Directional expressions: typology of lexicalization patterns

Marina Pantcheva

CASTL, University of Tromsø

marina.pantcheva@uit.no

The EGG School 2011

České Budějovice

July 25 – August 05, 2011

Contents of the course

Lecture 1

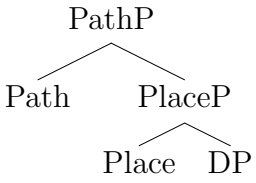
Lexicalization of directional expressions

1.1 The syntactic structure of directional expressions

1.1.1 The basic syntactic structure for directionals

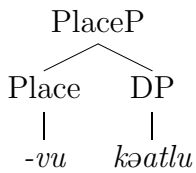
- The basic structure (van Riemsdijk 1990, van Riemsdijk and Huybregts 2002, Koopman 2000, Svenonius 2010, den Dikken 2010, inter alia):

(1)

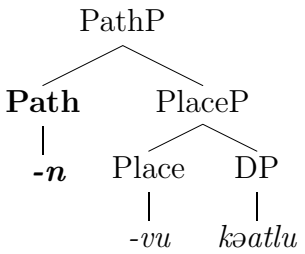


- Under this view, the Path head hosts directionality markers expressing various kinds of paths.
- Illustrating this fact on some directional expressions from Lak (Daghestanian), data from (Murkelinskij 1967))

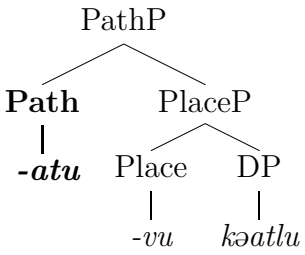
(2) kəat.lu-vu
house.ERG-IN
'in the house' (Location)



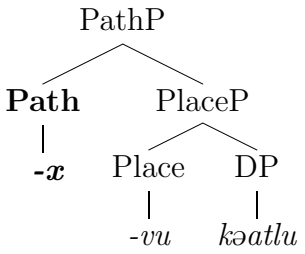
(3) kəat.lu-vu-n
house.ERG-IN-TO
'into the house' (Goal)



(4) kəat.lu-v-atu
house.ERG-IN-FROM
'out of the house' (Source)



(5) kəat.lu-vu-x
house.ERG-IN-THROUGH
'through the house' (Route)



- The same Locative, Goal, Source and Route morphemes are found in the other series in Lak.

	Location	Goal	Source	Route
in	*-vu*	*-vu-n*	*-v-a(tu)*	*-vu-x*
on	*-j*	*-j-n*	*-j-a(tu)*	*-j-x*
behind	*-x*	*-xu-n*	*-x-a(tu)*	*-xu-x*
under	*-lu*	*-lu-n*	*-l-a(tu)*	*-lu-x*
at	*-č'a*	*-č'a-n*	*-č'-a(tu)*	*-č'a-x*
by	*-c'*	*-c'u-n*	*-c'-a(tu)*	*-c'u-x*

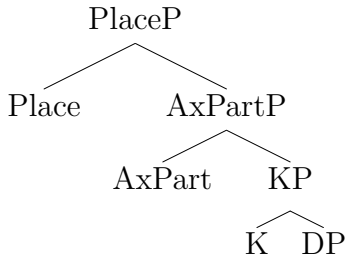
Table 1.1: Spatial case system in Lak (Zhirkov 1955)

- The structure for directional expressions is more elaborate.

1.1.2 The more elaborate structure for directional expressions

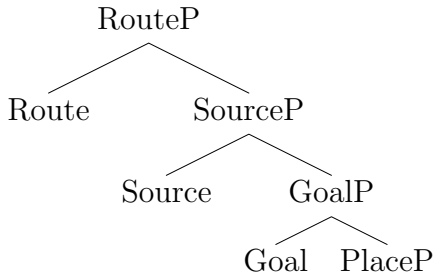
- Ax[ial]Part and K[ase] are part of the Place projection (Svenonius 2006).

(6)



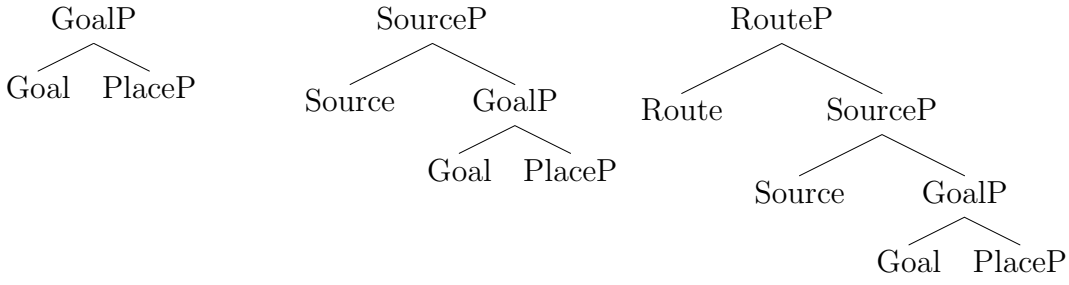
- The Path projection can be decomposed into several heads (Pantcheva 2010).

(7)



- Each type of path corresponds to a unique syntactic structure.

(8) a. Goal path: b. Source path: c. Route path:



- Other projections have been proposed too: DegP (Koopman 2000, den Dikken 2010), DeixP (Svenonius 2010), etc. I abstract away from them in this course.

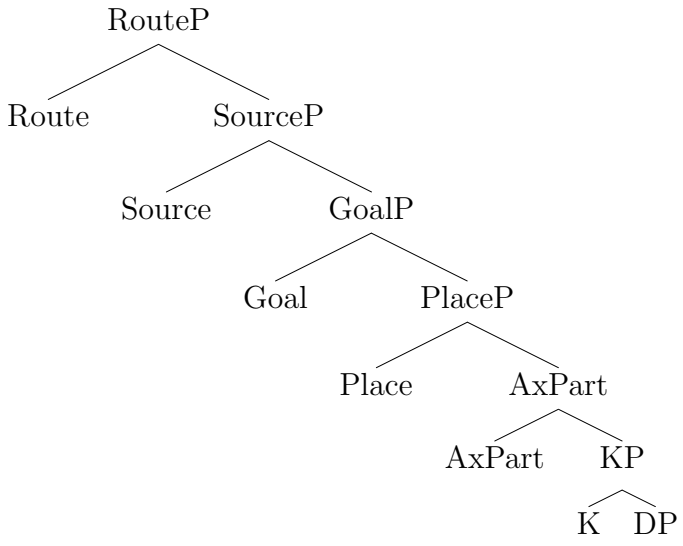
1.2 Lexicalization of the structure

- Basic assumptions:
  - There is a rigid Specifier-Head-Complement order (Kayne 1994).
  - Syntactic structure is universal (Chomsky 2001).
  - One-to-many mapping between morphemes and terminals.
    - Each terminal is spelled out by only one morpheme.
    - A morpheme can spell out one or more terminals.
- The more fine-grained structure for paths leads to a mismatch between the number of morphemes that constitute an expression and the number of heads in the underlying syntactic structure.
- Consider Lak again.

(9) kəat.lu-vu-x
house.ERG-IN-THROUGH
'out of the house' (Route)

- In (9), there are three suffixes attaching to the noun: the Ergative marker *-lu*, the Ax-Part/Place marker *-vu*, and the Route marker *-x*.
- The structure for Routes, however, contains (at least) six heads.

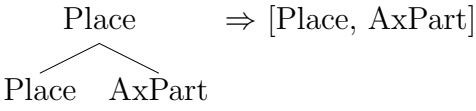
(10)



- How do we capture the mismatch?

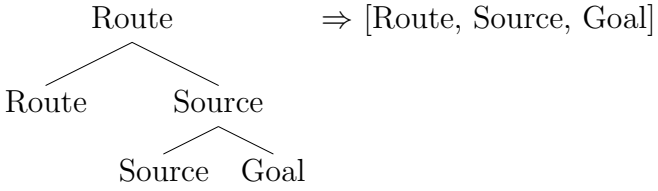
1.2.1 Distributed Morphology: Fusion

- When the number of terminals to be spelled out exceed the number of morphemes in a given expression, Distributed Morphology invokes the operation *Fusion* (Halle and Marantz 1993; 1994).
  - *Fusion* takes two sister nodes that have only grammatical features (and no phonological content), and fuses them into a single terminal node, which inherits the features of the original nodes.
  - The operation can be repeated multiple times.
  - A single morpheme can then spell out the newly derived terminal node.
  - Fusion applies after syntax and before Spell-out in a special morphological component (Harley and Noyer 1999).
  - Hence, Fusion is an operation that precedes lexical insertion.
- Applied to the Lak Route expression, Fusion has to fuse:
  - AxPart and Place:

(11) a. 

b. [Place, AxPart] ↔ *-vu*

  - Goal and Source. And then...
  - ... Route and the terminal created by the Fusion of Goal and Source.

(12) a. 

b. [Route, Source, Goal] ↔ *-x*

- The operation of Fusion leads to a *Fusion paradox*, first identified in Chung (2007:fn. 22), and also discussed in Caha (2009b) and Radkevich (2009).
- The paradox consists in the fact that Fusion
  - on the one hand, precedes lexical insertion
  - on the other hand, is triggered by the availability of an appropriate portmanteau lexical item in the lexicon, which expresses the features of the fused nodes.
- The Fusion Paradox illustrated on the Finnish Locative and Goal cases:

Series		Location	Goal
in	*-s*	*-ssa* (*talo-ssa* 'in the house')	*-(h)Vn* (*talo-on* 'into the house')
on	*-l*	*-lla* (*talo-lla* 'on the house')	*-lle* (*talo-lle* 'onto the house')

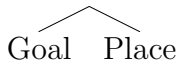
Table 1.2: Locative and Goal cases in Finnish (Sulkala and Karjalainen 1992)

- The Finnish Locative and Goal cases can be decomposed as shown in Table 1.3 (Comrie 1999).

Series		Location	Goal
in	*-s*	*-s-CA*	*-(h)Vn*
on	*-l*	*-l-CA*	*-l-Ce*

Table 1.3: Decomposition of the Locative and Goal cases in Finnish

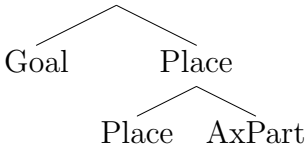
- Assume that the morphemes *-l* and *-s* spell out the AxPart head.
- For the lexicalization of an *onto*-phrase, Fusion has to apply to the Place and Goal heads and fuse them into a new node, which is then lexicalized by *-le*.

(13) a. 

⇒ [Goal, Place]

b. [Goal, Place] ↔ *-le*

- For the lexicalization of an *into*-phrase, Fusion has to fuse the nodes AxPart, Goal and Place together, so that the insertion of *-(h)Vn* can take place under the thus derived terminal.

(14) a. 

⇒ [Goal, Place, AxPart]

b. [Goal, Place, AxPart] ↔ *-h(V)n*

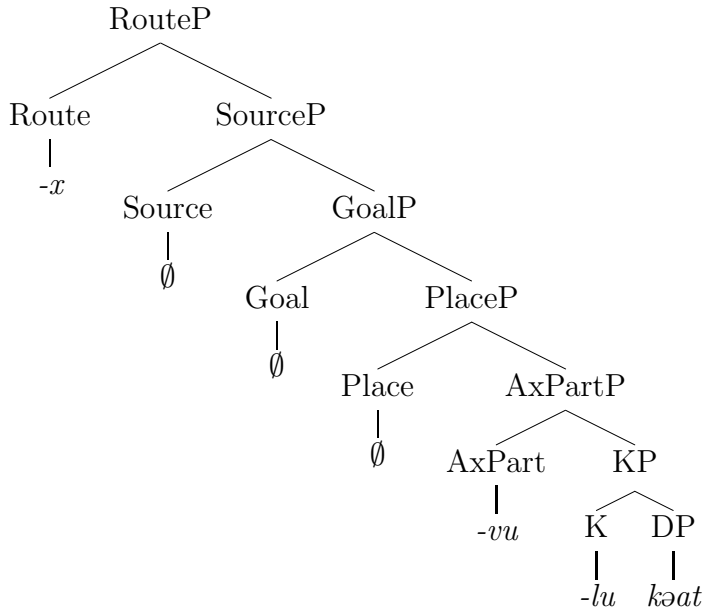
- Fusion applies to AxPart, Place and Goal in an *into*-phrase but does not apply to the AxPart head in an *onto*-phrase.
- Fusion has to somehow "know" that the lexicon contains an appropriate portmanteau morpheme for the *into*-phrase before it applies to the AxPart head in the syntactic structure.

- The same kind of "knowledge" prevents Fusion from applying to AxPart in the *onto-* phrase.
- The paradox: Fusion precedes lexical insertion, hence it is not expected to know in advance what matching lexical items there are in the lexicon.

1.2.2 Null morphemes

- An alternative to the Fusion solution of Distributed Morphology, is to assume the availability of *silent morphemes* à la Kayne (2004; 2008).
- The Lak Route expression will then be lexicalized as follows:
  - The morpheme *-vu* lexicalizes the AxPart head, since it encodes the notion of INTERIOR (vs EXTERIOR, SUPPORT, TOP, FRONT, etc.).
  - The morpheme *-x* lexicalizes the Route head, since it encodes a Route path (vs. Source or Goal).
  - The Ergative marker *-lu* lexicalizes the K[ase] head.
  - All the remaining heads are spelled out by null morphemes.

(15)



- The distribution of the postulated null Goal and Source morphemes in (15) has to be somehow restricted to the cases when Route is lexicalized by *-x*, because they do not seem to occur otherwise.
- For instance, a Source phrase in Lak is always marked by *-a(tu)*, while one would expect null marking to be available too.
- Bagvalal offers another example of the need to synchronize the co-occurrence of null morphemes with a particular overt morpheme:

	Series	Location	Goal	Source
in	*-i*	*-i*	*-i*	*-i-ss*
on	*-a*	*-a*	*-a-r*	*-a-ss*

Table 1.4: The IN and ON series in Bagvalal (Gudava 1967a)

- In Bagvalal, no overt Goal morpheme is present in the IN-series leading to a syncretism between Location and Goal in this series.

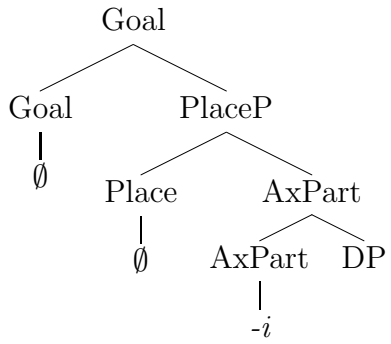
  (16) a. beq'-i
  barn-LOC/GOAL
  'in the barn' or 'into the barn' (Location/Goal)
  b. beq'-i-ss
  barn-LOC/GOAL-SOURCE
  'out of the barn' (Source)

- There is no Location=Goal syncretism in the ON-series.

  (17) a. am-a
  roof-LOC
  'on the roof' (Location)
  b. am-a-r
  roof-LOC-GOAL
  'onto the roof' (Goal)
  c. am-a-ss
  roof-LOC-SOURCE
  'off the roof' (Source)

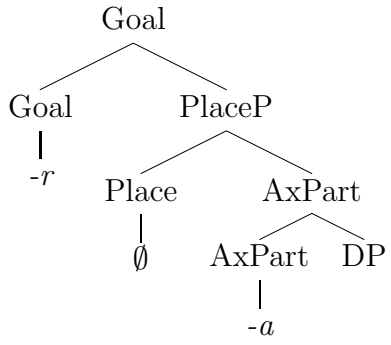
- Lexicalization in Bagvalal:
  - The series markers *-i* and *-a* carry spatial concepts which are commonly taken to be expressed by AxPart morphemes. Hence is is reasonable to assume that they spell out the AxPart head.
  - Consequently, the Place head must be lexicalized by a null morpheme.
  - Another null morpheme has to lexicalize the Goal head, when AxPart is spelled out by *-i* (in the IN-series).

(18)



– When AxPart is spelled out by *-a*, however, the overt Goal morpheme *-r* is inserted at the Goal head, see (19).

(19)

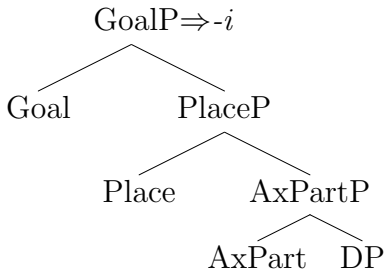


- The issue is how to make certain that the overt Goal morpheme *-r* in (19) does not attach to the *-i* marker of the IN-series.
- Similarly, we need to rule out the converse scenario where the null Goal morpheme of (18) appears with the *-a* marker of the ON-series.
- "The 'null morpheme' approach needs to be supplemented by a mechanism which ensures that the right (null) morphemes occur with the right overt morpheme." (Starke 2011).

1.2.3 Phrasal Spell-out

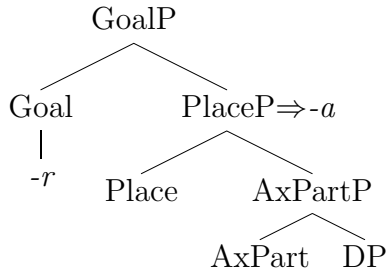
- The third conceivable solution is to adopt *Phrasal Spell-out* — one lexical item can lexicalize multiple terminals by being inserted at a phrasal node (McCawley 1968, Weerman and Evers-Vermeul 2002, Neeleman and Szendrői 2007 and work in Nanosyntax).
- Assume that *-i* has the features Goal, Place, and AxPart and can be inserted straight at the GoalP node.

(20)



- Suppose that *-a* does not have a Goal feature, but just Place and AxPart. It is then inserted at PlaceP.
- The Goal head has to be spelled out by a separate morpheme which has the Goal feature: *-r*.

(21)



- Compared to the null-morpheme solution, Phrasal Spell-out
  - dispenses with the null Goal and Place morphemes.
  - provides a possible explanation for why there is no Goal morpheme in the IN-series, but there is a Goal morpheme *-r* in the ON-series — *-i* has the feature Goal, while *-a* lacks it and therefore cannot express a Goal phrase by itself.
- Note that *-i* also expresses Location in addition to Goal.
- The lexical item *-i* should be able to lexicalize two distinct phrasal nodes: GoalP (in a Goal expression) and PlaceP (when used in a Locative expression).
- The lexicalization model which thus emerges must have the following properties:
  - It has to allow for a single morpheme to lexicalize multiple terminals (Phrasal Spell-out)
  - It has to allow for a given morpheme to lexicalize more than one syntactic structure.
- A syntactic framework which meets these requirements is Nanosyntax—a model of grammar developed at the University of Tromsø (Starke 2005-2009, Ramchand 2008b, Bašić 2007, Fábregas 2007, Abels and Muriungi 2008, Muriungi 2008, Lundquist 2008, Caha 2009b, Taraldsen 2010, Pantcheva 2010, for a representative collection of papers see Svenonius et al. 2009)

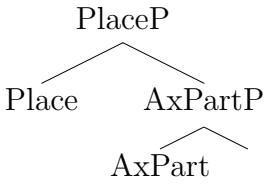
Lecture 2

Basics of Nanosyntax

2.1 The shape of morphemes

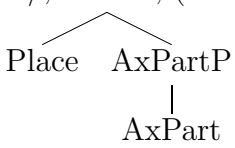
- The distinguishing feature of Nanosyntax is that syntactic terminals are very "nano" — each terminal corresponds to a unique feature.
- Syntax builds structure by arranging the atomic features into structures which comply with the hierarchical order determined by the functional sequence.
- Lexical entries are just the reflection of how chunks of these syntactic structures are stored in the lexicon
- For instance, syntax combines the atomic features Place and AxPart into the structure in (1):

(1)



- This structure can be stored in the lexicon as a unit, which is paired with a phonological and conceptual content.
- This unit represents a morpheme and its lexical entry has the following shape:

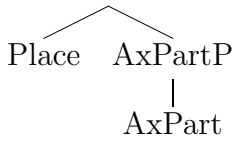
(2) $a \Leftrightarrow$ </phonological content/, PlaceP, (conceptual content)>.



- An example of such a morpheme is the Bagvalal series marker -*a* presented in (17a) in the preceding lecture, repeated below (data from Gudava 1967b).

(3) a. am-a
roof-LOC
'on the roof'

The lexical entry of -*a* has the following shape:

(4) -*a* ⇔ </a/, 

, ON>

- Other languages might not store the structure [$_{\text{PlaceP}}$ Place [$_{\text{AxPartP}}$ AxPart]] as one unit in the lexicon, but store just [Place] and just [AxPart].
- Each of the two structures will be paired with phonological content and such languages will have two morphemes: one for Place and one for AxPart.

	Series	Location
in	-∅	-∅-*i*
at	-*x*	-*x*-*i*
inside	-λ	-λ-*i*
behind	-*n*	-*n*-*i*
under	-*kk*	-*kk*-*i*
on	-*l*	-*l*-*i*
vertical attachment	-*tʃ*	-*tʃ*-*i*

Table 2.1: Locative case in Chamalal (Magomedbekova 1967)

- Taking as an example the series marker -*n* (BEHIND), we can assume that its lexical entry contain the information given in (5).

(5) -*n* ⇔ </n/, AxPart, BEHIND>.

- The lexical entry for the Locative suffix is the one in (6).

(6) -*i* ⇔ </i/, Place>

- The entry for -*i* in has no conceptual content because it is not associated with the type of "encyclopedic" information that distinguishes TOP from BOTTOM. The morpheme -*i* carries only "formal semantic" information.
- The two morphemes -*n* and -*i* in Chamalal then combine to lexicalize the Locative structure in the BEHIND-series.

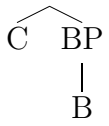
2.2 Lexical insertion

- The lexicon is a list of entries where fragments of syntactic trees are combined with a phonological representation and a conceptual content.
- Spell-out can be defined as a replacement of a piece of the syntactic tree by a lexical entry from the lexicon, thus supplying the syntactic structure with the phonological and conceptual content of the entry.
- Spell-out is concerned with whether the syntactic structure stored in the lexical entry matches the syntactic structure the entry replaces.
- Let us define Matching as follows (to be revised later):

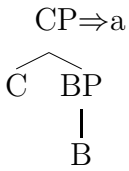
  (7) A lexical entry matches a node if the syntactic tree in its specification is identical to the node.

- A lexical items whose lexically stored tree contains a phrasal node CP can be thus inserted into a CP node in the syntactic structure (Starke 2009, Caha 2009a;b, among others)

  (8) $a \Leftrightarrow$ </a/,



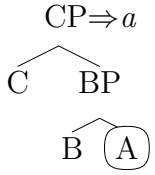
  (9)



- Syntactic structures that contain non-lexicalized features are ill-formed

  (10) *Exhaustive lexicalization* (Ramchand 2008a, Fábregas 2007):
  Each feature in the syntactic tree has to be lexicalized.

  (11) *



- Cyclic Spell-out: each Merge is followed by lexical access (Starke 2005-2009, Caha 2010, Pantcheva 2011).
- Entries inserted at the higher nodes override all previously inserted lexical material at the lower nodes.

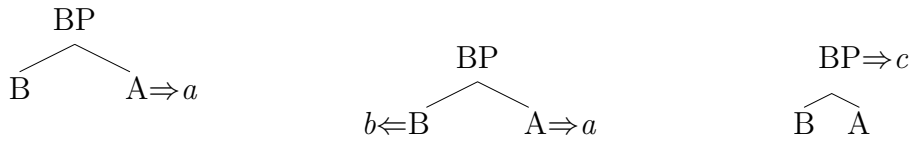
(12) a. $a \Leftrightarrow$ </a/, A>

b. $b \Leftrightarrow$ </b/, B>

c. $c \Leftrightarrow$ </c/, 

>

(13) a. Step 1 b. Step 2 c. Step 3



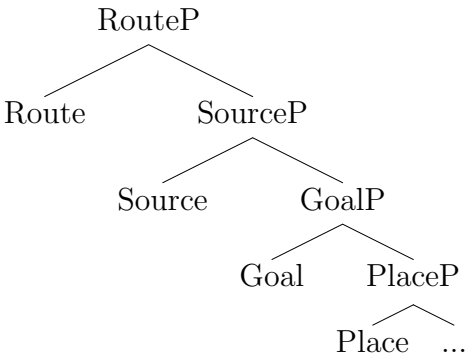
2.3 The Superset Principle

- According to the definition of Matching assumed so far, the insertion of a lexical item at a given syntactic node is possible if the item contains an identical syntactic structure.
- The phenomenon of syncretism suggests that the requirement of identity is too restrictive.
- Consider the following Hindi sentence, which is ambiguous between a Route path reading and a Source path reading (fieldwork notes).

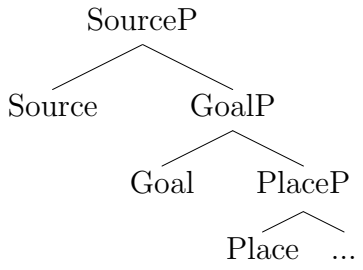
(14) baccaa kaar-ke saamne-see calaa.
child *car*-GEN *front*-ABL *walk*.PERF
(i) 'The child walked via in front of the car.' (Route)
(ii) 'The child walked from in front of the car.' (Source)

- Route paths and Source paths have different underlying syntactic representations (Pantcheva 2010).

(15) a. Route path



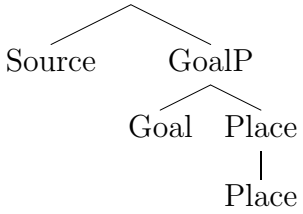
b. Source path



- Thus, the Hindi Ablative marker *-see* in (14) is used to lexicalize two different structures:
  - (15a) when it gives rise to a Route reading
  - (15b) when it has a Source path interpretation
- Importantly, the two structures are in a superset-subset relationship.
- We can then assume either underspecification or overspecification of the lexical entries:
  - Underspecification leads to the adoption of the *Subset Principle*:

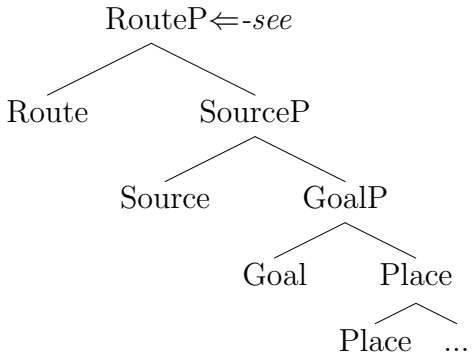
    (16) *The Subset Principle* (in the spirit of (Halle 1997)):
    A lexical item matches a node if its lexical entry is specified for a constituent contained in that node.

    (17) Lexical entry for Hindi Ablative *-see* (under the *Subset Principle*):
    -see $\Leftrightarrow <$ /see/, SourceP$>$

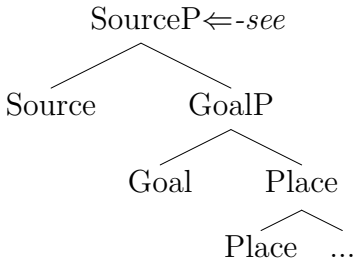


– Lexicalization of RouteP and SourceP under the *Subset Principle*.

(18) a. Route path



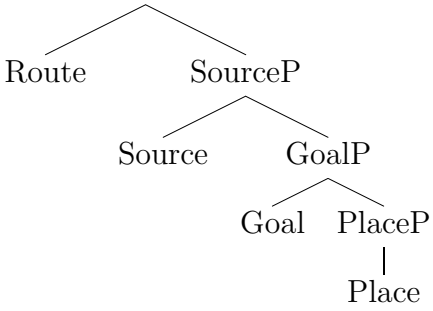
b. Source path



– Overspecification needs the *Superset Principle*.

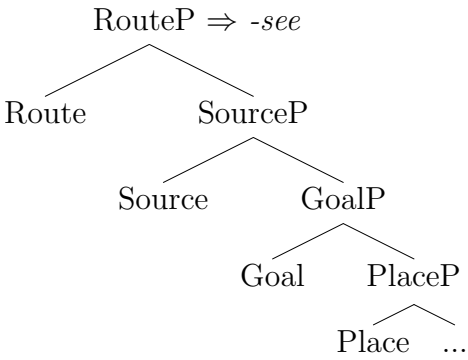
(19) *The Superset Principle* (Starke 2009, Caha 2009b):
A lexical item matches a node if its lexical entry is specified for a constituent containing that node.

(20) Lexical entry for Hindi Ablative *-see* (under the *Superset Principle*):
-see ⇔ </see/, RouteP >

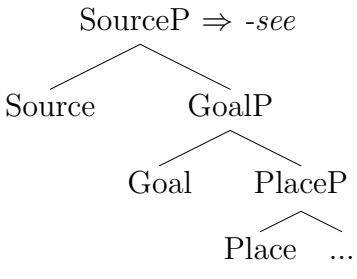


– Lexicalization of RouteP and SourceP under Superset.

(21) a. Route path



b. Source path

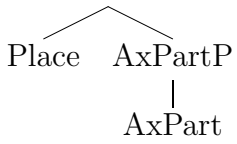


- Let us test the two solutions on the Bagvalal Goal=Location syncretism in the IN-series.

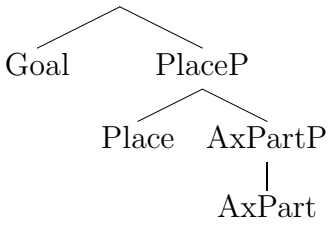
(22) beq'-i
barn-LOC/GOAL
'in the barn' or 'into the barn'

(23) am-a
roof-LOC
'on the roof'

- We start by testing the *Superset Principle*, according to which lexical entries are bigger or identical to the structure they lexicalize.
  - The ability of *-i* and *-a* to express a spatial configuration and Location by themselves suggests that they are specified for both the AxPart and Place features.
  - In addition, the entry for *-i* must have a Goal feature, as it is used also in Goal expression.
  - The lexical entries should then look like this:

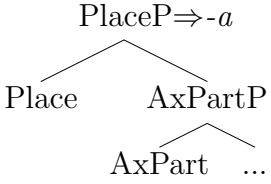
(24) a. *-a* ⇔ </a/, 

, ON >

b. *-i* ⇔ </i/, 

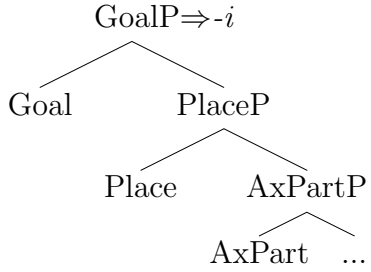
, IN >

  - When expressing a Locative structure, *-a* lexicalizes a node that is identical to the tree fragment stored in the entry.

(25) 

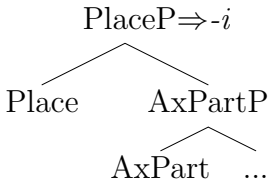
  - The entry for *-i* is "bigger" than the entry for *-a*—it contains a Goal head in addition, and therefore *-i* can lexicalize a Goal structure.

(26)



By the *Superset Principle*, *-i* can also lexicalize a PlaceP node, leaving its Goal feature "unused."

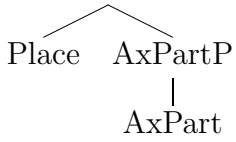
(27)

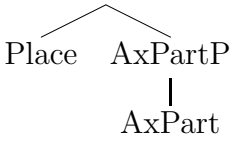


– The series marker *-a* cannot be used to Spell-out a Goal structure—it does not contain a Goal feature and by the *Superset Principle* it cannot be inserted at GoalP. That's why the Goal morpheme *-r* has to kick in.

- Let's now test the *Subset Principle*, according to which lexical entries are smaller or identical to the structure they lexicalize

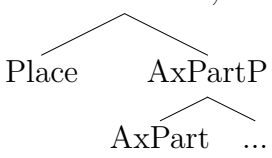
  – The entries for *-a* and *-i* will have to be as in (28a) and (29b).

  (28) a. *-a* ⇔ </a/,  , ON >

  b. *-i* ⇔ </i/,  , IN >

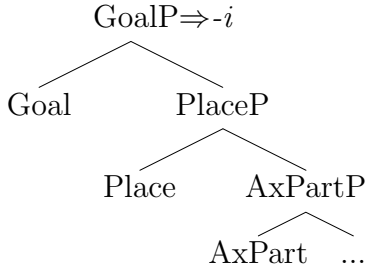
  – Both entries can be inserted at PlaceP, spelling out a Locative phrase.

  (29)

  – The series marker *-i* can also be inserted at GoalP, because it is specified for a *subset* of the features contained in the tree.

(30)



- The entry for *-a* contains the same subset of feature like *-i*. Why isn't it eligible for insertion at GoalP?
- The problem is that the *Subset Principle* is not compatible with a Phrasal Spell-out model.

2.4 The Elsewhere Principle

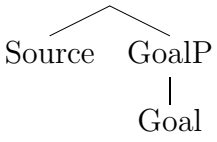
- This relaxation of the matching condition leads to the occurrence of situations where more than one lexical item is eligible to spell out a given syntactic node.
- Consider the Avar Source marker *-ssa* (presented in the ON-series).

Series	Location	Goal	Source	Route
on (top of)	*-da*	*-d-e*	*-da-ssa*	*-da-ssa-n*

Table 2.2: The ON-series in Avar (Blake 1994)

- The Source marker attaches to the Locative ending, hence, it lexicalizes both Goal and Source.

(31) Lexical entry for Avar Ablative *-ssa*:
-ssa ⇔ </ssa/, SourceP >

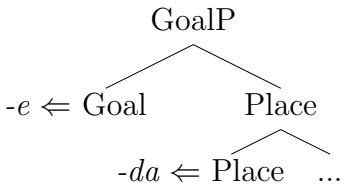


- According to the *Superset Principle*, *-ssa* can spell out also a Goal structure. This does not happen, though.
- The Goal structure is spelled out by the Allative *-e*, attaching to the Locative marked DP.

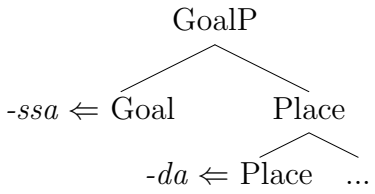
(32) Lexical entry for Avar Allative *-e*:
-e ⇔ </e/, Goal>

- The two possible ways to lexicalize a Goal structure are shown in the tree diagrams below.

(33) a.



b.



The correct lexicalization is the one in (33a)..

- The "better matching" Allative entry in (32) is preferred.

  (34) Minimize unused features:
  When two lexical entries meet the conditions for insertion in a given node, the item with the fewest features not contained in the node gets inserted.

- The generalization in (34) follows from a more general principle: the *Elsewhere Condition* of Kiparsky (1973) (Starke 2009, Caha 2009b, Pantcheva 2010).

  (35) *Elsewhere Principle* (Neeleman and Szendrői 2007)
  Let R_1 and R_2 be competing rules that have D_1 and D_2 as their respective domains of application. If D_1 is a proper subset of D_2, then R_1 blocks the application of R_2 in D_1.

- The domain of application of the Allative marker is a proper subset of the domain of application of the Ablative marker. Therefore, the Allative marker wins the competition for insertion in a Goal structure.

2.5 Linearization and Spell-out driven movement

- Let us examine step by step the lexicalization of the following spatial expressions from the Daghestanian language Karata (data from Magomedbekova 1971:73).

  (36) a. bajdan-ṭ'-a
  square-ON-LOC
  'on the square' (Location)
  b. bajdan-ṭ'-a-r
  square-ON-LOC-GOAL
  'to the square' (Goal)
  c. bajdan-ṭ'-a-gal
  square-ON-LOC-ROUTE
  'from/through the square' (Source=Route)

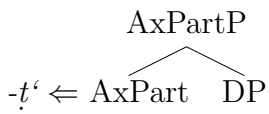
  – The locative morpheme *-a* lexicalizes the Place head.
  – The Allative morpheme *-r* lexicalizes Goal.

  - The Elative morpheme *-gal* lexicalizes Source and Goal when it is used as a Source marker, and Route, Source and Goal when it is used as a Route marker.
  - The series markers *-ṭ‘* lexicalizes the AxPart head.

- Let us then assume that the entry for the series marker is the following:

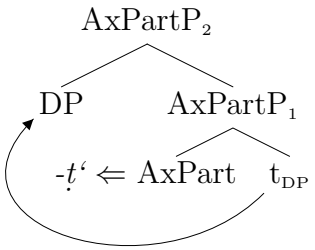
(37) *-ṭ‘* ⇔ </ṭ‘/, AxPart, ON>

- After the Merge of DP and AxPart, there is a round of lexical access and the structure is lexicalized as shown below:

(38)


- However, the DP in Karata precedes the series marker, hence, the DP must asymmetrically c-command the AxPart head (according to the LCA of Kayne 1994).

- This can be achieved if the DP raises above the AxPartP node, creating an adjunction structure with a two-segment category.

(39)


- What triggers this movement?

- Starke (2011): (This type of) movement is driven by the particular shape of the tree stored in the lexical entry (see also Caha 2010, Pantcheva 2011).

- To implement this idea, we need to revise the Matching condition, so that it ignores traces (Caha 2009b).

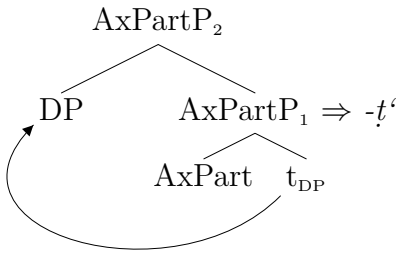
(40) A vocabulary item matches a node if its lexical entry is specified for a constituent containing that node, ignoring traces.

- Let us assume that the entry for *-ṭ‘* is specified both for the AxPart head and its projection:

(41) *-ṭ‘* ⇔ </ṭ‘/, AxPartP , ON>

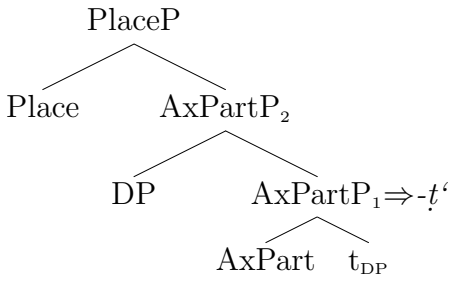

- The AxPart projection is then lexicalized as follows:

(42)



- The difference between (42) and (39) is that the series marker *-ṭ‘* is inserted at a phrasal node instead of a terminal.
- The evacuation of the DP is a Spell-out driven movement caused by the lexicalization of the non-terminal AxPartP node with the entry in (41).
- Let us now continue with the derivation of a Karata Place phrase, derived by merging the Place head to the tree in (42).

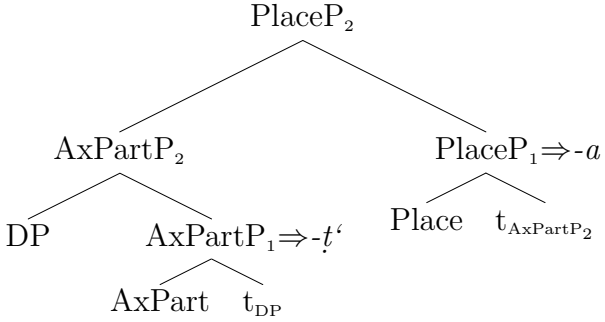
(43)



- The Place marker *-a* is suffixal and attaches to a noun marked by one of the series markers.
- Applying the same strategy as for *ṭ‘*, we can assume that *-a* triggers a movement of AxPartP to a position from which it asymmetrically c-commands *-a*.
- The shape of the tree stored in the entry for *-a* will therefore have to be the following :

(44) *-a* ⇔ </a/, PlaceP >
Place

(45)



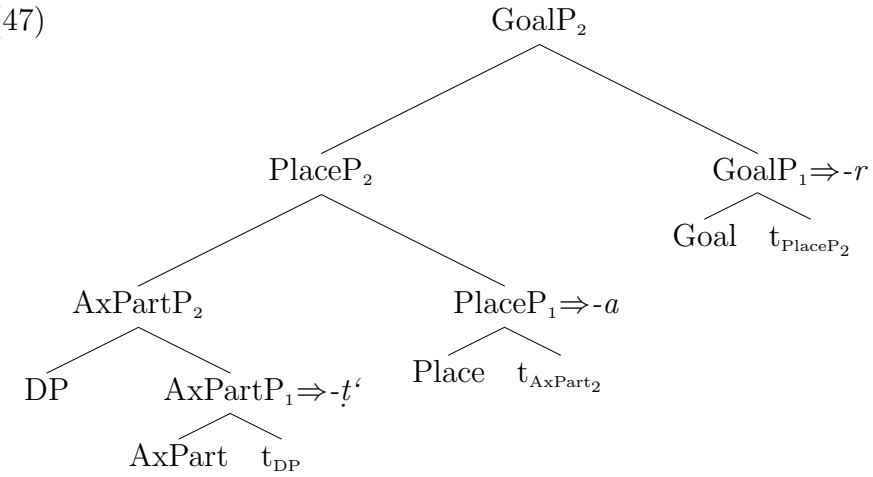
- The same strategy can be used also in the derivation of the Goal expression *bajdan-ṭ‘-a-r*.

- Assume that the Goal suffix *-r* is specified in the way shown in (46).

(46) *-r* ⇔ </r/, GoalP >
Goal

- The Spell-out of GoalP by *-r* will trigger an evacuation movement of the complement of Goal.

(47)



- The reverse ordering of the morphemes in the Karata Locative and Goal expressions comes about as the result of successive roll-up movements triggered by the shape of the lexical entries.

- The derivation becomes different when we reach the Source and Route heads, lexicalized by the morpheme *-gal*.

  – Similarly to the Goal suffix *-r*, *-gal* attaches to a noun marked by the Locative case.
  – Unlike *-r*, *-gal* corresponds to more than one feature: the features Goal, Source, and Route.

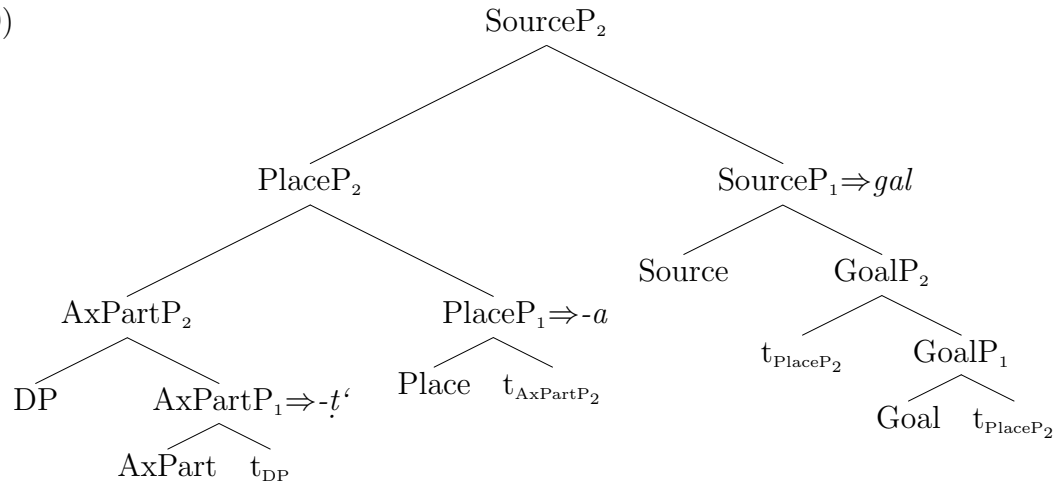
- The entry for *-gal* must therefore have the following shape.

(48) *-gal*, ⇔ </gal/ RouteP >
Route SourceP
Source GoalP
Goal

- This entry can be used for the lexicalization of a Source expression by virtue of the *Superset Principle*.

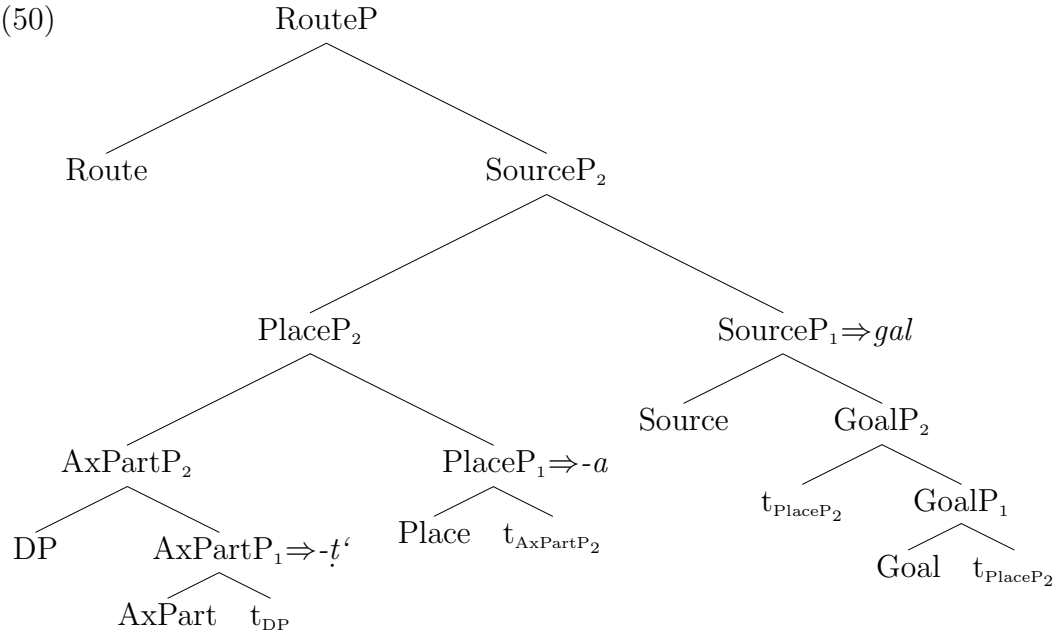
- The entry in (48) is a match for the SourceP node provided PlaceP_2 moves out.
- (Note that *-gal* is a match also for the GoalP node, but loses the competition to the more highly specified entry *-r*.)

(49)



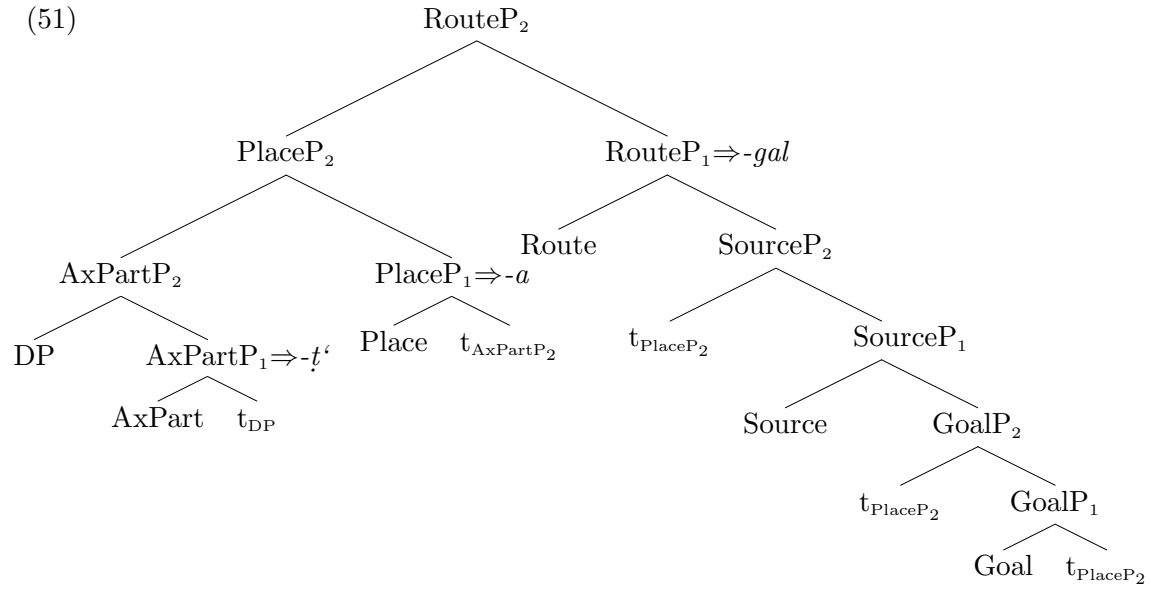
- Finally, let us turn to the "biggest" structure of Route paths, derived by the Merge of Route on top of SourceP.

(50)



- The entry *-gal* matches (using its full specification this time), if PlaceP_2 evacuates.
- The evacuation movement takes place and *-gal* is inserted at RouteP_1, overriding the material inserted below.

(51)



- Thus, the entry *-gal* triggers a successive-cyclic movement of PlaceP$_2$ within its own projection line.

2.6 Summing up

(52) The shape of the lexical entries is <phonology, syntactic tree, conceptual content>

(53) *Cyclic Spell-out*:
Each Merge is followed by lexical access.

(54) *Exhaustive Lexicalization* (Ramchand 2008a, Fábregas 2007):
Every syntactic feature must be lexicalized.

(55) *The Superset Principle* (Starke 2009, Caha 2009b):
A vocabulary item matches a node if its lexical entry is specified for a constituent containing that node, ignoring traces.

(56) *Elsewhere Condition* (reformulated from Kiparsky 1973)
When two lexical entries meet the conditions for insertion in a given node, the item with the fewest features not contained in the node gets inserted.

(57) *Spell-out driven movement* (Starke 2005-2009)
The particular configuration of the trees stored in the lexical entries can trigger evacuation movement of the nodes obstructing matching.

Lecture 3

More on Spell-out driven movement

3.1 Spell-out driven movement in more details

- In the preceding lecture, we assumed the idea that the particular shape of a lexical entry can trigger movement of a syntactic constituent such that the right configuration for insertion is created (*Spell-out triggered movement*) (Starke 2011).
- This assumption, of course, raises a series of questions:
  - **What can be evacuated?**

    (1) The moved constituent must contain the head noun (Cinque 2005).

  - **Where does the evacuated material land?**

    There are two possibilities:

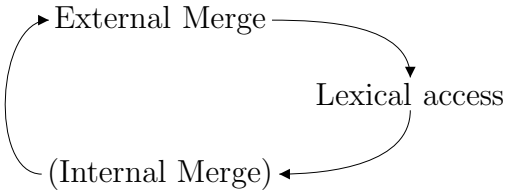
    * The evacuated material adjoins right above the node where matching takes place, thus performing the shortest possible move.
    * The moved constituent adjoins to the root node, thus obeying the *Extension Condition* of Chomsky (1995:190) according to which syntactic operations apply to the root of the tree.

    We assume *Shortest Move*

    (2) The moved constituent adjoins right above the node where insertion takes place.

  - **When does the Spell-out driven movement happen in the cyclic model we adopt?**

(3)



(4) The Spell-out triggered movement in one cycle takes place in the next cycle.

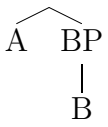
– This assumption is needed in order to have the nodes created by Spell-out driven movement be targeted by lexical insertion.

– Assuming that lexicalization within a cycle starts with the lowest node *in that cycle*, consider the derivation in (6) (using the entries in (5)):

(5) a. $a \Leftrightarrow$ </a/, A>

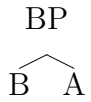
b. $b \Leftrightarrow$ </b/, BP >

c. $c \Leftrightarrow$ </c/, BP_2 >

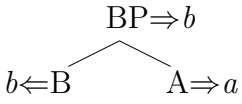


(6) a. **Cycle 1**

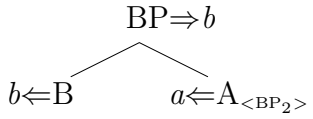
(i) Merge A and B (External Merge)



(ii) Match A, B and BP (Lexical access)

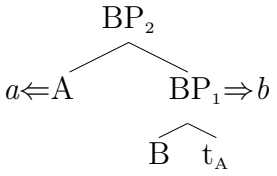


(iii) Mark A for extraction

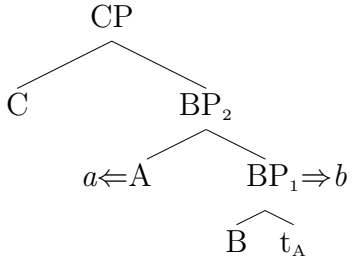


b. **Cycle 2**

(i) Extract A (Internal Merge)



(ii) Merge C (External Merge)



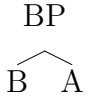
(iii) Match BP_2, C and CP (Lexical access)

– In this way, the node BP_2 will be targeted by lexicalization and the entry *c* can be inserted there.

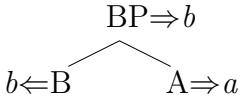
– If the Spell-out driven movement triggered in one cycle happens in the very same cycle, then the BP_2 node will not be targeted by lexicalization, as it will be "stranded" in the lower cycle 1, which is inaccessible in cycle 2.

(7) a. **Cycle 1**

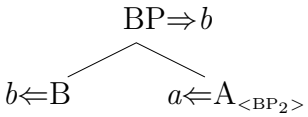
(i) Merge A and B (External Merge)



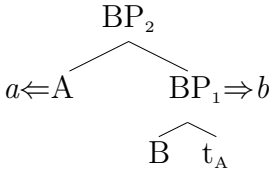
(ii) Match A, B and BP (Lexical access)



(iii) Mark A for extraction

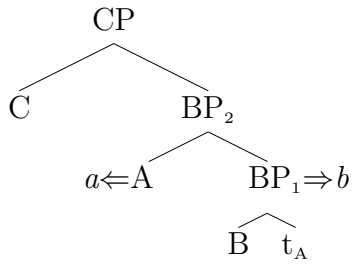


(iv) Extract A (Internal Merge)



b. **Cycle 2**

(i) Merge C (External Merge)



(ii) Match C and CP (Lexical access)

- The last three assumptions we make are:

(8) The order in which syntax performs the Spell-out triggered movements is opposite to the order in which they are triggered.

(9) Lexical entries store information only about heads and phrases, but not about segments (category-matching).

(10) Hierarchy of movements:
1.Don't move
2.Move just DP (cyclic movement)
3.Move DP with pied-piped material (snowball movement)

3.2 Derivation and lexicalization of the Finnish spatial expressions

- Finnish has six spatial cases:

Series		Location	Goal	Source
in	*-s*	*-ssa* (*talo-ssa*)	*-(h)Vn* (*talo-on*)	*-sta* (*talo-sta*)
on	*-l*	*-lla* (*talo-lla*)	*-lle* (*talo-lle*)	*-lta* (*talo-lta*)

Table 3.1: Spatial case system in Finnish (Sulkala and Karjalainen 1992)

- According to Comrie (1999), the case endings are compositional (with the important exception of *-(h)Vn*).

Series		Location	Goal	Source
in	*-s*	*-s-CA*	*-(h)Vn*	*-s-tA*
on	*-l*	*-l-CA*	*-l-Ce*	*-l-tA*

Table 3.2: Decomposition of spatial cases in Finnish

  - The series markers *-l* and *-s* lexicalize the AxPart head – (11a-b, d).
  - The locative morpheme *-CA* lexicalizes the Place head – (11a).
  - The morpheme *-Ce* lexicalizes Goal and Place – (11b).
  - The Illative morpheme *-(h)Vn* lexicalizes AxPart, Place, and Goal – (11c).
  - The morpheme *-tA* lexicalizes Source, Goal, and Place – (11d).

(11) a. Place AxPart DP
-CA *-l/-s*

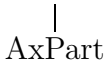
b. Goal Place AxPart DP
-Ce *-l*

c. Goal [Place AxPart DP
-(h)Vn

d. Source Goal Place [AxPart DP
-tA *-l/-s*

- Let us therefore assume the following entries for the Finnish spatial morphemes.

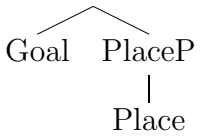
(12) Series marker *-l*:
-l ⇔ </l/, AxPartP , ON>



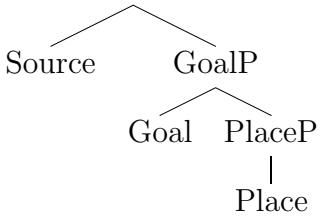
(13) Series marker *-s*:
-s ⇔ </s/, AxPartP , IN>

(14) Locative marker *-CA*:
-CA ⇔ </CA/, PlaceP >

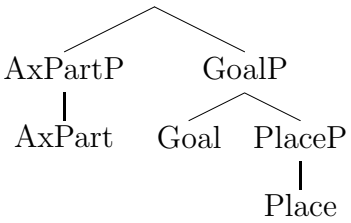
(15) Goal marker *-Ce*:
-Ce ⇔ </Ce/, GoalP >



(16) Source marker *-tA*:
-tA ⇔ </tA/, SourceP >

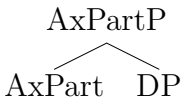


(17) Illative marker *-(h)Vn*:
-(h)Vn ⇔ </(h)Vn/, GoalP , IN>



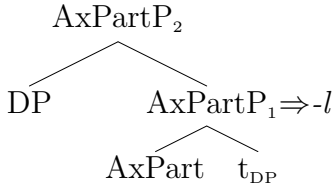
- We start with the derivation of the "biggest" Source expression in the ON-series, which involves the lexical entries *-l*, *-CA*, *-Ce*, and *-tA*.
- The first step is the Merge of AxPart and DP.

(18)



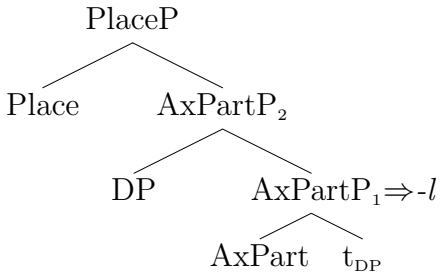
- The lexicon is consulted and the item *-l* in (12) is chosen for insertion.
- This triggers a movement of DP to AxPartP_2 as the first step in the next cycle.

(19)



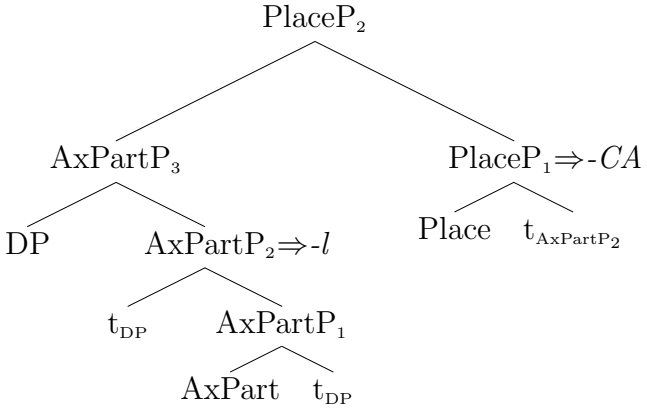
- Then, the Place head is merged and the structure is shipped to the lexicon for the search for matching items.

(20)



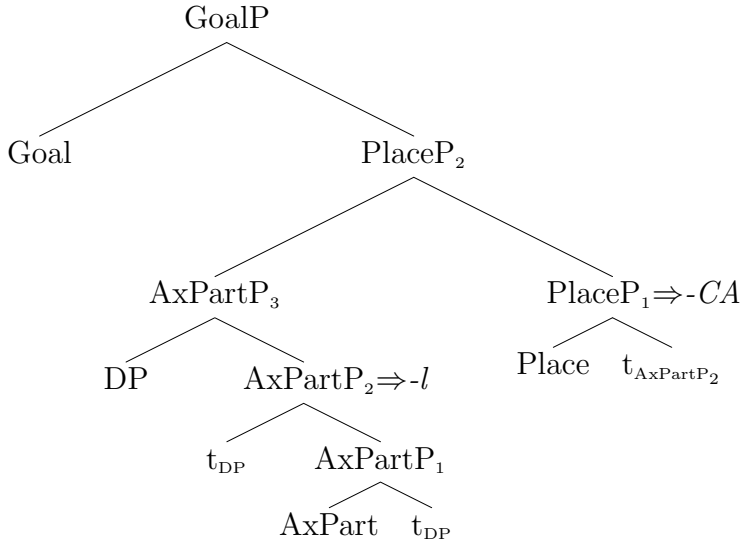
- The first node in the new cycle for which the lexicalization procedure searches for a match in the lexicon is AxPartP_2 (assuming that the DP has been spelled out in a previous cycle and the system remembers the outcome).
- The series marker *-l* is chosen as a match and DP is marked for extraction to AxPartP_3 in the next cycle.
- The second node to be lexicalized is Place – the Locative entry *-CA* and Goal the entry *-Ce* match it by the *Superset Principle* and the entry *-CA* is chosen by virtue of having fewer superfluous features.
- Then PlaceP is inspected for lexicalization. The entries *-CA* and *-Ce* match this node, too.
- Again *-CA* wins the competition and triggers an evacuation of AxPartP_2.
- Hence the next cycle begins with two movements: AxPartP_2 adjoins to PlaceP_1 and then DP adjoins to AxPartP_2 within the specifier of PlaceP.

(21)



- Next, the Goal head is merged.

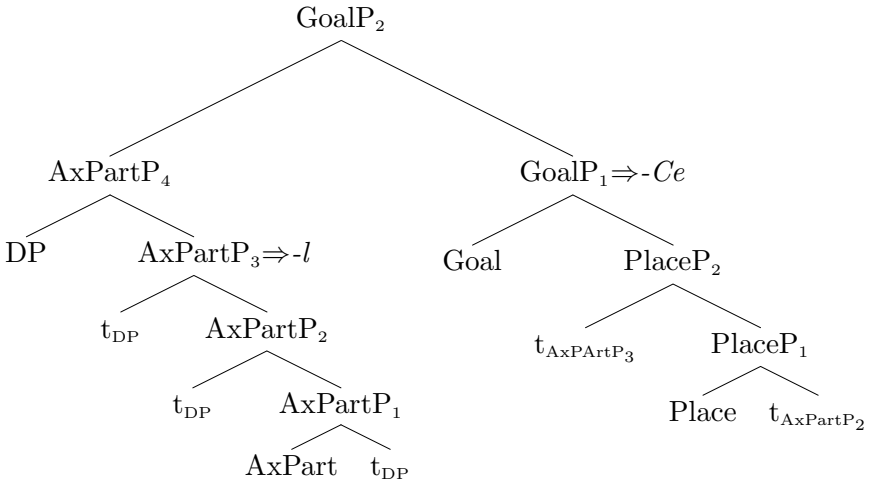
(22)



- The first node targeted by lexicalization is AxPartP_3 (This is a node created as the result of the Spell-out triggered movement which has taken place in the current cycle. Hence, AxPartP_3 has not been inspected for lexicalization previously.)
- The series marker *-l* matches AxPartP_3, triggering adjunction to AxPartP_4.
- Then, PlaceP_2 is inspected for matching items. The Locative marker *-CA* and the Goal marker *-Ce* are chosen as matching entries and *-CA* wins by the *Elsewhere Principle*.
- As a result, the AxPartP_3 node adjoined to it is marked for extraction to a position right above PlaceP_2.
- Then the Goal head is targeted by lexicalization — there are two matching items: the Goal marker *-Ce* in (15), and the Source marker *-tA* in (16).
- The winner is *-Ce* by the *Elsewhere Principle*.

- Finally, the phrasal node GoalP is targeted and *-Ce* is chosen over *-tA* again. Subsequently, AxPartP_3 is marked for extraction to GoalP_2.
- The insertion of *-Ce* at GoalP_1 overrides the Locative marker *-CA* inserted at PlaceP_2.

(23)

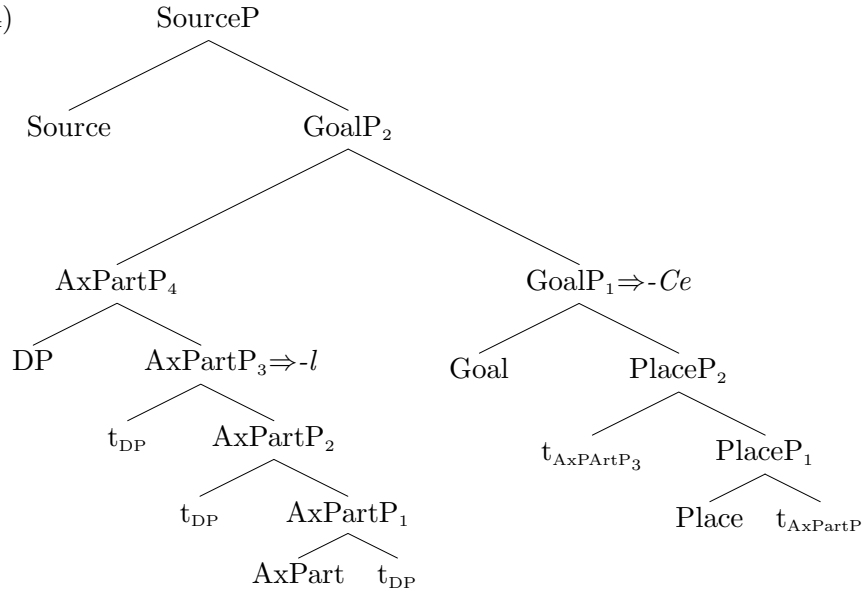


- The next cycle begins with two Spell-out driven movements: AxPartP_3 to GoalP_2 and DP to AxPartP_4, as shown in the diagram in (23).

  The adjunction of AxPartP_3 to a node right above PlaceP_2, which is supposed to take place after moving AxPartP_3 to GoalP_2, does not happen, as this instantiates lowering from GoalP_2.

- After these movements take place, the next head, Source, is merged, see (24).

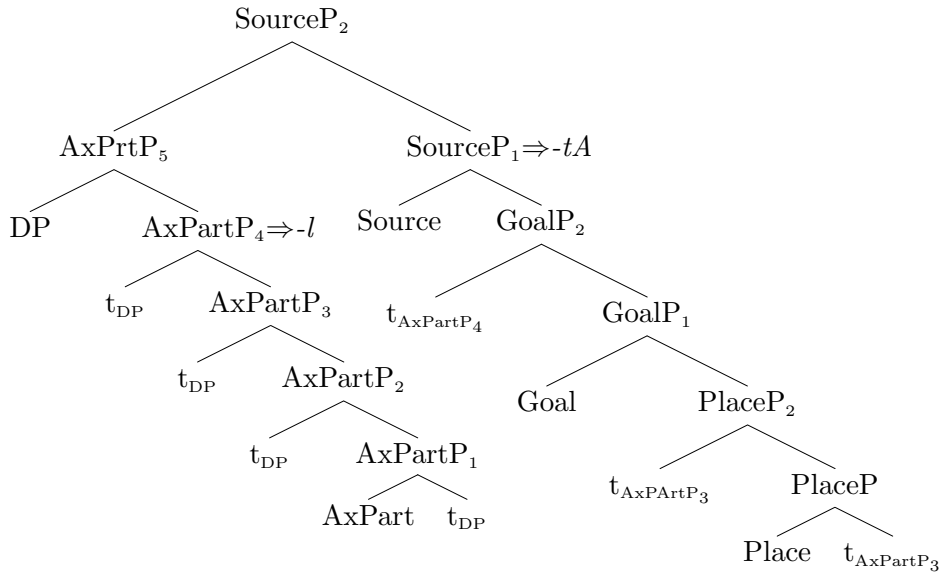
(24)



- First, AxPartP_4 is spelled out by *-l*, marking the DP to extract to AxPartP_5.

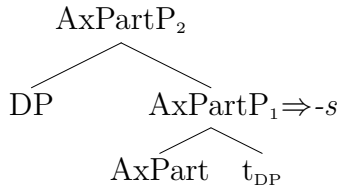
- Then GoalP_2, matched by *-Ce* and by the Source marker *-tA*, is lexicalized by *-Ce* triggering movement of AxPartP_4 to GoalP_3.
- The Source head is lexicalized by *-tA* and, finally, the SourceP head is spelled out by *-tA*, triggering movement of AxPartP_4 to SourceP_2 and overriding *-tA* inserted at the Source head and *-Ce* inserted at GoalP_2, see (25).

(25)



- With this the derivation of the Source expression in the *on*-series is completed.
- Let us now turn to the lexicalization of the Source case in the IN-series.
- The derivation starts again with the Merge of DP and AxPart.
- There are two items which contain the category AxPart and which are associated with the concept of interiority: *-s* and *-(h)Vn*.
- The two entries therefore compete and *-s* wins by the *Elsewhere Principle* and spells out AxPartP_1, triggering movement of DP.

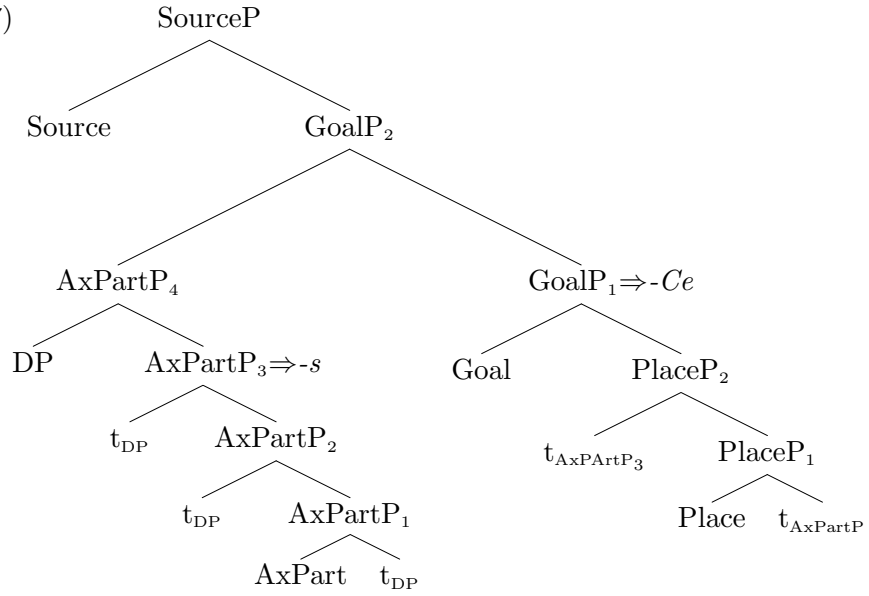
(26)



- The derivation then proceeds in a way parallel to the one described for the ON-series, with the only difference that, *-(h)Vn* also competes with *-CA* and *-Ce* for insertion at Place, PlaceP_1, PlaceP_2, Goal and GoalP_1 (and loses in each case because it has more superfluous features).

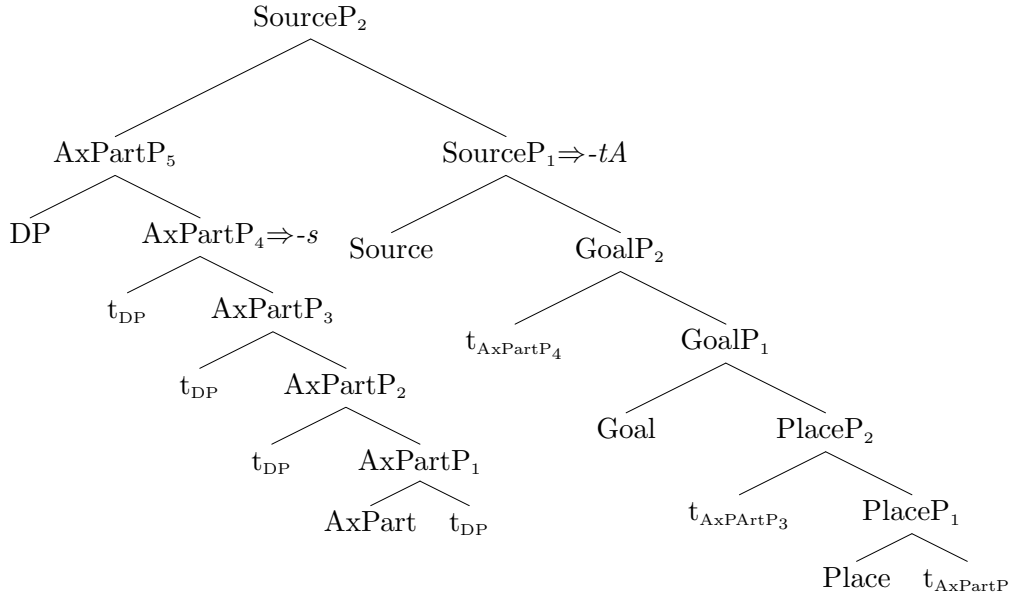
- Once we merge the Source head and create the $GoalP_2$ node by the evacuation movements triggered in the preceding cycle, the situation becomes different.

(27)



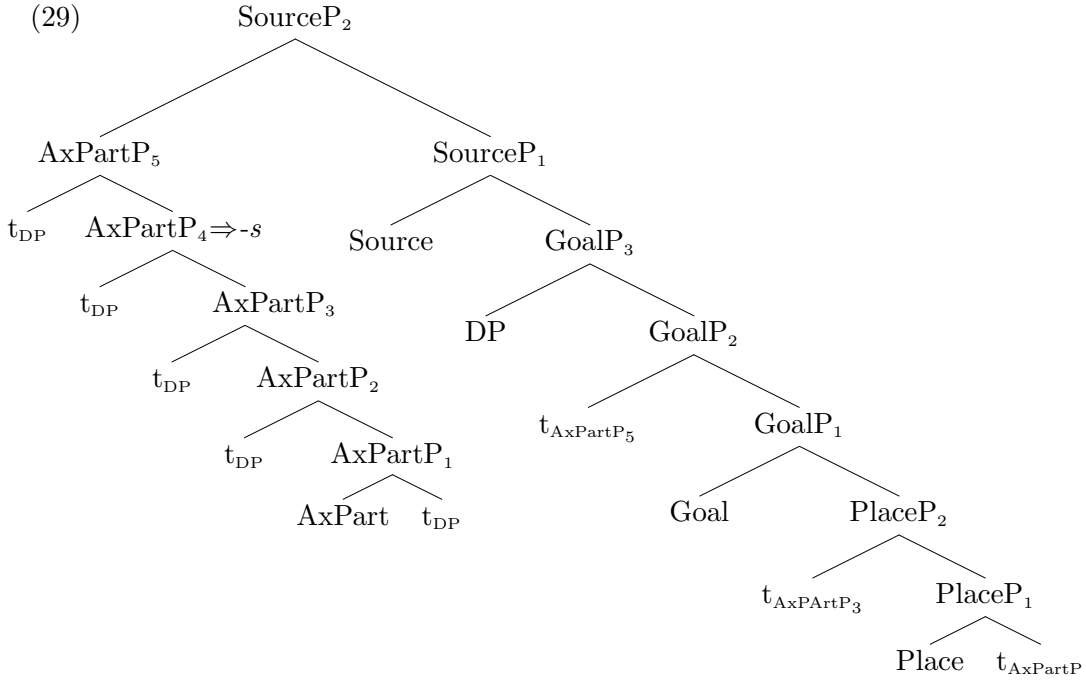
- The first node to be lexicalized is $AxPartP_4$, spelled out by *-s* thus triggering evacuation of DP to $AxPartP_5$.
- The next node is $GoalP_2$. The entry *-(h)Vn* is an almost perfect match—it spells out the entire structure without the DP.
- The Goal marker *-Ce* can also be inserted at $GoalP_2$ (triggering evacuation of $AxPartP_4$) and thus competes with *-(h)Vn*.
- There is a tie and *-(h)Vn* is chosen because it necessitates displacement of the sole DP.
- This is however an intermediate stage of the lexicalization, since there are two more nodes to be spelled out – Source and SourceP.
- The Spell-out of SourceP by *-tA* triggers movement of the entire $AxPart_4$ to the root node.
- This is the last movement triggered by Spell-out, hence the first one to be performed by syntax.
- Moving $AxPartP_4$ to $SourceP_2$ will raise also the DP contained in it, hence the movement of DP to a position right above $GoalP_2$ triggered by *-h(V)n*'s matching of $GoalP_2$ will not take place, because it is a downward movement.
- Finally, the first movement triggered by the Spell-out procedure in this cycle, namely the adjunction of DP to $AxPartP_{4s}$ will take place and the resulting structure will be the one in (28).

(28)



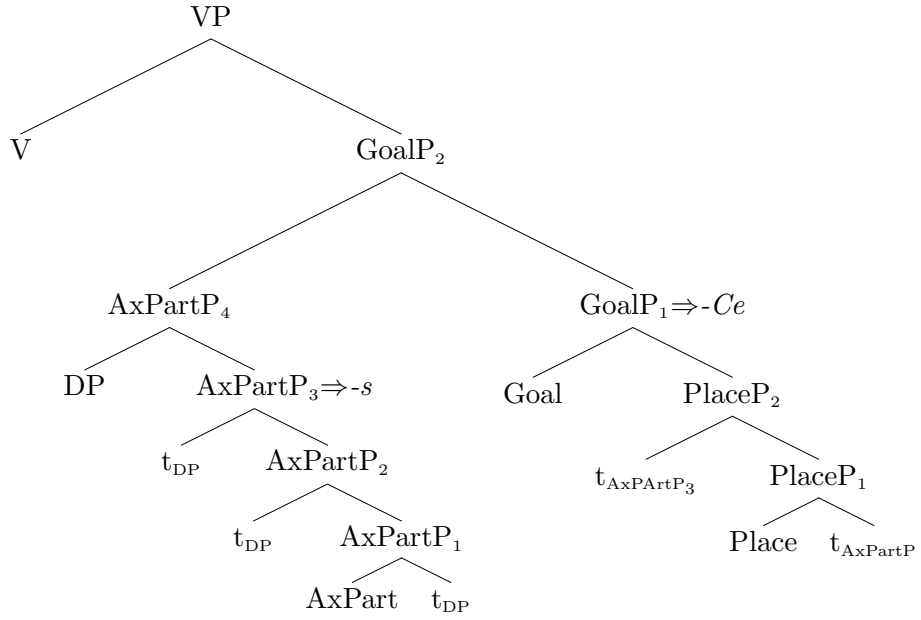
- The Finnish Ablative expression can be derived only if we assume that the order in which syntax performs the Spell-out triggered movements is opposite to the order in which they are triggered.
- Lets assume the opposite: as lexicalization proceeds bottom-up in the tree, first DP will be marked for extraction to AxPartP_5, then the same DP will be marked for extraction to GoalP_3, crucially escaping from AxPartP_5, and finally AxPartP_5 will be marked for extraction to SourceP_2.
- If the movements take place is the same order, the last movement of AxPartP_5 will displace a constituent which does not contain the DP, contrary to the assumption in **??**.

(29)



- Even worse, the entry *-tA* in fact does not match the SourceP$_1$ node anymore, due to the DP placed in the specifier of GoalP.
- Thus, *-tA* cannot be inserted — the DP-to-GoalP$_3$ movement takes place in cycle X+1, *after* *-tA* was matched with SourceP$_1$ in cycle X. SourceP$_1$ is therefore inaccessible for lexicalization anymore and the occurred mismatch cannot be repaired.
- Going back to the GoalP$_2$ node in the structure in (28), the entry matching the GoalP$_2$ node does not surface once all the morphemes are inserted into the nodes of the syntactic structure, because it is overridden by *-tA* at the SourceP$_1$ node.
- Still, the lexicalization of GoalP$_2$ by *-(h)Vn* can be made visible if we embed it under a verbal head.

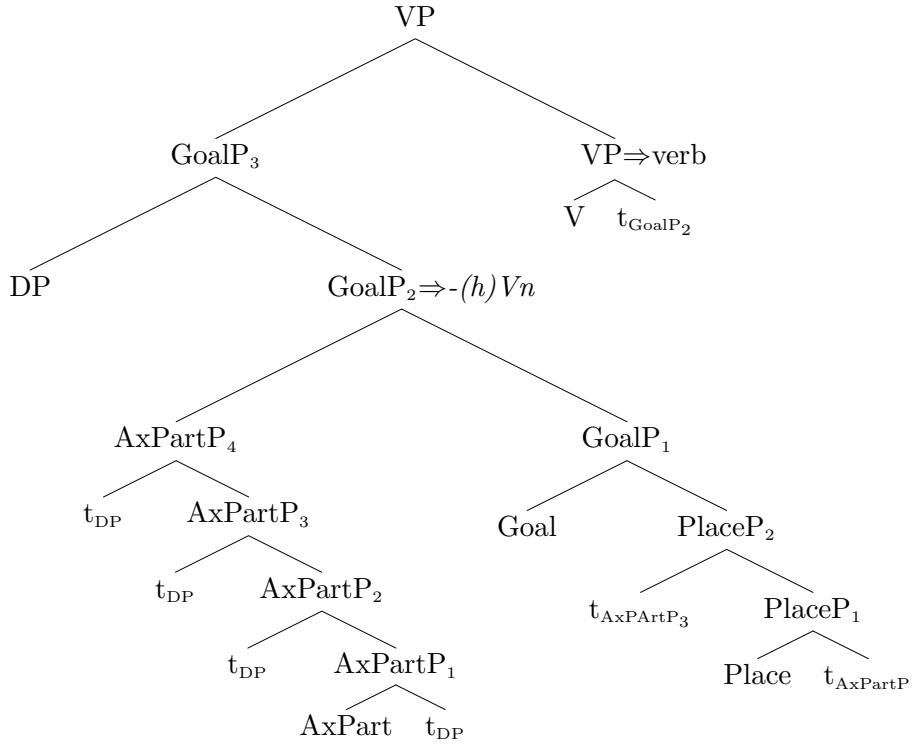
(30)



(31) verb ⇔ < VP >
V

- Assuming a verbal entry which triggers movement (in (31)), the lexicalization procedure will first target AxPartP_4, triggering a movement of DP to AxPartP_5.
- Then it will inspect the GoalP_2 node, where the entry *-(h)Vn* will trigger a movement of DP to GoalP_3.
- Finally, the Spell-out of VP by the verb will displace the entire GoalP_2 phrase.
- In syntax, first GoalP_2 will raise to VP, then DP to GoalP_3 and the first movement DP-to-AxPartP_5 will not take place, since it is downwards.

(32)



- In such case, *-(h)Vn* will lexicalize GoalP_2 and will not be overridden by the lexical material inserted at the higher verbal node.
- As a result, the lexicalization of the GoalP_2 node derived by the Spell-out driven movements of AxPartP_3 becomes visible and lends support to the idea that such nodes do indeed get lexicalized.

Lecture 4

Spurious syncretisms and typology of lexicalization

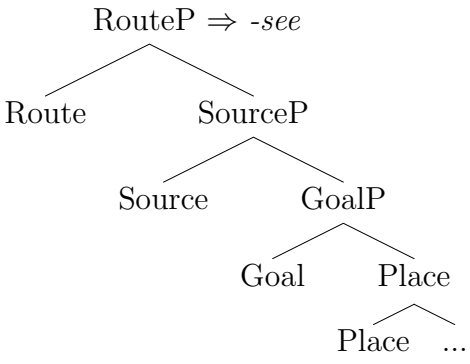
4.1 Real and spurious syncretisms

- In the preceding lecture, we discussed the Hindi Ablative marker *-see* which syncretizes Route and Source paths:

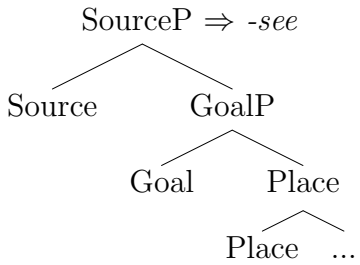
  (1) baccaa kaar-ke saamne-see calaa.
  child *car*-GEN *front*-ABL *walk*.PERF
  (i) 'The child walked via in front of the car.' (Route)
  (ii) 'The child walked from in front of the car. (Source)'

- The ambiguity of the Hindi *-see* is due to the fact that it spells out two distinct structures—a SourceP and a RouteP—which is made possible by the *Superset Principle*.

  (2) a. Route path



  b. Source path



- Persian, is also said to have that type of ambiguous marker: the preposition *æz* translated as 'from.'

- The preposition *æz* participates in both Route and Source path expressions.

- However, in Route expressions, it is used only in combination with the verbs *gozæshtæn* 'to go/pass by' or *ræd shodæn* 'to pass by" (Mahootian 1997:166).

  (3) a. Bæchche æz baq gozæsht.
  child *from garden pass.*3SG
  'The child went via the garden.'
  b. Bæchche æz pol ræd shod.
  child *from bridge pass became.*3SG
  'The child passed by the bridge.'

- When combined with any other motion verb, an *æz*-PP gives rise only to a Source interpretation and never to a Route interpretation.

  (4) Bæchche æz baq doid.
  child *from garden ran*
  'The child ran from the garden'
  *'The child ran via the garden.'

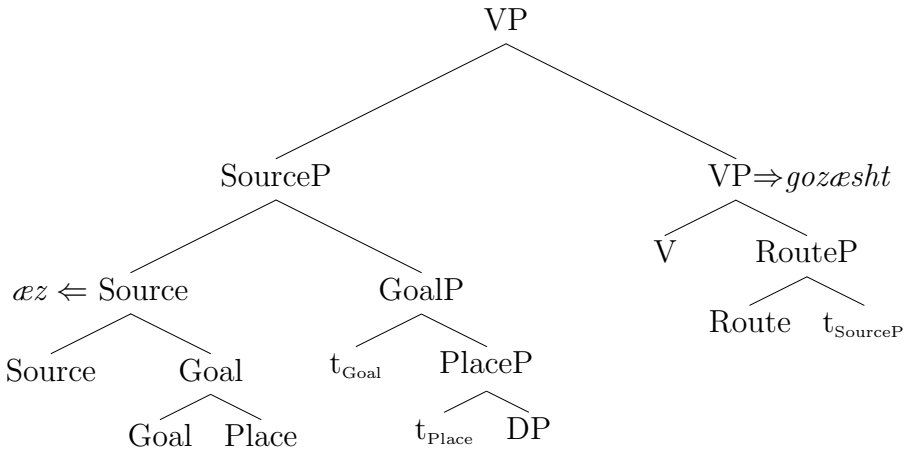
- Obviously, the Persian facts are quite different from the Hindi facts:
  - in Persian, the Route meaning of the preposition *æz* requires a particular "Route-verb"
  - in Hindi, the Route meaning of *-see* is available with a rather unrestricted set of manner of motion verbs.

- Ergo, the Persian *æz* is not really ambiguous between Route and Source, but expresses Source only.

- Question: What then makes the Route meaning in (3) possible?

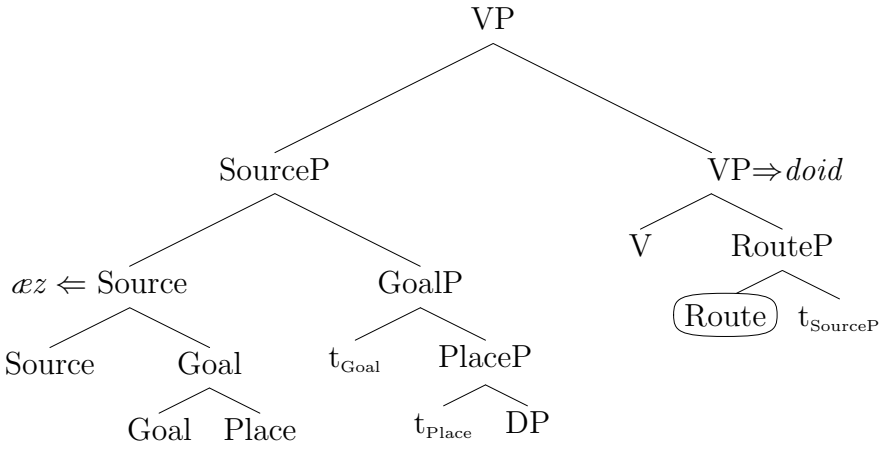
- Answer: the verbs *gozæshtæn* 'to pass' and *ræd shodæn* 'to pass by' lexicalize the bit of syntactic structure that is necessary for a Source path to become a Route path.

(5)



- This is why Persian verbs that do not belong to the set of "Route verbs" cannot express Route of motion with an *æz*-PP – this would violate *Exhaustive Lexicalization*.

(6)



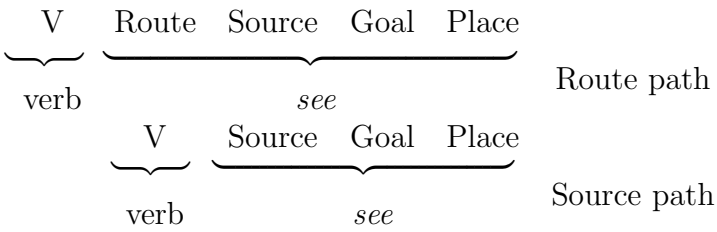
- On the face of it, it then appears that Persian *æz* syncretizes a Route and a Source path, but in reality, it always only spells out a Source structure and the Route=Source syncretism is spurious.

(7) *Real syncretism*:
Real syncretisms involve lexical items that are used to spell out two, or more, distinct structures.

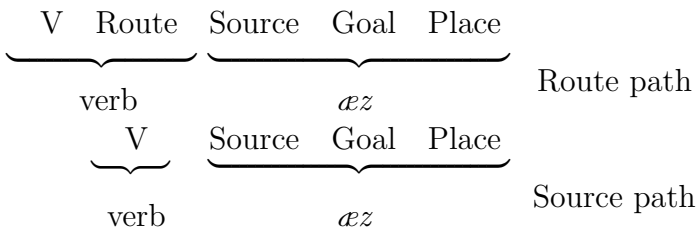
(8) *Spurious syncretim*:
Spurious syncretisms involve a lexical item that spells out one and the same structure within two or more distinct structures.

(9) *No syncretism*:
The lexical items are tailor-made for each of the syntactic structure corresponding to the different types of directional expressions.

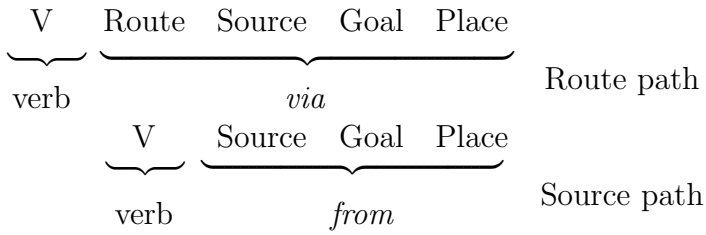
(10) Hindi (real syncretism)



(11) Persian (spurious syncretism)



(12) English (no syncretism)



- To sum up:
  - real syncretisms involve a *structural ambiguity*
  - spuriously syncretic entries are unambiguous — they always spell out the same structure, and their multiple functions results from the fact that they appear in *different syntactic contexts*.

4.2 Partitioning of the structure

- The diagrams in (10) to (12) present different ways to partition a Route structure.
- There can be a "cut" between V and Route (Hindi, English), or between Route and Source (Persian).
- There exist many other ways to partition a Route expression.

4.2.1 Route expressions: lexicalization patterns

- Consider the following sentences which express a Route path.

(13) Finnish, Finnic, Sulkala and Karjalainen (1992)
Pojat joksevat talo-n edi-tse.
boys *run*.3PL *house*-GEN *front*-PROL
'The boys are running across in front of the house.'

(14) Tabasaran, Daghestanian, Magometov (1965) (my glossing)
Izu ulṭurčºəunuza niri-ll-an.
I *jump.over* *river.*ERG-SUP-ABL
'I jumped across the river.'

(15) Kayardild, Tangkic, Evans (1995)
Kamar-ra ngudi-ja katharr-ir jirrka-an-kir!
stone-NOM *throw*-IMP *river*-ALL *north*-FROM-ALL
'Throw the stone from the north across the river!'

(16) Czech, Slavic (P. Caha, p.c.)
Kluci pro-běhli před dom-em.
boys *via-ran* *in.front.of house*-INSTR
'The boys ran across in front of the house.'

- There is a big range of choices:

Language	Expression used for Route	Expression is prototypically used for
Finnish	Prolative DP	Route paths
Tabasaran	Ablative DP	Source paths
Kayardild	Allative DP	Goal paths
Czech	P+Instrumental DP	Location[1]

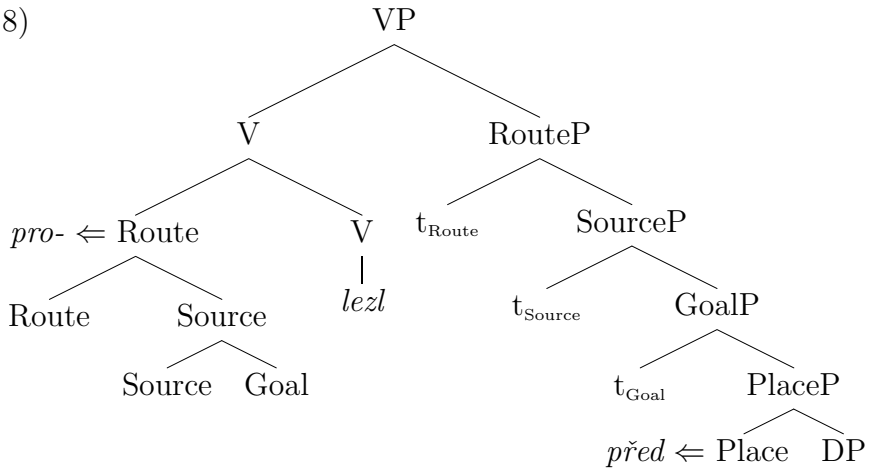
Table 4.1: Cases used by languages to express a Route path "across"

- Are these real or spurious syncretisms?
- Starting with Czech, we are looking for a clue whether something other than the expression consisting of P+DP-INSTR brings about the Route reading

(17) Czech, P. Caha, p.c.
a. Had pro-lezl před vchod-em.
snake via-crawled in.front.of entrance-INSTR
'The snake crawled via in front of the entrance.' (Route)
b. Had lezl před vchod-em.
snake crawled in.front.of entrance-INSTR
'The snake crawled in front of the entrance.' (Locative reading)

- The prefix *pro-* lexicalizes the heads between the verb and the Place projection in a Route structure:

(18)



- Hence, in Czech there is a spurious Location=Route syncretism.
- P+DP-INSTR is locative only and, in the case of Route paths, it needs the support of a special prefix that lexicalizes the Goal, Source and Route heads.
- Turning to the Tabasaran Route=Source syncretism, compare (19a) and (19b).

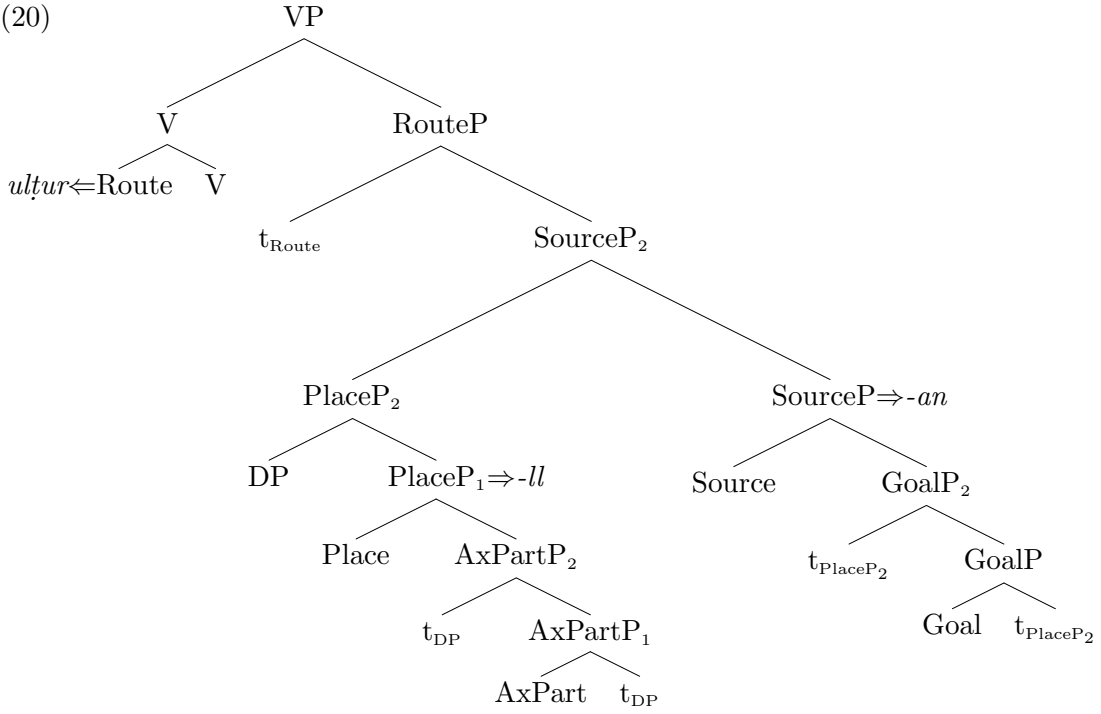
(19) Tabasaran, Magometov (1965) (my glossing)

a. Izu ulṭurč°ǝunuza qǝan-di-ll-an.
I *jump.over* *stone*-ERG-SUP-ABL
'I jumped over the stone.'

b. Izu qǝirč°ǝunuza qǝan-di-ll-an.
I *jump* *stone*-ERG-SUP-ABL
'I jumped off the stone.'

- The two sentences differ with respect to the prefix attached to the verb:
  - the verb in the Route expression is prefixed by *ulṭur-*, which I gloss as 'via,'
  - the verb in the Source expression is prefixed by a different affix *qǝir-*, the meaning of which is not given in Magometov's grammar
- It is then highly probable that the prefix *ulṭur-* is the element that turns a Source expression into a Route expression by lexicalizing the Route head.

(20)



- Is the Route=Goal syncretism in Kayardild spurious, too?

  (21) Kurrka-tha nga-ku-l-da natha-r nga-ku-lu-wan-jir!
  take-IMP 1-INC-PL-NOM *camp*-ALL 1-INC-PL-POSS-ALL
  'Let's take (it) to our camp!' (Evans (1995:150))

- There is no indication that an interpretation "Let's take it *through* our camp" is available.

- Hypothesis: the verb translated as *throw* in (15) lexicalizes the Route and Source heads, which the Allative case fails to lexicalize.

- Summarizing the picture so far:

(22)

	V	Route	Source	Goal	Place
Finnish	verb	PROL			
Persian	verb		*æz*		
Tabasaran	verb	*uḷtur*	ABL		SUP
Kayardild		verb		ALL	
Czech	verb		*pro*		P+INS

- Three more examples of possible partitionings:
  - In Slovak, Route expressions contain a special preposition that combines with a GoalP.

    (23) Slovak (data from P.Caha, p.c.)
    Na Forum Roman-um vstupujeme po-pod oblúk-∅ Tita.
    on Forum Romanum-ACC *enter*.1PL *po-under arch*-ACC *of.Tito*
    'We entered Forum Romanum via under Tito's arch.'

  - Without *po*, the PP has a Goal reading.

    (24) Slamu dal pod stôl-∅.
    hay put.3SG *under table*-ACC
    'He put the hay under the table.'

  - In Yukatek Maya, there are only two spatial prepositions *ich* 'in' and *ti'* 'at' which express exclusively Locations.

    (25) Yukatek Maya (Bohnemeyer and Stolz 2006)
    Le=kàaro=o' ti'=yàan ich le=kàaha=o'
    DET=*cart*=DIST PREP=*exist*.3SG *in* DET=*box*=DIST
    'The cart, it is in the box.'

  - To express motion, Yukatek Maya uses special "path-verbs."

    (26) Yukatek Maya (Bohnemeyer in prep)
    Le=ríiyo=o' h-máan ich le=bàaye=o'.
    DET=*river*=DIST PRV-*pass*.3SG *in* DET=*valley*=DIST
    'The river, it passed through the valley.'

– In Tetun Dili, there is verb serialization: manner of motion verbs (*walk, run*) combine with verbs expressing path (*enter, exit*).

(27) Tetun Dili (Hajek 2006:244)
ami lao esik ponti.
1PL.EXC *walk cross bridge*
'We walked across the bridge.'

- The lexicalizations in Slovak, Yukatek Maya and Tetun Dili can then be represented as follows:

(28)

	V	Route	Source	Goal	Place
Slovak	verb		*po*	P+ACC	
Yukatek Maya	verb				*ich*
Tetun Dili	verb				

- The stretch between V and Place can be carved up in eight other ways depending on how many morpheme borders the Route expression contains and where the "cuts" fall.

V		Route		Source		Goal		Place	
1									Tetun Dili
2	|								Finnish
3			|						Persian
4					|				Kayardild
5							|		Yukatek
6	|				|				Slovak
7	|						|		Czech
8	|		|						
9			|		|				
10			|				|		
11					|		|		
12	|		|				|		Tabasaran
13	|		|		|				
14	|				|		|		
15			|		|		|		
16	|		|		|		|		

Table 4.2: Possible partitionings of a Route structure

4.2.2 Source expressions: lexicalization patterns

- There are in total eight logically possible ways to partition the syntactic structure shown in Table 4.3.

	V	Source	Goal	Place	
1					Mandarin
2	|				English
3		|			
4				|	Yukatek
5	|	|			Laz
6	|			|	Lezgian
7		|		|	
8	|	|		|	Hua?

Table 4.3: Possible partitionings of a Source structure

- The first lexicalization possibility is found in Mandarin Chinese (data from Chen and Guo 2009:1751).

  (29) Wǒ pǎo chū le chúfáng.
  I run exit PERF *kitchen*
  'I ran out of the kitchen.'

- The second lexicalization possibility is represented by English.

  (30) He ran from the house.

- I have not encountered an example of the third pattern: a language where "Source-verbs" combine with Goal complements to form Source expressions.

- Yukatek Maya is a good candidate for lexicalization patterns 4, since its spatial PPs express only Location, as claimed in Bohnemeyer and Stolz (2006).

  (31) e=kàaro=o' h-hòok ich le=kàaha=o'.
  DET=*cart*=DIST PRV-*exit.*3SG *in* DET=*box*=DIST
  'The cart, it exited (lit. in) the box.'

- An example of the fifth lexicalization pattern is found in the Kartvelian language Laz. Since it involves a case of spurious syncretism, we will investigate it more thoroughly.

- Laz has two spatial cases (data from Broschart and Dawuda 1999):

– the null-marked Locative with the phonologically null exponent -∅

(32) Peteri livadi-∅ on.
Peter garden-LOC COPULA.3SG
'Peter is in the garden.'

– the Motative case, whose ending is *-şa*. The latter is claimed to be used both in Goal and Source expressions.

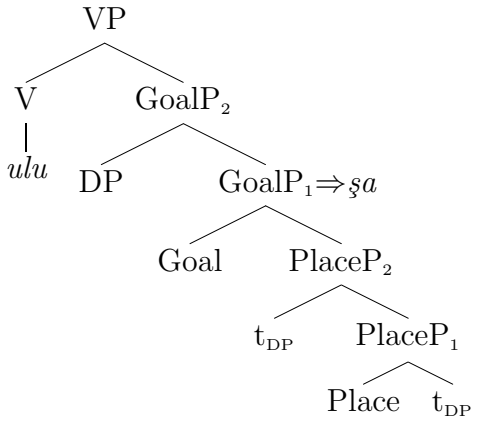
(33) a. Peteri oxori-şa ulu-n.
Peter home-MOT *go*-3.SG.PRES
'Peter goes home.'
b. Peteri oxori-şa mulu-n.
Peter home-MOT *come*-3SG.PRES
'Peter comes from home.'

- In the Source example, there is a morpheme *m-* prefixed to the verb, missing in the Goal example.
- Can the Motative spell out both GoalP and SourceP (real syncretism), or does is spell out just GoalP (spurious syncretism)?
- According to the data elicited in Kutscher (2001; 2010), the only possible reading of an *unprefixed* verb taking a Motative DP is one of Goal of motion, and never Source of motion.

(34) Oxori-şa ulu-n.
house-MOT *go*-3SG.PRES
'S/he goes into the house.'
*'S/he goes out of the house.' (Kutscher 2010)

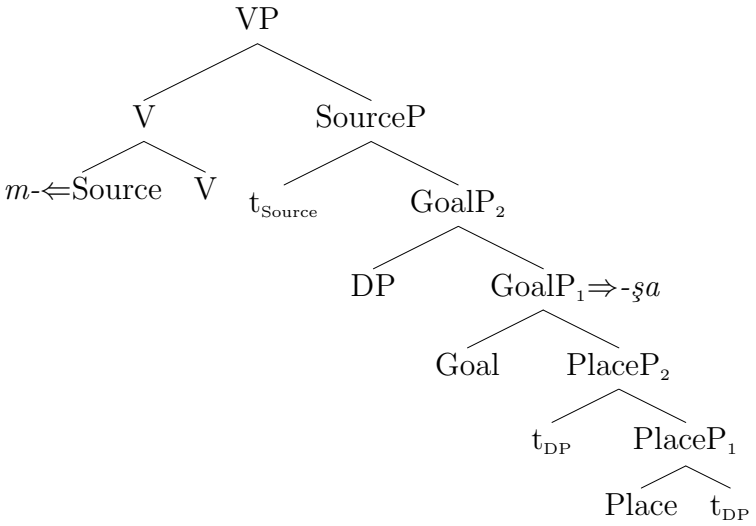
- This strongly suggests that the Motative case ending *-şa* expresses Goal paths only, that is, it spells out the structure as high as the GoalP:

(35)



- If the Motative lexicalizes only up to GoalP, then the Source meaning in (33b) must be contributed by the prefix *m-*
- The prefix *m-* spells out the Source head in Laz.

(36)



- The fifth lexicalization pattern can be found in the language Lezgian, where the Source suffix *-aj* is stacked on top of the locative structure.

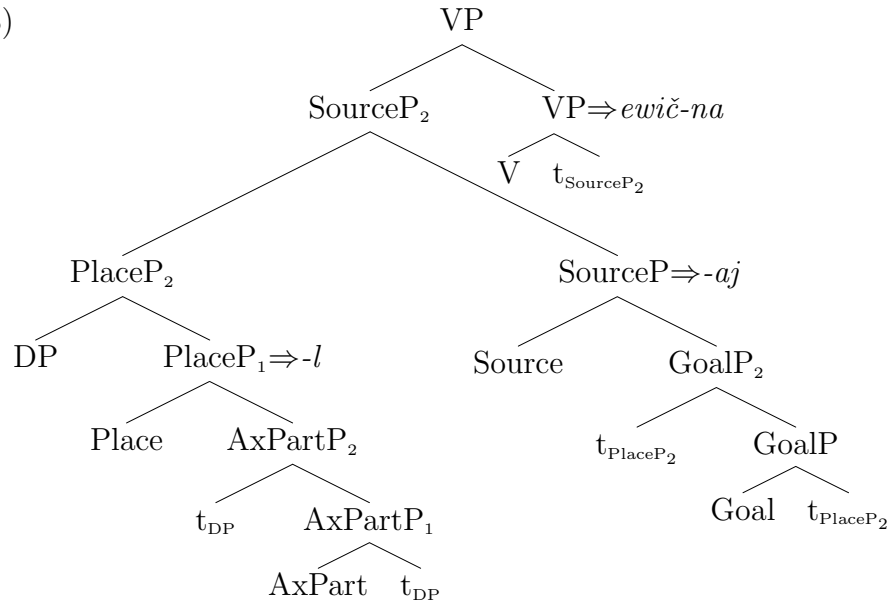
(37) Lezgian (data from Haspelmath 1993, my glossing)

a. Čur.a-l wad jac amiq'-na.
pasture.ERG-ON *five oxen stay*-PAST
'Five oxen were still on the pasture.'

b. Nurali buba balk'an.di-l-aj ewič-na.
Nurali father horse.ERG-ON-SOURCE *descend*-PAST
'Father Nurali got off the horse.'

- The tree diagram corresponding to the example in (37b) is shown in (38).

(38)



- Until now, I have not come across the lexicalization pattern presented in row 7 of Table 4.3.
- Finally, a probable candidate for the lexicalization presented in the last row in Table 4.3 is the Papuan language Hua.
  - According to Kibrik (2002:49), Hua has two locative suffixes: *vi'* 'in', and *-ro'* 'at.'
  - In Goal expressions, the morpheme *-ga* is added to the locative suffixes deriving *vin-ga* and *ro-ga*.
  - In Source expressions, the morpheme *-ri* is attached to the Goal marker thus forming *vin-ga-ri'* and *ro-ga-ri'*.
- Haiman (1980) however differs in his analysis of the Hua spatial morphemes and suggests that the presence of the morpheme *-ga* is only optional in Source expressions, as shown in (39) (my glossing).

(39) zu-ro(-ga)-ri' oe.
work-AT-TO-FROM *come.*1SG
'I have come from work.' (Haiman 1980:234)

- The lexicalizations of a Source expression can be summed up in the following way:[2]

[2]Assuming that the analysis of Kibrik 2002 for Hua is correct

(40)

	V	Source	Goal	Place
Mandarin	verb			
English	verb	*from*		
Yukatek Maya	verb			*ich*
Laz	verb	*m-*	MOT	
Lezgian	verb	*-aj*		*-l*
Hua	verb	*-ri'*	*-ga*	*-ro'*

4.2.3 Goal expressions: lexicalization patterns

- There are four general strategies to spell out a Goal path, shown in Table 4.4.

V	Goal	Place	
1			Thai
2	|		Evenki
3		|	Yukatek
4	|	|	Tobati

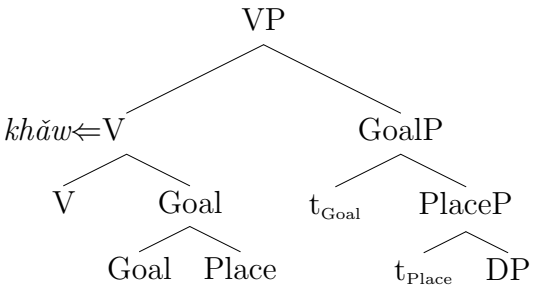
Table 4.4: Possible partitionings of a Goal structure

- The first pattern is common in serial verb languages, example from Thai (Zlatev and Yangklang 2004:163).

(41) chán khăw hɔ̌ŋ.
I enter room
'I went into the room.'

- The path-verb *khăw* 'to enter' lexicalizes the Goal and Place projections, in addition to the verbal projection.

(42)

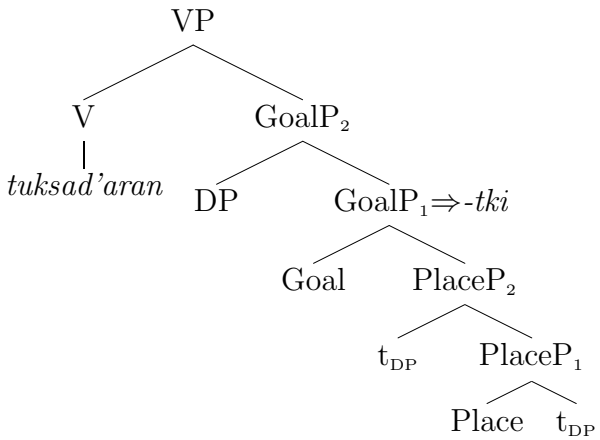


- The second lexicalization strategy is exemplified by Evenki (data from Nedjalkov 1997:170).

(43) Bejumimni hokto-tki tuksa-d'ara-n.
hunter *road*-ALL *run*-PRES-3SG
'The hunter is running to(wards) the road.'

- The Allative ending *-tki* spells out the Place and Goal heads:

(44)

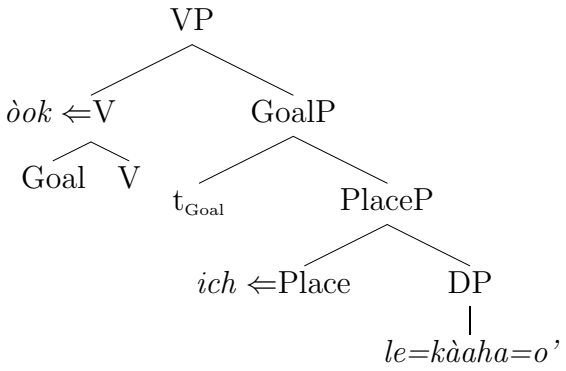


- The third lexicalization strategy can be found in Yukatek Maya, where the verb encodes the path (data from Bohnemeyer and Báez 2008).

(45) Le=kàaro=o' h-òok ich le=kàaha=o'.
DET=*cart*=DIST PRV-*enter*.3SG *in* DET=*box*=DIST
'The cart, it entered (lit. in) the box.'

- The corresponding tree diagram in shown in (46) (see also the analysis of Goal expressions in Son and Svenonius 2008).

(46)

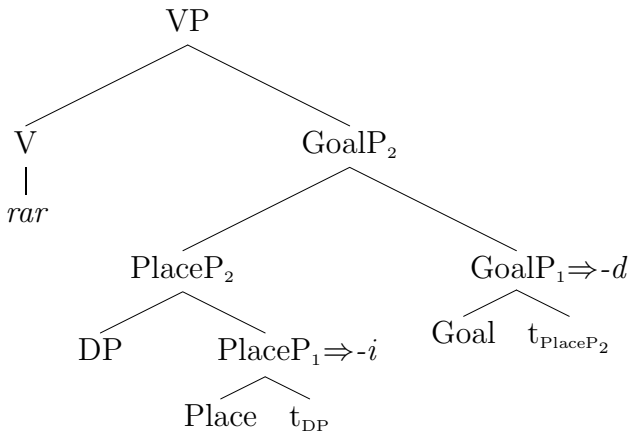


- Finally, a language exemplifying the fourth lexicalization pattern, is the Austronesian language Tobati.
- In Tobati, the Allative suffix *-d* is stacked onto the Locative *-i* (data from Donohue 2002:199-200).

(47) a. Ntric tad-i nanac.
1SG *sea*-LOC *swim.*PL
'They are swimming in the sea.'
b. Nyiu tad-i-d rar.
coconut sea-LOC-ALL *fell*
'The coconut fell into the sea.'

- The structure for the Tobati example in (47b) is presented below.

(48)



- The situation can be summarized as follows.

(49)

	V	Goal	Place
Thai	verb		
Evenki	verb	ALL	
Yukatek Maya	verb		*ich*
Tobati	verb	*-d*	*-i*

Lecture 5

Typology of syncretism patterns

5.1 How to tease apart real from spurious syncretisms

- Traditionally, syncretism is understood as the failure of a given formative to make a morphosyntactic distinction (Spencer 1991, Baerman et al. 2005).
- An example for such a lack of distinction can be found in Georgian, which, according to Creissels (2008), syncretizes Location and Goal of motion.

	IN	AT
Location Goal	*-ši*	*-tan*
Source	*-dan*	*-gan*

Table 5.1: Locative=Goal syncretism in Georgian (Creissels 2008)

- The definition of syncretism adopted in the previous lecture, i.e., as an instance of *structural ambiguity*, however, raises the question whether the Inessive=Illative and Adessive=Allative syncretism in Georgian is real.
- The question is whether *-ši* and *-tan* can express both Location and Goal of motion *by themselves*.
  - If they cannot, then there is no syncretism.
  - If they do, then the Location/Goal ambiguity should arise in the same context, i.e., in a combination with the same verb.
- No minimal pairs in grammars. Some data below taken from Vogt (1971), featuring *different verbs*:

(1) a. kalak-ši vcxovrob.
town-ŠI *live*
'I live in the town.'

b. kalak-ši mivdavar.
town-ŠI go.PAST
'I went to the town.'

(2) a. čems megobar-tan viq'avi.
I.GEN *friend*-TAN *was*
'I was at my friend's place.'
b. čems megobar-tan mivedi.
I.GEN *friend*-TAN *go*.PERF
'I have gone to my friend's place.'

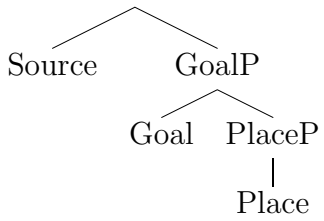
- In order to probe into the potential Location-Goal syncretism, it is necessary to create an ambiguous sentence of the sort found in English.

(3) The mouse ran under the table. (Location or Goal)

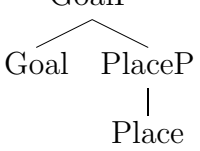
5.2 Possible and impossible syncretisms

5.2.1 *ABA

- Syncretisms can target only *adjacent* heads in the syntactic structure—an idea elaborated in detail by Caha (2008).
- Let us assume the hypothetical lexical entries in (4).

(4) a. $a \Leftrightarrow <$ 

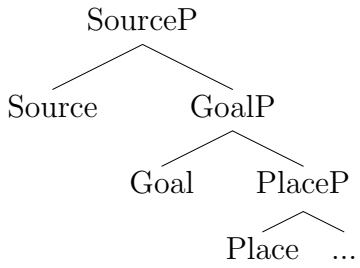
$>$

b. $b \Leftrightarrow <$ 

$>$

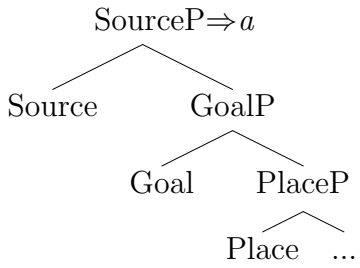
- Consider how a language with such entries lexicalizes a Source phrase with the structure in (5).

(5)



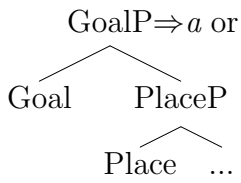
- There is only one lexical entry which is eligible for insertion at the SourceP node—the entry *a*—because it is the only entry which is specified for a constituent containing that node.

(6)



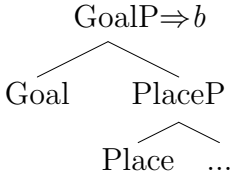
- Concerning the Goal phrase, there are two items which can be used to spell it out: *a* and *b*.

(7)



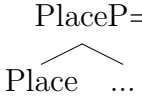
- The *Elsewhere Principle* enforces the use of the more highly specified entry *b*

(8)



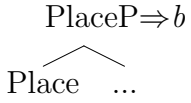
- The same competition between *a* and *b* arises for the lexicalization of a Locative phrase, since they both contain PlaceP.

(9)



- The winner is again *b*, because it contains fewer superfluous features (one) than *a* (two).

(10)

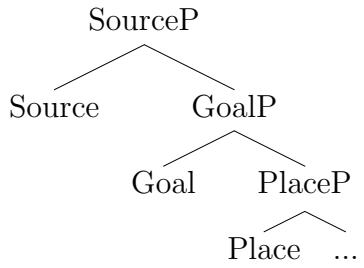


- The result is a paradigm of the shape *abb*, where *a* spells out the biggest Source structure and *b* spells out both the intermediate-sized Goal structure and the smallest Locative structure.
- Importantly, *a* cannot be used to lexicalize the smallest Locative structure because it loses the competition with *b* by the *Elsewhere Principle*.
- This is the gist of the *ABA generalization of Bobaljik (2007) and Caha (2008).

5.2.2 *A&¬A

- The structure of Source paths — the Source head applies to a Goal structure (Pantcheva 2010):

(11)



- Pantcheva (2011) proposes that the Source head is the locus of a semantic reversal operation which applies to the Goal phrase.
- A Source path is the "opposite" (or the negation) of a Goal path.
- A Source=Goal syncretism would involve the availability of a lexical item that expresses a given meaning and its exact opposite.
- Perhaps pragmatically unacceptable.
- If true, we would expect that the Goal=Source syncretism is unattested, although it is grammatical.
- This does not exclude the possibility that a *given lexical item a* includes the features <Source> and <Goal> — as long as there is a disambiguating lexical item *b* that limits the use of *a* to one of the spatial roles only, the item *a* is not used in a contradictory way.

5.2.3 Syncretism typology

- These restrictions on syncretisms reduce the 14 potentially possible syncretism patterns involving Location, Goal, Source and Route to only 4.

Type 1	Location≠Goal≠Source≠Route
Type 2	Location≠Goal≠Source=Route
Type 3	Location=Goal≠Source≠Route
Type 4	Location=Goal≠Source=Route

Table 5.2: Possible syncretisms

- The prohibited syncretism:

Type 5	*Location=Source≠Goal≠Route	*ABA
Type 6	*Location=Source≠Goal=Route	*ABA
Type 7	*Location=Route=Goal≠Source	*ABA
Type 8	*Location=Route=Source≠Goal	*ABA
Type 9	*Location=Route≠Goal≠Source	*ABA
Type 10	*Location=Route≠Goal=Source	*ABA and *A&¬A
Type 11	*Location≠Goal=Source=Route	*A&¬A
Type 12	*Location≠Goal=Source≠Route	*A&¬A
Type 13	*Location=Goal=Source≠Route	*A&¬A
Type 14	*Location=Goal=Source=Route	*A&¬A

Table 5.3: Impossible syncretisms

5.3 Testing the predictions

- There are only four possible syncretism patterns involving the notions of Location, Goal, Source and Route.
- Verifying this claim requires a great deal of fieldwork, since grammars rarely include data detailed enough to allow for a dissociation between real and spurious syncretisms.
  - Syncretisms predicted to exist are hard to find.
  - Syncretisms predicted to be impossible are claimed to exist.
- By and large, linguistic studies dealing with the expression of the spatial roles Location, Goal and Source (Creissels 2006; 2008, Radkevich 2009, Nikitina 2009, Lestrade 2010) confirm the asymmetry in the cross-linguistic distribution of the logically possible syncretism patterns.
- This assymmetry has been most concisely stated by Andrews (1985).

> A particularly interesting tendency [...] is for certain groups of notions but not others to be expressed by the same marker in many different languages. Thus sometimes one finds the same NP-marker coding the Locative, Goal and Source roles [...], sometimes one finds Locative and Goal expressed by the same

> marker, with a different one for Source [...], and sometimes, as in Warlpiri, different markers are used for all three locative roles. But one doesn't seem to find one marker used for Locative and Source, with a second for Goal; or one for Source and Goal, with a different for Locative.
>
> (Andrews 1985:97)

- The results from typological studies go in the same direction.

	Blake (1977)	Noonan (2008)	Pantcheva (2010)	Rice and Kabata (2007)
L≠G≠S	91% (77/85)	33% (25/76)	66% (35/53)	—
L=G≠S	9% (8/85)	58% (44/76)	34% (18/53)	23% (10/44)
L=G=S	0% (0/85)	4% (3/76)	11% (7/53)	11% (5/44)
L=S≠G	0% (0/85)	2,5% (2/76)	0% (0/53)	—
L≠G=S	0% (0/85)	2,5% (2/76)	0% (0/53)	0% (0/44)

Table 5.4: Pattern of syncretism for the lexicalization of Location, Goal, and Source

- The proposed distinction between real and spurious syncretism raises the question of how many of the syncretism cases in Table 5.4 involve truly ambiguous spatial markers.
- A closer inspection reveals that many of them turn out to be spurious.
  - Pantcheva (2010) includes Classical Tibetan in the group of languages with a Location=Goal≠Source syncretisms, as suggested in DeLancey (2003).
  - However, Beyer (1992:268) states that, although Classical Tibetan uses "the same locus particles with verbs of location and verbs of motion[, t]here is no confusion because, of course, the verbs are different."
  - If in Classical Tibetan, the interpretation of a noun marked by *-la* (general location) or *-na* (interior location) is always disambiguated by the verbs, then we are plausibly dealing with a case of spurious syncretism.
  - Rice and Kabata (2007) present Tagalog as a language where the unique spatial marker *sa* carries a Locative, an Allative and an Ablative function.
  - According to Schachter and Otanes (1972:260), Source expressions are built of a noun marked by *sa* combined with one of the following verbs or adverbs: *buhat*, *galing*, *mula* or *tubo*, all translated as 'from.'
  - The fact that a supporting *from*-morpheme is needed in order to construct a Source expression suggests that the Goal=Source syncretisms in Talagog is spurious.
  - Similarly, Pantcheva (2010) takes the Tibeto-Burman language Lahu to have a Location=Goal=Source syncretisms, since it has several noun particles of general locative meaning that are neutral with respect to directionality.

– However, their interpretation depends entirely on the built in semantic features of the clause's verb, as stated in Matisoff (2003:162).

(12) a. há-qō lo mɨ chɛ̆ ve.
cave *sit* PROG PU
'He is sitting in the cave.' (Location)
b. há-qō lo lɔ̀ʔ e ɔ̀.
cave *enter* PV PV
'He has already gone into the cave.' (Goal)
c. há-q̄o lo tɔ̆ʔ e ɔ̀.
cave *emerge* PV PV
'He has already come out of the cave.' (Source)

– It seems to generally hold that languages with a Location=Goal=Place syncretism have a unique spatial marker with a *default locative* interpretation. In order for this marker to acquire a Source or a Goal meaning, it has to occur with the right verb.

– Similar conclusions have been made also for other languages, e.g., the Bantu language Tswana (Creissels 2006), Yukatek Maya (Bohnemeyer and Stolz 2006).

5.3.1 The possible patterns of syncretisms: some examples

Type 1	Location≠Goal≠Source≠Route
Type 2	Location≠Goal≠Source=Route
Type 3	Location=Goal≠Source≠Route
Type 4	Location=Goal≠Source=Route

Table 5.5: Possible syncretisms (repeated from Table 5.2)

Location≠Goal≠Source≠Route

- In English, the prepositions *at, to, from* and *via* give rise to different spatial interpretations, even when combined with the same verb.

(13) a. I ran at the stadium. (Location)
b. I ran to the stadium. (Goal)
c. I ran from the stadium. (Source)
d. I ran via the stadium. (Route)

Location≠Goal≠Source=Route

- The Hindi Ablative marker *-see* syncretizes Source and Route. For Goal phrases, Hindi uses the Dative marker *-koo* and for Locative phrass it uses one of the locative markers *-mee* 'in' or *-par* 'on' (data from Narasimhan 2008).

(14) a. kamree-mee
room-LOC
'in the room'(Location
b. pharsh-par
floor-LOC
'on the floor' (Location)

(15) meez-koo
table-DAT
'to the table'(Goal)

(16) a. baccaa kaar-ke saamne-see calaa.
child *car*-GEN *front*-ABL *walk*.PERF
'The child walked from/via in front of the car.'(Source or Route)
b. ciRijaa Jhiil-ke upar-see uRi.
bird *lake*-GEN *above*-ABL *flew*
'The bird flew from/via above the lake.' (Source or Route)

- Other languages which have been claimed to have a Source=Route syncretism, but no Location=Goal or Goal=Source syncretism are Qiang, Tibeto-Burman (LaPolla 2003), Karata, Daghestanian (Magomedbekova 1971), Basque, isolate (Hualde and de Urbina 2003), and Marathi, Indo-Iranian (Pandharipande 1997).
- Unfortunately, the data presented in these sources do not allow to determine whether the Source=Route syncretism in these languages is real or spurious

Location=Goal≠Source≠Route

- It is surprisingly rare to come across an undoubtedly real Location=Goal syncretism, although the results from the typological studies show that this is the second most common syncretism pattern cross-linguistically.
- A good candidate is Tagalog, since "[i]n a sentence with a verbal predicate, a *sa* phrase is sometimes ambiguously interpretable as a locative adverb or a directional complement" (Schachter and Otanes 1972:450).
- Another language where this syncretism type is found is French.

(17) French (data from Nikitina 2009, confirmed by M. Starke, p.c.)
a. J'ai couru au stade.
I.have run *at/to.the stadium*
'I ran at the stadium' (Location)
'I ran to the stadium' (Goal)
b. J'ai couru du stade.
I.have run *from.the stadium*
'I ran from the stadium' (Source)

Location=Goal≠Source=Route

- I have not been able to find a good example of such a syncretism type, for there is a double impediment.
  - First, the information provided in grammars about Route expressions is very sparse.
  - Second, there is the usual issue with the lacking information about whether a given syncretism is real or spurious obtains.

5.3.2 The impossible patterns of syncretisms: some counterexamples

- There are two general types of syncretisms that are predicted to be impossible:
  - *ABA-type of syncretism, where two heads are syncretic across another
  - a syncretism of Goal and Source, i.e., a syncretism involving two "opposite" notions.

Goal=Source

- Starting with the Goal=Source syncretism, Laz is a language which has been reported to have a Motative case ambiguous between the two notions (Broschart and Dawuda 1999).
- As we saw in the previous lecture, the Goal=Source syncretism in Laz is more correctly analyzed as a spurious syncretism.
- The Location=Goal=Source syncretisms reported in Rice and Kabata (2007), Pantcheva (2010), and Wälchli and Zuñiga (2006), that I have been able to check are spurious, too.

Location=Source≠Goal

- There are several languages which have been claimed to exhibit this syncretism pattern:
  - Veps (Radkevich 2009)
  - Dinka (Creissels 2008, Nikitina 2009, Lestrade 2010)
  - Nivkh (Nikitina 2009, Radkevich 2009, Lestrade 2010)
  - Kanuri and Old Georgian (Creissels 2008, Lestrade 2010)
  - Iraqw (Creissels 2006, Lestrade 2010)
  - Nukuoro (Lestrade 2010)
- The Location=Source syncretism in Veps is rather a terminological issue stemming from the particular labeling of two spatial cases: Addesive-Ablative and Inessive-Elative.
- Despite their names the two cases have purely locative functions.

(18) Veps (Zajtseva 1981, my glossing)

a. käde-s
hand-INESS.ELAT
'in the hand' (Locative only)

b. käde-s-pei
hand-INESS.ELAT-FROM
'out of the hand' (Source only)

- Dinka and Nivkh have a greater potential of being real counterexamples, however, the available data does not provide clear evidence for such a claim.
- Consider the Dinka data in (19).

(19) Dinka (Andersen 2002)

a. My̤e̤e̤t̪ a̰-tɔ̤ mɛ́ɛ̤ɛc.
food D-*be.present fire.*INESS
'The food is on the fire.' (Location)

b. Rɛ̤ɛc a̰-mṳul bɛ̤y mɛ́ɛ̤ɛc.
fish D-*crawl out.*ALL *fire.*ABL
'The fish is crawling out from the fire.' (Source)

- The form of the noun *mɛ́ɛ̤ɛc* 'fire.INESS/ABL' is indeed identical in both sentences.
- The sentence in (19b), however, suggests that *mɛ́ɛ̤ɛc* by itself seems not to be enough, since we need the support of a special Allative-marked particle *bɛ̤y* to get the Source reading.
- The doubts are reinforced by the data in (20).

(20) Dinka (Nebel 1948)

a. Yɛk atɔ luɛk.
*cattle is byre.*LOC
'The cattle is in the byre.' (Location)

b. Weŋ aci riŋ luɛk.
cow PAST *run byre.*LOC
'The cow ran into the byre.' (Goal)

- If Dinka really had a Location=Source syncretism, then the expected interpretation of the sentence in (20b) would be Source-directional and not Goal-directional, contrary to the fact.
- The only data on Nivkh that I found is also that cited by Nikitina, taken from Gruzdeva (1998).

(21) Nivkh (Gruzdeva 1998)

a. T'ivlaŋ čag-ux ŋat'x-Ø vezla-d.
cold *water*-LOC/ABL *foot*-NOM *cramp*-FIN
'[I] have a cramp in [my] foot in the cold water.'
b. Umgu-Ø n'o-x p'u-d'.
woman-NOM *barn*-LOC/ABL *come.out*-FIN
'A woman came out from the barn.'

- As the data shows, the Source reading of a locative expression is available when the verb encodes a Source path (e.g., *come out*).
- In sum, it is debatable whether Dinka and Nivkh really exhibit the syncretism pattern Location=Source≠Goal.
- The same lack of convincing data marks the other languages mentioned as having a Location=Source≠Goal syncretisms.
- (22) Nukuoro (Lestrade 2010, citing Ross Clark, p.c.)
  a. Kai kilaateu ka teletele ai i te moana.
  and they PAST *sail.sail* PRT *on the sea*
  'And they kept sailing on the open sea.' (Location)
  b. Ka hulo kee i Kapingamaalangi.
  PAST *go*.PL *away from K.*
  '[They] left Kapingamarangi.' (Source)
  c. Ka lava ka hulo ki Luuku ma Motolako.
  PAST *finish* PAST *go*.PL *to L.* *and M.*
  'Then they went to Truk and the Mortlocks.' (Goal)
- While it is true that the same preposition *i* is used in both Locative and Source expressions in Nukuoro, it is not excluded that the particle *kee* translated as 'away' present only in (22b) is the lexical item that lexicalizes the Goal and Source heads.
- If this is so, then the Nukuoro Location=Source syncretism is a spurious one.
- North Sámi represents the most serious challenge for the *Location=Source≠Goal syncretism that I have come across.
- The Locative case in Northern Sami is said to syncretize Inessive and Elative (i.e., Location and Source), while it has a separate Illative (Goal) case.
- In the Locative singular, marked by *-s(t)*, the Inessive-Elative syncretism is seen as an accidental homophony resulting from the phonological development of the Proto-Sámi Inessive and Elative endings *-*snē* and *-*stē*, respectively.
- The problem is that the Inessive-Elative syncretism has been extended to other parts of the grammar: in the plural paradigm and with spatial adverbs and postpositions (Sammallahti 1998, Hansson 2007).

- Svenonius (2009) shows that the Source reading is available whenever the Locative is not and requires the presence of an additional element encoding transition in some way.

(23) North Sámi Locative (data from Svenonius 2009)

a. Joavnna viegai viesus.
Jon *ran* *house.*LOC
'Jon ran in the house.' (Locative)

b. Joavnna viehka-l-ii viesus.
Jon *run*-SUB-PAST *house.*LOC
'Jon suddenly ran off from the house.' (Source)

- Svenonius concludes that the North Sámi Locative phrase always spells out a PlaceP, even in Source expressions, thus making the Location=Source syncretism in North Sámi a spurious one.

Bibliography

Abels, Klaus and Peter Kinyua Muriungi. 2008. The focus marker in Kîîtharaka: Syntax and semantics. *Lingua* 118 5: 687–731.

Andersen, Torben. 2002. Case inflection and nominal head marking in Dinka. *Journal of African Languages and Linguistics* 23 1: 1–30.

Andrews, Avery. 1985. The major functions of the noun phrase. In *Language Typology and Syntactic Description*, edited by Timothy Shopen, vol. 1, pp. 62–154. Cambridge University Press, Cambridge.

Baerman, Matthew, Dunstan Brown, and Greville G. Corbett. 2005. *The Syntax-Morphology Interface: A Study of Syncretism*, vol. 109 of *Cambridge Studies in Linguistics*. Cambridge University Press, Cambridge.

Bašić, Monika. 2007. Serbian Ps with and without *iz* and the Superset Principle. In *Tromsø Working Papers on Language and Linguistics: Nordlyd 34.2,* Special issue on Space, Motion, and Result, edited by Monika Bašić, Marina Pantcheva, Minjeong Son, and Peter Svenonius, pp. 300–319. University of Tromsø, Tromsø. CASTL, Tromsø. Available at http://www.ub.uit.no/baser/nordlyd/.

Beyer, Stephan V. 1992. *The Classical Tibetan Language*. SUNY Series in Buddhist Studies. State University of New York Press.

Blake, Barry J. 1977. *Case Marking in Australian Languages*. No. 23 in Linguistic Series. Australian Institute of Aboriginal Studies, Canberra.

Blake, Barry J. 1994. *Case*. Cambridge University Press, Cambridge, second edn.

Bobaljik, Jonathan. 2007. On comparative suppletion. Ms., University of Connecticut.

Bohnemeyer, Jürgen. in prep. When going means becoming gone: Framing motion as state change in Yukatek. Available at http://www.acsu.buffalo.edu/∼jb77/CoL_model_chapter_yuk.pdf.

Bohnemeyer, Jürgen and Gabriela Pérez Báez. 2008. Object to path in Mesoamerica: Semantic composition of locative and motion descriptions in Yucatec Maya and Juchitán Zapotec. In *Memoria del IX Encuentro Internacional De Lingüística En El Noroeste*, vol. 2, pp. 269–284. Editorial UniSon, Hermosillo, Sonora, Mexico.

Bohnemeyer, Jürgen and Christel Stolz. 2006. Spatial reference in Yukatek Maya: A survey. In *Grammars of Space*, edited by Stephen C. Levinson and David P. Wilkins, pp. 273–310. Cambridge University Press, Cambridge.

Broschart, Jürgen and Carmen Dawuda. 1999. Beyond nouns and verbs: A typological study in lexical categorization. *Arbeiten des Sonderforschungsbereichs 282 "Theorie des Lexikons"* 113.

Caha, Pavel. 2008. The case hierarchy as functional sequence. In *Scales*, edited by Marc Richards and Andrej L. Malchukov, no. 86 in Linguistische Arbeits Berichte, pp. 247–276. University of Leipzig, Leipzig.

Caha, Pavel. 2009a. Classical Armenian declension. In *Nordlyd 36.1: Special issue on Nanosyntax*, edited by Peter Svenonius, Gillian Ramchand, Michal Starke, and Knut Tarald Taraldsen, pp. 77–112. University of Tromsø, Tromsø. Available at www.ub.uit.no/munin/nordlyd/.

Caha, Pavel. 2009b. *The Nanosyntax of Case*. Ph.D. thesis, University of Tromsø.

Caha, Pavel. 2010. The parameters of case marking and spell-out driven movement. In *Linguistic Variation Yearbook 2010*, edited by Jeroen Van Craenenbroeck. John Benjamins.

Chen, Lian and Jiansheng Guo. 2009. Motion events in chinese novels: Evidence for an equipollently-framed language. *Journal of Pragmatics* 41 9: 1749–1766.

Chomsky, Noam. 1995. *The Minimalist Program*. Current Studies in Linguistics, Cambridge, Massachusetts (CSLing); 28. MIT Press, Cambridge, Massachusetts.

Chomsky, Noam. 2001. Derivation by phase. In *Ken Hale: A Life in Language*, edited by Michael Kenstowicz, pp. 1–52. MIT Press, Cambridge, Massachusetts.

Chung, Inkie. 2007. Suppletive negation in Korean and Distributed Morphology. *Lingua* 117 1: 95–148.

Cinque, Guglielmo. 2005. Deriving Greenberg's Universal 20 and its exceptions. *Linguistic Inquiry* 36 3: 315–332.

Comrie, Bernard. 1999. Spatial cases in Daghestanian languages. *Sprachtypologie und Universalienforschung* 52 2: 108–117.

Creissels, Denis. 2006. Encoding the distinction between location, source and destination: a typological study. In *Space in Languages*, edited by Maya Hickmann and Stéphane Robert, Typological Studies in Language, Vol. 66, pp. 19–28. John Benjamins, Amsterdam/Philadelphia.

Creissels, Denis. 2008. Spatial cases. In *The Oxford Handbook of Case*, edited by Andrej Malchukov and Andrew Spencer, pp. 609–625. Oxford University Press, New York.

DeLancey, Scott. 2003. Classical Tibetan. In *The Sino-Tibetan Languages*, edited by Graham Thurgood and Randy J. LaPolla, pp. 255–269. Routledge, London and New York.

den Dikken, Marcel. 2010. On the functional structure of locative and directional PPs. In *The Cartography of Syntactic Structure, vol. 6*, edited by Guglielmo Cinque and Luigi Rizzi, pp. 74–126. Oxford University Press, New York.

Donohue, Mark. 2002. Tobati. In *The Oceanic Languages*, edited by John Lynch, Malcolm Ross, and Terry Crowley, Curzon Language Family Series, pp. 186–203. Curzon, Richmond, Surrey.

Evans, Nicholas. 1995. *A Grammar of Kayardild*. Mouton de Gruyter, Berlin.

Fábregas, Antonio. 2007. The Exhaustive Lexicalization Principle. In *Tromsø Working Papers on Language and Linguistics: Nordlyd 34.2,* Special issue on Space, Motion, and Result, edited by Monika Bašić, Marina Pantcheva, Minjeong Son, and Peter Svenonius, pp. 165–199. University of Tromsø, Tromsø. CASTL, Tromsø. Available at http://www.ub.uit.no/baser/nordlyd/.

Gruzdeva, Ekaterina. 1998. *Nivkh*, vol. 111 of *Languages of the World*. Lincom Europa, Munich.

Gudava, T.E. 1967a. *Багвалинский язык* [The Bagvalal Language]. In Языки народов СССР *[The Languages of the Peoples of the USSR]*, edited by V.V. Vinogradov, vol. 4, pp. 351–367. Наука [Nauka], Moscow.

Gudava, T.E. 1967b. *Годоберинкий язык* [The Godoberi language]. In Языки народов СССР *[The Languages of the Peoples of the USSR]*, edited by V.V. Vinogradov, vol. 4, pp. 307–321. Наука [Nauka], Moscow.

Haiman, John. 1980. *Hua: A Papuan Language of the Eastern Highlands of New Guinea*. No. 5 in Studies in Language Companion Series. John Benjamins.

Hajek, John. 2006. Serial verbs in Tetun Dili. In *Serial Verbs Constructions: A Cross-Linguistic Typology*, edited by Alexandra Y. Aikhenvald and Robert M. W. Dixon, Explorations in Linguistic Typology, pp. 239–253. Oxford University Press, Oxford.

Halle, Morris. 1997. Impoverishment and fission. In *Papers at the Interface*, edited by Benjamin Bruening, Yoonjung Kang, and Martha McGinnis, no. 30 in MITWPL, pp. 425–449. MIT, Cambridge, MA.

Halle, Morris and Alec Marantz. 1993. Distributed Morphology and the pieces of inflection. In *The View from Building 20: Essays in Linguistics in Honor of Sylvain Bromberger*, edited by Kenneth Hale and Samuel Jay Keyser, pp. 111–176. MIT Press, Cambridge, Massachusetts.

Halle, Morris and Alec Marantz. 1994. Some key features of Distributed Morphology. In *MIT Working Papers in Linguistics*, edited by Andrew Carnie and Heidi Harley (with Tony Bures), vol. 21, pp. 275–288. MIT Press, Cambridge, Massachusetts.

Hansson, Gunnar Oláfur. 2007. Productive syncretisms in Saami inflectional morphology. In *Saami Linguistics*, edited by Ida Toivonen and Diane Carlita Nelson, pp. 91–135. John Benjamins, Amsterdam and Philadelphia.

Harley, Heidi and Rolf Noyer. 1999. State-of-the-article: Distributed morphology. *GLOT International* 4 4: 3–9.

Haspelmath, Martin. 1993. *A Grammar of Lezgian*. No. 9 in Mouton Grammar Library. Mouton de Gruyter, Berlin.

Hualde, José Ignacio and Jon Ortiz de Urbina (eds.) . 2003. *A Grammar of Basque*. Mouton de Gruyter, Berlin/New York.

Kayne, Richard S. 1994. *The Antisymmetry of Syntax*. MIT Press, Cambridge, Massachusetts.

Kayne, Richard S. 2004. Here and there. In *Lexique, Syntaxe et Lexique-Grammaire/Syntax, Lexis & Lexicon-Grammar: Papers in Honor of Maurice Gross*, edited by C. Leclère, E. Laporte, M. Piot, and M. Silberztein, pp. 253–275. John Benjamins, Amsterdam.

Kayne, Richard S. 2008. Comparative syntax and the lexicon. DIUG lecture, University of Groningen, December 9/10, 2008. Available at *http://www.let.rug.nl/zwart/diug/docs/kaynediug.pdf*.

Kibrik, Aleksandr E. 2002. Nominal inflection galore: Daghestanian, with side glances at Europe and the world. In *Noun Phrase Structure in the Languages of Europe*, edited by Frans Plank, pp. 37–112. Mouton de Gryuter, Berlin.

Kiparsky, Paul. 1973. 'Elsewhere' in phonology. In *A Festschrift for Morris Halle*, edited by Paul Kiparsky and Steven Anderson, pp. 93–106. Holt, Rinehart and Winston, New York.

Koopman, Hilda. 2000. Prepositions, postpositions, circumpositions, and particles. In *The Syntax of Specifiers and Heads*, edited by Hilda Koopman, pp. 204–260. Routledge, London.

Kutscher, Silvia. 2001. *Nomen und nominalen Syntagma im Lasischen: Eine deskriptive Analyse des Dialekts von Ardeşen*. Lincom Europa, Munich.

Kutscher, Silvia. 2010. When 'towards' means 'away from': The case of directional-ablative syncretism in the Ardesen-variety of Laz (South-Caucasian). *Sprachtypologie und Universalienforschung* 63 2: 252–271.

LaPolla, Randy J. 2003. Qiang. In *The Sino-Tibetan Languages*, edited by Graham Thurgood and Randy J. LaPolla, pp. 573–587. Routledge, London and New York.

Lestrade, Sander. 2010. *The Space of Case*. Ph.D. thesis, Radboud University, Nijmegen.

Lundquist, Björn. 2008. *Nominalizations and Participles in Swedish*. Ph.D. thesis, University of Tromsø.

Magomedbekova, Zagidad. 1967. *Чамалинский язык* [The Chamalal language]. In Языки народов СССР *[The Languages of the Peoples of the USSR]*, edited by V.V. Vinogradov, vol. 4, pp. 384–402. Наука [Nauka], Moscow.

Magomedbekova, Zagidad. 1971. *Каратинский язык: граматицеский анализ, тексты, словарь [The Karata Language: Grammar Analysis, Texts, Glossary]*. Мецниереба [Mecniereba], Tbilisi.

Magometov, Aleksandr Arnarovich. 1965. *Табасаранский язык: исследование и тексты [The Tabasaran Language: Investigation and Texts]*. Мецниереба [Mecniereba], Tbilisi.

Mahootian, Shahrzad. 1997. *Persian*. Routledge, London.

Matisoff, James A. 2003. Lahu. In *The Sino-Tibetan Languages*, edited by Graham Thurgood and Randy J. LaPolla, pp. 208–221. Routledge, London and New York.

McCawley, James D. 1968. Lexical insertion in a transformational grammar without Deep Structure. In *Papers from the fourth regional meeting of the Chicago Linguistic Society*, edited by B. J Darden, C.-J. N. Bayley, and A. Davidson, pp. 71–80. University of Chicago, Chicago.

Muriungi, Peter Kinyua. 2008. *Phrasal movement inside Bantu verbs: Deriving affix scope and order in Kîîtharaka*. Ph.D. thesis, University of Tromsø.

Murkelinskij, G.B. 1967. *Лакский язык* [The Lak language]. In Языки народов СССР *[The Languages of the Peoples of the USSR]*, edited by V.V. Vinogradov, vol. 4, pp. 488–507. Наука [Nauka], Moscow.

Narasimhan, Bhuvana. 2008. Motion events and the lexicon: A case study of Hindi. *Lingua* 113: 123–160.

Nebel, A. 1948. *Dinka Grammar (Rek-Malual dialect) with texts and vocabulary*. Instituto Missioni Africane, Verona.

Nedjalkov, Igor. 1997. *Evenki*. Routledge, London and New York.

Neeleman, Ad and Kriszta Szendrői. 2007. Radical pro-drop and the morphology of pronouns. *Linguistic Inquiry* 38 4: 671–714.

Nikitina, Tatiana. 2009. Subcategorization pattern and lexical meaning of motion verbs: A study of the Source/Goal ambiguity. *Linguistics* 47 5: 1113–1141.

Noonan, Michael. 2008. Patterns of development, patterns of syncretism of relational morphology in the Bodic languages. In *The Role of Semantics and Pragmatics in the Development of Case*, edited by Jóhanna Bardal and Shobhana Cheliah, pp. 261–281. John Benjamins, Amsterdam.

Pandharipande, Rajeshwari. 1997. *Marathi*. Routledge, London.

Pantcheva, Marina. 2010. The syntactic structure of Locations, Goals and Sources. *Linguistics* 48: 1043–1082.

Pantcheva, Marina. 2011. *Decomposing Path: The Nanosyntax of Directional Expressions*. Ph.D. thesis, University of Tromø. To be defended on October 21, 2011. Available at *http://www.hum.uit.no/a/pantcheva/pub/pantchevathesis.pdf*.

Radkevich, Nina. 2009. Vocabulary insertion and the geometry of local cases. Available at http://ling.auf.net/lingBuzz/000958.

Ramchand, Gillian. 2008a. Lexical items in complex predications: Selection as underassociation. In *Tromsø Working Papers on Language and Linguistics: Nordlyd 35.1, special issue on Complex Predication*, edited by Peter Svenonius and Inna Tolskaya, pp. 115–141. University of Tromsø, Tromsø.

Ramchand, Gillian. 2008b. *Verb Meaning and the Lexicon: A First Phase Syntax*. Cambridge University Press.

Rice, Sally and Kaori Kabata. 2007. Crosslinguistic grammaticalization patterns of the ALLATIVE. *Linguistic Typology* 11: 451–514.

van Riemsdijk, Henk. 1990. Functional prepositions. In *Unity in Diversity*, edited by H. Pinkster and I. Gene, pp. 229–241. Foris, Dordrecht.

van Riemsdijk, Henk and Riny Huybregts. 2002. Location and locality. In *Progress in Grammar: Articles at the 20th Anniversary of the Comparison of Grammatical Models Group in Tilburg*, edited by Marc van Oostendorp and Elena Anagnostopoulou, pp. 1–23. Meertens Instituut, Amsterdam.

Sammallahti, Pekka. 1998. *The Saami Languages: An Introduction*. Davvi Girji OS, Kárásjohka.

Schachter, Paul and Fe T. Otanes. 1972. *Tagalog Reference Grammar*. University of California Press, Berkeley.

Son, Minjeong and Peter Svenonius. 2008. Microparameters of cross-linguistic variation: Directed motion and resultatives. In *Proccedings of the 27th West Coast Conference on Formal Linguistics*, edited by Natasha Abner and Jason Bishop, pp. 388–396. Cascadilla, Somerville, Ma.

Spencer, Andrew. 1991. *Morphological Theory: An Introduction to Word Structure in Generative Grammar*. Blackwell, Oxford.

Starke, Michal. 2005-2009. Nanosyntax. Class lectures, CASTL, University of Tromsø.

Starke, Michal. 2009. A short primer to a new approach to language. In *Nordlyd 36.1: Special issue on Nanosyntax*, edited by Peter Svenonius, Gillian Ramchand, Michal Starke, and Knut Tarald Taraldsen, pp. 1–6. University of Tromsø, Tromsø. Available at www.ub.uit.no/munin/nordlyd/.

Starke, Michal. 2011. Towards elegant parameters: Language variation reduces to the size of lexically stored trees. Transcipt from a talk at Barcelona Workshop on Linguistic Variation in the Minimalist Framework. Available at http://ling.auf.net/lingBuzz/001183.

Sulkala, Helena and Merja Karjalainen. 1992. *Finnish*. Routledge, London.

Svenonius, Peter. 2006. The emergence of Axial Parts. In *Tromsø Working Papers on Language and Linguistics: Nordlyd 33.1, special issue on Adpositions*, edited by Peter Svenonius, pp. 49–77. University of Tromsø, Tromsø.

Svenonius, Peter. 2009. Location and source in north sámi. Talk given at Arctic Languages: Syntax, Morphology, and Lexicon, September 24-26, 2009, University of Tromsø, September.

Svenonius, Peter. 2010. Spatial prepositions in English. In *The Cartography of Syntactic Structure, vol. 6*, edited by Guglielmo Cinque and Luigi Rizzi, pp. 127–160. Oxford University Press, Oxford. Prepublication draft available at http://ling.auf.net/lingBuzz/000001.

Svenonius, Peter, Gillian Ramchand, Michal Starke, and Knut Tarald Taraldsen (eds.) . 2009. *Nordlyd 36.1: Special issue on Nanosyntax*. University of Tromsø, Tromsø. Available at www.ub.uit.no/munin/nordlyd/.

Taraldsen, Knut Tarald. 2010. The nanosyntax of Nguni noun class prefixes and concords. *Lingua* 120: 1522–1548.

Vogt, Hans. 1971. *Grammaire de la langue géorgienne*. Universitetsforlaget, Oslo.

Wälchli, Bernard and Fernando Zuñiga. 2006. Source-goal (in)difference and the typology of motion events in the clause. *Sprachtypologie und Universalienforschung* 59 3: 284–303.

Weerman, Fred and Jacqueline Evers-Vermeul. 2002. Pronouns and case. *Lingua* 112: 301–338.

Zajtseva, Maria. 1981. *Грамматика вепсского языка: фонетика и морфологиа [Grammar of the Veps Language: Phonetics and Morphology]*. Наука [Nauka], Leningrad.

Zhirkov, L. I. 1955. *Лакский язык: фонетика и морфологиа [The Lak Language: Phonetics and Morphology]*. Издател'ство Академии Наук СССР [Publishing House of the SSSR Academy of Science], Moskow.

Zlatev, Jordan and Peerapat Yangklang. 2004. A third way to travel: The place of Thai in motion event typology. In *Relating Events in Narrative: Typological and contextual perspective*, edited by Sven Strömqvist and Ludo Verhoeven, vol. 2, pp. 159–190. Lawrence Erlbaum, Mahwah, New Jersey.