, but as an adverbial augmentation of the scene described in the overall clause. Such an analysis seems especially pressing when we turn to the second large class of cases I mentioned as exceptional for a syntactic account: those in which a main verb modified by directionals contains no hint of motion in its ordinary meaning. In such cases, the addition of directionals injects an element of motion (both in space and time) in a variety of interesting ways into the action portrayed.

I will present several typical examples, first with verbs of speaking and hearing.

(115) CHEPWED:246:
 te xa ch-a-k-al-be komel jay p'el
 there CL ICP-2A-1E-say-BEN stay (DIR) how*many NC (words)
 Then I will leave you with a few words.

Speaking seems to have an inherent directionality about it: words, as it were, issue from the speaker's mouth and make their way to the hearer's ear. However, adding the directional *komel* 'staying' to the verb 'say' implies not just that the words will stay where they fall, but that the speaker himself will **not**. Hence he speaks the words so they will 'stay behind.'²⁹

(116) Tape2b:49:
 ja` `al-o tal vo`ote Chepil
 ! say-IMP come (DIR) you NAME
 You be the one to speak first, José.

Example (116) is taken from tape recordings of an experiment designed by Lourdes de León, in which one person describes photographs to another. Here one of the participants asks the other to go first: 'you speak (coming)'--that is, 'you send your words in my direction.' The same directional trajectory can be observed in the following examples.

²⁹ A similar inference, over an entire scene, is required in interpreting the following example. The verb *muk* 'bury' is here used as a mediopassive or unaccusative bare root, thus meaning "get buried." The directional *komel* clearly refers to the fact that the thing buried **stays** buried, but only by contrast with the person who does the burying, who subsequently must be inferred to leave.

(xxError! Main Document Only.) T124:77:
 muk xi komel ta lum.
 bury thus stay (DIR) PREP ground
 He had quickly buried it in the ground (Laughlin 1977: 137).

(117) T144:97:
 `al-b-at tal y-u`un taj jkaxlan `une
 speak-BEN-PASS come (DIR) 3E-by DEM ladino CL
He was told that by that ladino (Laughlin 1977:223).

(118) anvas4:96:
 ja` taj lo`il i-y-a`i tal ta s-na
 ! DEM gossip CP-3E-hear come (DIR) PREP 3E-house
That's the gossip that he heard at his house.

In both cases the deictic *tal* 'come to "here"' suggests that the perspective or viewpoint adopted by the speaker is that of the receiver of words: the words from the ladino and the gossip came **here** to him. (I shall return to the notion of deictically anchored perspective shortly.) The directional need not, of course, come from the deictically anchored set.

(119) T152:62:
 xi ta j-k`el muyel `une
 thus ICP 1E-look ascend (DIR) CL
I was looking up (Laughlin 1977: 202).

With verbs of speaking and hearing--as well as with verbs of perception, as in example (49)--it is easy to interpret the trajectory or motion suggested by the directionals. In other cases more inferential ingenuity is required. There are many examples like (115) and (xx in footnote 29) with a directional *komel* 'staying' that implicates subsequent movement (by some participant) away from the action of the main verb.

(120) T162:196:
 laj komel k-u`un j-chik' xa komel
 (CP+3A) finish stay (DIR) 1E-by 1E-burn CL stay (DIR)
Well, I've finished it. I've burned it (Laughlin 1977: 390).

This line is spoken, in Laughlin's tale, by a lazy husband after he has gone home from the fields that he claims to have finished burning off. The use of *komel* implicates the fact that the man himself is no longer *in* the fields that he has burned.

Now consider the variety of implied trajectories of motion, indicated in bracketed boldface in the translations, in the following examples with the directional *tal* 'coming.'

(121) T61:234:
 t'om tal volkan
 (CP+3A) explode DIR volcano
The volcano erupted [and then its ashes] came.

(122) LOL1:875:
 ta j-ch'ak tal j-pasajeb `une
 ICP 1E-divide DIR 1E-fare CL
I will separate out (from the rest of the money) my bus fare [before bringing my money back home].

(123) BARIL:175:
 l-i-laj tal `un
 CP-1A-finish DIR CL
I was injured [on my way back here].

(124) t9007a1:988:
 mi ja` lek ch-a-ve`-ik tal che`e?
 Q ! good ICP-2A-eat-PL DIR PT
Should you then eat [before you come here]?

(125) T86:352:

mi`n a-toj tal a-ka?

Q 2E-pay DIR 2E-horse

"Did you pay for your mule [before bringing it back here]? (Laughlin 1977: 284).

One common element in all these inferred trajectories is that the action of the main verb takes place either **before** or **simultaneously** with the motion implied in the directional. Otherwise, though, there is rather little consistent patterning; the exact meaning of the directional depends on the overall scene evoked by the verb and the rest of the context of situation, which I have implicitly incorporated into the glosses.

Directionals with non-verbs

As is the case with auxiliary verbs, directionals can co-occur with forms that are superficially not full aspect bearing verbs at all. Here again they establish implied trajectories. With de-verbal nouns, directionals function in much the same way that they do with the full "parent" verbs.

(126) t9007a1:466:

ja` tz-k'an jim-b-el komel te` xtok e

! ICP+3E-want throw-BEN-EL stay(DIR) tree also CL

They need to have trees thrown down there on them, too.

(127) LRNACHIJ:154:

x-ich' sa`-b-el `ech'el y-ajval

ASP+3E-receive search*for-BEN-EL pass(DIR) 3E-owner

Someone will have to be sought (to) go [away from "here"] (and tell them).

In both of these examples, a ditransitive stem (*jim-be-* 'throw [something] on-' or *sa`-be* 'search for [someone] for-') has been passivized and verbalized with *-el*; the directional that follows³⁰ specifies a trajectory on the action so nominalized.

Directionals can also accompany stative adjectival predicates, those derived from positional roots as well as those derived from verbal roots. De León (1990) reports the frequent use of directionals, egocentrically anchored and combined with positional adjectives, in her experimental interactive game in which Zinacantecs offered verbal descriptions of photographs. We have met one such example at (86). Here is another, also from de León's transcripts.

(128) tape2a1:26:

cha` kot ich j-moj cholol ech'el

two NC chile one-blow lined*up(+3A) pass(DIR)

(These are) two chiles lined up [going away from me].

³⁰There are cases in which the linkage between de-verbal noun and directional is seemingly weakened. Consider:

(Error! Main Document Only.) t90007a1:99:

s-tak' pas-el unen ti` be komel un

3E-serve make-EL small opening path stay(DIR) CL

It is possible to make a small gate [and leave it behind].

Here the logical "object" *ti` be* 'gate' immediately follows the de-verbal *pasel* 'making [of something]' and the directional *komel* 'staying' comes afterwards. This is another apparent violation of the normal rules of directional placement.

Similar examples, including some with non-deictic directionals, abound in other conversational and textual materials, suggesting again the verbal nature of positional adjectives.

(129) LOL3:921:
ja`tey tzakal `ech'el x-chi`uk
! there joined pass(DIR) 3E-with

It [went away] attached to him.

(130) T75:53:
chukul komel ta te`el alampre
tied*up(+3A) stay(DIR) PREP post wire

[He had left the cow] tied to the fence post (Laughlin 1977: 228).

Somewhat more unusual is the use of directionals with non-verbal expressions of location. These may be formed with "relational nouns" (which denote parts or regions of their grammatical possessors). That part of the free gloss corresponding to the directional is again shown in boldface.

(131) t9006a1:46:
y-ak'ol³¹ tal Nachij
3E-above come(DIR) NAME

*(It is) above Nachij **on this side** (i.e., above coming).*

Some relational expressions have a verbal provenance, as in the following example where the expression *ta sjelavel* X 'having passed X' derives from the verb *jelav-* 'pass by' which we have already met.

(132) t9006a1:735:
x-i-`ech'-otik ta s-jelavel tal kelem ton
ASP-1A-pass-1PlI PREP 3E-passing come(DIR) rooster rock

*We pass by **on this side** of "Rooster Rock."*

Zinacantecs also say *sjelavel `ech'el* 'on the far side.'

More surprising, perhaps, is the use of the directionals *tal* and *`ech'el* to modify ordinary locative phrases of the form *preposition+NP*.

(133) LOL2:222:
le` ta `ach'eltik `ech'el s-na-e
there PREP muddy*expanse DIR 3E-house-CL

*His house is over there **on the far side** of the muddy place.*

Here a whole scene is broken into motion, position, and trajectory elements by the Tzotzil syntax. There is first a distal demonstrative *le`* 'there' (which also serves as the predicate that can bear absolutive suffixes, in this case a zero third person). It is complemented by a prepositional phrase, whose preposition *ta* is semantically empty. The directional *`ech'el* in turn suggests the image of, say, walking from the muddy place in a direction away from "here." The same image must be rather more statically re-packaged in the English translation.

³¹See Levinson and Brown (1990) for a discussion of the use of cognate expressions for "uphill" and "downhill" in nearby Tenejapan Tzeltal.

Auxiliaries combined with directionals

There is one final puzzle to consider in describing the behavior of Tzotzil auxiliaries and directionals. For it is clear, especially from Figures (9-12), that despite differences in detail, auxiliaries and directionals encode substantially similar notions of motion and time. Why then are there two syntactic slots? How do they combine? We have already seen enough Tzotzil sentences with both auxiliary and directional to have some idea, but I shall try to schematize the situation with a few final examples.

First, we have seen that there is a standard association between the motion of the auxiliary and the **subject** of a transitive main verb, and between the motion of the directional and the verb's **object**. Similarly, we have seen that the directional specifies a trajectory that is usually construed as either simultaneous or subsequent to the action of the main verb. In light of these facts, apparently redundant combinations of semantically equivalent auxiliary and directional can be understood to have non-redundant force.

(134) PROYLAN:346:
 ch-tal y-ak' tal s-moton li j`ilole
 ICP-come (AUX) 3E-give come (DIR) 3E-gift ART shaman
(He) comes to bring the gifts of the shaman.

(135) LOL3:150:
 ja` ch-ba s-man `ech`el le` `une
 ! ICP-go (AUX) 3E-buy pass (DIR) that CL
He'll go to buy that (and take it away).

In both examples (134) and (135), the auxiliary verb and the paired directional are semantically equivalent: *tal* 'come to "here"(AUX)' is paired with *tal* 'coming (DIR)' in (134), and *ba* 'go from "here" (AUX)' is paired with *ech`el* 'going (DIR)' in (135). However, the sense of (134) is "he comes and he **brings** [i.e., gives coming] the gift." Similarly, in (135), "he goes to buy [and afterwards **take away**] that thing."

The ordering of auxiliary and directional also suggests iconically the temporal sequencing of the two different phases of motion. The motion of the auxiliary comes first, that of the directional afterwards.

(136) LOL4:143:
 ch-ba j-sa` tal k-ikatz ta jobele
 ICP-go (AUX) 1E-search*for come (DIR) 1E-cargo PREP San*Cristobal
I'll go to find my goods in San Cristóbal (and bring them back here).

Thus, we could perfectly well imagine a sentence like:

(137) {constructed}
 ch-tal j-sa` `ech`el k-ikatz ta jobel
 ICP-come (AUX) 1E-search*for pass (DIR) 1E-cargo PREP SC
I'll come to look for my goods here (and take them away to San Cristóbal). (Or: I'll come to look for my goods here in SC, and take them away.)

which reverses both the order of coming and going, and also the deictic perspective from which it is "spoken." Thus, in (136) the speaker is somewhere other than San Cristóbal (in this case he was actually in the *paraje* of Nabenchauk), planning to go there to buy his goods and return. In (137) he might well be *in* San Cristóbal planning a trip into town from somewhere else at a later date.

The sequencing of the action of main verb and trajectory in combinations of auxiliary and directional is perfectly designed to encode various sorts of round-trip.

(138) LOL2:159:
 ch-k'ot j-man tal te ta s-zellej
 ICP-arrive(AUX) 1E-buy come(DIR) there PREP 3E-ridge
I arrive there at the ridge to buy (it) [and bring it back here].

(139) T87:329:
 `ati kreme `a la s-tzak-el la tal
 ART boy been(AUX) CL 3E-grab-EL CL come(DIR)
As for the boy, someone went to grab him [and drag him back].).

Moreover, since two sorts of motion or trajectory can be grammaticalized in every verb phrase by using both auxiliary and directional syntactic slots, the main verbs themselves can be lexically specific (as in the previous and following examples, where the verb *tzak* means 'grab'), but the overall topology of an action or its trajectory can still be economically encoded. The lexicalized character of the main verb is also, thereby, distributed over the entire scene--the action and both its preparatory and resulting trajectories.

(140) LOL1:348:
 pinchi `alvanil ba s-tzak-on `ocel
 damned mason go(AUX) 3E-grab-1A enter(DIR)
The damned mason just grabbed me [and hauled me inside].

Figure (14) is intended to capture some of these semantic relations between auxiliary, main verb, and directional.

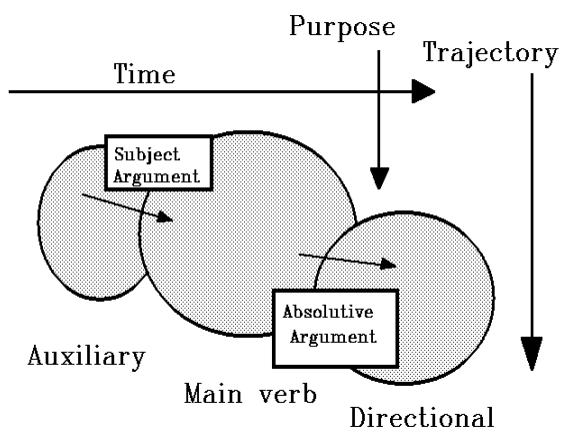


Fig. 14: Causal and temporal relations between auxiliaries and directionals.

Motion through time: the semantic provenance of auxiliaries and directionals.

We saw above that auxiliary verbs not only encode temporal aspect directly but also through a kind of extension from deictically oriented motion, substituting a temporal origo for a spatial one. There is an intuitively natural, arguably universal,³² interconnection between space

³²Consider, for example, Talmy's elaboration of a range of possibly universal linguistic categories that systematically collapse, or treat as homologous, 'space' and 'time.'

The kind of entity that exists in space is--in respectively continuous or discrete form-- 'matter' or 'objects'. The kind of entity existing in time is, correspondingly, 'actions' or 'events'... (1987:10).

and time, with motion precisely collapsing the two categories. Tzotzil, in particular, lexicalizes into single roots scenarios that inextricably combine both spatial and temporal notions. Thus, as I have argued, the motion verb *ay* and its corresponding auxiliary *a(y)* involve necessarily a spatial and a temporal profile: a visit to a reference point, but a visit that has come to an end, thus implying a trajectory necessarily involving movement in time and space. Similarly, the two verbs of "arriving," *k'ot* and *yul*, focus on a static endpoint that again collapses space (a deictically specified destination) and time (the moment of arrival), both aspects being exploited in the grammaticalization of auxiliary and directional.

Not surprisingly, then, Tzotzil systematically exploits directionals to convey not only spatial but also temporal information. Relational nouns, for example, can have temporal meanings, and associated directionals *tal* and *ech'el* project corresponding temporal trajectories. Thus, *ta y-olon k'in*, literally 'below the fiesta', means 'before the fiesta' and *ta yolon tal* suggests a period of time 'leading up to' something, i.e., between it and "now." Similarly, consider the following lines excerpted from a conversation about when the Chiconal volcano erupted.

(141) Chichon:

a: komo nopol xa `este semana santa x-k-al-tik
 because close CL PT week holy ASP-1E-say-1PlI
It was close to Holy Week, as we say.

b: mi y-olon mi s-lajel `ech'el
 Q 3E-below Q 3E-finish pass(DIR)
Was it before or was it after (Holy Week)?

Interestingly, the use of the directional *ech'el* in the last case suggests an orientation not to "now" (the time of speaking) but rather related to the reference point in question: the end of Holy Week **going away**, as it were. If, as Levinson and Brown (1990) suggest for Tenejapa Tzeltal, Tzotzil speakers conceive of time as tracing an uphill trajectory that does not reverse, then "going" in time must mean "movement" from a given reference point into the future. "Coming" would then designate a trajectory from some past moment to a reference point: "from then until now," for example. Consider the following sentences that use the directional *tal* to incorporate exactly this image.

(142) LOL1:23:

a-tam tal ya`el chonolajel ti vo`ne
 2E-lift come(DIR) it*seems selling ART long*ago
You began (and continued until now) selling long ago.

(143) CHICHON:46:

k'un'k'un xa ik'ub tal `ik'ub tal
 slowly CL darken come(DIR) darken come(DIR)
It slowly got progressively darker and darker.

(144) LOL1:726:

porke l-i-ch'i tal che`e
 because CP-1A-grow come(DIR) CL
Because I kept growing up (i.e., right up to my present adulthood).

The Tzotzil roots from which auxiliaries and directionals derive provide other stems to denote trajectories or moments in space/time. Thus the expression *sbatel `osil* literally, 'the going of the world,' is the standard way to say "forever." The numeral classifiers (de León 1988, Berlin

Motion itself, on this view, "can be understood as 'one-to-one correspondences' between 'adjacent' points of 'space' and adjacent points of 'time'" (p. 5). See also Lyons' (1977:718-724) comments on "localism."

1968) used for counting moments in time are also derived from motion roots which should by now be familiar: *-likel* (*lik* 'arise'), and *-`ech'el* (< *`ech'* 'pass').

(145) T71:108:
 s-k'an ch-ik' `ech'el `otro j-`ech'el
 3E-want ICP(+3E)-take pass(DIR) other one-time(NC)
He wanted to take her [to his house] another time (Laughlin 1977: 190).

However, rather than continue in such a hit-or-miss style to examine the semantics of the class of roots that are grammaticalized as auxiliaries and directionals, let me turn now to a more systematic examination of the (synchronic) origins of these "motion and aspect" roots. I shall then proceed to a comparative and diachronic sketch of Mayan auxiliary and directional systems.

"Motion verbs" and intransitive roots

John Lucy has recently suggested that notions like "motion" and "space" are too easily fabricated from the models of one language or intellectual tradition (ordinarily, our own) and imposed willy-nilly on the categories of another, no matter how uncomfortable the fit. Thus, asserting as I have done that the auxiliaries and directionals in Tzotzil all derive from a "class of 'motion' verbs" would require that I demonstrate first, that there is such a class, and second, that it does indeed consist of "motion" verbs.

Let me try to be a bit more explicit about the precise semantics of the fourteen auxiliary verbs, whose meanings I schematized earlier in this paper. It will come as no surprise that, however we might justify classifying the roots in question as *centrally* or *basically* "verbs of motion," their meanings as full verbs go well beyond motion literally understood. As in other languages, Tzotzil verbs with motion senses routinely function as markers of states³³ (often resultative states) with no literal motion seemingly involved. Moreover, in a characteristic Tzotzil pattern, motion verbs frequently combine with "body-part"³⁴ words (including such seemingly incorporeal "parts" as the *ch'u'el* 'soul'--conceived of by Zinacantecs as a detachable, thirteen-part, more or less immaterial entity) to form idiomatic expressions trading only metaphorically on an image of motion. Let me first present some of the salient facts about the usage of the auxiliary roots as full verbs; afterwards I shall justify a more limited semantic treatment of the verbs taken strictly as verbs of motion.

Ranges of stative meaning in Tzotzil motion roots

The four deictically anchored motion roots, as in English, are used to describe transitions into a variety of states.³⁵ However, the Tzotzil system encodes a perspectival distinction not

³³ Eve Clark, in a paper presented at the Nijmegen workshop on "Space, time, and the lexicon," mentioned in a footnote above, developed on this "stative" use of motion concepts in English, and showed its salience for children's acquisition of both space and state expressions.

³⁴ Haviland (n.d.a.) presents further details on these body part metaphors in Tzotzil and several other languages.

³⁵ Eve Clark points out that English 'come' is often used to describe transitions to normal states, whereas 'go' is used for abnormal, perhaps undesirable states. "go into a coma," but "come to one's senses." Note the metaphoric shift implied here on the normal meaning of the deictic center (or HOME position) encoded in the (complex) distinction between 'come' and 'go.' One discovers similar phenomena in Tzotzil, as we shall see.

lexicalized in English--between arrival at a goal and, by marked contrast, inception of motion--that crosscuts the deictic contrast between motion towards and away from a deictic origo.

	GOAL	SOURCE
from here	<i>k'ot</i>	<i>bat</i>
to here	<i>yul</i>	<i>tal</i>

In a motion sense, then, Tzotzil distinguishes between motion towards and away from the origo point (in the unmarked case, that shared by speaker and hearer); but it also distinguishes between marked achievement of a goal-point (*k'ot* and *yul*), and (when a marked contrast is invoked) simple inception of motion with no goal necessarily involved, or at least no mention of its having been reached (*bat* and *tal*). This four-way motion distinction maps differentially onto non-motion states. Consider the following examples.

Bat 'go' describes motion away from the deictic origo. By contrast with the definite here-and-now of this origo, the destination is often an unspecified "there." Thus, *bat* is the natural verb to use for various sorts of unspecified situations of "going away." For example, the formulaic exchange of greetings on the path, as in (146), uses the verb *bat* in both the first turn (a) and its standard polite reply (b).

- (146) Polite greetings
 a: ch-i-bat che`e
 ICP-1A-go then
 I'll go, then.
 b. bat-an che`e
 go-IMP then
 Go, then!

Moreover, since the only specified point in the path laid down by *bat* is the presupposable origo away from which motion occurs, in its maximally unmarked sense *bat* can simply denote a maximally unmarked path: just plain motion. A road, for example, 'goes' for a certain distance; or a character in a story may simply 'go' when she undertakes motion, without respect to any established origo.

- (147) PRANS:13:
 ch-i-bat-ik j-chi`uk `aleman
 ICP-1A-go-PL 1E-with foreigner
We went off with some foreigners.

Another characteristic example is what happens to food:

- (148) VANJEL:139:
 naka ta presko tajmek ch-0-bat `i y-ote
 only PREP soft-drink very ICP-3A-go ART 3E-tortilla
They wash their tortillas down exclusively with soft drinks.

The causative verb *bat-es* 'make go' is often used in this sense; the food or drink one eats with a tortilla is to "make it go (down)."

Bat also occurs in stative aspect, often to denote a situation in which people are simply not present here (by virtue of having gone or set out for somewhere), or are permanently gone somewhere else.

- (149) KUVETA:47:
 te bat-em y-u`un li kristoe
 there go-STAT 3E-agent ART Christopher
(The missing bucket) is probably (gone)

(150) t8814b31:219:
 `oy tey bat-em j-chi`il j-nabenchauk
 EXIST THERE go-STAT(3A) 1E-countryman AGN-Nabenchauk
One of my hamlet-mates from Nabenchauk has gone there (to live).

In experiments conducted by Lourdes de León (de León 1990), stative forms of *bat* also occur to suggest how something is oriented: an object's 'head' or 'nose' may be said to have "gone" in a particular direction.

(151) EXP2B3:116:
 `ali june xi bat-em s-jol xi ta `ak'ol li vi
 ART one thus go-STAT(3A) 3E-head thus PREP high ART look
One of them has its head going up this way, look!

Bat can also describe a state that will result: how something will 'turn out'--the metaphorical motion seemingly attaching to the progress of time, the evolution of a situation.

(152) anvask1:153:
 chopol l-a-bat `un
 bad CP-2A-go CL
Things went badly for you.

(153) TOBRIDE:44:
 mi . mas `ep i-0-bat k'usi `une
 Q more much CP-3A-go what CL
What if things get more serious (lit., go more)?

Bat may also describe how or where something may "end up," perhaps with an implied motion.

(154) t8814b31:435:
 mu j-k'an x-0-bat ta kaldo s-bek' k-at
 NEG 1E-want ASP-3A-go PREP soup 3E-seed 1E-penis
I don't want my testicles to end up (made into) soup (a punishment believed to be inflicted on unfaithful lovers).

Finally, there are several fixed expressions frequent in conversation.

bat -ch'ulel 'die (literally, ones soul goes)'
bat ta -o`on 'prove fatal (lit., it goesd to ones heart)'
bat ta mas 'become critical, become serious (lit., it goes more).'

The themes of metaphorical motion along a trajectory, and, more specifically, departure seem transparently mirrored here.

Tal 'come' represents the opposite vector; but it is more highly marked than *bat* since it explicitly encodes motion towards some presupposable "here." Thus, when predicated of general motion, a relation to an origo is nonetheless always marked, as in the following example in which the speaker describes the "motion" of the San Cristóbal market whose location was changed over time.

(155) t9006a1:240:
 i-0-tal `ali ch'ivite
 CP-3A-come ART market
The market was moved (towards here).

The shift in the position of the market is explicitly encoded as closer to the speaker's location (in this case in a hamlet far from San Cristóbal, but from whose vantage point the new location could be seen to be nearer than the old one).

In an extended sense, *tal* is used to denote "coming into existence"--the sort of motion through time towards a present origo that we have already met.

(156) LOL2:338:
 ja` i-0-tal li kase
 ! CP-3A-come ART kerosene
And then kerosene was introduced.

(157) LOL6:195:
 bweno k'un'k'un i-0-tal li marcante `une
 good slowly CP-3A-come ART customer CL
Well, slowly I began to get customers.

Other idioms exploit the same sort of imagery. *Chtal jabile* (literally, "the year comes") is "next year"; the customary way of doing things is called *s-tal-el*, lit. "its coming."

An asymmetry similar to that between *bat* and *tal* characterizes extended uses of the two arrival verbs, *k'ot* 'arrive there' and *yul* 'arrive here,' both of which focus on the achievement of a goal or destination. Something may be said to *k'ot* if it hits a target; someone may be said to *k'ot* if she has visited a place or perhaps is able to reach a place.

(158) Z8808293:113:
 lek i-0-k'ot i tone?
 well CP-3A-arrive ART rock
The rock hit (a dog it was thrown at).

(159) PRANS:110:
 ja` li muk' bu x-a-k'ot ta nome
 ! ART NEG WHERE ASP-2A-arrive PREP far
The fact is that you never travel to faraway places.

(160) t9006a1:821:
 mi mu x-i-k'ot
 Q NEG ASP-1A-arrive
Can I get there? (I.e., is it too far or too difficult for me to arrive there?)

Moreover, like *bat* when opposed to *tal*, *k'ot*, by contrast with *yul*, has the less marked meaning in the deictic opposition. The first day of a major fiesta is called *chk'ot musikero* "the musicians arrive"--whether or not one is in the town where the fiesta is to be held. *Yul*, on the other hand, always makes explicit a presupposable deictic origo.

(161) t9006a1:1053:
 k'alal l-i-yul ta tontike i-k-ak'-be y-ipal kachu
 when CP-1A-arrive PREP rocks CP-1E-give-BEN 3E-force horn
When I got to the rocky place, I would give a blast on my horn.

Although the speaker is recounting habitual practice of past times, it is clear from his choice of verb that when he blew his horn he was arriving home to the **same** home where he now sits telling the story.

K'ot also figures in such reasonably transparent expressions as

k'ot ta -o`on take offense (lit., it arrives at one's heart)
k'ot sat be able to see (lit., one's eyes arrive)

By contrast, characteristic expressions with *yul* 'arrive here' appear in the following examples.

(162) LOL2:99:
 ja` i-0-yul ta j-jol j-tuk
 ! CP-3A-arrive PREP 1E-head 1E-alone
I thought of it all by myself. (Lit., it arrived here to my head alone.)

(163) Z8922A20:99:
 ja`o i-0-yul j-ch'ulel
 Then CP-3A-arrive 1E-soul
That was the time that I began to have some sense (lit., that my soul arrived here).

Arriving **here**, as in Eve Clark's English data, seems to correspond to a desired state of normalcy; arriving **there** (or going away) suggests abnormal states, or death.

The point-oriented motion verbs describe somewhat complex trajectories around an established point of reference. The semantics of these verbs combines what we might characterize as entailed and presupposed aspects of motion or trajectory.³⁶ Thus, for example, to describe a trajectory with the verb *`ech* 'pass' asserts directly that the trajectory **includes** the point of reference; but it also suggests that the trajectory continues **beyond** that point (and that it has started elsewhere **before**). This combination of circumstances makes the verb *`ech* appropriate for a variety non-motion senses involving transitions--passages through temporary states or conditions, including school or religious or civil office (known, euphemistically, as "losing days").

(164) LOL1:93:
 mu `onox bu l-i-`ech' ta `eskwela ch-av-a`i
 NEG always where CP-1A-pass PREP school ICP-2E-understand
You see, I didn't ever go to school (lit., pass by school).

(165) TUNEM:114:
 ja` yech l-i-`ech' ta ch'ay-k'ak'al
 ! thus CP-1A-pass PREP lose-day
That's how I put in my service (lit., passed through day-losing) .

One can also "pass through" a disease--that is, recover.

(166) anvask1:155:
 bweno ch-0-`ech' `o chamel yech chk taje
 good ICP-3A-pass REL sickness thus like that
Well, that's how one gets over sickness.

Similarly, in a segmented temporal universe, last year is *i`ech' jabil* "the year passed/past"; and one can experience (and recover from) a period of desire or try one's best: *i`ech' yo`on* lit., one's heart passed.

³⁶ See Silverstein (1991) from whom I adopt what I take to be a related use of these terms. A slightly different perspective might allow one to calculate the "presupposed" aspects of the situated usage of these verbs from pragmatic principles applied over the entire structured set of alternate lexical items.

Sut 'return' clearly entails a trajectory towards (and probably reaching) a reference point; but it equally clearly presupposes that one has been there before. The verb thus incorporates two somewhat distinct images: first, of a return to a previous (perhaps simpler, smaller, less developed) state from which one's trajectory took one; and second, of a **round** trip, hence a circular motion, whirling. Indeed, Laughlin (1975) glosses the verb as not only 'return' but also 'shrink, wane, subside.' And he includes such derived forms as:

sutes ba recant (i.e., a witch who must reverse his own spells; lit., return oneself)
sutes k'op report change of plans (lit., return one's word)
sutum `ik' whirlwind (lit., returning wind)
sututet `o'on nausea (lit., returning heart)

Standard usage includes many examples in which motion is both literal and metaphorical.

(167) Z8811B30:72:
 le`e sut-em xa
 that return-STAT(3A) already
That (bridegroom) has given up the courtship (lit., has returned).

Here, for example, gossip describes a failed courtship, in which a suitor no longer continues to pay periodic visits to his erstwhile fiancée.

Kom 'remain' also clearly involves more than the location (and its potential permanence) that its use entails. It presupposes the possibility of **not** remaining, either a now discontinued motion in the past for its subject, or a contrastive moving present for some other subject. Thus, the extended senses of *kom* often emphasize terminal states (how one ends up or is left permanently).

(168) LOL5:447:
 i-0-kom li mol jose `une
 CP-3A-stay ART old Joe CL
I abandoned old Joe (as a business partner) after that. (Lit., Old Joe remained...)

(169) ULO1:28:
 vokoto xi la li xox vokotoe `une i-0-kom `o
 Chachalaca said CL ART Joseph CL CP-3A-remain REL
"Vokoto," said Joseph Vokoto, and the name stuck (lit., it remained forever).

Kom also denotes lapses (temporary or permanent) from normal motile states. Thus two brothers who are otherwise in continual argument are urged to "remain in agreement."

(170) MONOL:6:
 lek mi ch-0-kom ta `akwerto j-chi`uk mikele
 good Q ICP-3A-remain PREP agreement 1E-with Michael
It would be good for me to come (lit., stay) to an agreement with Michael.

Similarly, the standard description for someone who has fallen ill, by having lost his soul to the Lord of the Earth (through witchcraft or fright) is *ikom ta balamil* "he remained in the Earth."

The last verb in this group is *`ay* which asserts of a subject X that it was in some reference location L (which may be here), but requires for felicity that X no longer be in L (or at least have left L after the time in question). It is a sort of inverse of *sut*. As Laughlin (1975) points out, one can felicitously ask of another person

(171) constructed
 mi i-0-`ay nax
 Q CP-3A-have*been earlier*today

Was she here?

only if she is there no longer. By extension, then, `ay can be applied to states in which a subject no longer finds himself.

(172) LOL6:449:
 primero l-i-`ay ta pijijiapan
 first CP-1A-be PREP (place name)
First I went to sell (lit., was) in Pijijiapan.

Here, Lol is describing not a single journey to Pijijiapan, but a period in his flower selling career when he regularly sold his wares in the Pijijiapan market.

Region oriented motion verbs denote trajectories into or out of presupposable bounded regions. Naturally enough, these regions can be metaphorical as well as spatially extended. Thus, `och 'enter' can describe a beginning, of an activity, or even of a fight.

(173) LOL6:39:
 pas-chobtik i-0-`och `o
 make-milpa CP-3A-enter REL
He has started to farm corn permanently (lit., he has entered in corn-making).

(174) Z8808293:437:
 ch-0-`och `o tal li k'op `une
 ICP-3A-enter REL come (DIR) ART word CL
The dispute (lit. the word) is about to begin (literally, enter in this direction).

In general, something's `ochel 'entry' is its beginning.

Lok 'exit' can, conversely, describe the termination of something.

(175) TOTME:7:
 pero mi l-a-lok' le`e mu x-a-xokob xi
 But Q CP-2A-exit that NEG ASP-2A-be*free he*said
"But," he said, "once you finish (lit., exit from) that (religious office), you still won't be free (of religious obligations)."

However, the verb suggests not simply exiting from a state, but rather **emergence** into view: a kind of coming into existence. Thus one finishes a job when it (the job) "comes out." And one fails when it does not.

(176) LOL2:37:
 mu x-0-lok' i tarea
 NEG ASP-3A-exit ART task
One cannot finish the assigned work (lit., the task doesn't exit).

Similarly, one has a debut by "coming out."

(177) PULVOK:80:
 `ach' to `ox nan i-0-lok' ta `ilolal
 new still CL perhaps CP-3A-exit PREP curing
She had probably just recently had her debut (lit., exited) as a shaman.

"Emerging" suggests being visible, known, discovered, or developed (of, for example, a photograph).

(178) CHICHON:137:
 i-0-lok' ta radio

CP-3A-exit PREP radio
It was announced on the radio.

(179) LOL5:527:
 . . . k'alal i-0-lok' i chevrolet `une
 when CP-3A-exit ART CL
(That was when) the Chevrolet (trucks) first came out.

(180) PETPERES:140:
 mas i-0-lok' s-lo`iltael
 more CP-3A-exit 3E-gossip
More gossip about him has come out.

And having a sufficiency of something means that it can "come out" well.

(181) ANTPOX:25:
 `ali `antune, x-0-lok' `o li s-pox a`a
 ART Anthony ASP-3A-exit REL ART 3E-medicine CL
Anthony will certainly have enough fertilizer (lit., [the cornfield] will come out with the fertilizer).

Finally, the paired verbs denoting motion along the vertical axis have unsurprising imagistic associations. Obviously enough, prices "rise" and "fall." Liquor "rises to one's head" and one conventionally "goes up" to *Jteklum*, the ceremonial center of Zinacantán (which does lie generally uphill from the rest of the hamlets). But most of the metaphorical load involves descent: after drinking one can "fall to the ground" or, as the idiom has it, *yal ta k'ok'* 'get in trouble (lit., fall into the fire).'

(182) anvask3:58:
 i-0-yal la ta lum
 CP-3A-descend CL PREP ground
They say he passed out (lit., descended to the ground).

Eating impalatable food means forcing it **down**.

(183) PRANS:2:
 i-0-yal k-u`un `un
 CP-3A-descend 1E-agent CL
I got it [foreign food] down.

I have detailed examples of the extended use of these Tzotzil motion verbs to show that, as ordinary verbs, they share with motion verbs in many languages semantic extensions of a familiar (if not totally predictable) sort. There is nonetheless clear evidence from their use in the system of auxiliaries and directionals that these verbs have basic meanings rooted in motion. Notably, **none** of the non-motion senses of these roots extends to their use as auxiliaries. Thus, for example, despite the profusion of non-motion uses of, say, *lok'*, as an auxiliary *lok'* always seems to imply literal emergence from some physically bounded region or enclosure.

Motion, trajectory, and a model theoretic notion of path

It is possible to schematize the motion senses of the twelve central motion auxiliaries in Tzotzil in model theoretic terms³⁷, a task to which I very briefly turn. Suppose we represent a

³⁷ For this task, I shamelessly--and almost certainly incorrectly--adapt to Tzotzil paths notation and analysis proposed for certain path and aspect notions in English by Verkuyl and Zwarts (1990).

locational predicate as asserting of some entity X that it is "at" some space-time location, an ordered pair $\langle t_i, l_j \rangle$ of $t(\text{ime})_i$ and $l(\text{ocation})_j$ (defined with some linguistically suitable range of degrees of resolution). We may speak of such ordered pairs of times and locations as "places," symbolized here by p variables. Hence if p_n is, say, John's house at some specific time (say Nov. 24, 1990), then, trying to ignore any lurking indexicality, we could represent the proposition that John is/was at home on that day by a predicate like $AT(\text{John}, p_n)$. One can imagine sets of places, $\{p_1, p_2, p_3\}$, with no particular coherence; but normally we will be interested in sets of places with more restricted properties. Thus if John was home on the 24th, but at the office on the 25th (call p_m John's office on the 25th), then the unordered set $\{p_n, p_m\}$ (where the curly brackets signal an ordered set) represents two places which happen to correspond to the places at either end of his journey. The progression of time, of course, implicitly imposes a linear order on this set, now denoted by $\langle p_n, p_m \rangle$, a set which represents explicitly the relevant sequence of places that (perhaps incompletely) describes the fact that John went from home on the 24th to his office on the 25th. In general, we may describe a *path* as a specific sort of ordered set of places

$$(184) \langle p_1, p_2, \dots, p_j, \dots, p_n \rangle$$

where each p_j is $\langle t_j, l_j \rangle$ and the t values are linearly (that is, temporally) ordered, and where suitable conditions, which I will not try to specify here, on the contiguity of each l_j and l_{j+1} are imposed. Adapting conventions of Verkuyl & Zwarts (1990), we can imagine both bounded paths, like that shown in (184), for which a cardinal value of n can be determined, and unbounded paths like both of the following:

$$(185) \langle p_1, \dots \rangle$$

$$(186) \langle \dots, p_1 \rangle$$

We can also represent the "place-of" some entity e by conventionally enclosing the entity in parentheses; thus $p(e)$ is to be read as that $\langle t, l \rangle$ such that $AT(e, \langle t, l \rangle)$.

We shall need a few further notational conventions, continuing to gloss over some fairly serious difficulties surrounding indexicals and questions of pragmatic focus and perspective. Thus we shall use $p(H)$ to stand for a fairly special "place": the here-and-now of some particular utterance. Since Tzotzil allows a specific location to be explicitly stated (for example, as the object of the all-purpose preposition *ta*) we shall also represent as $p(X)$ that place (if any) specified by a locative modifier. (Strictly speaking, the location elements of places are more prominent, and more often explicitly specified, in Tzotzil utterances than the time elements.)

We shall imagine a two-argument function D such that, given any two places, $p_a = \langle t_a, l_a \rangle$ and $p_b = \langle t_b, l_b \rangle$, $D(p_a, p_b)$ produces the distance between l_a and l_b . We shall also need a function, which I will somewhat unseriously call A for "altitude," such that $A(p_n)$ yields some suitable number corresponding to the "height" of l_n (above some standard reference point, in some suitable scale, normalized in some way, and so on).

Finally, we shall need some notion of *focus* with respect to paths, where by focus I mean some segment of a path over which an assertion can be taken to apply. The parallel with presupposition and entailment is once again relevant, for some verbs *presuppose* certain path configurations for their felicitous application, but *entail* other characteristics of paths to which they are applied; and normally these characteristics will be asserted over some in-focus segment of a path. I will represent in-focus segments with italic type.

With these rough tools, I can proceed to the Tzotzil roots themselves, arranged in their familiar groups. First, the deictically anchored verbs all imply the presence of $p(H)$ somewhere in their schematic representation. All as well involve a general schematic path, P , which I may represent as follows:

$$(187) P = \langle p_1, \dots, p_j, \dots, p_n \rangle$$

The least marked of the deictically anchored verbs is clearly *bat*, which imposes a single restriction on P :

$$(188) \textit{bat}: p_1 = p(H).$$

However, in fact, as we have seen *bat* is highly unmarked. If a locative argument is specified then the total path in question is

$$(189) P_{\textit{bat}} = \langle p(H)_1, \dots, p_j, \dots, p(X)_n \rangle$$

in which no path segment is specifically in-focus.³⁸ If there is no explicit X , or if a marked contrast is drawn with *k'ot*, the focus seems to fall on the inception of the path.

$$(190) P_{\textit{bat}} = \langle p(H)_1, \dots, p_j, \dots, p(G)_n \rangle$$

In the still more general case in which *bat* conveys plain unmarked motion, one can imagine that the focus falls on some intermediate segment, not explicitly involving $p(H)$ at all.

$$(191) P_{\textit{bat}} = \langle p(H)_1, \dots, p_i, \dots, p_j, \dots, p(X)_n \rangle$$

In situations where a contrast with *tal* is possible, however, one might need to specify that the in-focus vector is moving away from the deictic origo, invoking the distance function D and imposing the following additional condition on p_i and p_j :

$$(192) D(p_i, p(H)) < D(p_j, p(H))$$

The verb *tal* clearly involves a path with the condition that

$$(193) \textit{tal}: p_n = p(H).$$

The asymmetry with *bat* is explained when we see that the endpoint of the path is always specified, since it is $p(H)$. However, the starting point of the path must also be in principle specifiable, since both verbs focus on initial or medial segments of paths, rather than on arrivals. Thus a path encoded by *tal* is necessarily more marked, or more restricted, than one marked by *bat*. That is, while *bat* may be applied to an unbounded path $\langle p_1(H), \dots \rangle$, *tal* always evokes a bounded path $\langle p_1, \dots, p_n(H) \rangle$, even if the starting point p_1 is not specifiable in detail.

A further curiosity must also be represented formally, namely the possible dual interpretation of an explicit locative modifier with *tal*. Thus, the sentence

(194) {constructed}
 ch-i-tal ta j-na
 ICP-1A-come PREP 1E-house

can mean either "I am coming to my house" (if, for example, I utter the sentence when I am in fact *in* my house), or "I am coming [here] *from* my house." By contrast, the sentence

³⁸ It is presumably possible to incorporate into a refinement of this model the contribution of verbal aspects. Roughly, I propose that incompletive aspect puts the inception of a path in-focus (i.e., focusses on a segment that includes p_1), whereas the completive aspect focusses on the segment including p_n . Stative or perfect aspect presumably makes an assertion about states located within time periods including and following t_n .

(195) {constructed}
 ch-i-bat ta j-na
 ICP-1A-go PREP 1E-house

can only mean "I am going to my house" (which cannot be "here").

Thus, we may represent the two verbs as follows (with optional clauses in parentheses):

(196) *bat*
 $p_1 = p(H)$.
 focus: on some subpath of P .
 $(p_n = p(X), \text{ if any})$.

(197) *tal*
 $p_n = p(H)$.
 focus: on some subpath of P .
 $p(X), \text{ if any, } = p_1 \text{ or } p_n$.

The verbs *k'ot* and *yul* are similar, except that their focus must be a subpath of P that includes p_n . Thus they both must involve bounded paths. Thus,

(198) *k'ot*
 $p_1 = p(H)$.
 focus: on some subpath of P including p_n .
 $p(X), \text{ if any, } = p_n$.

(199) *yul*
 $p_n = p(H)$.
 focus: on some subpath of P including $p_n(H)$.
 $p(X), \text{ if any, } = p_1 \text{ or } p_n$.

The complex paths of the point-oriented deictics can also be reasonably fully specified in terms of this model. Remember that X is the locative reference point either explicit or implicit in a proposition. One default clause that is common to all the verbs in this group is that, in the absence of any alternate specification, $p(X)$ can be taken to be $p(H)$ --the reference location can be understood as "here."

(200) *`ech'*
 for some i , $p_i = p(X)$.
 focus: some subpath of P containing $p_i(X)$.

(201) *sut*
 $p_n = p(X)$.
 for some i , $i < n$, $p_i = p(X)$.
 focus: some subpath of P that includes or follows p_i .

(202) *kom*
 there is some subpath $\langle p_i(X), p_{i+1}(X) (\dots) p_j(X) \rangle$ of P .
 focus: on $\langle p_i, \dots \rangle$.

(203) *`ay*
 there is some subpath $\langle p_i(X), \dots, p_j(Y) \rangle$ of P , where Y is not X .
 focus: some subpath of P that includes $p_i(X)$.

The two vertical axis verbs may presumably be defined in terms of a function like *A*, hinted at above, such that, for example:

(204) *muŷ*
 there is some subpath $\langle p_i, \dots, p_j \rangle$ of *P*, such that $A(p_j) > A(p_i)$.
 focus: includes subpath $\langle p_i, \dots, p_j \rangle$.
p(*X*), if any, = p_1 or p_n .

Finally, the enclosure oriented verbs *ʔoch* and *lok'* require model theoretic treatment of regions (in two and three dimensions) which I am not prepared to offer in this provisional sketch. If, however, we optimistically assume a treatment of regions as (complex) sets of places, which allows us to define a relation of containment $IN(p, R)$, we can offer a pseudo-representation of these two verbs that captures certain interesting properties.

(205) *lok'*
 there is some subpath $\langle p_j, \dots, p_k \rangle$ of *P*, and some region *R* such that $IN(p_j, R)$ and $\sim IN(p_k, R)$.
 focus: a subpath including $\langle p_j, \dots, p_k \rangle$.
 if *X* is specified, then *p*(*X*) is included in $\langle p_j, \dots, p_k \rangle$ and either $IN(p(X), R)$ or NOT $IN(p(X), R)$.

(206) *ʔoch*
 there is some subpath $\langle p_j, \dots, p_k \rangle$ of *P*, and some region *R* such that $\sim IN(p_j, R)$ and $IN(p_k, R)$.
 focus: a subpath including $\langle p_j, \dots, p_k \rangle$.
 if *p*(*X*) is specified, then *p*(*X*) is included in $\langle p_j, \dots, p_k \rangle$ and $IN(p(X), R)$.

Notice once again the asymmetry: *ʔoch* always involves entry *into* the specified region; whereas *lok'* involves exiting a region, but the explicit reference point can be either inside or outside. Again, the apparent default *X* is *H*.

We can thus address the conceptual worry I attributed earlier to John Lucy, with two observations. First, the grammar of Tzotzil itself singles out this small subset of verbal roots for special treatment--by grammaticalizing them into the two highly restricted syntactic slots--auxiliaries and directionals--that have been my focus here. Second, these constructions select precisely the schematic motion or trajectory encoded in the root to exploit in the meaning--motion-cum-purpose--of this grammatically restricted frame.

The morphological provenance of Tzotzil auxiliary and directional roots

Following directly on a model provided by Lucy,³⁹ it is possible to delineate, on formal distributional grounds, the subclass of Tzotzil roots from which auxiliaries and directionals are drawn.

First, as I have shown in preceding sections, the distributional facts uniquely define a set of fourteen verb roots that can fit into the auxiliary slot, and an almost identical set of roots which

³⁹ The idea for such an examination of an entire *class* of roots comes directly from John Lucy's presentation of a similar study of Yucatec Maya at the September 1990 workshop mentioned in Footnote 1. Lucy argues, in brief, that the overarching class in Yucatec to which all putative "motion verbs" belong, should be better classed as "change of state verbs." Of course, as Lyons (1977:720), following Miller and Johnson-Laird (1976:526ff.) has argued, on a thoroughly localist account "all verbs denoting a change of state may be regarded as verbs-of-motion."

produce directionals. What, if any, is the larger class of roots to which this limited group belongs? The diagnostic tests, as in the case of positional roots described above, have to do with the derivational possibilities associated with roots in the class. Here are the relevant criteria I have used. (1) In each case, the stem used as an auxiliary or to which the directional suffix *-el* is attached can also be directly inflected as an intransitive verb stem (taking aspectual and absolutive affixes). (2) There is, in each case, a corresponding derived transitive stem, with a causative meaning, formed by suffixing *-es*. (3) In some cases, although the plain intransitive stem or the *-es* form is missing, there are additional derived forms which suggest a similar root "character": for example, a reduplicated stem that inflects directly as an intransitive verb, or a derived stem based on a *CVC-es-* form that does not occur alone, and so on. For example, from the root *lok'* one forms :

- (1) an intransitive stem *lok'* which Laughlin (1975) glosses: exit, go out, come out, issue forth, run (dye), end (term of office).⁴⁰
- (2) a transitive stem *lok'es* which Laughlin (1975) glosses: move away slightly / table, pot, etc./, remove, take out, take off, dispatch / constable, principal/, produce . . .

Or, from the root *vitz'* although there is neither a direct intransitive nor transitive stem, one forms

- (3) an intransitive (antipassive) stem *vitz'esvan*, glossed: flick water on person

along with a variety of other derived forms, all of which suggest an underlying root meaning having to do with sprinkling water.

The contrast between diagnostic form (1), the bare intransitive stem, and form (2), the transitive/causative stem, suggests that the root itself denotes an action which either has no cause (it just happens to someone) or is self-caused. Adding a causative *-es* suffix then emphasizes the transitive action of a separate agent.

The entire inventory of Tzotzil roots that, by such formal criteria, form a single putative root class is surprisingly small, amounting to about one hundred roots (out of a total inventory in Laughlin's dictionary of just under three thousand roots, nearly half of which are nominal). Moreover, this set includes all of the roots we have met as auxiliaries and directionals.⁴¹ I have arranged the members of this distributionally defined class into groups, based on notional semantic categories suggested by Lucy for Yucatec, in which he argues intransitive roots of this sort denote "changes of state." The results appear in Table **Error! Bookmark not defined.**⁴²

The notional categories are meant only to suggest the range of actions and events lexicalized in Tzotzil as intransitive roots. They are not to be taken seriously as a proposal for semantic analysis. Nonetheless, there are some notable features to the table.

First, there is a proliferation of specific roots which lexicalize not only "changes of state" like swelling up or breaking into pieces but also the consistency, shape, position, or specific character of an appropriate subject for the resulting predicate. A similar proliferation appears in the subclass of notional motion roots that have to do with "falling," and, indeed, even of the surprisingly large class of roots denoting the beginnings or endings of events. Thus, one says *jin*

⁴⁰ Laughlin's glosses employ parentheses to suggest possible appropriate subject arguments (both S and A), and slashes for appropriate object (O) arguments.

⁴¹ A single possible exception is the putative root *jelav*, which gives rise to the directional *jelavel* 'passing.' The root yields too few derived forms to allow definite assignment, although *jelav* does inflect directly as an intransitive stem.

⁴² Glosses are based on Laughlin (1975).

'fall' only of a collection of piled objects that can, as we might say, come tumbling down; or one says *tzutz* 'finish' of work (a piece of weaving or a term in religious office, for example). This semantic specificity is characteristic of the positional roots described elsewhere in this paper, and, indeed, of the entire Tzotzil verbal lexicon.

Notably, none of these highly specific roots finds its way into the grammaticalized system of auxiliaries and directionals. Directionals and auxiliaries, instead, are somewhat remarkable in the context of the larger root class because of their semantic generality. As Laughlin's glosses suggest, there may often be quite specific nuances of meaning to these roots as verbs (for example, *yäl* means 'descend' not only of moving objects, but also of prices and frost on a cold morning). However, as directionals and auxiliaries the roots seem to encode schematic trajectories (so that a root like *yäl* simply corresponds in many cases to the English word *down*).

Table 1

Semantic categories in Tzotzil intransitive roots

Biological events	puj , I(2), puff up (tortilla), swell /skin from sting/
ch'i , I, grow up, grow (plant, animal)	pum , I, P, P(2), have gas on the stomach
kux , T, T(2), sober up, come back to life	vuch , P, blister /distinguished from <i>chuy</i> by rapidity of blistering/, fill
p'ol , I(2), multiply, proliferate (corn, people, words), increase (cane liquor)	vuk , I, P, puff up (tortilla, balloon)
jup' , I, get fat	voch , I, P, P(2), blister, puff up /with wind or air/, begin to head (cabbage)
`elan , I, be like	t'in , I(2), bloat, swell (stomach with gas or water)
mak , T, close, become constipated	sit' , I(2), P, P(2), swell (leather, nixtamal in water, beans, belly with gas)
vay , I(2), sleep, go to bed, spend the night, promise a good crop (virgin land)	mutz , P, P(2), shrink (clothing, sandal)
cham , I, die (person, animal, tree, plant, etc.) { <i>But see the category of "Events" below</i> }	tzap' , I, dry, shrink (wood, vine, corn, thatch, beans)
lub , I, tire	sap' , I(2), dry, shrink (wood, vine, thatch, beans, corn, potatoes)
vik' , I, T(2), open (eyes of puppy after 15 days), remain wide awake	<u>Splitting, cracking, crumbling, breaking</u>
`ok' , I, cry, weep, call (bird), sing (bird, cricket), drip (candle)	sok , T, slip (burden), break (sandals, threads of weaving), break down (car)
Psychological events	vok' , I(2), T(2), break (wood, egg, head, pot, bottle, peso bill, coin)
nop , I, T, become accustomed to	tuch' , I, T(2), break (rope, leather thong, weaving, thread, ribbon), be cut
kap , I, become angry, get mad, lose one's temper	tuk , I, open (bud, corn for posol), be crumbly (dry earth), be spread (gossip)
Physical events and state changes	vex , I(2), split open (corn, lime)
<u>Burning and cooking</u>	t'om , I(2), explode (rocket, blasting iron), fire (gun), burst (pot, demijohn)
k'ak' , I, burn	t'aj , I(2), P, split, crack (mud, wood, skin)
til , I, catch fire, burn /with fever/	kav , I(2), split open (earth)
`an , I, glow (embers)	p'al , I, T, flake (scab, dirt)
ta'aj , I, cook, ripen	`ex , I, split and become powdery (lime), split open (corn when boiled twice), become crumbly
p'ot , I, T, be roasted (corn), pop (fever sore), be removed (bark, cow hoof)	t'il , I(2), fray (ribbon, edge of clothing), split or crack (wood)
ch'it , I, pop (fire, roasting corn), snap (spark), squirt, splash (water, mud)	<u>Surface form or arrangement:</u>
<u>Change of consistency</u>	bo , I, fall out in great quantities, shed (hair), come apart (weaving)
vos , I, P, become soggy (tortilla, toasted tortilla, paper), become soft	jus , I(2), wear off (nap)
bi , T, become soft (corn kernel when boiled in lime water), peel off (skin)	<u>Opening, closing, loosening, filling, etc.</u>
k'a` , A, I, rot, dry up (mucous), become fertile	{ <i>cf. mak above</i> }
<u>Swelling and puffing</u>	

jitz, I, slip (knot)
t'ix, I(2), be obstructed (path), be unable to enter
yub, I, P, P(2), be closed (bag, ball of laundry)
`ax, I, provide cover /from rain/
kol, I, get loose (animal), escape, recover from
 /sickness/, be cured, get well
tzul, I, slip, slide (person, horse, tile, board)
yoch, P, P(2), become weak, stop fermenting,
 become loose (tooth, knot, fence)
noj, I, fill, flood

Miscellaneous, positional

vij, T, be flicked off (water)
vuk', T, be uprooted (tree), be flattened (corn field
 in wind), collapse (house)

Wetness, etc.

`ul, I, evaporate, dry up, melt, crystallize (salt,
 sugar), become penniless
`ach', I ooze, drip
matz', I, dry out partially (clothes, wood), dry up
 partially (mud, wound, skin)
tz'uj, I(2), leak (house), drip down (candle wax,
 water)
vitz', I(2), flick water on person
mul, I, T(2), be dipped (water jug, water gourd, or
 stick in water, cloth in dye)

Beginning and Ending of Events

lik, P, T or T(2), get up, arise, become erect *{and
 see trajectory & direction verbs below}*
nel, I, T, die, end (work)
ch'ab, I, P, end (argument, court case, war, pain)
laj, I, finish, end, die, wear out, be used up, get
 hurt
paj, I, stop, cease (rain, pain), be cancelled /trip/
tup', I, T, go out (light, fire), wilt (flower), be cut
 (fever)
yam, I, T(2), become tame or good-hearted, grow
 thin, die down (fire), lower
kuy, T, recur (sickness)
k'ep, I(2), stop raining
p'il, I, pass (time)
t'ab, I, P, P(2), die
tz'an, I, be conceived
tzutz, I, Ritual speech; end (term of office)
ch'ay, T, lose out, become lost

Motion

No direction, non self-initiated, manner of motion

vuy, I, P, sway in seat (drunk)
bak', I, move, make noise, make a sound
nik, I, T, shiver /with cold/, tremble /with fear/,
 quake (earth), be ripe
p'it, I, jump (person, animal, spark, chip of wood
 or rock), bounce, ricochet
vil, I, fly, die

Falling

juch', I(2), P(2), become bedridden /patient/
sol, I, N, drop (pants, skirt, anus /by effects of
 bloody dysentery/
jach', I, fall /sober person while walking/
jem, I, T(2), slide down, avalanche
jin, I(2), fall (cliff), roll down (rocks), fall off pile
 (adobe, brick, rock)
lom, p, T, or T(2), fall (drunk, person with burden,
 animal, tree, house)
p'aj, I, fall /from height/

Trajectory & direction

kom, I, stay, remain, be left, be left behind, be left
 over, be slow (watch)
bat, I, go, go on, elapse, last (time), turn out
tal, I, come, arrive
k'ot, I, arrive there, become, be straight-shooting
 (gun), reach, happen, come
yul, I, arrive here, return here
sut, I, return, set (moon), subside (skin disease,
 smallpox, etc.)
`ay, I, go and return (*NB: no causative*)
`ech', I, pass by, pass (sickness, grief, time, fear),
 abate (rain), leak (pot)
lok', T, exit, go out, come out, issue forth, run
 (dye), end (term of office)
`och, I, enter, go in, come in
yal, I(2), descend, climb down, come down
 (price), fall (frost, rain)
muy, I, climb, rise
toy, I, T(2), lift (northeaster), become wealthy or
 powerful, rise (sun)
lik, P, T or T(2), get up, arise, become erect

Finally, the comparison with other roots focusses our attention on those auxiliary and directional roots that display unusual formal characteristics. I have already mentioned that the root *jelav* does not fall neatly into the intransitive class on derivational grounds, since it has no causative form in *-es*. The root *`ay* is also aberrant, for the same reason. The notional semantic groupings also point out apparent anomalies. For example, why does the root *vay* 'sleep' produce a directional, but not for example the roots *kux* 'revive' or *cham* 'die'? Or why do such "motion" verbs as *jach* 'fall down' or *toy* 'lift' not function as auxiliaries?⁴³

⁴³ Such paradigmatic gaps may lead to innovative speech errors in young Tzotzil speakers, who might over-generalize syntactic patterns onto semantically similar roots--a topic awaiting further research.

Such questions naturally lead to diachronic and comparative enquiry: where does the system of grammaticalized spatial and aspectual reference come from in Tzotzil? How has it evolved? How does it compare with similar devices in sister languages? I turn briefly to these questions before ending with some more general considerations about the use of the modern Tzotzil system.

Auxiliaries and directional in Colonial Tzotzil

A survey of the comparable class of intransitive roots from Colonial Tzotzil (Laughlin 1988) produces a smaller list. Table 2 shows those roots which appear as both bare intransitive stems, and with the causative *-es* suffix. (I have occasionally given, in addition to the intransitive entry, Laughlin's gloss for the Colonial causative form.) The modern and Colonial materials are, of course, not really comparable, since Laughlin exhaustively elicited the modern Tzotzil entries, whereas the mysterious compiler of the Colonial dictionary whom Laughlin calls Z obtained his entries by unknown means. It is thus not surprising that many modern words do not appear with a sufficiently complete derivational paradigm in the Colonial dictionary to warrant their inclusion here.

Table 2
Semantic categories in Colonial Tzotzil intransitive roots

Key: = marks roots that also appear in Table **Error! Bookmark not defined.** of modern Zinacantec Tzotzil (although often with different meanings)

Biological events

=**kux**: come back to life, revive (plant, person, tree), mildew
 =**p'ol**: increase, multiply
 =**jup'**: grow fat
 =**vay**: sleep, take lodgings
 =**cham**: be or get sick, die, grow numb; =**tzames**: greet, kill
 =**lub**: become tired
lup: revive (tree or plant), sprout; **lupes**: enrage, poke fire and stir flames
vetz': decline (in number, population, property or rank), decrease

Psychological events

=**nop**: be in harmony or together (voices), fit in
k'exaves: humiliate, shame
xi': be afraid, startled or terrified, fear
k'ex: change one's ways

Physical events and state changes

Burning and cooking

=**k'ak'**: burn
 =**til**: burn with flames, flame up, light; =**tiles**: enrage, stir the fire (causing flames)

Splitting, cracking, crumbling, breaking

=**sok**: be uneasy, destroy, disturb
 =**tuk**: blossom, demolish or pull down (house, building), split open (cotton, ripe pomegranate), sprout, undo
jav: break into pieces, break open (pomegranates, cotton), break up (ship), split
ot: be wounded, bore through
ch'ak: be fined, become a lord, break (cord or thread), come undone, govern, rip, tear

Opening, closing, loosening, filling, etc.

=**yubes**: narrow
 =**kol**: be safe, escape, fall (beads from a ribbon, cloth), miss (crossbow, pellet, arrow), take shelter
 =**noj**: be full (moon), be occupied, be full or surfeited, fill up, swell
tz'ales: interweave
jelaves: pierce
jam: accuse, open, split open (cotton, ripe pomegranate); **james**: confess, reveal, say
pul: fill as above, sink, stuff oneself

Wetness, etc.

=**ul**: absorb, be absorbed, drained off (strength, water), or ended, decrease, melt, sink (water into ground); =**ules**: defame, diminish, drain off, finish off, humble, melt
 =**ach'**: get wet, sweat
 =**vitz'**: sprinkle; =**vitz'es**: sprinkle (with the hand or hyssop)
 =**mul**: sink

Beginning and Ending of Events

=**lik**: be movable, begin, change residence, depart, move, take fright, withdraw; =**likes**: begin, change residence, do or use for the first time, found, move, persuade, provide the opportunity, remove, start a battle or a dispute, upset
 =**laj**: be dead, fretted, squandered or wasted, be depopulated or devastated in war, die, end, fret (cloth, silk), ruin oneself, wear out (clothing)
 =**paj**: be constipated, stop (bleeding), turn back without reaching destination; =**pajes**: prevent person from doing something good or bad
 =**tup'**: be extinguished, decrease, humble oneself
 =**yam**: I, T(2), become tame or good-hearted, grow thin, die down (fire), lower
 =**p'il**: add, increase; =**p'iles**: add, increase, lift up the poor or downcast, raise one's rank
 =**t'ab**: be persuaded, begin
 =**tzutz'**: die, finish (work)
kaj: begin; **kajes**: begin, provide the opportunity

Motion

No direction, non self-initiated, manner of motion

=**bak'es**: disturb, make merry, stir up
 =**nik**: be movable, become stirred up (water by wind or storm), stagger, sway, wriggle

Falling

=**jin**: escape, flee, demolish or tear down (house, building)
 =**lom**: settle (ground), sink (ground when stepped on, basket, trunk, or other soft object when sat upon)

Motion & direction

=**kom**: be left, flood widely, remain, stay;
 =**komes**: cut short, leave
 =**bat**: absent one's self, go; =**batates**: remove;
 =**batbat**: withdraw
 =**tal**: come, come to the aid of; =**taltal**: approach;
 =**taltales**: make approach

- =**k'ot**: reach, arrive {this root does not appear as an intransitive verb stem by itself, but figures in such idioms as *k'ot ta `okel* 'reach maturity'; a reduplicated causative form appears in *k'otk'otes patan* 'apply rent.'}
- =**Hul**: come {corresponds to the modern *yul* 'arrive to "here"'; no causative form appears in the Colonial material}
- =**sut**: return; =**sutes**: comment, explain, oblige one to pay his debts, return a loan, translate, turn upside down
- =`**ech**': be digested, exceed, go through streets or gardens, pass by, surpass; =`**et'es**: abort, administer to (giving something to someone)
- =**lok'**: absent one's self, be divided into parts (rosary, sermon, talk), be reduced to (as, "all the commandments are reduced to this", "everything that has been said can be reduced to this", bud, be lucky; =**lok'es**: deprive of office, free (captive or prisoner), remove, take out, throw out
- =`**och**: be put in, enter, fit, batch, take lodgings
- =**yal**: descend, digest, fall from a height, go down, humble oneself; =**yales**: abort, find fault with, get down, lower, overmatch
- =**muy**: ascend, climb, rise
- =**toy**: be elevated in rank, lighten; =**toyes**: honor, raise the poor or downbeaten
- =**lik**: {see above, Beginning and Ending of Events}
- xanaves**: make walk, roll (wheel, cart)
- jak**: deviate, withdraw; **jakes**: put on the wrong road, remove, remove to a greater distance

Although the two lists do not exactly match, the same notional semantic categories used for modern Tzotzil seem appropriate for sorting the Colonial roots. Indeed, in many cases the Colonial material illuminates an otherwise rare or defective modern root. Thus, for example, the missing intransitive stem *vitz'*--hypothetically 'sprinkle'--in modern Tzotzil does appear as a Colonial intransitive stem. Conversely, the Colonial materials give a transitive stem *-jelaves* 'pierce,' which corresponds to the causative form of *jelav* 'pass' missing in modern Tzotzil. More general etymological comparison would certainly reveal much about processes of semantic change generally in the language.

Here our interest is restricted to the roots that figure in the auxiliary and directional system. The Colonial point-oriented motion verbs *sut*, *ech'* and *lok'*, seem to have rather different central meanings from their modern counterparts. Thus, as a causative *sutes* suggests less motion than return to rightful place or possessor ('return a loan' or even 'translate'); *ech'* is not just 'pass' but also 'surpass.' It is, of course, hard to decide how much the Colonial glosses reflect Tzotzil usage of the time as against the special preoccupations of Z and his fellow Friars. Nonetheless, there are striking differences from modern usage. The common motion verb *k'ot* appears infrequently in the Colonial material, usually in highly idiomatic non-motion contexts: *k'otel pox* 'proven medicine' (literally, perhaps, a medicine that "reaches" [its target?]); *k'otbaj* 'all'; *k'ot ta k'op* 'keep (literally: arrive at) one's word'; *mo xxk'ot ssat tuluk'* 'blind chicken' (literally, the eyes of the chicken do not arrive).⁴⁴ The Colonial *Hul*, corresponding to modern Zinacantec *yul* 'arrive to "here"' is frequently translated by the Friars as simply 'come,' and figures in the idiom *Hul -olonton*, lit., 'have one's heart arrive, i.e., come to one's senses.'⁴⁵ Both *bat* 'go' and *lok'* 'go out' are given the primary gloss 'absent oneself.' Finally, there is no sign in this derivational context of the modern *a(y)* 'to have been (in a place).' That is, a form that in some ways resembles the modern intransitive stem *a(y)* exists, but it is only equivocally an intransitive stem in the Colonial materials, behaving more like a nominal stem, as we shall shortly see.

Nonetheless, the same basic root material that provides modern Tzotzil auxiliaries and directionals seems to be available in Colonial Tzotzil. Not all of the same roots appear, however, and the pattern of grammaticalization is interestingly different. Here is a brief characterization of the relevant constructions, drawn partly from Haviland (1988).

Colonial Tzotzil had an auxiliary construction apparently identical in **form** to that of the modern language. The auxiliary verb bore aspect markers, and the main verb combined with person marking affixes, supplemented by a subjunctive suffix in the case of intransitives.⁴⁶

(207)
 mu x-laj `och-uk-otik.
 NEG ASP-finish(AIX) enter-SUBJ-1PLI
We can't fit (literally; we don't finish entering). (no cabemos).

However, the number of roots that occur as auxiliaries is much more limited than in the modern language. Just three "motion" auxiliaries occur. One is the familiar *bat* 'go.'

⁴⁴ The same idiom, *k'ot- -sat*, literally 'eyes arrive,' means "be able to see" in modern Tzotzil as well.

⁴⁵ Compare the modern *yul -ch'ulel* 'lit., have one's soul arrive, i.e., begin to have some sense [a child], sober up [a drunk].'

⁴⁶ In most cases I have drawn the Colonial examples from the Friar's fully inflected sentences, rather than from Laughlin's normalized dictionary entries. Parenthesized material following the English translation represents Z's original Spanish glosses.

(208)
 x-bat k-il-0.
 ASP-go (AUX) 1E-see-3A
I'm going to visit/see him. (visitar, ir a ver).

(209)
 x-bat j-kuch-0 si` j-k'atin.
 ASP-go (AUX) 1E-carry-3A firewood 1E-warm*self
I am going to bring firewood to warm myself.

It is unclear from these examples whether the motion sense or the future time sense of the auxiliary predominates. Of example (209), Z remarks that this is what "they very frequently say."

In the Colonial dictionary, there is also a single example of *k'ot* 'arrive "there"' as an auxiliary, and a single example with *tal* 'come.'

(210)
 x-k'ot k-ak' patan.
 ASP-arrive (AUX) 1E-give rent
I apply the rent. (recurrir con la renta)

It is unclear here where one is arriving, and whether it is to pay or collect the rent (the syntax and the archaic Spanish gloss suggest the former). Similarly, the auxiliary *tal* 'come' of the following example seems to suggest "come around (i.e., habitually)" rather than literally to come on some specific occasion.

(211)
 Ha` te mo `oy-uk stojol k'op x-tal y-al-bey-one
 ! PT NEG exit-SUBJ polite speech ASP-come (AUX) 3E-say-BEN-1A
He speaks abusively. (Literally, "without polite speech he comes to talk to me.") (acocear).

Most of the Colonial examples concentrate on the two "aspectual" auxiliaries *lik* and *laj*. Thus the following dictionary entries include the auxiliary *laj* 'finish':

(212)
 e-laj x-xen.
 CP-finish (AUX) 3E-stab(+3A)
He stabbed him many times. (dióle de puñaladas).

(213)
 mu x-laj k-a`i.
 NEG ASP-finish (AUX) 1E-understand
I did not understand very well. (entender no muy bien).

As in modern Zinacantec Tzotzil, the auxiliary *laj* seems to imply not just completion, but exhaustion, or markedly *complete* completion. Thus, (213) contrasts with the following Colonial entries.

(214)
 x-0-k-a`i.
 ASP-3A-1E-understand
I understand it. (entender algo).

(215)
 x-laj k-a`i.
 ASP-finish (AUX) 1E-understand(+3A)
I understand it very well. (entender muy bien).

Similarly, the auxiliary *lik* indicates the beginning--sometimes the sudden beginning--of something. Notably, all of the Colonial examples involve as main verbs adjectival forms of positional roots, suggesting that it is precisely the marked aspect--the sudden inception--that engenders the use of the auxiliary. (Without an auxiliary, the reader will remember, an adjectival predicate can bear no explicit aspect marking.)

(216)
 ta x-lik petl-uk
 ASP ASP-arise (AUX) blistered-3A+SUBJ
It swells up (bruise, boil). (roncharse or hacérsele ronchas).

Z also cites several examples apparently with the auxiliary *`och* 'enter,' which seems to combine a notion of entering (into the surface of something) with an aspectual meaning, very similar to that of the examples with *lik*.

(217)
 x-`och lapl-uk j-sat (a-sat).
 ASP-enter (AUX) inserted-SUBJ+3A 1E-eye 2E-eye
get circle's under one's eyes (literally, My eyes [or your eyes] get sunken). (ojeras hundidas).

(218)
 x-`och loml-uk, x-`och potz'l-uk.
 ASP-enter (AUX) sunken-SUBJ+3A ASP-enter (AUX) sunken-SUBJ+3A
It got dented. (hundirse, abollarse cosa dura).

The central aspectual meaning of the auxiliaries seems especially clear in these \colonial materials. In order to encode the temporal structure of an event, Colonial Tzotzil seems to have imported spatial metaphors into the very grammar of the verb phrase--a process which has continued, perhaps with expanded semantic content, in the modern language.

Colonial Tzotzil also had directionals, and two of them find their way directly into Z's dictionary as entries of their own.

batel. from now on. (*de aquí adelante*).

Z says: *no tienen este adverbio pero se dice batel* (they don't have this adverb [i.e., a word for 'from now on'], but they say *batel*). He goes on to give the following example:

(219)
 utz-uk-ot batel tana
 good-SUBJ-2A go (DIR) now
May all goodness be with you forever more.

There are two notable features to this example. First, note that the directional is attached directly to an adjectival predicate which has no hint of a verbal origin. Second, note again the **temporal** use of the directional formed with the root *bat* 'go.' The directional has neither the predictable meaning "going away" nor the modern meaning "from time to time"; instead, it seems to transfer the deictically anchored motion sense of the verb root to the domain of time, thus, "going from now onwards."

Nonetheless, in other entries and examples, the Friar records apparent uses of the directional *batel* with the predictable regular meaning. In fact, the examples split evenly between those with a temporal and those with a spatial meaning, suggesting that in Colonial Tzotzil perhaps the distinction was not a significant one. Here are some spatial examples:

(220)
 x-k-ich' batel.
 ASP-1E-take go (DIR)

I take it (inanimate thing). (llevar).

(221)
x-k-ik' batel.
ASP-1E-take go (DIR)

I take it (animate thing). (llevar cosas vivas).

(222)
tz'alal batel.
furrowed go (DIR)

plowed field (lit., it goes away ridged). curcador cosa o de muchos surcos así.

(223)
nelel batel.
descending go (DIR)

gradual descent (path). (Literally, it descends away from here.) (cuesta por la ladera, ir por allí.)

Here, by contrast, are a few further temporal examples.

(224)
x-k'ex-ey batel.
ASP-change-PASS go (DIR)

It is followed (by something). (sucesiva, cosa que sucede)

(225)
x-e-ch'i batel.
ASP-1A-grow go (DIR)

I grow up (crecer [al niño ya creciendo]).⁴⁷

(226)
yi batel.
young*ear*of*corn go (DIR)

ear of corn (when kernels are beginning to develop) (mazorca de maíz cuando comienzan los granos).

Once again, in (226), the directional is attached directly to a nominal predicate. The example seems to translate as "an ear of corn as it develops *after* the *yi* stage."

The Colonial dictionary also includes the following entry, transparently derived from *tal* 'come'.

talel. towards, up till now, yet (hasta aquí o hasta ahora por tiempo pasado).

Like *batel*, the Colonial directional *talel* combines motion in both space and time in its meaning. Thus, with respect to space:

(227)
x-e-lok' talel.
ASP-1A-exit come (DIR)

⁴⁷ Contrast the directional image in the following modern example:

(**Error! Main Document Only.**) LOL1:726:
porke l-i-ch'i tal che`e
because CP-1A-grow come (DIR) CL
Because I kept growing up (i.e., right up to my present adulthood).

Here growth is seen from the perspective of one *already grown*, hence the "coming" directional rather than the presumably anticipatory "going" image of the cited Colonial example.

I arrive (arribar, como cuando decimos arribamos a tal parte).

(228)

vetz' a-ba-ik talel.
decrease(+IMP) 2E-self-PL come(DIR)

Crowd yourselves in! (The entry is shown under "crowd forward"; in Spanish, desmedrar [lo mismo por allegarse o apretarse cuando hay muchos].)

And, in a temporal sense:

(229)

mo j-na` talel.
NEG 1E-know come(DIR)

I don't know it yet. (No es visto hasta ahora.)

Finally, the Colonial dictionary contains a few isolated examples of directionals based on the roots *muy* 'ascend,' *lok* 'exit,' and *lik* 'arise, begin.' These examples resemble modern Tzotzil in both form and meaning.

(230)

x-0-lut'lij muyel.
ASP-3A-jump climb(DIR)

It mounts (mating animal) (saltar el animal macho sobre la hembra..cuando son animales).

(231)

j-pitz' lok'el s-pojovil.
1E-squeeze exit(DIR) 3E-pus

I squeeze out the pus (sacar podre o materia).

(232)

x-0-tatub likel.
ASP-3A-thicken arise(DIR)

It (wine) grows murky (cuando se echan a rodar por algunas cuestras, i.e., when they roll them [the barrels?] down hills).

When one arrays these constructions against those of the modern language, several questions naturally arise. One is whether the apparent lexical gaps are simply artifacts of the limited Colonial material, or whether they reflect systematic differences between modern Tzotzil and the language as spoken four centuries ago. Second, if there are differences, do they shed light on the evolution of auxiliaries and directionals? What do they suggest about the process of grammaticalization of spatial and temporal categories?

The answer to the first question is that there are clear differences between what we can reconstruct of the Colonial grammar, and the situation described for modern Zinacantec Tzotzil in the first sections of this paper. That is, although there is unambiguous evidence of Colonial auxiliary and directional constructions on the modern pattern, there are also constructions serving similar purposes which do not fit the modern grammar.

Consider first the auxiliary construction. In Modern Tzotzil it combines either (1) a verb of motion with a notion of purpose, or (2) an aspectual verb with a main verb. Formally both cases are identical: the auxiliary verb bears aspect, whereas the following "main" verb is inflected only for person (with subjunctive suffixes in the case of an intransitive).

Colonial Tzotzil has a formally similar double verb construction where the first verb receives (more or less) full inflection, and the second subjunctive inflection without aspect markers.

(233)

j-yokin j-ch'ay, x-a-yokin a-ch'ay, s-yokin x-ch'ay
 1E-hurl 1E-lose ASP-2E-hurl 2E-lose 3E-hurl 3E-lose

I discard it, you discard it, he discards it. (Literally, [I] throw it out [in order] to lose it).

The friar says of this construction, "all these verbs are conjugated this way, with the first [conjugated] by tense and mood, and the second only like an adjective regardless of tense. I say 'the first verb' because in each case there are two." There is here a model, not normally found in the modern language, for a **purpose** construction, that links two full verbs. This model, one might hypothesize, can be further extended so as to fuse the two verbs more fully, as in the auxiliary construction.

In other Colonial sentences a verb of "motion"--that is, a verb that, in modern Tzotzil, functions as an auxiliary--combines with the preposition *ta* plus a second nominalized verb, often ending in *-el*.

(234)

e-0-bat ta jin-el.
 CP-3A-go PREP escape-EL

He is a fugitive. (hombre_que_anda_huido_).

(235)

x-i-bat ta ch'ivitaj-el.
 ASP-1A-go PREP market-EL

I am going marketing. (yr_a_la_plaza_...).

(236)

x-0-`och ta yal-el k'ak'al
 ASP-3A-enter PREP descend-EL sun

The sun sets (ponerse el sol).

The nominal character of the second verb, in such sentences, easily lends to the first verb an aspectual character. Thus, "the sun enters into the action of setting"; or "I leave for the activity of marketing." Perhaps constructions of this sort evolved, under the influence of the **purpose** model exemplified earlier, into the modern auxiliary construction, thereby neatly combining motion with purpose, and aspect.⁴⁸

⁴⁸ Indeed, there is reason to think that the modern aspect markers--both prefixes and proclitics--themselves evolved from full lexical words, perhaps verbs, at an earlier stage of the language. There are at least two pieces of evidence. First, the completive aspect prefixes in some modern dialects of Tzotzil (not that of Zinacantán) seem plausibly to derive from the verb *laj* 'finish.' Thus, where Zinacantec has *ijman* "I bought it," *aman* "you bought it," and *isman* "she bought it" varieties of neighboring Chamula Tzotzil have *lajman*, *laman*, and *lasman*. Second, whereas the normal incompletive aspect marker for Zinacantec Tzotzil is *ta* (perhaps related to *tana* 'now, later', see example [241]), there are a variety of alternants. For example, *yak* 'continue, or keep on' combine with verbs to create a durative aspect.

(**Error! Main Document Only.**) {constructed}

yak x-0-toy s-tojol kasolina
 keep ASP-3A-rise 3E-price gasoline

The price of gasoline keeps going up.

Yak, in turn, forms various verbal and adjectival forms like any other lexical root; it seems transparently related, however, to the normal Tzeltal incompletive proclitic *ya*.

Modern Tzotzil directionals, as we have seen, modify a main verb by specifying its trajectory. Again, the construction exists in the Colonial materials. However, the inventory of directional roots is reduced, and in many examples the "trajectory" of the directional is temporal rather than spatial. Moreover, Colonial Tzotzil also has another construction, impossible or at least awkward in the modern language, which seems to encode the same sort of action-plus-trajectory.

(237)
 e-0-lut' e-0-muy ta s-ba mesa.
 CP-3A-jump CP-3A-ascend PREP 3E-top table
He jumped onto the table (lit., he jumped he climbed onto the table) (salto_a....)

(238)
 j-kak j-ba x-e`och
 1E-thin 1E-self ASP-1A-enter
I go or slip through narrow place as an iron railing (lit; I squeeze myself I enter) (meterse o colarse por lugar estrecho como por entre verjas).

Here the two verbs are simply concatenated, an unlikely construction in modern Tzotzil. Instead, these sentences would be rendered into idiomatic modern Zinacantec with a directional construction, e.g.,

(239) {constructed}
 i-j-kakan j-ba `ochel
 CP-1E-squeeze 1E-self enter(DIR)
I squeezed myself in.

It thus seems plausible to suppose that the earlier double verb construction evolved into the directional construction, precisely in those cases where the second verb lent itself to the semantics of trajectory, on the model with *bat* and *tal* in the examples like (227) or (220) above.

The evident semantic merger between motion in space and "motion" in time in Colonial auxiliaries and directionals suggests a further hypothesis about the process of grammaticalization seen here. Semantically similar lexical material--for example, different verbs of "motion"--is drawn into new syntactic constructions by a process of analogy: thus, if one motion verb allows a double verb construction, or later a directional, then another semantically similar verb may also be used in the same set of constructions. Once so incorporated into the grammar, the original lexical content of a root can itself expand, or generalize. Thus, a motion verb comes to have an aspectual nuance; and a morphological slot originally designed for marking aspect may become the vehicle for encoding motion in space.

Finally, consider the interesting emergence of the verb *`ay* 'to have been in a place.' In the Colonial material, *`ay* is an anomalous stem. It appears to be etymologically related to two other stems: *`oy*, a nominal predicate which signifies possession and existence (both absolute existence and location); and *`ayan*, an intransitive verb stem meaning "to come into existence, i.e., to be born or to come about."

(240)
 k'alal te `oy-ot-e
 to there exist-2A-CL
up to where you are (hasta y donde tu estas).

(241)
 tana to x-0-`ayan
 later still ASP-3A-born
It is current (presente cosa).

However, *`ay*--which Laughlin translates as 'came, went'--cannot seem to make up its mind about its own grammatical status. It is conjugated as both nominal predicate (taking absolutive suffixes) and intransitive verb (taking aspectual and absolutive prefixes). In both cases it seems to mean "have been in a place (where one is no longer)." In examples (242) and (243) *`ay* is conjugated as a nominal.

(242)
 cha`-`ok' `ay-on.
 two-moment (NC) be-1A
I was there for two moments. \rato_de_tiempo.

(243)
 j-t'abel `ay-on.
 one-moment (NC) be-1A
I left in a hurry.

However, in (244) and (245) *`ay* is conjugated as a verb.

(244)
 Ha` y-u`un mu n-e-`ay.
 ! 3E-because NEG CP-1A-be
That's why I didn't go.

(245)
 `ay-em-0 ta tz'etob.
 be-PERF-3A PREP cutting
*He went to fell trees. \cortar_lo_... *

Furthermore, as (245) illustrates, *`ay* also accepts nominalized verbal complements with the preposition *ta*, much like the verbs of motion we saw earlier in examples (234)-(236).

(246)
 `ay-on `ox ta kol-el x-e-nipaj.
 be-1A CL PREP recover-EL ASP-1A-be*sick
*I was recovering, I had a relapse. \recaer_... *

(247)
 `ay-otik ta x-chuk-el vinik.
 be-1P1I PREP 3E-jail-EL man
We went to the jailing (lit., we were at the jailing of the man). \rebato_hacer \.

If indeed *`ay* is related to *`oy* 'exist, have,' it seems to start out as a temporally marked predicate of existence meaning "to have been formerly." In the four centuries since Z compiled the Colonial Tzotzil dictionary, the stem *`ay* has come to be unambiguously interpreted as an intransitive stem. Moreover, perhaps for reasons of semantic and structural similarity, it has been assimilated into the group of motion verbs and fully incorporated into the modern auxiliary construction. Indeed, it has proceeded farther in the process of grammaticalization than most other "motion" roots, since as an auxiliary it displays the phonologically reduced shape *`a* instead of *`ay*.

Comparative notes

Comparing descriptions of other Mayan languages, it is apparent that Mayan verb systems routinely grammaticalize motion into the verb phrase, by devices which range from verb concatenation and chaining to directional clitics and embedded verbal morphology. On the basis

of comparative material assembled by McQuown⁴⁹ it is possible to array Mayan languages one against another to see which "motion verbs" receive some kind of grammaticalized treatment. I have summarized McQuown's compilation in Table 3.

Language	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Tzotzil	*	*	x	x	x	x	x	x	x	x	x	x	x	x	x
Mam	*	*	x	x	x	x	x	--	x	x	x	x		x	
Quiché (Cl)	x	x	--	x	x				x	x					
Cakchikel	x	x	x	x	x		x		x	x	x	x			
Tzutujil	*	*	x	--	x				x	x	x	x			
Kekchi	x	x	x	x	x		x		x	x	x	x			
Pocomchi	x	x		x	x		x		x	x	x	x			
Pocomam	x	x	x	x	x	x	x		x	x	x	x		x	
Ixil	x	x	x	x	x		x					x	x		
Jacaltepec	*	*	x	x	x	x	X	x	*	*	x	x	x	X	
Chol	x	x						x	x	x	x	x			
Chorti	x	x	x	x	x	x	x		x	x	x	x		x	
Yucatec	x	x	x	?	x		x		x	x	x	X		x	
Kanjobal ⁵⁰			*	*				x	x				x	x	x

Key: Deictics: 1=go, 2=come, 3=arrive here, 4= arrive there; **Point-oriented:** 5=stay, 6=pass, 7=return, 8=reside, have been, return from; **Up/down etc.:** 9=up, A=down, B=in, C:=out; **Aspect:** D=start, E=finish, F=sleep, x=the form is present; -=a single form covers this meaning and a neighboring meaning; X=more than one form is evidently present; *=the form is highly grammaticalized (e.g., functions as a productive affix or clitic).

Table 3: Grammaticalized "motion" in several Mayan languages.⁵¹

The table shows the remarkable similarity across the languages of the family in the sorts of motion or trajectory that are grammaticalized into the morphology. **Every** language seems to distinguish a basic deictic dichotomy between "towards here" and "from here," precisely the distinction that is encoded in the most highly grammaticalized devices. Similarly, most languages incorporate the up/down in/out dichotomies, and pick selectively from what I have called the point-oriented trajectories (with *stay* and *return* the most commonly represented). The languages differ in the degree to which "motion" roots combine with one another or interact with different syntactic categories, and, although the data are not sufficiently rich to be certain, they differ in the semantic range **beyond** motion or trajectory that can be expressed by the directional devices.

Compared to some Mayan languages of Guatemala, the Tzotzil system of grammaticalized auxiliaries and directionals is somewhat meagre. The Tzotzil system is as lexically developed as those of most of its sister languages, but the degree to which Tzotzil auxiliaries and directionals are incorporated into the grammar of the verb phrase is significantly less than in a few other languages of the family. Indeed, detailed descriptions of directional morphology for Mam (England 1976, 1978, 1983) and of the near-obligatory use of directional elements in Jacaltepec speech (Craig 1979, 1977) suggest that in these languages, grammar itself

⁴⁹ McQuown generously shared a series of comparative tables, including this material, at the Workshop mentioned in a footnote at the beginning of this paper.

⁵⁰ See examples below; this summary is based on unpublished data of Otto Schumann.

⁵¹ Based on McQuown (1990). Since I have not, as a rule, consulted the original sources from which McQuown compiled his charts, I am not always sure of the nature of the grammaticalization in question.

forces speakers into habitual discriminations of location, motion, and direction that are facilitated, but not required, by the Tzotzil devices I have presented.

Moreover, in these languages one sees the continuing cycle of grammaticalization and semantic change that I have hypothesized for the evolution of Tzotzil. Notions of motion and direction, encoded in full independent verbs, are schematized and attached as grammatical modifiers to other verbs and predicates. Insofar as the new grammatical positions are obligatory, the entire structure of the clause may be infused with directional or motion elements, as in Jacalteco. Moreover, insofar as "motion" words affiliate themselves with semantically distinct categories that are similarly coded, and as they become (near) obligatory formatives in predicate constructions, as in Mam, their meanings may extend in new directions, and, conversely, may fuse with their new morphological hosts, losing or diluting their original "directional" meanings.

Kanjobal "directionals"

Published descriptions of Mam and Jacalteco are well known, and I will not repeat the details here. Instead I shall give a brief example from Kanjobal⁵², which displays a strategy for incorporating directional information into the verb somewhat different from that of other languages of the family.

Kanjobal has a series of motion verbs which can be incorporated, in reduced form, into the paradigm of a transitive verb; it also has two "deictic" directional suffixes, also based on verbs, which can form an additional layer of suffixing. The full verbal forms are as follows:

`ey, descend.
 `aa~`aaj, ascend
 `ok, enter
 `el, exit
 kan, stay
 `ek', pass.

tej, come
 toj, go.

In combination with a verb stem like *`il* 'see,' these roots yield new stems, what Schumann calls "compound" and "juxtaposed" forms. The former somewhat parallel the Tzotzil auxiliary forms, in that they suggest motion of (or from the perspective of) the agent, i.e., "the seer," or perhaps his "line of vision." Thus, for example:

`il-tej see it, to bring it
 `il-toj see it, to take it away
 (Both verbs also mean "learn something by seeing it"--presumably an extension of the meaning of the verb 'see.')

`il-ok-oj see something clearly
 `il-kan-oj remain looking at something
 `il-el-oj learn something by looking at it

⁵² The Kanjobal examples are drawn from unpublished data collected by Otto Schumann, and presented by him at a seminar at IIA-UNAM in March, 1985. My thanks to him for sharing these materials, though I cannot claim to have gotten them exactly right. In particular, I am unsure about the relevant inflectional possibilities.

`il-ey-oj	see something from above, looking down	
`il-aa-j	see something from below; read	
`il-ek'-tej	see from here	
`il-ek'-toj	see the other side of something	
`il-ok-toj	see something from the outside in; look east	
`il-ok-tej	see something inside from outside (NOT: look east)	
`il-el-toj	see something from the inside looking out;	look west
`il-aa-toj	see something from below looking up	
`il-ey-toj	see something from above looking down	
`il-kan-toj	turn to see something; remain to see something	

Here, the deictic *toj* "from here to there" and *tej* "from there to here" are understood to apply as well to an idealized speaker's "here" and hearer's "there." Thus, for example, *`il-ek'-toj* (see passing from there to here) can apply to a situation where the hearer is seeing the speaker; or *`il-ek'-toj* (see passing from here to there) suggests that both speaker and hearer are jointly seeing something else.

On the other hand, what Schumann calls the "juxtaposed" forms compound the full motion verb (including its initial glottal stop) with the transitive stem; and the motion or trajectory accrues to the grammatical object of the main verb.

`il-`ek'-toj	see something pass, watch until it passes
`il-`eloj	see it run away or go out
`il-`okoj	see it enter, watch until it enters
`il-`ok-toj	see it enter
`il-`eyoj	learn it well
`il-`ey-tej	see it descend, watch until it descends
`il-`aa-toj	see it ascend, watch until it ascends

We can see in such examples features of the pattern of grammaticalization of space common to most of the languages of the family. First, there are complex relations, perhaps syntactically controlled, between different ways of incorporating the (basically intransitive) motion roots into a verb complex and the argument structure of the resulting construction--sometimes picking out an A argument, sometimes an S, sometimes an O, etc.⁵³ Second, the deictically anchored directionals have the privileged possibility of combining with other seemingly less general motion elements. Third, there is a certain vague systematicity, derivative in part from the structure of the set of directional roots as a whole, to the sorts of extensions of "directional" meaning one encounters. Thus, for example, if east is "entering" then west is naturally "exiting." There are, similarly, patterned extensions to the meanings associated with deictically anchored directionals that mirror exactly the extensions of deictic elements elsewhere in language (so that "here" may be variously centered, in time, space, and, for example, social interest⁵⁴).

Mesoamerican languages and beyond

⁵³ Dürr (1990), for example, argues that in Classical Quiché the meaning of directionals seems to accrue to an "agent" in a transitive construction, "contrary to the general ergative pattern of the language" (p.3).

⁵⁴ See Hanks (1990).

Suárez (1983:78-80) summarizes the range of devices for encoding direction, motion, and location across the languages of Meso America. A systematic grammaticalized distinction between "coming" and "going" can be observed almost universally, but there are also highly elaborated systems of locationals in languages like Cora and Huichol, as well as the well-known Tarascan system (Friedrich 1971) that combines shape, location, and part-whole relations. Motion and location are sometimes dissociated, as in Northern Totonac.

Moreover, location and motion throughout the area are often fused with the morphological devices for conveying verbal aspect--thus collapsing onto a single verbal category two domains which are, in Western thought, at least distinct, if metaphorically convergent. Verbs of motion are frequently singled out for special constructional possibilities. Thus one finds verbal phrases in Zapotec that "consist of a motion verb plus a verb which instead of a tense prefix has a special one that is only used in this construction and indicates simultaneous event" (Suárez 1983:126); similar constructions are found in Tlapanec and Chichimec. Or one discovers that Huave future tense is "historically a verbal phrase in which the auxiliary is the verb meaning 'go' and the main verb is inflected for subordinate mode" (Suárez 1983:131-2). Further afield, the morphology of aspect (and of evidentiality) in Yanomamî is intimately tied up with "basic space morphemes" which in turn "can be traced etymologically to free lexemes which have been grammaticalized into the verbal morphology" (Mattéi-Muller n.d.).⁵⁵

There is, of course, familiar evidence of similar processes of grammaticalization of motion verbs in European languages. In Latin American Spanish a compound future form based on the verb *ir* 'go' has all but replaced the simple future.⁵⁶ The deictic origins of the future form are, however, not entirely lost. That is, although one can felicitously utter the apparent oxymoron

(248) voy a venir
I am going to (i.e., will) come

one must still distinguish between, say,

(249) nos van a visitar
They are going to visit us (somewhere other than "here").

and

(250) nos vienen a visitar.
They are coming to visit us ("here").

Similarly, there is an apparent cryptotype of "basic motion verb" or perhaps "potential auxiliary" in English. The diagnostic is a reduced form of clausal coordination in the imperative, where the first coordinate verb comes from a highly restricted set, and where the second "main" verb follows directly with no explicit conjunction except an option *and*. Again, the clearest cases are with the verbs *come* and *go*.

(251) Go (and) sit down.
(252) Come (and) eat your soup.

In my dialect it is also possible to say, for example,

⁵⁵ I am indebted to Aurore Becquelin for bringing this interesting paper to my attention.

⁵⁶ Which was, of course, also originally a compound form.

(253) Run bring me the wrench.

The examples are meant to show merely that (at least three) motion verbs in English, too, have properties resembling those of auxiliaries in Tzotzil and other Meso-American languages. They seem to lend themselves to (incipient) grammaticalization in the verb phrase.

Notes on Space and time in Tzotzil

The incorporation of motion verbs into the system of aspect, and the frequent "extensions" of spatial auxiliaries and directionals into clearly temporal meanings are not isolated accidents in Tzotzil. There may well be universal connections between spatial and temporal domains, as has often been argued. However, Tzotzil makes the connection between motion in space and time explicit in a variety of other ways that have little to do with the morphology of the verb phrase itself. I will give just three examples, one drawn from morphology, another from phrasal syntax, and a third from conversational practice.

(1) Time vs. place suffix

Consider the nominalizing suffix *-eb(al)* which produces from a verb *V* a nominal form meaning roughly "the time of (or just before) *V*-ing, or the place for *V*-ing." The glosses of the following nominals (drawn from Laughlin 1975), derived from roots of various categories, illustrate clearly the alternation between spatial and temporal meanings for the suffix.

Place for X-ing:

tza`nebal, privy, bathroom < *tza`an*, *tv*, defaecate.

najebal, bowl in which spindle is turned < *no*, *n.*, thread.

paxyajebal, Polite speech; area of yard used for defecation < *paxyaj*, walking around < Spanish: *pasear*. (Note that the derivation also applies to a stem derived from a Spanish loan.)

`ayaneb, Ritual speech, prayer for forgiveness (or) Denunciatory speech; lit., birthplace, i.e., mother < *`ayan*, be born. (And see the next group of examples.)

Time of X-ing:

jitujebal, moment just before something becomes untied < *jituj*, be untied.

solebal, moment when pants, cliff, etc. are about to drop < *sol*, drop, slip off.

`ayanebal, last few days of pregnancy < *`ayan*, be born.

The following examples show the essential ambiguity between the spatial and temporal meanings, involving **both** time and place.

julavebal, position of sun when person wakes up < *julav*, wake up.

chukebal, jail, prison; **or** moment before being jailed < *chuk*, jailed, tied.

toninajeb(al), place where hen lays; **or** moment when hen is about to lay < *tonin*, lay egg.

lajebal, ghost, afterworld, moment when action is about to end < *laj*, finish.

`uch'ebal, Ritual speech, prayer: lit., drinking place, i.e., fireside; **or** lit., time of absorption, i.e., onset of rainy season when house absorbs moisture < *`uch'*, drink, absorb.

Thus, although *lajebal* can refer to the **place** one goes upon finishing (i.e., dying)--the underworld--it can also refer to the moment of completion, as in conversational example (254).

(254) t9007a1:829:

pero y-u`un lajebal s-mak-ik
but 3E-because finish-EBAL 3E-close-PL

But they have almost finished closing [the fence]. (I.e., they are at the finishing point of their closing of the fence.)

Here derivational morphology imposes a single template that conflates spatial and temporal points.

(2) The perspectival clitics *to*, and *xa*

The "second-position" clitics *to* 'still' and *xa* 'already' figure in a wide variety of syntactic contexts. We have met them in many textual examples already. They are glossed, by both Tzotzil speakers and lexicographers alike, in temporal terms. Thus Spanish-speaking Zinacantecos often gloss *to* as Spanish *todavía* and *xa* as Spanish *ya*. Laughlin (1975:340) gives the following gloss for *to*: "until, still, then, just /expresses future time or remphasizes recentness of past events/." And for *xa* he has "already, now" (p. 316). Nonetheless, it is clear that these clitics encode perspective in both time and space. In both cases, as well, their use implicates a trajectory--implied motion--in either time or space.

Before pursuing the semantics of *to* and *xa*, however, let me say something more about Tzotzil aspect. Tzotzil verbs, as we have seen, are obligatorily marked for one of four aspects, which I have labelled neutral, completive, incompletive, and stative aspects.⁵⁷ A thorough study of *Aktionsart* in Tzotzil verbs remains to be done, but it is clear that the aspectual system projects a limited schema of temporal structure onto virtually all verbs.⁵⁸ Unmarked or neutral aspect is used primarily in negation and with special classes of verbs whose temporal structure is thereby unspecified. Completive aspect projects an action, state, or process as terminated or complete. Incompletive aspect, by contrast, projects action as unmarked with respect to completion; it is hence appropriate for intentions, plans, habitual or repetitive actions, focus on inception, or possibility. Stative or perfect aspect construes an action as a durative state, frequently that state "consequent upon the completion of the process which the verb (in other aspects than the perfect) denotes" (Lyons 1977:714-15).

To make this clear, here are textual examples, all of which we have met before, which illustrate these aspects. First, neutral aspect cooccurs normally with the negative *mu*.

(255): t9007a1:136:
 mu x-ak' pwersa lok'el a`a yu`van
 NEG ASP(3E)-give force exit(DIR) CL CL
They won't make the effort to get out, indeed [horses which won't try to cross a rough fence].

Second, completive aspect depicts an action as a completed whole.

(256) LOL1:376:
 solel l-i-s-tzak-on `ochel
 only CP-1A-grab-1A enter(DIR)
He just just grabbed me (and hauled me) in.

⁵⁷ Aissen (1987) calls the stative forms "perfect" and the neutral form "unmarked aspect."

⁵⁸ There are a few exceptional verbs, and verb classes, that resist specific aspectual inflection. We have already met one example, the intransitive *`ay* 'to have been in a place' which does not occur in the INcompletive aspect, having, as it were, a necessarily completed nature that restricts it to Completive and Stative forms. Certain verbs of speaking, and members of the class of "affective verbs"--derived forms that have a certain explicit affective tone, often describing motions or sounds, and always with some evaluative overtones--only rarely occur with explicit aspect, being largely limited to unmarked aspect, even in the positive. Further details must remain for another place.

Incompletive aspect is, by contrast, relatively unmarked. Thus, in (257) the speaker is describing how, when he was a young man, even when he returned from long trips, he would (repeatedly) arrive at home quickly.

(257) T9006A1:863:
 ch-i-yul ta ora
 ICP-1A-arrive.here PREP hour
I would arrive right away.

However, the same sentence could be uttered, in appropriate circumstances, to mean "I will arrive immediately" or even "I would have arrived immediately (although, as it turned out, I didn't)."⁵⁹ Finally, the stative aspect portrays the state that results from a particular action.

(258) T130.TXT:290:
 bat-em s-sa` tal kaxlan-vaj ve`-ik-utik
 go(AUX)-STAT 3E-search come(DIR) tortilla eat-SUBJ-1PlE
He's gone to bring bread for us to eat.

Insofar as *bat* means 'go (somewhere other than here)' its perfect form suggests that one has set out for someplace (and, having not come back, thus is probably there now, or at least certainly not "here").

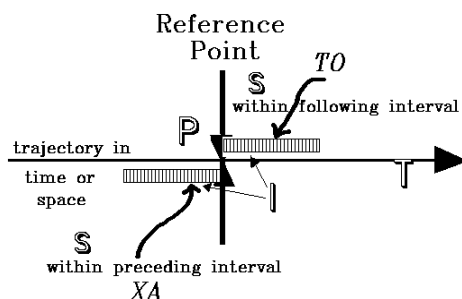
Now, let us return to the clitics *to* and *xa*. Schematically, the semantics of both words requires three elements, viz.

1. A directed trajectory **T**; in the case of a temporal reading, this is time itself, passing from past to future; in the case of spatial position this may be any **vector**, whose orientation is specified by the context and the constituent lexemes.
2. A reference **point P**. This may be explicitly specified by some locative expression (for example, the preposition *ta*, followed by a spatial or temporal descriptor: *ta Jobel* 'in San Cristóbal' or *ta`ol k'ak'al* 'at noon'), or it may be implicit (in which case it will frequently refer to the "here and now"⁶⁰).
3. A "subject" **S**--a place, action, point in time whose "location" the perspectival clitics will help to establish. The nature of this "subject"--specified by verbal aspect, the positive or negative polarity of the predicate, as well as by the nature of the lexical items in question--will affect the nature of the spatio-temporal perspective encoded.

Using *to* or *xa* locates **S** on an interval **I** of trajectory **T** that is either "at or just before" **P** (in the case of *xa*) or "at or just after" **P** (in the case of *to*), the sense of "before" and "after" here being determined by the orientation of the vector in **T**. This situation is schematized in Figure (15).

⁵⁹ The clitic *ox* is used precisely to mark verbs whose actions are to be located in some specific time *other than* the present. See example (277).

⁶⁰ See Lyons(1977:686), who remarks that sentences "which carry no explicit indication of their reference to past, present or future time (or to any other deictically determined point or period of time), would nonetheless be interpreted, on particular occasions of their utterance, as having reference, preferentially, to the here-and-now. . ."

Fig. 15: The semantics of *to* and *xa*.

Textual examples of these clitics abound, but I first offer constructed examples for the sake of clarity. Consider the normal temporal use, where *T* is the passage of time, *S* is some ongoing activity (such as "John's eating"), and *P* is a specified time, say "noon."

(259) {constructed}
 ta to x-0-ve` ta `ol k'ak'al li Xune
 ICP CL ASP-3A-eat PREP half day ART John
John will still be eating at noon.

(260) {constructed}
 ta xa x-0-ve` ta `ol k'ak'al li Xune
 ICP CL ASP-3A-eat PREP half day ART John
John will already be eating by noon.

The perspectival clitics, plus the incompletive aspect of the verb, locate the ongoing, as yet uncompleted activity of John's eating, on temporal intervals after and before noon, respectively. With completive aspect the reading would focus instead on John's eating as a completed activity, or as a virtual point in time (corresponding, for example, to the inception of his eating).

(261) {constructed}
 i-0-ve` to ta `ol k'ak'al li Xune
 CP-3A-eat CL PREP half day ART John
It wasn't until noon that John ate.

(262) {constructed}
 i-0-ve` xa ta `ol k'ak'al li Xune
 CP-3A-eat CL PREP half day ART John
John had eaten by noon.

Compare the following examples with a clearly punctual verb.

(263) {constructed}
 ta to x-0-k'ot ta `ol k'ak'al li Xune
 ICP CL ASP-3A-arrive PREP half day ART John
John will not arrive until noon.

(264) {constructed}
 ta xa x-0-k'ot ta `ol k'ak'al li Xune
 ICP CL ASP-3A-arrive PREP half day ART John
John will have arrived by noon.

Furthermore, note what happens when the reference point **P** is unstated, thus normally reverting to "here and now."

(265) {constructed}
 ta to x-0-k'ot li Xune
 ICP CL ASP-3A-arrive ART John
John will still arrive (although he hasn't yet).

(266) {constructed}
 ta xa x-0-k'ot li Xune
 ICP CL ASP-3A-arrive ART John
John will arrive any time now (he's just arriving).

With a negative element, the same perspective is conveyed by the clitics *xa* and *to*, but what occupies interval **I** is not the action of the verb but its **absence**. (Note that the aspectual distinction between completive and incompletive is generally neutralized in the negative.) Thus, for example, one could say:

(267) {constructed}
 mu xa x-0-ve`
 NEG CL ASP-3A-eat
He is no longer eating (now). (That is, either he was eating, but in the immediately preceding interval ceased to eat; or he was going to eat, but as of this recent interval no longer will.)

(268) {constructed}
 mu to x-0-ve`
 NEG CL ASP-3A-eat
He won't eat yet. (I.e., the immediately succeeding interval still contains no occurrence of his eating, although he presumably intends to eat sometime.)

Exactly this schematic perspective, using the same clitics, can be applied to trajectories in space. This may appear to be a simple extension of the temporal sense; for example, if we substitute in (259) and (260) the locative phrase *ta Jobel* 'in San Cristóbal' for the temporal phrase *ta `ol k'ak'al* 'at noon' we produce sentences that mean, respectively:

John will eat in San Cristóbal (but not, e.g., before he gets there).

John will eat at least by the time he gets to San Cristóbal.

However, if one asks a question like *bu `oy vo`* "Where is there some water?" one might similarly receive the following answers:

(269) {constructed}
 te to ta Jobel
 there CL PREP San*Cristóbal
In San Cristóbal (but not before, i.e. not between here and there).

(270) {constructed}
 te xa ta Jobel
 there CL PREP San*Cristóbal
In San Cristóbal (certainly, and perhaps before).

When these perspectival clitics are put to work in conversation, the interpretive problem they pose is how to calculate the relevant vectors and reference points. I will repeat here a few textual examples, which we have met before, to illustrate the process. First I present a few examples of *to* 'still' in interaction with the auxiliary and directional devices on which this paper focusses.

(271) CHICHSPN:78:
 kom to `abtej-uk.
 stay(AUX) still work-SUBJ(3A)
He stayed to work.

(272) t9007a1:393:
 mu to bu ch-tal s-kolta-el
 NEG yet where ICP-come(AUX) 3E-release-EL
Is no one coming to release them yet? [horses whose owners' names cannot be remembered].

In (271), several men are recalling where they were during the eruption of the Chichonal volcano in 1981. They talk about one man who was caught alone in a distant town, having stayed behind to work after his fellow Zinacantecos had gone home. Thus, he stayed to work (S) in the interval (on the trajectory of time T) immediately after the reference point (P) established by his compatriots' departure. In the negative polarity example (272), a Zinacantec building a corral for his horse comments that the owners of several other horses which will pasture there have not yet brought them. I have diagrammed the perspective established by the clitics in these examples in Figures 16 and 17.

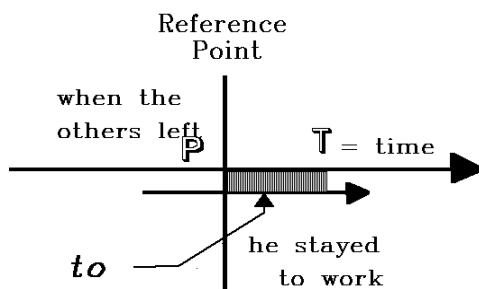


Fig. 16: "Stayed to work"

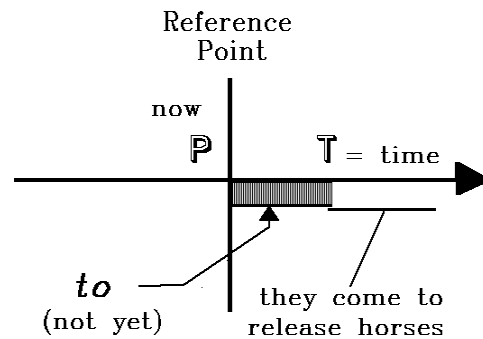


Fig. 17: "Not yet brought"

In (273) the clitic *to* suggests a spatial perspective. This is a command issued by one Zinacantec, who is walking up a path, to his companion who is farther behind. He asks the other to block the path of the horses they are leading so that they will come farther up the hill (thus the directional *muyel* 'ascending') toward him (thus the directional *tal* 'coming'). The interaction of *to* with the two directionals establishes the relevant trajectory T as an uphill vector oriented towards the place where the speaker is. And the clitic itself focusses on the interval on the trajectory beyond where the horses currently are; thus, "block them so they'll come farther up towards here." See Figure 18.

(273) T9007a1:916:
 mas lek mak-o to muyel tal un bi
 more good cover-IMP CL ascend(DIR) come(DIR) CL PT.
It would be better if you would block them [horses, so they will come] farther up here.

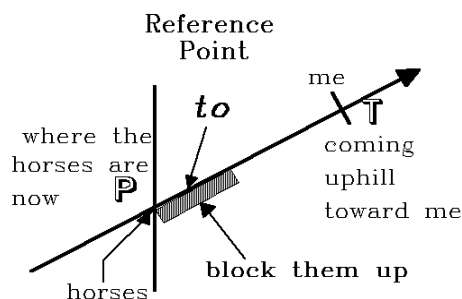


Fig. 18: "Farther up here"

The clitic *xa* also interacts with directionals. For example, in (274) the reference point **P** is calculated by reference to the moment of the cow's arrival: it was *already* angry when it arrived.

(274) T128:261:
 pero kap-em-0 xa la k'otel
 but anger-STAT-3A already QUOT arrive(DIR)
But [the awful cow] arrived furiously now (Laughlin 1977:310).

Example (275) shows *xa* with a negative polarity sentence. A man who has quarrelled with his brother over land has decided to take him to the magistrate to have a formal settlement, so as to avoid future troubles.

(275) MONOL:
 mi mu xa s-sa` k'op bak'in
 Q NEG CL 3E-search*for trouble sometime
So that [the brother] won't cause trouble another time.

By the time of the settlement, the man hopes, his brother's troublemaking will have ceased.

Example (276) illustrates a further conflation of spatial with temporal terminology. We find a man trying to remember what time of year the volcanic eruption occurred. It was, "already near Holy Week," he says, combining the clitic *xa* with the word *nopol* 'close (in space).'

(276) Chichon:
 komo nopol xa `este semana santa x-k-al-tik
 because close CL PT week holy ASP-1E-say-1PlI
It was close to Holy Week, as we say.

The temporal reference point of the perspectival clitics can also be explicitly set in some time other than the here-and-now with the further clitic *`ox*. Here is a canonical example of its use. A Zinacantec flower-seller reminisces about getting married. Then he says:

(277) LOL5:511:
 komersyante-on xa `ox `une
 businessman-1A already then CL
I was already a businessman by then.

Here *`ox* fixes the reference point **P** as the time when he got married; *xa* tells us that his career as a business man was already established in the prior interval.

Figures 19-22 diagram these examples with the clitic *xa*.

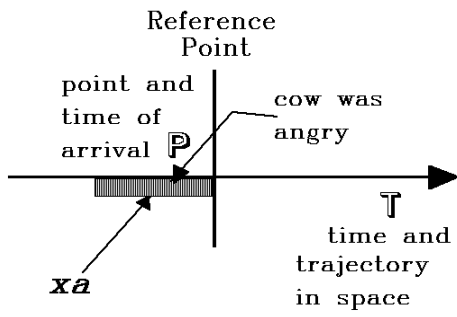


Fig. 19: "The cow arrived angry"

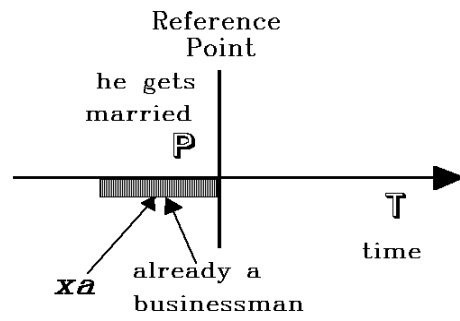


Fig. 22: "Already a businessman"

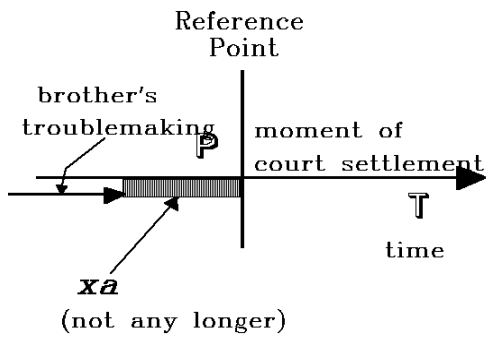


Fig. 20: "No more troublemaking"

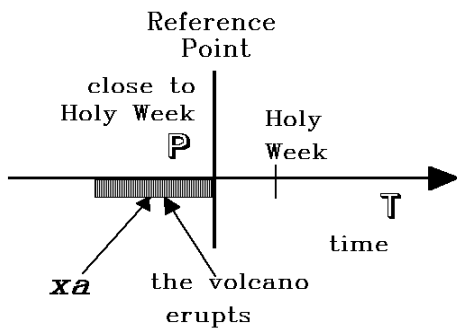


Fig. 21: "Near Holy Week"

One final example will illustrate how spatial trajectories can also be implicated by *xa*. The story tells of an unfortunate woman who, after an encounter with a supernatural monster, was taken home only to die.

(278) T130:329:
 naka xa la ch-k'ot cham-uk tz-na.
 just already QUOT ICP-arrive (AUX) die-SUBJ (3A) PREP+3E-house
She just reached home and died. (Laughlin 1977:318)

The language suggests that, in both temporal and spatial trajectories, she was dead on arrival.

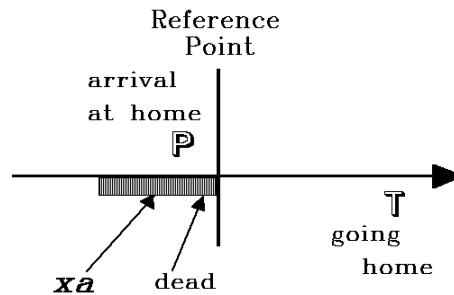


Fig. 23: "dead on arrival"

With schematic devices like the clitics *to* and *xa* Tzotzil seems to collapse both spatial and temporal trajectories onto a single template. Moreover, despite the standard (ethno)metalinguistic practice of glossing these clitics in temporal terms, it is far from clear whether a temporal or a spatial meaning is primary.

The imagery of motion to express time in speech

Contemporary Zinacantecs have a reputation for punctuality. They are great connoisseurs of watches, and they keep careful track of times and schedules (busses and trucks, times for arrival and departure to work, appointments even for visits to friends, and so on). Modern timepieces have given Tzotzil a reasonably precise vocabulary for time, but even before such devices reached highland Chiapas villages, the same preoccupations seem to have been in place.

Here are fragments from a conversation I had with my compadre Petul Vaskes, in July 1990, about how as a young boy, in the teens and twenties, he would travel with his father from the hamlet of Nabenchauk to the ladino town of San Cristóbal. First he tells me about an alternate vocabulary for talking about time.

- 1 p; pwes le`e che`e ja` lijobelajotikotike
Well, that was when we would go to San Cristobal.
- 2 chibatikotik ta . las tres delamanyana
We would go at three A.M.
- 3 ali mu xal las tres dela manyana ya`el li moletike
But the old people didn't say "at three in the morning."
 [
- 4 j; bu ya`el
So where did--
- 5 p; ta ol ak'ubal ta . jun ora

- or "midnight" or "at one o'clock."
 6 j; aja
 7 p; ali: chbat ta stz'et ak'ubal mi ta: .
They would say "let's go at a sliver of the night" or--
 8 po`ot tzakub ja` no`ox
--or "when it's about to dawn"--only that (did they say).

He goes on, somewhat later, to describe how the exact time of departure could be set not by reference to a specific hour, but rather by projecting ahead to where one wanted to be on the path *at sunrise*, and, accordingly how long before dawn one should leave so as to achieve that goal.⁶¹

- 23 p; bwe:no xi
"Alright," they would say.
 24 bu tzakub un xi?
"Where will it get light?" they would say.
 25 mojon tulan xi
"At Oak Fence," they would say.
 26 j; esosi smojon tulan
Right, at "Oak's Fence."
 27 p; mojon tulan ik' chbatik une
At "Oak Fence" if they left when it was still dark.

By transposing micro-geography in this way, one could achieve considerable delicacy in describing micro-time as well. Thus, leaving earlier in the morning could be achieved by aiming for a different spot farther down the road.

- 39 p; mojon tulan
Oak Fence.
 40 mi ik' ibate bu tzakub xi
If they left early, "Where will it dawn?" they would say.
 41 tzakub ta Toch'
"It will dawn at Toch'."
 . . .
 45 j; aa
I see.
 46 p; bwe:no xi
"OK," they would say.
 47 las sinko la manyana tey ta Toch'
At five o'clock in the morning, (they would be) there at Toch'.

These examples are meant to suggest that both the form and use Tzotzil tend to merge space, time, and motion into a single grammatical template. Our immediate concern, the grammaticalization of "motion" into the verb phrase, shows simply one reflex of a more complex set of speech practices.

⁶¹ Consider, again, Lyons' ruminations about localism. "[B]y virtue of the interdependence of time and distance (in that what is further away takes longer to reach), there is a direct correlation between temporal and spatial remoteness from the deictic zero-point of the here-and-now" (1977:718). Lyons could here be describing traditional Zinacantec time-keeping practice, as we shall see.

Final words

The reader may notice that there has been no mention of "location" in the grammatical templates described in this paper. Static location in Tzotzil is encoded through devices rather different from those that have been my focus here. Indeed, location is rarely separated from rather complex specifications of position, form, and other qualities that exploit a highly specialized lexical repertoire that contrasts starkly with the schematic, grammaticalization of motion and perspective in the Tzotzil verb system.⁶² Tzotzil positionals are, by contrast, highly lexicalized devices whose treatment must be left to another place.

Instead, this long excursion through Tzotzil morphology, syntax, and conversation has meant to describe in some detail how Tzotzil grammaticalizes "motion" into the structure of the verb phrase. Research on Zinacantec conceptualizations of space, and the corresponding linguistic resources of Tzotzil, continues. The focus of this essay has been the limited subset of such resources that is incorporated into the grammatical template of the predicate. I hope to have shown here, for Tzotzil, (1) that motion and aspect are naturally combined in the morphology of auxiliaries and directionals; (2) that the calculation of trajectories and perspectives are only partly syntactically controlled; and (3) that indexical facts encoded in this small area of Tzotzil morphology can, as is customary with deictics, be exploited in subtle and far-reaching ways in normal communication.

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⁶² There are also limited schematic contrasts built into the Tzotzil system of articles and demonstratives which I cannot consider here.

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