About doing a typology of PATH

A draft of an essay at saying who we are and what we want to do...
(includes excerpts from Grinevald 2005, to appear)

1. About functional typological linguistics

The functional-typological framework of linguistic analysis espoused here is outlined in Givón (2001), and is reflected in our approach in several ways:

a. through the exploration of the **typological variety** found in the expression of a particular functional domain (SPACE: with subdomains of static location or motion events).

b. by the consideration of **strategies of linguistic expression**, taken in the context of constructions, and placed in their **discourse context**,

c. and by opting for an approach to categorization that appeals to the concepts of **prototypes and continua** rather than discrete categories,

d. by attending to the dynamic aspects of grammar building, directly through **grammaticalization**, and indirectly through **lexicalization**.

2. About descriptive strategies for typological work

For any one ‘system’ identified, provide information on:

a. the morphosyntactic categorization of the system

b. the inventory of its elements

c. the semantics of its elements

d. its discourse frequency and use

f. its relation to other systems of the language (distribution of the expression of space between adpositions and case, or preverbs, directionals and adpositions)

g. its dynamics: lexical origin, degree of grammaticalization, path of grammaticalization
3. Example of systems in perspective for Basic Locative Constructions:

<table>
<thead>
<tr>
<th>FIGURE</th>
<th>Spatial relation</th>
<th>GROUND</th>
</tr>
</thead>
<tbody>
<tr>
<td>NP</td>
<td>LOCATIVE PREDICATE</td>
<td>(a) ADPOSITIONS NP</td>
</tr>
<tr>
<td>(b) SIMPLE LOCATIVE PREDICATES</td>
<td>locative verbs</td>
<td>posture verbs</td>
</tr>
<tr>
<td>(c) SATELLITES</td>
<td>preverbs</td>
<td>verbal particules</td>
</tr>
<tr>
<td>(d) BI-PARTITE STEMS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(e) NOMINAL CLASSIFICATION

<table>
<thead>
<tr>
<th>noun classes</th>
<th>verbal classifiers</th>
<th>locative classifiers</th>
</tr>
</thead>
<tbody>
<tr>
<td>num. classifiers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>dem. classifiers</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table X. Inventory of morpho-syntactic elements of basic locative constructions

Table X is organized in stages corresponding roughly to those of the discussions of basic locative constructions, from the original discussions concentrating on the semantics of adpositions, to the later interest in the variety of locative predicates, including at the bottom nominal classification systems found in the expression of figure and ground in some languages, because of their semantic and sometimes morphological links to locative predicates in such constructions.

4. On the basics of the expression of SPACE: framework and references

The essentials of the terms to be used for the description of the expression of path in motion events or basic locative constructions include:

- the three elements of figure, ground and spatial relation (as per Talmy 1985, Vandeloise 1986) with the following characteristics:
  - a figure that is static or moving, idealized as a point in space or identified by its physical or functional specificity of spatial entity
  - a ground that is also idealized as a point in space or considered as a spatial entity (characterized also by its contour/ boundary, functional use, nature).
  - a spatial relation not strictly of geometric semantics but, more often than initially recognized, conveying pragmatic/cultural information.

- the situations where PATH may be expressed are
  -Motion events, whether simple movement or translational motion ("mouvement vs déplacement as the French linguists say), which can be spontaneous or caused motion, or static location (non motion, in Basic Locative Constructions),
  -to which must be added the cases of 'fictive motion' (the river crosses town), or 'path of vision' (he looked through the window into the hut).
The initial typology based on the encoding of PATH from the seminal work by Talmy (1985, 2000) identified two major types of linguistic expression, either verb-framed (with lexical conflation of PATH in verb, as in the French ‘monter/descendre’, or satellite-framed (with a grammatical expression of PATH, as in the English ‘go up/go down’). More recent amendments have specified that it is not a matter of a typology of languages but rather of a typology of coding strategies (allowing for languages with a mix of strategies), on one hand, and, on the other hand, that one must include at least a third type, that of serialized constructions (with the possibility of many degrees of syntacticization and even lexicalization of verbs complexes).

General concepts about the encoding process (as discussed for the expression of space in Talmy (1985, 2000) and highlighted in Sinha & Kuteva (1995)) to be considered are finally the following notions: that of the encoding being overt vs covert, and consisting maybe of the conflation of semantic elements in a lexical item (as in the French ‘monter’ = motion+PATH), and of the spatial information being distributed throughout the construction, across the different elements carrying spatial information (as will be amply demonstrated with the case study of Jakaltek Popti’ below).

About the notion of PATH

1. The conceptual elements of PATH

PATH as a Time/Space (T/S) oriented line, with origin, vector and end points:

```
(1) * --------------------------------> *
   T/S1              T/S2              T/S3
   point of origin   vector           end point
   (depart from)     (pass through)   (arrive at)
```

The notion of PATH is present both in the displacement of a figure over space in time and in a simple scanning of space without physical displacement to locate the figure. The source/origin and goal/end points are idealized as points in space.

the ground may be bounded (enclosed) or not, with the following situations occurring:
- the ground is an unbounded space, as in the interval Time/Space2 (‘go towards’)
- it is a bounded space with a point of contact (C) between figure and ground, whether it is the point of origin (‘from X...’) or the end point (‘to Y’) of the PATH.
- there may finally be a phenomenon of boundary crossing, from T/S1 to T/S2 (‘exit out of’) or from T/S2 to T/S3 (‘enter in(to)’).

All these situations can be situated in the schema in (2) below:

```
(2) T/S1  \[ C \]  T/S2  \[ C \]  T/S3
    (exit)       (boundary)       (enter)
```
the PATH further follows an absolute orientation in space and be either vertical/horizontal (considered the unmarked cases) or can be explicitly identified, in some languages, as being at an (ascending or descending) angle (more marked cases).

an essential component of PATH is also its point of reference that determines a certain discourse perspectivizing (it is for the speaker to chose the point of reference, as a cameraman choosing its effect, by choosing from which angle to frame the scene, whether the one of the speaker, the protagonist or some other one). Part of this perspectivizing corresponds to the deictic dimension of the pair ‘come / go’ (‘centripetal/centrifugal).

4.2. About the linguistic encoding of PATH

There are multiple parameters to consider in the linguistic encoding of PATH. The essentials ones include the following:

whether lexical or grammatical means are used, as in the contrast between verb-framed and satellite framed constructions, or intermediate complex verb stems formation.

there are some language specific variations to be checked such as:

- the density of the encoding of segments of the PATH (à la Givón), i.e. how many points of the PATH are identified between origin and end points, as in the succession of the following inventory of English prepositions: ‘from X …toward Y… to Y … almost to Y …all the way to Y’.

- a rather common a-symmetry of encoding of source and goal, the point of origin not being treated the same way as the end point. This particular point will be illustrated below with IndoEuropean and Mayan data.

- the markedness of boundary crossing, which, for instance appears to be more salient than Time linearity as the order of the prepositions and particles in English points out. To be noted is the linear priority of the marker of boundary crossing over that of the marker of extreme points, whether origin or end of the PATH spatio temporal line, as in ‘get out off’ vs go into (* to in).

- the possibility of semantic conflation of spatial information and other information, about the ground for instance.

Inventory of grammatical categories used to encode PATH

It is not the case that these grammatical categories specialize in the encoding of space but rather that part of their inventories is used to express spatial notions of interest here. These grammatical categories will be regrouped here by their affinity to particular elements or aspects of the construction, such as (a) the noun phrase expressing the ground, (b) the verbal predicate, (c) the argument structures of the verbs, in particular the voice system:
(a) with the noun phrase of the ground: the two main categories are the 
adpositional system and the CASE system, the boundary between the two being 
sometimes difficult to establish. Within the cover term of adpositions one should 
include the phenomenon of RELATIONAL NOUNS (Noms de Localisation Interne), 
such as ‘at the foot of $X$, in front of $X$’, more common in many Native American 
languages than standard invariable adpositions.

(b) as part of the verbal complex, whether affixed or free morphemes, but as 
elements gravitating around the predicative element, with their more or less traditional 
terminology within certain language family fields of descriptive linguistics. 
Regrouped as verbal affixes, one finds

- verbal prefixes (commonly grammaticalized adpositions discussed under the 
  label of verbal prefixes or preverbs),
- adverbial preverbs (of a more lexical nature usually), and
- so-called ‘verb(al) particles’ (as with the English verb particles derived from 
either prepositions or adverbs) It is in this category that one would find the 
cases of DIRECTIONALS (free particles or affixes) of the kind to be described 
for Jakaltek-Popti’ later.

(c) within the voice systems of languages, one may find types of 
APPLICATIVE voices used in constructions expressing PATH, as is the case with 
‘locative’ voices, specifically used for spatial expression (as in K’ichee’ Mayan or 
Halkemelem), or shared with other applicatives (general applicative applying to 
locative/instrumental/benefactive or other semantic arguments of the verb.

(d) Somewhat artificially regrouped here, to the extent that they raise questions 
about the argument structure of individual verbs, are also the cases of complex verbal 
stems (as in Yuhup Maku; Tsafiki, or Chontal …) and the serial type constructions 
as with the verb-framed type of construction of Yukatek Mayan, or Klallam.

References

2005 “The expression of static location in a typological perspective” in M. 
Hickmann & S. Robert (eds) Space in languages: linguistic systems and 
cognitive categories. Amsterdam/Philadelphia: John Benjamins.
To appear: “Prepositions don’t do it because directionals do: path in motion and 
Variation and change in Adpositions of Movement.

1 Known in the French literature on space as Noms de Localisation Interne (or NLI). See Aurnague (1996), and 
Aurnague, Hickmann & Vieu (to appear).
2. Classification selon l'inventaire morphologique

La méthode des adénomammaries pour départ:

- Expression de la langue globale : över, across, down...
- Tête médiane
- Initial
- Final
- Antérieur
- Postérieur
- Médian
- Initial
- Final
- Antérieur
- Postérieur

3. Classification selon le granularité de la structure

aussi diverses formes de fond:

- Polynème,ерь : distinguant toutes les phases de l'incorporation de

4. Forme du fond (confinition + vecteur de la structure)

1. Description de l'ADN (2006):
2. Sens de la thymidine (2009):
3. Définition de l'ADN à partir de l'incorporation de
4. Extrait de la thymidine de polynèmes d'ADN

Pour une topologie des systèmes d'adénomammaries
3.3. Classification selon la granularité de la trajectoire:

| Trajet | Localisation | Exemple de Polonais (V. Kopocka):
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hôtel</td>
<td><em>Przec + axe</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>mijady + axe</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>source + axe</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>direction + axe</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>entete + axe</em></td>
</tr>
</tbody>
</table>

3.2. Exemples de Polonais (V. Kopocka):

- *Piecza!*
- *Garnia!*
Pour une introduction rapide du rôle de l'œuvre et de la théorie de la philosophie des sciences...
The Mayan Family (England 1992)

On the Mayan Family of Languages

2 Verbal Morphosyntax

DJD 9 Nov 2007

Journals, [References]
Table 1. Intransitive Verbs of Motion and Trajectory in Mayan

3 Inventory of Verbs of Motion (Zavala 1993:33)

4.1 Location/Position

Example: "I am here."
3. ON SEMANTICS

4. NOUN PHRASAL AND SYNTAX

4 On Tzotzil (Telhamian Mayan) directional

I. INTRODUCTION AND SEMANTICS

(1) Semiotic signs and conventions (Gibson & West)

- eye
- ear
- smell
- taste
- touch

(2) He would keep an eye on you, but not too closely.

 segunda

(3) El 2

(4) Verbs and their meanings

- (a) to see
- (b) to hear
- (c) to speak
- (d) to eat
- (e) to write
- (f) to read

(5) What is the weather like today?

(6) What is the weather like?
A4.2 DISRUPTIONS: Problems with disruptive in undisturbed residential areas

- The people living in the street are more... (continued)

| Table 1: Directions
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Source: Motion video (motion vectors)</td>
</tr>
<tr>
<td>Directional Bearing</td>
</tr>
<tr>
<td>East</td>
</tr>
<tr>
<td>South</td>
</tr>
<tr>
<td>West</td>
</tr>
<tr>
<td>North</td>
</tr>
</tbody>
</table>

1. Directions are verbal suffices with embedded order
2. The directional bearing of the video (motion vectors) are given in clockwise (1994)
3. Exceptions from Propositions do not violate directional observations or predictions.

A sketch of illustrative pop directional AS OF 9/4

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directionals. There was only a somewhat higher frequency of the deictic directional
DIR3 = 40% when compared with the other types: DIR1 = 27%, and DIR2 = 33%.

5. on studying the expression of PATH in 4 motion events

5.1. Cases of typical situations of “caused-motion” events

(6) Movement Figure Ground
A. cause-move POT FIRE
B. cause-move SHIRT CHEST
C. cause-move PERSON BUS
D. cause-move PERSON TRUCK

(7) Ground as origin or end point

(8) canonical figure/ground type of relations

<table>
<thead>
<tr>
<th>figure</th>
<th>SPATIAL RELATION</th>
<th>ground</th>
<th>type of relation</th>
</tr>
</thead>
<tbody>
<tr>
<td>pot</td>
<td>ON</td>
<td>fire</td>
<td>SUPPORT</td>
</tr>
<tr>
<td>shirt</td>
<td>IN(SIDE)</td>
<td>chest</td>
<td>INCLUSION / CONTAINMENT</td>
</tr>
<tr>
<td>person</td>
<td>IN(SIDE)</td>
<td>bus</td>
<td>INCLUSION / CONTAINMENT</td>
</tr>
<tr>
<td>person</td>
<td>ON</td>
<td>truck</td>
<td>SUPPORT / CONTAINMENT</td>
</tr>
</tbody>
</table>

5.2. A three language typological perspective for these caused motion events:
How English, French and Jakaltek-Popi talk of the same scenes

ENGLISH "satellite-framed"

(9) a. to put the pot on the fire
    b. to put it up on the fire

(10) a. to take the pot off the fire
    b. to take it down off the fire

The typological characteristics of English are therefore:
- The lexicalization of CAUSED-MOTION+PATH by their conflation in the verb
  (put/take),
- The possible use of an extra verb particle (up/down) as a PATH “satellite”,
  particularly in constructions where the figure is in an anaphoric form.
- The difference between a primarily static preposition to express goal/end
  point (on) and a strictly dynamic preposition to express source/point of origin
  (off)

English has in total three different elements to express PATH: lexical verb root, verbal
particles and dynamic prepositions.

FRENCH “verb-framed”

(11) mettre/poser la marmite sur le feu
    put the pot on the fire

(12) enlever la marmite du feu
    take off the pot from the fire

In French one can note:
- The lexicalization of CAUSED-MOTION+PATH by conflation in the verb
  (mettre/enlever),
- And the same difference between an essentially static preposition to express
  the goal/end point (sur) and an essentially dynamic preposition to express
  the source/point of origin of the caused movement (du).

In French, therefore, PATH information is distributed between the verb and the
prepositions.

JAKALTEK-POPTI “satellite framed”

(13) pot on fire scenes
    a. a’-ah-toj tx’ox’ xhalu y-ib’an’ qa’a
       move-up-away earth pot its-ON fire
       lit: move-up-away the(earth) pot on the fire
       ‘put the pot on the fire!’
    b. a’-ay-tij tx’ox’ xhalu y-ib’an’ qa’a
       move-down-this way earth pot its-ON fire
       lit: move-down-this way the(earth) pot on the fire
       ‘take the pot down from the fire!’

(14) people in truck scenes
    a. xk-in ha-ten-ik-toj y-ul karo
       Asp-me you-move-in-away its-IN truck
       Lit: you moved me in-away in the truck
       ‘you pushed me into the truck
    b. xk-in ha-ten-il-tij y-ul karo
       Asp-me you-move-out-this way its-IN truck
       Lit: you moved me out-away in the truck
       ‘you pulled me out of the truck
    c. xk-in ha-ten-ay-tij y-ul karo
       Asp-me you-move-down-this way its-IN truck
       Lit: you moved me down-away in the truck
       ‘you pulled me down from the truck’
6. Perspectives in ask holistic Constructions

The combination of conceptual and emotional elements in the field of affect

The set of the most common relational nouns is given below in (16), with the one

About the distribution of special information in fact-based papers

The interaction of the distribution of specific information differs from the English
The expression of motion events in discourse: the rabbit and the coyote

The scenes are excerpted from a published text telling a Jakaltek Popol' version of the numerous coyote stories told all over the American continent. This one story entitled the "The Rabbit and the Coyote" was originally published in a collection of Native American coyote stories (Craig 1979). The chosen excerpts have been re-transcribed in the official alphabet of the languages of Guatemala and illustrated (Vermeulen 2003).

Scene 1: Basic Locative Construction and Caused Motion

The three examples are a continuous chain in discourse. Example (1) is a typical basic locative construction establishing that the rabbit is up in the tree, actually high in the tree as expressed by the relational noun for 'top', derived itself from the body part term for 'head'. The next two examples involve a dialogue evoking motion events with a change of point of reference. In (2) the coyote is talking from the ground where he stands, while in (3) the rabbit answers him from up in the tree, as indicated by the switch of DIR3 from -tij to -toj.

1. akej no! 'nie an konejo s'it'e chulul
   ay-ah-toj no! 'nie an konejo s-wi' te' chulul
   exist-DIR2-DIR3(CL)/animal small rabbit in-supert(CL/plant injerto tree
   'the little rabbit was [up, away] on top of an injerto tree' (79)a.,T3.1

2. a'ap'tij humuj weutam!
   a'-ay-tij
   hun-uj w-wet an
   CAUSE-DIR2-DIR3 one-IRR my-for Hart
   'throw one [down, toward] for me! (talking of an injerto fruit)' (79)b.,T3.9

3. xhwa'a aq'tuj humuj hawet.
   xhwa-a-w-a'ay-tij
   hun-uj baw-ect
   app-a 1-CAUSE-DIR2-DIR3 one-IRR your-for
   'I'll throw one [down, away] for you' (79)c.,T3.11

Scene 2: Existential construction and more perspectivizing

Here too, the four examples are in a natural chain of discourse; the rabbit sitting on the edge of the well is talking. In (31) one finds an existential construction noticeably without