1. Purpose and aims

The research project “Derived aspect and event structure in North Sámi” aims at exploring various verbal derivations in North Sámi, all related to aspect. The investigation will focus on the semantic and syntactic properties of the base verbs and of the derived verbs and on the syntactic frames that they appear in, with the purpose of reaching a better understanding of the structure of the verb phrases and of the event structures associated with the verbs. Moreover, since there are cross-linguistic similarities in the basic building blocks of verb phrases and also in event structures, the ultimate goal of the project is to contribute to theory building by improving on existing models for event structure in language more generally.

North Sámi differs from English and other languages where one single verb form can allow a number of readings. For example, whereas many verbs in English are ambiguous between a semelfactive and a durative reading (such as sneeze) or between a causative and an intransitive reading (such as sink), similar ambiguities are not found in North Sámi. In North Sámi aspectual type-shifting is always overtly marked, either on the verb itself or by other means. This means that North Sámi provides us with a window on event structure, allowing us to see more directly the relations that can only be inferred indirectly in more analytic languages, like English. North Sámi is therefore an ideal testing ground for models dealing with the aspectual properties of verbs and verb phrases.

Argument structure alternations in North Sámi, in causatives and passives, have already been dealt with by Julien (1996) and Vinka (2002). However, although all Sámi languages have a very rich inventory of verbal derivations related to aspect, alternations in the aspectual properties of verbs in Sámi have not attracted much attention by linguists. Nelson (2007) addresses the relation between case marked adverbials and event structure in Inari Sámi, but theoretically informed works dealing with verbal aspectual derivations are hard to find—see the bibliography in Toivonen & Nelson (2007). Thus, the project proposed here will open up a whole new area for research.

North Sámi is spoken in the northernmost parts of Norway, Sweden and Finland, and it is the most widely used of all Sámi varieties. Newspapers and literary works are published in this language, as well as official documents from the Sámi parliaments and numerous blogs on the Internet. Hence, it is relatively easy to find examples of actual language usage.

North Sámi also happens to be the Sámi variety that the investigator knows best. In 1991–1992 I completed, with top grades, a one-year program in Sámi language and literature at the University of Tromsø, taught in North Sámi and aimed at students with Sámi as their first language. In 1995, also in Tromsø, I submitted my MPhil thesis titled “Syntactic word formation in Northern Sámi”, which was later published as Julien (1996).

After gaining a PhD in 2000, on a dissertation with a much broader typological perspective, I returned to Sámi as my object of investigation in Julien (2003) and Julien (2007). The latter was my first attempt at dealing with the aspectual properties of North Sámi verbs and can therefore be seen as the very beginning of the project that I am now planning.

Also relevant for the planned project was my employment for a little more than one year, from August 2004 to September 2005, as the principal builder of a Constraint Grammar based automatic parser for North Sámi at Giellatekno, the centre for Sámi language technology at the University of Tromsø (see http://giellatekno.uit.no). Finally, it should be mentioned that I regularly have professional assignments related to Sámi linguistics.
For these reasons, North Sámi has been chosen as the focus of the project, although derivational patterns similar to those in North Sámi are also found in other Sámi varieties.

2. Theoretical background

The theoretical background will be recent developments within generative grammar; more specifically dealing with event structure. The grammatical representation of event structure has attracted considerable attention within this framework in recent years, and a number of models have been proposed within a general approach that is often referred to as event decomposition. This is a view of the linguistic representations of events (not of the events themselves) which takes the subparts of events to be represented in the grammar. For example, the events expressed in The door is closed, The door closed and John closed the door have different properties—the first one being stative, the second transitional and the third agentive and transitional. In event decomposition approaches, these differences are connected to elements that are part of the event structure, a part of grammar, and that combine in different ways yielding events with different properties.

There is then the question of in which part of the grammar the composition of events take place. Pustejovsky (1991), building on works like Jackendoff (1983) and Parsons (1990), took the relevant domain to be semantics. The semantic approach to event structure has since Pustejovsky’s seminal paper been further developed in works like Tenny (1994), Levin & Rappaport Hovav (1995, 2005), and Rothstein (2004), to mention a few. But parallel to the tradition placing event structure in the semantic domain, another line of investigation has developed according to which the structure of conceptually complex events is also reflected in the syntax. Baker (1988), Hale & Keyser (1993) and Pylkkänen (2008), among others, deal mainly with argument structure, whereas e.g. Arad (1998), Borer (2005) and Ramchand (2008) focus on the aspectual properties of events. What all these works have in common is that they retain Pustejovsky’s insight that “grammatical phenomena do in fact make reference to the internal structure of events, and that a subeventual analysis for predicates is able to systematically capture these effects” (Pustejovsky 1991:48).

3. Empirical background and preliminary results

Just like what we see in other languages, monomorphemic verbs in North Sámi vary with respect to the situation aspect that they (typically) express. Classified according to the typology of lexical aspect proposed by Smith (1991), some monomorphemic verbs are stative, e.g. ballat ‘fear’ and diehtit ‘know’; others denote activities (i.e. dynamic and atelic), e.g. suhkat ‘row’ and dânsut ‘dance’, or achievements (dynamic, telic, and instantaneous), e.g. gávdnat ‘find’ and joavdat ‘arrive at, reach’. (The main difference between the classification in Smith (1991) and in Vendler (1957) is that unlike Vendler, Smith includes semelfactives as a separate type.)

The situation aspect associated with a given verb can be manipulated in various ways, but crucially, in North Sámi the change in semantics is reflected by changes in the morphology or syntax. We will see examples of this below. In addition, North Sámi has a rich inventory of derivations that manipulate aspectual properties in a broader sense, such as the continuative logadit ‘read continuously’ from lohkat ‘read’ and sugadit ‘row continuously’ from suhkat ‘row’, as well as the frequentative addalit ‘give repeatedly’ from addit ‘give’ and giitalit ‘thank repeatedly’ from giitit ‘thank’. Other alterations of (the conceptualisation of) the event structure are also overtly marked, such as the so-called causative/intransitive alternation seen in the verbs vuodjut ‘sink (intransitive)’ and vuodjudit ‘sink (causative)’.
As an instigation of the coming project, I have recently investigated North Sámi inceptives. This has resulted in a paper called “Beginnings in North Sámi” (Julien 2012), which has been submitted to the newly launched open access-journal *Finno-Ugric Languages and Linguistics*. In the following, I present the main results from the investigation of inceptives, in order to give an idea of the kind of questions that will be dealt with in the project, and the form that the answers might have.

One way of expressing the beginning of an event in North Sámi is with the inceptive verb álgit ‘begin’, as in (1). Here álgit takes a verbal complement, but just like inceptive verbs in many other languages, álgit can also appear with a nominal complement, which then represents the event whose initial boundary is referred to by álgit. An example is given in (2).

(1) Álggii munnje sawkalit.
begin.PAST.3SG me.ILL whisper.INF
‘S/he began whispering to me.’

(2) Lean álgán iežan-ovddidan-kursii.
be.PAST.1SG begin.PTC self-development-course.ILL
‘I have started (attending) a self-development course.’

It has been claimed, by Cinque (2006) and others, that when an inceptive seemingly has a nominal complement, there is an abstract verb present, so that there is no principled structural difference between inceptives with verbal complements and inceptives with nominal ones. However, it can be shown that álgit with a verbal complement and álgit without a verbal complement have very different properties. For example, only the latter can be causativised and passivised, and it is also able to assign illative case. In fact, álgit in nominal contexts shares many characteristics with main verbs, which points to the conclusion that álgit is the main verb, whereas álgit with a verbal complement is an auxiliary. This is an example of how existing theories can be modified on the basis of North Sámi data.

Another type of inceptive, shown in (3), is formed by changing the theme vowel of an intransitive activity verb. In the same way, inceptives can also be derived from stative base verbs, as in (4).

(3)a. buollat ‘burn (intr)’ > buollát ‘begin to burn’
b. doarrut ‘fight’ > doarrát ‘begin to fight’
c. duoldat ‘boil (intr)’ > duldet ‘begin to boil’
d. čierrut ‘cry’ > čirrot ‘begin to cry’

(4)a. ballat ‘fear’ > ballát ‘begin to fear, become afraid’
b. diehtit ‘know’ > diehttát ‘get to know’
c. goallut ‘feel cold’ > goallát ‘begin to feel cold’
d. máhttit ‘know’ > máhttát ‘learn, begin to know’

The alternation in the thematic vowel must mean that the derivation takes place very low down in the verbal projection, close to the root—traditionally, it would be called a lexical derivation. Moreover, the derived verbs represent more complex events than the base verbs. In all cases, an initial boundary has been added to an eventuality (state or process) that has no linguistically encoded boundaries. The derivation appears to proceed in a parallel fashion regardless of whether the base verb denotes an activity or a state. Hence, if we are to interpret the derivations in syntactic terms, we would take them to be similar except for the nature of the verbal base.
Concerning the structure of statives, several proposals put forward in recent linguistic literature involve a stative verbaliser that combines with the root to form a stative verb. In dynamic verbal projections, the stative verbaliser is replaced by a dynamic verbaliser. Proposals to this effect are found in e.g. Kratzer (1996), McGinnis (2000) and Folli & Harley (2007). Ramchand (2008) takes a different tack on it and proposes that stative verbs represent a syntactic head that encodes initiation. In processual predicates, the initiation head, if it appears at all, combines with a lower processual head—for example in push, which encodes a process as well as its initiation by an agent. In the absence of a processual part, she argues, the initiation head gets a stative interpretation.

The North Sámi data shown above speak against Ramchand’s analysis, since we see here that an element representing initiation can be added to stative as well as to processual verbs. It is then very improbable that the stative verb in itself is an initiation head. My analysis of the syntactic structure associated with the derived verbs in (3) and (4) is therefore that in all these cases, the inceptive is formed by adding an initiation head on top of the base verb. The base verb consists of a processual or stative verbaliser that has combined with a root.

The reason for taking the base verb to consist of a root and a verbaliser is that the roots can also appear in non-verbal contexts. For example, alongside the verb stem balla- ‘fear’ there is the noun ballu ‘fear’. As we see, the root ball- is the same but the thematic vowels are different. I therefore take the thematic vowels to represent the elements that assign lexical categories to roots. That is, I take -a in balla- to represent a verbalising head, and -u in ballu to represent a nominaliser. And again, we see that the transparent morphology of North Sámi can guide us to a more accurate analysis of semantically complex verb forms.

We can also note, however, that although many of the inceptive verbs shown in (3) and (4) involve the thematic vowel -á-, -á- is not generally a marker of the inceptive. Firstly, as we see in (3), other thematic vowels appear in inceptives, and secondly, á- also appears in non-derived stative verbs, such as čohkkát ‘sit’ and veallát ‘lie’, as well as in derived stative verbs, such as vielgát ‘look white or pale’, from vielgat ‘white’, and also in some non-inceptive non-stative verbs, such as cunnát ‘kiss’ and gurpát ‘tie together in a bundle’. In none of these verbs can the -á- be taken to represent inceptive. It only represents inceptive aspect in cases where it replaces the thematic vowel of the base verb to form an inceptive verb.

(A third type of inceptive in North Sámi involves the suffix -goahtit, which always combines with a verb and is in many ways similar to the auxiliary álgit. For space reasons I leave it out of the discussion here.)

4. Project description

In the following, I first give an overview of the project, and then I present in more detail three derivation patterns that will be the focus of the project.

4.1 Overview

The investigation will build on the line of research that takes the aspectual properties of events to be reflected in the syntax—and here “aspect” is used as a cover term for external, grammatical, or viewpoint aspect as well as internal, lexical or situation aspect (=Aktionsart). Since there is not much to build on in the area that I am interested in, a necessary first step of the investigation will be purely descriptive, consisting of identifying the aspectual types that North Sámi verbs represent and also the aspectual shifts that can be accomplished by derivation. To some extent, this can be gleaned from the descriptive grammars, but the classification found there is not fine-grained enough for our purpose and needs to be developed further. The second step, and the main part of the investigation, is an in-depth analysis of a selection of aspectual derivations. The grammatical properties of these
derivations, and of the verb phrases that they appear in, will be examined through corpus searches supplemented by consultations with informants.

One particularly important source of data will be the text corpus at Giellatekno, which is available online. It contains newspaper texts, fiction, documents from the Sámi parliament (in Norway), etc., and is therefore an invaluable source of information on contemporary North Sámi. In addition, very detailed descriptions are available of North Sámi, in particular Nielsen (1926–1929), but also e.g. Nickel (1990). Individual verbs are dealt with in Nielsen (1932–1962). Sammallahti (2002) contains a backwards dictionary, with the words in Nielsen’s dictionary listed according to their final letters, which means that verbs formed with the same derivational suffix are listed together. Together, these resources should greatly facilitate the investigation that I am planning to do, by providing information on the derivational suffixes and their uses as well as on individual derived verbs.

More specifically, the investigation will focus on the following derivation types: 1) the semelfactive/durative alternation, 2) “passive” inchoatives, 3) verbs with secondary predication. These types, to be presented below, are all potentially very interesting from a theoretical point of view, and they will be dealt with according to the following time plan:

Year 1: Overview of derivational patterns related to aspect and event structure. The semelfactive/durative alternation.

Year 2: “Passive inchoatives” and other inchoatives.

Year 3: Verbs with secondary predication, possibly also verbs with added resultative components (the latter will not be presented here for space reasons).

The results will be presented at international conferences and in 4-5 papers which should be published in peer reviewed international journals, such as *Journal of Linguistics*, *Lingua*, *Natural Language & Linguistic Theory*, and the newly launched open access-journal *Finno-Ugric Languages and Linguistics*. A monograph might be an alternative, but since the project will deal with a number of related but nevertheless distinguishable topics, a series of papers is likely to be a more efficient way to get the results disseminated. In cases when a journal not practising Open Access is chosen as the primary publication channel, additional publication will be made in on-line archives such as Lund University Publications and Lingbuzz. The project will also have its own homepage at Lund university.

4.2 The semelfactive/durative alternation

As mentioned above, in e.g. English there are quite a few verbs that are ambiguous between a semelfactive and a durative reading. On the semelfactive reading, the verb designates an event of short duration, which unlike achievements do not involve any change of state. On the durative reading, the verb designates an activity made up of iterated minimal events. For English, it is generally assumed that the semelfactive reading is basic and the durative reading derived—see e.g. Smith (1991), Rothstein (2004). At the same time, it is well known that in the Slavic languages, for examples, semelfactive verbs can be derived from activity verbs by affixation—see e.g. Dickey & Janda (2009). On this background, it is interesting to note that North Sámi displays considerable variation with respect to semelfactive verbs.

Firstly, there are pairs of verbs, one semelfactive, the other durative, that are built on the same root but have different thematic vowels. In these cases, it is not at all clear if a direction of derivation can be identified. Some examples are given in (5).

(5) \begin{tabular}{ll}
SEMELFACTIVE & DURATIVE \\
a. čurvet & čuorvut ‘shout’ \\
b. njuiket & njuikut ‘jump’ \\
\end{tabular}
c. ravget  ravgut  ‘jerk’

In other semelfactive/durative pairs there is no doubt, on morphological grounds, that the durative verb is basic and the semelfactive verb derived from the durative verb by means of a suffix, as in the examples in (6).

(6) SEMELFACTIVE        DURATIVE
a. gosādit  <  gossat  ‘cough’
    b. goaikkihit  <  goaikut  ‘drip’
    c. speažžalit  <  speažžut  ‘slap’

One relevant question here would be if there is any systematic semantic difference between the verbal roots in (5) and those in (6), so that properties of the root determine what type of alternation it enters into. Both groups appear to contain verbs of impact as well as verbs of light/sound/substance emission, so a detailed investigation of the behaviour and meaning of relevant verbs in context would be necessary.

A more intricate pattern is seen in verbs like boŋkit ‘slam’, which appears to be the derivational basis of the semelfactive boŋkalit ‘slam once’ and the subitive/semelfactive boŋkkihit ‘suddenly slam once’, as well as the frequentative boŋkkuhit ‘several times slam’, which is obligatory transitive, taking an internal argument in the accusative or the comitative case: boŋkkuhit uvssa ‘slam the door shut’; boŋkkuhit uvssain ‘slam the door’. The same pattern can be seen in e.g. bāvkit ‘bang’, semelfactive bāvkalit, transitive frequentative bāvkkuhit. Here arguments are involved in the alternations in addition to aspect. Hence, these verbs represent events with very complex structures, and by understanding these structures we will learn more about event structure in language in general.

4.3 “Passive” inchoatives
North Sámi has many inchoative verbs formed from adjectives. (Here I use the well-established term inchoative to verbs that refer to events of entering into a state, although in section 3 the term inceptive was applied to all elements representing the initial stage of eventualities, in order to emphasise the similarities between them.) Some of them appear to be formed simply by adding a verbaliser with processual content to the adjectival root, just like the English soften. Some Sámi examples are shown in (7).

(7)a. dimis  ‘soft’  >  dipmat  ‘become soft(er)’
b. goikkis  ‘dry’  >  goikat  ‘become dry(er)’
c. guhkki  ‘long’  >  guhkkut  ‘become long(er)’
d. stuoris  ‘big’  >  stuorrut  ‘become big(ger)’

Then there are verbs of the type shown in (8), which traditionally are called passives (Nielsen 1926:256), Nickel 1990:229), since they appear to be related to transitives in the same way as ordinary passives:

(8)a. buođđut  ‘close up’  >  buddosit  ‘accidentally become closed up’
b. ěoavdit  ‘undo’  >  ěoavdásit  ‘come undone (of its own accord)’
c. jorgut  ‘turn inside out’  >  jorgasit  ‘be turned inside out (of its own accord)’
d. rahpat  ‘open’  >  rahpasit  ‘open (of its own accord)’

Vinka (2002), on the other hand, takes the suffixed -s- in (8) to be an inchoative marker (-it is the infinitival ending), corresponding to a zero marker in the inchoative verbs in (7). He also assumes that neither the transitive nor the intransitive verb is derived from the other in pairs.
like these, and proposes instead that transitive and intransitive verbs are formed with different verbalisers (see Vinka 2002:153).

A problem with Vinka’s analysis is that -s- can also be added to some intransitive verbs, giving the meaning ‘accidentally’, as for example in báddasit ‘get swollen accidentally’ from báddat ‘swell’ (Nielsen 1926:257). Following Pylkkänen (2008), one could say here that -s- represents a causative head that comes without a causer, or, in the terms of Ramchand (2008), an initiation head but no initiator. This would give the ‘accidentally’ reading when added to an intransitive processual verb like báddat. In cases like those shown in (8), where the base verbs are transitive, we would take the causative head to replace the head introducing the agent in the base verbs.

There is then the question of whether the analysis I have just sketched could be extended to the suffixed -n- seen in the deadjectival verbs in (9), which are normally taken to be plain inchoatives:

(9)a. buorre ‘good’ > buorránit ‘improve\textsubscript{INTR}’
   b. cuovkkas ‘broken’ > cuovkanit ‘get broken’
   c. guhkki ‘long’ > guhkkánit ‘become longer’
   d. liekkas ‘warm’ > liegganit ‘become warm’

The question arises because some verbs with -n- exist alongside shorter inchoatives—consider guhkkánit in (9c) and guhkkut in (7c). The difference in form might indicate that guhkkánit is more complex also semantically and represents a richer event structure. However, only a detailed investigation of the verbs in question, and of the contexts they appear in, can give us the correct answer to this question.

4.4 Verbs with secondary predication

North Sámi also has a rather peculiar class of verbs built from adjectival and nominal roots. In this class, we find stative verbs like čáhppát ‘sit or lie looking black’, from čáhppat ‘black’, fiskát ‘sit or lie looking yellow’, from fiskat ‘yellow’. In these verbs, which are unlike anything I know of from other languages, the root appears to represent a secondary, depictive predicate. The meaning of čáhppát, for example, is that someone is in a stative position and also is black.

Corresponding to these stative verbs, there are motion verbs built on the same roots and with a parallel meaning. An example is čáhpuhit, meaning ‘walk/move, looking black’. Note that this is different from čáhpodit ‘turn black’, which is based on the same root but is a degree achievement change-of-state verb. Hence, although they are both processual these two verbs must have different syntactic structures, given the assumption that event structure is represented in the syntax. For the change-of-state verb, I would suggest that the adjectival root combines with a processual verbaliser, which then takes the undergoer as its subject. Optionally, between the root and the processual head there is also a resultative projection, which gives rise to the telic reading that these verbs can have.

Concerning the verbs involving secondary predication, I would suggest that at the bottom of the syntactic structure of these verbs is an adjectival projection. The subject originates as the subject of this projection. Over the adjectival projection, there is a stative or processual verbaliser. The subject of the lower adjectival predicate moves to the specifier of the verbaliser, thereby becoming the subject of the whole construction. The resulting syntactic structure is sketched in (10).

(10) [ subject proc/stat [ subject AP] }
We can now also see how inceptive verbs like čáhppánit ‘start moving, set off (of something black)’ are derived: by adding an inceptive element over the motion verb containing secondary predication. But verbs like čáhpput ‘appear black (of something moving)’, where the visible property appears to be the primary predicate and the movement the secondary one, suggest that there is more variation in this area than what I have been able to deal with so far. This will necessarily be a topic for more detailed investigation.

5. International and national collaboration

Although I am planning an individual research project, I will have contacts with linguists at the universities in Umeå and Tromsø, who have an interest in Sámi as well as in event structure, in particular Mikael Vinka, lecturer in Sámi at Umeå university, and Gillian Ramchand and Peter Svenonius, professors of linguistics at CASTL, University of Tromsø. At both locations there are also linguists and/or students who are native speakers of North Sámi, and additional informants are available. Hence, visits to Umeå and Tromsø to meet informants and exchange ideas with linguists there are included in the plan.

6. Significance

A number of models developed in recent years in order to capture the grammatically relevant properties of events make very specific claims about the structure of verbs and verb phrases of various types. Hence, they provide a set of tools with which the finer details of North Sámi verb phrases can potentially be captured. One goal of the project is therefore to give a theoretically informed analysis of aspectual derivations in North Sámi.

At the same time, confronted with data from North Sámi the models will also be put to the test. In addition to provide analyses for the Sámi data, I therefore also intend to contribute to the theory building within the field. The existing models of event structure aspire to universal validity, and consequently, whenever these models cannot adequately account for empirical facts, they will have to be revised. My expectation is that since the components of semantically complex events are visible in the morphology and/or in the syntax in North Sámi to a much greater extent than in the languages that existing models have been built on, and since North Sámi has verbs that represent events with very complex structures, the investigation of North Sámi will reveal that considerable revision of the models is called for. In other cases, the North Sámi data can guide us in the choice between competing models. This was demonstrated in section 4, where earlier claims concerning the syntax of inceptive verbs in nominal contexts as well as the syntactic representation of statives were challenged by the facts of Sámi.

In North Sámi, there are numerous derivational patterns that may have great theoretical significance—many more than the few examples I have presented here. The main reason why they have not been addressed in the linguistic literature is probably that few linguists know Sámi. Being one of the few trained linguists who know the language fairly well, I am eager to try and fill the gap. I also think that now is the right time, since relevant theoretical tools and also more practical tools, such as corpuses, have been developed in recent years. And importantly, my ambition is to present results sufficiently substantial to be of value even to researchers working within other frameworks.