Editorial

The editors of FULL are pleased to announce the first issue of the second volume of the journal. Our journal is meant to provide a platform for linguistic research on modern and older Finno-Ugric or other Uralic languages and dialects, comparative research as well as research on single languages, with comparison of just Finno-Ugric languages or comparison across family lines, with formally or empirically oriented papers. The present issue contains three papers, one historical-comparative, and two dealing with syntactic constructions in individual languages. We hope you will find them interesting and useful.

We wish to thank all the anonymous reviewers who generously lent their time and expertise to make sure that each submission is carefully vetted and fairly assessed. Their constructive criticism helped improve each of the contributions that appear in the present issue as well. Our special thanks go to Orsolya Tánczos, whose dedicated and painstaking editorial assistance has made the editing of this issue possible.

A small announcement is in order regarding the journal's online access system, which we have modified so that now all papers can be freely accessed and downloaded without any need for prior registration. At the same time, those who register, or have already registered, are provided with the benefit of getting notified of new issues, calls, etc. via the occasional email.

FULL welcomes manuscripts from all the main branches of linguistics, including phonology, morphology, syntax, semantics and pragmatics, diachronic or synchronic, as well as from first language acquisition and psycholinguistics. Whatever the theoretical or empirical orientation of the contributions may be, our leading principle is to maintain the highest international standards.

The Editors

The Inverse Agreement Constraint in Uralic Languages[*]

Katalin É. Kiss

The paper aims to answer the question why object–verb agreement is blocked in Hungarian, Tundra Nenets, Selkup, and Nganasan if the object is a first or second person pronoun. Based on Dalrymple & Nikolaeva (2011), it is argued that object–verb agreement serves (or served historically) to mark the secondary topic status of the object. The gaps in object-verb agreement can be derived from the Inverse Agreement Constraint, a formal, semantically unmotivated constraint observed by Comrie (1980) in Chukchee, Koryak and Kamchadal, forbidding object-verb agreement if the object is more 'animate' than the subject: The paper claims that the Inverse Agreement Constraint is a constraint on information structure. What it requires is that a secondary topic be less topical than the primary topic. An object more topical than the primary topic can only figure as a focus. A version of the constraint can also explain why Hungarian first and second person objects have no accusative suffix, and why accusative marking is optional in the case of objects having a first or second person possessor.

Keywords: *differential object–V agreement, differential object marking, information structure, secondary topic, Inverse Agreement Constraint*

1   Introduction: The problem

It is a long-standing mystery of Hungarian grammar that object–verb agreement, elicited by definite objects, is blocked if the object is a first or second person pronoun. Compare:

(1)   a.   *János lát-t-a   őt.*
                John see-PAST-OBJ.3SG   him[1]
                'John saw him.'

versus

        b.   *János lát-ott   engem.*
                John see-PAST.3SG   me
                'John saw me.'

As revealed by the data of Dalrymple & Nikolaeva (2011), this mystery is not confined to Hungarian. First and second person objects do not elicit object–verb agreement in Tundra Nenets, Selkup, and Nganasan, either. Whereas the 3rd

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[1]   OBJ stands for a morpheme cross-referencing the object.

person object of the Tundra Nenets example in (2a) can trigger object–verb agreement, the first and second person objects in (2b) cannot. In fact, object–verb agreement is not automatic for 3rd person objects, either. As argued by Dalrymple & Nikolaeva, it is licensed if the object is a contextually given secondary topic.

(2)   a.   *Wanya   syita   ladǝ˚   / ladǝ˚ da*
           John   he.ACC   hit.3SG/ hit.OBJ.3SG
           'John hit him.'
      b.   *Wanya   syiqm˚/syit̆˚   ladǝ˚   /*ladǝ˚ da*
           John   I. ACC/you. ACC   hit.3SG/ hit.OBJ.3SG
           'John hit me/you.'

                                          (Dalrymple & Nikolaeva 2011: 172)

In the Selkup example in (3a), the verb optionally agrees with the 3rd person object. In (3b), where the object is 2nd person, object–verb agreement is impossible.

(3)   a.   *Tǝp   kanap   qontyrtɛnta / qontyrtɛntyŋyty*
           he   dog. ACC   see.FUT.3SG/see.FUT.OBJ.3SG
           'He will see a/the dog.'

      b.   *Tǝp   šĭnty   qontyrtɛnta / *qontyrtɛntyŋyty*
           he   you. ACC   see.FUT.3SG/ see FUT.OBJ.3SG
           'He will see you.'

                                          (Kuznecova et al. (1982: 235), cited by
                                          Dalrymple & Nikolaeva (2011: 199-201))

There are also non-Uralic languages that display verbal agreement with 3rd person objects, but block agreement with first and second person objects, among them Waris (Brown 1988), Sursunga, Nanggu, Waura, Parecis (Siewierska 2004: 150), and Chukchi, Koryak, and Kamchadal (Comrie 1980; Bobaljik & Branigan 2006).

Various explanations have been proposed for the lack of object–verb agreement with first and second person objects. Coppock & Wechsler (2012) try to derive the different behavior of third person and non-third person nominals from the presence versus lack of an alleged [+DEF] lexical feature. Comrie (1980) proposed a filter, the so-called Inverse Agreement Constraint to block object agreement with first and second person pronouns. Dalrymple & Nikolaeva (2011) have suggested a functional explanation based on the claim that first and second person pronouns represent a higher degree of topicality than third person pronouns. Here I will argue that Coppock & Wechsler's account is untenable, whereas the explanations of Comrie, and Dalrymple & Nikolaeva represent two sides of the same coin: Comrie's constraint, a seemingly unmotivated formal filter, in fact, formalizes Dalrymple & Nikolaeva's insight. Their combined explanation straightforwardly accounts for the relevant facts of the Samoyedic languages and of Chukchi, Koryak, and Kamchadal. The lack of agreement with first and second

person objects in Hungarian is a fossil from a former stage of the language; it is the grammaticalization of the effect of the Inverse Agreement Constraint.

Capitalizing on a suggestion of Gerland & Ortmann (2013), the explanation will also be extended to a further mystery of Hungarian: the lack of the accusative suffix in standard Hungarian on first and second person objects (*engem* 'me' and *téged* 'you'), and the optionality of accusative marking on objects bearing a 1st or 2nd person possessive suffix (*kalapom(-at)* 'my hat(-ACC)', *kalapod(-at)* 'your hat-ACC').

The paper is structured as follows. Section 2 introduces differential object–verb agreement on the basis of Hungarian facts. Section 3 surveys previous explanations of the curious distribution of agreeing and non-agreeing objects attested in Hungarian and other languages. Section 4 puts together a new explanation from the ingredients of former proposals.

2   Differential object-verb agreement in Hungarian

The mystery outlined above, attested in several Uralic (and non-Uralic) languages, will be introduced in detail by facts of Hungarian. The Hungarian verb is known to have two agreement paradigms: a "subjective" or "indefinite" conjugation used in the case of intransitive verbs and verbs taking an indefinite object, and an "objective" or "definite" conjugation used in the case of verbs taking a definite object. For example:

(4)	*én*	*íro-k*	*(egy cikket)*	'I write (a paper)'
	te	*ír-sz*	*(egy cikket)*	'you write (a paper)'
	ő	*ír-Ø*	*(egy cikket)*	'(s)he writes (a paper)'
	mi	*ír-unk*	*(egy cikket)*	'we write (a paper)'
	ti	*ír-tok*	*(egy cikket)*	'you write (a paper)'
	ők	*ír-nak*	*(egy cikket)*	'they write (a paper)'

(5)	*én*	*íro-m*	*a cikket*	'I write the paper'
	te	*íro-d*	*a cikket*	'you write the paper'
	ő	*ír-ja*	*a cikket*	'(s)he writes the paper'
	mi	*ír-juk*	*a cikket*	'we write the paper'
	ti	*ír-játok*	*a cikket*	'you write the paper'
	ők	*ír-ják*	*a cikket*	'they write the paper'

The types of objects eliciting the definite conjugation include, among others, nouns supplied with a definite article, possessive constructions, proper names, 3rd person personal pronouns, reflexive pronouns (which have the morphological make-up of possessive constructions of the type 'my body', 'your body'), and demonstratives. Cf.

(6)   *(Én) ismere-m   a   cikket   / Pál cikkét   / Pált*
       I   know-OBJ.1SG   the   paper.ACC   /Paul's paper.ACC /Paul.ACC
       /őket/ önmagamat/ azokat.
       /they. ACC/myself.ACC/those.ACC
       'I know the paper/Paul's paper/Paul/them/myself/those.'

The types of objects eliciting the indefinite conjugation include, among others, bare nouns, nouns supplied with an indefinite determiner or a numeral, and indefinite and universal pronouns, e.g.:

(7)   a.   *(Én) ismere-k   egy/ néhány   / sok   / minden híres   nyelvészt.*
             I   know-1SG   a/some   /many/every famous   linguist.ACC
             'I know a/some/many/every famous linguist.'
       b.   *(Én) ismere-k   nyelvészeket/   valakit   / mindenkit.*
             I   know-1SG   linguists.ACC/ somebody.ACC /everybody.ACC
             'I know linguists/somebody/everybody.'

Honti (1995), Rebrus (2000), Bartos (2000), etc. have argued on the basis of synchronic and diachronic considerations that the definite conjugation involves a morpheme complex consisting of two agreement suffixes (except for the 1st and 2nd person singular verb forms, where a portmanteau morpheme stands for them). The morpheme closer to the verb, represented by a *-ja/e/i* element (subject to various assimilation processes in different contexts), is an object agreement suffix, cognate with the reconstructed Proto-Uralic 3rd person singular personal pronoun. The subject agreement morpheme is null in 3rd person singular.

(8)   a.   *íro-m*   'write-OBJ.1SG'   b.   *ismere-m*   'know-OBJ.1SG'
             íro-d   'write-OBJ.2SG'   *ismere-d*   'know-OBJ.2SG'
             ír-ja-Ø   'write-OBJ.3SG'   *ismer-i- Ø*   'know-OBJ.3SG'
             ír-j-uk   'write-OBJ.1PL'   *ismer-j-ük*   'know-OBJ.1PL'
             ír-já-tok   'write-OBJ.2PL'   *ismer-i-tek*   'know-OBJ.2PL'
             ír-já-k   'write-OBJ.3PL'   *ismer-i-k*   'know-OBJ.3PL'

Surprisingly, a verb with a 3rd person subject taking a 1st or 2nd person object is in the indefinite conjugation:

(9)   a.   *Ő ismer- Ø   engem/ minket   / téged   / titeket.*
             he know-3SG   me   /us   /you.SG.ACC/you.PL.ACC
             'He knows me/us/you.'
       b.   *Ők   ismer-nek   engem / minket / téged   / titeket.*
             they know-3PL   me   /us   /you.SG.ACC/you.PL.ACC
             'They know me/us/you.'

However, a 2nd person object does elicit verbal agreement if the subject is 1st person singular − but the agreement marker is different from that found in the definite paradigm used with 3rd person objects; it is a combination of *-l-*, a 2nd

person agreement morpheme, and *-k*, the 1st person singular agreement morpheme of the indefinite conjugation:

(10) (Én) ismer-le-k   téged   /titeket.
      I   know-2OBJ-1SG[2]   you.SG.ACC/you.PL.ACC
      'I know you.'

3   Previous explanations of the gaps in object–verb agreement

3.1.   Explanations based on the [+/-definite] feature of the object

In the widely accepted theory of Bartos (2000), Hungarian object–verb agreement is elicited by objects of the category DP. Bartos assumes that indefinite noun phrases only project a NumP; they have no DP layer, and this is also true for 1st and 2nd person pronouns. In a modified version of this theory put forth by Coppock & Wechsler (2012), the objective conjugation "registers the object's formal, not semantic, definiteness". Definiteness is manifested in a +DEF feature, which is lexically associated with certain determiners and certain types of pronominals, but not with others. Objects represented by third person pronouns are +DEF, but first and second pronouns happen to be marked as -DEF.

However, the minimal pair in (11a-b) provides crucial evidence against the NumP/[-DEF] analysis of 1st and 2nd person pronouns. Sentences with a 1st person singular subject somewhat marginally allow a 1st person plural pronominal object (the optimal solution is to use a reflexive pronoun in such cases, as in (11c)). In such sentences, the verb must be in the definite conjugation (see (11a)), which clearly shows that it is not the 1st person pronoun that is indefinite in sentences like (9a-b); the use of the definite or indefinite conjugation is determined by clause-level relations.

(11) a. ?*Én   minket   is   belevesze-m   a   névsorba.*
            I   us.ACC   also   include-OBJ.1SG   the namelist-into
            'I also include us into the list of names.'

      b. **Én   minket   is   belevesze-k   a   névsorba.*
            I   us.ACC   also   include-1SG   the namelist-into

cf.   c. *Én   magunkat   is   belevesze-m   a   névsorba.*
            I   ourselves.ACC also include-OBJ.1SG   the namelist-into
            'I also include ourselves into the list of names.'

The construction in (10) also represents a problem for the NumP/[-DEF] analysis of 1st and 2nd person pronouns. The fact that 2nd person pronouns elicit agreement on the verb if the subject is 1st person, and this agreement marker is

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[2]   2OBJ-1SG stands for '2nd person object, 1st person singular subject'.

different from that found in the definite paradigm used with 3rd person objects is not explained by the theories of Bartos (2000) and Coppock & Wechsler (2012).

3.2. Deriving the gaps from the Inverse Agreement Constraint

As observed by É. Kiss (2005), the seemingly ad hoc gaps in Hungarian object−verb agreement, can be derived from the so-called Inverse Agreement Constraint, proposed by Comrie (1980) for the East-Siberian Chukchi, Koryak and Kamchadal. In these languages, the participants of events are ordered with respect to animacy/agentivity. The 1st person is seen as more animate than the 2nd person, the 2nd person is seen as more animate than the 3rd person, and in each person singulars are seen as more animate than plurals. In Chukchi, Koryak, and Kamchadal the V agrees both with its subject and with its object, and the relative animacy of the subject and object is constrained by the following principle:

(12)   *INVERSE AGREEMENT CONSTRAINT*
An object agreeing with a verb must be lower in the animacy hierarchy than the subject agreeing with the same verb.

As shown by Comrie (1980), Chukchi, Koryak and Kamchadal have two strategies to avoid a violation of the Inverse Agreement Constraint. In case the object of a verb is more "animate" than its subject, (i) either an inverse morpheme is prefixed to the verb to indicate that the Inverse Agreement Constraint is suspended[3], (ii) or the verb only agrees with its subject, but not with its object, i.e., it behaves as if it were intransitive. In the latter case the verb is supplied with a detransitivizing morpheme, yielding a verb form analyzed by Bobaljik & Branigan (2006) as a spurious case of the antipassive construction of ergative languages. Chukchi always employs strategy (ii) in the case of a 2nd person subject acting on a 1st person object.
    The three languages examined by Comrie all adopt the "animacy hierarchy" under (13), but they segment it differently.

(13)   1SG > 1PL > 2SG > 2PL > 3SG > 3PL

In Koryak, singular is more prominent than plural only in the 3rd person. Chukchi collapses the first four levels of the hierarchy, as follows:

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[3]   A similar strategy has been described in several American Indian languages, among them Algonkin. In these languages, the verb appears either in a direct form or an inverse form, depending on whether its subject or object is more prominent in the hierarchy. The direct verb form is used when the subject is more prominent than the object (e.g., when the subject is 1st person, and the object is 3rd person). If the object is more prominent than the subject, then the verb is in the inverse form. In these languages subject and object pronouns are not marked morphologically, and their word order is also free. Their subject or object status depends on whether the verb is in the direct or inverse form.

(14)   1/2 > 3SG > 3PL

In Kamchadal, the hierarchy only has two levels:

(15)   1/2/3SG > 3PL

In Koryak, the subject agreement morpheme precedes the verb, and the object agreement morpheme follows it. The Inverse Agreement Constraint is invoked in the case of the following subject-object combinations:

(16)   a.   2nd person subject – 1st person singular object
       b.   2nd person subject – 1st person plural object
       c.   3rd person singular subject – 1st person singular object
       d.   3rd person singular subject – 1st person plural object
       e.   3rd person singular subject – 2nd person object
       f.   3rd person plural subject – any object

In the (a) and (c) cases, no object agreement morpheme is licensed (the verb has the agreement morphology of an intransitive verb, with both the prefix and the suffix agreeing with the subject). In the rest of the cases, the Inverse Agreement Constraint is suspended by the inverse morpheme *ne-*.

Hungarian also observes the Inverse Agreement Constraint, and avoids its violation by applying strategy (ii). Hungarian adopts the following version of the animacy hierarchy, collapsing both the two lowest levels, and the three intermediate levels of the hierarchy in (13):

(17)   1SG > 1PL/2 > 3

That is, the speaker-participant is at the top of the animacy hierarchy, the non-speaker participants of the discourse represent the intermediate degree of animacy, and those not participating in the discourse are the least animate.

Languages employing the Inverse Agreement Constraint differ in their treatment of subject−object pairs representing the same degree of animacy. Hungarian allows verb−object agreement in the case of a 3rd person subject and a 3rd person object; hence the formulation of the Hungarian version of the Inverse Agreement Constraint is supplemented with a caveat:

(18)   *INVERSE AGREEMENT CONSTRAINT* (for Hungarian)
       An object agreeing with a verb must be lower in the animacy hierarchy than the subject agreeing with the same verb, unless both the subject and the object represent the lowest level of the animacy hierarchy[4].

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[4]   (18) is more explicit than the original formulation of É. Kiss (2005), cited in (i):

(i)   An object agreeing with a verb must be lower in the animacy hierarchy than the subject agreeing with the same verb, unless the subject represents the lowest level of the animacy hierarchy.

Having no inverse verb forms, Hungarian avoids the violation of the Inverse Agreement Constraint by blocking verbal agreement with an object that is more animate than the subject. The definite conjugation is ruled out in the case of the following subject-object combinations:

(19) a.   3rd person subject – 1st/2nd person object
     b.   2nd person subject – 1st person object
     c.   1st person plural subject – 2nd person object

These are precisely the gaps in the definite conjugation, i.e., the cases when a definite object elicits the indefinite conjugation.

   The Inverse Agreement Constraint − correctly − does not rule out verb−object agreement in the case of a 1st person singular subject and a 2nd person object. As shown in (10), the Hungarian verb does agree with its object in this construction, however, the object agreement morpheme *-l-* is different from the *-ja/e/i-* agreement morpheme attested in the case of 3rd person objects. This is as expected if the object agreement morphemes were originally object pronouns cliticized to the verb, and the *-ja/e/i-* element is the descendant of a Proto-Uralic 3rd person pronoun. Although the etimology of *-l-* is uncertain, it is clearly cognate with the 2nd person subject agreement morpheme of the so-called *-ik* conjugation. The *-ik* conjugation is believed to be the descendant of a middle conjugation, where the *-l-* morpheme cross-referenced a 2nd person theme subject (in other words, a 2nd person D-structure object). Cf.

(20) *én ese-m*   'I fall-1SG'
     *te ese-**l***   'you fall-2SG'
     ő es-ik   '(s)he fall-3SG'

That is, when the object and the verb agree in Hungarian, they share a person feature; the morpheme *-ja/e/i-* agrees with a 3rd person object, whereas *-l-* agrees with a 2nd person object.

   The Inverse Agreement Constraint, claiming that the verb agrees with its DP object in person, provided the object is lower in the animacy hierarchy than the subject, or both of them represent the lowest degree of the animacy scale, correctly predicts the distribution of object−verb agreement in Hungarian. Why this derivation is, nevertheless, unsatisfactory is that it leaves the motivation for the attested distribution unclear.

3.3. A functional explanation based on Information Structure

The reason why object–verb agreement is blocked in the case of a third person subject and a first or second person object, or in the case of a second person subject and a first person object can only be clarified if we have understood the function of object–verb agreement.

3.3.1. Marcantonio's theory of object–verb agreement

The question what motivates object–verb agreement, and what motivated its emergence was raised by Givón (1976), and with respect to the Ugric languages, by Marcantonio (1985). According to Givón (1976), object–verb agreement, and verbal agreement, in general, is related to information structure. Agreement morphemes appearing on the verb arose as topic-doubling pronominals in topic-shifting constructions, i.e., they marked the topic role of the cross-referenced arguments. Object agreement also played a role in signaling the relative topicality of internal arguments. When a language reanalyzed the topic constituent as the normal subject or object of the neutral, non-topicalized sentence pattern, it also reanalyzed subject-topic agreement as subject agreement and object-topic agreement as object agreement. Givón pointed out this process in the Bantu languages, in Creol languages, and in child language (Givón 1976: 151).

Marcantonio (1985) hypothesized a similar development in the Ugric branch of the Uralic family, which proceeded at different length in Hungarian, Mansi (Vogul), and Khanty (Ostyak). Marcantonio (1985) shares the generally accepted view that the Proto-Ugric sentence was SOV, and the subject also functioned as the topic of the clause. She claims that verb-object agreement arose in OSV sentences where the object had the topic role; it served to encode that the topic function was associated with the object[5]. Since the topic was in most cases represented by a definite noun phrase, verbal agreement with the topicalized object later came to be reinterpreted as marking the definiteness of the object.

Marcantonio reconstructed for Proto-Hungarian a diachronic process involving the following three stages:

1. Proto-Hungarian first marked the topic function of the object on the object by the suffix *-t* (which replaced the Proto-Uralic *-m*). Later the topical-accusative marker *-t* was extended to all direct objects, whether topic or not.
2. After the extension of *-t* (the present-day accusative suffix) to all direct objects, the topic function of objects came to be marked on the verb, i.e., topical object−verb agreement evolved.
3. Then Proto-Hungarian developed a topic position independent of grammatical functions, which made the marking of the topic role of the object by a verbal morpheme redundant. Consequently, the definite conjugation has been reinterpreted as marking the definiteness of the direct object−irrespective of its discourse function.

Evidence for the hypothetical stage 1 and stage 2 of this process is provided by the fact that they can be found in various Mansi and Khanty dialects. This suggests that the hypothesized process, starting in the Proto-Ugric period, got stalled at earlier stages in some of the daughter languages. Marcantonio's theory predicts that in the Ugric dialects that mark the topic role and/or the definiteness of the object by a suffix on the object, there is no verb−object agreement. In the dialects in which accusative marking is extended to all objects, the topic role of the object is encoded by a morpheme on the verb. The theory does not exclude the

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[5]   Comrie (1977) formulated a similar insight; he assumes that verb-object agreement encoded deviation from the regular SOV pattern.

possibility of skipping stage 1, i.e., marking the topicality of the object on the verb also in lack of a generalized accusative suffix. This is what we attest in the majority of Mansi and Khanty dialects, among others in Vah Khanty. Observe the following minimal pair cited by Gulya (1970):

(21)   a.   *ku   rit   tus-Ø*
            man   boat   take-PAST. 3SG
            'The man took a boat.'
       b.   *ku   rit   tus-t*
            man   boat   take-PAST.OBJ.3SG
            'The man took the boat.'

There are also Mansi dialects representing stage 1 of the change, where the accusative suffix *-m* or *-ma/me* only appears on definite objects:

(22)   a.   *kwal*: 'house.NOM/house.ACC';
       b.   *kwal-me*: 'the house-ACC'
                                                   (Collinder 1960, cited by Marcantio 1985, p. 285)

Bereczki's (1971) data suggest that Mari also belongs to this type.

Marcantonio's theory explains why Steinitz (1950:75) assumed verbal agreement with definite objects in Khanty to be optional. In dialects representing stage 2 of the change, a definite object elicits the indefinite conjugation in case it is not the topic but the focus of the clause.

Although Hungarian attained stage 3 of the change prior to the end of the 12th century, the beginning of the documented history of the Hungarian language, Old Hungarian texts still preserve relics of stage 2. Marcantonio cites several examples from 14th and early 15th century codices, collected by Bárczi (1958), in which either a topicalized indefinite object elicits the definite conjugation, or a non-topicalized definite object fails to elicit it. In example (23a) from the Vienna Codex, written around 1416, copied in 1466, the topicalized object *kit* 'whom' is indefinite, nevertheless the verb bears the *-e* object agreement suffix. In example (23b) from the Jókai Codex (written around 1370, copied in 1448), the object, represented by a possessive construction, is definite but non-topic, and the verb bears the null 3rd person singular indefinite agreement suffix.

(23)   a.   **Kit**   *Amasias kiral auag pap*   *gakorta*   **getre-tt-e**
            whom   Amasias king or   priest   often   torture-PAST-OBJ.3SG
            'whom king or priest Amasias often tortured'
                                                                        (Vienna Codex p. 214)
       b.   *es   ottan*   **ve-n**   *ysteny malaztnak latasatt*
            and   there   take-PAST. 3SG   divine   grace.GEN   sight.ACC
            'and there he took the sight of God's grace'
                                                                        (Jókai Codex p. 131)

That is, topicality occasionally still overrides definiteness in licensing object−verb agreement in 14th-15th-century Hungarian. In fact, we do not even have to go back to the 14-15th century to find examples of type (23a). Although object noun phrases supplied with indefinite determiners (including the [+specific] *bizonyos* and *egyes* 'certain') require the indefinite conjugation according to all grammars of Modern Hungarian, Peredy (2009) has found certain types of examples in the case of which speakers hesitate whether the indefinite or the definite conjugation is more appropriate, often accepting both, or preferring the definite conjugation. Interestingly, the examples in the case of which the unexpected definite conjugation is accepted, and even preferred, by the majority of speakers (up to 85% of them) all involve a topicalized [+specific] indefinite object, e.g.:

(24)   a.   *Bizonyos gyerekeket   a   társasjátékok   leköt-i-k.*
             certain   kids.ACC   the board-games absorbe-OBJ-3PL
             'Certain kids are absorbed by board-games.'   (Peredy 2009, (13c))
       b.   *Egyes   nőket   a   sötét ruhák   öregít-i-k.*
             certain   women.ACC   the dark clothes make.look.old-OBJ-3PL
             'Certain women, dark clothes make look older.' (Peredy 2009, (15))

These facts support Marcantonio's basic hypothesis about the correlation between object agreement and information structure.

3.3.2. Nikolaeva's theory of object–verb agreement

Though Marcantonio's theory makes a number of correct predictions for Hungarian, it has turned out to be imprecise in certain respects. Firstly, the diachronic process outlined by her must have spanned a much longer period than assumed by her. As pointed out by Hajdú (1966), Mikola (1966), Honti (1995; 2009), Rédei (1996), Csúcs (2001), etc., verb−object agreement is attested not only in the Ugric branch of the Uralic family, but also in Mordvin and the Samoyedic languages; what is more, the morpheme agreeing with 3rd person objects is also cognate in most of these languages. Hence the diachronic process reconstructed by Marcantonio must have started in the Proto-Uralic period, before 4000 BC[6].

    Secondly, and more importantly from the present perspective, Nikolaeva's (1999, 2001) research into Khanty suggests that the discourse function and the syntactic environment of verb−object agreement is likely to have been somewhat different from that assumed by Marcantonio (1985); instead of marking the topic role of the object in OSV sentences, verbal agreement with the object signaled the secondary topic role of the object in SOV sentences. As Nikolaeva's studies of Khanty (1999a,b 2001) have revealed, the Khanty sentence is a strictly SOV structure with a morphologically unmarked object, displaying a fusion of discourse functions and grammatical functions. The subject obligatorily bears the role of topic. If the D-structure object (alone) is to be assigned the topic role, topic–subject identity is established by passivization. Citing Kulonen (1989), Nikolaeva (1999, 2001) demonstrates that theme, benefactive, location, goal, and temporal

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⁶   Keresztes (1999), on the other hand, claims that the morpheme clusters of the Mordvin definite conjugation are recent developments.

arguments can equally be encoded as subjects of a passive construction. Passivization is obligatory if the D-structure subject is non-referential, hence not topicalizable, as shown by the following minimal pairs:

(25) a.   *tam   xu:j   xoj-na   an   wa:n-s-a*
             this   man who-LOC   not   see-PAST-PASS.3SG
             'This man was seen by nobody.'

      b.   * *xoj   tam   xu:j   an   wa:nt-əs   /wa:nt-əs-li*
             who   this   man   not   see-PAST.3SG   /see-PAST-OBJ.3SG
             'Nobody saw this man.'   (Nikolaeva 2001, (28a-b))

(26) a.   *(luw) juwan   re:sk-ə-s*
             he   Ivan   hit-EP-PAST.3SG[7]
             'He hit Ivan.'

      b.   *juwan   xoj-na   re:sk-ə-s-a*
             Ivan   who-LOC   hit-EP-PAST-PASS.3SG
             'Who was Ivan hit by?'   (Nikolaeva 1999a, (58))

Whereas the subject is always topic, the object functions either as a secondary topic, or as a focus, depending on whether or not it elicits verbal agreement. Nikolaeva (2001) defines secondary topic as follows:

(27) *SECONDARY TOPIC*
      Secondary topic is an entity such that the utterance is construed to be about the relationship between it and the primary topic.

The secondary topic shares two basic properties of primary topics: it is associated with existential presupposition, and it is activated, i.e., its referent is already present in the discourse. Interestingly, the latter requirement is stronger for secondary topics than for primary ones. As Nikolaeva (2001) shows, for a constituent to be construed as a primary topic, it merely has to be known to the interlocutors, but need not necessarily be present in the domain of discourse, i.e., it can be a non-familiar aboutness topic. The secondary topic, on the other hand, nearly always has a referent that has been activated in the immediate context or situation, i.e., it is a familiarity topic. Nikolaeva proves the familiarity of secondary topics by comparing the activation status of agreeing and non-agreeing objects in texts collected by Pápay (1906–8). She has examined nearly 1100 transitive clauses recorded by Pápay, 412 of which contain a non-agreeing object, and 677 of which contain an agreeing object. The proportion of objects evoked in the preceding context or in the situation of discourse is 87% in the case of agreeing objects, but only 11% in the case of non-agreeing objects.

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   [7]   EP abbreviates 'epenthetic vowel'.

(28)   Activation status of the object

non-agreeing objects (412 clauses)		agreeing objects (677 clauses)	
activated	inactivated	activated	inactivated
46	366	561	116
11%	89%	83%	17%

52% of the agreeing objects analyzed as inactivated are, in fact, activated clause-internally: they have a possessor referentially bound by the subject/primary topic. For example:

(29)   a.   *What did he do?*
            luw   kalaŋ-əl   re:sk-əs-li   / *re:sk-əs
            he   reindeer-3SG   hit-PAST-OBJ.3SG   /*hit-PAST.3SG
            'Hei hit hisi/*j reindeer.'   (Nikolaeva 2001, (45))

If a Khanty sentence answers the question "What happened?", i.e., if it is pragmatically an all-focus utterance, its object cannot agree, i.e., it cannot be construed as a secondary topic whether or not it has been activated previously:

(30)   a.   *What happened?*
       b.   *ma   tam   kalaŋ   we:l-s-əm   / *we:l-s-e:m*
            I   this   reindeer kill-PAST-1SG   /kill-PAST-OBJ.1SG
            'I killed this reindeer.'

In focus structures where the object is part of the presupposition, it always elicits agreement:

(31)   *ma   ta:ləx   ta:ta   a:kət-l-e:m   / *a:kət-l-əm*
       I   mushroom   here   collect-PRES-OBJ.1SG /collect- PRES-1SG
       anta   to:ta*
       not   there
       'I collect mushrooms HERE, not THERE.'

        Whereas the secondary topic shares the topicality or saliency presupposition of the primary topic, it is claimed to be less pragmatically salient for the speaker than the primary topic (Dalrymple & Nikolaeva 2011, 57). As it stands in a certain pragmatically presupposed relation to the primary topic, it cannot appear when there is no primary topic.
        In ditransitive constructions either the patient or the recipient can function as the secondary topic, eliciting agreement on the verb. In (32a) the patient is the secondary topic. (32b) contains no secondary topic and no object agreement. In (32c), the recipient is encoded as the caseless object-topic eliciting agreement.

(32)   a.   *(ma) a:n Juwan-a   ma-s-e:m*
            I   cup John-LAT   give-PAST-OBJ.1SG
            'I gave the cup to John.'

b.   *(ma) Juwan-a   a:n   ma-s-ǝm*
      I   John-LAT   cup   give- PAST-1SG
      'I gave the cup to John.'

c.   *(ma) Juwan a:n-na   ma-s-e:m   /*ma-s-ǝm*
      I   John   cup-LOC   give- PAST-OBJ.1SG /give- PAST-1SG
      'I gave John a cup.'

The array of grammaticality judgments in (32) suggests that (32b) represents the base generated order, which can answer the questions *What happened*, or *What did John do.* (32c) is a derived order, involving the removal of the goal constituent from inside the verb phrase, the focus domain.

Differential object agreement encoding the secondary topic role of the object is not restricted to Khanty in the Uralic language family. Skribnik (2001) reports similar facts from Mansi, and Dalrymple & Nikolaeva (2011) report similar facts from Tundra Nenets, Selkup, and Nganasan, representatives of the Samoyedic branch, areally located between the West-Siberian Mansi and Khanty, and the non-Uralic East-Siberian Chukchi, Koryak, and Kamchadal. In all of these languages, verbal agreement with the object is seemingly optional; in fact, it is determined by whether the object is a contextually given topic, or a focus, carrying new information.

The grammars of Nenets, Selkup, Nganasan, and Hungarian not only share the phenomenon of object–verb agreement; they also share the prohibition against agreement with first and second person objects (recall the Tundra Nenets examples in (2), and the Selkup examples in (3)). The fact that discourse-motivated object–verb agreement is present in more than one branch of the Uralic family suggests that it is Proto-Uralic heritage. Since the blocking of agreement with 1st and 2nd person objects is also a shared property of many of these languages, it cannot be an accidental phenomenon but must be an integral part of the system of discourse-motivated object–verb agreement inherited from the proto-language. Dalrymple & Nikolaeva draw the plausible – though not fully explicit – conclusion that the lack of agreement with 1st and 2nd person objects must be related to the inherent topicality of 1st and 2nd person pronouns. "On this view, the Samoyedic languages (Nenets, Selkup and Nganasan) and Old Hungarian have grammaticalised the tendency for first and second person pronouns to be likely primary topics and unlikely secondary topics. Therefore, they cannot correspond to the primary object, which is strongly aligned with the secondary topic in these languages. There are no such restrictions for third person objects" (Dalrymple & Nikolaeva 2011: 201).

4   The Inverse Agreement Constraint revisited

Dalrymple & Nikolaeva's insight provides the missing motivation for the Inverse Agreement Constraint; or, from the opposite perspective, the Inverse Agreement Constraint allows a more precise formulation of Dalrymple & Nikolaeva's insight. Namely, in a typical SOV sentence structure of the Uralic type, where the primary

topic is obligatorily promoted to the role of grammatical subject, an object is either secondary topic (marked by verbal agreement), or focus. What the Inverse Agreement Constraint blocks is that the secondary topic be more topical (in other words, more animate, more specific) than the primary topic. An object more animate, more salient than the subject can only be presented as a focus.

Hungarian is not an SOV language any more, but it has preserved the Inverse Agreement Constraint as a linguistic fossil. Hungarian might have gone through the following diachronic process, starting in the Proto-Ugric, or Proto-Uralic period: Originally it was a language where the primary topic and the subject roles were fused, i.e., the primary topic had to be construed as the subject of the clause. The object functioned either as a focus or as a secondary topic. The secondary topic role of the object was marked on the object by a -*t* suffix, i.e., the Proto-Hungarian of this period employed the same kind of differential object marking that is attested in some present-day Mansi dialects (cf. the discussion of (22)). Later the -*t* accusative ending was generalized to all objects, and the secondary topic role of the object came to be marked on the verb by a suffix agreeing with the object in person.

The secondary topic, represented by the object, had a dependent, subordinate role with respect to the primary topic − hence it had to be less animate than the primary topic. An object more animate than the primary topic could only be construed as a focus. Since a first or second person object is inherently more animate, more topical, than a third person object, a first or second person object could not function as a secondary topic. Hence in the period when the secondary object status was marked on the object by a -*t* suffix, it received no -*t,* and this property of first and second person singular pronouns was preserved also after -*t* had been generalized to all objects. First and second person singular object pronouns still receive no accusative case ending in Hungarian; they only bear the 3rd person singular possessive morpheme, a means of marking definiteness in Proto-Ugric and in many of the present-day Uralic languages:

(33) *én*   —   *en-g-em-Ø*   *te*   —   *té-g-ed-Ø*
       I-NOM   I-EP-POSS1SG[8]   you-NOM   you-EP-POSS2SG
       'I'   'I-ACC '   'you.SG'   'you.SG-ACC'

Non-standard varieties of Hungarian have already eliminated these exceptional forms:

(34) *én*   —   *en-g-em-et*   *te*   —   *té-g-ed-et*
       I-NOM   I-EP-POSS1SG-ACC   you-NOM   you-EP-POSS2SG-ACC
       'I'   'I-ACC'   'you.SG'   'you.SG-ACC'

Objects with a first or second person singular possessor are also full grammatical without an accusative ending, and objects with a first or second person plural possessor are also marginally acceptable:

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8   EP stands for 'epenthetic'.

(35) *Keresem   a   kalapom   /kalapod   /??kalapunk/??kalapotok.*
      seek.OBJ.1SG   the   hat.POSS1SG /hat.POSS2SG/ hat.POSS1PL/hat.POSS2PL
      'I am looking for my hat/your hat/our hat/your hat.'

In every other case, the omission of the accusative suffix of the object is strongly ungrammarical:

(36) ** *Keresem   a   kalapja   /a   kalap.*
       seek-OBJ.1SG   the   hat-POSS3SG/the hat
       'I am looking for his hat/the hat.'

The constructions in (35) are also fossilized manifestations of the inherent primary topicality of an object achored to the speaker or to the addressee.
    When Hungarian started marking the secondary topic role of the object by verbal agreement, the inherent primary topic status of the first and second persons came to be manifested as the Inverse Agreement Constraint, prohibiting the marking of a first or second person object as a secondary topic.
    By the end of the 12th century, the time of the first surviving coherent text, Hungarian had changed from SOV to Topic Focus V X*, and the topic function came to be encoded by movement into a designated left-peripheral position. Agreement between the primary topic and the verb grammaticalized as obligatory subject−verb agreement, whereas secondary topic−verb agreement grammaticalized as obligatory definite object−verb agreement. The Inverse Agreement Constraint fossilized as a gap in definite object−verb agreement in the case of '3rd person subject/1st or 2nd person object', and '2nd person subject/1st person object' combinations.
    The question whether the interpretation of the Inverse Agreement Constraint as a constraint on the relative animacy of the primary and secondary topics can be extended to non-Uralic languages such as Chukchi, Koryak, and Kamchadal, as well, would require a detailed analysis of the relevant constructions of these languages. However, certain hints in the existing analyses suggest that object−verb agreement is related to the topicality of the object in these languages, too. As shown by Comrie (1980) and Bobaljik & Branigan (2006), in the Chukchi active transitive clause, the verb usually agrees both with the ergative subject and the absolutive object. A verbal prefix references the person and number of the subject, and a suffix references the subject for an intransitive verb, and the object (or a combination of subject and object features) for a transitive verb. Chukchi also has an antipassive construction, where the verb is supplied with *-ine-*, a detransitivizing suffix, the D-structure object bears oblique instead of absolutive case, and the verb fails to agree with it. Interestingly, in all the examples cited by Bobaljik & Branigan (2006), the object of an active clause, eliciting agreement, is translated as definite, whereas the object of an antipassive clause, not eliciting agreement, is translated as indefinite. Compare the following minimal pair, cited from Kozinsky et al. (1988: 652):

(37) a.   *ʔaaček-a   kimitʔ-ən   ne-nłʔetet-ən*
           youth-ERG   load-ABS   3PL.SUB-carry-3SG.OBJ
           '(The) young men carried away the load'
      b.   *ʔaaček-ət   ine-nłʔetet-ɣʔet   kimitʔ-e*
           youth- PL(ABS)   AP-carry-3PL.SUBJ   load-INSTR
           '(The) young men carried away a load'

Since the agreeing object noun phrase in (37a) has no overt determiner, its definiteness must be computed on the basis of the object agreement morpheme on the verb, presumably marking its secondary topic status (the primary topic role being associated with the clause-initial subject).

      In (38) the inverse agreement constraint blocks agreement between the object and the verb:

(38) *ə-nan   ɣəm   Ø-ine- łʔu-łʔi*
       he-ERG   I (ABS)   3SG.SUB-AP-see-3SG.SUBJ
       'He saw me.'   (cited from Skorik 1977: 44)

The construction in (38) is called 'spurious antipassive' because, although the verb bears the *-ine-* prefix, and the verb fails to agree with its object like in the antipassive voice, the object, preposed into preverbal position, is assigned absolutive case, and the subject is ergative like in the active voice.

      The comparison of examples (37a-b) and (38) suggests that *-ine-* marks the presence of a non-agreeing object. The object eliciting agreement in (37a) occupies a post-subject, preverbal position, and bears structural (absolutive) case. However, post-subject position in the preverbal domain, and absolutive case are properties also shared by the non-agreeing object in (38), hence they cannot be sufficient to trigger object−verb agreement. The property that the agreeing object in (37a) has and the non-agreeing object in (38) does not have is its relatively low animacy as compared to the subject. The situation appears to be similar to that reconstructed for Proto-Hungarian on the basis of Khanty. The subject functions as primary, aboutness topic, whereas the preverbal, absolutive object can − but need not − function as secondary, familiarity topic. Its topic role is marked by verbal agreement. Apparently in Chukchi, the verbal suffix agrees with the familiarity topic, and the verbal prefix agrees with the aboutness topic. (In single-topic sentences the same topic functions as aboutness topic and familiarity topic, hence it elicits agreement twice.) What the inverse agreement constraint forbids is that an object more animate, i.e., more topical, than the primary topic be construed as a secondary topic.

References

Bartos, Huba. 2000. Az inflexiós jelenségek szintaktikai háttere [The syntactic background of inflectional phenomena]. In Ferenc Kiefer (ed.), *Strukturális magyar nyelvtan [Structural Grammar of Hungarian] II. Morfológia,* 653-761. Budapest: Akadémiai Kiadó.

Bárczi, Géza. 1958. A tárgyas igeragozás használatának történetéből [From the history of the objective conjugation]. *Magyar Nyelv* 54. 257-270.

Bereczki, Gábor. 1971. *Cseremisz (mari) nyelvkönyv [Cheremiss (Mari) grammar]*. Budapest: Tankönyvkiadó.

Bobaljik, Jonathan & Philip Branigan. 2006. Eccentric agreement and multiple Case-checking. In A. Johns, D. Massam, & J. Ndayiragije (eds.), *Ergativity: Emerging Issues*, 44-77. Dordrecht: Kluwer.

Brown, Robert. 1988. Waris case system and verb classification. *Language and Linguistics in Melanesia* 19. 37-80.

Collinder, Björn. 1960. *Comparative Grammar of the Uralic Languages*. Stockholm: Ahlmquist.

Comrie, Bernard. 1977. Subjects and direct objects in Uralic languages: a functional explanation of case-marking systems. *Etudes Finno-Ougriennes* 12. 5-17.

Comrie, Bernard. 1980. Inverse verb forms in Siberia: Evidence from Chukchee, Koryak and Kamchadal. *Folia Linguistica* 1. 61-74.

Coppock, Elisabeth & Stephen Wechsler. 2012. The objective conjugation in Hungarian: Agreement without phi features. *Natural Language and Linguistic Theory* 30. 699-740.

Csúcs, Sándor. 2001. Tárgyas ragozás az uráli nyelvekben [Objective conjugation in Uralic languages]. In László Büky and Tamás Forgács (eds.), *A nyelvtörténeti kutatások újabb eredményei II. Magyar és finnugor alaktan [Recent results of historical linguistic research II. Hungarian and Finno-Ugric morphology]*, 29-36. Szeged: Department of Hungarian Linguistics, University of Szeged.

Dalrymple, Mary & Irina Nikolaeva 2011. *Objects and Information Structure*. Cambridge: Cambridge University Press.

É. Kiss, Katalin. 2005. The inverse agreement constraint in Hungarian − a relic of a Uralic–Siberian Sprachbund? In Hans Broekhuis, Norbert Corver, Jan Koster, Riny Huybregts and Ursula Kleinhenz (eds.), *Organizing Grammar. Linguistic Studies in Honor of Henk van Riemsdijk*, 108-116. Berlin: Mouton de Gruyter.

É. Kiss, Katalin. 2011. From Proto-Hungarian SOV to Old Hungarian Top Foc V X*, to appear in Teresa Biberauer and George Walkden (eds.), *Syntax over Time: Lexical, Morphological and Information-Structural Interactions*. Oxford: Oxford University Press.

Gerland, Doris & Albert Ortmann. 2013. What counts as relational in Hungarian? http://www.sfb991.uni-duesseldorf.de/fileadmin/Vhosts/SFB991/a02/Gerland_Ortmann-ctf12-handout.pdf

Givón, Talmy. 1976. Topic, pronoun, and grammatical agreement. In Charles Li and Sandra Thompson (eds.), *Subject and Topic*, 149-188. New York: Academic Press.

Gulya, János. 1970. Aktiv, Ergativ und Passiv im Vach-Ostjakischen. In Wolfgang Schlachter (ed.), *Symposium über Syntax der uralischen Sprachen*. Göttingen: Van den Hoock and Ruprecht.

Hajdú, Péter. 1966. *Bevezetés az uráli nyelvtudományba [Introduction to Uralic linguistics].* Budapest: Tankönyvkiadó.

Honti, László. 1995. Zur Morphotaktik und Morphosyntax der uralischen/finnisch-ugrischen Grundsprache. In Heikki Leskinen (ed.), *Congressus Octavus Internationalis Fennougristarum. Pars I,* 53-82. Jyväskylä: Moderatores.

Honti, László. 2009. Tűnődések tárgyas igeragozásunk kialakulásáról [Reflections on the evolution of our objective conjugation]. *Nyelvtudományi Közlemények* 106. 132-146.

Jókai-kódex. 1370/1448. János P. Balázs (ed.). Budapest: Akadémiai Kiadó, 1981.

Keresztes, László. 1999. *Development of Mordvin Definite Conjugation.* Suomalais-Ugrilaisen Seuran Toimituksia 233. Helsinki: Suomalais-Ugrilainen Seura.

Kozinsky, Issac S., Vladimir Nedjalkov, & Maria S. Polinskaja. 1988. Antipassive in Chuckchee: oblique object, object incorporation, zero object. In Masayoshi Shibatani (ed.), *Passive and Voice.* Amsterdam: John Benjamins.

Kulonen, Ulla-Maija (1989), *The Passive in Ob-Ugrian.* Helsinki: Finno-Ugrian Society.

Kuznecova, Ariadna, Evgenij Xelimskij & Elena Gruskina. 1982. *Ocherki po sel'kupskomu jazyku [Studies in Selkup].* Moscow: MGU.

Marcantonio, Angela. 1985. On the definite vs. indefinite conjugation in Hungarian: A typological and diachronic analysis. *Acta Linguistica Hungarica* 35. 267-298.

Mikola, Tibor. 1966. A tárgyrag és a tárgyas ragozás kérdéséhez [On the issue of the objective suffix and the objective conjugation]. *Magyar Nyelv* 62. 441-461.

Nikolaeva, Irina. 1999. *Ostyak.* Languages of the World/Materials 305. München: LINCOM Europa.

Nikolaeva, Irina. 2001. Secondary topic as a relation in information structure. *Linguistics* 39. 1-49.

Pápay, József. 1906-8. Északi-osztják nyelvtanulmányok [Northern Ostyak linguistic studies]. *Nyelvtudományi Közlemények* 36-38. 345-98; 52-79; 164-95; 258-75; 111–50; 313–29.

Peredy, Márta. 2009. A stochastic account for the variation in Hungarian object agreement. Ms. Budapest: Research Institute for Linguistics of the Hungarian Academy of Sciences.

Rebrus, Péter. 2000. Morfofonológiai jelenségek [Morphophonological phenomena]. In: Ferenc Kiefer (ed.), *Strukturális magyar nyelvtan [Structural Grammar of Hungarian] II. Morfológia.* 763-949. Budapest: Akadémiai Kiadó.

Rédei, Károly. 1962. Tárgyas igeragozásunk kialakulása [The evolution of our objective conjugation]. *Magyar Nyelv* 58. 421-435.

Rédei, Károly..1996. A magyar alaktan uráli (finnugor) háttere [The Uralic (Finno-Ugric) background of Hungarian morphology]. *Magyar Nyelv* 92. 129-138.

Siewierska, Anna. 2004. *Person.* Cambridge: Cambridge University Press.

Skorik, Piotr Ja. 1977. *Grammatika chukotskogo jazyka, chast II: glagol, narechie, sluzhebnye slova* [Grammar of Chukchi, vol II: verb, adverb and auxiliary words]. Leningrad: Nauka.

Skribnik, Elena. 2001. Pragmatic structuring in Northern Mansi. In Tönu Seidenthal (ed.), *Congressus Nonus Internationalis Fenno-ugristarum. Pars IV. Dissertationes sectionum: Linguistica III*. Tartu: Tartu University.

Steinitz, Wolfgang. 1950. *Ostjakische Grammatik und Chrestomatie mit Wörterverzeichnis.* Leipzig: O. Harrassowitz.

Vienna codex. 1416-1435/1450. Gedeon Mészöly (ed.). Budapest: Magyar Tudományos Akadémia, 1916.

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Beginnings in North Sámi[*]

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In North Sámi, inceptives can be formed with the inceptive verb *álgit*, with the morphologically bound form *-goahtit*, or by changing the theme vowel of the base verb. The syntactic properties of these inceptives indicate that *-goahtit* is an auxiliary, and so is *álgit* when it takes a verbal complement. These inceptive auxiliaries are located below tense, and also below obligational and permissive modals, conditional mood, negation, and the head encoding progressive aspect, while they are located above causative, passive and frequentative aspect.

The position of inceptive auxiliaries in North Sámi is not in accordance with neither of the two positions for inceptives suggested by Cinque (2006), since on Cinque's proposal, inceptives that are below modals should also be below the causative and the passive. The North Sámi inceptives *álgit* and *-goahtit* are also problematic for Fukuda (2008), since they are located higher that any of the two inceptive positions identified by him. The inceptives involving change of theme vowels could however be associated with Fukuda's higher inceptive position, since they take VP as their complement.

Notably, *álgit* can also appear with only nominal dependents, and I argue that it is then the main verb of the clause.

Keywords: *Inceptive, North Sámi, nominal complement, auxiliary, main verb*

1   Introduction

Verbs that refer to the beginning of an event, also called inceptive verbs, like *begin* and *start*, have attracted attention within the generative paradigm at least since the seventies, being discussed in works like Perlmutter (1970), Newmeyer (1975), Emonds (1976) and Freed (1979). More recently, they have been addressed e.g. by Cinque (2006) and Fukuda (2008).

In this paper, I present three different inceptives in North Sámi. The aim of the presentation is first and foremost to show how much expressions of inceptive aspect can vary within one single language, but in addition, I also compare my findings to the proposals of Cinque (2006) and Fukuda (2008), in order to see if the patterns found in North Sámi are compatible with any of these two approaches.

The first North Sámi inceptive to be addressed is the verb *álgit* 'begin', which can take a verbal or a nominal complement. I conclude that when *álgit* takes a verbal complement, it is an auxiliary located in the functional domain of the clause. Its position is however somewhat different from the positions for inceptives proposed by Cinque (2006) and Fukuda (2008). When *álgit* appears with a nominal complement, on the other hand, it is the main verb of the construction.

The second North Sámi inceptive I deal with is the auxiliary verbal suffix *-goahtit*, which can only take verbal complements. It turns out that the syntax of *-goahtit* is similar to the syntax of *álgit* with a verbal complement.

Finally, I discuss a type of inceptive marking that consists of changing the theme vowel of the base verb. This inceptive, which I call "low inceptive", only applies to stative or processual verbs that have no external argument, and I conclude that low inceptives take VP as their complement.

Before launching into the discussion of North Sámi inceptives I will present briefly the North Sámi language, as well as the relevant aspects of the proposals of Cinque (2006) and Fukuda (2008).

2   A brief sketch of North Sámi and its inceptives

North Sámi is the northernmost of all Sámi varieties (see e.g. Toivonen & Nelson 2007), and it also is the variety that has the largest number of speakers – the estimate given in Lewis (2009) is 20,700. It is widely used in literature, education, and in written and spoken media. Practically all speakers are bilingual, with Norwegian or Swedish as their second language, or, for a minority of the speakers, with Finnish as their second language.

The basic word order in North Sámi is SVO, with S Aux OV as an alternative to S Aux VO. The finite verb agrees in person and number (singular, dual, or plural) with the subject, and pro-drop is possible. There is also a range of non-finite verb forms, which appear as complements to verbs or as nominals or modifiers of nominals. Seven cases are being used productively in the present-day language: nominative, accusative, genitive, illative, locative, comitative and essive (see Sammallahti (1998)).

Like its more well-known relative Finnish, North Sámi has an extremely rich array of derivational suffixes, in the verbal as well as in the nominal domain. Concerning verbs, a change of argument structure or of aspectual properties will be accompanied with a modification of the morphological form of the verb. Ambiguous forms like English *sink*, which can be transitive or intransitive, or *cough*, which can be durative or semelfactive, are not found in North Sámi. Instead, we find pairs like the intransitive *vuodjut* 'sink' versus the transitive/causative *vuodjudit* 'sink', and the durative *gossat* 'cough' versus the semelfactive *gosádit* 'cough once'. In both cases, the direction of derivation is clearly visible, unlike in English, where the relation between verbs in different uses is more opaque.

The passive in North Sámi is also a suffix, and as seen in (1b), it precedes the suffix that marks tense and subject agreement. I take the passive to be encoded in a Voice head which is located above the head that introduces the external argument, i.e. the head commonly referred to as v (see e.g. Kratzer (1996)).[1]

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[1]   The majority of the North Sámi examples presented in this paper are found in the corpus at Sámi Giellatekno at the University of Tromsø (see giellatekno.uit.no). Some of them are slightly adjusted. The following abbreviations are used in the glosses: ABE=abessive, ABS=absolutive, ACC=accusative, ADJ= adjective, ADV=adverbial, CAUS=causative, COM=comitative, COMP= comparative, COND=conditional, CONT=continuative,

(1)   a.   *Elle   loga-i   reivve.*
             Elle.NOM   read-PAST.3SG   letter.ACC
             'Elle read a/the letter.'
       b.   *Reive   lohkko-juvvu-i   jitnosit   buohkaide.*
             letter.SG.NOM   read-PASS-PAST.3SG   aloud   all.PL.ILL
             'The letter was read aloud to everyone.'

The causative in North Sámi is dealt with in much detail in Julien (1996) and Vinka (2002). Here it will suffice to note that just like the passive, the causative is marked by suffixes, which I take to represent syntactic heads. Moreover, verbs with and without external arguments can be causativised, as illustrated in (2).

(2)   a.   *Árbevieru   sáhttá   heive-h-it   boahtte-áigái.*
             tradition.ACC   can.PRES.3SG   suit-CAUS-INF   coming-time.ILL
             'One can adjust the tradition to the future.'
       b.   *Lea   boastut   bora-h-it   bohcco   bearehaga.*
             is   wrong   eat-cAUS-INF   reindeer.ACC   excessively
             'It is wrong to feed the reindeer excessively.'
       c.   *Áhčči   bora-h-a   mánnái   láibbi.*
             father.NOM   eat-CAUS-PRES.3SG   child.ILL   bread.ACC
             '(The) father makes the child eat bread/feeds bread to the child.'

Causative verbs can be passivised, as demonstrated in (3). I take this to mean that a Voice head can appear above the causative head:

(3)   a.   *Karate-graderen   lea   mánáide   heive-h-uvvo-n.*
             karate-grading   is   children.ILL   suit-CAUS-PASS-PTC
             'The karate grading is adjusted to children.'
       b.   *Bohccuide   bora-h-uvvo-jit   parasihta-dálkasat.*
             reindeer.PL.ILL   eat-CAUS-PASS-PRES.3PL   parasite-medicine.PL.NOM
             'Parasite medicine is fed to the reindeer.'

As for the inceptive, the linguistic representation of the beginning of an event, there are several ways of expressing this in North Sámi. One possibility is to use the verb *álgit* 'begin', as in (4), and another is the inceptive suffix *-goahtit*, as in (5) (*álgit* and *-goahtit* are the infinitive forms).

(4)   *Mánná   álggii   čierrut.*
       child.SG.NOM   begin.PAST.3SG   cry.INF
       'The child began to cry.'

ERG=ergative, ESS=essive, FREQ= frequentative, GEN=genitive, ILL=illative, IMP= imperative, INC=inceptive, IND=indicative, INF=infinitive, INS=instrumental, INTR=intransitive, LOC= locative, MASC=masculine, NEG=negation, NOM=nominative, PASS= passive, PERF=perfective, PL=plural, POSS=possessive, PRES=present, PROG=progressive, PRT=particle, PTC= past participle, SG=singular.

(5) *Mánná   čierru-gođii.*
    child.SG.NOM   cry-begin.PAST.3SG
    'The child began to cry.'

Yet another option is to use the inceptive derivation seen for example in *čirrot* 'begin to cry', from *čierrut* 'cry', which primarily consists of a change of theme vowel (other stem changes follow from this). An example with the inceptive verb *čirrot* 'begin to cry' is shown in (6). The verb form *čirrui* can be compared to the past third person singular of *čierrut* 'cry', which is *čierui*.

(6) *Mánná   čirrui.*
    child.SG.NOM   cry.INCEP.PAST.3SG
    'The child began to cry.'

Because of its structural and morphological proximity to the verbal root, I will use the term "low inceptive" for inceptives of this type.

In this paper, I will not so much be concerned with the choice between the three North Sámi inceptives as with their syntactic properties. Since it turns out that the North Sámi inceptives do not have identical syntactic properties, they can help us improve our understanding of the syntax of inceptives more generally.

3   Theoretical background

Although inceptives have been addressed in numerous works over the years, the proposals that will be presented here are those that my own investigation is most directly related to, namely, the relatively recent Cinque (2006) and Fukuda (2008).

3.1   Cinque (2006)

Cinque (2006) takes as his starting point the so-called cartographic approach to clause structure (see e.g. Cinque & Rizzi (2008)), and assumes that aspectual verbs like *begin* and *stop*, and their counterparts in other languages, represent functional heads located somewhere in the functional domain of the clause. More specifically, he claims that there is a higher and a lower position for inceptives. This claim builds on Italian data like the following. In (7), the verb *cominciare* 'begin' embeds a passivised verb (from Cinque (2006:72)). This means, on Cinque's interpretation, that below *cominciare* there is a Voice head, where the passive is encoded. The lower verb *infliggere* raises to the Voice head and gets passive morphology, but crucially, the inceptive *cominciare* is not affected.

(7) *Gli   cominciarono ad essere inflitte   delle   punizioni.*
    to.him   began   to be   inflicted of.the   punishments
    'Punishments began to be inflicted on him.'

Now in (8) we see an example of the so-called long passive, found in Italian and many other Romance languages (from Cinque (2006:70)). Here the passive morphology applies to the inceptive verb, while the lower verb is unaffected.

(8) *Furono   iniziate/?cominciate a costruire solo   due   case.*
     were   begun   to build   only   two   houses
     'Only two houses were begun being built.'

This means, according to Cinque, that in this case the inceptive verb is located lower than the Voice head.

  As evidence that it is the inceptive verb that can appear in different positions, while the position of the Voice head is fixed, Cinque points to the observation that there is a semantic difference between an inceptive verb that embeds a passive verb and an inceptive verb that is itself passivised. The latter can only mark the beginning of a bounded process at its natural starting point, as in (8), whereas an inceptive that embeds a passive can mark the beginning of a bounded or unbounded process at an arbitrary point, as in (7). However, as demonstrated in (9), an inceptive marking the beginning of an unbounded process cannot be passivised (Cinque (2006:70)).

(9) **Furono   iniziate/cominciate a   costruire   case.*
     were   begun   to build   houses

Cinque's conclusion is that there are two positions for inceptives in Italian clauses, one above and one below Voice, and these two positions correlate with different semantic properties, as described.

  Cinque (2006) also gives a more detailed account of the relative order of a great number of mood and aspect markers. This account is partly based on data from Cinque (1999), where the relative order of many markers was established, but more data is added in Cinque (2006). The ordering of a selection of markers that are of particular relevance for the present discussion is shown in (10). This ordering is taken from Cinque (2006), page 93, with the addition of data from pages 76 (the position of the causative) and 175 (the positions of tense and modals). Triple dots indicate where I have left out markers that are not relevant for the present discussion.

(10) … T_{past} > … $T_{anterior}$ > … Mod_{aletic} > … $Asp_{frequentative(i)}$ > $Mod_{volition}$ > … $Asp_{progressive}$ > … $Asp_{inceptive(i)}$ > $Mod_{obligation}$ > $Mod_{ability}$ > … $Mod_{permission}$ > … Voice > … Causative > … $Asp_{inceptive(ii)}$ > $Asp_{completive(ii)}$ > $Asp_{repetitive(ii)}$ > $Asp_{frequentative(ii)}$ …

We see that the high inceptive is below volitional modality and progressive aspect, but above modal markers of obligation, ability and permission. It is also above Voice, as already mentioned. Between Voice and the low inceptive is the causative head, and below the low inceptive are found markers of completive, repetitive and frequentative aspect. However, on p. 175–176 in Cinque (2006) we find a

hierarchy which is partly in conflict with the one presented on p. 93 in Cinque (2006), since on p. 175–176, the lower inceptive is only followed by the lower position for completive aspect. In any case, Cinque assumes that the clausal structure is basically the same in all languages, and it follows that the proposed ordering should be found in all languages.

Furthermore, Cinque (2006) suggests that aspectual verbs never take nominal complements, although they sometimes seemingly do so. Two relevant examples, from Cinque (2006:35), are given in (11).

(11) a. *Maria ha cominciato il romanzo.*
Maria has begun the novel
'Maria has begun the novel.'
b. *Il concerto sta cominciando.*
the concert is beginning
'The concert is beginning.'

In (11a), *cominciare* 'begin' appears to behave syntactically as an ordinary transitive main verb, taking a nominal subject and a nominal object, whereas in (11b), it takes a single argument that becomes the surface subject. Cinque nevertheless assumes, with reference to Pustejovsky (1995) and Jackendoff (1997), that in both cases, there is an abstract, phonologically empty lexical verb present below the aspectual verb, so that *cominciare* is a purely functional verb, i.e. an auxiliary, also in these constructions.

3.2   Fukuda (2008)

Fukuda (2008), focusing on English, starts by pointing out that aspectual verbs, like *begin*, *continue*, and *finish*, are non-thematic. He refers to Newmeyer (1975) and Brinton (1988), who showed that a verb that embeds an aspectual verb will impose its own selectional restrictions on the complement of the aspectual verb. Their examples are repeated in (12) below (from Fukuda (2008:13); originally from Newmeyer (1975:33–34) and Brinton 1988:65)).

(12) a. *John asked him to listen/#hear.*
b. *John began to listen/hear.*
c. *John asked him to begin.*
d. *John asked him to begin to listen/#hear.*

In (12a), we see that *ask* can embed *listen* but not *hear*. *Begin*, by contrast, is compatible with both verbs, as shown in (12b). (12c) serves to demonstrate that *begin* can be embedded under *ask*, while in (12d), we see that in that case, the complement of *begin* must meet the selectional restrictions of *ask*. In other words, the pattern in (12) indicates that *begin* is a non-thematic verb.

Fukuda argues, though, that it is not a raising verb. He observes that while raising verbs are normally believed to embed a TP, the complement of *begin* is smaller. As (13) shows, the complement of *begin* is not allowed to be marked for

grammatical aspect, although grammatical aspect is generally assumed to be located below tense in the syntactic structure.

(13)   a.   *He began [*being running down the road*].
       b.   *He began [*to have finished his homework*].

Fukuda concludes that aspectual verbs represent functional heads that are located lower than grammatical aspect in the clausal structure. More specifically, he proposes that they can be located either between v and VP or immediately above vP. An aspectual verb in the higher position, above vP, takes an infinitival complement, while an aspectual verb in the lower position, between v and VP, takes a gerundive complement. Thus, the infinitive corresponds to vP whereas the gerund corresponds to VP.

Fukuda presents several arguments in support of his proposal, one of them being that adverbials in infinitival complements of aspectual verbs can be ambiguous between a speaker-oriented reading and a manner reading, while adverbials in gerundive complements only allow the manner reading. This is illustrated in (14) (from Fukuda (2008:16)).

(14)   a.   …*everyone around me grew quiet as I began stupidly to say what I really think.*
       b.   …*everyone around me grew quiet as I began stupidly saying what I really think.*

In (14a), *stupidly* can get either of the two readings, but in (14b), it gets the manner reading. Since the speaker-oriented reading is generally associated with a relatively high syntactic position, whereas the manner reading is generally associated with a relatively low syntactic position, Fukuda concludes that the infinitival complement is structurally larger than the gerundive complement; more specifically, that the former is a vP while the latter is a VP.

The aspectual verb *finish*, which only takes a gerundive complement, can be passivised if the object of the lower verb undergoes a change of state, as in (15) (from Fukuda (2008:20)).

(15)   *These cakes were finished baking.*

Assuming that the passive is encoded in v, Fukuda concludes that aspectual verbs with gerundive complements are situated below v, i.e. they have VP as their complement, while aspectual verbs with infinitival complements have vP as their complement.

3.3   Comparing Cinque (2006) and Fukuda (2008)

It is clear from the preceding brief presentation that both Cinque (2006) and Fukuda (2008) take there to be two positions for inceptives in the clausal hierarchical structure. The main difference between the two approaches is that whereas Cinque locates the higher as well as the lower inceptive in the functional domain, that is, above the vP domain, there being positions for other aspectual

markers between the lower inceptive and the vP, Fukuda places both markers low down, with the higher one immediately above vP and the lower one inside vP. On both approaches, one position for inceptives is above the head that encodes passive, while the other position for inceptives is below this head. Cinque and Fukuda differ, however, when it comes to the position of the passive. Cinque takes passive to be encoded in a Voice head which is located higher than some of the aspectual markers, while Fukuda takes passive to be encoded in v.

4 The inceptive verb *álgit* 'begin'

As we have already seen, one way of expressing the beginning of an event in North Sámi is with the inceptive verb *álgit* 'begin'. I will now first take a brief look at the behaviour of *álgit* in combination with verb phrases of different types. After that, I try to identify the position of *álgit* when it has a verbal complement. This use of *álgit* is then compared to cases where *álgit* takes only nominal dependents. The conclusion is that when *álgit* takes a verbal complement, it is located relatively high up in the functional domain, in other words, it is an auxiliary, but when it appears with only nominal dependents, it is the main verb of the construction.

In the last part of this section, I address a construction where *álgit* combines with a nominative subject and with another nominal phrase carrying illative case. It turns out that this construction provides further evidence that *álgit* is the main verb when it appears with only nominal dependents.

4.1 *Álgit* 'begin' with verbal complements

The North Sámi inceptive verb *álgit* 'begin' can take verbs of many types as its complement. Below, the complements of *álgit* in (16) and (17) are transitive verbs, in (18) it is an agentive intransitive verb, in (19), it is a unaccusative verb, and in (20), a stative psych verb.

(16) *Elle álggii barggu ohcat Norggas.*
Elle begin.PAST.3SG work.ACC look.for.INF Norway.LOC
'Elle began looking for work in Norway.'

(17) *Dál leat nuorat álgán mobil-telefuvnnaid*
now are young.PL.NOM begin.PTC mobile-phone.PL.ACC
geavahit.
use.INF
'Now young people have started to use mobile phones.'

(18) *Álggii munnje savkalit.*
begin.PAST.3SG me.ILL whisper.INF
'S/he began whispering to me.'

(19) *Reantu*   *álgá*   *loktanit.*
      interest.rate.NOM   begin.PRES.3SG   rise.INF
      'The interest rate begins to rise.'

(20) *De   son   álggii*   *hirbmadit   liikot   vivva-s-is.*
      then s/he begin.PAST.3SG   intensely   like.INF son.in.law-ILL-POSS.3SG
      'Then she took to liking her son-in-law very much.'

It also seems clear that *álgit* 'begin' is a non-thematic verb, just as Fukuda (2006) argues for its English counterpart *begin*. The surface subject of *álgit* is the logical subject of the complement of *álgit*, and when the complement does not have a subject, as in the case of *sevnnjodit* 'get dark', which belongs to the class of atmospheric or weather verbs, the construction as a whole will not have any overt subject either, as shown in (21).

(21) *Lei   juo   álgán   sevnnjodit.*
      was   already   begin.PTC get.dark.INF
      'It had already begun to get dark.'

This indicates that *álgit* is theta transparent – it does not assign any theta roles and is not an argument taker, as long as it takes a verbal complement.

Further, one can note that when *álgit* combines with a verb phrase representing a non-punctual eventuality (an activity, an accomplishment, or a state), the inceptive verb marks the onset of a single event. The onset itself can be conceived of as punctual (perhaps the most natural interpretation of (16) and (18) above), or as gradual (for example in (20)). This is in line with the observation in Smith (1991) that inceptive verbs can form derived achievements (instantaneous onsets) or derived accomplishments (gradual onsets).

When *álgit* combines with a verb phrase denoting a punctual event, on the other hand, it triggers a non-punctual reading of the base event. More specifically, the reading that a punctual event gets under *álgit* can be habitual or iterative, as in (22), which does not report one single losing event but rather a series of such events:

(22) *Mis   ledje   sávzzat   álgán   massit*
      us.LOC   be.PAST.3PL sheep.PL.NOM   begin.PTC   lose.INF
      lábbáid.
      lamb.PL.ACC
      'Our sheep had begun losing their lambs.'

The iterative reading of the base event in (22) is a consequence of the plurality of the object *lábbáid* 'lambs'. In the absence of plurality, the base event can be conceived of as stretched out in time, i.e. as a process. This is illustrated in (23), where the coming of water is likely to be going on for some time:

(23) *Čáhci   maid   álggii   boahtit.*
water.NOM also   begin.PAST.3SG come.INF
'Water also began to come.'

The conceptual manipulation of punctual verbs under inceptives is however not particular to North Sámi. It is probably a property of inceptives in general, since inceptives marks onsets, and in order to have an onset that can be discerned from the event as a whole the event must have temporal extent. Exactly the same phenomenon is seen for example in English, as shown in (24)–(26):

(24) *I found this in a book of film criticism on Woody Allen.*
(25) *I began to find islands of ease within the chaos of my life.*
(26) *When I began to find my roots, I was absolutely convinced that "my family's file" was out there somewhere.*

The verb *find*, normally denoting an achievement, as in (24), is forced into a non-punctual reading when it appears in the complement of *begin*. In (25), which contains a plural object, *find* gets an iterative reading, but in (26), where the plural object refers to a coherent whole, most natural interpretation appears to be one where the finding of roots is a process that goes on for some time.[2]

4.2   The position of *álgit* 'begin' with verbal complements

I will now go on to investigate in some detail the syntactic position of *álgit* when it takes a verbal complement. Firstly, many of the examples in 4.1 showed that *álgit* must be situated lower in the syntactic structure than the head encoding past tense, since it can be inflected for past tense, and also for present tense, which can be seen as the realisation of [–past]. If the past participle represents anterior tense, then *álgit* is below the head $T_{anterior}$ as well. In addition, the examples below show that *álgit* follows after modal verbs, like the obligational *fertet* 'must' in (27) and the permissive *sáhttit* 'can' in (28).[3] In (29) we see that *álgit* cannot precede *fertet* or *sáhttit*. Hence, it seems clear that *álgit* is situated below these markers of root modality.

(27) *Giđđat   ferte   álgit   ráhkkanit   bivdui.*
spring.ADV   must.3SG   begin.INF prepare.INF   hunt.ILL
'In spring one must begin to prepare for the hunt.'

(28) *Juohkehaš   sáhttá   álgit   taksiin   vuodjit.*
everyone.NOM can.3SG   begin.INF taxi.COM   drive.INF
'Everyone can/may start driving a taxi.'

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[2] The effect of plural objects is also noted by Rochette (1999), who refers to it with the term *multiplexing*, borrowed from Lamiroy (1987).

[3] *Sáhttit* expresses permission or circumstantial possibility. Ability, or dispositional possibility, is expressed with the auxiliary *máhttit* (see also Magga (1982)).

(29) *Son   álgá   fertet/sáhttit   dahkat   dan.
       s/he begin.PRES.3SG   must.INF/can.INF   do.INF   that.ACC

Moreover, *álgit* is situated below the head that encodes conditional mood, since the conditional mood marker, which is a verbal suffix in North Sámi, can be suffixed to *álgit*:

(30) *Mii   sáva-šeimmet   ahte   dát   joavku   álggá-šii   fas*
       we   wish-COND.1PL   that   this   group.NOM begin-COND.3SG   again
       čuojahit.
       play.INF
       'We would wish that this group would begin to play again.'

To this can be added the example in (31), which shows that *álgit* is located below the sentential negation. An example of the opposite order, with *álgit* above negation, cannot be given, since the sentential negation is an auxiliary which is always located higher than all other verbs, and it does not have non-finite forms.

(31) *Mii   eat   luohte   šat   sutnje,   jus   ii   álgge*
       we   NEG.1PL trust   any.more 3SG.ILL   if   NEG.3SG begin
       gulahallat   earáiguin.
       communicate.INF   other.PL.COM
       'We don't trust her anymore if she does not begin to communicate with others.'

Similarly, it can be shown that *álgit* is below the marker of progressive aspect, since *álgit* can appear with a progressive suffix, the progressive then taking scope over the inceptive, as in (32a). Having the progressive on the lower verb instead is ungrammatical, as shown in (32b).

(32) a.   *Lean odne   álgi-min   fárret.*
             am   today   begin-PROG   move.INF
             'Today I am beginning to move (house).'
       b.   * *Odne   álggán   fárre-min.*
             Today   begin.PRES.1SG   move-PROG

The complement of *álgit* can however be a verb marked for frequentative aspect, as shown in (33). It follows that below *álgit* there is a position for frequentative markers.

(33) *De   fáhkkestaga álgá   Biera   jeara-halla-t*
       then   suddenly   begin.PRES.3SG   Biera   ask-FREQ-INF
       eatni-s.
       mother-POSS.3SG
       'Then suddenly Biera begins to ask his mother over and over.'

Turning now to *álgit* co-occurring with passive and causative, we see in (34a) that *álgit* can take a passive verb as its complement, but it cannot itself be passivised, as shown in (34b) and (34c).[4]

(34) a.   *Lullisámegiella   álgá   gullot   ja   oidnot   eanet.*
            South.Sámi   begins   hear.PASS   and   see.PASS   more
            'South Sámi begins to be seen and heard more.'
       b.   * *Lullisámegiella álgo-juvvo   gullat.*
            South Sámi   begin-PASS.PRES.3SG   hear.INF
       c.   **Visti*   *álgo-juvvu-i*   *hukset.*
            house.NOM   begin-PASS-PAST.3SG   build.INF

The verb phrase *hukset visti* 'build a/the house' denotes a bounded process, just like the complement of *iniziare* in (8). Hence, if *álgit* could occur at all in the lower inceptive position that Cinque (2006) identified in Italian, (34c) should be a case in point. The ungrammaticality of (34c) indicates that there is no Voice head over *álgit*.

Álgit can also embed a causative verb, as in (35). The base verb in *borahit* 'feed' is *borrat* 'eat', which has an external agent argument and consequently must be taken to project a vP. The causative in *borahit* must accordingly be encoded in a syntactic head which is situated above the head that introduces the external argument, i.e. above v. As for *álgit*, it must be located even higher than the causative.

(35) *Elle   álggii   bora-h-it   guliid.*
      Elle   begin.PAST.3SG   eat-CAUS-INF   fish.PL.ACC
      'Elle began to feed the fish.'

But notably, *álgit* itself cannot be causativised when it has an infinitival complement. Thus, starting from a construction like (36a) one cannot add a causative and get (36b):

(36) a.   *Sii   álge   heivehit   boazo-logu.*
            they   begin.PAST.3PL   adjust.INF   reindeer-number.ACC
            'They began to adjust the number of reindeer.'
       b.   * *Eiseválddit   álgga-hedje   sin   heivehit*
            authority.PL.NOM   begin-CAUS.PAST.3PL   them   adjust.INF
            boazo-logu.
            reindeer-number.ACC
            Intended meaning: 'The authorities made them begin to adjust the number of reindeer.'

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[4]   An anonymous reviewer suggests that the reason why *álgit* does not passivise is that it is a raising verb. However, raising verbs sometimes allow passivisation, as in the long passives discussed in Wurmbrand (2003). Hence, there is no reason to assume a priori that *álgit* does not passivise.

This is consistent with *álgit* with a verbal complement being located higher up in the functional domain than the causative.

The properties of *álgit* 'begin' as seen in this section leads to the following conclusions. When *álgit* has a verbal complement, it is an auxiliary located below past tense, below obligational and permissive modals, below conditional mood, below negation, and below the head encoding progressive aspect. It is however above the heads encoding passive, causative and frequentative aspect.

The position we have identified for *álgit* is not in agreement with the proposals of Cinque (2006) or Fukuda (2008). The fact that *álgit* is lower than obligational and permissive modals suggests that it might be in the lower inceptive position identified by Cinque. However, it should then also be below the causative and passive markers, while the opposite is the case. Furthermore, Cinque takes both positions for inceptives to be below the progressive, but *álgit* is situated higher than the progressive, as we have seen. As for the conditional mood, it is not included in Cinque's hierarchies, but from what is said in Cinque (1999:79) it appears that the conditional can be associated with the aletic modal head, which is located higher than both positions for inceptives. The position of *álgit* relative to the conditional marker is then in accordance with Cinque's proposal.[5]

The possibility of having frequentative aspect in the complement of *álgit* is also in accordance with the hierarchy shown on p. 93 in Cinque (2006), if we assume that the frequentative marker is then in the lower position for frequentatives. It is not, however, in accordance with the hierarchy shown on p. 175-175 in Cinque (2006), where the lower inceptive is only followed by a position for completive aspect.

Fukuda (2008) proposes, on the other hand, that inceptives can have vP or VP as their complement. Since *álgit* can embed a passive, its complement cannot be just VP – it must be vP (recall that Fukuda takes the passive to be encoded in v). Still, the fact that *álgit* also can embed causative and frequentative does not seem to be compatible with Fukuda's proposal. An aspectual projection inside vP has been proposed, e.g. by Travis (1992), but then this projection is connected to the lexical aspect of the verb, and not to aspectual meanings taking scope over the base verb, like the frequentative in (33).[6]

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[5]   It can also be shown that the conditional marker is located higher than modal verbs encoding obligation. The ordering shown in (i) fits the hierarchy given in (10) if the modal verb *fertet* 'must' represents the $Mod_{obligation}$ head while the conditional suffix corresponds to Mod_{aletic}.

(i) *Dál   ferte-šii   juoga   dahkk-o-t.*
     now   must-COND.3SG   something.NOM   do-PASS-INF
     'Now something ought to be done.'

[6]   An anonymous reviewer suggests that the marker of frequentative aspect is inside vP in West Greenlandic, since it is closer to the root than transitivity morphology. However, the examples given by van Geenhoven (2005), which is the work that the reviewer refers to, or other works on West Greenlandic that I have consulted, do not show that the frequentative marker is inside vP. Consider the following example, from van Geenhoven (2005:110):

4.3   The position of *álgit* 'begin' with nominal dependents

Just like inceptive verbs in many other languages, the North Sámi *álgit* does not obligatorily take a verbal complement. It can also appear with only nominal dependents. One possibility is that it takes a subject which represents either an event or an object with serial properties or spatial extent (another possibility will be discussed in the next subsection). In these cases, *álgit* makes reference to the initial boundary of its subject, as shown in the following examples, where the subject of *álgit* is an event in (37), an object with serial properties in (38), and an object with spatial extent in (39). Note that the subject is then the only argument in the clause.

(37)   *Oaggun-gilvu*   *álggii*   *diibmu*   *ovttas.*
        fishing-competition.NOM   begin.PAST.3SG   hour   one.LOC
        'The fishing competition began at one o'clock.'

(38)   *Geavaheaddje-namma   ferte   álgit   smávva   bustávain.*
        user-name.NOM   must.3SG   begin.INF   small   letter.SG.COM
        'The user name must begin with a small letter.'

(39)   *Guivvi   bálggis   álgá   Suttesjogas.*
        Guivi.GEN   path.NOM   begin.PRES.3SG   Suttesjohka.LOC
        'The path to Guivi begins at Suttesjohka.'

        Now   whereas   *álgit*   cannot   be   causativised   when   it   takes   a   verbal

---

(i)   *Qaartartu-t   sivisuu-mik   qaar-qattaar-put.*
       bomb-ABS.PL lengthy-INS   explode-again&again-IND.[-tr].3PL
       'Bombs exploded again and again for a long time.'

Here we see that the frequentative marker *-qattaar-* is closer to the root than the suffix *-put*. However, although *-put* reflects the fact that the verb is intransitive, I do not believe it should be identified with v or other heads that manipulate transitivity. In (ii), an example taken from Bittner (1987:215), we see that the antipassive suffix *-nnig-*, which prevents the verb from having an accusative object, is closer to the verb than the aspect marker *-qqig-*, while the aspect marker in its turn is closer to the verb than the suffix *-puq*, which is the singular counterpart of *-put*.

(ii)   *Ilinniartitsisu-mik   uqaluqatigi-nnig-qqig-puq*
       teacher-INS   talk.with-AP-again-INTR.IND.3SG
       'He talked again with teacher.'

The antipassive marker must presumably represent an element inside vP, since it interferes with the realisaton of arguments, but there is no evidence that *-puq* is also inside vP. On the contrary, since it reflects the mood of the clause, it is probably situated much higher up, and the same goes for *-put* in (i). In short, *-put* and *-puq* are subject agreement markers. When the verb is transtitive, markes showing agreement with subject and object are used instead, but it does not follow that any of these agreement markers in themselves manipulate transitivity (see e.g. Fortescue 1984:288–289). Hence, the reviewer's suggestion does not go through.

complement, as demonstrated in (36), causativisation may well apply to *álgit* in nominal contexts. The causative of *álgit* is *álggahit*, a transitive inceptive verb which makes reference to the initial boundary of its grammatical object, and takes a subject that has the thematic role of agent/causer. Two examples are shown in (40) and (41):[7]

> (40) *Eiseválddit*   *álgga-h-edje*   *boazo-logu*
>   authority.PL.NOM   begin-CAUS-PAST.3PL   reindeer-number.GEN
>   *heiveheami.*
>   adjustment.ACC
>   'The authorities initiated the adjustment of the number of reindeer.'

> (41) *Australia*   *oaiveministtar*   *lea*   *álgga-h-an*
>   Australia.GEN   prime.minister.NOM   is   begin-CAUS-PTC
>   *guorahallama.*
>   investigation.ACC
>   'Australia's prime minister has started an investigation.'

Note that (40) differs minimally from the ungrammatical (36b), where we have the infinitive *heivehit* 'adjust' instead of the nominalisation *heiveheapmi* 'adjustment'. Hence, the category of the complement of *álgit* makes the whole difference.

The possibility of causativising *álgit* when it appears in a nominal context suggests that *álgit* in these cases is located lower down in the clause than *álgit* with a verbal complement. Furthermore, the causative *álggahit* can be passivised, as shown in (42).

> (42) *Kursa*   *álgga-h-uvvo*   *ihttin*
>   course.NOM   begin-CAUS-PASS.PRES.3SG   tomorrow
>   *Guovdageainnus.*
>   Guovdageaidnu.LOC
>   'The course is being started tomorrow in Guovdageaidnu.'

The morphologically simple *álgit*, on the other hand, is no more passivisable when it has only nominal dependents than when it has a verbal complement. The reason is that *álgit* does not have an external argument, so that the conditions for passivisation are not met. Only when an external argument has been introduced by the causative can a Voice head with the feature [passive] be added to the derivation.[8]

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[7]   An anonymous reviewer points out that a morphologically well-behaved causative of *álgit* would be **álggihit*, a form that does not exist. However, it holds in general, and also for North Sámi, that causativisation at the verb phrase level tends to show morphological irregularities (see Vinka 2002, Julien 2007).

[8]   Passives of *álgit*, without the causative affix, can also be found. One example from the Giellatekno corpus is shown in (i).

The facts that we have seen so far suggest that *álgit* in nominal contexts is located lower down in the clausal structure than *álgit* with verbal complements. But recall that it has been argued, as noted e.g. in Cinque (2006), that when inceptives appear to take nominal complements, they actually select an abstract verbal complement. In other words, they are auxiliaries whether or not the main verb is visible.

On this point, Cinque refers to Pustejovsky (1995) and Jackendoff (1997). Both Pustejovsky (1995: 199) and Jackendoff (1997:60) discuss constructions like (43):

(43) *Mary began the novel.*

In this case, they argue, *begin* requires an event to be associated with its complement. Hence, we are forced to add to the interpretation of (43) an activity involving the nominal phrase in object position, in this particular case prototypically one of reading or writing.[9]

Notably, Pustejovsky (1995:201) also addresses the constructions exemplified in (44). In (44a), *begin* has an event-denoting nominal as its only argument, and Pustejovsky sees it as an unaccusative verb here. That is, *the movie* is the internal argument of the verb, and it is promoted to surface subject because there is no other candidate.

(44) a. *The movie began.*
     b. *Mary began the movie.*

The example in (44b) is the causative counterpart of (44a). An external argument bearing the causer role has been added, so that the internal argument can stay in object position.

While there might be an unexpressed event involved in (43), or, in the terms of Cinque (2006), a phonologically empty main verb, I do not see the necessity of postulating an unexpressed verb in (44ab). Since the event is encoded in the

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(i) *Mánáid-valáštallan-skuvla*   *Kárášjogas*   *álgo-juvvo.*
    children-sport-school.NOM   Kárášjohka.LOC   begin-PASS.PRES.3SG
    'A sport school for children is started in Kárášjohka.'

The native speakers that I have consulted nevertheless find passivisation of *álgit* ungrammatical (cf. 34bc). Most likely, examples like (i) are influenced by Norwegian, where the inceptive verbs *begynne* 'begin' and *starte* 'start' can be intransitive or transitive and allow passivisation.

[9]   Rochette (1999) suggests that in constructions like (43), the surface subject and the surface object originate in a small clause structure embedded under the inceptive verb. This is meant to be consistent with the idea that inceptive verbs (and other aspectual verbs) are always raising predicates, and to capture the intuition that the surface subject is also the semantic subject of the implicit process associated with the object. However, a problem for Rochette's analysis is that the inceptive in (43) can be passivised: *The novel was begun by Mary.* Normally, only external arguments can be demoted in passivisation. Hence, it is possible that there is an unexpressed lower verb in (43) as well as in the passive version; the latter then corresponding to *The novel was begun to be read by Mary.*

nominal, the interpretation does not require an activity to be added. Hence, I would suggest that *begin* is actually the main verb here. Since the referent of *the movie* has an initial boundary, this noun can be selected as the argument of *begin*, as indicated in (45a). This argument will later raise to become the surface subject.[10]

In (44b), the verb phrase must include a head that introduces an external argument, i.e. a v head. But as indicated in (45b), this v head does not have any phonological realisation of its own, so that the transitive verb *begin* is morphologically identical to intransitive *begin*. Hence, what we see here is an example of the causative/inchoative alternation which is also seen with many other English verbs.

(45)   a.

```
              VP
            /    \
          V       the movie
         began
```

      b.

```
              vP
            /    \
         Mary     v′
                /    \
              v       VP
              ∅     /    \
                   V      the movie
                 began
```
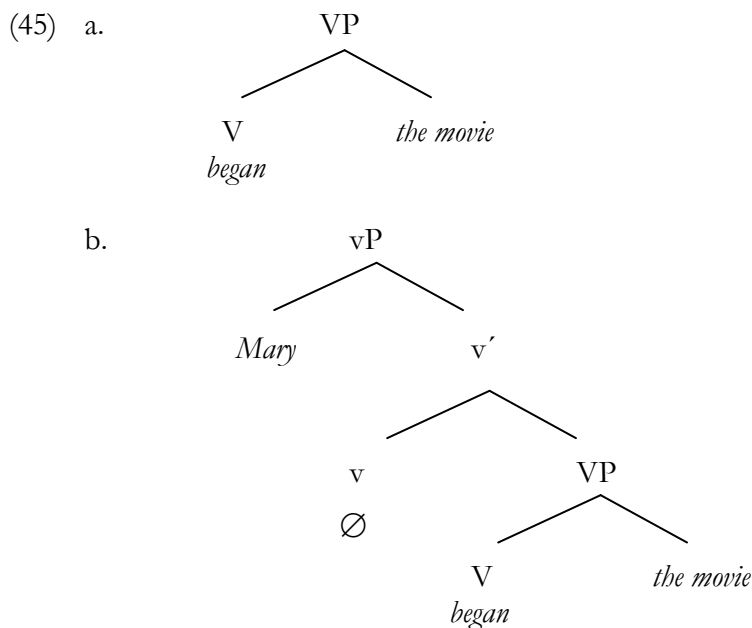
The North Sámi verb *álgit* 'begin' differs from English *begin* in one respect: the morphologically simple verb *álgit* does not take an external argument. As pointed out in the brief sketch of North Sámi given in section 2, this language does not have verbs that are ambiguously transitive or intransitive. Instead, the addition of an external argument to an intransitive verb will be accompanied by the addition of a suffix. This also holds for *álgit*, as we have just seen.

My proposal is that when *álgit* appears with only a nominal argument, and no verbal complement, as in (37)–(39), it represents a V head, just like *begin* in (44a). The syntactic structure of the verb *álggahit*, on the other hand, is as shown in (46), with the root *álgga-* representing the V head and the causative suffix *-h-* representing the v head (tense and agreement are encoded in heads situated higher up and not shown here).

---

[10] Rochette (1999) also suggests that event-denoting nominals can be subjects of aspectual verbs. However, she does not say anything more explicit about the overall syntax of the construction.

(46)

```
                    vP
                   /  \
               SUBJ    v′
                      /  \
                     v    VP
                    -h-   /  \
                         V    OBJ
                       álgga-
```
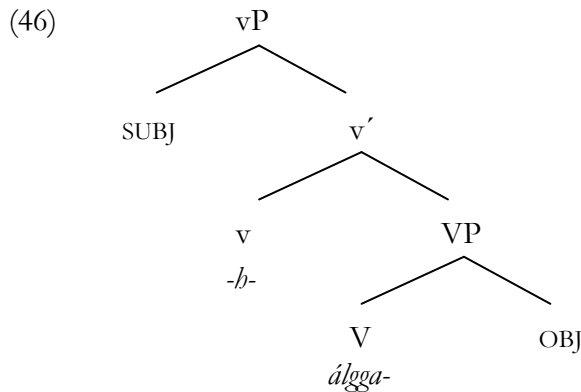
There are however cases in North Sámi where there might be an unexpressed verb in the complement of *álgit* after all. An example is given in (47).

(47) *Olbmot   leat   álgán   fas   šibihii-guin.*
     people.NOM   be.PAST.3PL begin.PTC   again cattle-PL.COM
     'People have started with cattle again.'

Here we also have *álgit* with no visible verbal complement. But since neither the subject nor the comitative phrase refers to entities that provide an onset that the inceptive could be connected to, we are forced to add to the interpretation some activity involving cattle (such as 'work'). This might mean that there is a phonologically empty verb present in this clause. I am thus not arguing that inceptive verbs never can have phonologically empty verbal complements; my point is only that they can also appear without any verbal complements.

To sum up, we have seen that there are cases where the reasons for postulating an empty verb in the complement of an inceptive verb is not very strong. On the contrary, in North Sámi we see that *álgit* with an event-denoting nominal argument is syntactically different from *álgit* with a verbal complement. While *álgit* with a verbal complement is situated higher up in the clause structure than the causative, *álgit* in nominal contexts is situated lower, so that it allows causativisation and also passivisation, and I have argued that it is then the main verb.

This means that the proposals of Cinque (2006) and Fukuda (2008) that clauses have two positions for inceptives finds some support in North Sámi. But whereas Cinque and Fukuda take both high and low inceptives to appear with verbal complements, we are lead to conclude here that higher inceptives have verbal complements, while inceptives with only nominal dependents are located in a lower position.

4.4 *Álgit* with illative complements

The verb *álgit* 'begin' in North Sámi can also appear in a syntactic frame that is different from what we saw in the preceding section. It is possible for *álgit* to combine with a nominative subject and with another nominal phrase marked with

illative case. Examples of this construction are shown in (48), (49) and (50).

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

(49) *Mun várra álggán*   *boazo-dollui.*
      I   maybe   begin.PRES.1SG   reindeer-husbandry.ILL
      'Maybe I will go into reindeer husbandry.'

(50) *Ránnjá-gánda*   *ii*   *lean*   *vel*   *álgán*
      neighbour-boy.NOM   NEG.3SG   be.PAST   yet   begin.PTC
      skuvlii.
      school.ILL
      'The boy next door had not started school yet.'

Here the main verb properties of *álgit* are even more evident, since the illative case
appears to be dependent on *álgit*. Compare (50), where *skuvla* 'school' has illative
case, to (51), where the verb *vázzit* 'go' is inserted between *álgit* and *skuvla*, and
skuvla has the accusative case marking that it normally has in the collocation *vázzit
skuvlla* 'go to school'.

(51) *Mun álgen*   *vázzit*   *skuvlla*   *1946:as.*
      I   begin.PAST.1SG   go.INF   school.ACC   1946-LOC
      'I started going to school in 1946.'

Hence, if there is an abstract, phonologically empty verb following *álgit* in (48),
(49) and (50), that verb cannot be *vázzit* or any other verb taking an accusative
object.

      My claim is therefore that there is no phonologically empty verb present in
the structure. Instead, the illative marking of the nominals in these clauses is
selected by *álgit*. To see this, we first need to take a look at the North Sámi illative
case more generally.

      In North Sámi, the illative is the case that expresses the goal of motion, as in
(52) and (53):[11]

(52) *Joavnna*   *viegai*   *skuvlii.*
      Joavnna   run.PAST.3SG   school.ILL
      'Joavnna ran to school.'

(53) *Dán*   *gova*   *áiggun*   *henget*   *seaidnái.*
      this.ACC   picture.ACC   want.PRES.1SG   hang.INF   wall.ILL
      'I want to hang this picture on the wall.'

---

[11]   The North Sámi illative is also the case for indirect objects and for causees in causatives
formed from transitive verbs (see Julien (1996)). These uses are however not of relevance here.

In addition, it is used in constructions like (54), where the verb does not denote motion but instead a change of state; the illative then expressing the position of the subject after the change of state.

(54) *Olmmái   heavvanii   etnui.*
       man.NOM   drown.PAST.3SG   river.ILL
       'The man drowned in the river.'

If we now go back to (48)–(50), we see that *álgit* here also denotes a change of state, and the noun marked with illative represents the position of the subject after the change of state – as a participant in the course, as a practitioner of reindeer husbandry, or as a child attending school. Hence, it appears that the illative case depends on the verb *álgit* here, just like it depends on the verb *heavvanit* 'drown' in (54).

One might want to suggest instead that there is a phonologically empty verb present in (48)–(50) after all, and that this verb, and not *álgit*, selects illative case on the following nominal. This verb would then have to be one referring to movement or change of state, in order to select for illative. But if we consider the semantics of the examples in (48)–(50), which all involve *álgit* followed by a nominal phrase carrying illative case, it seems clear that postulating a phonologically empty verb embedded under *álgit* is not motivated. If a phonologically empty verb is present in these examples, it should be either a stative, copula-like verb, or one denoting activity, rather than a verb denoting movement or change of state. However, copulas and activity verbs do not select for illative case. Moreover, the semantics of these sentences can be explained without reference to any phonologically empty verb. In each sentence, we get the interpretation that the subject undergoes a transition and thereby ends up in the position that the illative phrase refers to. If we take *álgit* to represent the transition, the meaning of the construction as a whole can be accounted for. Hence, I see no convincing argument against taking *álgit* to be the main verb.

5   Inceptives in *-goahtit*

I will now turn to the suffix *-goahtit*, which adds inceptive meaning to its base verb.[12] One example was given in (5), and another one follows here:

(55) *Sii   leat   hukse-goahtá-n   hotealla.*
       they   are   build-INC-PTC   hotel.ACC
       'They have started to build a/the hotel.'

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[12] This suffix is sometimes taken to include an initial fricative (see e.g. Sammallahti (1977) and Szabó (1987)), since when the derivation base is an odd-syllabled verb, an -*š* appears in front of *-goahtit*, as in *muitališgoahtit* 'begin to tell', from *muitalit* 'tell' (an illustration of the importance of syllable numbers in North Sámi morphology). For the present purpose I will nevertheless refer to the inceptive suffix as *-goahtit*.

Except for the fact that it is a bound form morphologically, *-goahtit* shares many properties of ordinary disyllabic verbs. It is inflected in the same way as disyllabic verbs of the *-it* conjugation class. We see this in (56), where some forms from the paradigm of *-goahtit* are given alongside the corresponding forms of *boahtit* 'come'.[13]

(56)   <u>Partial paradigms of *boahtit* 'come' and *-goahtit*</u>

INFINITIVE	*boahtit*	*-goahtit*
PRESENT 1SG	*boađán*	*-goađán*
PRESENT 3SG	*boahtá*	*-goahtá*
PAST 1SG	*bohten*	*-gohten*
PAST 3SG	*bođii*	*-gođii*

Another property that sets *-goahtit* apart from most verbal derivational suffixes is the possibility of conjunction reduction, noted by Ylikoski (2009:124) and illustrated by him with the following example:

(57)   *De   neavvui   válddi   dulka   daid nieiddaid   movt*
        then   advice.PAST.3SG   bailiff.GEN interpreter those girls.ACC   how
        galget   čohkkát geresis,   goppos   geres   hállaniš-
        shall.3PL sit.INF sledge.LOC   to.which.direction   sledge   lean-
        ja   šleađgasiš-goahtá,   doppil   galget   eret   hállet
        and   rock-INC.PRES.3SG   in.that.direction   shall.3PL away   bend.INF

        geresa.
        sledge.ACC

        'Then the bailiff's interpreter gave those girls advice on how to sit in the
        sledge, that when the sledge begins to lean and rock in one direction, they
        must bend the sledge away from that direction.'

A closer inspection of the syntactic properties of *-goahtit* suggests that it is very similar to auxiliary *álgit*. The main differences between *álgit* and *-goahtit* is, firstly, that *-goahtit* always has a verbal complement, and secondly, that *-goahtit* attracts the head of its complement and combines with it morphologically. To illustrate this I will start from one of the examples given earlier of *álgit* with a nominal complement, namely (50), where we have *álgán skuvlii* 'started school'. If we instead have the root *skuvl-* 'school' as the complement of *-goahtit*, it will necessarily get a verbal interpretation, as indicated in (63):

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[13] The alternation between *-ht-* and *-đ-* in the consonant centre is an example of the grade alternation that pervades the inflectional morphology of North Sámi.

(58) *Julggaštus   ávžžuha   universitehtaid   skuvle-goahti-t*
     manifesto.NOM   encourage.PRES.3SG university.PL.ACC school-INC-INF
     priváhta   fitnodagaid.
     private   company.PL.ACC
     'The manifesto encourages universities to start schooling private companies.'

I take this to mean that *-goahtit* can never be a main verb. It can only represent an inceptive head found in the functional part of the clause. In other words, *-goahtit* is always an aspectual auxiliary.

    Apart from this difference, *-goahtit* is like *álgit* in its ability to combine with verbs of many types. We have already seen *-goahtit* with intransitive verbs in (5) and (62), with transitive verbs in (60) and (63), and below, I add examples showing *-goahtit* with an agentive intransitive verb in (64), with an unaccusative verb in (65), and with a stative verb in (66).

(59) *Dál lea áigi barga-goahti-t.*
     now is   time work-INC-INF
     'Now it's time to start working.'

(60) *Sáme-kultuvra   lea   rievda-goahtá-n.*
     sámi-culture.NOM   is   change-INC-PTC
     'The Sámi culture has begun to change.'

(61) *Muhtun vuovde-rádje-lagežat   leat sulastahtti-goahtá-n*
     some   forest-limit-mountain.birch.PL.NOM   are   resemble-INC-PTC
     eppel-muoraid.
     apple-tree.PL.ACC
     'Some mountain birches near the forest limit have begun to resemble apple trees.'

    The above examples already suggest that *-goahtit* is a non-thematic verb, just like *álgit* in its auxiliary function. The thematic transparency of *-goahtit* is seen even clearer in (62), where *-goahtit* has combined with the verb *muohttit*, which means 'snow' and does not take any arguments. Notably, the combination of *muohttit* and *-goahtit* does not have any arguments either. This shows that *-goahtit* does not take any arguments of its own, and in particular no subject.

(62) *Muhtimat   illudit   go   muohtti-goahtá.*
     some.PL.NOM rejoice.PRES.3PL when snow-INC.PRES.3SG
     'Some are happy when it starts snowing.'

    Moreover, *-goahtit* is like *álgit* in triggering a non-punctual reading of its complement. Thus, the base event gets an iterative reading in (63) and a process reading in (64):

(63) *1800-logu*   *loahpa-geahčen*   *Avviljoga*   *guovlluin*
1800-number.GEN   end-towards   Avviljohka.GEN   district.PL.LOC
gávdna-gohte   *golli.*
find-INC.PAST.3PL   gold.ACC
'Towards the end of the 1800's they started to find gold in the district of Avviljohka.'

(64) *Pragmáhtalaš*   *girjjálašvuođa*   *oaidnu*   *dál*   *lea*   *vuoiti-goahtá-n*
pragmatic   literature.GEN   view.NOM   now   is   win-INC-PTC
formalalašvuođa   *badjel.*
formalism.GEN   over
'A pragmatic view of literature has now begun to win over formalism.'

Concerning the position of *-goahtit* in the clause structure, we have already seen that it can be inflected for past and present tense, and also carry past participial marking. Consequently, *-goahtit* must be situated below the heads encoding past and anterior tense. Further, the examples in (65)–(68) show that *-goahtit* is situated below obligational permissive modals, below the conditional mood, and also below the progressive:

(65) a. *Searvi*   *ferte*   *čuovvu-goahti-t*
organisation.NOM   must.PRES.3SG   follow-INC-INF
Máze   *ovdamearkka.*
Máze.GEN   example.ACC
'The organisation must begin to follow the example from Máze.'
b. ** Son ferte-goahtá*   *dahkat*   *dan.*
s/he must-INC.PRES.3SG   do.INF   that.ACC

(66) a. *Stáhtat*   *eai*   *sáhte*   *ávkkástalla-goahtit*   *daid*
state.PL.NOM   NEG.3PL   can   exploit-INC.INF   those.ACC
resurssaid
resources.ACC
'States cannot start exploiting those resources.'
b. **Sii*   *eai*   *sáhtte-goađe*   *dahkat*   *dan.*
they   NEG.3PL   can-INC   do.INF   that.ACC

(67) a. *Dalle*   *jáhkán*   *Kárášjohka*
then   think.PRES.1SG   Kárašjohka.NOM
beaggi-goađá-šii   *guhkkelabbui.*
be.known-INC-COND.3SG   further
'I think that Kárášjohka would then begin to be more widely known.'
b. **Dat beakká-š-goahtá*   *guhkkelabbui.*
it   be.known-COND-INC-PRES.3SG   further

(68) a. *Son   lea   muohta-kino   ráhkadiš-goahti-min.*[14]
s/he is   snow-cinema.ACC   prepare-INC-PROG
'S/he is beginning to prepare a snow cinema.'

b. **Son leahket-goahtá   muohta-kino   ráhkadea-min.*
s/he be-INC.PRES.3SG   snow-cinema.ACC   prepare-PROG

But just like *álgit*, *-goahtit* can embed frequentative verbs, as in (69):

(69) *Olbmot   leat   jeara-halla-goahtá-n   goas   sin   CD-skearru*
people.NOM   are   ask-FREQ-INC-PTC   when their CD-record.NOM
ilbmá.
comes.out
'People have begun to ask when their CD-record will be released.'

The complement of *-goahtit* can also be a passive verb, as in (70), whereas passivisation of *-goahtit* is ungrammatical, as indicated in (71):

(70) *Unnitloguid   jietna   gull-o-goahtá   buorebut.*
minority.PL.GEN voice.NOM   hear-PASS-INC.PRES.3SG better
'The voice of the minorities begin to be heard better.'

(71) **Jietna/jiena   gulla-gohtto-juvvu-i.*
voice.NOM/voice.ACC   hear-INC-PASS-PAST.3SG

This shows that just like auxiliary *álgit*, *-goahtit* is situated higher than the Voice head. From the following examples we see that *-goahtit* is also higher than the causative, since the complement of *-goahtit* can be a causativised verb, as in (72) and (73), whereas causativising *-goahtit* is ungrammatical, as illustrated in (74):

(72) *Sii   oahpa-hiš-gohte   bártni   čuojahit.*
they learn-CAUS-INC.PAST.3PL son.ACC   play.INF
'They started to teach their son to play (an instrument).'

(73) *Rieban   duoldda-hiš-gođii   biergo-gievnni.*
fox.NOM   boil-CAUS-INC.PAST.3SG   meat-pot.ACC
'The fox started to get the meat pot to boil.'

(74) **Rieban   duolda-goađi-h-ii   biergo-gievnni.*
fox.NOM   boil-INC-CAUS-PAST.3SG   meat-pot.ACC
Intended meaning: 'The fox made the meat pot begin to boil.'

Together, what we have seen of *-goahtit* so far indicates that it is in the same position as *álgit*, when *álgit* has a verbal complement. In other words, in a North Sámi

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[14] The *-š* in *ráhkadiš-* is not a conditional marker, it is just a consequence of adding *-goahtit* to an odd-syllabled verb (see fn. 12).

clause there appears to be a position for inceptive aspectual auxiliaries somewhere in the middle of the functional domain of the clause, and *-goahtit* as well as *álgit* can appear in that position.

6   Low inceptives

We will now turn to a class of North Sámi inceptives that differ from *álgit* and *-goahtit*, discussed in the preceding sections. From some North Sámi verbs one can derive an inceptive verb by changing the theme vowel of the base verb. For reasons that will be made clear, I call these inceptives "low inceptives". The derivation of low inceptives is lexically restricted, so that it does not apply freely to any verb. The verbs that allow the formation of low inceptives are all atelic; they denote either states or activities, and they do not take external arguments. Below, I will first deal with low inceptives formed from stative verbs, and then with low inceptives formed from activity verbs.

6.1   Low inceptives from stative verbs

In (75) I present some examples of low inceptives derived from stative verbs[15]:

(75)	a.	*ballat* 'fear'	>	*ballát* 'begin to fear, become afraid'
	b.	*bivvat* 'keep warm'	>	*bivvát* 'get warm'
	c.	*diehtit* 'know (that)'	>	*diehttát* 'get to know'
	d.	*goallut* 'feel cold'	>	*goallát* 'begin to feel cold'
	e.	*gohcit* 'be awake'	>	*gohccát* 'wake up'
	f.	*máhttit* 'know (how)'	>	*máhttát* 'learn, begin to know'

In these verb forms, the final *-t* is the infinitival marker. Hence, the verbal stem is what precedes the *-t*, and as we see, what distinguishes the base verbs, i.e. the verbs in the left hand column, from the derived inceptive verbs, in the right hand column, is the stemfinal vowel, i.e. the theme vowel.

While the base verbs in (75), which are all stative, show variation in their theme vowels, the derived inceptive verbs all have *-á-* as their theme vowel. This does not mean, though, that *-á-* can generally be characterised as a marker of inceptive. The theme vowel *-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 the adjective *vielgat* 'white', and also in some non-inceptive non-stative verbs, such as *cummát* 'kiss' and *gurpát* 'tie together in a bundle'. In none of these verbs can the *-á-* be taken to represent inceptive. It is only in combinations like those in (75), where the *-á-* replaces the theme vowel in a stative base verb, that it represents inceptive aspect.

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[15] Verbs that refer to events of entering into a state are usually called inchoatives. However, since this paper compares different expressions of beginnings of states and events, I follow Smith (1991:77) and use the term *inceptive* for all of them.

An important fact concerning theme vowels in North Sámi is that they are not only found in verbs. They are also found in nouns and adjectives; that is, in all words belonging to the main lexical categories. Moreover, words based on the same root but belonging to different categories will have different theme vowels. For example, the verb *ballat* 'fear' in (75a) is based on the same root as the noun *ballu* 'fear', but has a different theme vowel. Hence, it appears that the theme vowels represent elements that specify the lexical category, thereby determining whether the root will appear in a nominal, verbal or adjectival context. But note that the theme vowel -*a*- is not restricted to verbs, and -*u*- does not only appear in nouns – cf. e.g. the verb *goallut* in (75d). Rather, there is variation in theme vowels in all lexical categories. The fact that the inchoative derivations in (75) are marked by changes in the theme vowels suggests that these derivations take place very low down in the verbal projection.

In Julien (2007) I proposed that stative verbs like *ballat* are formed by combining the root with a stative verbaliser, and that the derived inceptives are the result of adding an inceptive head on top of the stative projection. I will adopt this analysis also here, with some minor modifications, and propose that the inceptive verbs in (75) involve the syntactic structure shown in (76).

(76)
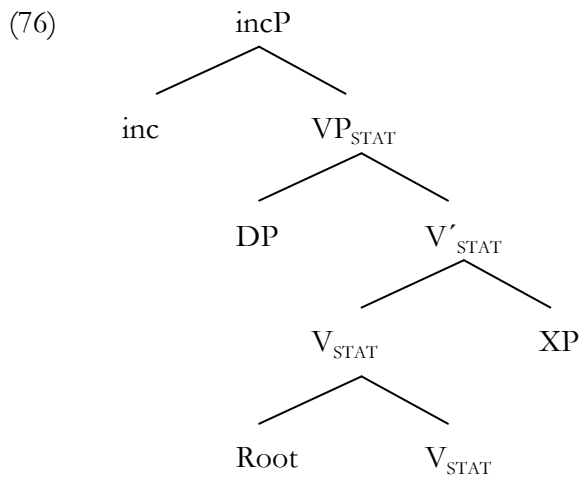
The theme vowel of the base verb corresponds to V_{STAT}. The theme vowel of the derived verb is either the result of the spellout of the inceptive head overriding the spellout of V_{STAT}, or else the theme vowel of the derived inceptive verbs could be seen as the realisation of inc+V_{STAT} in combination. For reasons of space, I will not go into a detailed discussion of the potentially relevant morphological mechanisms here. I will only point out that *álgit* (and all other verbs) is also made up of a root plus a verbaliser, so that the head denoted as V in (46) is in reality more complex than shown there.

Going back now to (76), DP is the subject of the stative base verb, and it becomes the surface subject of the construction as a whole. Some of the base verbs also take a second argument in addition to the subject, an argument representing the target of emotion or the subject matter of a psychological predicate. I take this argument to be a complement of V, and I represent it as XP

in (76). This argument is retained in the derived inchoative, as shown for *ballat* 'fear' and *ballát* 'begin to fear' in (77) and (78).

(77) *Son   ballá   boahtte-áiggis.*
      s/he   fear.PRES.3SG   coming-time.LOC
      'She fears the future.'

(78) *Bohccot   hakset   ja   ball-á-jit   hájas.*
      reindeer.PL.NOM   smell.PRES.3PL   and   fear-INC-PRES.3PL   smell.LOC
      'The reindeer smell (it) and got frightened by the smell.'

As a final point we can note that unlike the base verbs, the derived inchoative verbs in (75) are dynamic. This is illustrated in (79) and (80):

(79) *Mun   árvidan   ahte   geatki   ballái*
      I   understand.PRES.1SG   that   wolverine.NOM   fear.INC.PAST.3SG
      go   gulai   skohtera.
      when   hear.PAST.3SG   snowmobile.ACC
      'I understand that the wolverine got scared when it heard the snowmobile.'

(80) *Mun   in   diehtán   das   in   maidege*
      I   NEG.1SG know.PAST   it.LOC   NEG.1SG   anything.ACC
      vuohččan, muhto de   fáhkkestaga   diehtt-á-jin.
      at.first   but   then suddenly   know-INC-PAST.1SG
      'I didn't know anything about it at first, but then suddenly I got to know.'

Hence, the inceptive head adds dynamicity to the projection, encoding a transition that is the starting point of the state.

6.2   Low inceptives from activity verbs

While (76) showed inceptive verbs derived from statives, I present in (81) some examples of low inceptives derived from activity verbs:

(81) a.   *buollat* 'burn (intr)'   >   *buollát* 'begin to burn'
      b.   *johtit* 'travel'   >   *johttát* 'begin to travel'
      c.   *vardit* 'bleed'   >   *vardát* 'begin to bleed'
      d.   *doarrut* 'fight'   >   *doarrát* 'begin to fight'
      e.   *duoldat* 'boil (intr)'   >   *duldet* 'begin to boil'
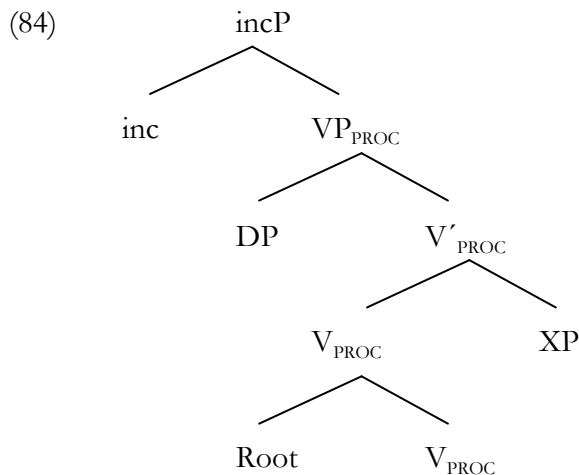   f.   *čierrut* 'cry'   >   *čirrot* 'begin to cry'

As we see, just like in (75) the overt manifestation of the derivations in (81) is the change of theme vowel, which means that here too we have examples of low inceptives, with the inceptive added close to the verbal root.[16]

While the base verbs in (81) all denote unbounded processes, the corresponding inceptives are bounded, denoting a change from no activity to activity. The contrasting aspectual properties are shown in (82) and (83). The main verb in (82) is the activity verb *duoldat* 'boil', and it combines with a time span adverbial, whereas *duldii* in (83) is a past tense form of the inchoative verb *duldet* 'begin to boil', and it combines with a time frame adverbial.

(82)   *Divtte*   *smávvát*   *duoldat*   *sullii*   *20 minuhta.*
     let.IMP   little.ADV   boil.INF   around   20 minute.ACC
     'Let simmer for around 20 minutes.'

(83)   *Gáffe*   *duldii*   *5*   *minuhtas.*
     coffee.NOM   boil.INC.PAST.3SG   5   minute.LOC
     'The coffee started to boil in 5 minutes.'

I propose that the inceptive verbs in (80) involve a syntactic structure which is very similar to the structure shown in (76), except that the stative verbaliser is replaced by a processual one, as shown in (84). Here too the inceptive takes as it complement a projection that does not contain an external argument. That is, the complement of the inceptive head is a VP which encodes an (unbounded) activity. The boundedness of the derived inceptive verbs is a consequence of the inceptive head encoding a transition.

(84)   incP

$$
\begin{array}{c}
\text{incP} \\
\diagup \quad \diagdown \\
\text{inc} \quad\quad \text{VP}_{\text{PROC}} \\
\quad\quad \diagup \quad \diagdown \\
\quad\quad \text{DP} \quad\quad \text{V}'_{\text{PROC}} \\
\quad\quad\quad\quad \diagup \quad \diagdown \\
\quad\quad\quad\quad \text{V}_{\text{PROC}} \quad\quad \text{XP} \\
\quad\quad\quad\quad \diagup \quad \diagdown \\
\quad\quad\quad\quad \text{Root} \quad\quad \text{V}_{\text{PROC}}
\end{array}
$$

Concerning the realisation of the structure in (84), we see in (81) that there is variation not only in the theme vowels of the base verbs, but also in the theme vowels of the derived verbs. The choice of theme vowel depends on the choice of

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[16]   The monophthongisation that we see in the roots in (81e) and (81f) is a phonological consequence of the change of theme vowel.

root, in the base verbs as well as in the inceptive verbs. Moreover, it is not possible to infer from the theme vowel in the base verb what the vowel will be in the inceptive – compare (81a) and (81e). That is, when it comes to phonological realisation, the combinations of root and theme vowel must all be listed in the lexicon and then matched with the combination of root and V_{PROC} (for the base verbs) or the combination of root, V_{PROC} and inc (for the derived verbs).

6.3   Concluding low inceptives

We have seen that the low inceptive in North Sámi applies very low down in the verbal projection, taking the VP as its complement. In this respect, it fits the analysis of inceptives with gerundive complements in Fukuda (2008), which are also taken to embed VPs. However, objections can be raised against Fukuda's analysis, since both gerundive and infinitival complements to inceptives can contain a passive:

(85)   a.   *Ranch style houses began being built in the 1920s.*
        b.   *Gothic churches began to be built in the late twelfth century.*

This suggests that the gerundive complement is larger than VP after all, and that English does not have inceptives that are situated in a similarly low position as the low inceptives in North Sámi.

7   Conclusions

We have seen in this paper that there are differences as well as similarities between the three inceptives in North Sámi. The inceptive verb *álgit* 'begin' can be an auxiliary, situated relatively high up in the functional domain and taking a verbal complement.

   When *álgit* appears with only nominal dependents, on the other hand, it is the main verb of the construction. As for the inceptive *-goahtit,* it is similar to auxiliary *álgit*, except that *-goahtit* is a bound form morphologically.

   The position of *-goahtit* and of auxiliary *álgit* is in line with the general idea in Cinque (2006), since they are located in the functional domain of the clause, both preceded and followed by other markers. However, the precise details of the position of *-goahtit* and of auxiliary *álgit* is not in accordance with Cinque's proposal. It is also clear that these two North Sámi inceptives are in a higher position than what Fukuda (2008) proposes for English aspectual verbs and for aspectual verbs in general.

   Concerning *álgit* in nominal contexts, however, I have argued that it is the main verb, and not an auxiliary at all. Hence, although it is then positioned very low down in the verbal projection, proposals concerning the position of inceptive markers are not relevant for these cases. My analysis goes against the suggestion in Cinque (2006) that inceptive verbs always have verbal complements, whether or not the lower verbs are phonologically realised.

The low inceptives, manifested as alternations of theme vowels, are different from -*goahtit* and from all occurrences of *álgit*. The low inceptives can be derived from processual or stative intransitive verbs, and I have suggested that the base verb represents either a stative verbaliser or a corresponding processual head, and that the inceptive is the result of adding an inceptive head over the base VP.

References

Bittner, Maria. 1987. On the Semantics of the Greenlandic Antipassive and Related Constructions. *International Journal of American Linguistics* 53(2). 194–231.

Brinton, Laurel, L. 1988. *The Development of English Aspectual Systems.* New York: Cambridge University Press.

Cinque, Guglielmo. 1999. *Adverbs and Functional Heads.* New York: Oxford University Press.

Cinque, Guglielmo. 2006. *Restructuring and Functional Heads.* New York: Oxford University Press.

Cinque, Guglielmo & Rizzi, Luigi. 2008. The Cartography of Syntactic Structures. In *STiL (Studies in Linguistics), CISCL Working Papers on Language and Cognition,* Vol. 2. 43–59.

Emonds, Joseph E. 1976. *A Transformational Approach to English Syntax.* New York: Academic Press.

Fortescue, Michael. 1984. *West Greenlandic.* Dover, New Hampshire: Croom Helm.

Freed, Alice F. 1979. *The Semantics of English Aspectual Complementation.* Dordrecht: Reidel.

Fukuda, Shin. 2008. Aspectual Verbs and the Aspect Phrase Hypothesis. *San Diego Linguistic Papers* 3.

Jackendoff, Ray. 1997. *The Architecture of the Language Faculty.* Cambridge: Massachusetts: MIT Press.

Julien, Marit. 1996. *Syntactic Word Formation in Northern Sámi.* Oslo: Novus.

Julien, Marit. 2007. Roots and verbs in North Saami. In Ida Toivonen & Diane Nelson (eds.), *Saami Linguistics*, 137–166. Amsterdam: John Benjamins.

Kratzer, Angelika. 1996. Severing the External Argument from its Verb. In Johan Rooryck & Laurie Zaring (eds.), *Phrase Structure and the Lexicon*, 109–137. Dordrecht: Kluwer.

Lamiroy, Béatrice. 1987. The Complementation of Aspectual Verbs in French. *Language* 63. 278–298.

Lewis, M. Paul (ed.). 2009. *Ethnologue: Languages of the World, Sixteenth edition.* Dallas: SIL International. Online version: http://www.ethnologue.com/.

Magga, Ole Henrik. 1982. *Modalverb og infinitiv innen verbalet: prosjektrapport.* Guovdageaidnu: Sámi instituhtta.

Newmeyer, Frederick J. 1975. *English Aspectual Verbs.* The Hague: Mouton.

Nielsen, Konrad. 1932–1962. *Lappisk ordbok: grunnet på dialektene i Polmak, Karasjok og Kautokeino = Lapp dictionary: based on the dialects of Polmak, Karasjok and Kautokeino.* Oslo: Aschehoug. [Reprinted 1979 by Universitetsforlaget, Oslo.]

Perlmutter, David M. 1970. The Two Verbs *begin*. In Roderick A. Jacobs & Peter S. Rosenbaum (eds.), *Readings in English Transformational Grammar*. 107–119. Waltham, Massachusetts: Ginn.

Pustejovsky, James. 1995. *The Generative Lexicon*. Cambridge, Massachusetts: MIT Press.

Rochette, Anne. 1999. The Selection Properties of Aspectual Verbs. In Kyle Johnson and Ian Roberts (eds.), *Beyond Principles and Parameters: Essays in Memory of Osvaldo Jaeggli*, 145–165. Dordrecht: Kluwer.

Sammallahti, Pekka. 1977. Bridging the gap between two inchoative suffixes: *-skande-* and Lapp *-skoatte-*. *Finnisch-Ugrische Forschungen* 42. 192–194.

Sammallahti, Pekka. 1998. Saamic. In Daniel Abondolo (ed.), *The Uralic Languages*, 43–95. London: Routledge.

Smith, Carlota S. 1991. *The Parameter of Aspect*. Dordrecht: Kluwer.

Szabó, László. 1987. The Use of the Inchoative in Kola-Sami Sentences. *Nordlyd: Tromsø University Working Papers on Language and Linguistics* 13. 70–103.

Toivonen, Ida & Nelson, Diane (eds.). 2007. *Saami Linguistics*. Amsterdam: John Benjamins.

Travis, Lisa de Mena. 1992. Inner Aspect and the structure of VP. *Cahiers de Linguistique de l'UQAM* 1. 130–146.

Van Geenhoven, Veerle. 2005. Atelicity, pluractionality, and adverbial quantification. In Henk J. Verkuyl, Henriette de Swart & Angeliek van Hout (eds.), *Perspectives on Aspect*, 107–124. Dordrecht: Springer.

Vinka, Erling Mikael. 2002. *Causativization in North Sámi*. Montreal: McGill University dissertation.

Wurmbrand, Susanne. 2003. *Infinitives: Restructuring and Clause Structure*. Berlin: Walter de Gruyter.

Ylikoski, Jussi. 2009. *Non-finites in North Saami*. Helsinki: Suomalais-Ugrilainen Seura.

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The Structure of Finnish Relative Clause[*]

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This article has two aims. First, it argues against (Manninen, 2003b) who claims that Finnish restrictive relative clauses are derived by Kaynean style head raising. We argue, based on evidence from binding, case assignment, polarity, quantifier scope, anaphors and extraposition that head raising is not a possible strategy for deriving Finnish restrictive relative clauses. We then argue that Finnish restrictive relative clauses are right-adjoined to the projectional spine of the hosting DP and that they are derived head-externally. A detailed grammatical mechanism for deriving relative clauses in Finnish is proposed in the minimalist framework that takes into account recent observations concerning snowball wh-movement and the structure of Finnish CP. We will also make several comments towards clarifying the grammatical role of the scope-discourse active left periphery and propose an extension to the recent feature inheritance model by Chomsky (2008).

Keywords: *Finnish, relative clause, raising analysis, edge, feature inheritance*

1 Introduction

This article examines Finnish restrictive relative clauses. An example of a restrictive relative clause in Finnish is provided in (1).

(1)   *Tuo on kirja, [jonka kaikki   ovat lukeneet]*
        that is   book which everyone have read
        'That is the book which everyone has read.'

Generativists have debated the correct analysis of relative clauses for decades. Smith (1964) and Chomsky (1965) were the first to address the structure of relativization from the generative perspective. Chomsky proposed a head external analysis, further developed and defended by Jackendoff (1977), Chomsky & Lasnik (1977) and Borsley (1997), among others. This analysis was and is challenged by the raising analysis, which was proposed by Vergnaud (1974) and Schachter (1973) and has been developed by Kayne (1994) and

Bianchi (1999). Our entry-point here is the article by Manninen (2003b), who proposes a raising analysis for Finnish relativization.[1] Here we take issue with Manninen and argue that the raising derivation is not an option in Finnish.[2]

In the latter portion of this article we present our own analysis: Finnish restrictive relative clauses are right-adjoined and head external. A detailed grammatical model of head external relativization is presented. The model takes into account several new observations concerning Finnish relativization, some published but many still unpublished. We will take several steps towards clarifying the role that the left peripheral position, or the edge position, plays in sentences and subsentential domains, and propose an analysis in terms of the *edge feature* by (Chomsky, 2008).

To see what is at stake, consider example (2).

(2)   I know the man who(m) you met ___ yesterday
      'I know the x such that x is a man and you met x yesterday.'

The relative clause begins with a relative pronoun *who*, which is associated with a gap (marked as ___). The phonologically empty position is the "relativization site". The material inside the DP that the relative clause modifies, the noun phrase *man*, constitutes the *head* of the relative clause. The head external analysis claims that the head has never been inside the relative clause, thus it is "external" to it. According to one influential head external analysis,[3] the relative pronoun is originally merged to the relativization site and is subsequently moved to a left peripheral $\overline{\text{A}}$-position of the relative clause. After this, the relative clause is combined with the relative clause head by a predicate composition rule (Chomsky, 1977, 1982, Rizzi, 1990). This analysis is illustrated in (3). The exact target of merge is debatable and will be addressed in the second portion of this article.

(3)   I know [$_{DP}$ the man [$_{CP}$ *who(m)* you met ___ yesterday]]
      'I know the x such that x is a man and you met x yesterday.'

This analysis is "head external" because the relative clause head is never a syntactic part of the relative clause. The raising analysis, in contrast, holds that the relation between the noun head (and other nominal elements) and the relativization site come about by raising, not by predicate composition (Schachter, 1973, Vergnaud, 1974, Kayne, 1994, Bianchi,

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[1]   Although we will ultimately reject Manninen's analysis, her paper stands as an important seminal contribution to the generative analysis of Finnish relativization.

[2]   A third possible position is a theory which allows both structures to be derived. Aoun & Li (2003) argue that both derivations exist in English and in Lebanese Arabic (LA) (see also Hulsey & Sauerland, 2006). Åfarli (1994) makes the same claim for Norwegian. We will leave this theory for another occasion and concentrate on the Finnish facts.

[3]   There are several versions of the head external analysis. One common head external analysis is the matching analysis (e.g. Lees, 1960, Chomsky, 1965, Sauerland, 1998, 2003, Hulsey & Sauerland, 2006). Another version is proposed by Quine (1960), Partee (1975) and Chomsky (1977), the basics of which we will follow here.

1999, 2000, Bhatt, 2002, de Vries, 2002). According to this analysis, the relative clause head *man* originates at the relativization site together with the relative pronoun *who(m)*, which constitutes a determiner. Both elements are subsequently raised to a higher position, where they take part in the construction of the DP. Under the analysis of Kayne (1994), the higher position is Spec,CP; a Kaynean analysis for (2) is provided in (4). The relative clause head moves past the relative pronoun and the relative clause is formed by synthesizing D + CP.[4]

(4)   I know [$_{DP}$ the [$_{CP}$ [man$_i$ who(m) ___$_i$]$_j$ you met ___$_j$ yesterday]]

Which one of these analyses fits Finnish relativization? The raising analysis holds that the relative clause head was once inside the relative clause, from where it raised to construct the hosting DP. Under the head external analysis, the head was never part of the relative clause. To argue for or against either of these analyses, we must seek evidence of the first-Merge position of the relative clause head, and, specifically, whether it can be located inside the relative clause. This issue is examined in section 2. On the basis of the present evidence, we will reject the raising analysis for Finnish. An alternative, head external analysis is provided in section 3.

2   Evidence for the head external analysis

2.1   Where is the head?

Finnish has three main types of relative pronouns: pronoun *joka* 'which/who/that', which refers to individuals; pronoun *mikä* 'what', which has an abstract referent; and a more rarely used pronoun *kuka* 'who', which refers to people. More information on the distribution of these relative pronouns can be found from Hakulinen et al. (2004, §735-736). These relative pronouns share the basic syntactic properties that are relevant for the discussion in this paper. We will therefore concentrate here on the most common one, the pronoun *joka*:[5]

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[4]   What comes to *that*-relatives, Kayne assumes that the raised noun phrase is a NP, not a DP. A compelling criticism of this claim was presented by Borsley (1997), and Bianchi (2000) drops the assumption that the moved constituent is a NP. According to Bianchi (2000), it is a DP with an empty determiner. We will discuss the DP-hypothesis briefly in section 2.7.

[5]   We use the following abbreviations in this article: 1SG = first person singular; 1PL; first person plural; ACC = accusative case; GEN = genitive case; INF = infinitive; INE = inessive case; NOM = nominative case; PL = plural; PAR = partitive case; PASS = passive; PRTCPL = participial adjective; PX/3SG = possessive suffix, third person singular form (the third person plural form is identical to the third person singular); Q = yes-no-question particle; SG = singular; TUA = a non-finite verb form belonging to the temporal construction. This form means roughly 'after doing something'. The person and number inflection on finite verbs is omitted in most example sentences.

(5) *Pekka   osti   kirjan,   [jonka   kaikki   ovat lukeneet].*
     Pekka.NOM bought book.ACC which.ACC everyone.NOM have read
     'Pekka bought a book which everyone has read.'

The raising analysis differs from the head external analysis with respect to the first-Merge position of the relative clause head (in the example above, the NP *kirja*). If Manninen (2003b) is right in that Finnish restrictive relative clauses are derived by raising, we ought to find evidence of the presence of the relative clause head inside the relative clause.[6] Our argumentation takes the following form. In the raising analysis, the relative clause head undergoes $\overline{\text{A}}$-movement from its first-Merge position at the relativization site to the edge of the relative clause. In Finnish, $\overline{\text{A}}$-moved phrases maintain most of their grammatical properties which they acquire in the first-Merge position, among them case and polarity properties. We will demonstrate that the relative clause head does not hold those properties. The lack of such "reconstruction" effects suggests that the raising analysis is not on the right track for Finnish.

This section is organized as follows. We will first investigate reconstruction effects: the next section 2.2 considers case assignment on the relative clause head and case concord in different constructions; section 2.3 addresses polarity phenomena; section 2.4 considers anaphors and binding; and section 2.5 reconstruction of quantifier scope. Idioms provide further evidence of the first-Merge position of the relative clause head, and they are considered in section 2.6. Finally, section 2.7 examines the extraposition of relative clauses in both theories.

2.2   Case concord

2.2.1   Background

We begin with a well-known criticism of the raising analysis, and then extend our argument with the help of new evidence coming from quantificational case construction, long distance case assignment and snowball relativization.

Finnish noun phrases exhibit virtually complete case concord. Almost every item inside a noun phrase up until the noun head is case-marked and shows a morphological case feature (6).

(6) *Pekka söi sen   pilaantuneen leivän.*
     Pekka ate the/that.ACC stale.ACC   bread.ACC
     'Pekka ate that stale bread.'

The raising analysis predicts that the case feature of the relative pronoun and the hosting noun phrase should agree via concord. Under Kayne's analysis, for instance, the

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[6]   There are two types of relative clauses, restrictive relative clauses and appositive relative clauses. Manninen (2003b) shows how restrictive relative clauses and appositive relative clauses can be separated in Finnish. We will use her diagnostics in separating the two. Note that according to Finnish punctuation conventions, both restrictive and appositive relative clauses are preceded with a comma.

relative pronoun and the noun head start off inside the same constituent. This predicts that they should share their case feature. In example (7), for instance, both the relative pronoun *who* = D^0 and the noun head *man* = N^0 are merged to the relativization site, where they should agree in case (cf. (6)).

(7) I know the [$_{CP}$ you met [who man] yesterday]
     Agreement in case: (who, man)

However, case concord facts support the head external hypothesis (Borsley, 1997, Alexiadou et al., 2000, Bianchi, 2002). The case feature of the noun head is determined by its position inside the *matrix clause*, while the case feature of the relative pronoun is determined by its position inside the *relative clause*. In example (8), the relative pronoun is marked for the nominative while the noun head is marked for the accusative case.

(8) *Minä tunnen miehen,   joka   tapasi sinut.*
     I   know man.ACC who.NOM met   you
     'I know the man who met you.'

Bianchi (1999, 94) and Manninen (2003b) explain these facts away by making three assumptions. First, they propose that syntactic, abstract case is a property of D, and that the rest of the nominal elements get case via case concord. Second, they assume that case concord takes place at Spell-Out, after $\overline{A}$-movement. Third, they assume that the post-syntactic case concord mechanism is local. The most local element bearing a syntactic case feature will assign its case (via concord) to one or several case assignees before the construction is shipped off to the phonological form. These three assumptions derive the facts in the following way. Consider (9) from Manninen (2003b, 681–682). Example (9a) shows the original example, while (9b) shows its derivation under the raising analysis.

(9) a. *tämä   vanha   poro   jonka   Sirkku näki*
         this.NOM old.NOM reindeer.NOM which.ACC Sirkku saw
         'this old reindeer which Sirkku saw'

     b. [$_{DP}$ *tämä*   [$_{CP}$ [$_{DP}$ *vanha poro$_i$ jonka   ___$_i$]$_j$ C *Sirkku näki* ___$_j$]
         this(D_1)   old   reindeer which(D_2)   Sirkku saw

The sentence is derived as follows. First, *vanha poro* 'old reindeer' is raised to the specifier of DP headed by D_2 = *jonka* 'which'. Then the whole DP is raised to Spec,CP and complemented with D_1 = *tämä* 'this'. The nominal material *vanha poro* 'old reindeer' gets case from the local D_1, while the relative pronoun lives in D_2 and does not receive new case. Thus, we provide that the nominal material will agree with the matrix case (D_1), while the relative pronoun maintains the case it obtains at the relativization site. Notice that under these assumptions, some case forms are determined after $\overline{A}$-movement, while others are determined before $\overline{A}$-movement. Specifically, nominal elements below D are provided case forms after $\overline{A}$-movement, while D receives its case before $\overline{A}$-movement. We believe, however, that there are strong reasons to doubt that this analysis is the correct one.

2.2.2   A quantifier construction

In Finnish (as well as in many other languages) there are situations where the case of the noun head is not determined by D, but by a quantificational numeral that occurs between D and N (Brattico, 2008, Brattico & Leinonen, 2009, Brattico, 2010, 2011a). The basic paradigm is shown in (10).

(10) a. *Odotin   sen   puoli minuuttia.*
          waited.1SG that.ACC half minute.PAR
          'I waited that half a minute.'

      b. *Ostin   ne   kolme punaista sukkaa.*
          bought.1SG those.ACC three red.PAR sock.PAR
          'I bought those three socks.'

The numerals *puoli* in (10a) and *kolme* in (b) assign the partitive case (PAR) to the noun head and other elements between the numeral and the head. The elements above the numeral, such as D and certain high adjectives, are assigned external case (ACC). Since the numeral functions as a syntactic case assigner, the raising analysis predicts that the Num-NP complex should *not* undergo case alteration when it is moved to the complement of an external D. This prediction is not borne out. Example (11a) illustrates case assignment on the noun phrase *kolme punaista sukkaa* 'three red socks' when it occurs in a direct object position. Example (11b) shows that the case features of this NP change to inessive when it is raised to Spec,CP, where the higher determiner is assigned the inessive case (inessive means roughly 'in'). Example (c) shows that the partitive case is not maintained in the complement of the numeral.

(11) a. *Ostin   ne   kolme punaista sukkaa.*
          bought.1SG those.ACC three red.PAR sock.PAR
          'I bought those three red socks.'

      b. *Havaitsin   reiän   niissä   kolmessa   punaisessa sukassa,   jotka*
          noticed.1SG hole.ACC those.INE three.INE red.INE   sock.INE which.ACC
          ostin   ___.
          bought.1SG
          'I noticed a hole in those three socks that I bought.'

      c. **Havaitsin   reiän   niissä   kolmessa   punaista sukkaa,   jotka*
          noticed.1SG hole.ACC those.INE three.INE red.PAR sock.PAR which.ACC
          ostin   ___.
          bought.1SG

Thus, we assumed that syntactic case is assigned in the first-Merge position, and because the Num-head is a syntactic case-assigner, it should maintain its case in $\overline{\text{A}}$-movement. However, as examples (11b-c) show, the numeral and the elements below it receive case on the basis of the matrix clause. The head external analysis accounts for this phenomenon

since, according to this hypothesis, the relative clause head *kolme punaista sukkaa* 'three red socks' has never been at the relativization site. Its case properties therefore reflect its position in the matrix clause.

2.2.3   Long-distance case

Let us consider another context where an approach based on case concord fails to predict the case distribution within a DP. In Finnish, the form of the object case is regulated by the presence of ϕ-agreement on a finite verb (Vainikka & Brattico, in press). For example, in the passive clause (12a), the verb does not inflect in ϕ-features and the object argument exhibits (what looks like) the nominative case. In contrast, when the finite verb inflects in ϕ-features of the subject, as in (b), the object argument exhibits the accusative case.

(12)   a.   *Me   syötiin   kakku.*
               we.NOM ate.PASS cake.NOM
               'We ate a/the cake.'

        b.   *Me   söimme   kakun.*
               we.NOM ate.1PL cake.ACC
               'We ate a/the cake.'

Furthermore, the presence of ϕ-inflection on the finite verb has an effect to the case of the object argument of a DP-internal non-finite clause, as illustrated in examples (13a-b) below (Brattico, 2012b). Example (a) shows that when the matrix verb does not inflect in ϕ-features of the subject, both the direct object and the object of the non-finite verb inflect in the nominative case. In contrast, when the matrix verb inflects in ϕ-features of the subject, as in (b), the accusative case alternates with the nominative case. Thus, Finnish exhibits long distance case assignment in addition to the more traditional local case assignment.

(13)   a.   *Me tehtiin* $[_{DP_1}$ *se   päätös   ostaa* $[_{DP_2}$ *se   auto/*
               we made.PASS   the.NOM decision.NOM to.buy   the.NOM car.NOM
               **sen   auton]].*
               the.ACC car.ACC
               'We made the decision to buy the car.'

        b.   *Me teimme* $[_{DP_1}$ *sen   päätöksen   ostaa* $[_{DP_2}$ *se   auto/*
               we made.1PL   the.ACC decision.ACC to.buy   the.NOM car.NOM
               sen   auton]].
               the.ACC car.ACC
               'We made the decision to buy the car.'

Example (13b) above further demonstrates that the object of the non-finite verb (DP$_2$) can inflect in *different* case than the D$_1$, and, therefore, DP$_2$ does not agree in case with D$_1$. This means that D$_2$ does not receive case via case concord, but instead, it is case-marked in syntax. Let us now turn to constructions (14a-b), where the noun phrase

containing the non-finite clause is relativized. Example (14a) shows that when the matrix verb inflects in ϕ-features, the case of the non-finite clause object (DP$_2$) alternates between accusative and nominative. Conversely, in the absence of ϕ-agreement in (14b), both the object argument and the non-finite clause object (DP$_2$) inflect in the nominative case. The object argument of the non-finite clause is thus case-marked within the matrix clause.

(14)   a.   *Pekka hyväksyi*   [$_{DP_3}$ *päätöksen*   [*ostaa*   [$_{DP_2}$ *auto/   auton*]],
            Pekka approved.3SG   decision.ACC   to.buy   car.NOM car.ACC
            joka   me tehtiin   ___].
            which.NOM we made.PASS
            'Pekka approved the decision to buy the car, which we made.'

       b.   *Me hyväksyttiin*   [$_{DP_3}$ *päätös*   [*ostaa*   [$_{DP_2}$ *auto/   *auton*]],
            we approved.PASS   decision.NOM   to.buy   car.NOM car.ACC
            jonka   Pekka teki   ___].
            which.ACC Pekka made.3SG
            'We approved the decision to buy the car, which Pekka made.'

Assuming that case-marking of D takes place in syntax, the raising analysis predicts that the non-finite clause object is case-marked before $\overline{A}$-movement to the edge of the CP. The raising analysis therefore fails to account for the morphological case of the non-finite clause object in examples (14a-b).

2.2.4   Snowball wh-movement

Finnish relative clause constructions display a significant amount of pied-piping, to the extent that the phenomenon can be characterized in terms of "snowball" wh-movement (Huhmarniemi, 2012, 62–63). In snowball wh-movement, a wh-element first moves to the edge of a constituent, say XP, and the whole XP moves to the edge of a larger constituent, and so forth, until the final scope position is reached. For example, certain adposition phrases (PPs) contain an edge position, to which a wh-phrase moves before the whole PP is pied-piped to the Spec,CP, as illustrated in examples (15a-b) (Manninen, 2003a). The two movement steps are marked in example (b) with indices 1 and 2.

(15)   a.   *Pekka käveli*   [$_{PP}$ *kohti   puistoa].*
            Pekka walked   towards park.PAR
            'Pekka walked towards a/the park.'

       b.   [$_{PP}$ *Mitä*$_1$ *kohti   ___*$_1$]$_2$ *Pekka käveli   ___*$_2$?
            which.PAR towards   Pekka walked
            'What did Pekka walk towards?'

Finnish follows the edge generalization by Heck (2008), which requires that the wh-phrase occurs at the edge of its hosting phrase (Huhmarniemi, 2012). Consider now sentences (16a-b) (from Huhmarniemi, 2012, 63). Example (a) presents the canonical word order of a sentence that contains an adverbial clause that hosts the PP of the example

above. When this sentence is transformed to the wh-question (b), the wh-phrase undergoes three movement steps. First, the wh-phrase moves to the edge of the PP, then to the edge of the adverbial clause, and finally, to the edge of the finite clause (Spec,CP).

(16)   a.   *Pekka   näki Merjan   [kävellessään [kohti   puistoa]].*
           Pekka.NOM saw Merja.ACC   walk.INF   towards park.PAR
           'Pekka saw Merja when he was walking towards a/the park.'

      b.   *[[Mitä$_1$ kohti   ___$_1$]$_2$ kävellessään ___$_2$]$_3$ Pekka   näki*
           what.PAR towards   walk.INF   Pekka.NOM saw
           Merjan ___$_3$?
           Merja.ACC
           'What was Pekka walking towards when he saw Merja?'

Relativization is subject to the same mechanism. For example, the derivation of expression (17) in a head external analysis starts off from (17a) and requires two movement steps: movement of the DP to the edge of the adverbial, as in (b), and movement of the adverbial clause to Spec,CP, as in (c). Finally, the relative clause is attached to the DP in (d).

(17)   *se   kirja, jota   lukemalla nukahdin   joka ilta*
       the/that book which.PAR by.reading fell.asleep.1SG every night
       'the book by reading which I fell asleep every night'

      a.   *nukahdin   joka   ilta   [lukemalla jota]*
           fell.asleep.1SG every night   by.reading which.PAR

      b.   *nukahdin   joka   ilta   [jota$_1$ lukemalla   ___$_1$]*
           fell.asleep.1SG every night   which.PAR by.reading

      c.   *[jota   lukemalla   ___]$_2$ nukahdin   joka   ilta   ___$_2$*
           which.PAR by.reading   fell.asleep.1SG every night

      d.   *se   kirja [jota   lukemalla ___] nukahdin   joka ilta ___*
           the/that book   which.PAR by.reading   fell.asleep.1SG every night

When sentence (17) is modelled in terms of the raising analysis, the derivation starts off from (18a) and requires an additional movement step of the relative clause head to the edge of the relative pronoun. This movement is marked with index 3 in example (b).

(18)   a.   *D [$_{CP}$ nukahdin   joka   ilta   [lukemalla [jota   kirja]]*
           fell.asleep.1SG every night   by.reading   which.PAR book.PAR

      b.   *se(D)   [[kirja$_3$ jota   ___$_3$]$_1$ lukemalla   ___$_1$]$_2$ nukahdin   joka*
           the/that   book which.PAR   by.reading   fell.asleep.1SG every
           ilta   ___$_2$
           night
           'the book by reading which I fell asleep every night'

What happens next under Kayne's raising analysis is that the external D assigns case to the head *kirja*. However, snowball relativization implies that this operation must penetrate an arbitrary number of phrase boundaries: DP and AdvP boundaries in (18b), but others as well if all possible snowball constructions are taken into account (i.e., PPs, several types of adverbial clauses) (Huhmarniemi, 2012, 223–226). A head must be able to assign a case feature into the specifier's specifier, indefinitely deep. But we know of no other constructions in which D assigns case so deep into the left branch of its complement. For example, in (19a-b), the expressions in bold satisfy the hypothetical case valuation configuration, but this case is never assigned by D. On the contrary, the specifier of the specifier of the complement of some head H is immune to case assignment by H.

(19)   a.   *tätä*   *[kauniin   punaista] autoa*
            this.PAR   beautiful.GEN red.PAR car.PAR
            'this beautifully red car'

       b.   *tätä*   *Pekan   autoa*
            this.PAR Pekka.GEN car.PAR
            'This car of Pekka'

       c.   *tätä*   *[[tutkimuksen   tehneen]   professorin]   artikkelia*
            this.PAR   research.ACC done.PRTCPL.GEN professor.GEN article.PAR
            'this article done by a professor who performed the research'

This problem is avoided in the model by Bianchi (1999, 2000), where the head of the relative clause moves outside of the containing DP to the specifier of a higher head in C-domain, as illustrated in (20) from Bianchi (2000, 130):

(20) $[_{DP}$ the $[_{CP}$ $[_{NP}$ picture] $[C^0$ $[_{XP}$ $[_{DP}$ which t_{NP} $]_i$ $[X^0$ $[_{IP}$ Bill liked t_i]]]]]]

However, this movement violates island conditions in several contexts (see e.g. Bhatt, 2002, 81). For example, the derivation of the Finnish example (17) would require extraction from an adverbial clause, which is a well-known island. These problems will be discussed in connection with extraposition, in section 2.7.

This section has addressed three instances of case assignment and case concord on the relative clause head: case assignment by quantifying expressions, long-distance case and case assignment to pied-piped phrases. The data from these constructions suggest that the distribution of case within Finnish noun phrases cannot be accounted for by relying solely on case concord. The case concord is, however, the principal mechanism of case distribution in the raising analysis, which leads us to conclusion that a head external analysis better accounts for the Finnish data.

2.3   Polarity

2.3.1   Partitive case under negation

What holds true of case assignment holds true of the computation of polarity: the polarity properties of the relative pronoun are determined by elements inside the relative clause, while the polarity properties of the relative clause head are determined by elements inside the matrix clause. We make use of the fact that in Finnish, the sentential negation and other negative polarity items assign the partitive case to direct objects (Heinämäki, 1984, Leino, 1991, Kiparsky, 1998, Kaiser, 2002, Brattico, 2012b, 2011a). The accusative case is impossible under the scope of negative polarity items. This is shown in (21). The verb *voittaa* 'to win' requires its direct object in the accusative, while the partitive is ungrammatical (a). With the negation, the facts are reversed (b).

(21)   a.   *Pekka voitti *kilpailua/   kilpailun.*
           Pekka won competition.PAR competition.ACC
           'Pekka won the competition.'

       b.   *Pekka ei   voittanut kilpailua/   *kilpailun.*
           Pekka not won   competition.PAR competition.ACC
           'Pekka didn't win the competition.'

Examples (22a–c) below demonstrate that the polarity properties of the relative pronoun are determined by elements inside the relative clause, while the relative clause head is sensitive to the polarity elements inside the matrix clause.

(22)   a.   *Pekka voitti jonkun   miehen,   jota   en   tunne ___.*
           Pekka won some.ACC man.ACC who.PAR not.1SG know
           'Pekka won some man who(m) I don't know.'

       b.   *Pekka voitti jonkun   miestä,   jota   en   tunne ___.*
           Pekka won some.ACC man.PAR who.PAR not.1SG know

       c.   *Pekka voitti jonkun   miehen,   jonka   en   tunne ___.*
           Pekka won some.ACC man.ACC who.ACC not.1SG know

The examples above can be accounted for in the raising analysis assuming Bianchi's model of case, where the matrix D takes the partitive case and the elements within the NP receive morphological case from D by case concord. Nevertheless, in section 2.2.3 (examples (13)-(14)) we argued that case concord fails to capture correctly the case distribution within the relative clause head. The same argumentation applies for the partitive case. Consider examples (23a-b) below. In affirmative sentence (a), the case of the non-finite clause object can be either nominative, accusative or partitive. However, the presence of sentential negation in (b) disables the accusative case.

(23) a. *Me teimme   suunnitelman ostaa   talo/   talon/   ?taloa.*
          we made.1PL plan.ACC   to.buy house.NOM house.ACC house.PAR
          'We made a plan to buy a house.'

      b. *Me emme   tehneet suunnitelmaa ostaa   talo/   *talon/   taloa.*
          we not.1PL made plan.PAR   to.buy house.NOM house.ACC house.PAR
          'We didn't make a plan to buy a house.'

Example (24) shows that partitive under negation also applies to the DP which is contained within the relative clause head. Had this DP acquired case on the basis of its syntactic position within the relative clause, as assumed under the raising analysis, we would predict that accusative case is grammatical. However, the accusative case is ungrammatical in (24).

(24) *Pekka ei   hyväksynyt* $[_{DP_1}$ *suunnitelmaa* $[$ *ostaa* $[_{DP_2}$ *talo/   *talon/*
      Pekka not.3SG approved   plan.PAR   to.buy   house.NOM house.ACC

      taloa]],   jonka   me teimme   ___].
      house.PAR which.ACC we made.1PL
      'Pekka didn't approve the plan to buy a house which we made.

The evidence from the first polarity phenomenon, partitive case under negation, therefore suggests that the relative clause head acquires its polarity properties on the basis of its position within the matrix clause rather than the relativization site.

2.3.2   The polarity particle -kin/-kAAn
Another polarity item in Finnish is the particle *-kin*, 'also, too', which cannot occur under the scope of negation, as illustrated in (25a-b). The *-kin*-particle has a negative counterpart form *-kAAn*, which is used instead, as illustrated in (25c-d).

(25) a. *Merja tarjosi   työpaikkaa-kin Pekalle.*
          Merja offered job.PAR-*kin*   Pekka.to
          'Merja offered also a job to Pekka.'

      b. **Merja ei   tarjonnut työpaikkaa-kin Pekalle.*
          Merja not offered job.PAR-*kin*   Pekka.to

      c. *Merja ei   tarjonnut työpaikkaa-kaan Pekalle.*
          Merja not offered job.PAR-*kAAn* Pekka.to
          'Merja didn't offer Pekka a job either.'

      d. **Merja tarjosi   työpaikkaa-kaan Pekalle.*
          Merja offered job.PAR-*kAAn* Pekka.to

When the *-kin*-particle appears on the relative clause head, as in the examples below, we observe that the polarity of the matrix clause determines the form of the particle on the relative clause head. In examples (26a-b), the matrix clause is affirmative, whereas the

relative clause is negative. The relative clause head *sihteerin paikkaa* 'secretary position' takes the affirmative particle *-kin* (a), whereas the negative particle *-kAAn* is ungrammatical (b).

(26)   a.   *Pekka haki   sitä   sihteerin paikkaa-kin,   jota   Merja ei*
              Pekka applied that.PAR secretary position.PAR-*kin* which.PAR Merja not
              tarjonnut ___ hänelle.
              offered   s/he.to
              'Pekka applied also for the secretary position that Merja didn't offer him.'

       b.   **Pekka haki   sitä   sihteerin paikkaa-kaan,   jota   Merja ei*
              Pekka   applied that.PAR secretary position.PAR-*kAAn* which.PAR Merja not
              tarjonnut ___ hänelle.
              offered   s/he.to

A possible strategy for explaining these facts away is to assume that the polarity properties are determined after movement of the relative clause head. However, A-movement does not feed polarity morphosyntax in Finnish. Examples (27b-c) below shows that the *-kAAn*-particle reconstructs to the complement clause in long-distance A-movement.

(27)   a.   *Pekka arveli   että Merja ei   tarjoaisi   hänelle sitä*
              Pekka thought that Merja not offer.would s/he.to that.PAR
              sihteerin paikkaa-kaan.
              secretary position.PAR-*kAAn*
              'Pekka thought that Merja wouldn't offer him the position as a secretary either.'

       b.   *Sitä   sihteerin paikkaa-kaan   Pekka arveli   että Merja ei*
              that.PAR secretary position.PAR-*kAAn* Pekka thought that Merja not
              tarjoaisi   ___ hänelle.
              offer.would   s/he.to
              'Pekka thought that Merja wouldn't offer him even the position as a secretary!'

       c.   **Sitä   sihteerin paikkaa-kin   Pekka arveli   että Merja ei   tarjoaisi*
              that.PAR secretary position.PAR-*kin* Pekka thought that Merja not offer.would
              ___ hänelle.
              s/he.to

In conclusion, the distribution of the polarity particle *-kin* is generally preserved in A-movement. However, when the *-kin*-particle is attached to the relative clause head, its properties do not reconstruct to the relativization site. This evidence from polarity therefore supports the head external analysis for relative clauses.

2.4   Anaphors and binding

Anaphor reconstruction effects provide perhaps the most compelling evidence in favor of the raising analysis (Kayne, 1994, 87). This section examines basic instances of anaphoric

relations in Finnish in terms of the Binding Theory (Chomsky, 1981, 1986) and demon-strates that anaphors do not reconstruct to the relativization site.

Finnish has two types of reflexive anaphors: the reflexive *itsensä* 'him/herself' (example (28a)), and the third person possessive suffix (example (28b)). Both the reflexive anaphor *itsensä* and the third person possessive suffix are Condition A anaphors in Finnish (for the syntax of possessive suffixes in Finnish, see Vainikka 1989, Trosterud 1993). For example, when the third person possessive suffix is attached to a noun head, as in (28b-c), it requires a local c-commanding antecedent.

(28)　a.　*Pekka　　　näki itsensä.*
　　　　　Pekka.NOM saw self.ACC
　　　　　'Pekka saw himself.'

　　　b.　*Pekka　　　näki valokuvansa.*
　　　　　Pekka.NOM saw picture.ACC.PX/3SG
　　　　　'Pekka saw his picture.'

　　　c.　**Minä　näin valokuvansa.*
　　　　　I.NOM saw picture.ACC.PX/3SG

We will now construct experiments where the reflexive anaphor has an appropriate antecedent only under the raising analysis, but not under the head external analysis. The raising analysis therefore predicts such expressions to be grammatical, while the head exter-nal analysis predicts the opposite. One relevant example is (29a), which shows that Finnish reflexive anaphor cannot be interpreted if the only suitable correlate is inside the relative clause. A possible way out is to hypothesize that movement feeds Condition A. There is however no evidence that Finnish A̅-movement would have such properties; in example (29b), the reflexive anpahor can be bound by the antecedent *Pekka* that c-commands it locally prior to the long-distance A̅-movement.[7]

(29)　a.　**Minä ihailen　　itseään　jota　　　Pekka　　　vihaa ___.*
　　　　　I.NOM admire.1SG self.PAR which.PAR Pekka.NOM hates
　　　　　'*I admire himself who Pekka hates.'

　　　b.　*Itseään　minä　sanoin että Pekka　　　vihaa ___!*
　　　　　self.PAR I.NOM said　that Pekka.NOM hates
　　　　　'I said that Pekka hates HIMSELF!

Because it is controversial whether a reflexive pronoun can function as a head of a restrictive relative clause, let us consider examples (30a-c) that further illustrate the same

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[7]　The moved element receives contrastive focus in example (29b), which is indicated by capital letters in the English translation.

point. The reflexive does not reconstruct to the relative clause in (b), although the reconstruction is possible in $\overline{\text{A}}$-movement in (c).[8]

(30) a. *Pekka$_i$ palkkasi itseään$_i$ fiksumpia   ihmisiä.*
          Pekka.NOM hired   self.PAR smarter.PAR people.PAR
          'Pekka hired people smarter than himself.'

      b. *Minä   ihailen niitä   itseään$_{*i}$ fiksumpia   ihmisiä,   joita*
          I.NOM admire those.PAR self.PAR smarter.PAR people.PAR who.PAR
          Pekka$_i$ palkkasi ___ .
          Pekka.NOM hired
          'I admire those people smarter than himself who Pekka hired.'

      c. *[Itseään$_i$ fiksumpia   ihmisiä]   Pekka$_i$ palkkasi ___ !*
              self.PAR smarter.PAR people.PAR Pekka.NOM hired
          'Pekka hired people smarter than himself!

Another way to say the same is that $\overline{\text{A}}$-movement reconstructs for Condition A. It is therefore not clear how the raising analysis can account for the lack of co-reference in (29a) and in (30b). Manninen (2003b) acknowledges these facts but maintains the raising analysis. She speculates that the lack of reconstruction is due to an independent principle, but the proposal cannot be evaluated since the principle remains unknown.

Similar data is available for the third person possessive suffix. Reconstruction to the relativization site is not possible (31a), although the third person possessive suffix normally reconstructs for $\overline{\text{A}}$-movement in Finnish (b). Note that examples (31a-b) avoid the problem of relativizing a reflexive anaphor while still providing evidence from reflexive binding in relative clause constructions.

(31) a. **Minä ihailen sitä   uusinta   maalaustaan$_i$,   jota*
          I.NOM admire that.PAR newest.PAR painting.PAR.PX/3SG which.PAR
          Pekka$_i$ vihaa ___ .
          Pekka.NOM hates
          Intended: 'I admire that newest painting of his$_i$, which Pekka$_i$ hates.'

      b. *Uusinta   maalaustaan$_i$ Pekka$_i$ vihaa ___ .*
          newest.PAR painting.PAR.PX/3SG Pekka.NOM hates
          'Pekka hates his NEWEST PAINTING.'

Binding Conditions B and C further support the head external analysis. First, Binding Condition B states that a pronoun must be free in its local domain, as illustrated in (32a). Example (b) shows that co-reference remains to be impossible after $\overline{\text{A}}$-movement of the pronoun. Assuming that the relative clause head is base-generated to the relativization site, we would expect to observe the same reconstruction effect in example (33c): the

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[8]   These sentences have the additional reading where the self-reflexive is interpreted as referring to the noun head, as in *a man smarter than himself.*

pronoun should fail to co-refer with the subject argument *Pekka*. However, the co-reference is possible. This means that the pronoun does not reconstruct to the relativization site.

(32) a. *Pekka$_i$ vihaa hänen$_{*i/j}$ maalauksiaan.*
          Pekka hates his/her paintings
          'Pekka hates his/her paintings.'

   b. *Hänen$_{*i/j}$ maalauksiaan Pekka$_i$ vihaa ___.*
          hsi/her paintings Pekka hates
          'Pekka hates HIS PAINTINGS.'

   c. *Minä pidän ainoastaaan siitä hänen$_{i/j}$ maalauksestaan, jota Pekka$_i$ vihaa ___.*
          I like only that his/her painting which Pekka hates
          'I like only that painting of his that Pekka hates.'

Binding Condition C states that a referential expression must be free; this is shown for Finnish in (33a), where a c-commanding pronoun fails to co-refer with the proper name *Pekan*. Example (b) shows that, similarly as with Condition B, Finnish A̅-movement reconstructs for Binding Condition C. The reconstruction effects are nevertheless absent in the relative clause construction (c).

(33) a. *Minä tiedän että hän$_{*i/j}$ vihaa Pekan$_i$ maalausta.*
          I know that s/he hates Pekka's painting
          'I know that s/he hates Pekka's painting.'

   b. *Pekan$_i$ maalausta minä arvelin että hän$_{*i/j}$ vihaa ___*
          Pekka's painting I thought that s/he hates
          'I thought that s/he hates PEKKA'S PAINTING.'

   c. *Minä pidän ainoastaan siitä Pekan$_i$ maalauksesta, jota hän$_{i/j}$ vihaa ___.*
          I like only that Pekka's painting that s/he hates
          'I like only that painting of Pekka that he hates.'

To summarise, assuming that raising is an instance of A̅-movement, the raising analysis predicts that the anaphoric relations of the relative clause head should reconstruct to the relativization site. In this section, we have provided examples that suggest that none of the traditional binding conditions support the reconstruction hypothesis. First, we examined reflexive anaphors and showed that the raising analysis would violate binding condition A. We then proceeded to examine data from pronominal binding and demonstrated that both binding conditions B and C would be violated in the raising analysis. These violations do not arise in head external analysis, where the relative clause head is base-generated outside the relative clause.

However, there exists a subclass of reflexive anaphors that display exceptional behaviour with respect to Binding Condition A. We will address them briefly before proceeding to the next section. Consider examples (34a-b) below. In these examples, the relative

clause head forms a picture noun phrase, with a reflexive anaphor that is able to pick its referent from the relative clause. Reciprocals, such as *toisiaan* 'each other' in (c), form another type of anaphor that can receive an antecedent within the relative clause.

(34) a. *kuva   itsestään$_i$ jonka   Pekka$_i$ maalasi* ___
          picture himself.of.PX/3SG which.ACC Pekka.NOM painted
          'a picture of himself which Pekka painted'

      b. *kuva   pojastaan$_i$ jonka   Pekka$_i$ maalasi* ___
          picture son.of.PX/3SG which.ACC Pekka.NOM painted
          'a picture of his son which Pekka painted'

      c. *tunteet   toisiaan$_i$ kohtaan, joita   [Pekka ja   Merja]$_i$ osoittivat* ___
          feelings each.other towards which   Pekka and Merja   showed
          'feelings for each other which Pekka and Merja showed'

These type of anaphors have been used for supporting the raising analysis (e.g. Kayne, 1994, 87). However, it has been observed that picture noun phrases differ from other reflexives by finding their antecedents contextually (Pollard & Sag, 1992, Reinhart & Reuland, 1993). We will not address this special case in this paper, but merely note that picture noun phrases have exceptional referring capacities in Finnish relative clauses. It should be noted that neither Binding Condition B nor C reconstructs to the relativization site in these constructions. Example (35a) shows that a pronoun is able to refer to a proper name within the relative clause, although it would be ungrammatical in the relativization site (b), in accordance with Condition B. Similarly, Condition C is not violated in (36a), although the violation is present in (b).

(35) a. *Tämä on se   kuva   hänestä$_{i/j}$, jota   Pekka$_i$ vihaa* ___.
          this is the picture him.of   which Pekka hates
          'This is the picture of him which Pekka hates.'

      b. *Pekka$_i$ vihaa kuvaa   hänestä$_{*i/j}$.*
          Pekka hates picture him.of
          'Pekka hates the picture of him.'

(36) a. *Tämä on se   kuva   Pekasta$_i$, jota   hän$_{i/j}$ vihaa* ___.
          this is the picture Pekka.of which s/he hates
          'This is the picture of Pekka which he hates.'

      b. **Hän$_i$ vihaa kuvaa   Pekasta$_i$.*
          s/he   hates picture Pekka.of
          '*He$_i$ hates the picture of Pekka$_i$.'

We therefore conclude that apart from picture noun phrases hosting reflexive anaphors, the binding data support the head external analysis.

2.5 Scope

Final syntactic phenomenon that displays reconstruction effects which we will examine in this paper concerns quantifier scope. The raising analysis can be supported with examples of quantifiers, where the narrow scope reading of the relative clause head is traced down to the relativization site (Åfarli, 1994, Bianchi, 2000). However, we failed to find this type of scope reconstruction effects from Finnish relative clauses.

To provide few illustrative examples, a sentence such as (37) has two possible readings, one where the existential quantifier lies within the scope of the universal quantifier ($\forall > \exists$) 'for each person, there is some guru such that the person admires that guru' and another where the scopes are reversed ($\exists > \forall$) 'there is one guru such that everyone admires him/her'.

(37)   *Kaikki   ihailevat jotain   gurua.*
       everyone.NOM admire some.PAR guru.PAR
       'Everyone admires some guru.'

The same readings are present in sentences where the existential quantifier $\overline{\text{A}}$-moves:

(38)   *Jotain   gurua   kaikki   ihailevat* ___.
       some.PAR guru.PAR everyone.NOM admire
       'Everyone admires some guru.' ($\exists > \forall, \forall > \exists$)

If the existential quantifier is relativized, however, the narrow reading of the existential is off:[9]

(39)   a. *Joku guru, jota   kaikki   ihailevat* ___, *vierailee Ruotsissa.*
          some guru who.PAR everyone admire   visits Sweden.in
          'Some guru, who everyone admires, visits Sweden.' ($\exists > \forall, *\forall > \exists$)

       b. *Kolme gurua,   joita   kaikki   ihailevat* ___, *vierailee Ruotsissa.*
          three guru.PAR who.PL.PAR everyone admire   visits Sweden.in
          (The) three gurus, who everyone admires, will visit Sweden.' ($\exists > \forall, *\forall > \exists$)

The existential quantifier is not, therefore, reconstructed for the purposes of scope interpretation. This is unexpected in the raising analysis: if the quantifier was base-generated to the relativization site, we would expect it to maintain its scope in $\overline{\text{A}}$-movement to the

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[9]   It is possible to construct examples where the existential quantifier is contained within the relative clause head, thus avoiding the relativization of the quantifier expression itself:

(i)   a. Kaikki noudattavat jonkun gurun opetuksia.
         'Everyone follows the teachings of some guru.' ($\exists > \forall, \forall > \exists$)

      b. Jonkun gurun opetukset, joita kaikki noudattavat ___ ovat mielenkiintoisia.
         'The teachings of some guru which everybody follows, are interesting.' ($\exists > \forall, *\forall > \exists$)

edge of the relative clause. Comparison to Ā-movement of the quantifier in example (38) reveals that the derivation of the relative clause does not share the properties of other types of Ā-movement to the left periphery of a finite clause.

2.6 Transparent and opaque idioms

Another type of evidence for the raising analysis is provided by idioms. The relative clause head can constitute part of an idiom whose second part is made up of the verb inside the relative clause (*the headway we made*), as in Finnish examples (40a-b). Under the assumption that idiom constituents are necessarily merged together (Marantz, 1984), the head must have been inside the relative clause (Schachter, 1973, Vergnaud, 1974).

(40) a. *Se   väite,   jonka   Pekkakin allekirjoitti ___, on   kumottu.*
          the.NOM claim.NOM which.ACC Pekka.too signed   has.been rejected
          'The claim that Pekka agreed with as well, has been rejected.'
          allekirjoittaa väite 'agree with', lit. 'sign a claim'

      b. *?Vihaan läppää   jota   Pekka heittää ___.*
          hate.1SG joke.PAR which.PAR Pekka throws
          'I hate Pekka's jokes.'
          heittää läppää 'talk nonsense, joke' lit. 'throw jokes'

In contrast, many idioms are opaque in the sense that they cannot be broken up in a relative construction (**the bucket he kicked*) (see de Vries, 2002, 78). Example (41) illustrates this phenomenon in Finnish:

(41) a. **?Pelkäsin   kenkää,   jota   pomo   antaa meille ___, jos*
          was.afraid.1SG shoe.PAR which.PAR boss.NOM gives us   if
          epäonnistumme.
          fail.1PL
          antaa kenkää 'fire', lit. 'give shoe'
          Intended: 'I was afraid of the boss firing us if we fail.'

      b. **?henki, jota   kala   haukkoi joutuessaan kuivalle maalle*
          breath which.PAR fish.NOM gasped ended.up try   land
          haukkoa henkeä 'catch one's breath', lit. 'gasp breath'
          Intended: 'the breath the fish was gasping when it ended up on dry land'

The evidence is therefore ambiguous at best and can support neither the raising analysis nor the head external analysis. Under the head external analysis, the differences between the idiom classes can nevertheless be accounted for by assuming that the idioms in (40) can, in fact, be merged to separate positions, whereas idioms in (41) are necessarily merged together. Evidence that this is so comes from the distribution of pre-nominal adjective modifiers: the former type of idioms allow such adjectives (42a-b), while the latter do not (c-d).

(42) a. *Pekka allekirjoitti sen   kiistanalaisen   väitteen.*
          Pekka signed   the/that.ACC controversial.ACC claim.ACC
          'Pekka signed the controversial claim.'

      b. *Pekka heitti   kauheaa   läppää.*
          Pekka threw terrible.PAR joke.PAR
          'Pekka told terrible jokes.'

      c. **Pomo   antoi meille pientä   kenkää.*
          boss.NOM gave us   small.PAR shoe.PAR

      d. **Kala   haukkoi säälittävää   henkeään.*
          fish.NOM gasped pityful.PAR breath.PAR

Furthermore, the former type of idioms can be base-generated in separate positions in resumptive constructions. Examples (43a-b) illustrate resumptive prolepsis, where the constituent in the elative case is related to the complement clause via a pronominal expression. It is unlikely that this construction was derived via A̅-movement in Finnish. For example, movement in example (43b) violates Left Branch Condition (Ross, 1967; for Finnish, see Huhmarniemi, 2012).

(43) a. *Siitä   läpästä Pekka sanoi että   se oli   hyvin heitetty.*
          that.of joke.of Pekka said that it was well thrown
          'Pekka said about that joke that it was a good one.'

      b. *Siitä   väitteestä Pekka sanoi että [sen   allekirjoittaminen] on hänelle   helppoa.*
          that.of claim.of Pekka said that it.ACC signing.NOM   is s/he.to easy.PAR
          'Pekka said about that claim that it is easy for him to agree with it.'

If we accept the hypothesis that certain idioms are decomposable, then the idiom data speaks in favor of head external analysis and against raising. But why does a contrast like (40-41) arise? We propose that the idioms in (40) receive literal interpretation while still maintaining something close to their idiomatic interpretation, while the idoms in (41) do not. Consider the idiom *antaa kenkää* 'fire', lit. 'give shoe'. The meaning of 'to fire somebody' does not contain the meaning of 'shoe', although the word denoting shoe is there; but it is likely that the meaning of *allekirjoittaa väite* 'agree with', lit. 'to sign a claim' involves a literal claim and literal signing.

According to the head external analysis, the two parts of a "true idiom" are always merged together; hence an expression where the parts are separated in this way is automatically illicit. If and only if the parts are separable both syntactically and semantically, hence if and only if they do not behave like true idioms, can the "idiom chunk" be separated into two blocks.

2.7 Extraposition

A relative clause can be separated from the hosting DP by an operation referred to as "extraposition", as in the example below (Chomsky, 1981, Ross, 1967):

(44)   A man came who I know.

This section is dedicated to investigating extraposition under the raising analysis. The aim is to address some new data that is problematic for the raising analyses considered here. First, extraposition poses problems for the raising analysis, because, under the present assumptions, the determiner and the relative clause head do not form a constituent:

(45)   I know $[_{DP}$ the $[_{CP}$ [man$_i$ who ___$_i]_j$ you met ___$_j$ yesterday]]

This problem can be accounted for by assuming that indefinite determiners can be part of the relative clause head, and therefore, extraposition is analyzed as movement of the nominal material, where the rest of the relative clause is stranded (Kayne, 1994, 118; Bianchi, 1999, 264). In her paper, Manninen (2003b) examines extraposition from the viewpoint of Finnish data. First, Manninen observes that Finnish postpositional phrases prefer extraposition. Consider sentences (46a-b) (from Manninen (2003b, 686)).[10] Example (a) shows that a DP hosting a relative clause cannot occupy the specifier of the postposition *alla* 'under'. In contrast, example (b), which involves an extraposed relative clause, is grammatical.

(46)   a.   *?[(sen) vanhan talon   jossa   Sirkku asui   lapsena] alla   ___
            the old   house in which Sirkku lived as child under

        b. $[_{DP}$ (sen) vanhan talon]$_i$ alla   [___$_i$ jossa   Sirkku asui   lapsena]
            the old   house under   in which Sirkku lived as child
        under the old house where Sirkku lived as a child'

Manninen proposes that extraposition can be derived by assuming that the raising element is not a NP, but a DP, as in (47). In addition, Manninen proposes that the D^0 that selects the relative clause is null and therefore allows the raising DP to move to its specifier position and escape the structure. For example, the derivation of sentence (47a) would involve an intermediate step (b), where the relative clause head occupies the specifier of DP (Manninen, 2003b, 688) .

(47)   a.   [se   kilpailija]$_i$ voittaa [___$_i$ joka toi   tuomarille kukkasia]
            the contestant wins   who brought judge   flowers

        b. $[_{DP} [_{DP}$ se   kilpailija   ]$_i$ D^0 $[_{CP} [_{DP}$ ___$_i$ joka ___$_i$]$_j$ C^0 ___$_j$ toi   ...]]
            the contestant   who   brought

---

[10]   Manninen uses traces (*t*) in her examples, which are here replaced by gaps (___).

However, there are several problems with this analysis. First one concerns snowball relativization discussed in section 2.2.4. Recall that the snowball relativization results in a structure where the head of the relative clause (e.g. *the contestant*) lies arbitrarily deeply embedded inside of a specifier's specifier of a head. Positing movement out of this environment violates well-known constraints on movement. For example, extraction from a moved constituent violates the Condition on Extraction Domains (Huang, 1982; see also Salzmann, 2006). This problem has been recognized among others by Bhatt (2002, 81) in connection with English possessors.

Moreover, it is possible to construct examples such as (48a), in which the DP is embedded within an adverbial clause that is an island in this context. Movement of the DP would therefore violate two island constraints: extraction from left branch and extraction from an adjunct (for extraction conditions in Finnish, see Toivonen, 1995, Huhmarniemi, 2009, 2012). Example (b) shows that extraction of a wh-phrase from this construction is impossible.

(48) a. *[sen vanhan talon] alla, [[[jonka ___] naapurissa] asuessaan] Sirkku oli vielä*
          the old   house under   which   neighbor.in living   Sirkku was still

          lapsi
          child
          'under the old house whose neighboring house Sirkku was living in when she was still a child'

      b. **Minkä   Sirkku oli   vielä lapsi [asuessaan [___ naapurissa]]?*
          what.GEN Sirkku was still child   living   neighbor.in

The second problem concerns the fact that if relativization is allowed to contain overt determiners, an obtrusive set of assumptions is called for to prevent determiner doubling. It is of course possible to posit such mechanisms. However, they are not needed in the head external analysis. A related problem is to explain how such determiner phrase can still contain the relative pronoun, which, too, is assumed to occur at the D-position. Manninen proposes the following structure:

(49) *[$_{DP}$ joka [$_{DP}$ se [$_{NP}$ kilpailija]]]*
           who   the   competitor

But, if this is possible, why cannot one normally stack determiners in Finnish? For example, a determiner pronoun cannot occur together with a demonstrative in (50a-b).

(50) a. **tämä se   auto*
          this   the/that car

      b. **se   tämä auto*
          the/that this car

In addition, the data from Finnish wh-questions fail to offer support for the determiner stacking hypothesis. Consider sentence (51a), where the possessor occupies the edge

of D.[11] Example (b) illustrates that a wh-phrase cannot occur together with an overt determiner or a demonstrative pronoun (Huhmarniemi, 2012, p. 147). In conclusion, determiner stacking in (49) would represent an exceptional phenomenon in Finnish.

(51)   a.   *Kenen   polkupyörä   varastettiin?*
            whose bike.NOM stolen.PASS
            'Whose bike was stolen?'

       b.   **Kenen se   polkupyörä   varastettiin?*
            whose the/that.NOM bike.NOM stolen.PASS

Finally, Manninen (2003b, 685) argues that extraposition poses a problem for the head external analysis on the basis that it is difficult to explain how the determiner and the noun head could strand their own complement. Assuming, following the view of Kayne and Manninen, that it is the D + N that moves, we believe that this way of stating the problem exaggerates it. If the relative clause is (right-)adjoined to the nominal projection instead of merging to the complement, it is less of a mystery how it can be stranded. In addition, it is possible that it is the relative clause that moves, not the nominal material (Fox & Nissenbaum, 1999).

2.8   Summary

We have compared the fates of two hypotheses concerning the syntactic structure of relative clauses in Finnish: the raising analysis and the head external analysis. We found no evidence of the head being merged inside the relative clause, while the evidence (that is not outright equivocal) speaks in favor of the head external analysis.[12] Therefore, we will develop a head external derivation for Finnish restrictive relative clauses.

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[11]   Finnish possessor can appear together with an overt determiner, as in (i.a), and in lower positions. For example, the possessor can be located below the numeral or below the adjective, as in examples (i.b-c), but determiner stacking remains to be ungrammatical (i.d).

(i)   a.   *ne   hänen   autonsa*
            those his/her cars.PX/3SG
            'those cars of his/her'

       b.   *ne   kolme hänen   autoaan*
            those three his/her car.PAR.PX/3SG
            'those three of his/her cars'

       c.   *se   punainen Pekan   polkupyörä*
            the/that red   Pekka.GEN bike
            'Pekka's red bike'

       d.   **tämä punainen se   Pekan   polkupyörä*
            this   red   the/that Pekka's bike

[12]   There is one argument in favor of the raising analysis raised by Manninen (2003b) but left unexplored in this paper – the fact that there appears to be a selection-type relation between certain determiners and the unit constituting the noun head and the relative clause. Specifically, certain D-elements can only select for the N + CP complex but not for an N (*The Paris that I love* vs. *I love (*the) Paris*). This phe-

3   An analysis of Finnish relativization

3.1   Introduction

In the previous section we provided evidence for the head external analysis of Finnish restrictive relative clauses, where the relative clause is merged inside the DP that contains the relative clause head. We recognize two possible sites where the relative clause can be merged: complement to the noun head or right-adjunct to some projection inside the DP. The complement-analysis has been defended by Platzack (2000), among others, while the adjunct-approach has been argued by Jackendoff (1977). In section 3.2, we consider these two hypotheses and propose that in Finnish, the relative clauses are right-adjoined to the hosting DP.

Once the structural properties of the hosting DP are settled, section 3.3 will move to examine the properties of relative pronoun movement, with a special emphasis on snow-ball wh-movement and the landing site of the relative pronoun at the left periphery of Finnish relative clause. Our theoretical assumptions come from minimalism (Chomsky, 2000, 2008). We will provide an analysis of movement in terms of the edge feature by Chomsky (2008), which has been applied earlier to Finnish wh-questions (Huhmarniemi & Brattico, 2013).

3.2   Relative clauses are right-adjoined

The most compelling evidence for the adjunction analysis of relative clauses is that a relative clause can appear in a noun phrase where the complement of the noun head is already occupied. For example, in (52a), the non-finite clause *ostaa auto* 'to buy a car' occupies the complement of N.[13] In this example, the relative clause modifies the head noun *sopimus* 'agreement'. Similarly, in examples (52b-c), the relative clause can modify a noun phrase which has its complement position filled. In (b), the complement position is filled with a non-finite clause, and in (c), a quantifying noun head takes a noun phrase as its complement.[14]

(52)   a.   *Merja hylkäsi jokaisen sopimuksen ostaa auto, jota Pekka*
Merja rejected each.ACC agreement.ACC to.buy car.NOM which.PAR Pekka
ehdotti   ___.
suggested

---

nomenon is also present in Finnish, as argued by Manninen (2003b, 678–679). This suggest that the N + CP complex is in reality something else, namely a CP with the nominal material in Spec,CP. Such data can be explained by assuming that the D selects for a CP. We will leave this question open in this paper.
[13]   The complement position is supported among others by extraction data (Huhmarniemi, 2012, 131–132). It is well-known that this non-finite clause occurs as the complement of a verb (Vainikka, 1989, Toivonen, 1995, Koskinen, 1998).
[14]   We thank an anonymous reviewer for pointing out the example (52c).

'Merja rejected each agreement to buy a car which was suggested by Pekka.'

b. *se   Merjan lupaus   auttaa Pekkaa   jota   hän ei   pitänyt* ___
    the/that Merja's promise to.help Pekka.PAR which.PAR s/he not kept
    'Merja's promise to help Pekka which she didn't keep'

c. *se   pullo mehua,   jonka   Pekka unohti jääkaappiin* ___
    the/that bottle juice.PAR which.ACC Pekka forgot fridge.to
    'the bottle of juice which Pekka forgot to the fridge'

Binding Condition C provides further evidence that relative clauses are adjuncts. In example (53a), the possessive pronoun at Spec,NP can be coreferential with the proper name inside the relative clause. If the relative clause were merged to the complement of N, then Spec,NP would c-command the proper name and Condition C would make coreference impossible. This observation can be contrasted with declarative CP-complements, such as (b), where the coreference between the pronoun and the proper name is impossible.

(53) a. *se   hänen$_{i/j}$ autonsa,   jonka   Merja$_i$ pesi*
         the/that.NOM his/her car.NOM.PX/3SG which.ACC Merja.NOM washed
         eilen ___
         yesterday
         'the car of hers that Merja washed yesterday'

     b. *Merja   ei   hyväksynyt hänen$_{*i/j}$ ajatustaan,   että Pekka$_i$*
         Merja.NOM not accepted his/her   idea.ACC.PX/3SG that Pekka.NOM
         lähtisi.
         leave.would
         'Merja didn't accept his/her idea that Pekka would leave.'

These facts suggest that Finnish relative clauses can be right-adjoined to the hosting DP.[15] But to which position? The placing of possessors in Finnish noun phrases provides evidence of the adjunction site. Consider again the example (53a)/(54). Since the possessor can be coreferential with the proper name inside the relative clause, Condition C predicts

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[15]   Finnish relative clauses are semantically close to participial adjectives, which in turn exhibit semantic and syntactic properties of adjuncts. For example, certain relative clauses can be transformed into participial clauses and vice versa. The strong resemblance to adjoined phrases makes it more likely that relative constructions are also adjoined. In (i.b) *Merjan ostama* 'bought by Merja' is a participial adjective adjoined to the NP.

(i)   a. *se   auto [$_{CP}$ jonka Merja osti]*
         the/that car   which Merja bought
         'the car which Merja bought'

      b. *se   [$_{AP}$ Merjan   ostama]   auto*
         the/that   Merja.GEN bought.PRTCPL car
         'the car bought by Merja'

that the possessor does not c-command the relative clause. The relative clause must therefore be able to occupy a higher position than the possessor. We conclude that relative clause can be right-adjoined above the possessive pronoun.

(54) *se   hänen$_{i/j}$ autonsa, jonka   Merja$_i$ pesi   eilen   ___*
      the/that his/her car   which Merja washed yesterday
      'her car which Merja washed yesterday'

```
              DP
            /    \
          D        NP
          se      /  \
               NP      CP
              /  \    /  \
    hänen_{i/j} autonsa   jonka Merja_i pesi eilen
```
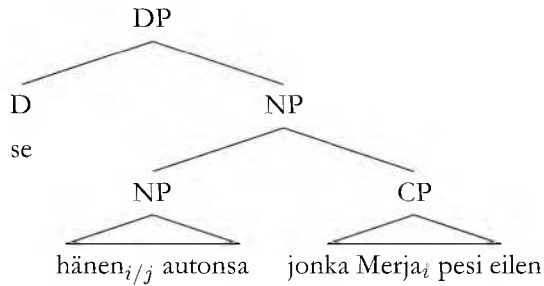
Finnish possessors typically occupy the specifier of NP (Vainikka, 1989, Brattico & Leinonen, 2009). The evidence above thus shows that the relative clause can be adjoined to the NP. However, possessors can also obtain higher positions within the DP, as in (55b-d).

(55) a. *nämä   kaikki   kolme hänen   autoaan*
         these.NOM all.NOM three his/her car.PAR.PX/3SG
         'all these three cars of his/hers'

      b. *nämä kaikki hänen kolme autoaan*

      c. *nämä hänen kaikki kolme autoaan*

      d. *?hänen nämä kaikki kolme autoaan*

We will assume the following cartography of Finnish DP (see for the functional projections inside Finnish noun phrases, Brattico, 2008, 2010, Brattico & Leinonen, 2009, Vainikka, 2011). Determiners and demonstrative pronouns occur at D, which can take a quantifier phrase as its complement. The projection NumP occurs between the quantifier phrase and the noun phrase:

(56)
```
                DP
              /    \
            D        QP
          nämä      /  \
         'these'  Q      NumP
                kaikki  /   \
                 'all' Num      NP
                      kolme    /  \
                     'three'  autoa
                              'car'
```
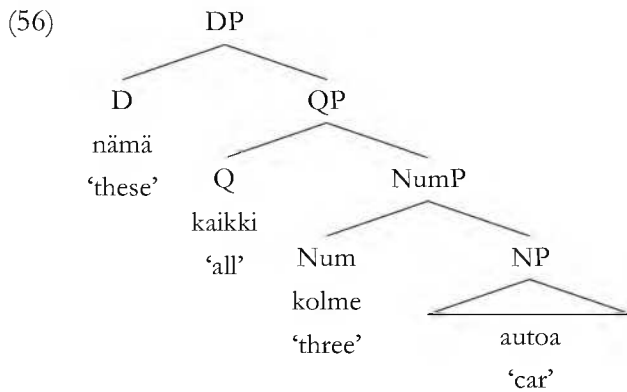
If the possessive pronoun were always merged to Spec,NP, determiners, quantifiers and numerals should precede it. However, as can be seen in (55b-c), the possessor can occur between Q and Num or between D and Q, and even above D. Let us now investigate the Condition C with respect to the position of the possessive pronoun in examples (57a-c); in all cases, the co-reference between the pronoun and the proper name is available. If the relative clause were adjoined to the NP in (b-c), Condition C would forbid coreference. It is thus possible that the relative clause can be adjoined also to higher projections, such as QP or NumP in (b) or to the QP in (c) (Gröndahl, 2013).

(57)   a.   *ne   kaikki   kolme hänen$_{i/j}$ autoaan,   jotka   Merja$_i$*
             those.NOM all.NOM three his/her car.PAR.PX/3SG which.ACC Merja.NOM
             pesi   eilen
             washed yesterday
             'all those three cars of her's which Merja washed yesterday'

       b.   *ne kaikki hänen$_{i/j}$ kolme autoaan jotka Merja$_i$ pesi eilen*

       c.   *ne hänen$_{i/j}$ kaikki kolme autoaan, jotka Merja$_i$ pesi eilen*

The argument is nevertheless weakened by the possibility of the pronoun obtaining any of these higher positions by $\overline{\text{A}}$-movement. The above argument then only holds if Condition C applies at the final position and does not see the first-Merge position (either by means of possessive reconstruction or by means of Condition C applying earlier than at LF). The following sentence shows, however, that Condition C does not bleed $\overline{\text{A}}$-movement.

(58)   *Häntäkö$_{i/j}$ Pekka$_i$ ajattelee, että sinä rakastat ___?*
       s/he.PAR.Q Pekka thinks that you love
       'Is it he/she who Pekka thinks that you love?'

Thus, if the pronoun obtains these higher positions by $\overline{\text{A}}$-movement, we cannot use Condition C effects for registering the position of the relative clause above the first-Merge position of the possessor. We leave the matter open for further study, as it is not crucial for the analysis we will propose in the next section.

In sum, we have argued that Finnish noun phrases offer several adjunction sites for the relative clause. The data from pronominal binding of the possessor suggest that the relative clause can be adjoined with a noun phrase (or occupy the complement position if it is available), and possibly with some of the higher projections.

3.3   On relativization

In this, final section, we discuss the internal mechanisms of relativization. In conclusion, we propose a theory of relativization in Finnish. We make the following initial assumptions. Relative clauses are derived by moving the relative pronoun, or a phrase containing the relative pronoun, from its first-Merge position to a left peripheral operator position of the

relative clause, where it encodes scope and participates in the presentation of clause type and/or labelling the clause. The gap left behind by the departure of the relative pronoun represents the *variable* x that is bound by a left peripheral operator OP, whose presence is in turn signalled by the relative pronoun movement itself:

(59) *mies [jonka   minä tapasin ___ eilen]*
      man   who.OP$_x$ I   met   x   yesterday
      'a man, who I met yesterday'

We wish to investigate the following three questions: (1) what is moved, (2) what is the target of movement, and (3) how is this movement implemented.

We consider first question (2), the target of movement. It has been a long-standing proposition among specialists in the domain of Finnish syntax that finite clauses possess exactly one left peripheral position available for wh-elements, relative pronouns and other type of elements that get left peripheralised (Hakulinen & Karlsson, 1979, Vilkuna, 1989, 1995, Vainikka, 1989, Vallduví & Vilkuna, 1998, Holmberg & Nikanne, 2002, Kaiser, 2006). An example of each is shown in (60). Only one of these phrases can occupy the left peripheral position at the time.

(60) a. *Kenet   sinä   tapasit ___?* (wh-movement)
         who.ACC you.NOM met
         'Who did you meet?'

      b. *mies, jonka   sinä   tapasit ___* (Relative pronoun movement)
         man who.ACC you.NOM met
         'a/the man you met'

      c. *Pekan   sinä   tapasit ___.* (Contrastive focus movement)
         Pekka.ACC.FOC you.NOM met
         'It was Pekka that you met.'

      d. *Pekan-ko   sinä   tapasit ___?* (Yes/no interrogativization)
         Pekka.ACC-Q you.NOM met
         'Was it Pekka that you met?'

      e. *Pekan-han   sinä   tapasit ___.* (Discourse movement/-*hAn*)
         Pekka.ACC-*hAn* you.NOM met
         'It was Pekka that you met.'

      f. *Pekan-pa   sinä   tapasit ___.* (Discourse movement/-*pA*)
         Pekka.ACC-*pA* you.NOM met
         'It was Pekka that you met.'

The semantic function of these left peripheralised phrases is to represent operator-variable constructions and/or various discourse properties, such as contrastive focus.[16]

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[16] We will not go into details of the discourse functions of particles -*hAn* and -*pA* in this paper; for more information, see Hakulinen (1976), Nevis (1986), Hakulinen et al. (2004, §131).

Thus, we say that the left periphery represents scope-discourse features. We call them *peripheral features*, or P-features, after Chomsky (2000).

Discourse-related movement has been recently investigated for Finnish by Huhmarniemi (2012), Brattico et al. (submitted) and Huhmarniemi & Brattico (2013). One of the distinctive properties of relative clauses considers the distribution of P-features. We thus draw a distinction between the left peripheral *position* that may be occupied by at most one phrase, and the peripheral *features*, which are associated with that position and overtly expressed there. The distinction is important to make due to the fact that while only one full phrase can occur at the left peripheral position, that phrase may convey and/or overtly express several peripheral P-features. One way to think about this is that there is one left peripheral position which can host several P-features. For example, many of these features are available in ordinary interrogatives (61):[17]

(61)   a. *Siis KENET   sinä   tapasit ___?*
          So who.ACC.FOC you.NOM met
          'So who was it that you met?'

       b. *Kenet-hän   hän   tapasi ___?*
          who.ACC-*hAn* s/he.NOM met
          'I wonder who he met?'

       c. *Auton-ko-han   hän   myi ___?*
          car.ACC-Q-*hAn* s/he.NOM sold
          'I wonder if it was a car that he sold?'

       d. *Kenet-kö-hän   hän   tapasi ___?*
          who.ACC-Q-*hAn* s/he.NOM met
          'Who do you think he met?"

However, interrogatives, contrastively focused elements and left peripheral clitics cannot occur at the left periphery of relative clauses, although they are available in other types of finite clauses. Thus, compare (61) and (62).

(62)   a. **mies, JONKA   sinä   tapasit ___*
          man   who.ACC.FOC you.NOM met

       b. **mies, jonka-han   sinä   tapasit ___*
          man   who.ACC-*hAn* you.NOM met

       c. **mies, jonka-pa   sinä   tapasit ___*
          man   who.ACC-*pA* you.NOM met

       d. **mies, jonka-ko   sinä   tapasit ___*
          man, who.ACC-Q you.NOM met

---

[17]   For the discourse-function of the particles in wh-questions, see Hakulinen et al. (2004, §1681).

The disparity between relative clauses and other finite clauses is further illuminated in the following. Finnish does not permit subject extraction from finite complement clauses, as shown in (63a) (Huhmarniemi, 2012, 97, fn. 54). However in spoken Finnish, the nominative wh-subject can be extracted if the moved element is focussed aggressively, as in (b).

(63)   a. *?Pekka   minä   luulen että ___ siivoaa tämän   sotkun.*
              Pekka.NOM I.NOM think that   cleans this.ACC mess.ACC
              Intended: 'Pekka I think will clean this mess.'

       b. *KUKA   sä   luulet että ___ siivoaa tämän   sotkun?!*
              who.NOM you.NOM think that   cleans this.ACC mess.ACC
              'Who (the hell) do you think that cleans this mess?'

Brattico (2012a) notes that such movement is impossible in relative clauses, such as (64). Since relative clauses do not license focus, aggressive focus movement is not available (cf. (62)).

(64)   *mies, joka   sä   luulet että ___ siivoaa tämän   sotkun*
        man, who.NOM you.NOM think that   cleans this.ACC mess.ACC
        Intended: 'the man who (*the hell) you think will clean this mess'

What keeps P-features out of relative clauses? Following the cartography philosophy of Rizzi (2004) and the feature inheritance hypothesis of Chomsky (2008), Brattico et al. (submitted) argue that the difference lies in the fact that full finite clauses (other than relative clauses) are headed by projection Force, from which the left peripheral $\overline{\text{A}}$-position below *inherits* several P-features, which license additional discourse-elements (i.e. those in ex. (62)).[18] The feature inheritance from Force to the lower $\overline{\text{A}}$-projection (αP) is illustrated below:

(65)   P-features are inherited from the Force-head.

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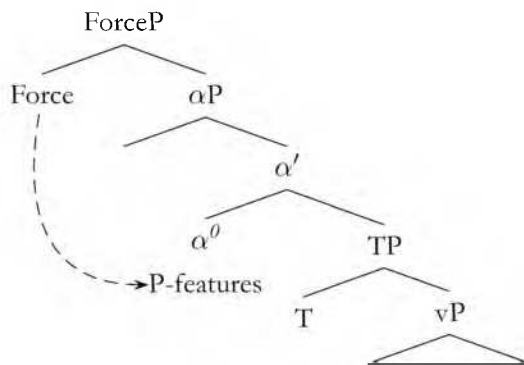
[18]   A reviewer points out that there are differences with respect to which P-features are licensed in which finite clauses. Thus, whereas root finite clauses can realize each and every P-feature, embedded CPs are more limited. This is due to selection. Thus, an interrogative matrix verb can select for an interrogative CP (ForceP) and thus exclude certain P-features while allowing others.

However, relative clauses lack the Force-head, and therefore, they do not license these features or the elements carrying them. In other words, according to this analysis, many P-features originate in Force but reincarnate in a lower head, where they are involved in movement and P-feature checking. Thus, full finite clauses are analysed as in (66a), while relative clauses are more sparse: they lack the Force projection (66b). All $\overline{\text{A}}$-movement to the left periphery targets the Spec,αP, where αP represents a functional projection above TP but below Force (under Rizzi's system, αP = FocusP).

(66) a. Finite clauses (other than relatives)
          ForceP - αP - TP - vP - VP

      b. Relative clauses
          αP - TP - vP - VP
          (Spec, αP = target of $\overline{\text{A}}$-movement)

As a first approximation, then, we propose that α^0 functions as a probe; it searches for a goal represented by the relative pronoun (or other types of variable elements) and the relative pronoun is moved to Spec,αP due to an EPP-feature located at α. If further features are inherited from Force, they function as probes. Relative clauses lack Force, however, and thus these extra P-feature probes are not available. The probe-goal system adopted here comes from Chomsky (2000, 2008). Example (67) shows how these mechanisms drive the derivation of the interrogative (63). The matrix clause is headed by Force, which contains the wh-feature together with an aggressive focus feature +FOC. These are peripheral P-features. These features are inherited by α^0, which will probe a goal bearing the same features: an aggressively focused interrogative pronoun. Since α^0 possesses the EPP-feature, the pronoun will be sandwiched between Force and α^0.

(67) *(Force^0)*   *Kuka*   *(α^0)*   *sä   luulet että* ___ *siivoaa tämän sotkun?*
      [FOC+*wh*] [FOC+*wh*] [+FOC+*wh*+EPP] you think that   cleans this   mess

An additional complication is that the moved element can be either a relative pronoun or a phrase that *contains* the relative pronoun. In the latter case, we say that the relative pronoun *pied-pipes* the phrase that wraps it. In the example (68), the moved DP *jota kohti* 'towards which' contains the relative pronoun.

(68) *talo   [[jota   kohti]   Pekka juoksi* ___
      house   which towards Pekka ran
      'a/the house.towards which Pekka ran.'

However, as was discussed in section 2.2.4, Finnish relative clauses follow the edge generalization proposed by Heck (2008), according to which a relative pronoun has to occupy the edge of the pied-piped phrase. Thus, for example, the expression (69) is ungrammatical.

(69) **talo* *[[kohti jota]* *Pekka juoksi* ___
     house   towards which Pekka ran
     'a/the towards which Pekka ran.'

What if the relative pronoun is not initially situated at the left periphery of the pied-piped phrase? Huhmarniemi (2012) and Huhmarniemi & Brattico (2013) show that the edge generalization can be met by having the relative pronoun $\overline{A}$-*move* to the left periphery of its hosting phrase. Huhmarniemi & Brattico (2013) further show that such "intermediate secondary operations" satisfy all conditions which hold of the final movement step. In short, it is the same $\overline{A}$-movement which will bring relative pronouns to the left edge of their pied-piped phrases that will bring the whole phrase to the final scope position. The two movement steps are illustrated in (70a–b).

(70) a. *Pekka juoksi kohti taloa.*
        Pekka ran   towards house
        'Pekka ran towards a house.'

     b. *talo* *[jota*$_1$ *kohti* ___$_1$/$_2$ *Pekka juoksi* ___$_2$
        house which towards   Pekka ran
   'a/the house towards which Pekka ran'

Because Huhmarniemi & Brattico (2013) failed to find an independent diagnostic property that would distinguish these two movement steps, they assumed that the mechanism (triggers and operations) are identical in both cases. Shall we assume, then, that there are P-features lurking all around the phrase-structure?

One possibility is that several types of phrases are headed by P-features, which in turn trigger the intermediate movement operations; another is that the triggering mechanism is a formal enterprise, while the scope-discourse interpretation arises as the moved elements are interpreted by the conceptual-intentional (C-I) component. Which one is the correct way? We see this primarily as a question of causes and effects: are peripheral interpretative shifts the constitutive cause, or the consequence, of movement? In other words, we take it for granted that there is (i) both successive-cyclic movement to the edge and (ii) interpretational effects tied with these operations; what has remained controversial is what causes what.

Chomsky (2000) assumed the former, while Chomsky (2008) assumes the latter. Huhmarniemi & Brattico (2013) follow the latter view and propose that movement is triggered by a left peripheral *edge feature* EF'. We will assume the same implementation of movement here. The left peripheral edge feature heading the phrase will make the extra Spec-positions available and fill it by internal Merge (i.e. phrasal movement) (see Chomsky 2008 for details).

To see this choreography in action, consider the derivation of the adposition phrase *jota kohti*. The preposition head possesses the edge feature EF' which acts as a probe for the relative pronoun. If a goal is found, it will be probed and moved to the left peripheral

position Spec,PP. Thus, the relative pronoun is moved to Spec,PP, resulting the order *jota kohti* in (71).

(71)
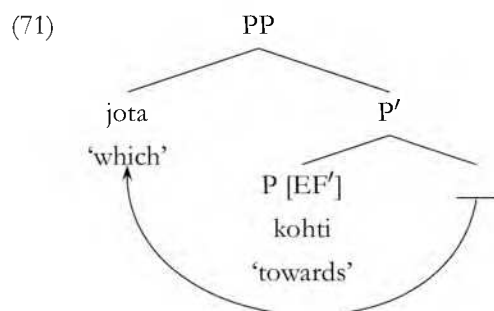
There will be no additional discourse interpretation: secondary relative pronoun movement in (71) is a formal operation (for a more generalized argument for a view which considers the EPP-feature as a formal quirk, see Brattico 2011b). Furthermore, also the matrix α possesses an EF′-feature that functions as a probe for the relative pronoun. It will locate the goal *jota* 'which' downstream, and the goal, or the phrase containing the goal, will be moved to Spec,αP, as in (72). However, the α-head of the relative clause cannot be purely formal: it must take some role in labelling the clause as a relative clause and establishing its scope properties.

(72)
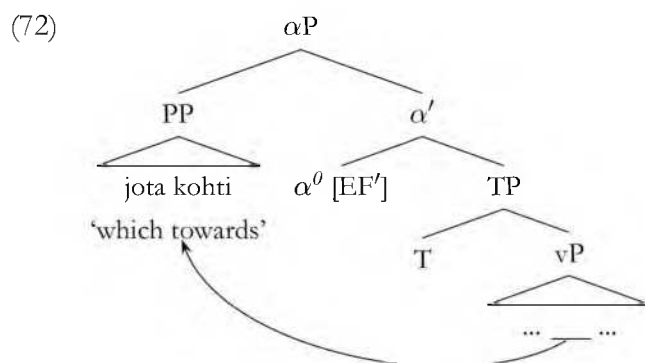
Notice that the EF′-feature does not distinguish wh-pronouns, relative pronouns or phrases with discourse clitics from each other: they are probed in similar fashion, as shown by Huhmarniemi (2012). In effect, the edge feature of Chomsky (2008) is an abstract feature which makes the left peripheral Spec-position available and functions as a probe; the position is, furthermore, filled in an indiscriminate fashion. In Chomsky's words, "the edge feature of the phase head is indiscriminate: it can seek any goal in its domain, with restrictions (e.g., about remnant movement, proper binding etc.) determined by other factors" (Chomsky, 2008, 151). The various goals are distinguished from each other only at the matrix level, where, as we have pointed out, features such as [+*wh*] or the left peripheral discourse features reside in the Force head. Thus, "what is raised is identified as [e.g.] topic

by the final position it reaches, and any extra specification is redundant" (p. 151). It also follows that the goals will terminate movement only at these positions, since the intermediate EF′-triggered movement will not delete the P-features.

To summarize, goals are rolled up in a successive-cyclic fashion, one Spec-position at a time, until something lands at the final scope position. These operations have the consequence that sometimes the final scope position is filled with a relative pronoun, sometimes a phrase that *contains* a relative pronoun at its left periphery. The relative pronoun can be buried indefinitely deep inside the hosting phrase, depending on the number of layers involved in the movement operations. The same facts hold true of all forms of $\overline{\text{A}}$-movement in this language (with only minor differences here and there, not discussed in this article). Thus, the edge feature is indiscriminate.

The data in (73-74) illustrate these assumptions at work in a variety of Finnish constructions. Example (73) shows an outline of our analysis: the heads of various phrases (CP, AdvP and DP) possess an EF′-feature, which will trigger successive movement operations and pied-piping. Example (74) illustrates the same mechanism in a variety of constructions. Our stance is that the movement operations are not necessarily tied with a particular discourse interpretation, although in many cases they do trigger changes in the discourse interpretation.[19]

(73) *kirjailija* [$_{CP}$ [$_{AdvP}$[$_{DP}$ *jonka* (D⁰)* ___ *kirjan*] *(Adv⁰)* *luettuaan* ___] *(α⁰)* *Pekka*
       writer   whose +EF′   book +EF′ read.TUA   +EF′ Pekka
       muutti *mielipidettään* ___.
       changed opinion
       'the writer after reading whose book Pekka changed his opinion'

(74) a. [[*Kenen* ___ *kirjan*]   *luettuaan* ___] *Pekka muutti* *mielipidettään* ___?
           whose   book.ACC read.TUA   Pekka changed opinion.his
           'After reading whose book did Pekka change his opinion?'

      b. [[*Merjan-ko*   ___ *kirjan*] *luettuaan* ___] *Pekka muutti*
           Merja.GEN-Q   book.ACC read.TUA   Pekka changed
           mielipidettään ___?
           opinion.his
           'Was it after reading MERJA'S book that Pekka changed his opinion?'

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[19]   One problem lingering in the air is which phrases are headed by the left peripheral edge feature EF′. Chomsky assumes that only *phase heads* have such properties. Huhmarniemi (2012) and Brattico (2012c) have studied the question in some considerable detail in Finnish, showing that there are many such phrases besides the standard phases CP, v*P (and DP). We can adopt a position according to which there are (in Finnish at least) many more phases than CP, v*P and DP, or find another, independent property which puts pied-piping domains aside from the rest. Brattico (2012c) adopts the latter option, but we will leave the question open here.

c. *[[Merjan-han ___ kirjan] luettuaan ___] Pekka muutti*
    mielipidettään ___.
    Merja.GEN-*h̆An* book.ACC read.TUA Pekka changed
    opinion.his
    'It was after reading MERJA'S book that Pekka changed his opinion.'

d. *[[Merjan-pa   ___ kirjan]   luettuaan ___] Pekka muutti*
    Merja.GEN-*p̆A*   book.ACC read.TUA   Pekka changed
    mielipidettään ___!
    opinion.his
    'It was after reading MERJA'S book that Pekka changed his opinion!'

e. *[[MERJAN ___ kirjan]   luettuaan   ___] Pekka muutti   mielipidettään ___!*
    Merja.GEN   book.ACC read.TUA   Pekka changed opinion.his
    'It was after reading MERJA'S book that Pekka changed his opinion!'

A final piece in this puzzle concerns the nature of the head α, which is in main clauses sandwiched between Force and T. Since Force encodes sentential force and tense represents tense, the semantic role left for α in finite clauses is to host operators representing scope. Thus, we think that α is best thought of as a head creating a pure operator-variable construction without the extra weight of P-features descending from Force. In addition, when it occurs without the Force-head, it has a role in labelling the clause as a relative clause.

4   Conclusions

This paper has addressed the structure and derivation of Finnish restrictive relative clauses. The first part of the paper comprised an investigation of Finnish relative clauses with relation to two persisting analyses of relative clauses: the raising analysis and the head external analysis. It was demonstrated that the data from the derivation of Finnish restrictive relative clauses headed by relative pronouns support the head external analysis against any of the raising analyses proposed to date.

In the second part of the paper, we proposed an analysis in which relative clauses are right-adjoined to a noun phrase. In addition, we proposed a system of the movement of the relative pronoun which amalgamates the properties of relative clauses to the properties of other finite clauses that exhibit Ā-movement to the left periphery. First, it was proposed that the left periphery of Finnish relative clauses lack certain discourse features that are present in main clauses, and therefore, the relative clauses have a reduced set of left peripheral functional projections. In the model developed here, relative clauses are otherwise identical to main clauses, but they are missing the projection Force, which hosts the left peripheral discourse properties. Second, the movement of the relative pronoun was analyzed in terms of a general property at edge of different types phrases, the edge feature.

References

Åfarli, Tor A. 1994. A promotion analysis of restrictive relative clauses. *Linguistic Review* 11(1). 81—100.

Alexiadou, Artemis, Paul Law, André Meinunger & Chris Wilder (eds.). 2000. *The syntax of relative clauses* Linguistik Aktuell 32. Amsterdam/Philadelphia: John Benjamins.

Aoun, Joseph & Yen-hui Audrey Li. 2003. *Essays on the representational and derivational nature of grammar: The diversity of wh-constructions.* Cambridge, MA.: MIT Press.

Bhatt, Rajesh. 2002. The raising analysis of relative clauses: Evidence of adjectival modification. *Natural Language Semantics* 10. 43–90.

Bianchi, Valentina. 1999. *Consequences of antisymmetry: Headed relative clauses.* Mouton de Gruyter.

Bianchi, Valentina. 2000. The raising analysis of relative clauses: A reply to Borsley. *Linguistic Inquiry* 31(1). 123–140.

Bianchi, Valentina. 2002. Headed relative clauses in generative syntax. Part II. *Glot International* 6(7). 197–204.

Borsley, Robert D. 1997. Relative clauses and the theory of phrase structure. *Linguistic Inquiry* 28. 629–47.

Brattico, Pauli. 2008. Kayne's model of case and Finnish nominal phrases. *Nordic Journal of Linguistics* 31.2. 135–160.

Brattico, Pauli. 2010. The two-part models and one-part models of nominal case: Evidence from case distribution. *Journal of Linguistics* 45. 47–81.

Brattico, Pauli. 2011a. Case assignment, case concord, and the quantificational case constructions. *Lingua* 121. 1042–1066.

Brattico, Pauli. 2011b. The diehard extended projection principle. *SKY Journal of Linguistics* 24. 181–188.

Brattico, Pauli. 2012a. Islands and operators in Finnish. *Biolinguistica Fennica Working Papers* 3. 26–65.

Brattico, Pauli. 2012b. Long distance case assignment in Finnish. *Studia Linguistica* 66. 245–284.

Brattico, Pauli. 2012c. Pied-piping domains and adjunction coincide in Finnish. *Nordic Journal of Linguistics* 35. 71–89.

Brattico, Pauli, Saara Huhmarniemi, Jukka Purma & Anne Vainikka. submitted. On feature inheritance and the structure of the Finnish CP. Manuscript submitted for publication.

Brattico, Pauli & Alina Leinonen. 2009. Case Distribution and Nominalization: Evidence from Finnish. *Syntax* 12(1). 1–31.

Chomsky, Noam. 1965. *Aspects of the theory of syntax.* Cambridge, MA: MIT Press.

Chomsky, Noam. 1977. On wh-movement. In P. W. Culicover, T. Wasow & A. Akmajian (eds.), *Formal syntax*, 71–132. New York: Academic Press.

Chomsky, Noam. 1981. *Lectures in government and binding: The Pisa lectures*. Dordrecht: Foris.

Chomsky, Noam. 1982. *Some concepts and consequences of the theory of government and binding*. Cambridge, MA.: MIT Press.

Chomsky, Noam. 1986. *Knowledge of language: Its nature, origin, and use (convergence)*. New York: Praeger.

Chomsky, Noam. 2000. Minimalist inquiries: The framework. In Roger Martin, Davic Michaels & Juan Uriagereka (eds.), *Step by step: Essays on minimalist syntax in honor of Howard Lasnik*, 89–156. Cambridge, MA.: MIT Press.

Chomsky, Noam. 2008. On phases. In Robert Freidin, Carlos Otero & Maria-Luisa Zubizarreta (eds.), *Foundational issues in linguistic theory: Essays in honor of Jean-Roger Vergnaud*, 133–166. Cambridge, MA: MIT Press.

Chomsky, Noam & Howard Lasnik. 1977. Filters and control. *Linguistic Inquiry* 8. 425–504.

de Vries, Mark. 2002. *The syntax of relativization*: Universiteit van Amsterdam dissertation.

Fox, Danny & Jon Nissenbaum. 1999. Extraposition and scope: a case for overt QR. *WCCFL* 18.

Gröndahl, Tommi. 2013. On Finnish relativization. Ms.

Hakulinen, Auli. 1976. Liitepartikkelin -han/hän syntaksia ja pragmatiikkaa. Tech. rep. Åbo Akademi Forskningsinstitut.

Hakulinen, Auli & Fred Karlsson. 1979. *Nykysuomen lauseoppia*. Helsinki: Finnish Literature Society.

Hakulinen, Auli, Maria Vilkuna, Riitta Korhonen, Vesa Koivisto, Tarja Riitta Heinonen & Irja Alho (eds.). 2004. *Iso suomen kielioppi*. Helsinki: Finnish Literature Society.

Heck, Fabian. 2008. *On pied-piping: Wh-movement and beyond*. Berlin: Mouton de Gruyter.

Heinämäki, Orvokki. 1984. Aspect in Finnish. In Casper de Groot & Hannu Tommola (eds.), *Aspect bound: A voyage into the realm of Germanic, Slavonic and Finno-Ugrian aspectology*, 207–234. Foris: Dordrecht.

Holmberg, Anders & Urpo Nikanne. 2002. Expletives, subjects and topics in Finnish. In Peter Svenonius (ed.), *Subjects, expletives, and the EPP*, 71–106. Oxford: Oxford University Press.

Huang, Cheng-Teh James. 1982. Move wh in a language without wh movement. *Linguistic Review* 1. 369–416.

Huhmarniemi, Saara. 2009. Extraction islands in Finnish. *Biolinguistica Fennica Working Papers* 1. 21–78.

Huhmarniemi, Saara. 2012. *Finnish A′-movement: Edges and Islands* Institute of Behavioural Sciences, Studies in Cognitive Science 2. Helsinki: University of Helsinki. `http://urn.fi/URN:ISBN:978-952-10-7712-8`.

Huhmarniemi, Saara & Pauli Brattico. 2013. On primary and secondary movement. *Acta Linguistica Hungarica* 60(2). 173–216.

Hulsey, Sarah & Uli Sauerland. 2006. Sorting out relative clauses. *Natural Language Semantics* 14. 111–137.

Jackendoff, Ray. 1977. *X-bar syntax: A study of phrase structure*. Cambridge, MA: MIT Press.

Kaiser, Elsi. 2002. Case alternation and NPIs in questions in Finnish. In L. Mikkelsen & C. Potts (eds.), *WCCFL 21 proceedings of the 21st West Coast Conference on Formal Linguistics*, 194–207. Somerville, MA.: Cascadilla Press.

Kaiser, Elsi. 2006. Negation and the left periphery in Finnish. *Lingua* 116. 341–350.

Kayne, Richard. 1994. *The antisymmetry of syntax*. Cambridge, MA.: MIT Press.

Kiparsky, Paul. 1998. Partitive case and aspect. In Miriam Butt & Wilhelm Geuder (eds.), *The projection of arguments: Lexical and compositional factors*, 265–307. Stanford: CSLI Publications.

Koskinen, Päivi. 1998. *Features and categories: Non-finite constructions in Finnish*: University of Toronto dissertation. Distributed by Toronto Working Papers in Linguistics.

Lees, Robert B. 1960. *The grammar of English nominalizations*. The Hague: Mouton.

Leino, Pentti. 1991. *Lauseet ja tilanteet: suomen objektin ongelmia*. Helsinki: SKS.

Manninen, Satu. 2003a. Finnish PPs and the Phase Impenetrability Condition. In Diane Nelson & Satu Manninen (eds.), *Generative approaches to Finnic and Saami linguistics*, 295–320. Stanford, CA: Center for the Study of Language and Information (CSLI), Stanford University.

Manninen, Satu. 2003b. To raise or not to raise: The case of Finnish restrictive relative clauses. *Nordlyd* 31(4). 668–693.

Marantz, Alec. 1984. *On the nature of grammatical relations*. Cambridge: MIT Press.

Nevis, Joel A. 1986. *Finnish particle clitics and general clitic theory*: The Ohio State University dissertation.

Partee, Barbara H. 1975. Montague grammar and transformational grammar. *Linguistic Inquiry* 6(2). 203–300.

Platzack, Christer. 2000. A complement-of-N0 account of restrictive and non-restrictive relatives. In *The syntax of relative clauses*, 265–308. Amsterdam/Philadelphia: John Benjamins.

Pollard, Carl & Ivan Sag. 1992. Anaphors in English and the scope of binding theory. *Linguistic Inquiry* 23(2). 261–303.

Quine, Willard van Orman. 1960. *Word and object*. Cambridge, MA: MIT Press.

Reinhart, Tanya & Eric Reuland. 1993. Reflexivity. *Linguistic Inquiry* 24(4). 657–720.

Rizzi, Luigi. 1990. *Relativized minimality*. Cambridge, MA: MIT Press.

Rizzi, Luigi (ed.). 2004. *The structure of CP and IP*, vol. 2 The cartography of syntactic structures. New York: OUP.

Ross, John Robert. 1967. *Constraints on variables in syntax*: MIT dissertation.

Salzmann, Martin. 2006. *Resumptive prolepsis: A study in indirect A'-dependencies*: University of Leiden dissertation.

Sauerland, Uli. 1998. *The meaning of chains*. Cambridge, Mass.: Massachusetts Institute of Technology dissertation.

Sauerland, Uli. 2003. Unpronounced heads in relative clauses. In Kerstin Schwabe & Susanne Winkler (eds.), *The interfaces: deriving and interpreting omitted structures* Linguistik Aktuell 61, 205–226. Amsterdam/Philadelphia: John Benjamins.

Schachter, Paul. 1973. Focus and relativization. *Language* 49. 19–46.

Smith, Carlota S. 1964. Determiners and relative clauses in a generative grammar of English. *Language* 40. 37–52.

Toivonen, Ida. 1995. *A study of Finnish infinitives*. Brandeis University MA thesis.

Trosterud, Trond. 1993. Anaphors and binding domains in Finnish. In Anders Holmberg & Urpo Nikanne (eds.), *Case and other functional categories in Finnish syntax*, 225–243. New York: Mouton de Gruyter.

Vainikka, Anne. 1989. *Deriving syntactic representations in Finnish*: University of Massachusetts Amherst dissertation.

Vainikka, Anne. 2011. Finnish genitive. Ms.

Vainikka, Anne & Pauli Brattico. in press. The Finnish accusative: Long distance case assignment by agreement. *Linguistics* .

Vallduví, Enric & Maria Vilkuna. 1998. On rheme and kontrast. In P. Culicover & L. McNally (eds.), *The limits of syntax*, vol. 29 Syntax and Semantics, 79–108. New York: Academic Press.

Vergnaud, Jean-Roger. 1974. *French relative clauses*: MIT dissertation.

Vilkuna, Maria. 1989. *Free word order in Finnish: Its syntax and discourse functions*. Helsinki: Finnish Literature Society.

Vilkuna, Maria. 1995. Discourse configurationality in Finnish. In Katalin É. Kiss (ed.), *Discourse configurational languages*, 244–268. Oxford University Press.

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