Aztec causative/applicatives in Space Grammar

David H. Tuggy
SIL-UND

AZTEC CAUSATIVE/APPLICATIVES IN SPACE GRAMMAR

David Tuggy

0. Introduction

There are in Aztecan generally a number of verbal suffixes which function as causatives or as applicatives. (Applicatives often translate by "dative movement" structures in other languages.) Some of these suffixes are usually causatives, others are usually applicatives, but all function at times in both categories. All also function as verbalizing suffixes, mostly on nouns but often on adjectives and postpositions as well. In each case the suffix has a constant phonological shape and constant morphological properties such as position-class in the verb, conditioning of stem-formation rules, pattern of tense-formation, etc., which make it desirable to treat it as one suffix in spite of its different functions and meanings. This type of phenomenon occurs elsewhere (e.g. the Germanic prefix be- as in English be-speak, be-lie, be-friend, be-little, be-labor, and even be-low shows some very interesting parallels); see also Comrie (1981. 176). I will confine this discussion to a very few forms, all involving a single suffix, -tiya, which is one of a half dozen such suffixes in the dialect of Nahuatl (or Aztec) spoken in Tetelcingo, Morelos.

These forms are listed in (1). (1a) is a causative: putting -tiya on the stem mik 'die' produces the transitive stem 'kill (someone)', (1b) is an applicative: putting -tiya on te-kal 'throw stones' means not 'make (someone) throw stones' but rather 'stone (someone),' (1c) is neither a causative nor an applicative, neither 'make (someone) cry' nor 'cry to (someone)', but rather 'mourn (someone)', (1d-f) illustrate verbalizing usages of -tiya.

(1a)   mik-tiya
       die-caus

       'kill (someone)'

(1b)   te-kal-tiya
       stone-throw-applic
       throw stones

       'stone (someone), throw stones at (something)'

(1c) čōkī-tiya
       cry-caus? applic?

       mourn (someone)'

(1d) īš-pan-tiya
       eye-on-vblzr
       in front of

       'get (something) out in the open'

(1e) tlāl-tiya
       land-vblzr

       'give (someone) land, endow (someone) with land'

(1f) pantalōn-tiya
       trousers-vblzr

       'put (his) trousers on (someone)'

An important theoretical problem such data raise is this: can causatives and applicatives and the various other structures associated with suffixes like -tiya be analysed in such a way as to show their related-ness, accounting for the tremendous amount of overlap, or not? Most theories of syntax with which I am acquainted do not allow this: they force us to posit a cluster of accidentally homophonous suffixes which are quite separate from each other in terms of their meanings (if they in fact have any) and of their syntactic behavior. For instance, under Perlmutter and Postal's Relational Grammar (1a) would typically be analyzed as a Causative Clause Union, with the ultimately suffixal -tiya, meaning 'cause', as the governing main verb. By contrast, in (1b) there would be an indirect object movement structure, with an initial indirect object or goal advancing to direct objecthood, and -tiya would be a meaningless suffix introduced syntactically to mark the advancement. The other cases (1c-f) would probably be relegated to the lexicon, with no obvious connection between any of them and the other forms.

1. Space Grammar

Ronald Langacker's theory of Space Grammar (as set forth in his recent paper in Language on the English Passive, and elsewhere)[2] makes possible a very different approach, showing us close relationships among all of these usages, making understandable the historical changes leading to the present situation, and letting us view -tiya as a synchronic unit rather than an arbitrary collection of accidentally homophonous forms.

(2)
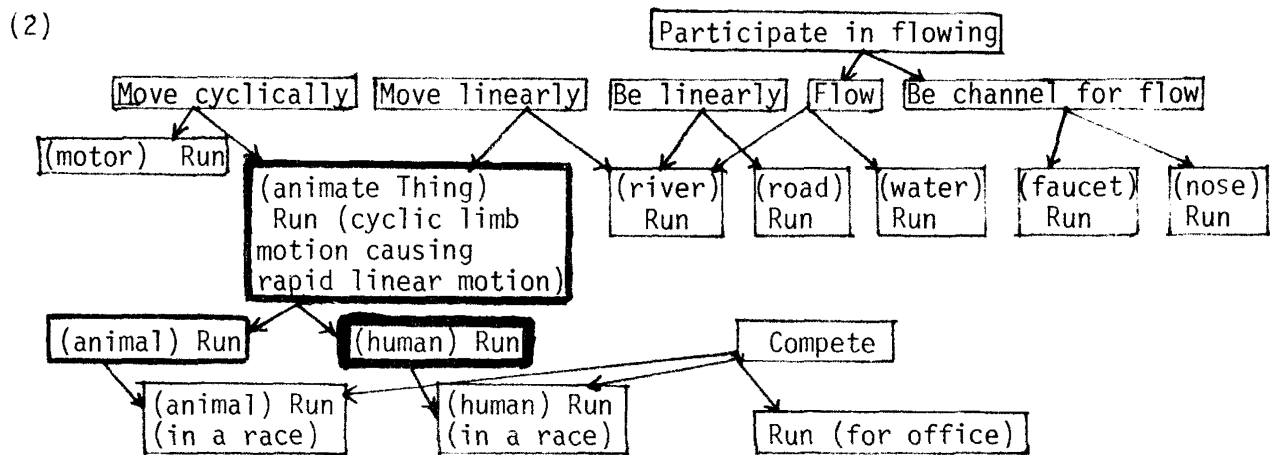
It is widely accepted and intuitvely obvious that lexical items typically have a semantic structure such as that in (2), with a core, or prototypical meaning or set of meanings, and with related meanings corresponding to different usages. These are linked to the prototypical meaning by relationships of what Langacker terms schematicity, where a schematic concept covers the same semantic territory as its instantiation or elaboration, but does so in lesser detail. Thus in (2), the prototypical meaning of run designates a human running; also very prototypical is the notion of an animal running; and the two are subsumed under a schema which neutralizes the distinction between them. (The schematicity is symbolized by the arrow from the schematic concept to its elaboration.) The schema neutralizing animal and human running is a sub-case of schemas involving cyclic motion and (relatively rapid) linear motion; under the first it is sister to such notions as that of an engine running, and under the second to such as those of a river or a road running. And so forth: even one's nose running is not unrelated or unrelatable.

I would like to stress that while structures such as this are language-specific and I for one doubt that they can ever be absolutely predicted, that does not mean that they are arbitrary. It is a mistake to

assume that there is in language a dichotomy between what is
predictable or explainable and what is arbitrary or accidental: it
is more realistic to recognize a continuum, with the absolutely predic-
table and the totally arbitrary as endpoints, but with most cases involv-
ing a degree of reasonableness or expectedness without attaining the
inevitability of the truly predictable.

Under Space Grammar, the same kind of structure is expected of
morphological and syntactic units. Suffixes such as -tiya, and the
constructions in which they figure, may be expected to bear a range
of meanings corresponding to different usages and related in a schematic
hierarchy similar to that in (2), meanings not predictably, but
reasonably, related. Such an analysis certainly shows the differences
between the different meanings, but it also lets us view them all as
related and the suffix as a single, though of course a very complex, unit.

2. A Space Grammar Analysis

What I would posit, then, is that all the cases of -tiya, in (1)
have the following characteristics in common: First of all, they
designate (or profile, to use Langacker's term) a process in which
one Relation causes another. In this process the trajector, i.e. the
most prominent Thing, in the causing Relation and the trajector of the
caused Relation are selected as Trajector and Landmark of   -tiya, the
entities that will correspond to its subject and direct object. Both of
these Things are expected to be elaborated, i.e.   -tiya expects both
a subject and a direct object to appear in construction with it, and is
thus transitive. Phonologically it is specified that the form is pro-
nounced tiya,and there is the expectation that a stem (which can receive
only the most schematic phonological specification) will precede the
form as part of the same word. This is tantamount to claiming suffixal
status for -tiya. This phonological stem symbolizes a semantic entity
which figures in the structure of -tiya: exactly how it does so is the
main difference among the various usages of -tiya we are examining. In
construction with the stem, -tiya is always profile determinant, that is,
the profiling imposed by -tiya rather than that of the stem is retained
in the composite structure: the stem's specifications are fitted into
those of -tiya rather than vice versa. For those who are used to diagrams
of the type used in Space Grammar, (3) represents the construction we have
been describing: it summarizes what all these usages of -tiya have in
common.

(3)

(Phonological Space)
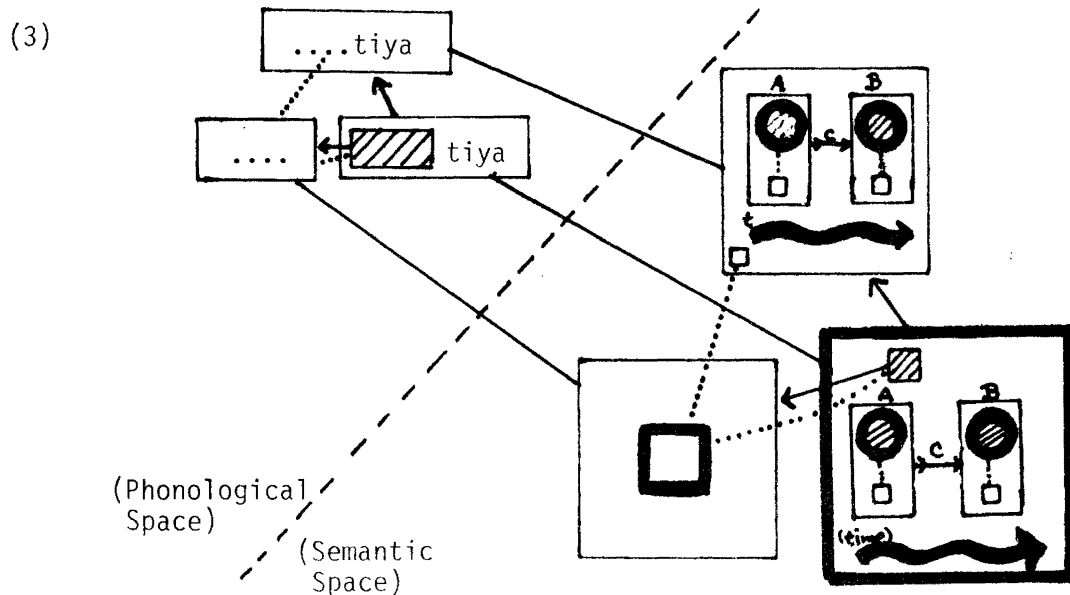
(Semantic Space)

For those not used to such diagrams, the following explanation may be helpful: Morphemes and constructions consist in the conventional pairing of phonological structures with semantic structures. Such pairings are represented in the diagrams by the solid lines crossing the dashed line between semantic "space" and phonological "space". The rectangles on either end of such lines represent units; the material they enclose is, I claim, mastered as a virtually automatic routine by native speakers. In each diagram in this paper two unanalyzable morphemes combine to form a complex, analyzable structure: the morphemes are aligned side by side and the composite structure is placed above them to facilitate diagramming the relationships holding among them. (Space Grammar strongly claims that both analyzed and composite representations of complex structures are often necessary, in spite of the redundancy entailed.)

Within the phonological units, left-right order reflects phonological sequencing, letters are used with their customary phonological values, and four dots are used to represent schematic (i.e. vague, abstract) phonological content.

Dotted lines (lines of integration) are used in both phonological and semantic structures to indicate that the entities they join are identified with each other in constructing the complex expression. Simple arrows, as before, indicate schematicity. Cross-hatching an entity marks it as an elaboration-site, i.e. a structure one of whose specifications is the expectation that there will be a syntagmatically related structure identified with it and for which it will be schematic.

In semantic structures, profiled entities are boldfaced, i.e. those entities which are designated by the structure, which stand out as figure

against the background provided by the rest of the structure (the base). The label 'TR' marks the trajector within the profile of a Relation: 'LM' marks its primary landmark, 'tr' and 'lm' mark sub-trajectors and sub-landmarks. A boldfaced arrow marked 't' (for 'time') marks processes (=verbs); a wavy time arrow indicates a perfective process (one involving a change of state through time), whereas a straight arrow indicates an imperfective process (a state continuing through time). Boldfacing the entire rectangle containing a semantic unit indicates that that unit is profile determinant, i.e. that its specifications take precedence over those of syntagmatically related structures when they are construed together. A double-headed arrow marked 'c' connecting two Relations is the (adhoc) representation of causation; the causing Relation is arbitrarily marked 'A' and the caused Relation 'B', for ease of reference. Stick figures are used in some of the diagrams as a crude reminder of certain visual aspects of the extremely complex specifications of the stems involved. They are certainly far from rigorous or exhaustive representations of the stems' meanings, but they are at least as good as simply writing in English equivalents in capital letters.
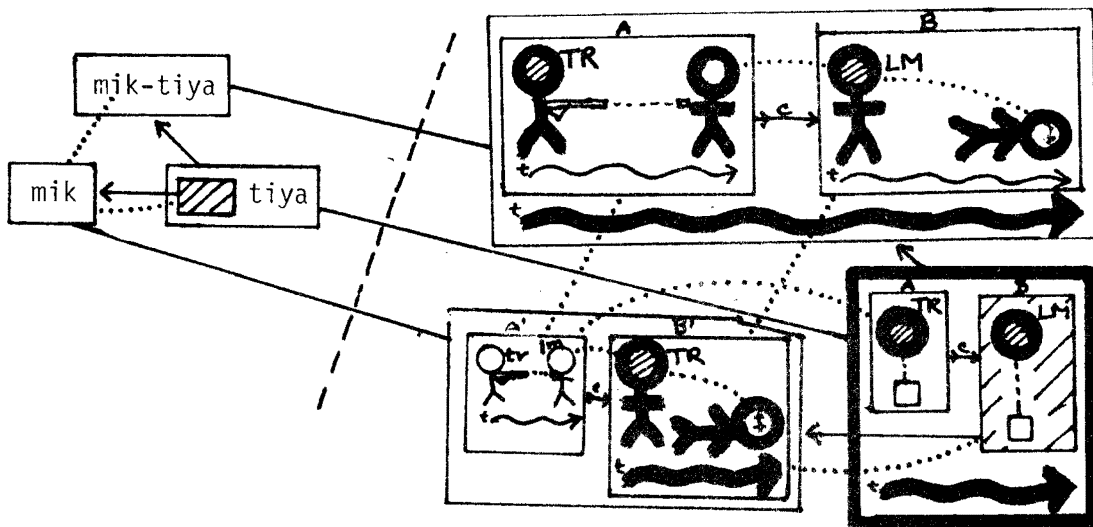
2.1 Causative -tiya: mik-tiya

Let us look at the individual usages, then, and see how they elaborate this schema. In (1a), the prototypical case, where -tiya is a causative, all the specifications just given hold, with the following additions: the stem is specified to be a process, and it elaborates the caused Relation, the one marked as Relation B in the diagrams, rather than the causing one. Also, the most prominent Thing in the causing Relation is specified to be the Trajector and that of the caused Relation is Landmark. Thus into the concept of one Relation causing another, introduced by -tiya, is integrated the specification that the caused Relation is the process of dying designated by the stem mik. The Thing most prominent in the causing (Relation A) is expected to be elaborated by a subject, and the Thing most prominent in the caused Relation (the Thing specified by the stem as dying) is expected to be elaborated by a direct object. These specifications, diagrammed in (4), add up to the meaning of mik-tiya 'kill' and illustrate the use of -tiya as a causative.

(4)
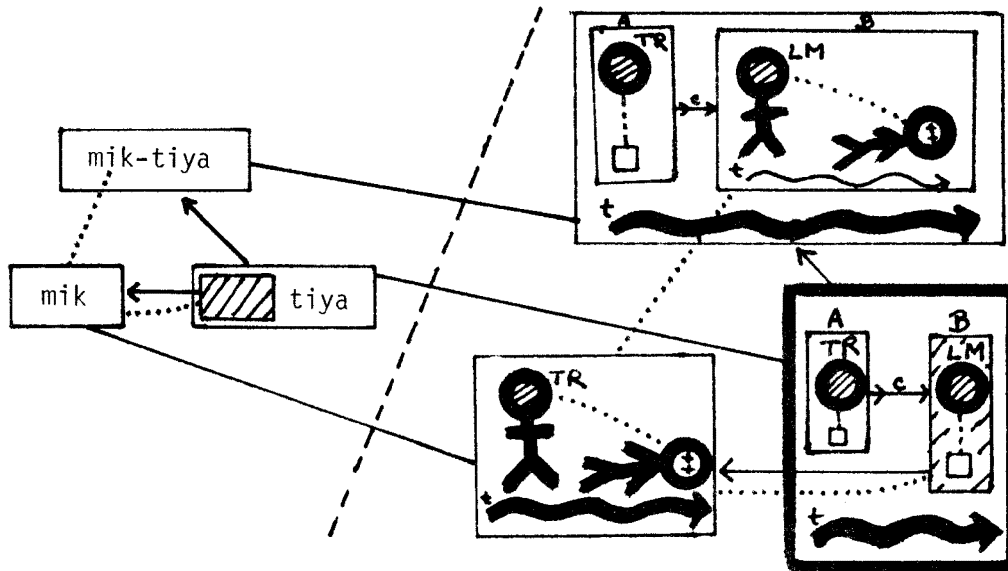
Sub-versions of <u>mik</u> specify different relations which cause dying: in the prototypical version of <u>mik-tiya</u> a version of <u>mik</u> is selected in which an episode of shooting the trajector is specified as the cause of the profiled episode of dying. This episode of shooting then elaborates Relation A within -<u>tiya</u>, making the integration of the stem and suffix even closer. This prototypical sub-case of <u>mik-tiya</u> is diagrammed in (5).

(5)

2.2 Applicative -tiya: te-kal-tiya

In the applicative construction (1b), the only thing different from a causative like mik-tiya is that the stem elaborates, instead of the caused Relation B, the Causing Relation, Relation A. This of course means that the most prominent Thing in the stem will be equated with the Trajector rather than the Landmark of -tiya; thus the subject rather than the direct object of the composite stem will correspond to the subject expected for the basic stem. Again, then, we have the notion of one Relation causing another, but with the stone-throwing designated by the stem construed not as caused but as causing. Much as in the structure diagrammed in (5), the nature of the caused Relation is specified by a non-profiled part of the meaning of the stem, namely the expectation that the result of throwing something will be that Thing's coming into the vicinity of or contact with some other Thing. These specifications are diagrammed in (6).

(6)
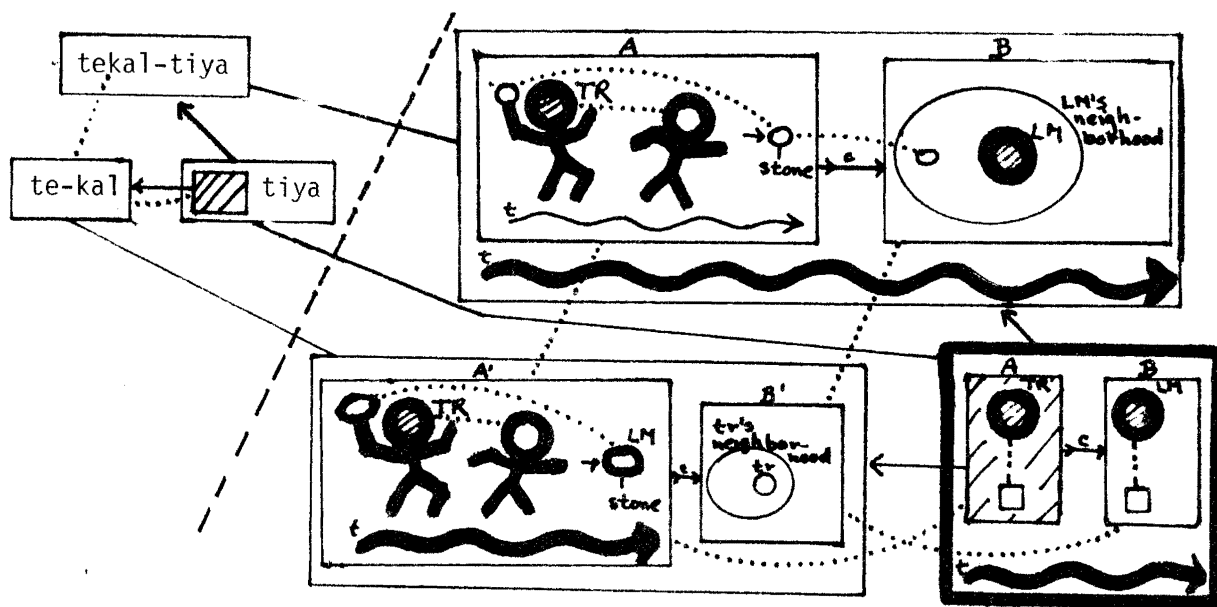
2.3 The Schema Uniting Causatives and Applicatives

A schema can be drawn from these two cases, differing from that diagrammed in (3) in that it specifies that the stem is a process which elaborates either Relation A or Relation B within -tiya, and that the Trajector and Landmark of - tiya are in Relations A and B, respectively. This schema, diagrammed in (7), states directly and fully the close relationship between causative and applicative -tiya.

(7)
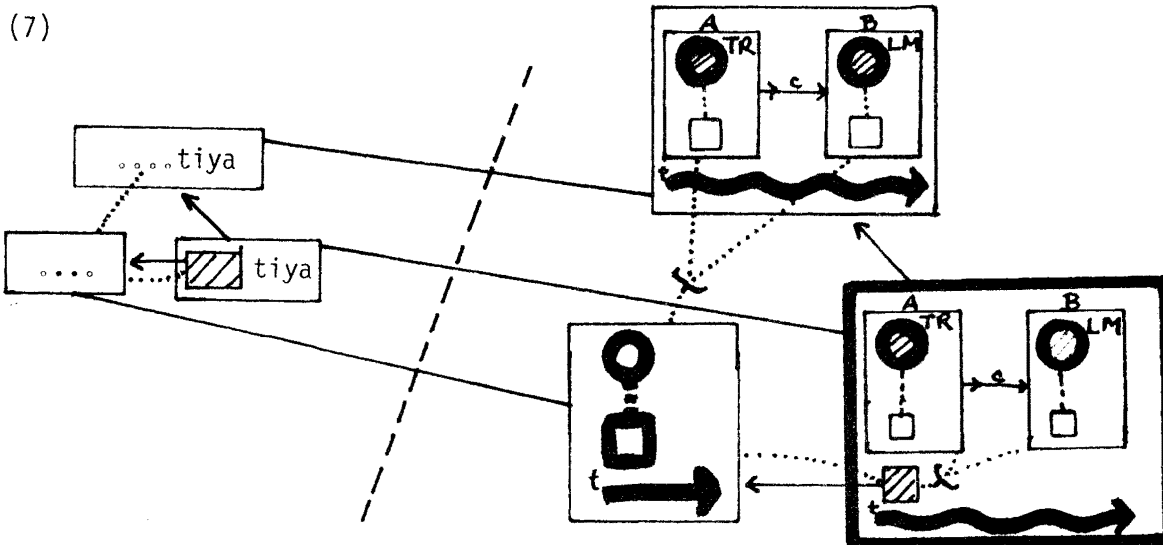
2.4 An Intermediate Case: čōkī-tiya

-tiya as used in (1c), čōkī-tiya, is intermediate between a causative and an applicative construal. In it, I suggest, the meaning is that the Trajector cries because of the Landmark: in mourning we cry for the dead in the old, causal sense of for. Thus we again have the familiar A causing B pattern, with the stem elaborating Relation B as in a causative--the crying, we are positing, is caused by something else, typically someone's dying. However, unlike either structure we examined previously, it is the trajector of Relation B rather than the trajector of Relation A which is selected as overall Trajector of -tiya. Note that this means that the trajector of the stem, čōkī corresponds to the Trajector of -tiya and thus of the composite structure. This characteristic is shared with applicative construals like (1b) as in (6). Thus -tiya in this usage, although an idiosyncratic lexical item, is nevertheless closely and clearly related to the construals of -tiya in the more prototypical causative and applicative usages, and in fact forms a bridge between the two. čōkī-tiya is diagrammed in (8).

(8)
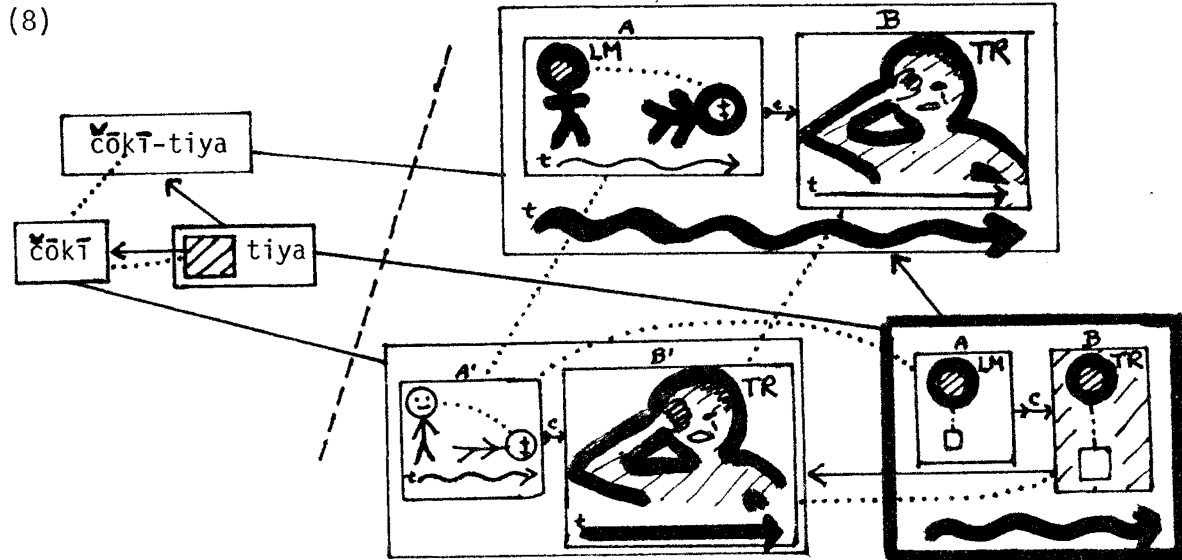
2.5 Verbalizing Construals

The construals in (1d-f) are also easily relatable to those that we have examined. (1d) is essentially a causative: the only difference between it and constructions like mik-tiya is that the stem which is put in correspondence with Relation B is stative rather than processual. In (1e) and (1f) -tiya is put in construction with a noun. These are causative construals in which the noun stem corresponds to the landmark of Relation B and a Relation prominent in the base of that noun is adopted as the elaboration of Relation B as a whole. For instance, one of the salient specifications of the version of tlāl which means 'arable land' is that it is typically owned by some person. That Relation of ownership elaborates Relation B: the profiled Thing, the land itself, elaborates the landmark of that Relation, and the composite structure follows naturally, as diagrammed in (9). Similarly the Relation of wearing is prominent within pantalōn, and is thus naturally (though of course not inevitably) selected to correspond with Relation B.
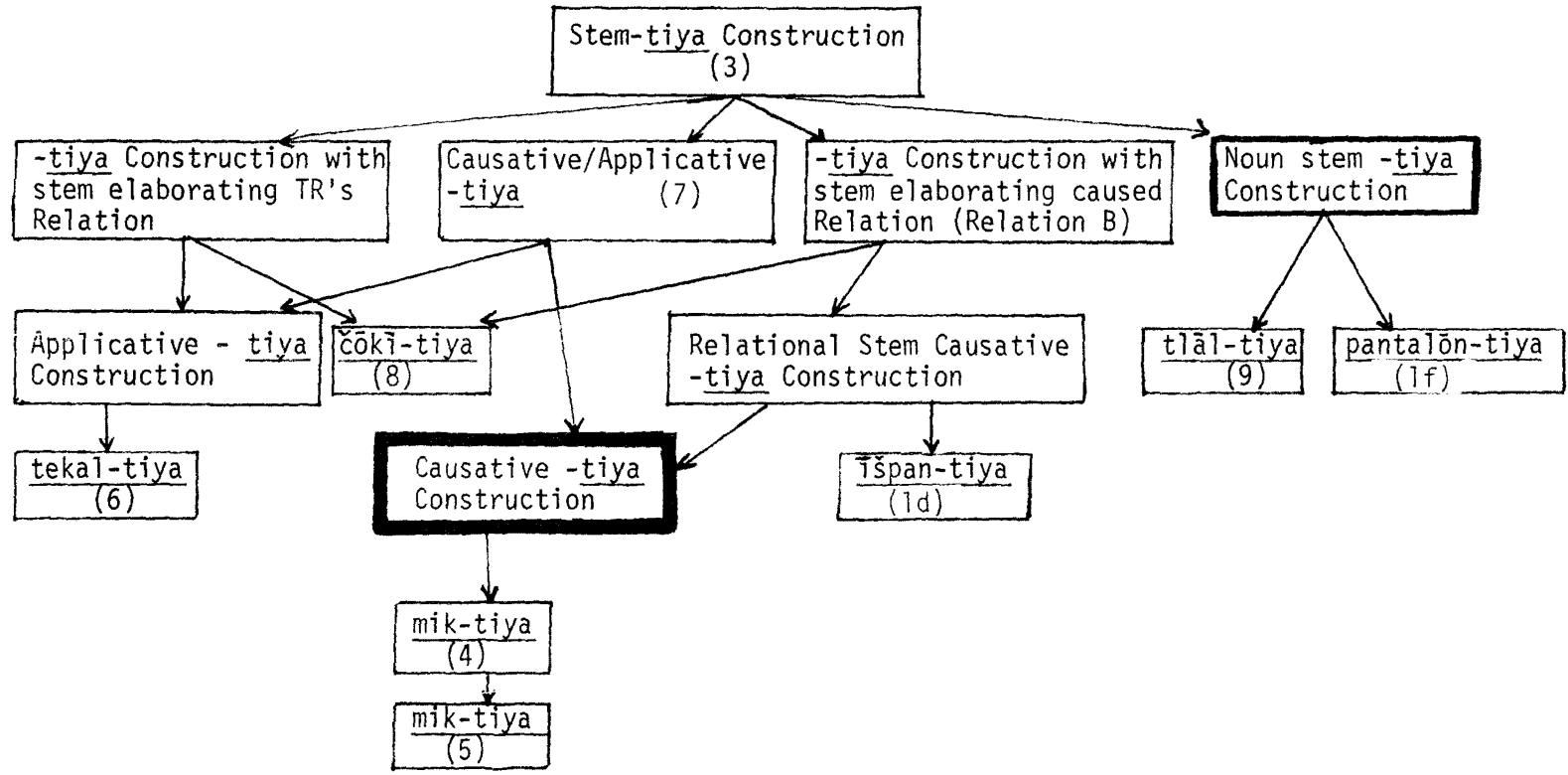
(9)
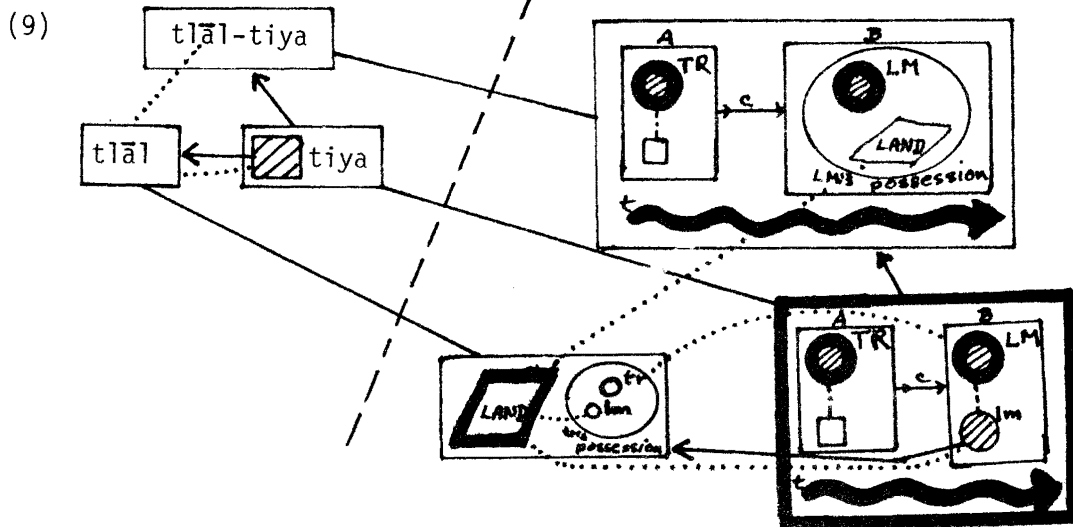
3. Summary

I trust that the relationships between the meanings of -tiya presented in (3)-(9) will be sufficiently obvious. The same basic structure is present in every case, in which Relation A causes Relation B; the trajectors of the two Relations function as Trajector and Landmark of -tiya; and some entity within -tiya, either Relation A or Relation B or the landmark of B, serves as an elaboration-site corresponding to the stem. -tiya is in every case profile determinant: the composite structure is a process profiling the situation as structured by -tiya. In (10) a diagram is given of the usages of -tiya, including a number of schemas implied but not directly discussed. The prototypical case is that exemplified in (3-4), the usage as a verbal causative. Less prototypical meanings are related to this one by means of schematic concepts. The topmost schema, (3), despecifies whether -tiya is used with a verbal, stative Relational, or nominal stem, but contains the really rather extensive specifications which all the cases have in common.

In sum, the Space Grammar analysis has been able to relate easily and naturally all the different cases of the suffix -tiya which we have examined Forms translated in other languages by structures as different as causatives and dative movements are shown to be closely related, making it no accident that historically and synchronically there is great overlap among them. -tiya has a meaning much as run has a meaning: its meaning consists of many meanings, corresponding to different usages, meanings which are unpredictable yet reasonable extensions of each other, different but nonetheless clearly united in a schematic network. Syntactic changes in the usage of verb stems with and without -tiya follow naturally from its meaning: you do not sift the syntax of a sentence around and arbitrarily mark the verb to reflect those shifts. In short, under this analysis forms like -tiya and the other Aztecan causative/applicatives are not weird freaks, but very natural pieces of human language.

(10) Schematic Hierarchy of Stem-_tiya_ Constructions

```
                          ┌─────────────────────────┐
                          │  Stem-tiya Construction  │
                          │           (3)            │
                          └─────────────────────────┘
       ┌───────────────────┬──────────┼────────────────┬──────────────────────┐
       ▼                   ▼                            ▼                      ▼
┌──────────────────┐ ┌──────────────────┐ ┌──────────────────────┐ ┌──────────────────┐
│ -tiya Construction│ │Causative/Applicative│ │-tiya Construction with│ │ Noun stem -tiya │
│ with stem        │ │ -tiya        (7) │ │stem elaborating caused│ │ Construction     │
│ elaborating TR's │ │                  │ │Relation (Relation B) │ │                  │
│ Relation         │ └──────────────────┘ └──────────────────────┘ └──────────────────┘
└──────────────────┘
```

| Applicative - _tiya_ Construction | _čōkī-tiya_ (8) | | Relational Stem Causative -_tiya_ Construction | _tlāl-tiya_ (9) | _pantalōn-tiya_ (1f) |

| _tekal-tiya_ (6) | Causative -_tiya_ Construction | _īšpan-tiya_ (1d) |

| _mik-tiya_ (4) |

| _mik-tiya_ (5) |

158

Footnotes

[1] This paper was read at the 1982 LSA winter meeting; it represents an extremely selective condensation of material from Chapter VI and Appendix G of Tuggy (1981).

[2] The paper referred to is Langacker (1982); other presentations of Space Grammar theory and analyses include Langacker (1979), (1981), and (1983), Lindner (1981), Tuggy (1981), and Casad (1982).

References

Casad, Eugene H. 1982. Cora locationals and structured imagery. San Diego: UCSD doctoral dissertation.

Comrie, B. 1981. Language universals and linguistic typology. Chicago: The University of Chicago Press.

Langacker, Ronald W. 1979. Grammar as image. Linguistic Notes from La Jolla 6. 88-126.

_____. 1981. The nature of grammatical valence. Linguistic Notes from La Jolla 10. 33-59.

_____. 1982. Space grammar, analyzability, and the English passive. Language 58.22.80.

_____. 1983. Foundations of cognitive grammar, Chapters 1 and 2. Unpublished manuscript.

Lindner, Susan. 1981. A lexico-semantic analysis of English verb-particle constructions with UP and OUT. San Diego: UCSD doctoral dissertation.

Tuggy, David. 1981. The transitivity-related verbal morphology of Tetelcingo Nahuatl: an exploration in space grammar. San Diego: UCSD doctoral dissertation.