Drowning "into" the river in North Sámi: Uses of the Illative*

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This chapter documents and analyzes an instance in North Sámi of spatial morphology (directional case and adpositions) interacting with temporal interpretation (change of state). In effect, in North Sámi one can sleep on a floor or swim in a river, but one falls asleep 'onto' the floor, and drowns 'into' the river. The analysis relates the phenomenon to the Talmian dichotomy of satellite-framed and verb-framed expressions of path in directed motion. Specifically, I provide an analysis in which the illative gives the location of result states, assuming a decomposition of complex events including motion events. This provides a unified analysis of different uses of the North Sámi illative, at the expense of a unified analysis of directed motion constructions across English and North Sámi.

directional case, directed motion, illative, North Sámi, Talmy

1   Introduction

In this chapter I discuss the typologically unusual system of directional and locative expressions in the North Sámi language. North (or Northern) Sámi is a Finno-Ugric language spoken by about 20,000 people in northern Norway, Sweden, and Finland, closely related to other Sámi languages spoken in those countries and in northwest Russia. It is also known as Lappish, but some people find that term objectionable, whereas Sámi is based on the autonym (in English also spelled Saami or Sami).

The language has a morphological case system, including cases called locative and illative, which are widely used in spatial contexts and which are the subject

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of this chapter. It is typical for such systems that, the locative has a meaning like 'at', 'in', or 'on', and the illative appears to have a meaning like 'to' (compare the system described by Forker, this volume, in which a locative case (essive) is opposed to several directional ones (lative, directional, and ablative)).

(1) Joavnna viegadii   viesus.
     *Jon   ran.around house.*LOC
     'Jon ran around in the house'

(2) Joavnna viegai vissui
     *John   ran   house.*ILL
     'John ran to the house'

In addition, there is a nominative-accusative distinction; ordinarily, subjects are nominative and objects are accusative. I omit this from the gloss when it is not relevant. Accusative can also be used for paths, as indicated in (3) (I use the gloss ACG for forms that are systematically indistinct between genitive and accusative).

(3) Máret bođii dán geainnu.
     *Marit came this way.*ACG
     'Marit came this way'

There is a comitative case covering several of the senses of English 'with', and an additional case, the essive, which is found on predicative elements (not to be confused with the essive of the Daghestanian languages). These are not relevant here. Genitive is, however, relevant as the case on postpositional complements. Possessors and the complements of postpositions are formally genitive, but this can only be seen in certain forms as the genitive is usually morphologically identical to the accusative.

(4) Biila leai viesu   duohken.
     *car   was house.*ACG *behind*
     'The car was behind the house'

Spatial postpositions normally have at least two forms, one corresponding to the locative and one corresponding to the illative. I gloss the illative-like form of postpositions with 'TO' because it does not consistently conform to illative morphology on nouns.

(5) Biila vujii viesu   duohkái.
     *car   drove house.*ACG *behind.*TO
     'The car drove [to] behind the house'

Several spatial postpositions have a third form corresponding to the spatial use of

the accusative ('along' or 'via'). I gloss this form with 'RTE' for 'route'.

(6)   Biila vujii viesu   duoge.
       *car   drove house.*ACG *behind.*RTE
       'The car drove (along) behind the house (and continued)'

Unlike English *to*, and unlike its directional counterparts in many languages with directional case, the Northern Sámi illative and the related TO form of the postpositions are used to describe the location of an object or person after a significant transition has taken place. The transition can be the creation or coming into existence of an object (Nickel 1994: 422–423).

(7)   Máhtte ráhkadii dálu dievá ala.
       *Mattis built   farm hill   on.*TO
       'Mattis built the farm on ["onto"] a hill'

(8)   Šaddet-go deike   eppelat?
       *grow-*Q   *here.*ILL *apples*
       'Do apples grow here ["to here"]?'

The transition can also be the death of a person or animal (Nickel, ibid.).

(9)   Gárdái   njuvve   ollu bohccuid.
       *corral.*ILL *slaughtered many reindeer.*PL.ACG
       'They slaughtered many reindeer in ["into"] the corral'

(10)   Dat heavvanii etnui.
       PN *drowned river.*ILL
       'S/he drowned in ["into"] the river'

The analysis of this use of the illative is the subject of this chapter. In section 2, I outline the basic facts, and in section 3 I present an analysis.

2   Northern Sámi Case

The grammar of Northern Sámi is described in Nielsen (1926), Nickel (1994), and Svonni (2009), and there are numerous articles on specific aspects of Northern Sámi grammar (see the bibliography in Toivonen & Nelson 2007), but the facts discussed here have not been treated in English, to my knowledge, so in this section I provide a detailed description of the relevant aspects of Northern Sámi grammar. I draw throughout on the three grammars mentioned, and many of the examples are from there, especially from Nickel (1994).

2.1 Forms of Location, Goal, and Source in Northern Sámi

As mentioned in the introduction, there are seven cases, though systematic syncretism collapses accusative and genitive most of the time. The six consistently distinct forms are illustrated in (11).

(11) Six cases, including a nearly fully syncretised Genitive/Accusative

	Singular	Plural		Singular	Plural
Nom	várri	várit	Nom	johka	jogat
Acg	vári	váriid	Acg	joga	jogaid
Ill	várrái	váriide	Ill	johkii	jogaide
Loc	váris	váriin	Loc	jogas	jogain
Com	váriin	váriiguin	Com	jogain	jogaiguin
Ess	várrin		Ess	johkan	
	'mountain'	'mountains'		'stream'	'streams'

The morphophonology is complex but regular. For analysis, see Svenonius (2008) and references there.

Demonstratives also show case forms. The demonstrative system is very complex and there is no space to treat it here. A partial paradigm for one series of demonstratives is shown in (12), with just three case forms, the nominative, the locative, and the illative. It can be seen that the morphological expression of the illative is different from that appearing on nouns.

(12)

	Distal			Proximal	
	near	medium	distant	speaker	hearer
Nom	dat	duot	dot	dát	diet
Loc	das	duos	dos	dás	dies
Ill	dasa	duosa	dosa	dása	diesa

Also mentioned in the introduction was the existence of two or three forms of postpositions. These are illustrated in (13).

(13) AT/FROM TO   ALONG/VIA
      duohken duohkái duoge   'behind, up to'
      vuolde   vuollái vuole   'under'
      bálddas báldii   báldda   'alongside'
      bealde   beallái beale   'beside'
      guoras   gurrii   guora   'by, near'
      gaskkas gaskii   gaskka   'between'
      fárus   fárrui   fáru   'with'
      alde   ala   'on'
      siste   sisa   'in'
      maŋis   maŋŋái   'behind'
      ovddas   ovdii   'in front of'
      luhtte   lusa   'at the house of, by'
      sajis   sadjái   'instead of'

The forms in the first column are used not only for static location, but also for source readings. This is true of the locative case as well, both on nouns and on demonstratives. In order to discuss this phenomenon, it is important to be able to distinguish the formal category, which I will call LOCATIVE after the usual name of the case, from the conceptual notion of location. The gloss LOC in examples always refers to locative case. I will use the term LOCATIONAL in the text to mean 'expressing location', as opposed to source. Thus, locative case in Northern Sámi has two primary uses, expressing location (=locational) and expressing source.

Historically, Northern Sámi experienced a system-wide syncretism of inessive (-*sne*) and elative (-*ste*), as sound changes caused the endings to become indistinct (Nielsen 1926, Sammallahti 1998, Hansson 2007). This led to the emergence of a regular locative form -*s*, but the locative forms of many of the postpositions do not have this regular local case suffix, as can be seen in (13). Yet regardless of its morphological expression, wherever there is a locative form, it is used in both locational and source senses. No distinct source postposition is found (though a directional adverbial particle *eret* means 'away', and verbs distinguish 'coming' from 'going').

2.2 Examples of the local cases in use

Traditionally, the term LOCAL case covers cases that have to do with space, including locative, illative, allative, ablative, and so on. Northern Sámi has two local cases in this sense, the locative and the illative (though as already noted the accusative can be used to express routes). Some examples are provided here to illustrate typical uses of the locative and illative cases.

One typical use of the locative is the location of an entity, either with the

copula (as in (4)) or with a positional verb like 'stand' or 'sit'.

(14) a. Mánná čohkká stuolus.
          child sits chair.LOC
          'The child is sitting on the chair'
      b. Mánná veallá láhttis.
          child lies floor.LOC
          'The child is lying on the floor'
      c. Dat čohkká-jit beavddis.
          they sit-3PL *table*.LOC
          'They're sitting at the table'

Other stative verbs also support locative expressions of this kind.

(15) a. Mun orun Kárášjogas.
          I   live Karasjok.LOC
          'I live in Karasjok'
      b. Mun oidnen Bireha   busses.
          I   saw.1SG *Biret*.ACG *bus*.LOC
          'I saw Biret on the bus' (cf. Nickel 1994: 416)

Locatives can also be used to describe the locations of activities. Example (16a)
is repeated from (1) above, but here the continuative aspectual suffix on the verb
is parsed out.

(16) a. Joavnna viega-d-ii   viesus.
          Jon   run-CONT-PAST *house*.LOC
          'Jon ran around in the house'
      b. Mun čálán   mášiinnain Romssas
          I   write.1SG *machine*.COM *Tromsø*.LOC
          'I am writing on a typewriter in Tromsø'

With a punctual predicate, the locative expression is not naturally understood as
locational. This is illustrated in (17), where the 'subitive' suffix gives the verb a
punctual aspect. The locative expression is understood in this case as a source.

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

More examples of contexts in which formally locative expressions are interpreted
as sources are given in (18).

(18)   a.   Goas don vulget   Romssas?
             when you travelled Tromsø.LOC
             'When did you leave Tromsø?'
       b.   Mun boađán   viesus.
             I   come.1SG *house*.LOC
             'I am coming out of the house'
       c.   Suovva ihtá   goađis.
             smoke   appears tent.LOC
             'There is smoke coming from the tent'
       d.   Sáhpán njuik-ii   girjji duohken.
             mouse   jump-PAST *book behind*
             'The mouse jumped from behind the book' (Source)

As mentioned in the introduction, the illative case and the corresponding 'TO' forms of postpositions express the notion of goal of motion.

(19)   a.   Joavnna viegai skuvlii
             John   ran   school.ILL
             'John ran to the school'
       b.   Sáhpán njuikii girjji duohkái.
             mouse   jumped book behind.TO
             'The mouse jumped [to] behind the book'

(20)   a.   Boađe dal   vissui!
             come   now house.ILL
             'Now come into the house!'
       b.   Mánná gahčai johkii.
             child   fell   river.ILL
             'The child fell into the river'

Northern Sámi allows goal expressions to combine freely with a wide range of manner verbs, and so patterns with 'satellite-framed' languages in the well-known typology stemming from Talmy (1985) (discussed in several of the other chapters in this volume, for example Ibarretxe-Antuñano and Hijazo-Gascón). An example of an unusual motion predicate is illustrated in (21), one meaning 'to move with clothing in disarray, to go dishevelled'.

(21)   Dat skolppui   lávddi ala.
       PN *go.dishevelled*.PAST *stage   onto*
       'S/he went onto the stage with his/her clothing in disarray'

The illative case can also be used for benefactives and recipients (the exact distribution is subject to some dialectal variation; see Vinka 2002).

(22) a. Mun attán dutnje girjji goađis
I give.1SG you.SG.ILL book.ACG tent.LOC
'I am giving you a book in the tent'

b. Rabas munnje uvssa.
open me.ILL door
'Open the door for me'

c. Čájet áhččái maid!
show.IMP.2SG father.ILL also
'Show it to father too!'

It is also used for demoted or embedded agents in some constructions. This is illustrated with one kind of passive and one kind of causative in (23) (for more discussion of such constructions, see Vinka 2002 and Julien 1996).

(23) a. Mun bora-hall-en beatnagii.
I.NOM bite-PASS-1SG dog.ILL
'I was bitten by the dog'

b. Áhčči daga-h-ii niibbi rávdái.
father.NOM make-CAUS-PAST knife.ACG smith.ILL
'Father had the smith make a knife'

The uses of the illative up to this point have been consistent with uses of illatives, allatives, and datives in various other languages.

Unlike datives in some other languages, the illative is not systematically used in Northern Sámi to mark experiencers, though in some cases an experiencer coming into a state may be marked illative.

(24) Bierai šattai hoahppu.
Per.ILL become.PAST.3SG hurry
'Per came to be in a hurry'

More common in Northern Sámi is the pattern where the state entered is marked illative.

(25) Áhkku šattai illui.
grandmother.NOM become.PAST.3SG happiness.ILL
'Grandmother became happy'

Up to this point, accounts developed for locational and goal expressions in other languages could be extended to the facts I have described for Northern Sámi, except for the systematic syncretism of location and source, which is unusual. That syncretism might be described by positing a null FROM with the semantics of a function from locations to sources. I will provide an alternative account

below.

2.3 Illative locations

Now, having established the relevant background facts for the use of Northern Sámi locative and illative cases, and the matching distribution of the different forms of the postpositions, I turn to the unusual uses of the illative (and of the TO forms of the postpositions). Most of the examples are drawn from Nickel (1994). It will be seen from the data that the phenomenon is highly relevant to the themes of this volume, as the illative is used to describe static locations under certain circumstances which are best characterised in temporal terms. Thus, the grammar of Northern Sámi interweaves space and time in a precise and unusual way.

First, the illative is used with verbs like 'stay' and 'remain', even when no motion is involved.

(26) Nieida bissánii Romsii.
      girl   stayed Tromsø.ILL
      'The girl remained in Tromsø'

(27) Biila   bissánii Šuošjávrri ja   Jergol gaskii.
      car.NOM *stayed Sjuosjávri and Jergol between*.ILL
      'The car broke down between Sjuosjávri and Jergol'

Another context where Sámi uses the illative involves changes of the status of a location, for example hiding or storing a thing in a place; a literal change of location of the thing is not entailed.

(28) a. Biergasiiddis son   guđii gaféstohpui.
          baggage.POSS *he*.NOM *stored café*.ILL
          'He stored his baggage at the café'
      b. Gosa   don   čihket   dan?
          where.ILL *you*.SG.NOM *hid*.PAST.2SG *it*.ACG
          'Where did you hide it?'

Such changes need not be intentional; losing or forgetting a thing can also be described in this way.

(29) a. Mun lean   láhppán iežan fáhcaid   várrái.
          I   am.1SG *lost   REFL mitten*.PL.ACG *mountain*.ILL
          'I have lost my mittens in the mountains'
      b. Mun vajálduhtten govvidanapparáhta hotellii.
          I   forgot   camera   hotel.ILL
          'I forgot my camera at the hotel'

Another context in which Sámi uses the illative is in cases where a thing is created or built in a location.

(30)   a.   Máhtte ráhkadii dálu dievá ala.
           Mattis built   farm hill   onto
           'Mattis built the farm on a hill'

          b.   Min   gillái   lea huksejuvvon ođđa girku.
           *us.*PL.ACG *village.*ILL *is erected   new church*
           'In our village a new church has been erected'

Again, intentional action is not a necessary factor; growth and precipitation are also commonly used with the illative.

(31)   a.   Šaddet-go deike   eppelat? (=(8))
           *grow-*Q   *here.*ILL *apples*
           'Do apples grow here?'

          b.   Romsii   lea muohttán hirbmadit dán dálvvi.
           *Tromsø.*ILL *is snowed   frightful   this winter.*ACG
           'It has snowed very much in Tromsø this winter'

In the following examples, a thing acquires a scalar property in a location, and the location is expressed in the illative.

(32)   a.   Gea, mo lea buorrá-n-an   deike   dát luodda
           *look how is   good-*INCH-PTCPL *here.*ILL *this road.*NOM
           'Look how good the road has become here'

          b.   Áddjá   buohccái   dasa.
           *grandfather.*NOM *became.sick there.*ILL
           'Grandfather became sick there'

In the following examples, a nonscalar property is acquired in a location, which again is expressed using the illative.

(33)   a.   Mánná nohkai láhttái.
           *child slept floor.*ILL
           'The child fell asleep on the floor'

          b.   Dat heavvanii etnui.
           PN *drowned river.*ILL
           'S/he drowned in the river'

The following examples illustrate the same thing with caused changes of state.

(34)   a.   Vuovdái godde dan   guovžža.
           *woods.*ILL *killed the.*ACG *bear.*ACG

'They killed the bear in the woods'

b. Gárdái njuvve ollu bohccuid.   (=(9))
corral.ILL *slaughtered many reindeer.*PL.ACG
'They slaughtered many reindeer in the corral'

These uses of the illative are rather different from corresponding expressions in languages like English and Norwegian. In a sense they are the inverse of the pattern discussed in Lewandowski (this volume), in which a locative expression is used where a directional one might be expected. In the remainder of this chapter I present an analysis of the North Sámi illative intended to account for this distribution.

3   Event decomposition

I suggest that the Northern Sámi illative be thought of in terms of event semantics (see Fong 1997 for a different event-based treatment of a related phenomenon in Finnish).

Essentially, I suggest that the expression of a locational relation in Northern Sámi is sensitive to whether the locational expression modifies a resultant stage of an event or not. If it does, it is realised in the illative. So illative is semantically locational, rather than path-denoting. To motivate this I first outline the way location and direction are expressed in a language like English.

3.1   Location and Direction

Tungseth (2008) shows that in Norwegian, directional PPs (as in *push the cart into the parking lot*) are generally complements of V, while locational PPs (as in *push the cart (around) in the parking lot*) are adjuncts, attached outside the core verb phrase. Schweikert (2005) and Takamine (2010) show that in German and Japanese (respectively), locational expressions are attached relatively high up, hence are not complements of V. We can assume that the same is true for English, and that locational expressions are normally adjuncts, as diagrammed in (35).

(35)   a.

```
            VP
          /    \
        VP      PP_LOC
        |       /    \
        V   in the house
        |
   run (around)
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b.

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            VP
          /    \
        V       PP_DIR
        |       /    \
       run  into the house
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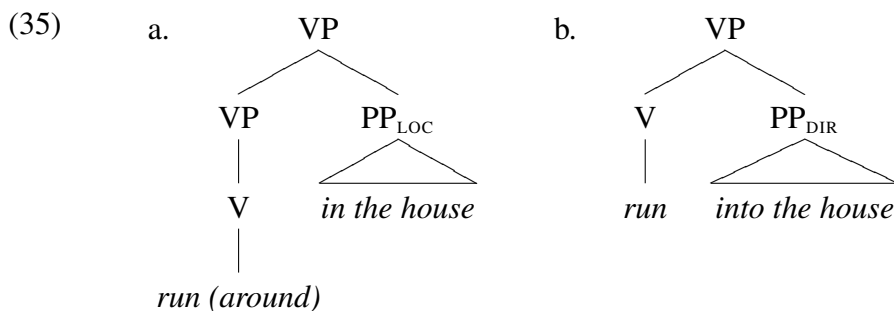
Here I sketch a simple semantic analysis for such examples; see Son & Svenonius (2008) for more detail. I leave out the DP arguments in the following translations, assuming them to be introduced in a post-Davidsonian way (see Ramchand 2008). I will assume an ontological distinction among events (e), locations (l), and paths (p) (eventually also time intervals (t) and states (s)).

A locational PP, or PlaceP, is a description of a location. I assume a functor Loc relating locations to events, so that LocP is a description of an event located at a place.

(36)   Denotation of a locational PP adjunct

    a. $[\![_{\text{PlaceP}}\text{in the house}]\!] = \lambda l.\text{in}(l,\text{the-house})$

    b. $[\![\text{Loc}]\!] = \lambda P\lambda e\exists l.\text{Loc}(e,l)\ \&\ P(l)$

    c. $[\![_{\text{LocP}}\text{in the house}]\!] = \lambda e\exists l.\text{Loc}(e,l)\ \&\ \text{in}(l,\text{the-house})$

The first line simply says that *in the house*, as a PlaceP, is the set of locations that stand in the 'in' relation to the house. The second line says that Loc is a functor that relates location descriptions to event descriptions by the 'Loc' relation, which could be paraphrased 'is located at'. The third line simply gives the result of applying the second to the first; the denotation of LocP is the set of events that are situated at a location that is in the 'in' relation to the house.

I will assume that syntactic adjunction is interpreted as coordination (for event descriptions, something like $\lambda P\lambda Q\lambda e.P(e)\ \&\ Q(e)$). This means that if the VP is a simple event description, then the meaning of the VP with a locational adjunct can be represented as in (37).

(37)   Semantics for VP with locational PP adjunct

    a. $[\![\text{run}]\!] = \lambda e.\text{run}(e)$

    b. $[\![\text{run in the house}]\!] = \lambda e\exists l.\text{run}(e)\ \&\ \text{Loc}(e,l)\ \&\ \text{in}(l,\text{the-house})$

To form a description of a path, another functor is added, Path. Here I focus on Path$_{\text{Goal}}$, the 'to' path (as opposed to 'from' or 'via' paths; see for example Zwarts 2005 for discussion of the semantics of paths, and Pantcheva 2011 for discussion of the rich inventory of path types). As with location descriptions, path descriptions need to be further adjusted in order to combine with event descriptions.

(38)   Semantics for a path expression in a language like English

    a. $[\![\text{Path}_{\text{Goal}}]\!] = \lambda P\lambda p\exists l[\text{culminate}(p,l)\ \&\ P(l)]$

    b. $[\![_{\text{PathP}}\text{into the house}]\!] = \lambda p\exists l.\text{culminate}(p,l)\ \&\ \text{in}(l,\text{the-house})$

The first line here says that Path$_{\text{Goal}}$ is a function from location descriptions to path descriptions, where the path 'culminates' in the location, i.e. it ends there. Combined with a description like 'in the house', we get the second line, where

'into the house' denotes the set of paths that culminate in a location that is in the 'in' relation to the house.

Just as with location descriptions, path descriptions can be related to event descriptions. To this end, I assume another functor, Dir[ectional], which maps an event onto a path description using the 'trace' function proposed by Krifka (1998): each part of the event corresponds to some part of the path.

(39) Semantics for directed motion use of path descriptions
    a. $[\![\text{Dir}]\!] = \lambda P \lambda e \exists p[\text{trace}(e,p) \ \& \ P(p)]$
    b. $[\![[_{\text{DirP}} \text{into the house}]]\!] = \lambda e \exists p,l.\text{trace}(e,p) \ \& \ \text{culminate}(p,l) \ \& \ \text{in}(l,\text{the-house})$

Syntactic specifiers and complements can usually be interpreted in terms of function application. However, I will adopt from Ramchand (2008) the possibility of interpreting a complement relation in terms of a cognitive primitive 'leads to': if A takes B as complement, and the denotations of A and B are event descriptions P(e) and Q(e), then the combination can be interpreted such that the first subevent (P(e)) 'leads to' the second (Q(e′)). The 'leads to' relation is the most basic asymmetric relation between 'subevents' in a 'macroevent' described by a single predicate. Typically, if P(e) leads to Q(e′), then e and e′ share the same agent, theme, goal, and so on. In Ramchand's theory, x *kill* y means that x initiates a subevent e, and e leads to a subevent e′, and y dies in e′.

Now we can provide a semantics for the combination of the event description *run* with the event description (the DirP) *into the house*.

(40) Directional semantics for English
    a. $[\![\text{run}]\!] = \lambda e.\text{run}(e)$
    b. $[\![\text{run into the house}]\!] = \lambda e \exists e′,p,l.\text{run}(e) \ \& \ \text{leads-to}(e,e′) \ \& \ \text{trace}(e′,p) \ \& \ \text{culminate}(p,l) \ \& \ \text{in}(l,\text{the-house})$

This says that *run into the house* describes an event that leads to another event that maps onto a path that culminates at a location that is in the house. The relationship to English is clearer if the arguments are inserted: *John ran into the house* will describe a past event in which John runs, leading to an event that traces a path for John, culminating at a location in the house for John; that is, John's running leads to his traversing a path that ends in the house. Given traces of the subject to anchor the different predicates in this way, and a suitable restriction on the 'leads to' relation (to rule out indirect causation), and a semantics for tense, the meaning is that John ran into the house.

Using these semantics, we can explain why it is not generally acceptable in English to combine path expressions with change of state predicates. A change

of state, in Ramchand's system, normally involves at least two subevents. For example, *die* involves a process that leads to a result. Following Ramchand, this is reflected in the syntax: a change of state verb is normally structurally bipartite, with a process projection taking a result projection as complement.

An activity verb like *run*, in contrast, has a process projection but no result projection. The DirP that expresses the event-trace of a path is the complement of a verb like *run*, but cannot occur in the complement position of the process projection of a verb like *die* because that is filled with the result phrase. Compare *fall asleep* and *fall onto the floor*, where English does not allow **fall asleep onto the floor*: there is only space for one complement to *fall*.

The result subevent, according to Ramchand, is understood as a state. States are assumed to be homogeneous, and cannot be mapped onto paths, which have a part-whole structure. So the DirP projection cannot be merged as a complement of the state subevent, either.

For these reasons, **The child fell asleep onto the floor* and **The swimmer drowned into the river* are deviant in English.[1]
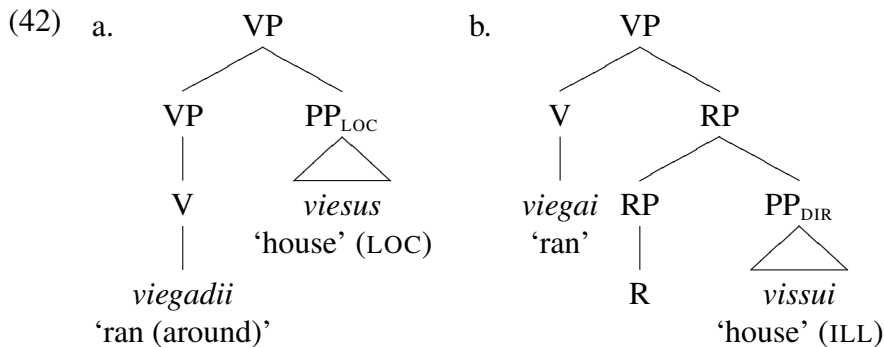
3.2   Semantics of locative and illative in North Sámi

Now, if the Northern Sámi illative and locative were exactly like their English counterparts, then we would not see the illative with changes of state as we do. Instead, it seems that the illative is used to describe the location at the end of a change of state. I will first illustrate how this would look for a pair of locative and directional sentences, like those in (1) and (2), repeated here as (41a) and (41b) respectively.

(41)   a.   Joavnna viegadii   viesus.   (=(1))
             Jon   ran.around house.LOC
             'Jon ran around in the house'
        b.   Joavnna viegai vissui   (=(2))
             John   ran   house.ILL
             'John ran to the house'

The default assumption is that Northern Sámi syntax is like that of English, German, and Japanese, so that in a locational example like (41a), the locational expression is an adjunct, as illustrated in (42a). However, I suggest that in a directional example like (41b), the directional expression is not a complement as in English, but rather an adjunct to a lower projection, as illustrated in (42b).

---

[1]A sentence like *She died into his arms* seems just possible, perhaps a case of coercion or metaphor, i.e. using the lexeme *die* in an atypical frame. The discussion in the text refers to the typical frame lexically stored as part of the meaning of *die*.

(42) a.

```
              VP                        b.              VP
            /    \                                    /    \
          VP     PP_LOC                              V      RP
          |       /\                                 |     /   \
          V     viesus                            viegai  RP   PP_DIR
          |    'house' (LOC)                       'ran'   |    /\
       viegadii                                           R   vissui
      'ran (around)'                                          'house' (ILL)
```

The semantics for the locative example is as for English. However, the semantics for the directional example must be different, something like what is sketched here (continuing to abstract away from tense and other irrelevant details).

(43)   Directional semantics for Northern Sámi

     a. $[\![viegai]\!] = \lambda e.\text{run}(e)$

     b. $[\![R]\!] = \lambda e[\text{state}(e)]$

     c. $[\![vissui]\!] = \lambda e \exists l.\text{Loc}(e,l) \,\&\, \text{at}(l,\text{the-house})$

     d. $[\![viegai\ vissui]\!] = \lambda e \exists e',l.\text{run}(e) \,\&\, \text{leads-to}(e,e') \,\&\, \text{state}(e') \,\&\, \text{Loc}(e',l) \,\&\, \text{at}(l,\text{the-house})$

Here, the same semantics are used for adjunction (coordination) and complementation (leads-to) as for English. The chief difference is that the illative is given a locational semantics, and modifies a state-denoting projection that serves as a complement to the motion verb (compare Ramchand's 2008: 79–82 analysis of directed motion interpretations of punctual transition verbs like *jump*).

The resulting translation is a set of running events that lead to states that are located at the house.

Two questions immediately arise on this analysis. The first is what controls the distribution of the locative and the illative in Northern Sámi, since they now have identical denotations. The second is why English cannot also use this strategy for motion verbs (allowing, for example, *walk at the park* to mean what *walk to the park* means). Suppose the answers to the two questions are related: the locative in North Sámi adjoins to VPs, or event descriptions, while the illative adjoins to RPs, or state descriptions. English locational PPs, on the other hand, are different, and do not adjoin to RP, but only to higher projections.

In fact, I suggest that the North Sámi illative is a location of states, using the symbol s for states, so that the denotation of *viegai vissui* 'run to the house' can be as follows.

(44) $[\![viegai\ vissui]\!] =$
     $\lambda e \exists s,l.\text{run}(e) \,\&\, \text{leads-to}(e,s) \,\&\, \text{state}(s) \,\&\, \text{Loc}(s,l) \,\&\, \text{at}(l,\text{the-house})$

Compare the English.

(45)   [[run to the house]]=
       $\lambda e \exists e',p,l.\text{run}(e)$ & leads-to(e,e') & trace(e',p) & culminate(p,l) & at$(l,$the-house)

This fundamental difference in the way motion events are constructed means that the illative in Northern Sámi and the directional PPs in English have quite different semantic representations. This leads to the other differences observed in this chapter.

Importantly, an example like (10), repeated here in (46), now simply involves the adjunction of the illative PP to RP.

(46)   Dat heavvanii etnui.   (=(10))
       PN *drowned   river*.ILL
       'S/he drowned in ["into"] the river'

(47)   [[*heavvanii etnui*]]=
       $\lambda e \exists s,l.\text{process-of-drowning}(e)$ & leads-to(e,s) & state-of-being-drowned(s)
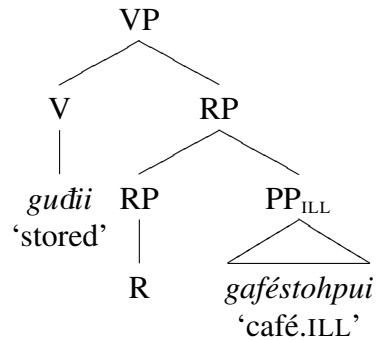   & Loc(s,l) & at$(l,$the-river)

For a complex macroevent involving a change of state, there are in principle three ways in which one might talk about its location: in terms of the location of the complex event, the location of the transitional process, or the location of the end state. In the typical real-world situation, all three are in the same location. However, for a change of state like dying or falling asleep, the end state is particularly salient. For Northern Sámi, the most natural way to express the location of a dying or falling asleep event, then, is to use the illative, which expresses the location of result states.

Similarly, an event of storing or forgetting something is one in which the actor does or undergoes something, and as a result an object is stored or forgotten. North Sámi allows the result eventuality to be modified by an illative adjunct, so that the result state is what is located. Examples (28a) and (29b) are repeated in (48a) and (48b).

(48)   a.   Mun vajálduhtten govvidanapparáhta hotellii.
            I   forgot   camera   hotel.ILL
            'I forgot my camera at the hotel'
       b.   Biergasiiddis son   guđii gaféstohpui.
            baggage.POSS *s/he*.NOM *stored café*.ILL
            '(S)he stored his/her baggage at the café'

A partial tree representation for (48b) is given in (49), with a partial semantic translation in (50). As before, the illative is adjoined to the state descriptive RP.
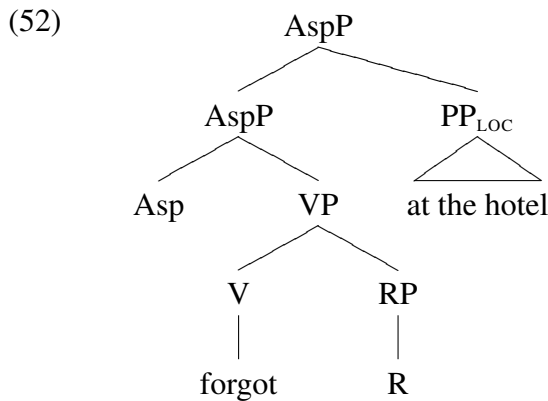
(49)

```
                    VP
                  /    \
                 V      RP
                 |     /   \
              guđii  RP    PP_ILL
             'stored' |    /\
                      R   gaféstohpui
                          'café.ILL'
```

(50)   ⟦*guđii gaféstohpui*⟧= λe∃s,l.process-of-storing(e) & state-of-being-stored(s) & leads-to(e,s) & Loc(s,l) & at(l,the-café)

Even an event of remaining can be thought of as a kind of transition, from one in which there is a potential to go somewhere else to one in which that potential has been passed up. If remaining is lexicalised in North Sámi as a bipartite event, then the natural way to express the location of remaining will be through the illative adjunct.

In English, I suggest, there is no locative adjunct specially for states. In fact, I suggest that the usual locational adjunct PPs in English are not event modifiers either, but are higher up. Instead of directly adjoining to VP, I suggest that they adjoin to some higher projection, after the existential closure of the event variable introduced by the VP. For example, suppose that Asp[ect] is a relationship between events and temporal intervals, which existentially closes the event variable (a fairly uncontroversial assumption, see e.g. Parsons 1990).

(51)   ⟦Asp⟧= λPλt∃e.R(t,e) & P(e)

If this is correct, then the English locational adjunct is a property of intervals, rather than of events. This would mean that it attaches outside Asp, and takes the entire macroevent in its scope, rather than just the initiating subevent.

(52)

```
                    AspP
                 ___/    \___
              AspP           PP_LOC
            __/    \__        /\
          Asp        VP    at the hotel
                   __/  \__
                  V        RP
                  |        |
               forgot      R
```
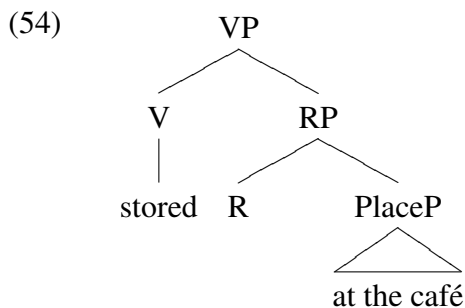
The interpretation of the event then does not include any information about location; in order to see the locational meaning we need to look at the temporal interval (assuming here that the relation between a location and an interval can be abbreviated 'Loc', just like the relation between a location and an event).

(53)   [[forgot at the hotel]]= $\lambda t\exists e,s,l.$Asp(t,e) & process-of-forgetting(e) & state-of-being-forgotten(s) & leads-to(e,s) & Loc(t,l) & at(l,the-hotel)

This would mean that the English sentence *I forgot my camera at the hotel* means that there is an interval that transpires at the hotel that stands in the relevant aspectual relation with the macroevent that includes both the process and result of forgetting. The North Sámi sentence (48a), in contrast, is hypothesised to mean that the result of forgetting is what is located at the hotel; whether the process of forgetting also occurred there is only something that could be inferred via the leads-to relation. Further investigations are necessary to determine whether the predicted difference in meaning is substantiated.

Verbs like *store* and *hide*, which have more deliberate connotations, might be lexicalised in English as causative verbs of change of location, taking PlaceP complements (recall that PlaceP is the location description that can combine with Loc to form a locational adjunct).

(54)

```
           VP
         _/   \_
        V       RP
        |      _/  \_
     stored   R      PlaceP
                      /\
                  at the café
```

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This would give a meaning much more similar to that proposed for the corresponding North Sámi sentence, given a reasonably uncontroversial interpretation of the complement relation here.

(55) 〚stored at the café〛= $\lambda e \exists s,l$.process-of-storing(e) & state-of-being-stored(s) & leads-to(e,s) & Loc(s,l) & at(l,the-café)

Compare the denotation of the corresponding North Sámi sentence in (50). Here, the difference between adjunction and complementation does not affect the truth conditions.

3.3 Force dynamics

The above account suggests that the contribution of the illative and locative can only be understood in the light of a decomposition of the event structure of the different predicates with which they combine.

The different behaviour of different event types can be expressed in terms of Talmy's (1988) Force dynamics, sketched roughly as follows, illustrating with some of the kinds of verbs that have been seen to appear with the illative.

(56)

	stage 1	**force**	**stage 2**
'store'	(initial state)	effective	x is stored
'hide'	(initial state)	effective	x is hidden
'build'	(initial state)	effective	x is built
'stop'	x moves	effective	x isn't moving
'lose'	x possd by y	effective	x not possd by y
'stay'	x in loc	resisted	x in loc

In each of these cases, there is an initial state or event (stage 1) and a final state or event (stage 2), and what is conceptually salient is the location of the object at stage 2, in the sense that the object is entailed to be at that location.

In a language like English, the same range of locational PPs are used with an event that is internally homogeneous like an activity of running, and an event that is internally heterogeneous, like an achievement of storing. But in Northern Sámi, the latter pattern with the internally heterogeneous events of directed motion.

However, it is not the case that all heterogeneous event descriptions combine with the illative, rather than the locative. In particular, if the location described is the source of motion, then the locative is used, as illustrated in section 2.2. Some of the kinds of events that were shown there to appear with the locative case are given in the table below, in terms of Talmy's force dynamics.

(57)

	stage 1	**force**	**stage 2**
'travel'	x in loc1	effective	x in loc2
'come'	x in loc1	effective	x in loc2
'appear'	(initial state)	effective	x in loc
'buy'	(initial state)	effective	x possd by y
'steal'	x possd by y	effective	x not possd by y

In each case, the source is the location of the theme argument at stage 1, the first of the two subeventualities. Thus, the generalisation for complex events in Northern Sámi appears to be that the locative is used only for the initial stages of such an event, hence with a source reading, while the illative is used when what is relevant is the location of the theme at the end of the event. This is summarised in the following table.

(58)

State	'sit on a chair'	Locative
Activity	'run (around) in the house'	Locative
Achievement, initial	'appear from the tent'	Locative
Achievement, final	'drown in the river'	Illative
Accomplishment (final)	'run into the house'	Illative

These observations, combined with the analysis proposed here, provide a natural explanation for the distribution of source readings of locative expressions in North Sámi. Consider (17), repeated here as (59).

(59)　Joavnna viehka-l-ii　viesus.　　(=(17))
　　　Jon　　run-SUB-PAST *house*.LOC
　　　'Jon suddenly ran off from the house' (Source)

This example contains a 'subitive' suffix, which gives a punctual aktionsart. Suppose that the subitive existentially closes the event description and provides a punctual inceptive event, with a denotation something like that in (60).

(60)　a.　$[\![Sub]\!]= \lambda P \lambda e \exists e'.inception(e,e')$ & $P(e')$
　　　b.　$[\![viehkalii]\!]= \lambda e \exists e'.inception(e,e')$ & $run(e')$

This means that there is an event e, which is the inception of another event e′, and e is a running. Now, if a subitive-headed VP is still a VP, and hence an event description, then the North Sámi locative can adjoin to it, giving the meaning in (61).

(61)　$[\![viehkalii\ viesus]\!]= \lambda e \exists e',l'.inception(e,e')$ & $run(e')$ & $Loc(e,l)$ & $at(l,the-house)$

This adds the meaning that the inception is located at the house, i.e. the running

event starts there. If the locative adjunct can only attach to the maximal VP, then this will be the only meaning available for a subitive verb phrase, which is empirically correct. Thus, a source-type meaning is available without the usual source path semantics (the counterpart to the 'culmination' relation employed for English *to*). Furthermore, English cannot use locational PPs to get source readings in the way that North Sámi can, because English locational PPs are interval descriptions, and cannot take narrow scope over an initiating event.

4 Conclusion

In this chapter I have discussed a typologically unusual pattern in North Sámi in which the expression of location in the form of case (illative or locative) or adposition is sensitive to a temporal-aspectual property of the event (whether there is a change of state or not).

At first blush, this exotic property might seem to play into the characterisation of linguistic variation as essentially wild and unconstrained. At some level of description one might then posit a "construction" to stipulate a correlation between change of state and illative case.

I suggest instead that the differences between North Sámi and other languages in this respect can be characterised in more constrained terms. Effectively, I suggest, satellite-framed languages like English allow path complements to motion verbs through the use of a functor which maps path denotations onto events. This is like having a function word which conforms to a restrictive theory of semantics (Dir in (39)).

North Sámi, I suggest, achieves functional parity for directed motion expressions not by positing a path-to-event mapping functor, but rather by positing a locative expression which attaches to result descriptions in change of state predicates (the locative functor in (43)). In languages like English, in contrast, locative descriptions normally attach to a higher-level predicate, a description of a situation or an interval.

This yields functional parity in the expression of directed motion. The difference becomes evident when change of state and other internally complex predicates are modified by locational elements. In North Sámi, it is often natural to modify only the result state, with the outcome that located changes of state look like directed motion predicates, since it is the illative case that is specialised for result state modification.

At a coarse level, the analysis could be described in terms of "parameters" distinguishing languages, so that having or lacking Dir would be one parameter, and having or lacking a North Sámi-like illative would be another (a language lacking both would not have satellite-framed directed motion expressions, like

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Spanish on Talmy's characterisation).

However, a parametric approach is only plausible insofar the inventory of parameters can be evolutionarily motivated (cf. Chomsky 2005). Thus, I believe that the current account should not be cast in terms of parameters, but rather in terms of a restricted format for functional heads; functional heads (whether pronounced or not) are built from a finite set of cognitive primitives such as result and trace functions, in restricted ways. These are not the conceptual categories which can be consciously exploited in creative metaphor, but are more abstract and primitive.

This derives something like parametric variation in the Chomskian sense (Chomsky 1981), since discrete choices involving a finite set of alternatives (here, the coherent arrangements of the finite set of cognitive primitives in functional heads) lead to different linguistic properties. This conception of variation, however, eschews stipulating the parameters themselves in the genetic code, and does not imply that the options are finite in number.

The approach therefore relies importantly on the idea that there are cognitive primitives such as events and situations and paths and predicates over them that are combined in a restricted set of ways by the linguistic system. If the approach is right, then descriptions in these terms can account for surface phenomena like the variation which distinguishes North Sámi from other languages.

This account is sufficiently explicit to make additional subtle predictions about differences in meaning between the English and North Sámi directed motion expressions, predictions that I hope to test in future investigations. If these predictions prove correct, then they will contribute to validating this approach to understanding language.

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