1. Introduction

stratification of the conceptual domain SPACE (cf. Herskovits 1986, Levinson/Wilkins 2006):

(1)

<table>
<thead>
<tr>
<th>spatial relations</th>
</tr>
</thead>
<tbody>
<tr>
<td>static</td>
</tr>
<tr>
<td>+contact</td>
</tr>
<tr>
<td>(non-projective)</td>
</tr>
<tr>
<td>-contact</td>
</tr>
<tr>
<td>(projective)</td>
</tr>
<tr>
<td>topology</td>
</tr>
<tr>
<td>frames of reference</td>
</tr>
<tr>
<td>movement</td>
</tr>
<tr>
<td>[containment]</td>
</tr>
<tr>
<td>[surface]</td>
</tr>
<tr>
<td>in</td>
</tr>
<tr>
<td>on</td>
</tr>
<tr>
<td>over, behind, right</td>
</tr>
<tr>
<td>into, onto, towards</td>
</tr>
</tbody>
</table>

construction scheme of a topological expression in an adpositional language (e.g. English)

(2) The bottle is on the table.

<table>
<thead>
<tr>
<th>Figure</th>
<th>predicate</th>
<th>Relator</th>
<th>Gound</th>
</tr>
</thead>
<tbody>
<tr>
<td>the bottle</td>
<td>is</td>
<td>on</td>
<td>the table</td>
</tr>
</tbody>
</table>

collection scheme of a topological expression in Laz: Relator is affix on the finite verb (preverb), no adpositions, no local case marker (in Ardeşen; in other Laz dialects: locative case marker = dative).

(3) Figure Ground Relatum predicate
<table>
<thead>
<tr>
<th>NP</th>
<th>NP</th>
<th>PRV-</th>
<th>verb</th>
</tr>
</thead>
<tbody>
<tr>
<td>şişe</td>
<td>masa</td>
<td>goo-</td>
<td>dgun</td>
</tr>
<tr>
<td>bottle:NOM</td>
<td>table:NOM</td>
<td>on</td>
<td>stand:3s:PRS</td>
</tr>
</tbody>
</table>
2 IN-ON-scale as a universal (?) principle of conceptual ordering in the spatial domain

As a short comparison between English and German shows, "in" and "on" are not universal concepts but rather can be analysed as conceptual clusters consisting of primitive concepts such as containment, surface, superposition (Wunderlich 1986, Klein 1991, Nüse 1999, Levinson/Meira 2003):

(4) a.

<table>
<thead>
<tr>
<th>Language</th>
<th>Word</th>
<th>Concept</th>
</tr>
</thead>
<tbody>
<tr>
<td>German</td>
<td>auf</td>
<td>in</td>
</tr>
<tr>
<td>English</td>
<td>on</td>
<td>in</td>
</tr>
<tr>
<td>German</td>
<td>an</td>
<td>in</td>
</tr>
<tr>
<td>English</td>
<td>on</td>
<td>in</td>
</tr>
</tbody>
</table>

b.

<table>
<thead>
<tr>
<th>Language</th>
<th>Word</th>
<th>Concept</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>in</td>
<td>[+containment]</td>
</tr>
<tr>
<td>on</td>
<td>[+surface]</td>
<td></td>
</tr>
<tr>
<td>Deutsch</td>
<td>in</td>
<td>[+containment]</td>
</tr>
<tr>
<td>an</td>
<td>[+surface, + side]</td>
<td></td>
</tr>
<tr>
<td>auf</td>
<td>[+surface, + support from below/superposition]</td>
<td></td>
</tr>
</tbody>
</table>

Hypothesis of a "similarity space" for the topological subdomain of space. The claim is that, crosslinguistically, topological spatial relations are conceptually ordered in the same way along a so-called "IN-ON scale" (Bowerman/Choi 2001, Levinson/Meira 2003: 488). The scale has been developed after investigating 40 genetically and typologically diverse languages. Relators are supposed to denote only adjacent configurations of the scale.

(5)

\[
\begin{array}{ccccccc}
\text{ON} & \rightarrow & \text{IN} \\
\text{superposition} & & \text{containment} \\
\end{array}
\]

English  on  on  in  in  in

but:

Laz  goo-  ce-  dolo-  dolo-  ce-

→ Laz relators cover discontinuous parts of the scale, e.g. preverb ce- for 'on the head' and 'in the bowl'.
3. Conceptualisation of topological relations in Laz

Data: - Ardeşen-Laz
  - fieldwork data collected in Ardeşen using visual stimuli developed by the Language and Cognition Group of the Max-Planck-Institute Nijmegen: two booklets with drawings and photographs showing topological configurations (for a detailed description see Ameka/Levinson 2007 and Kutscher/Genç 2007). The stimuli were tested with 4 fluent speakers
  - spontaneous data overheard during the fieldwork stay
  - data from spoken narratives (Kutscher/Genç 1998)

3.1 Configurations of Containment

cce-
(6) bere yataći ce-zun
child bed PRV-lie:3s:PRS

'The child is in the bed.'

(7) oşkuri tasi ce-zun
apple bowl PRV- lie:3s:PRS

'The apple is in the bowl.'

dolo-
(8) şişe tıkina dolo-zun
bottle basket PRV- lie:3s:PRS

'The bottle is in the basket.'

mola-
(9) köçi oxori mola-xen
man house PRV- sit:3s:PRS

'The man is in the house/is at home.'

b. fincanı dolabi mola-dgun
cup cupboard PRV-stand:3s:PRS

'The cup is in the cupboard.'
3.2 Surface configurations

goo-
(11) fianci masa goo-dgun
cup table PRV-stand:3s:PRS
'The cup is on the table.'

gola-
(12) çitabi oğude gola-zun
book shelf PRV-lie/stand:3s:PRS
'The book is on the shelf.'

cela-
(13) a. rezim i koda cela-bun
picture wall PRV-hang:3s:PRS
'The picture is on the wall.'
b. patto aski cela-bun
jacket hook down-hang:3s:PRS
'The jacket is attached (lit.: hangs down from) to the hook.'

balkoni cela-p-xer
balcony PRV-1.A-sit:PRS
'I sit on the balcony.' (Kutscher/Genç 1998: 28)

me-
(15) mskala koda me-zun
ladder wall PRV-lie:3s:PRS
'The ladder is leaning on the wall.' (lying along a wall: ela-zun)
4 Hypothesis: IN-ON-scale holds for Laz

4.1 Are there Ground properties which are relevant for the use of preverbs denoting containment configurations?

- extensions of preverbs used for referring to containment configurations

dolo- and meške-

dolo-: in a (cylindrical) basket (cf. (8)) or a pannier (Laz: likina)

(17) mantari şişe dolv-o-n3oy
    cork   bottle    PRV-VV-be_stuck:3s:PRS
    'The cork is stuck in the bottle.'

→dolo-: [Ground: cylindrical]

meške-: in a narrow object like a hole in a tree, cf. (10)

(18) d-i-mpulu, nçala bardı meška-xedu,
    MOD-VV-hide:3s:PRS   hay.stack    PRV-sit:3s:PAST.PFV
    va gam-ulun
    NEG   PRV-go:3s:PRS
    '(The man) hid, he sat in the hay stack, he did not come out of it.'
    (Kutscher/Genç 1998: 155)

→meške-: [Ground: dense, narrow]

gola- vs. cela- vs. ela-

go-la-: 'being on a shelf', cf. (12).

(19) golo-b-ulur
    PRV-1.A-go:PRS
    'I go along a horizontally oriented road or path'

ce-la-: 'hanging down on the wall', cf. (13), 'being on a balcony', cf. (14).

(20) a. cele-b-ulur
    PRV-1.A-go:PRS
    'I go down a road/path (e.g. in the mountains)'

b. ele-b-ulur
    PRV-1.A-go:PRS
    'I go up a road/path (e.g. in the mountains)'

→ -la-   [Ground: strip]
Shape properties of the ground seem to be relevant for the usage of Laz preverbs:

i) Ground is striplike or has an edge:    *gola-, cela-* (vs. *goo-*)    ON
ii) Ground is cylindrical:    *dolo-* (vs. *ce-*)    IN
iii) Ground is dense, narrow:    *meşka-* (vs. *mola-* )    IN

→ locative classification (Allen 1977, Aikhenvald 2000)

Comparable to the cluster concepts for containment and surface configurations in Tiriyo (Levinson/Meira 2003) and Palikur (Aikhenvald/Green 1998), Laz seems to have a finer grained differentiation in the conceptualisation of containment and surface configurations, i.e. the IN-ON-scale may need some rearrangement but in principle holds also for Laz.

But:

4.2 The orientation of configuration is also relevant for configurations which - from a geometrical perspective - are containment relations

*dolo-* vs. *mola-*

dolo-:

(21) *zeytiniyayi  dolo-b-u-bi*
    olive.oil    PRV-1.A-VV-pour:[1>3]s:PAST.PFV
    'I poured olive oil into (the cow’s mouth).' [the cow is lying on the ground]
    (Kutscher/Genç 1998:34)

mola-

(22) *çiçci  çari  molo-b-i-bi*
    mouth  water    PRV-VV-pour:1.A:PAST.PFV
    'I put water in my mouth.' [in order to spray it on swarming bees]
    (Kutscher/Genç 1998:40)

*cela-/ela-* vs. *gola-, ceška-/eška-* vs. *meşka-*

cela- / ela-:  'Ground is a vertical oriented striplike object (e.g. a mountain path)' vs.

gola-:  'being on a shelf', 'going along a horizontally oriented road or path'
    (cf. section 3.1) vs.

ceška-/eška-:  *ceške-bulur* 'I go down in a mountain forest', *eške-bulur* 'I go up in a mountain forest'

   ->  'Ground is a vertical oriented dense or narrow object' vs.

meşka-:  being in a small place (like a hole in a tree), cf. (10) being in a dense or narrow object (like a hay stack'), cf. (18); moving horizontally amidst a narrow or a dense object'
5 New Claim:
Laz preverbs cannot be ordered according to the IN-ON-scale

- Orientation of configuration relevant for (geometrical) containment configuration (e.g. dolo- vs. mola-)
- Preverb mo- does not refer to meaning components such as [surface] or [containment], see section 5.1
- There are preverbs which refer to both surface (ON) and containment (IN) relations (ce-), see section 5.2

5.1 Semantic extension of the topological uses of mo-

(23) kapayı tencere mo-zun
lid pot PRV-lie:3s:PRS

'The lid is on the pot.' (in case of lid belonging to pot)

(24) kapayı tencere goo-zun
lid pot PRV-lie:3s:PRS

The lid is on the pot.' (in case of lid too big for pot)

(25) a. kitabi kapayı mo-zun
book slip.case PRV-lie:3s:PRS

'The book is in the slip case.'

b. maçindri kifi mo-zun
ring finger PRV-lie:3s:PRS
'The ring is on the finger.'

c. kuçxe modvala kuçxe mo-zun
shoe foot PRV-lie:3s:PRS
'The shoe is on the foot.'

- with movement verbs used as a proximal deictic marker 'towards speaker'

(26) ko-mo-xti
MOD-PRV-go:2s:IMPER
'Come here!'

⇒ mo- 'belonging-to-relation'
5.2 Semantic extension of the preverb ce-

(27) oxorza  araba ce-xen
woman  car  PRV-sit:3s:PRS

'The woman sits in the car.'

(28) a. oşkuri tabayi ce-zun
apple  plate  PRV-loc:3s:PRS

'The apple is on the plate.'

b. masa hali ce-dgu
table  carpet  PRV-loc:3s:PRS
'The table is on the carpet.'

semantic overlap of ce- and goo-: [two speakers out of 4 used ce-, two used goo-]:

(29) şeyi masa ce-zun / goo-zun
cloth  table  PRV-loc:3s:PRS

5.3 Clustering of Concepts in Laz

<table>
<thead>
<tr>
<th>Orientation</th>
<th>Ground Properties</th>
<th>Inclusion ?</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical (“up”)</td>
<td>dense, narrow strip</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(“down”)</td>
<td>dense, narrow strip</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Horizontal

| | | | |
| dense, narrow strip | + | meşke- | IN TREE CAVE, IN HAYSTACK |
| | - | gol- | ON SHELF |
| | + | mola- | IN HOUSE |
| | - | goo- | ON TABLE |

Neutral (+belonging)

| | | -/+ | mo- | LID ON POT |
| | | | | ON LEG, LEANING ON WALL |

(-belonging)

| | | | |
| | | - | me- | LID ON POT |

(30) mska içi me-m-i-du ce-fiti
'She put the ladder (on the wall) for me (and) I went down.' (Kutscher/Genç 1998:83)
- Comparing two Taxonomies of Space

(31) **Laz:**

```
  \hspace{1cm} ground properties
  \hspace{1cm} ela-(eška-),
  \hspace{1cm} (e-)
  \hspace{1cm} up
  \hspace{1cm} vertical
  \hspace{1cm} orientation
  \hspace{1cm} +contact
  \hspace{1cm} space

  \hspace{1cm} down
  \hspace{1cm} horizontal
  \hspace{1cm} neutral

  \hspace{1cm} (-contact vertical down)

  \hspace{1cm} (…)
```

(32) **German:**

```
  \hspace{1cm} inclusion
  \hspace{1cm} in
  \hspace{1cm} +contact
  \hspace{1cm} surface
  \hspace{1cm} superposition
  \hspace{1cm} auf
  \hspace{1cm} side

  \hspace{1cm} (…)
```

The taxonomy of conceptual components of preverbs used to express topological configurations in (31) shows that these components specify the configuration between a Figure and a Ground, but also relate to properties of the Ground ([strip], [dense], [cylindric]). In contrast to European adpositional (e.g. German in (32)) and Fennic/NE-Caucasian locative case systems, Laz seems to focus mainly on features such as [orientation] and [shape properties of ground] whereas the former treat components such as [inclusion] and [surface] as the fundamental features.

6 Conclusion

- For Laz, concepts such as surface and containment seem not to be fundamental spatial concepts. In addition, the IN-ON-scale proposed by Bowerman/Choi (2001) and Levinson/Meira (2003) is not applicable for topological expressions in Laz (cf. (5)).

- Rather, concepts such as orientation of the configuration ([vertical: downwards], [horizontal]), shape properties of the ground ([striplike], [cylindric]), and „belonging together“ (lid on pot) are relevant for the meaning of Laz preverbs.
A typology of spatial conceptualisation:
With respect to the fundamental concepts of space, we find at least two types of languages:

- Type 1 (English, German, Finnish, Turkish, etc.):
  topological spatial concepts are ordered according to the IN-ON-scale. All seem to have nominal relators (adpositions, local cases).
- Type 2 (Laz, Mingrelian?):
  topological spatial concepts relate to endpoints of path configurations. The relators are part of the verbal complex.

Abbreviations

| A  | Actor                  |
| IMPER | imperative            |
| MOD | speaker modality/focus |
| NEG | negation               |
| NOM | nominative            |
| PAST.PFV | past perfective |
| PRS | present tense         |
| PRV | preverb               |
| s  | singular              |
| U  | Undergoer             |
| VV  | version vowel         |
| [ >] | verbform is marked for two arguments, subject (= Actor) acting on object (= Undergoer) |

Laz orthographie
Examples are written in the Lazoğlu/Feurstein-alphabet introduced to the Laz community in Turkey in 1984. It deviates from the Caucasianists' transcription in the following graphemes (<Laz = Caucasianist>):
<ç = ç>, <ç = ç>, <k = k'>, <∅ = p'>, <s = s'>, <t = t'>, <ç = ç>, <ç = ç>

References


