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## Preface

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# On the development of definiteness markers in Scandinavian

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## Abstract

This paper deals with the development of three different definiteness markers in Old Scandinavian: the definite suffix *-inn* and the pre-adjectival articles *(h)inn* and *sá/þen*. It is argued that only the development of the definite suffix followed the normal path of grammaticalization of definite articles. From the earliest Scandinavian texts, the runic inscriptions, follows that the future articles *(h)inn* and *sá/þen* started as formal elements preceding weakly inflected adjectives. They appear in this function very early, and, seemingly, more or less obligatorily so from the beginning. On this ground, earlier analyses of the definite markers and the noun phrase in Old Norse are rejected. Further, the role of the regional variation in Scandinavia is highlighted in relation to the competition between the two free articles.

## 1. Introduction

The grammaticalization of definiteness markers in Old Norse has recently been focused by several scholars, both in earlier working papers within this series, namely Faarlund (WPSS 79, 2007) and Abraham & Leiss (WPSS 80, 2007), and in other publications, e.g. Lohndal (2007) and van Gelderen (2007). All the authors mentioned have good points to make, but they also confuse the picture in some respects. In this paper, I will discuss some of these unclear issues, addressing the following questions.

- What is the relation between the two definite “articles” deriving from the (lost) demonstrative *(h)inn* in Old Scandinavian, namely the post-posed enclitic article *-inn* and the pre-adjectival *(h)inn*?
- How can we capture the grammaticalization process of *-inn* and *(h)inn* from a structural point of view? Is “grammaticalization downwards”, as proposed by both Faarlund (2007) and Lohndal (2007), the ultimate analysis? (Faarlund and Lohndal are heavily criticized by Abraham & Leiss (2007) for their unorthodox view on grammaticalization in this case.)
- Why is *hinn* replaced by *þen* (< *sá*) as a pre-adjectival article in Mainland Scandinavian?

The answers to the different questions above are in some respects mutually depending, but I will nevertheless try to focus on them in turn.

A guideline for the discussion is the idea that we have to keep the perspective wide in time as well as in space. A lot of work on Old Scandinavian in these days focuses on texts from Iceland and Norway from the 13<sup>th</sup> and 14<sup>th</sup> centuries, i.e. the language that is generally termed Old Norse. But the development may become much clearer if we also, when possible, take earlier stages of this language into account, and, further, if we consider the regional variation in all of Scandinavia.

To some extent it is possible to get a more precise knowledge of the Scandinavian language before the 13<sup>th</sup> century. The runic inscriptions date from the 9<sup>th</sup> or 10<sup>th</sup> century and some hundred years ahead. (I disregard here the even older, but rather few and often unclear, Proto-Scandinavian inscriptions.) Even if these texts generally are extremely short, limited in number and unevenly spread, with peaks in different periods of time in different regions, they make nevertheless an excellent complement to the later manuscripts.

Good reasons to widen the perspective geographically are the mutual intelligibility of the languages in Scandinavia during the time under consideration, from Iceland to the Isle of Gotland in the Baltic, and the fact that these languages in some respects developed in a common direction. Since we cannot take for granted that everything happened spontaneously and simultaneously all over this vast area, it may sometimes be a more fruitful approach to look for novation centres and paths of diffusion, wherever they may be, rather than to restrict the investigation to some very closely related varieties.

The somewhat unorthodox term Old Scandinavian is used here, and in the following, when a more precise specification in time and space is not essential. The term comprises all Scandinavian varieties from the Viking Age to the late Middle Ages (approx. from the 9<sup>th</sup> to the 15<sup>th</sup> century).

What I have to say in the following is based on preliminary results from a work recently started on the noun phrase in Old Scandinavian. My empirical base is for the time being rather limited. But I have excerpted and sorted noun phrases in runic inscriptions from different parts of Scandinavia and I will cite some of them (in transcribed form) in the following. Only the individual code of the inscription will then be given as reference. The first letters/letter of the code signal(s) the regional provenience: Sö, Ög, Hs, Vs, U =

different provinces in Sweden (see Sveriges runinskrifter), DR = Denmark (see Danmarks runeindskrifter), N = Norway (see Norges innskrifter med de yngre runer). The inscriptions can also be searched by their codes in the downloadable “Scandinavian runic-text database” (see address under References).

The rest of the paper is organized as follows. Section 2 is a short clarification on what three definiteness markers are treated in the paper. Section 3 deals with the relation between the definite suffix *-inn* and the pre-adjectival *(h)inn* in Old Scandinavian. Section 4 is a discussion on form and meaning of definite noun phrases, resulting in a model of the abstract structure of noun phrases, a model that is applied in section 5, which deals with the grammaticalization of *-inn* and *(h)inn* from a structural point of view. The question of why *(h)inn* is replaced by *þen* is highlighted in section 6. Section 7, finally, contains some concluding remarks.

## 2. Three articles, three grammaticalization processes

When talking about the developing of definiteness markers in Scandinavian, there are three different articles to consider (if the definite suffix may also be covered by the term article). As will become clear in the following, I take the three articles to be the results of three, principally independent, grammaticalization processes.

First, there is the development of the definite suffix on nouns, sometimes referred to as the post-posed definite article. The origin of this suffix is (presumably) a post-posed demonstrative *(h)inn*, which came to cliticize to the noun. The process as such, i.e. something like: *fisk*<sub>ACC.</sub> *(h)inn* ‘this > the fish’ > *fiskinn* ‘the fish’, is not possible to follow in the sources, but I do not think there is reason to hesitate about it in principle.<sup>1</sup>

Then we also have *(h)inn* used as a pre-adjectival article, see (1). I assume without discussion that this word and the definite suffix have the same origin,

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<sup>1</sup> A puzzling fact is that we do have a demonstrative *hinn* in Old Scandinavian, but this *hinn* is chiefly used to express contrast: ‘the other (one); the former (one)’ (cf. Germ. *jener*), and does not show article-like qualities. For reasons that it would carry to far to sort out here, I do not believe that this *hinn* and the origin of the definite suffix are the same word. The etymologists do neither present a definite answer, nor a unanimous one. (Blöndal Magnússon 1989:329, Krause 1968:53, Lehmann 1986:J5, de Vries 1962:228.)

The proposal by Elly van Gelderen (2007: 294) that the origin of the post-posed article is a locative adverb *hinn/hitt* ‘here’ is, to say the least, remarkable; locative adverbs do not appear in a full set of gender-number-case-forms as the post-posed article did.

as does obviously Faarlund (2007).<sup>2</sup> (However, whereas a common origin is of little importance for my analysis, it is essential for Faarlund's.) The free article (*h*)*inn* is practically lost in modern Scandinavian, but can occasionally be found in formal (chiefly written) Icelandic. (Sigurðsson 2006:195 f.)

- |     |   |   |
|-----|---|---|
| (1) | Hialpi hinn hælgi Krístr hans sal.<br>help-SUBJ. the holy Christ his soul<br>'May the holy Christ help his soul.' | Runic inscription from<br>the 11 <sup>th</sup> century (Sö 125) |
|-----|---|---|

Besides the two articles developed from (*h*)*inn*, there is actually one more definite article to take into account, viz. the pre-adjectival article that is still used in Scandinavian varieties except Icelandic. This article originates from a demonstrative normally labelled *sá*, which is the irregular form in the masculine singular nominative. The deviant *s*-forms, *sá* and the feminine singular nominative *sú*, are preserved in Modern Icelandic, but were, in Mainland Scandinavian, rather early substituted for *p*-forms, *þen* and *þe* respectively, by analogy with the rest of the paradigm.<sup>3</sup> The article in modern Swedish, Norwegian and Danish is *den*.

The pre-adjectival article is used only when an adjectival attribute precedes the noun. In modern Swedish, Norwegian and Faroese, the noun takes the definite form even in these cases, see (2a). Older stages of these languages are reflected in (modern) Danish, where combined use of the two articles is not possible, cf. (2b). In Icelandic, *sá* has never become an article. Modern Icelandic does not need any pre-adjectival article at all; definite (as well as indefinite) noun phrases can be headed by an adjective, see (2c).

- |     |  |                           |
|-----|--|---------------------------|
| (2) | a. den gamle mannen<br>DEF. old man-DEF. | 'the old man' (Swedish)   |
|     | b. den gamle mand<br>DEF. old man        | 'the old man' (Danish)    |
|     | c. gamli maðurinn<br>old man-DEF.        | 'the old man' (Icelandic) |

<sup>2</sup> One reason not to identify it with *hinn* 'the other/former (one)' (cf. note 1) is the tendency of *h*-dropping, here captured by the brackets around *h* in (*h*)*inn*. The variant with *h* is admittedly the most common in the runic inscriptions from the Scandinavian mainland and in the Norwegian examples in Faarlund 2004, but Icelandic manuscripts most often have *inn* (or *enn*). The contrastive demonstrative is usually written with *h*, even in Icelandic manuscripts.

<sup>3</sup> I let *þen* represent this secondary form, disregarding the variation in spelling (and pronunciation) of the vowel (<e>/<æ>/<a>) in Old Scandinavian.

To sum up, the Scandinavian languages developed very early, by means of grammaticalization, three different definiteness markers:

- the definite suffix *-inn* (mod. Sw./Norw./Dan. *-en*) which originates from the demonstrative *(h)inn*,
- the pre-adjectival definite article *(h)inn* from the same demonstrative,
- the pre-adjectival definite article *sá/þen* (mod. Sw./Norw./Dan. *den*) from the corresponding demonstrative *sá/þen*.

The definite suffix remains in all standard varieties of Scandinavian. The pre-adjectival function is upheld by *den* in Mainland Scandinavian, where *(h)inn* is totally lost. Modern Icelandic can mostly do without any pre-adjectival article, but uses *hinn* occasionally.

### **3. The relation between the definite suffix and the pre-adjectival *(h)inn***

The cliticizing article *-inn* and the pre-adjectival *(h)inn* in Old Scandinavian may seem to represent two stages on one and the same grammaticalization cline:

- (3) demonstrative > free article > clitic > suffix

This view is also put forward by Faarlund (2007:21 f.). The treatment of the grammaticalization in Faarlund 2007 (and in Lohndal 2007) is further founded on the assumptions that the post-posed article, *-inn*, was a clitic, not yet a suffix, in Old Norse, and that the pre-posed definite article *(h)inn* was a free counterpart to the clitic.

My opinion is that only the development of the definite suffix follows the normal path of grammaticalization of definite articles. As I will return to below, the original function of the pre-adjectival article was not to convey “definiteness” to the noun phrase. It presumably started in the same demonstrative as the cliticizing *-inn* and may have ended up as a normal definiteness marker, but it followed its own path.

Thus, the suffix did not develop from the free article. And nor did the free pre-posed article develop from the post-posed enclitic one, as put forward by Abraham & Leiss (2007). The authors’ references to the empirical basis for their statement are far from clear. An especially confusing passage is the following.

In fact, the earliest independent, unbound definite article morphemes were also post-posed (albeit not enclitic). They are attested long before the enclitic article. What is even more striking is the fact that the preposed article is limited in occurrence to Art + adjectival attribute + N. (Abraham & Leiss 2007:20)

It is true that the earliest instances of *(h)inn* are post-posed. However, what Abraham & Leiss do not report is the striking fact that these earliest instances of post-posed *(h)inn* always precede an adjective. Thus, the earliest instances of *(h)inn* are all clear instances of the pre-adjectival article, the only difference from the later instances of the same word being the post-noun position, see the Viking Age examples from runic inscriptions in (4a–b).

- (4) a. ÞioðrikR hinn þurmoði (Ög 136, the Rök stone, 9<sup>th</sup> cent.<sup>4</sup>)  
           Theodoric the bold  
       b. Gunnborga [...] hin goða (Hs 21)  
           Gunnborga the good

In a long diachronic perspective on syntax, the position of the complex *(h)inn* + adjective is not odd at all; the earliest Scandinavian had chiefly (though not solely) “noun-first” word order in noun phrases. This means that, when taking a longer period of time into consideration, a label such as post-posed article is hazardous. This is why I often stick to the term pre-adjectival article instead.

It should be emphasized here that we do not find in the sources any clear example of a post-posed free *(h)inn*, which is not followed by an adjectival attribute, i.e. a precursor of the definite suffix. There are a few runic inscriptions of interest, but this is not the place for a deeper discussion on the matter. The two instances of *andinni*<sub>DAT.</sub> ‘the soul’ on two Swedish runestones from the 11<sup>th</sup> century are traditionally taken as the first instances of the definite form in Scandinavian. Formally the interpretations *and’inni* or *and inni* are acceptable too, but they lack empirical support.

Contrary to Faarlund, I believe that the enclitic article was a suffix already in early medieval Scandinavian. The evidence given for its status as a clitic is not conclusive, and the presentation of the morpheme as a lexical head that needs a host to lean on and thus attract another head (Faarlund 2007: 31), seems to me as a good description of an inflexional affix.

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<sup>4</sup> The interpretation of the inscription on the rune-stone from Rök has recently been questioned on several points by Bo Ralph (2007). According to Ralph it is not evident that the name Theodoric is correct, but this does not affect my point here.

The dating of the development should, in my opinion, be discussed in relation to the changes in the noun phrase word order. It is of course due to the normal post-position of demonstratives in earliest Scandinavian that we have got a definite suffix at all and not (only) a pre-posed (free) definite article, like many other European languages. The post-posed demonstrative has been reinterpreted, maybe first as a cliticizing article, finally as a suffix. And it is likely that the process is completed before “noun-first” had ceased to be the dominant word order of noun phrases.

At a first stage, when nouns in noun phrases regularly precede all kinds of determiners and attributes, we can assume that the noun is fronted to the first position for some reason independent of the article. At some point, however, the post-posed article is reinterpreted as a suffix, i.e. starts to attract the noun; a suffix “needs a host to lean on”. As long as nouns are still regularly fronted to first position in all kinds of noun phrases, we can not see on the surface whether the definiteness marker is just a cliticizing article or a suffix. But, when, later, nouns are no more fronted to a position before free determiners, but nevertheless precede *-inn*, we must conclude that the reinterpretation has already taken place.

Now, the pure access to a formal definiteness marker does not immediately lead to a frequent use of it, as is convincingly demonstrated by Elisabeth Leiss (2000, 2007). Early article systems are, as Leiss (2007:75) puts it, hypo-determining. In a hypo-determining language, explicit definiteness marking by an article is a marked alternative, primarily used to avoid ambiguity. Absence of definiteness marking is still normal also when a definite interpretation is intended, provided that the definite interpretation is the most plausible one within the context.

As mentioned above, I take the pre-adjectival (*h*)*inn* to have a quite different function from the definite suffix. As concerns the latter, it is reasonable to believe in a grammaticalization process that does not deviate from what is normal when a language acquires definiteness marking. It can be described in terms of an expanded use of the original demonstrative, from its true deictic function, to an anaphoric function, i.e. use of the demonstrative to refer to a just mentioned referent, and finally to the function of independent definiteness marking. (Cf. Leiss 2007:94 ff.)

The Old Scandinavian pre-adjectival (*h*)*inn*, however, seems to be just a formal element preceding adjectives with so called weak inflection. Adjectives in Old Scandinavian were, as were demonstratives and pronominal

determiners, inflected to agree with the head noun in gender, number and case. But the declension of adjectives could be both strong and weak, and the weak declension had a very reduced set of contrasting forms. (The situation is the same in modern Icelandic, whereas Mainland Scandinavian now has just a few strong forms, agreeing in gender and/or number, and only one common weak form.)

For the moment, I have no decisive idea about the exact role of the pre-adjectival article. It could be tempting to take the more discriminating inflection of (*h*)*inn* to compensate for the weak forms of the adjectives. But then we land in the question why we have weakly inflected adjectives at all – a question I will not try to answer here.

An examination of the instances of (*h*)*inn* + adjective in the runic inscriptions leads to the striking result that the majority of them occurs in connection with a proper name. The examples in (4a–b) are representative so far, at least for the genre of memorial inscriptions. For some of these instances it can be argued that the function of (*h*)*inn* + adjective is likely to restrict the reference of the noun phrase. There is for instance a rune carver who calls himself *Balli hinn rauði* ‘Balli the red’ (Vs 15), which could be a way to handle a situation where more than one Balli was around. But not all adjectives must or can be interpreted in a restrictive way.<sup>5</sup> A purely descriptive attribute is (*hinn*) *hælg* ‘(the) holy’ in *Kristr hinn hælgi* ‘the holy Christ’ (U 391).

Whatever the function of the pre-adjectival (*h*)*inn* in the oldest stages of Scandinavian was, it seems clear that it was not used in the normal functions of a future definite article. This does not mean, however, that it did not have the qualities to become an article. It seems like it (maybe) did, once it was no longer regularly preceded by the noun. We cannot take for granted, though, that the article interpretation is at hand as soon as (*h*)*inn* appears for the first time in the initial position of the noun phrase, since noun phrases were not yet obligatorily headed by an article (or by a noun inflected for definiteness).

In (5), where I show the different paths of development of the definite suffix and the free definite article (*h*)*inn*, I tentatively use the term “mediating” for the primary function of the latter, the logic being that it mediates

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<sup>5</sup> The same holds true in modern Scandinavian, including varieties with double definiteness, which makes the description of the pre-posed article in modern Norwegian in Abraham & Leiss 2007 doubtful: “the preposed article seems to be a set-choice marker in the sense that it singles out those Ns that have the property of the attributed adjectival.” (Abraham & Leiss 2007:20)



phrase expresses. But it is not easy to define “the one and only” meaning of definiteness. And, if there is one, how come then, that some languages regularly use structurally definite noun phrases to capture e.g. generic reference, whereas other languages prefer indefinite noun phrases in the same cases?

The assumption of the DP-dP structure (in practice a split of the traditionally DP) is founded on the basic idea that syntax – despite the fact that there is not always a one-to-one relation between form and meaning – is used to derive meaning, e.g. to capture the meaning of “definiteness”.

The presentation starts with a discussion in section 4.1 of what the grammatically encoded meaning of “definiteness” might be, whereas section 4.2 focuses on what consequences the adopted view has for the abstract structure of noun phrases.<sup>6</sup> I have found it necessary not to be too short. The argumentation is, however, by no means exhaustive.

#### **4.1 The grammatically encoded meaning of “definiteness”**

The concept of definiteness is often explained semantically or pragmatically in terms like specificity, identifiability, uniqueness etc. A fairly good description is the following: A definite noun phrase is used when the speaker assumes that the hearer, within the given context (in the broadest sense of the word), can uniquely identify the intended referent(s) from the descriptive core of the noun phrase. Sometimes, also syntacticians take some concepts of this kind as formal grammatical ones. In e.g. Julien 2005, which for the time being is the most elaborate model of the Scandinavian noun phrase, definiteness is connected to both specificity and inclusiveness. (See also Lyons 1999.)

In my opinion, the grammatically encoded meaning of definiteness should be understood as more formal in nature. Such a standpoint is well motivated considering the nature of syntax, but has other advantages as well. A nice outcome of my proposal is e.g. that it facilitates the understanding of why definite markers, once they are established in the prototypical (specific) uses, tend to expand to generically referring phrases and even further. (This development is well attested cross-linguistically, see Greenberg 1978. Cf. also Dahl 2007 on Scandinavian varieties.)

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<sup>6</sup> The discussion on definiteness from the semantic point of view is partly based on earlier work on the topic; see e.g. Stroh-Wollin 2003.

If we take as our point of departure the idea that the function of determiners is to restrict the set of referents in relation to the largest possible set given by the descriptive core of the phrase, a formal way to capture the meaning of definiteness is provided by the meta-language of set theory. I call the mentioned “largest possible set given by the descriptive core” of a noun phrase the universal set (U). The universal set of a noun phrase like *the dogs* for example, is defined by the denotation of the noun *dog*. The actual reference of the same phrase may be different every time it is uttered, but the set of referents (R) is invariably a subset of the universal set.

Now, one may object that the set of referents is always a subset of the universal set, irrespective of whether the noun phrase is headed by an indefinite or a definite determiner. This means that we cannot capture the difference between e.g. indefinite and definite noun phrases solely by defining the relations between R and U. There are, however, good reasons to regard the restriction of the set of referents as a two-step process. If we consider the true meaning of *the dogs* not as a simple subset of the universal set of dogs, but as ‘the totality of a (contextually) restricted set of dogs’, we have in fact to do with two quantifications.

To handle this, we need an intermediate set between U and R; I call this set the set of selection (S). When counting with an S, the set of referents is not directly defined in relation to U, but selected from S, which in turn is defined in relation to U. Now, we have a tool to discriminate between definite and indefinite noun phrases. First, the set of selection (S) is a subset of U in the definite cases, but equal to U in the indefinite cases; second, the set of referents (R) is a subset of S in the indefinite cases but equal to S in the definite cases, cf. *some dogs* and *the dogs* in (6a–b).

- |     |  |                                   |
|-----|--|-----------------------------------|
| (6) | a. There are <i>some dogs</i> in the garden. | interpretation: $R \subset S = U$ |
|     | b. <i>The dogs</i> are in the garden.        | interpretation: $R = S \subset U$ |

The sign for “is a subset of” used in the examples in (6),  $\subset$ , is to be more precise the sign of “is a true subset of”. If S is a true subset of U, it means that it is certain that S has fewer members than U, that S cannot be equal to U. This is also in accordance with the prototypical interpretation of definite noun phrases.

However, definite noun phrases are sometimes used with generic reference, as *the Brazilians* in (7), which means that the formal meaning of definite noun phrases is less precise than is shown by the interpretation of



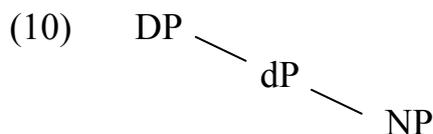
sentence in (9b). Nobody seems here to bother about the fact that most people have two legs and that it remains unclear which one is broken.

- (9) a. Hon har brutit *benet*.  
       she has broken leg-DEF.  
       b. She has broken *her leg*.

Then we may take it as a pragmatic, non-grammatical, question why the tendency to use definite phrases decreases considerably as the number of possible referents increases; *she went to see her brother* is fine, even when the brother is not uniquely identifiable to the hearer, but *she went to see her friend* is odd if the friend is not a very special friend or a friend mentioned beforehand, and thus uniquely identifiable.

## 4.2 Noun phrase structure – in Modern Scandinavian and earlier

I take the grammatically encoded meaning of definiteness as presented above to have syntactic consequences. To capture that definiteness is composed by two interdependent relations, the relation between U and S and the relation between S and R, we need two projections. The value of S has to be settled separately, before the value on R can be defined. To this end, I split the, nowadays generally assumed, DP into a (big) DP and a (small) dP. Since the finer organisation of the structure below dP is not at stake here, I let it be represented by a simple NP in (10).<sup>7</sup>



During the derivation of a definite noun phrase, some lexical element that can value S in relation to U is merged to the (little) dP, either to the head or to the specifier. Formally, we can take d to host an abstract feature,  $\sigma$ ,

<sup>7</sup> However, to avoid misunderstandings: I do not distinguish any projections like NumP, CardP or Q(uant)P. I assume inflection in number to take place in NP, i.e. below dP, and quantifiers to be first merged in dP or DP. It could also be noted, since number and quantifiers are sometimes associated with a common projection, NumP, that I do not regard inflection in number a question of quantification, but rather a question of conceptualization of the entity. A plural noun denotes a collective of countable individuals, whereas a singular noun denotes something uncountable, a mass entity or one single individual.

attracting a lexical counterpart to give it a value. I assume articles to be heads and other determiners, i.e. even demonstratives, to be specifiers in the normal case.<sup>8</sup> (Cf. Giusti 1997:107 ff.; van Gelderen 2007:283 ff.) Elements in dP restrict the set of selection in relation to the universal set, the latter being defined by the descriptive content of the constituents in the structure below dP. In case a definite article is merged to the d-head, the restriction is purely formal and S, formally  $\sigma$ , is just valued as a subset of U:  $S \subseteq U$ .

Within the higher (big) DP, the value of R is settled. In the unmarked case, a determiner from (little) dP is remerged. The determiner, carrying the  $\sigma$ -feature, represents S, which can equate with R, when the determiner is moved to the higher projection.

If the noun phrase is headed by more than one determiner, as *these my two books*, I take all determiners to be first merged, in multiple dPs below DP in the normal case, and I consider it sufficient that only the highest one moves to the DP.

Thus, I regard all determiners as (presumptive) d-elements; having more than one d-constituent in one and the same noun phrase should not be more problematic than having more than one non-finite verb in one and the same clause.<sup>9</sup> The tendency of a fixed relative order between demonstratives, possessives and quantifiers can be handled in some way or another, e.g. in terms of scope.

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<sup>8</sup> A postulate for the assumption is that articles are simple morphemes, possibly spelled out as different allomorphs, whereas e.g. demonstratives are complex units of stem + inflection morpheme (= phrase constituents). For the moment, I am not sure whether this necessarily has to be the case for every possible article or demonstrative.

<sup>9</sup> I actually presume that there might also be a structural parallel between clause structure and noun phrase structure here. The specification of clausal tense is, like the specification of the set of referents in noun phrases, a process in, at least, two steps. This, now classical, view on tense was first explored in a book by Hans Reichenbach (1947:287 ff.). By distinguishing a time of Reference (R), in addition to the time of Event (E) and the time of Speech (S), Reichenbach manages to describe different tenses in a logical way. The tense of a clause does not simply express the temporal relation between the time of the event and the moment of speech, but the combination of 1) the temporal relation between the time of the event and the time of reference (i.e. E and R) and 2) the temporal relation between the time of reference and the time of speech (i.e. R and S). (See also Vikner 1985 and Christensen 1997.)

Now, it is possible to state that finite verbs are specified for both kinds of relations, whereas non-finite verbs carry specification only for the relation between the time of the event and a time of reference. Let's then split TP into a (big) TP and a (small) tP and take the latter to regulate relations between E and R, and the former to regulate the relation between R and S, and we have the parallel mentioned above. Only one verb in the clause, the finite one, can move to TP; additional verbs, the non-finite ones, remain in tPs below TP, and the number of tPs is equal to the number of verbs in the clause.

Besides determiners, also adjectives may be merged to spec-dP, always to the lowest one, in case of multiple dPs. Theoretically, adjectives may be merged either to spec-NP or to spec-dP, and I believe that different languages follow different strategies in this respect. As concerns the Scandinavian languages, I assume weak adjectives to be dP-merged, whereas strong adjectives presumably are NP-merged.

Furthermore, it is not always possible to make a clear-cut distinction between adjectives and determiners. Possessives, for instance, often function as determiners, but they can also be more adjective-like and be merged below dP. I take the latter to be the case in e.g. Norwegian noun phrases with a post-posed possessive, like *den lille bilen min* ‘my little car’ (lit. the little car my).

Now, there are some complications when we come to definite noun phrases in the Scandinavian languages. Noun phrases consisting of a single noun in the definite form, like Sw./No./Dan. *huset*, Isl. *húsið* ‘the house’, are easy, though. The definite morpheme (e.g. *-et/-ið*) is first merged to the d-head and, being a suffix, attracts the nearest head down the tree (e.g. *hus/hús* in N). Then the complex head moves to D.

However, as noted above, the standard varieties of Scandinavian represent three different solutions when the noun in a definite noun phrase is preceded by an adjective, see (2a–c), here repeated as (11a–c). As mentioned, Norwegian and Faroese follow the Swedish pattern.

- (11) a. den gamle mannen                    ‘the old man’    (Swedish)  
           DEF. old man-DEF.  
       b. den gamle mand                    ‘the old man’    (Danish)  
           DEF. old man  
       c. gamli maðurinn                    ‘the old man’    (Icelandic)  
           old man-DEF.

Swedish, Norwegian and Faroese have so called double definiteness, i.e. combined use of the definite form of the noun and the pre-posed definite article. Here, I take only the suffix of the definite morphemes to be merged in dP; it is merged to the d-head from where it attracts (and amalgamates with) the noun. The free article on the other hand, has in these languages an unvalued  $\sigma$ -feature, and is merged directly to D, from where it probes for a specification on  $\sigma$ . This is in fact very much in line with the expletive interpretation of the free article in double definiteness-languages in Delsing 1993.

In Danish, the pre-posed article cannot be used in combination with the definite suffix on the noun. I take this to testify to a formal difference between the free articles in Swedish, Norwegian and Faroese on the one hand and in Danish on the other. The Danish article is a true determiner with a valued  $\sigma$ -feature, which rules out definiteness marking on the noun. The free article is, regularly first merged in dP and moves to DP.<sup>10</sup>

Icelandic lacks the pre-posed definite article of the other Scandinavian languages. This means that an adjective may be the first constituent of a definite noun phrase as in (11c). I believe that the DP in this case is lexicalized by movement of the entire dP (representing S) to spec-DP. A similar phrase-movement is also proposed by Julien (2005:54 ff.), but for different reasons. Julien also suggests phrase-movement to spec-DP in definite noun phrases without pre-posed attributes (p. 27 f.), where I prefer head-movement, cf. above.

The analysis of the noun phrase so far follows in principle the now widely accepted hypothesis that noun phrases in languages with articles are DPs. But what about languages without articles? In my opinion, the problem is above all a question of the labelling of the highest functional projection of the noun phrase. It is obvious that the language in the oldest proofs of Scandinavian lacks articles, but the well attested noun-first word order, with nouns preceding e.g. demonstratives and possessives, actually talks in favour of a DP-structure, the only problem being the D-label.

The noun-first word order is demonstrated by the typical pattern of memorial runic inscriptions in (12). The internal word orders of the noun phrases *stæin þenna* and *faður sin goðan* are the normal ones before the Middle Ages. The word order then gradually shifts towards the modern patterns: *denna sten* ‘this stone’ and *sin gode fader* ‘his good father’.

- (12) NN ræisti *stæin þenna* eftir NN, *faður sin goðan*.  
 NN raised stone this after NN father his good.

The noun phrases in (12) can easily be inserted in a structure like the one in (10), provided that the noun can move to D. The spec-dP is the natural locus of the demonstrative and a possible locus of the possessive (cf. above).

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<sup>10</sup> A related difference between Swedish, Norwegian and Faroese on the one hand and Danish on the other, is that the former languages use *det*, i.e. the neuter form of *den*, as expletive non-referential subject in existential clauses, whereas Danish cannot have *det* in the same kind of constructions, but uses *der*, cf. the English existential *there*.

But why should bare nouns be moved to D? An answer to this question follows if we regard the DP just as the left edge of a phase. Then we have a reason to collect all information in the D-projection that is relevant for the use of the noun phrase in a further derivation, e.g. in a clause. And what information is that?

A specification of the set of referents is obviously one important piece of information. Obviously, because articles and other determiners, as means for this specification, regularly take the first position in noun phrases. But the importance is also evident when considering the impact of articles on the Aktionsarten of clauses (in languages with no or limited morphological aspect marking), cf. e.g. the difference between *peel the potatoes* and *peel potatoes*.

But also case is of course relevant information in the further derivation, and this fact might have consequences for the constituent order of noun phrases in languages with morphological case marking but no articles, like early Old Scandinavian. Even if inflection for case takes place below the DP-dP domain, which I believe it does, a specified value for case has nevertheless to be transmitted to the phase edge. Then, in the absence of some determiner, that carries itself a value for case or can probe for it, some other constituent has to lexicalize the DP.

Movement of a case marked noun is of course one way to transmit the relevant value to the left edge of the noun phrase, when the language lacks articles. Movement of some attribute, either case-marked or capable to probe for case, would be another. However, it should be noted that the first strategy is by far the most common one in e.g. the runic inscriptions of the Viking Age.

An overall conclusion of the discussion so far is that there is really no reason to assume different structures of the noun phrases in Old and Modern Scandinavian (or at all?). We may see considerable changes with respect to flexion and word order, but, contrary to Faarlund (2007) and Lohndal (2007), I think the underlying abstract structure remains the same.

It could be especially noted that Faarlund (2007:32 f.) assumes that DP-recursion was a possibility in Old Norse, but that it is not any more. DP-recursion is, according to Faarlund, a way to capture examples like *þau in stóru skip* ‘those the large ships’ with double determiners. From the assumption that demonstratives are heads (Faarlund 2007:33), it follows that one D-head is needed for the demonstrative (*þau*) and another for the article (*in*).

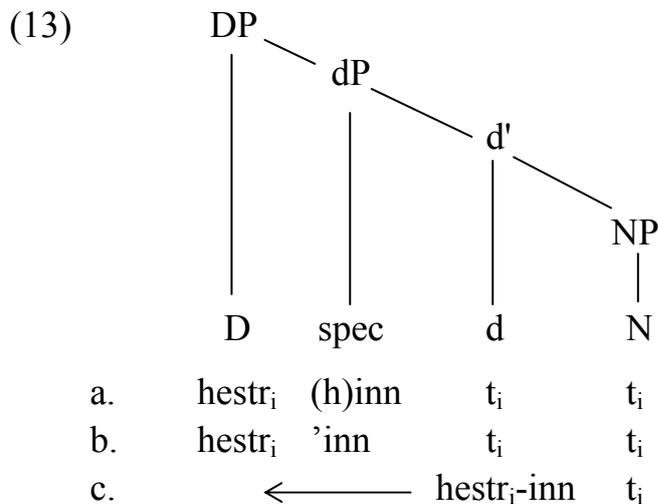
However, it is still fully possible to use double determiners in corresponding noun phrases, as in (Swedish)  *dessa de stora skeppen* ‘these the large ships’. So, if demonstratives are heads, the conclusion should be that also Modern Scandinavian must allow DP-recursion.

With my assumption that demonstratives are specifiers (cf. above), the examples do not prove anything as concerns the number of D-projections; the demonstrative could precede the article within one and the same D-projection, which I actually mean is the case in at least the modern variant. The splitting of the DP into two projections is motivated for other reasons.

## 5. The grammaticalization of *-inn* and *(h)inn* from a structural point of view

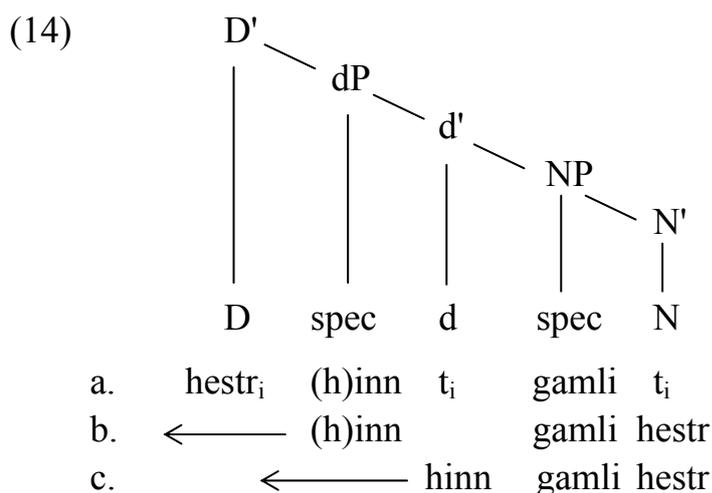
With the structure of the noun phrase as proposed above, the grammaticalization process of the definite markers in Old Scandinavian, the suffix *-inn* and the free article *(h)inn*, comes out quite straightforward. We can date the point of departure in both cases to a stage where nouns regularly are fronted to D and precede demonstratives in spec-dP.

The development of the definite suffix is illustrated in (13a–c), with *hestr* *(h)inn* ‘this horse’ becoming *hestrinn* ‘the horse’. (13a) gives the point of departure: *hestr (h)inn*. (13b) shows a stage that is structurally rather similar to the initial state, the only difference being that the demonstrative, or maybe already article, tends to cliticize to the noun: *hestr’inn*. At some point this cliticizing is reinterpreted as in (13c); the article has got head status and is



taken for a suffix. As such it attracts the noun from N. The complex head may then move on to D.

The development of the free, pre-adjectival, definite article is illustrated in (14a–c), with *hestr (h)inn gamli* ‘this/the old horse’ becoming *(h)inn gamli hestr* ‘the old horse’. The initial stage, *hestr (h)inn gamli*, illustrated in (14a), has, besides the noun in D and the demonstrative in spec-dP, the adjective *gamli* in spec-NP. (Maybe we should rather merge the weakly inflected adjective to a lower dP, in accordance with what I take to be the locus of weak adjectives in modern Scandinavian. This detail is, however, not at stake here.) When the noun is no longer (regularly) fronted to D, there are two possibilities; *(h)inn* may remain in its old function (as long as articles are not obligatory) and maintain its status of specifier as in (14b), or it could be reinterpreted as a regular article and become a head as in (14c). In both cases it can also be moved to lexicalize the DP.



The grammaticalization is in neither of the cases demonstrated above a “grammaticalization downwards” in the sense that the demonstrative/article becomes associated with a lower projection than before. The only difference is the reinterpretation from specifier to head. And if we do not assume different noun phrase structures for Old and Modern Scandinavian, we can see that the definite suffix has remained the same from the stage of the language history which is focused in Faarlund 2007 and Lohndal 2007.

The pre-adjectival article *(h)inn* has disappeared. But it was, seemingly rather early, replaced by *þen* in Mainland Scandinavian. As I will return to in the next section, the demonstrative *þen* (< *sá*) actually went through the same grammaticalization process as did *(h)inn*. This means that the analysis of

(14c) corresponds well to what we can presume for *den gamle hest* ‘the old horse’ in modern Danish. In the double definiteness-languages, though, *þen* (> *den*) has lost its independent power to mark definiteness.

## 6. (H)inn and þen in competition

When focusing on the language in Iceland and Norway in the 13<sup>th</sup> and 14<sup>th</sup> centuries, it may seem natural to regard, like e.g. Faarlund (2007), (h)inn as the normal pre-posed definite article. But as Faarlund also notes, (h)inn alternates with *þen* already in very early Norwegian manuscripts, e.g. *þeim helga manni* DAT. ‘the holy man’ (Faarlund’s example 19a), and in the long run, it is *þen* that survives as the only pre-posed article.

The explanation proposed by Faarlund (2007:36) is that the article *þen* derives from the demonstrative *þen* in constructions like *þau in stóru skip* ‘those the large ships’, with the demonstrative (here *þau*, agreeing with the neuter plural head noun) preceding the article (h)inn. This proposal is linked to the assumption that DP recursion became obsolete. “As a result (or a cause?!), the demonstrative took over the role of *inn*”, as the author puts it.

However, a closer look at the development of the demonstrative *sá/þen* in the Scandinavian mainland, from the beginning of the Viking Age and ahead, may lead to other conclusions. To start with, it is obvious that *sá* loses much of its deictic power very early; it is very seldom used in formulations like “raised this stone” or “carved these runes”, which are so common in the runic inscriptions. When we do find it in this function, it is often in very early inscriptions, as the one on the Rök stone, see (15). In later inscriptions, we normally find the demonstrative *þessi* (< *sási*, a reinforced *sá*) when an interpretation ‘this/these’ is necessary.

- (15) Aft Væmoð standa runaR þaR. (Ög 136)  
 after Væmoð stand runes these  
 ‘In the memory of Væmoð stand these runes.’

But this does not mean that *sá* is not used at all. It is (of course) used as anaphoric pronoun in the forms that correspond to modern Swedish neuter singular *det* ‘it’ (< *þet*) and plural *de* ‘they’, but occasionally also in the masculine singular *sá* and the feminine singular *sú*, where we now have only *han* ‘he’ and *hon* ‘she’. A less evident, but very common, use is as “supplementary” antecedent to a relative clause, see (16).

- (16) Ek vilda kjósa mey þá er fegrst er í Þursheiminum. (N 192)  
 I wanted choose maid DEM. REL. fairest is in Þursheim.  
 I wanted to choose the maid who is the fairest in Þursheim.

Examples like the one in (16) should not be taken as evidence for a development of *sá* towards a use as definite article in the usual sense.<sup>11</sup> Its connection to a following relative clause, or sometimes to a *that*-clause, is very clear, e.g. no less than 49 of a total of 79 instances of *sá* in the Norwegian runic inscriptions appear in such contexts. (The rest is distributed on three normal demonstrative uses and 27 anaphoric pronouns.)

*Sá* before relative clauses and *that*-clauses may be associated with a “mediating” function, comparable to that of *(h)inn* before weak adjectives, the difference being that, in this case, the pronoun links an attributive clause (not an adjective) to the noun. It also happens, for that matter, that even *(h)inn* is used in this function too.

Now, *sá* also appears, already in Viking Age runic inscriptions, in the mediating function above associated with *(h)inn*, i.e. before weak adjectives. A very interesting case is the inscription in (17), where the pre-adjectival function is fulfilled by both *sá* (in the accusative form *þan*) and *(h)inn* in one and the same noun phrase.

- (17) [...] resþi sten [...] at Opinkor [...] þan dyra ok hin drottinfasta.  
 ... raised stone ... to Opinkor ... DEM. valued and DEM. lord-loyal  
 ‘... raised the stone ... in memory of Opinkor ..., the valued and loyal  
 to his lord.’ (DR 81)

The most plausible conclusion to draw from these early instances of pre-adjectival *sá/þan* is that the original demonstrative went through the same kind of grammaticalization process as did the pre-adjectival *(h)inn*, cf. (14) above. This means that Old Scandinavian presumably had two competing free definite articles for some time; as we know, *þan* was the victorious one.

Initially, though, there was a regional variation; *(h)inn* was very dominating in Iceland and Norway, but not in other parts of Scandinavia. There are e.g. a dozen *(h)inn*, but no pre-adjectival *sá* in the Norwegian runic inscriptions, whereas the Danish inscriptions show a handful of each. And there is a

<sup>11</sup> Besides, the rune carver in this case already has access to the definite suffix; he writes *Þursheiminum*, translated to *Þursheim* in (16), but *-heiminum* is actually the definite form of *heim* ‘home’ in the dative: *heiminum*. The literal meaning of *Þursheiminum* is ‘the home of giants’. This is a very early instance of the definite form, from about 1100.

clear predominance for *þen* in mediaeval manuscripts from Denmark and Sweden. (Delbrück 1916:26 ff.)

My belief is that the already grammaticalized article *þen* was “imported” to Norway from south and/or east. I find this explanation more likely than a late reinterpretation of a demonstrative *þen* in contexts such as *þau in stóru skip* ‘those the large ships’. If such expressions are rare, we should not exaggerate their importance for the change of article. If they are more common, we should ask ourselves why; at least modern Swedes make a very limited use of expressions like *dessa de stora skeppen*. Maybe the demonstratives in these instances are no demonstratives at all, but definite articles.

As mentioned above, *sá/þen* had lost most of its original (N.B. proximal) deictic power already before the Middle Ages. My guess is that it was no longer used primarily as a demonstrative in Old Norse, but in its new functions, cf. above.<sup>12</sup> This does not mean that an interpretation of the kind ‘those the large ships’ is not possible. But if the combination of *sá/þen* + *(h)inn* appears with a remarkable frequency in Old Norse, the interpretation may be questioned. It could be that *(h)inn* had not really gained the status of an independent definite article, that it remained a pure pre-adjectival “mediator”. In that case, a definite article *sá/þen* could find its use in the same phrase.

If *sá/þen* was ahead of *(h)inn* in the grammaticalization process, this might also explain why it won the competition, even on Norwegian ground. Perhaps *(h)inn* chiefly remained in its early developed mediating function, until it was phased out; maybe it actually was the pre-posed mediator *(h)inn*, not the article, that disappeared. Exactly why this happened is another question. But I am rather convinced it has nothing to do with a loss of DP recursion; *(h)inn* disappeared also in Icelandic, without *sá* competing for the, supposedly, only D-position.

## 7. Concluding remarks

In the preceding sections, I have discussed the relation between the definite suffix *-inn* and the definite article *(h)inn* in Old Scandinavian, the way they developed by means of grammaticalization, and, finally, the question of why

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<sup>12</sup> In modern Scandinavian, *den* can still be used deictically, but only as a distal demonstrative and when the right contextual support is at hand; *den där* (‘that (one)’, lit. that there) is otherwise the more expressive alternative. It can occasionally also work as an anaphoric demonstrative, but in most such cases the proximal (and stronger) *denna* (‘this’) is preferred.

mainland Scandinavian today uses *den*, not *(h)inn* as the definite article. All these issues have been treated by others before me in recent papers, but I have given new, and hopefully better, answers to the questions addressed.

There are different reasons why it is possible to come to so disparate conclusions. One is of course that the assumptions one makes for the abstract structure of noun phrases highly affect the result. But I would also like to emphasize the importance of the empirical approach. Focusing on a very limited period of time and not taking into account closely related varieties near by may be hazardous. In my research on the noun phrase of Old Scandinavian, I try to keep the perspective wide, in time as well as in space, and I believe felicitously.

It should also be clear from the above discussion that there are questions concerning the noun phrase in Old Scandinavian that have not yet had a satisfactory answer; the role of the weak adjectival declension is one. I hope to come up with new suggestions on this and other issues later on.

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## In search of the force of dependent V2:

### A note on Swedish\*

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#### Abstract

This paper is a brief extension of recent work on embedded verb second and is a contribution to research on the relation between V2 and illocutionary force. It presents a problem for the hypothesis that there is an illocutionary motivation for the verb second word order in Mainland Scandinavian declaratives. The relevant force, to the extent that we can identify it, appears to be available also in the absence of V2 word order.

## 1 Introduction

The background of this paper is a wish to understand the alleged semantic difference between the two members of minimal pairs like (1) in view of hypothesis (2).

- (1) a. Olle sa att han inte hade läst boken. (non-V2)  
*Olle say.Past that he not had read.Sup book.Def*
- b. Olle sa att han hade inte läst boken (V2)  
*Olle say.Past that he had not read.Sup book.Def*  
'Olle said that he had not read the book.'

- (2) *Illocution hypothesis of V2 (declaratives):*

V2 declaratives have illocutionary force, V-in-situ declaratives don't.

Example (1a) shows the more common non-V2 word order in Mainland Scandinavian embedded clauses, (1b) embedded verb second. The question is whether it is possible to identify an illocutionary force in (1b) that is

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absent in (1a), in which case the V2 word order (V-in-C) would be a potential force marker. A related question is whether this force is never present in V-in-situ declaratives, in which case the force perceived would actually be dependent on V2 word order, in support of (2).

Recent research on embedded verb second in Scandinavian declarative clauses divide in two camps regarding (2) with the more optimistic Julien (2007) on the one side and the more sceptical Wiklund et al. (2009) on the other. The debate bears some resemblance to that represented in *Theoretical Linguistics* 32-3 (2006) between Truckenbrodt (2006) and e.g. Reis (2006) on the semantic motivation of verb movement to C in German. Other works on the relation between illocutionary force and V2 include Andersson (1975), den Besten (1977/1983), Wechsler (1991), Heycock (2006) and Julien (2007).

V2 is one of many phenomena that call for scrutiny if we are to choose between models where illocutionary force is not directly encoded in syntax (even though it can be traced to syntactic properties), as in Zanuttini and Portner (2003), and models where syntax takes over a great deal of the burden of pragmatics, as in Speas and Tenny (2003). In the latter, sentence mood and point of view related phenomena are taken to be deducible from a layered speech act phrase and a layered sentence phrase, respectively. The issues raised here do not put into question the presence of a Force head as such, the primary role of which is to distinguish clause types (Rizzi 1997). This head may be layered and perhaps does also encode illocutionary force. However while sympathetic to the cartographic theory in general, I think there is room for some scepticism until it has been shown that illocutionary force does not follow from other properties.<sup>1</sup> This note is a contribution to research on the relation between V2 and illocutionary force. I will end up not having much to say about whether or not there is

<sup>1</sup>For cartographic approaches, see Rizzi (1997) on the C-domain, Cinque (1999) on the I-domain, Ramchand (2008) on the V-domain of the clause, and works under the heading of *Nanosyntax* that take the “atoms” of syntax to be smaller than words or morphemes (to which the work by Ramchand 2008 also belongs).

a force in (1b). However, to the extent that we can identify such a force, it also appears to be available in V-in-situ declaratives. This weakens the relation between V2 and illocutionary force even though there is little doubt about there being a relation (at least in Mainland Scandinavian), if by nothing else, by virtue of both being root phenomena.

## 2 Embedded V2 is limited to asserted clauses

The illocutionary act normally associated with declaratives is that of *asserting*, roughly the act of uttering a sentence with the intention to make the addressee accept the content of it and take it as part of the common ground. Given that the verb second word order in Swedish and other languages is excluded under the factive predicate *ångra* ( $\approx$ ‘regret’), see (3a), where the content of the clause is presupposed (already part of the common ground), we seem to have support in favor of there being a relation between the verb second word order and assertion or the corresponding assertoric force. We can at least conclude that a presupposed proposition cannot be expressed by using the verb second word order.

- (3) a. \*Olle ångrade att han hade inte läst boken.  
*Olle regret.Past that he had not read.Sup book.Def*
- b. Olle ångrade att han inte hade läst boken  
*Håkan regret.Past that he not had read.Sup book.Def*  
 ‘Olle regretted that he had not read the book.’

Looking at semi-factives like *upptäcka* ‘discover’, we see two things. First, factivity is irrelevant to V2 but whether the content of the embedded clause is presupposed by both the speaker and the hearer or only by the speaker appears to be relevant for the possibility of verb second (see Wiklund et al. 2009 for details).

- (4) Olle upptäckte inte att Lena hade redan gått.  
*Olle discover.Past not that Lena had already go.Sup*  
 ‘Olle did not discover that Lena had already left.’

In (4), the content of the embedded proposition has to be presupposed by the speaker but need not be so by the hearer, in which case the illocution of the clause potentially qualifies as an assertion; the sentence may be uttered with the intention of informing the addressee about the fact that Lena had already left. To the extent that we want to accept calling something that is presupposed *asserted* in this context, which is a matter of terminology, we can at least conclude that the less presupposed the content of the clause is, the more compatible it is with verb second. (4) contrasts with (3b) in precisely this way. In (3b), the content of the embedded clause has to be part of the common ground (presupposed by both speaker and hearer).

A third discovery is the compatibility between verb second and matrix negation in Scandinavian under semi-factive verbs, as in (4).<sup>2</sup> This is in fact also possible with *say* as long as negation is not an illocutionary negation (in the sense of Searle and Vanderveken 1985). The negation of a non-assertive verb like *doubt* shows the same (marginal) compatibility, (5a), here despite the fact that this verb is otherwise not compatible with the verb second word order, cf. (5b).

- (5) a. ?Jag tvivlar inte på att den boken köper du.  
*I doubt.Pres not on that DET book.Def buy.Pres you*  
 b. \*Jag tvivlar på att den boken köper du.  
*I doubt.Pres on that DET book.Def buy.Pres you*

All of these facts show us that there is a relation between verb second word order in declaratives and assertion in the sense that V2 word order is ruled out in cases where the speaker is not undertaking some commitment to the proposition expressed, as in (5b), and in cases where there is no

<sup>2</sup>Another verb with the same properties, which is factive when embedding a finite clause (but does not belong to the semi-factives) is *glömma* ‘forget’.

wish to update the common ground (to inform the hearer of something), as in cases where the embedded proposition is already part of the common ground, (3a).

### 3 V-in-situ declaratives

One immediate problem, however, is that the non-V2 word order is the default word order of Swedish embedded clauses and it is not clear in what sense the non-V2 word order under *say*, (1a), and *discover* on the relevant use, (6), are not also assertions (again, to the extent that we wish to label informative presuppositions assertions); at least (6) yields the interpretation of a commitment to the embedded proposition on the part of the speaker and on the parenthetical use we can also infer a wish that the embedded proposition is added to the common ground (also becomes known to the addressee).

- (6) Olle upptäckte att Lena inte hade gått.  
*Olle discover.Past that Lena not had go.Sup*  
 ‘Olle did not discover that Lena had not left.’

(4) and (6) both seem to have parenthetical uses, just like (1a) and (1b). Note that there seems to be no way to distinguish the two word orders in terms of notions like *main assertion* (Hooper and Thompson 1973). In Wiklund et al. (2009), a detailed investigation of Icelandic, Norwegian, and Swedish is performed, using the diagnostics presented in Simons (2007) in search for differences between the two word orders regarding the status of the clause in terms of *main assertion* (*Main Point of Utterance* – MPU in the terminology of Simons 2007). Whenever the content of an embedded clause alone can constitute the answer to a question, the embedded clause has the possibility of being the MPU. It is shown that neither is the V2 word order necessary for a clause to represent the main assertion, nor is this word order unambiguously the main assertion of the sentence. As an

illustration, the example sentences in (8) and (9) are all possible answers to the question in (7). In (8), the embedded clause expresses the main assertion (he did not come to the party because he did not have time), in (9) the whole sentence represents the main assertion (he did not come to the party because someone said something that offended him). Under both uses, the non-V2 word order (a-sentences) and the V2 word order (b-sentences) are both possible.

- (7) Varför kom han inte på festen?  
*why come.Past he not to party*  
 ‘Why didn’t he come to the party.’
- (8) a. Han påstod att han inte hade tid.  
*he claim.Past that he not had time*
- b. Han påstod att han hade inte tid.  
*he claim.Past that he had not time*  
 ‘He claimed that he did not have time.’
- (9) a. Någon sa att dom inte ville ha en idiot där.  
*someone say.Past that they not want.Past have an idiot there*
- b. Någon sa att dom ville inte ha en idiot där.  
*someone say.Past that they want.Past not an idiot there*  
 ‘Someone said that they didn’t want an idiot there.’

MPU-readings, just like the V2 word order, are not possible when the content is already part of the common ground, nor under non-assertive predicates (e.g. *doubt*). Under assertive predicates and semi-factives, however, MPU-readings are possible, just like the V2 word order, see Wiklund et al. (2009) for details. Importantly though, the non-V2 word order is also possible.

#### 4 Identifying force

Suppose that the relevant clauses with non-V2 word order nevertheless lack the *force* of an assertion. The question is how to identify that force. Assertive particles, speech act adverbials, and swear words would seem to constitute candidate indicators. However, these elements appear perfectly fine also with the non-V2 word order, see (10).<sup>3</sup> According to Julien (2008), the V2 word order is preferred with discourse-oriented swear words. Many speakers (including myself), however, do not agree with this intuition.

- (10) a. Hon upptäckte att han **ju** inte hade rest.  
*she discover.Past that he you-know not had go.Sup*
- b. Hon sa att han **fasen** inte hade gjort ett skit.  
*she say.Past that he SwearWrd not had do.Sup a shit*
- c. Hon sa att han **ärligt talat** inte hade betalat.  
*she say.Past that he honestly speaking not had pay.Sup*
- d. Vi upptäckte att de **nämligen/minsann** inte hade kommit.  
*we discover.Past that they you-see/indeed not had come.Sup*

Although this fact does not preclude a difference between V2 and non-V2 word order with respect to illocutionary force in the absence of the above elements, verb movement does not appear to be obligatory in the presence of the purported illocutionary force features. Note also that the above elements are impossible in precisely those environments where MPU readings are unavailable and where V2 word order is impossible in Swedish:

- (11) a. Hon ångrade att hon (\*ju) inte hade rest.  
*she regret.Past that he you-know not had go.Sup*

<sup>3</sup>The same seems to be true for Norwegian (Kristine Bentzen, p.c.).

- b. Hon tvivlade på att han (\*fasen) inte hade gjort ett  
*she doubt.Past on that he SwearWrd not had do.Sup a*  
 skit.  
*shit*

If illocutionary force is possible in the absence of V2 word order, this weakens the connection between V2 and illocution considerably. The important observation seems to be that the three phenomena V2, Main-Point-of-Utterance readings, and illocutionary force (qua identifiable by the above mentioned elements) may occur independently from one another. Unless we have evidence to the contrary, illocutionary force may be derived from whatever is responsible for the root status of a clause, which in dependent clauses may be e.g. the presence of a certain layer of the C-domain in combination with other configurational properties. E.g. V2-clauses appear to contrast with clauses displaying non-V2 word order in not being topicalizable, (12a) vs. (12b). This is also true of the embedded clauses in (10) that lack V2 word order but involve discourse elements, cf. (12c).<sup>4</sup>

- (12) a. Att hon inte hade gått hem upptäckte han först  
*that she not had go.Sup home discover.Past he not-until*  
 igår.  
*yesterday*
- b. \*Att hon hade inte gått hem upptäckte han först  
*that she had not go.Sup home discover.Past he not-until*  
 igår.  
*yesterday*

<sup>4</sup>Another property that seems to show the same distributional split is the obligatoriness of (or preference to insert) the complementizer in V2-clauses and clauses involving the above mentioned discourse elements (I am indebted to Christer Platzack for reminding me of this fact):

- (i) a. Hon sa (att) hon inte hade läst den.  
*she say.Past that she had read.Sup it*
- b. Hon sa ??(att) hon hade inte läst den.  
*she say.Past that she had not read.Sup it*
- c. Hon sa ??(att) hon nämligen inte hade läst den.  
*she say.Past that she you.see not had read.Sup it*

- c. \*Att hon nämligen hade gått hem upptäckte han först  
*that she you-see had go.Sup home discover.Past he not-until*  
 igår.  
*yesterday*

As a final note, V-in-situ is in fact possible also in root clauses; in exclamatives of the kind shown in (13a). In these, a force is arguably present (exclamative) but V2 word order is impossible, cf. (13b).

- (13) a. Att han inte var där!  
*that he not was there*
- b. \*Att han var inte där!  
*that he was not there*

Although this fact says nothing about the relation between V2 and the specific illocutionary force of assertion (see Truckenbrodt 2006 on the difference between exclamatives and epistemic speech acts), it is another case where V-in-situ appears to come with illocutionary force. Examples of what appears to be the reverse situation – V2 without illocutionary force – can be found in Icelandic A (see Jónsson 1996 and also Gärtner 2003), where V2 word order is possible also under non-assertive and factive predicates.<sup>5</sup> Thus, verb second does not always yield force and force does not appear to require verb second, not even the forces associated with epistemic speech acts.

## 5 Conclusion

I have discussed problems for the hypothesis that there is an illocutionary motivation for the verb second word order. The relevant force, to the extent that we can identify it, appears to be available also in the absence of V2 word order in Swedish.

<sup>5</sup>See Wiklund et al. 2007 and Wiklund et al. 2009 for arguments in favor of taking all Icelandic verb movement to be to C.

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# Restructuring and OV order

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## **Abstract**

Older Icelandic had several OV word order patterns. This article focuses on the derivation of word order patterns with ‘split’ orders. The principal aim is to argue for how the parameter loss (loss of OV) must be seen as a loss of ‘weak’ (defective) T, leading to the loss of VP/PredP moving to SpecCP. This accounts for the diachronic aspect in terms of one parameter change, resulting in the loss of all the various OV word order patterns at the same time in the history of Icelandic.

## **1 Introduction**

While Modern Icelandic exhibits a virtually uniform VO order, Older Icelandic (OI) had both VO and OV order, as well as several ‘mixed’ or ‘split’ word order patterns. Split patterns here mean word order patterns where a part of the clause is OV while another part is VO, for instance patterns where the verb may occur interspersed between two DPs. Focusing on

these split orders, we will introduce a new way to account for the loss of the attested OV word order patterns in the history of Icelandic, where we will localize the change to a category T. We argue that the loss of OV orders, in the form of loss of VP-extraction, is due to a change of the T-node attracting the VP. This change is identified with a change of parameters: Modern Icelandic only has incoherent complements, while Old Icelandic had the option of having coherent complements as well.

Finally, we will draw diachronic correlations between Old Icelandic and Old French, showing that the historical development of Icelandic may have more in common with that of French than with that of other Germanic languages.

Old Icelandic mainly differs from the modern language in that the older stage has all the (surface) patterns in (1), while the modern language only allows (1a).

- (1)
- a. V<sub>fin</sub> - V<sub>aux</sub> - V<sub>main</sub> - DP
  - b. V<sub>fin</sub> - DP - V<sub>aux</sub> - V<sub>main</sub>
  - c. V<sub>fin</sub> - V<sub>aux</sub> - DP - V<sub>main</sub>
  - d. V<sub>fin</sub> - (DP) - V<sub>main</sub> - V<sub>aux</sub> - (DP)

The three word order patterns in (1b-d) are typical examples of restructuring in the Modern West Germanic languages; (1b) is the typical pattern of restructuring (long DP- movement) in Dutch, (1c) is a case of verb-projection raising typical for West Flemish, Swiss German, and South Tyrolean, and (1d) is the standard pattern of verb-raising in Standard German. Hence, we will argue that (overt) restructuring has disappeared in the his-

tory of Icelandic. Furthermore, these word order patterns all disappeared simultaneously in the history of Icelandic (see Hróarsdóttir 2000).

Hróarsdóttir (2000) studied the frequency of OV and VO patterns in various texts dating from the fourteenth to the nineteenth centuries, in addition to personal letters dating from throughout the nineteenth century. We have used this database for the current study. A list of the sixteen texts used for this study is given in Appendix A, together with bibliographical information. These texts are literary works, all in reliable editions based directly on the original composition. Approximately 25-30 pages were extracted from each text, where possible, until a corpus of approximately 5,500 sentences each containing at least one non-finite verb had been reached, exhibiting either OV or VO word order. Nineteenth century letters by 75 individuals were also studied. Bibliographical information for the nineteenth century letters are given in Appendix B, together with an explanation for the abbreviations in parentheses in the examples.

Hinterhölzl (1997, 2006) argues in favor of a uniform VO-base hypothesis, in a line with Kayne (1994) and Hróarsdóttir (2000), for the West Germanic OV languages. He claims that the infinitival marker occupies a functional head to the left of the VP; hence, it can be shown that not only arguments but also VP-internal predicates, verb particles and PPs have to move out of the VP to be licensed in specific positions in the functional domain. He further assumes that the mechanism by which some elements can be stranded by such movement follows from a specific implementation of

the minimalist operation of feature checking which allows for partial deletion of copies. Moreover, he claims that the distribution of (event-related) adverbs in OV languages (where they occur outside the VP) and VO languages (where they occur within the VP) gives support to the VO-based hypothesis. Assuming these adverbs to be base-generated in the VP, they undergo licensing movement into the functional domain (the middle field) similar to arguments of the verb. However, generalizing Kayne's (1998) analysis, Hinterhölzl proposes that English VO word order in general is the result of further verb- or VP-movement to the left; arguments and verb particles also move out of the VP to licensing positions (in the functional domain) in (a VO language like) English, and English verbs or VPs move to T. Hence, it follows that the difference between OV and VO languages with regard to the relative position of the verb and its complements cannot be reduced to the question of whether arguments move to check their case *overtly* or *covertly*.

## 2 Split word order patterns

### 2.1 Word order patterns

In OI, several 'split' or mixed word order patterns existed, as illustrated below:

- (2) a. [V<sub>fin</sub> - DO - V<sub>main</sub> - IO]
- b. [V<sub>fin</sub> - IO - V<sub>main</sub> - DO]
- c. [V<sub>fin</sub> - DP - V<sub>main</sub> - PP]

- d. [V<sub>fin</sub> - PP - V<sub>main</sub> - DP]
- (3) a. [V<sub>fin</sub> - DO - V<sub>aux</sub> - V<sub>main</sub> - IO]  
 b. [V<sub>fin</sub> - DP - V<sub>aux</sub> - V<sub>main</sub> - PP]  
 c. [V<sub>fin</sub> - PP - V<sub>aux</sub> - V<sub>main</sub> - DP]
- (4) a. [V<sub>fin</sub> - V<sub>aux</sub> - DP - V<sub>main</sub> - PP]  
 b. [V<sub>fin</sub> - V<sub>aux</sub> - PP - V<sub>main</sub> - PP]
- (5) a. [V<sub>fin</sub> - DO - V<sub>aux</sub> - IO - V<sub>main</sub>]  
 b. [V<sub>fin</sub> - DP - V<sub>aux</sub> - PP - V<sub>main</sub>]
- (6) [V<sub>fin</sub> - V<sub>aux</sub> - IO - DO - V<sub>main</sub>]

Mixed word order patterns are patterns containing both pre- and postverbal complements; hence, a part of the clause is OV while another part is VO. The simple mixed pattern [object - V<sub>main</sub> - object] occurred with a higher frequency than any of the other word order patterns containing two objects in OI. The sentences below show some examples of this pattern.

- (7) [DO - V<sub>main</sub> - IO]
- a. hvarum eg hefir áðr **Skírslu** géfið **viðkomandi Prófasti**  
*where-of I have previously report given in-question archdeacon*  
 (letter.)  
 ‘A report of which I have already given to the archdeacon in question’
- b. Enn greind Þuríður hefur **þad Suar** gefed **mier** þar til, ad ... (Afs)  
*but named Þuríður has that answer given me there to, that ...*  
 ‘But this Þuríður has given me that answer about this, that ...’

## (8) [IO - Vmain - DO]

get eg ei þér sagt **kínda og kúa skurð** (letters)  
*can I not you said sheep and cows reduction*  
 ‘I cannot tell you about the thinning of sheep and cattle stocks’

## (9) [DP - Vmain - PP]

- a. Á þessu klæði mun hann **þig** flytja **til byggða drottningar** (Árm)  
*on this fabric will he you carry to residences queen*  
 ‘He will transport you on this fabric to the queen’s residence’
- b. að ferð mín hingað hefur **mér** orðið **til bráðrar bölfunar** (letters)  
*that trip min to-here has me been to sudden misfortune*  
 ‘that my trip here has led to sudden misfortune for me’

## (10) [PP - Vmain - DP]

- a. að hr. Gizur mætti **að sér** taka **alla þá peninga, sem ...** (Bisk)  
*that mister Gissur might to REFL take all that money, that ...*  
 ‘that Mr. Gissur is allowed to take all the money, that ...’
- b. þú skulud **við þá** skipta **öllum klæðum og bunade** (Dín)  
*you shall with them trade all clothes and equipment*  
 ‘You shall trade with them all clothes and equipment’

The mirror order, [IO - Vmain - DO], was only found with a single sentence in the attested corpus, shown in (8). As illustrated, the direct object is ‘long’ or heavy in this sentence, while the preverbal indirect object is a personal pronoun. DPs more often occurred preverbally than the PP object in this construction. In the few examples with the reverse word order [PP - Vmain - DP], the DP was most often heavy (see (10)).

Mixed word order within sentences that contained two objects in addition to two non-finite verbs were relatively rare in OI. However, several different patterns appear as already listed above. Some examples are given

below:

(11) *[object - Vaux - Vmain - object]*

- a. að eg hefi ei **neitt** getað skrifað **þér** hjartað mitt elskulegasta  
*that I have not anything could written you heart.the mine lovable*  
'that I haven't been able to write you anything, my dear heart'
- b. Þú segist **ekkert** hafa frétt **af Marinó** (letters)  
*you say nothing have heard of Marinó*  
'You say you haven't heard anything from Marinó'
- c. skal þeim **af þessu** hafa vorðit **en mesta sæmd ok gæfa**  
*shall them from this have been the most honor and good-fortune*  
(Finn)

'It is said that this will have brought them much honor and good fortune'

(12) *[Vaux - object - Vmain - object]*

- a. hvor hann vildi heldur láta **sér** vísa fyrst í **kirkju eða heita**  
*whether he wanted rather let REFL show first to church or hot*  
**baðstofu** (Munn)  
*living room*  
'whether he preferred to be shown first into the church or the warm ...'
- b. svo sem það hefi ekki verið að **þeim** farið **með tilhlýðilegri lempni og**  
*so as it had not been to them gone with appropriate skills and*  
**tilhliðrunarsemi** (letters)  
*willingness-to-oblige*  
'as if they had not been treated with appropriate skills and courtesy'

(13) *[object - Vaux - object - Vmain]*

- a. hann kuez firir laungu **þat** hafa **honum** spað (Finn)  
*he says for long it have him predicted*  
'He says he had predicted this for him a long time ago'
- b. ef eg kynni **eitthvað** geta **henni** þóknast (letters)  
*if I knew something can her please*  
'if I could please her in some way'
- c. og segist **ekkert soddan** hafa **á honum** séð (letters)  
*and says nothing such have on him seen*  
'And he says he has seen nothing of the sort on him'

(14) [Vaux - IO - DO - Vmain]

- a. kvaðst mundi heldur **honum** strax **hæginda** leita (Munn)  
*said would rather him immediately comfort look*  
 ‘He said he would rather look immediately for some comfort for him’
- b. Mun þú vilja **mér það** nokkru góðu launa (Árm)  
*will you want me it rather good reward*  
 ‘You will want to reward me for this with something good’

(15) [DP - PP - Vaux - Vmain]

þar ekki hefði **sig til sakramentis** um kvöldið viljað taka  
*because not had REFL to sacrament in evening.the wanted take*  
 ‘because he had not wanted to take him to sacrament that evening’

In all the above patterns, shown in (11) through (15), only personal pronouns (negated and non-negated) and PPs occurred higher than the non-finite auxiliary verb, while different types of objects could precede the non-finite main verb. See further discussion of word order patterns in OI and the different types of objects involved in Hróarsdóttir (2000, 2008, and 2009).

## 2.2 Implementation

In this paper, we will propose handling the derivation of these ‘split’ word order cases in the spirit of Hinterhölzl’s (1997, 2006) analysis, assuming that there are two types of full sentential infinitival complements; incoherent/opaque CPs and coherent/transparent CPs. While the coherent infinitives are *transparent* for several types of extraction processes, the incoherent infinitives block long distance scrambling (of the arguments into the domain of the matrix IP). Moreover, coherent infinitives give rise to the formation of verb clusters. This is illustrated for German in (16) for both

coherent infinitives (cf. (16a)) and incoherent infinitives (cf. (16b)) (cf. Hinterhölzl 1997: 2-3).

- (16) a. daß [der Maria]<sub>i</sub> [das Buch]<sub>j</sub> Hans gestern [ti tj zu geben] versprach  
*that Mary the book Hans yesterday [] to give promised*  
 ‘that Hans promised yesterday to give the book to Mary’
- b. \*daß uns [**das Buch**]<sub>i</sub> Hans gestern der Maria ti zu geben bat  
*that us the book Hans yesterday to Mary [] to give asked*  
 ‘that Hans asked us yesterday to give the book to Mary’

The difference between incoherent and coherent complements is further illustrated in (17) and (18).

- (17) *Incoherent complement:*

V [CP C [TP ... [FP F ... [PredP Spec [VP ...

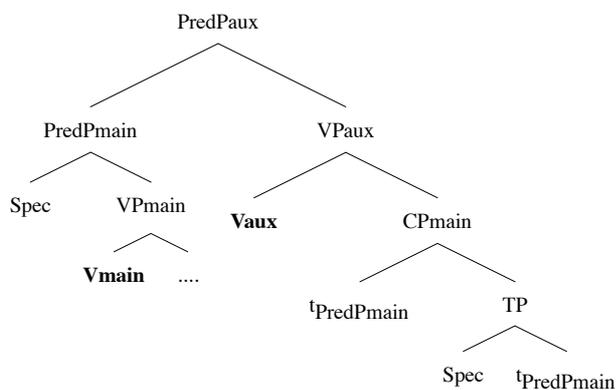
- (18) *Coherent complement:*

[PredPaux [VPaux Vaux [CPmain C [TP ... [PredPmain [VPmain Vmain ...

- (19) *Movement of PredPmain*

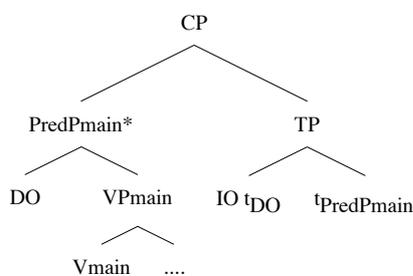
First step: PredPmain moves to [Spec, CPmain]:

Second step: PredPmain moves on to [Spec, PredPaux]:



In coherent complements, as (18), there is a movement of PredPmain to [Spec, PredPaux]. As illustrated in (19), PredPmain first moves to [Spec, CPmain] (CPmain is a transparent complement), and then on to [Spec, PredPaux]; this second step only takes place in German (and not in Dutch, where PredPmain only moves to [Spec, CPmain] and stays there), and gives the [Vmain - Vaux] word order of German. Since OI had both orders [Vaux - Vmain] and [Vmain - Vaux], it seems to have had the *option* of being either like Dutch or German in this respect, that is, either moving the PredP out of the TP, further up to [Spec, PredPaux], or permitting it to stay in [Spec, CPmain], depending on the type of the complement. Furthermore, in OI, the [Spec, PredP] position could be filled by a stranded small clause predicate. Here, we will make use of Hinterhölzl's (1997, 2006) remnant TP movement, as well as the *possibility* of PredP pied-piping the direct object when it moves (to [Spec, CP]), stranding the indirect object, as illustrated below.<sup>1</sup> PredP\* is here assumed to represent the PredP together with the pied-piped direct object.

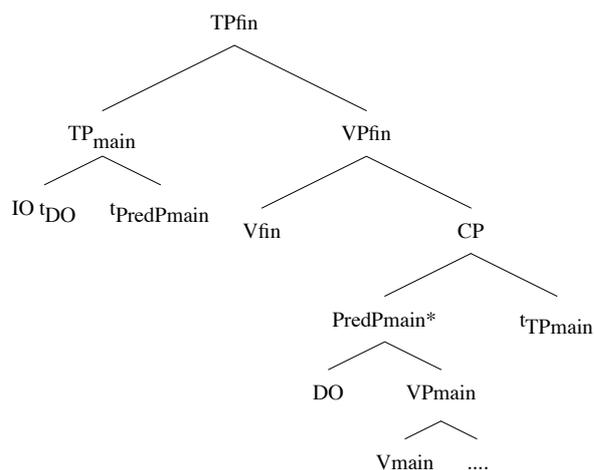
(20) First step: PredPmain moves to [Spec, CPmain], pied-piping the DO:



<sup>1</sup>For simplification, the inner structure of the double objects is not shown here. But see Hróarsdóttir (2009) for details.

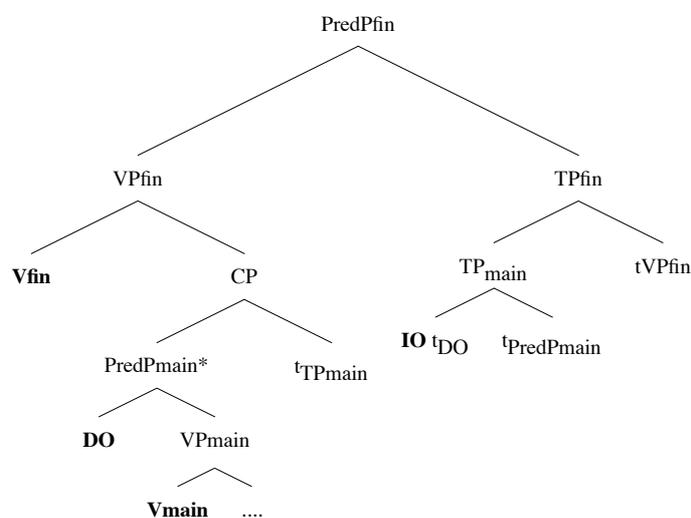
Then, there is a remnant TP-movement, illustrated in (21), where the indirect object is moved via remnant TP movement into the matrix domain.

(21) Second step: Remnant TP movement:



Finally, in VO languages like OI, the finite VP moves to [Spec, TP], see (22).

(22) Third step: Remnant VPfin movement:



This derives the most frequent split word order pattern with double objects, [Vfin - DO - Vmain - IO]:

(23) [DO - Vmain - IO]

- a. hvarum eg hefir áðr **Skírslu** géfið **viðkomandi Prófasti**  
*where-of I have previously report given in-question archdeacon*  
 (lett.)  
 ‘A report of which I have already given to the archdeacon in question’
- b. Enn greind Þuríður hefur **þad Suar** gefed **mier** þar til, ad ... (Afs)  
*but named Þuríður has that answer given me there to, that ...*  
 ‘But this Þuríður has given me that answer about this, that ...’

The much less frequent mirror order pattern, [Vfin - IO - Vmain - DO] could be derived in a similar way as the [Vfin - DO - Vmain - IO] pattern, where the order of the two DPs has simply been inverted prior to their movements. Hence, the IO would be pied-piped along with PredPmain, leaving the DO to be moved via the remnant TP movement into the matrix domain. This predicts that all examples of this type should contain verbs of the *gefa*-type (allowing inversion in Icelandic). This is borne out in the OI corpus:

(24) [IO - Vmain - DO]

- get eg ei **þér** sagt **kinda og kúa skurð** (letters)  
*can I not you said sheep and cows reduction*  
 ‘I cannot tell you about the thinning of sheep and cattle stocks’

Another word order pattern attested in the OI corpus is the pure word order pattern [IO - DO - Vfin], although it seem to have been slightly less

frequent than the [DO - Vmain - IO] pattern derived above. See examples in (25).

(25) [IO - DO - Vmain]

- a. að eg skal þér það allvel launa (Árm)  
*that I shall you it well reward*  
 ‘that I shall reward you well for it’
- b. þó eg hafi honum ektaskapar orðum lofað (letters)  
*although I have him marriage words promised*  
 ‘although I have promised to marry him’

This pattern is also easily derived within our system by either assuming that the two objects may move as a DP-cluster, prior to the movement of PredPmain (see Hróarsdóttir 2008), or that both objects may be pied-piped along with the first step illustrated in (22) above, where PredPmain moves to [Spec, CPmain]. If both DP are allowed to be pied-piped as one cluster in this way, this explains why the unmarked order of the two objects is [IO DO], regardless of whether they appear pre- or postverbally. Only a handful of examples showed up in the direct mirror image of the unmarked order, and in these examples the indirect object is a pronoun while the direct object is usually either negative or quantified. Furthermore, they only appear with verbs of the *gefa*-type, allowing inversion in Icelandic:

(26) [DO - IO - Vmain]

- a. þá skaltu það eina þér tilskilja er ... (Árm)  
*then shall-you it alone you stipulate that ...*  
 ‘Then you shall only stipulate to yourself that ...’

- b. því eg get ekki **meiri liðsemd** þér veitt (Árm)  
*because I can not more assistance you give*  
 ‘because I cannot give you any more assistance’

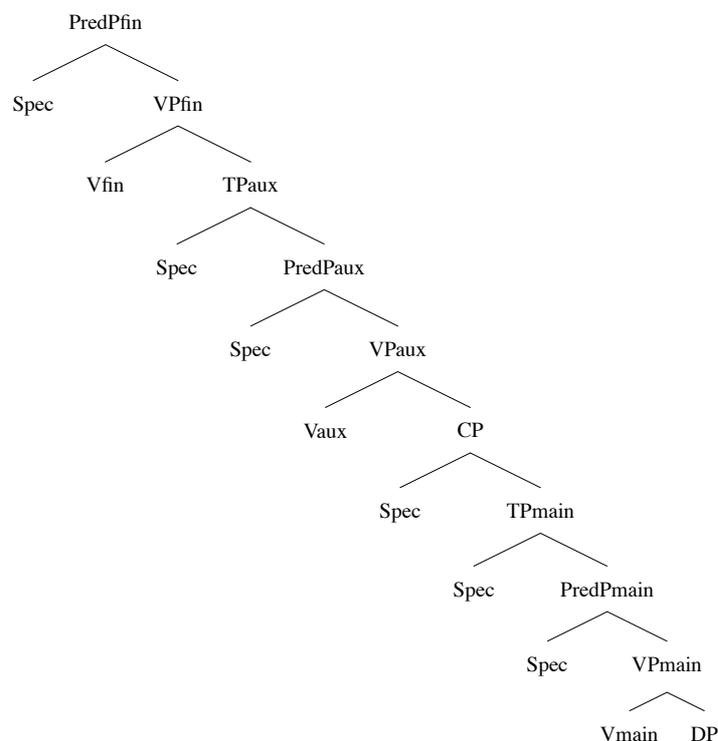
On the other hand, in the frequent OV word order pattern exhibiting the order [IO - DO], both objects could be either pronominal or a full DP.

## 2.3 Outline

### 2.3.1 Starting out

As we have seen, the OI split word order pattern [DO - Vmain - IO] can be derived in a similar fashion to patterns of verb-projection raising in West Flemish, with the difference that in Flemish, the main verb always follows all of its complements (due to lack of finite VP-preposing, the last step in the OI derivation).

Turning to split orders with two non-finite verbs and double objects. As noted, mixed order within sentences that contained two objects in addition to two non-finite verbs were relatively rare in OI. Let us start by illustrating the difference between the “Dutch option” [DP - Vaux - Vmain] and the “German option” [DP - Vmain - Vaux].

(27) *The initial structure*

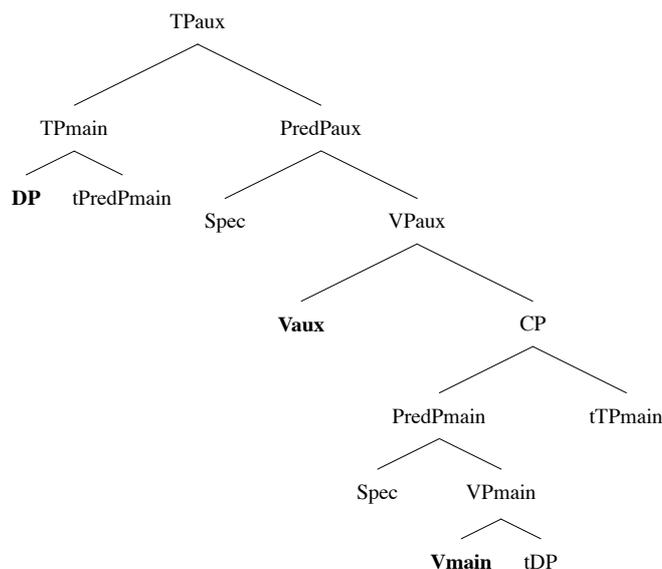
In (28), we illustrate the derivation of the word order [DP - Vaux - Vmain], i.e. coherent infinitives (verb-raising constructions). This word order is common for both German and Dutch.

(28) *[DP - Vaux - Vmain]*

First step: DP moves:

Second step: PredPmain moves to [Spec, CPmain]:

Third step: (Remnant) TPmain moves to [Spec, TPaux]:



This derives the word order [DP - Vaux - Vmain]. In OI, this word order is of course only attested as [Vfin - DP - Vaux - Vmain], where Vfin does not equal Vaux, and the final step in the derivation is remnant VPfin movement to [Spec, TP) (see the derivation in (24) above).

(29) [Vfin - DP - Vaux - Vmain]

- a. at hon **mundi** eigi **barn mega eiga** (Finn)  
*that she would not child may own*  
 ‘that she would not be allowed to have a child’
- b. ef hann **hefði þat viljað fága** (Guðm)  
*if he had it wanted clean*  
 ‘if he had wanted to clean it’

Let us now turn to the derivation of the “German option” [DP - Vmain - Vaux]. This word order pattern is generated by adding one step to the previous derivation, where PredPmain moves on to [Spec, PredPaux]. As mentioned, the movement of PredPmain on to [Spec, PredPaux] can only take place when CPmain is a transparent complement.

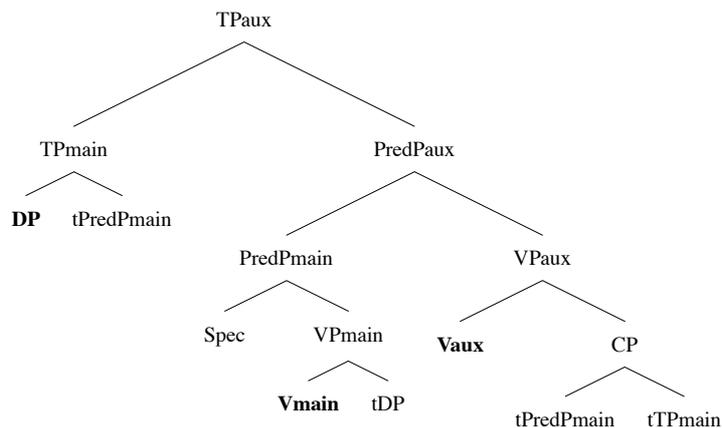
(30) [DP - Vmain - Vaux]

First step: DP moves:

Second step: PredPmain moves to [Spec, CPmain]:

Third step: PredPmain moves to [Spec, PredPaux]:

Fourth step: (Remnant) TPmain moves to [Spec, TPaux]:



This derives the word order [DP - Vmain - Vaux]. Again, in OI, this word order is only attested as [Vfin - DP - Vmain - Vaux]:

(31) [Vfin - DP - Vmain - Vaux]

- a. og enginn þóttist **þvílíkan veikleika séð hafa** (Álf)  
*and no-one pretended such weakness seen have*  
 ‘And no one pretended to have seen such weakness’
- b. að eg mundi **hann sigrað geta** (Árm)  
*that I would him defeat could*  
 ‘that I would be able to defeat him’

This leads us to the derivation of our split clusters with double objects.

### 2.3.2 Split clusters

A few examples of sentences containing two non-finite verbs in addition to double objects were attested in the OI corpus, as noted. Let us start with

patterns with the “Dutch option”, that is, [Vaux - Vmain]. In addition to the pure VO word order pattern [Vfin - Vaux - Vmain - IO - DO], the DO could precede both non-finite verbs, leaving the IO in situ (32a), or one of the objects could precede the non-finite auxiliary, while the other object precedes the non-finite main verb (32b) and (32c). Finally, in (32d), the DO occurs interspersed between the two non-finite verbs, with the IO in situ.

- (32) a. [Vfin - DO - Vaux - Vmain - IO]  
 b. [Vfin - IO - Vaux - DO - Vmain]  
 c. [Vfin - DO - Vaux - IO - Vmain]  
 d. [Vfin - Vaux - DO - Vmain - IO]

Some OI examples are given below:

- (33) [DO - Vaux - Vmain - IO]<sup>2</sup>
- a. að eg hefði ei **neitt** getað skrifað **þér** hjartað mitt elskulegasta  
*that I have not anything could written you heart.the mine lovable*  
 ‘that I haven’t been able to write you anything, my dear heart’
- b. Þykist eg nú **það** hafa launað **þér**  
*believe I now it have payed you*  
 ‘I believe I have now payed you for that’

- (34) [IO - Vaux - DO - Vmain]<sup>3</sup>
- ... hví Bolli mun **sér** hafa þar **svo staðar** leitað  
*... why Bolli will refl have there so place sought*  
 ‘Why Bolli will have chosen himself such a place to hide’

<sup>2</sup>Example (33b) is from Rögnvaldsson (1996: 63)

<sup>3</sup>This example is from Rögnvaldsson (1996: 62)

(35) [DO - Vaux - IO - Vmain]

- a. hann kuez firir laungu **þat** hafa **honum** spað (Finn)  
*he says for long it have him predicted*  
 ‘He says he had predicted this for him a long time ago’
- b. ef eg kynni **eitthvað** geta **henni** þóknazt (letters)  
*if I knew something can her please*  
 ‘if I could please her in some way’

(36) [Vaux - DO - Vmain - IO]<sup>4</sup>

Ófeigur ... kveðst ekki mundu **mikla tillögu** veita **honum**  
*Ofeig says not will great help give him*  
 ‘Ofeig says that he will not be able to help him much’

In order to derive the split word order pattern [Vfin - DO - Vaux - Vmain - IO], we cannot take the German option that leads to [Vmain - Vaux], and therefore, there is no pied-piping of the direct object. However, in order to split up the two objects, we must pied-pipe the direct object with PredPaux when it moves to [Spec, CPaux].

(37) [Vfin - DO - Vaux - Vmain - IO]

First step: [IO DO] moves to [Spec, TPmain]:<sup>5</sup>

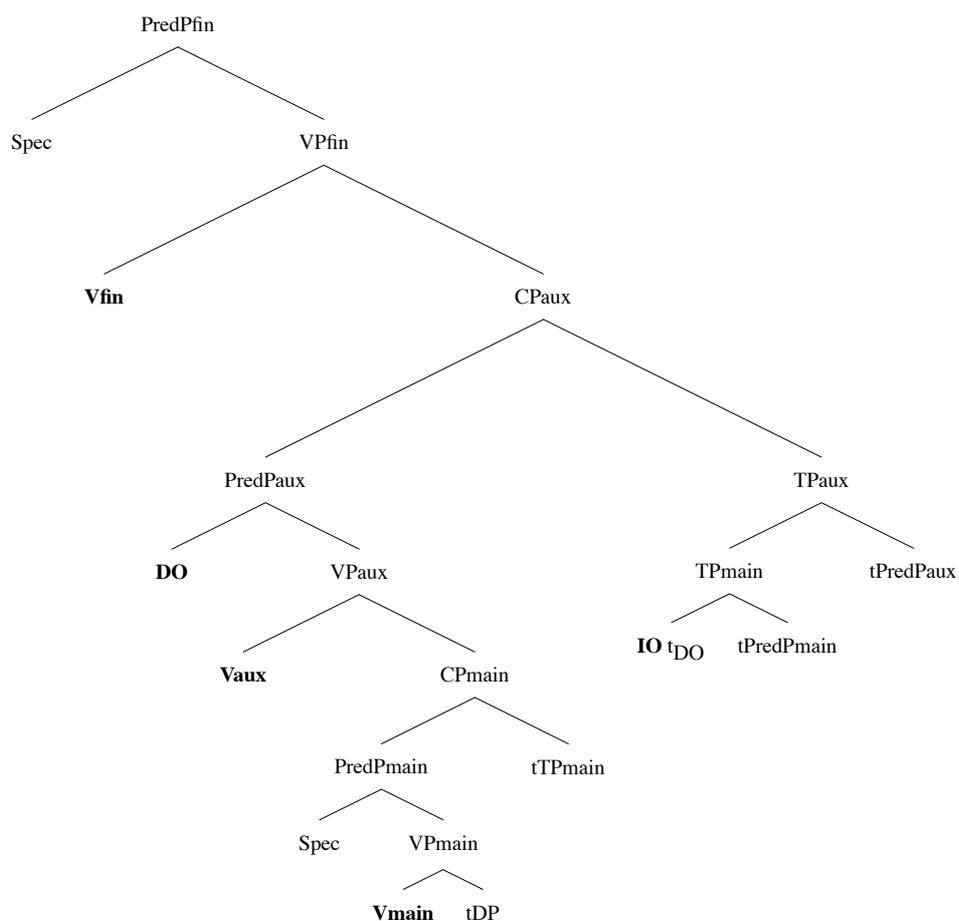
Second step: PredPmain moves to [Spec, CPmain]:

Third step: (Remnant) TPmain moves to [Spec, TPaux]:

Fourth step: PredPaux moves to [Spec, CPaux], pied-piping the DO:

<sup>4</sup>This example is from Rögnvaldsson (1996: 62)

<sup>5</sup>We assume that the DP must always move to [Spec, TPmain] (for licensing reasons).



Finally, since this is a VO language, VPfin must move to [Spec, TPfin].

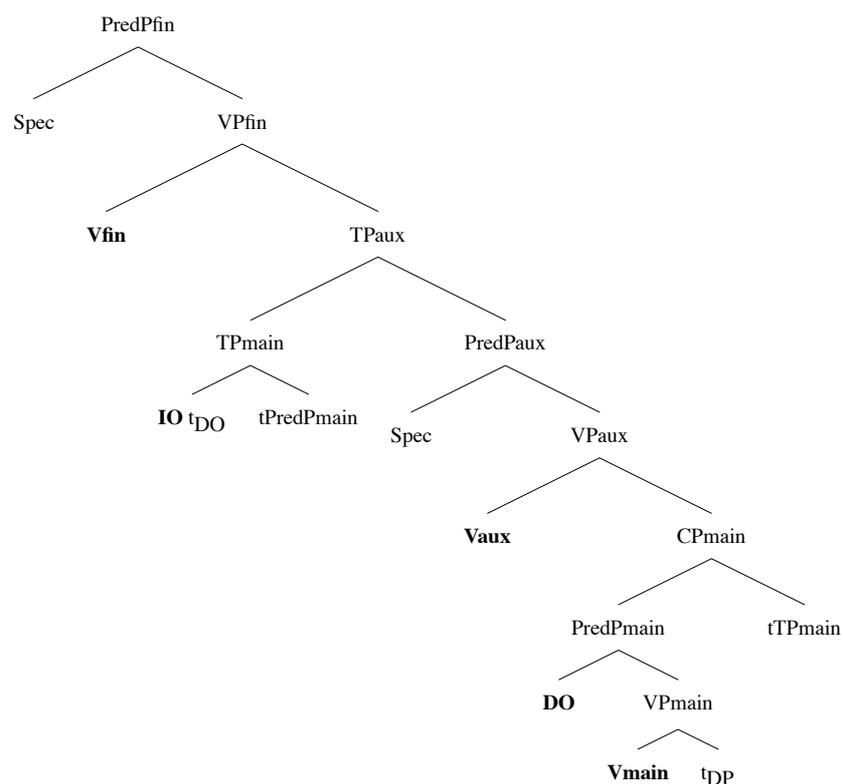
Let us then turn to the derivation of [Vfin - IO - Vaux - DO - Vmain], illustrated in (38).

(38) [Vfin - IO - Vaux - DO - Vmain]

First step: [IO DO] moves to [Spec, TPmain]:

Second step: PredPmain moves to [Spec, CPmain], pied-piping the DO:

Third step: (Remnant) TPmain moves to [Spec, TPaux]:



This is like verb-projection raising, that is, the “Dutch option”.<sup>6</sup> Again, as OI is a VO language, the last step in the derivation would move VPfin to [Spec, TPfin].

The order [Vfin - DO - Vaux - IO - Vmain] would be derived in the same way, where we assume that the order of the two DPs has been inverted prior to their movement. Hence, the IO would be pied-piped along with PredPmain, leaving the DO to be moved via the remnant TP movement into the matrix domain. This predicts that all examples of this type should contain verbs of the *gefa*-type (allowing inversion in Icelandic). This is

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<sup>6</sup>Although this is called the “Dutch option” here, this direct word order is, of course, ungrammatical in Dutch (\**ik zal haar hebben het boek gegeven* // *I will her have the book given*). However, sentences like these are fine in West Flemish and Swiss German (for illustrations see Haegeman and van Riemsdijk 1986).

borne out in the OI corpus.

The derivation of the word order pattern [Vfin - Vaux - DO - Vmain - IO] is shown in (39).

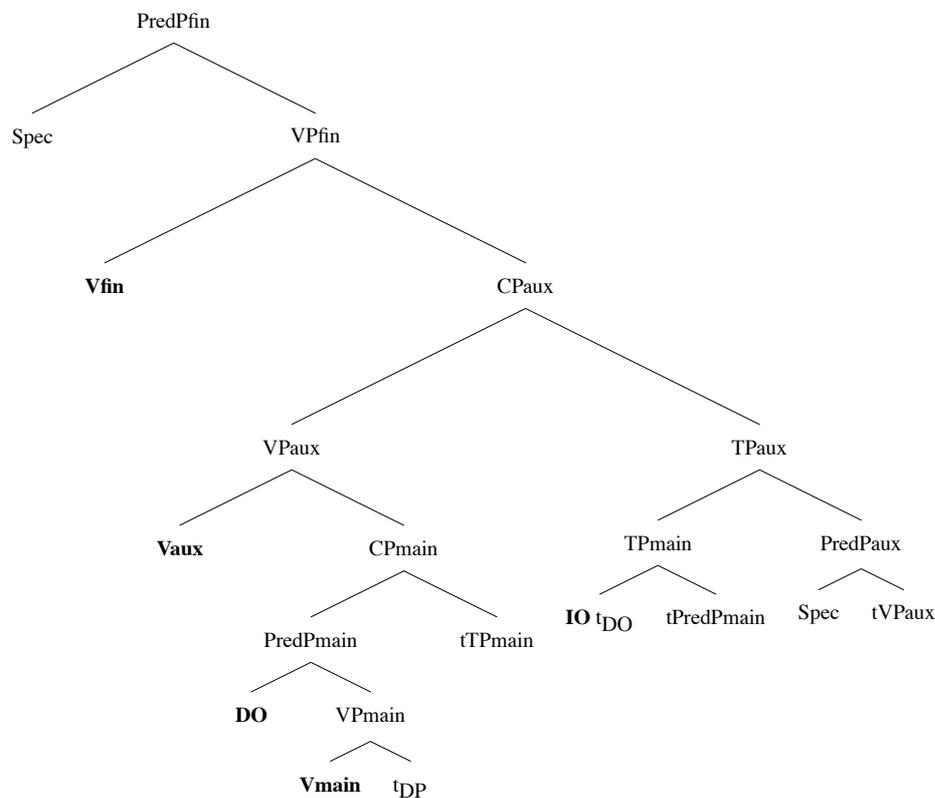
(39) [Vfin - Vaux - DO - Vmain - IO]

First step: [IO DO] moves to [Spec, TPmain]:

Second step: PredPmain moves to [Spec, CPmain], pied-piping the DO:

Third step: (Remnant) TPmain moves to [Spec, TPaux]:

Fourth step: VPaux moves to [Spec, CPaux]:



In addition, two patterns arise were the two objects have not been split, but occur with the unmarked [IO - DO] order, either occurring interspersed between the two non-finite verbs, (40a), or preceding both verbs, as in (40b). In these cases, no pied-piping of the DO takes place.

- (40) a. [Vfin - Vaux - IO - DO - Vmain]  
 b. [Vfin - IO - DO - Vaux - Vmain]<sup>7</sup>
- (41) [Vaux - IO - DO - Vmain]
- a. kvaðst mundi heldur **honum** strax **hæginda** leita (Munn)  
*said would rather him immediately comfort look*  
 ‘He said he would rather look immediately for some comfort for him’
- b. Mun þú vilja **mér það** nokkru góðu launa (Árm)  
*will you want me it rather good reward*  
 ‘You will want to reward me for this with something good’
- (42) [IO - DO - Vaux - Vmain]<sup>8</sup>
- Bárður kvaðst **honum engi** mundu segja  
*Bard said him no would way*  
 ‘Bard said that he would not tell him any [news]’

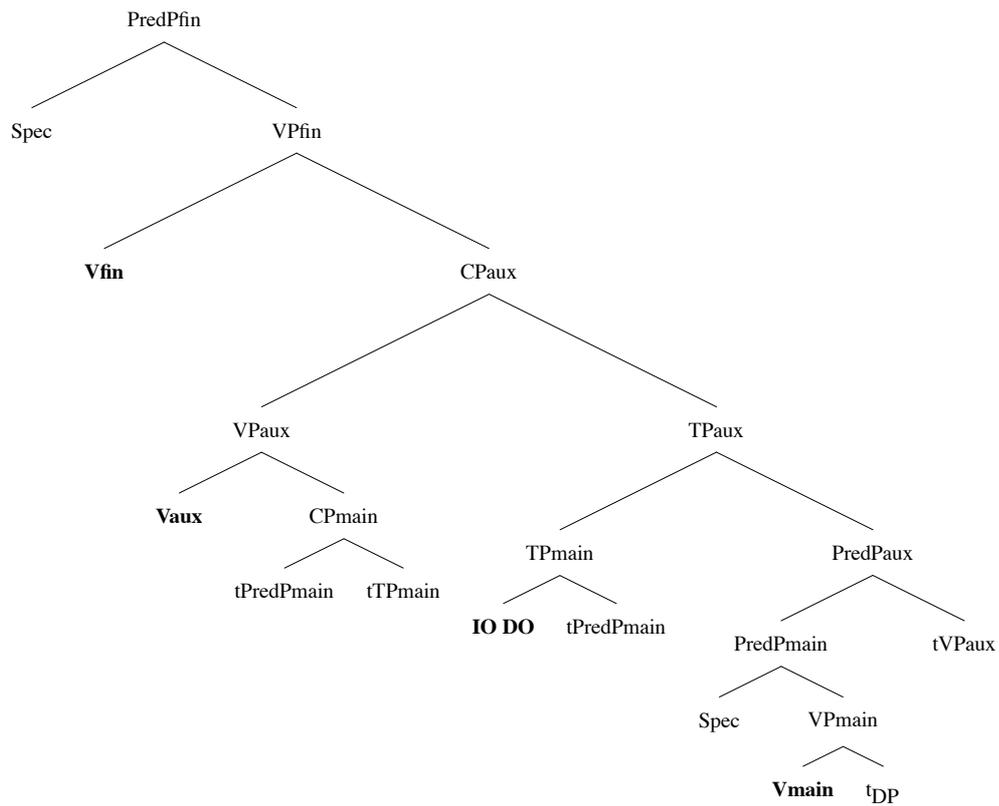
Let us start with the derivation of the former pattern, [Vaux - IO - DO - Vmain]:

- (43) [Vfin - Vaux - IO - DO - Vmain]
- First step: [IO DO] moves to [Spec, TPmain]:
- Second step: PredPmain moves to [Spec, CPmain]:
- Third step: PredPmain moves to [Spec, PredPaux]:
- Fourth step: (Remnant) TPmain moves to [Spec, TPaux]:
- Fifth step: VPaux moves to [Spec, CPaux]:

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<sup>7</sup>Although this order was not attested in our IO corpus, Rögnvaldsson (1996) has found examples of this pattern in Old Icelandic texts.

<sup>8</sup>Example from Rögnvaldsson (1996: 63).



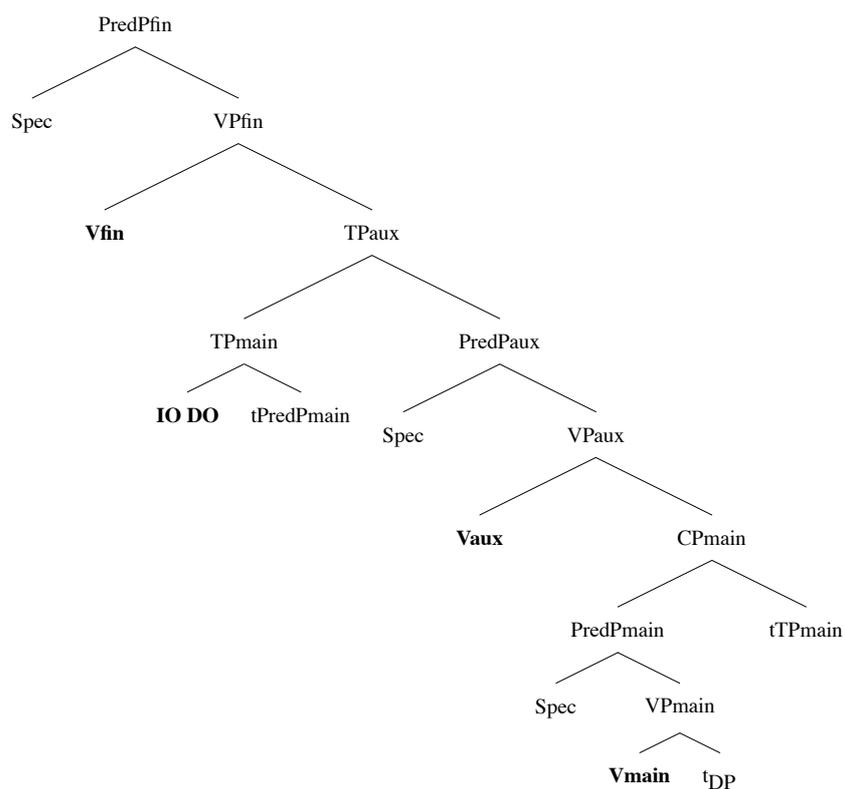
The derivation of the latter pattern, [IO - DO - Vaux - Vmain], is shown in (44):

(44) *[Vfin - IO - DO - Vaux - Vmain]*

First step: [IO DO] moves to [Spec, TPmain]:

Second step: PredPmain moves to [Spec, CPmain]:

Third step: (Remnant) TPmain moves to [Spec, TPaux]:



Finally, Rögnvaldsson (1996) mentions a pattern in Old Icelandic, with the “German option”, [Vmain - Vaux] and double objects, where both objects precede both non-finite verbs, see (45):

(45) [Vfin - IO - DO - Vmain - Vaux]

(46) [IO - DO - Vmain - Vaux]<sup>9</sup>

... að þessi maður mundi **honum sanna hluti** sagt hafa  
 ... *that this man would him true things said have*  
 ‘... that this man would have told him the truth’

<sup>9</sup>Example from Rögnvaldsson (1996: 63).

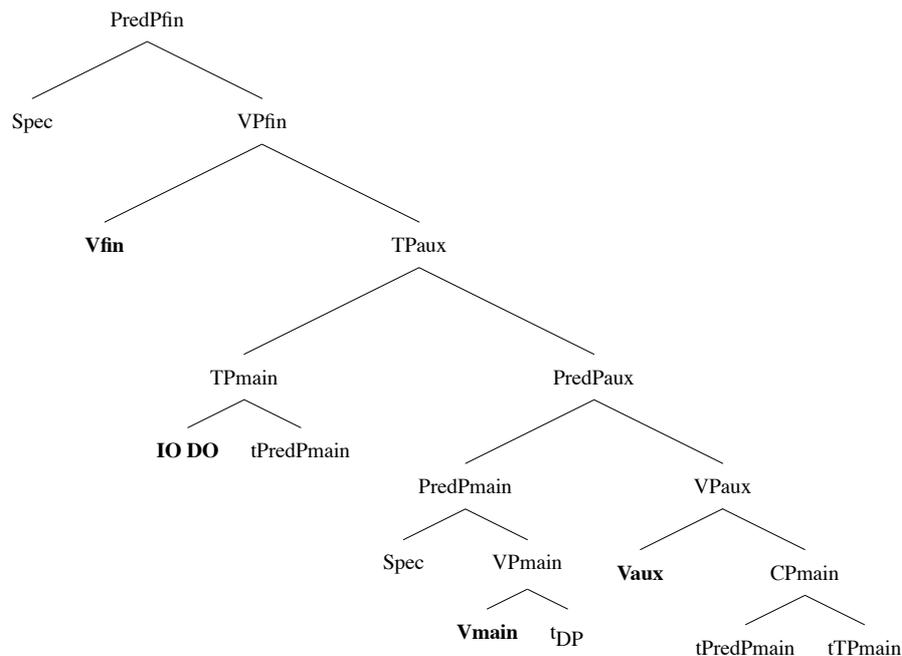
(47) [*Vfin* - *IO* - *DO* - *Vmain* - *Vaux*]

First step: [*IO DO*] moves to [*Spec*, *TPmain*]:

Second step: *PredPmain* moves to [*Spec*, *CPmain*]:

Third step: *PredPmain* moves to [*Spec*, *PredPaux*]

Fourth step: (Remnant) *TPmain* moves to [*Spec*, *TPaux*]:



### 3 Restructuring verbs

Our analysis of the OI data looks like restructuring/verb-raising in the Modern West Germanic languages, hence, as noted earlier, the prediction is that we should only find the long object movement in OI with (matrix) verbs that are restructuring/verb-raising verbs. In this section, we will go through each of the verbs that take part in the OV word order patterns and give a comparison of restructuring in OI and Modern German/Dutch.<sup>10</sup>

<sup>10</sup>It has often been claimed that IPP (*Infinitivus pro Participio*) is equal to verb-raising. Hinterhölzl (1998), however, argues that IPP is just a morphological side-effect of verb-raising; it follows from

The main question, of course, is whether the OI verbs are consistent with the so-called verb-raising verbs in the West Germanic languages, allowing long object movement and restructuring. In the West Germanic languages (German, Swiss German, Dutch, Afrikaans), there is a link between verb classes and the possibility for long DP-movement, restructuring, and IPP. In short, these verb classes may contain causatives (*let, make, do*), modals (*may, can, must, shall, need, dare, ought*), perception verbs (*hear, see, feel, notice*), duratives (*stay, remain, lie, sit, walk, be, stand*), inchoatives (*begin, continue, stop, use to*), control verbs (*try, dare, promise, persuade*), verbs of saying/thinking (*say, mean, think, believe, explain, ...*) and raising verbs (*seem, appear*) (cf. Schmid 1997; Broekhuis, den Besten, Hoekstra and Rutten 1995). See also Schmid (1997) for a further discussion of which of the four languages allow which verb class (either obligatory, optionally or not) with regard to IPP.

Rutten (1991) has a complete list of Dutch verb-raising verbs; see his listings of verbs selecting bare infinitives (1991: 27), verbs selecting *te*-infinitives (1991:29), third construction verbs (1991: 78), and third construction auxiliaries (1991:79).<sup>11</sup> Rutten's verbs selecting bare infinitives

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F1P-movement in some dialects with certain verbs (in some dialects it is completely absent); the transparency associated with verb-raising follows from TP- and T-movement independently of F1P-movement. Hence, IPP occurs with a subclass of coherent verbs, with much dialectal variation. Therefore, it is not a problem for our analysis that IPP did not occur in OI; it also does not occur in Low German, Frisian and Upper Austrian. Furthermore, dialects in which the particle is formed without a prefix never show an IPP-effect (Hinterhölzl, p.c.). This would also hold of Icelandic.

<sup>11</sup>Rutten (1991) makes a point of the need to distinguish verb-raising from 'the third construction' (remnant extraposition), which is described in detail in Broekhuis, den Besten, Hoekstra, and Rutten (1995: 93ff.).

and *te*-infinitives trigger verb-raising in Dutch; the verbs selecting bare infinitives trigger verb-raising, while the verbs selecting *te*-infinitives trigger raising of the *te*-infinitive. Rutten (1991:29) claims that raising of the *te*-infinitives is always obligatory in Dutch. On the other hand, the third construction verbs allow remnant extraposition, but not raising of the *te*-infinitive. Finally, the third construction auxiliaries can be used either as main verbs or as auxiliaries; in the latter case, then, they can trigger raising of the *te*-infinitive (verb raising).

The verbs (finite verbs and non-finite auxiliaries) found in OI exhibiting OV word order (where long object movement has occurred according to our analysis) seem to fit nicely with the West Germanic pattern. If we take all the OI verbs and put them into the eight main verb classes allowing verb-raising in the West-Germanic languages, all that remain are the following 8 verbs found with OV word order in the OI corpus.

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gleyma	‘forget‘	muna	‘remember‘
játa	‘admit‘, ‘offer‘	neita	‘deny‘
letjast	‘dissuade‘	reynast	‘prove‘
líka	‘like‘, ‘want‘	þóknast	‘please‘

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A comparison with Rutten’s classification leaves out the following 7 verbs found with OV word order in the OI corpus.

In sum, only 5 verbs in the OI corpus do not seem to be verb-raising/restructuring verbs in the West Germanic languages. Only one sentence was found with each of these verbs, except for the verbs *játa* (admit, offer) and *muna* (re-

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enda	‘end’, ‘finish’	plaga	‘tend to’
játa	‘admit’, ‘offer’	reynast	‘prove’
letjast	‘dissuade’	þóknast	‘please’
muna	‘remember’		

---

member) where three examples were found. These examples are shown in (48) and (49) below.<sup>12</sup>

- (48) a. Þorsteinn **játar það satt vera** (Árm)  
*Þorsteinn admits it true be*  
 ‘Þorsteinn admits that it is true’
- b. þá **löttust** aller kónga syner **hennar að bidia** (Dín)  
*then dissuaded all kings sons her to propose*  
 ‘then all the princes were dissuaded from proposing to her’
- c. sem og í sannleika **reynist login vera** (Morð)  
*which and in truth prove untrue be*  
 ‘which, in truth, turns out to be untrue’
- d. [sem] honum **þóknast mér að senda** ... (letters)  
*which him pleases me to send ...*  
 ‘which pleases him to send me’
- (49) a. Eg **man** nú ekki **meira að rugla** (letters)  
*I remember now not more to talk-nonsense*  
 ‘I don’t remember anything more to say’
- b. Ekki **man** eg nú **fleira** í fréttanafni **að fortelja** (letters)  
*not remember I now more in name of news to say*  
 ‘I don’t remember anything more to say by way of news’
- c. Eg **man** nú ekki **fleira að tína** í þennan seðil (letters)  
*I remember now not more to gather in this note*  
 ‘Now I don’t remember anything more to say in this letter’

The sentences in (49) are clearly of a different kind than the other exam-

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<sup>12</sup>Example (48a) was repeated three times in the same text.

ples, since they are infinitival relatives, still grammatical in Modern Icelandic; the preverbal object there is negated/quantified. Hence, we do not have to consider these examples any further here. The verbs *játa* (admit), *letjast* (be dissuaded), *reynast* (prove) and *þóknast* (please) also do not seem to be very problematic for the analysis, although they do not all seem to allow long DP-movement in Dutch/German, as shown in (50) for the verbs *toegeven* (admit) and *afraden* (be dissuaded) in Dutch. The verbs ‘admit’ and ‘be dissuaded’ are particle verbs that generally block verb-raising in both German and Dutch. On the other hand, Koopman and Szabolcsi (2000) mention the verb *tetszik* (please) in Hungarian as a possible verb-raising verb.

- (50)
- a. \*dat het meisje **het toegeeft** te hebben gedaan  
*that the girl it admits to have done*
  - b. dat het meisje **toegeeft het** te hebben gedaan  
*that the girl admits it to have done*  
‘that the girl admits to have done it’
  - c. \*dat het meisje **het werd afgeraden** te vertellen  
*that the girl it was dissuaded to tell*
  - d. dat het meisje **werd afgeraden het** te vertellen  
*that the girl was dissuaded it to tell*  
‘that the girl was dissuaded from telling it’

No verbs that are ‘morphologically complex’ like *voor-stellen* (suggest), *af-raden* (dissuade) and *toe-geven* (admit) allow verb-raising in Dutch. The same is true for inherently reflexive verbs and (non-reflexive) particle verbs in Dutch. Hence, these verbs are not directly comparable to their Icelandic counterparts. The OI example in (55a) with the verb *játa* (admit)

is also not easily comparable with the Dutch example since the Icelandic example has a different syntactic structure to begin with (an ECM (exceptional case marking) structure). The same is true for the verbs *letjast* (be dissuaded), *reynast* (prove) and *þóknast* (please) and other *st*-verbs; these verbs are not easily comparable to any verbs in Dutch/German since they show a special morphosyntactic property (not found in the other languages). It is interesting to note that all the *st*-verbs found in the OI corpus seem to allow OV word order (long DP-movement, on our hypothesis), hence, they were transparent in earlier Icelandic for some reason.<sup>13</sup> Finally, the verb *blijken* (prove) in Dutch attracts verb-raising obligatory, as shown in (51).

- (51) a. dat het bleek onwaar te zijn  
           *that it proved untrue to be*
- b. dat het onwaar bleek te zijn  
           *that it untrue proved to be*  
           ‘that it turned out to be untrue’

Hence, the main prediction that we should only find the long object movement in OI with verbs that are restructuring/verb-raising verbs seems to be borne out. This is further supported by facts from verbs in the West Germanic languages that never allow verb-raising/restructuring, and have no special morphosyntactic property making them incomparable to their Icelandic counterparts. This includes, for instance, the verbs ‘recommend’,

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<sup>13</sup>Presumably, the transparency of the *st*-verbs in OI has something to do with licensing (case marking), see further discussion of *-st* verbs and case in Icelandic in Sigurðsson (1992: 258ff.) and Jónsson (1999).

‘regret’, ‘hate’ and ‘hesitate’.<sup>14</sup> These verbs were never found with OV word order in the OI corpus, although several examples with VO word order were found. A few examples are shown in (52), together with some control verbs only found with VO word order.

- (52) a. sem þú **ráðleggur** að taka til bænna (letters)  
*whom you recommend to take to prayer*  
 ‘whom you recommend be led in prayer’
- b. og hefur **harmað** biskupsdæmið (Skál)  
*and has regretted bishop-position-the*  
 ‘and has regretted the bishopric’
- c. þui hefur hann **hatad** alla síjna sveina (Dín)  
*therefore has he hated all his men*  
 ‘therefore, he has hated all his men’
- d. en sakir þess **varð** hún oft at þola bönd og bardaga (Fi.)  
*but because-of this had she often to withstand ties and fight*  
 ‘therefore, she often had to withstand ties and fight’
- e. Þér **verðið** að forlata mér (letters)  
*you must to forgive me*  
 ‘You must forgive me’
- f. Árni **lofar** að gjöra það (Álf)  
*Árni promises to do it*
- g. var eg **sendur** að hleypa fénu út (Próf)  
*was I sent to let sheep out*  
 ‘I was sent to let the sheep out’

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<sup>14</sup>In Dutch, the verbs *aanraden* and *aanbevelen* (recommend) are particle verbs; they weakly allow long scrambling, but not verb-raising; the verb *betreuren* (regret) allows long scrambling but not verb-raising. The verb *spijten* (regret) does not allow verb-raising either since it takes an internal argument which blocks long DP-movement. The verb *haten* (hate) does not allow long scrambling either because it requires a provisional object *het* (it), which blocks long scrambling. Furthermore, *haten* takes an infinitival clause, introduced by the complementizer *om*. Finally, *aarzelen* (hesitate), if construed with an infinitive, does not allow verb-raising while long scrambling is fairly good (den Besten, p.c.; Broekhuis, p.c.).

- h. svo illa er heimurinn **búinn** að fara með mig (letters)  
*so badly is world-the finished to go with me*  
 ‘The world has treated me that badly’

Finally, the verb *reyna* (try) in OI has not patterned like the verb *proberen* (try) in Dutch, since it did not allow long DP-movement. In German, on the other hand, the verb *versuchen* (try) allows for long object movement or restructuring. Some examples with VO word order from the OI corpus are given in (53).

- (53) a. Eg vildi gjarnan **reyna að skrifa þér** ... (letters)  
*I wanted readily try to write you*  
 ‘I would readily try to write to you’
- b. þá skal eg **reyna að gera þig að manni** (Próf)  
*then shall I try to make you to man*  
 ‘then I shall try to make you a man’
- c. að báðir flokkar **reyna að ná í þessa nýgræðinga** (letters)  
*that both parties try to get to these beginners*  
 ‘that both parties attempt to get these new members’

#### 4 Diachronic correlations

An interesting consequence of the use of the analysis presented above for the mixed word order patterns in OI is the explanation of the change of word order. As already mentioned, the three main word order patterns that disappeared from Icelandic are typical examples of restructuring in the Modern West Germanic languages (long DP movement/verb-projection raising/verb-raising). Hence, what might have disappeared in Modern Icelandic is simply (overt) restructuring. Now, it becomes necessary to ex-

press the parameter change in question by new means; we need to express the parameter change in Icelandic by saying that Modern Icelandic only has *incoherent complements*, while OI had *coherent complements* as well. After the loss of coherent complements, no long movements (restructuring effects) could take place. This account of the diachronic process leads to only one parameter change; the loss of coherent complements, which again explains both the loss of OV word order in general (both with nominal objects and PPs and (other) small clause predicates) and the loss of the [Vmain - Vaux] word order. The relevant question, then, is why Icelandic should have lost coherent complements. At first sight, this might simply seem as being a question of labeling without a real theoretical content. However, we will claim that this change has to do with the TP. Following Hinterhölzl (1997), we want to claim that the TP can be ‘defective’ in some languages. If the lowest (local) TP is defective, then it is not an appropriate landing site for the VP; thus, the VP must move further up in search for a more appropriate landing position. Hence, in OI, the TP has the possibility of being defective, while in Modern Icelandic it cannot. Consequently, in Modern Icelandic, the VP moves only to the lowest TP. Since it can land there, it does not have to move further up. If the TP is an appropriate landing site, the VP can never move further up by UG economy conditions. This is similar to saying that long DP movement disappeared. Icelandic is not the only language that has undergone such a change, but this has actually taken place in the history of French as well. Roberts (1997) pro-

poses that the absence of restructuring in French and its presence in Italian is related to whether or not infinitives move beyond TP (although, Roberts has a different explanation for this change in French than the one we are proposing, namely by means of overt versus covert movement of infinitives beyond TP).

The loss in Icelandic gets support from the history of French (in comparison to Italian, for instance). Earlier French has overt restructuring effects/infinite movement; namely long DP-movement triggered by mediopassive *se*, cases where the choice of aspectual auxiliary in the main clause is triggered by the lower verb, and clitic climbing (cf. Pearce 1990; Roberts 1997). This is illustrated in (54).

- (54) a. Nuls om mortals no.1 pod penser  
*no man mortal not-it could think*  
 ‘No mortal man could think it’
- b. Elle **le** commença a desirer  
*she him began to desire*  
 ‘She began to desire him’

This word order possibility, however, disappeared in French, when the language lost its coherent infinitives. ”There is, then, a diachronic correlation between the loss of long infinitive movement (for main verbs) and the loss of overt restructuring in French” (Roberts 1997: 445). It is a well-known fact that Modern French lacks restructuring phenomena of the Italian kind. Italian, in comparison, still has coherent infinitives, and thus, the possibility of long clitic movement.

It is also a very interesting fact that Modern French still allows quantifier climbing (cf. Kayne 1975; Roberts 1997), as Modern Icelandic. Quantified and negated objects always occurred preverbally in OI, and they still do in the modern language. These are the remaining OV orders in the modern language. The Icelandic negative phrase construction has, thus, obvious similarity with the French ‘L-Tous’ construction, as illustrated in (55) for Icelandic and (56) for French.

- (55) a. Jón hefur **ekkert** lesið  
*John has nothing read*  
 ‘John hasn’t read anything’
- b. Jón hefur **ekkert** viljað lesa  
*John has nothing wanted to-read*  
 ‘John hasn’t wanted to read anything’
- (56) a. Jean a **tout** lu  
*John has everything read*  
 ‘John has read everything’
- b. Jean n’a **rien** lu  
*John neg has nothing read*  
 ‘John hasn’t read anything’
- c. Marie a **tout** voulu faire  
*Mary has all wanted to-do*  
 ‘Mary has wanted to do everything’

This adds a further interesting comparative syntax perspective to the Icelandic history. In both French and Icelandic, it is, for instance, possible, at least marginally, for a negated/ quantified object to climb out of tensed (subjunctive) clauses. This is illustrated in (57) (the French example is from Roberts 1997: 441).

- (57) a. Hann hefur **ekkert** viljað að ég segði  
*he has nothing wanted that I say*
- b. Il n'a **rien** voulu que je dise  
*he neg has nothing wanted that I say*  
 'He didn't want me to say anything'

Hence, these constructions were not affected when the OV word order constructions with ordinary non-quantified, non-negative objects disappeared, due to the loss of coherent complements ('defective' TP). The fact that it is not possible to have negative shift with verb movement in Icelandic and French is, then, due to the existence of a special shifted position for the negative argument to shift into ([Spec, NegP]). This position (NegO) has some property in common with the *wh*-position, and acts as a minimality block for movement of the finite verb across it; the finite verb cannot move past the Neg-position/Neg-property. This is illustrated for Icelandic in (58).

- (58) a. María hefur **ekkert** sagt Jóni  
*Mary has nothing said John*
- b. \*María sagði **ekkert** Jóni  
*Mary said nothing John*  
 'Mary didn't say anything to John'

Of course, there still remain highly topical theoretical questions that these negative/ quantified constructions bear quite directly on, notably the question of what triggers the movement and the related question of how to understand the fact that they sometimes look optional and sometimes obligatory. There is also the interesting question of how the landing site fits into

or does not fit into the A versus A-bar distinction or related distinctions.

A further diachronic correlation in both French and Icelandic is observed, supporting the hypothesis that overt restructuring effects in earlier periods of these two languages should be treated in a similar way. Namely, earlier periods of both Icelandic and French allowed referential null subjects, whereas the modern stage of these languages does not. According to Roberts (1997), referential null subjects were lost from French in the seventeenth century, and the loss of long infinitive movement (for main verbs) together with the loss of overt restructuring in French also took place in the seventeenth century. Referential null arguments disappeared from the history of Icelandic at the same time as OV word order disappeared. Like the OV word order patterns, referential null arguments had also remained quite stable from the earliest Icelandic texts until the eighteenth or nineteenth centuries (cf. Hjartardóttir 1993; Sigurðsson 1993; Hróarsdóttir 1996, 1998). According to Hróarsdóttir (1996, 1998), null arguments of the types that are ungrammatical in Modern Icelandic still occurred frequently in the language of speakers born between 1730 and 1750, or in texts dating from approximately 1800; then they disappeared in a relatively short time. Hence, it is indeed tempting to link the loss of null arguments to the loss of long infinitive movement and the loss of overt restructuring effects in general.

We also note an interesting link from our analysis of the loss of OV in Icelandic to the history of English (see Biberauer & Roberts 2005). In

short, they take both VP-raising to [Spec, vP] and vP-raising to [Spec, TP] to be pied-piping operations. Furthermore, the option of pied-piping is used to explain parameter variation. They claim that the [+ pied-piping] setting may be interpreted as telling the system to 'move an XP, not an X'. The Spec pied-piping languages, moreover, are assumed to have a choice of ways of satisfying T's features since the non-pied-piping languages lack the pied-piping option, and in head pied-piping languages, movement of the DP would not be enough. One of Biberauer & Roberts' (2005) most important results is that the loss of the optionality (just as the loss of optionality with regard to the status of the T-node attracting the VP in the history of Icelandic) and its replacement with just the non-pied-piping/stranding variant (subject DP-movement to [Spec, TP] and object DP-movement to [Spec, vP]) underlies much of the word order change observed during the Middle English period.

Finally, defective T in restructuring might mean that T actually does not exist in the structure, but just as a feature on the embedded verb. This would force Agree + Move of embedded material to the matrix in certain languages (remnant movement) in order to identify the T. If a certain element in the language is to be interpreted as Spec,TP (expletive), then this defect disappears on the T, and T must be present in the structure, which again makes it impossible for the T-domain to restructure and movement to the matrix-domain becomes impossible.<sup>15</sup>

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<sup>15</sup>Thanks to A-L Wiklund for bringing this observation to my attention.

## 5 Summary

Although Modern Icelandic has pure VO order with regard to the order of objects and non-finite verbs, it has been noted that many examples of OV order can be found in Old(er) Icelandic texts. However, it is generally assumed that both Old and Modern Icelandic have obligatory movement of the finite verb to a verb-second position, in both main and subordinate clauses.

Various ways to account for the loss of OV word order patterns in the history of Icelandic have been put forward in the literature during the past decade. In this paper, we have focused on how to account for the attested ‘split’ word order pattern, where the non-finite verb may occur interspersed between two DPs, or where the two DPs have been split up. We proposed handling the split clusters in the spirit of Hinterhölzl’s (2006) analysis, using his extension of verb-raising to verb projection raising in the West Germanic languages by remnant TP movement, via the assumption that PredP may pied-pipe the direct object when it moves. The application of this proposal was shown to put a new light on the diachronic aspect, by means of the loss of (overt) restructuring in Modern Icelandic, due to the fact that the TP could be ‘defective’ in the old language, allowing the VP/PredP to move past it, further up in the structure.

In sum, this leads to an analysis quite different from a traditional one, and much closer to that of the West Germanic languages exhibiting OV word order. Both OV and VO languages are now assumed to be able to

have overt long distance scrambling (restructuring effects), although the effects of this movement are obscured in VO languages.

## Appendices

### Appendix A: Primary texts

[Finn]. *Finnboga saga ramma*. Edited by Hugo Gering. Verlag der Buchhandlung des Waisen Hauses, Halle, 1879. Heroic epic. Date of composition: 1330-1370.

[Guðm]. *Saga Guðmundar Arasonar, Hóla-biskups, eptir Arngrím ábóta. Biskupa sögur*. Second volume, pp. 1-220. Hið íslenska bókmenntafélag, Copenhagen, 1878. Story of bishops. Date of composition: 1350-1365.

[Árn]. *Árna saga biskups*. Edited by Þorleifur Hauksson. Stofnun Árna Magnússonar in Iceland, Reykjavík, 1972. Story of bishops. Date of composition: 1375-1400.

[Dín]. *Dínus saga drambláta*. Edited by Jónas Kristjánsson. Riddarasögur I. Háskóli Íslands, Reykjavík, 1960. Chivalric romance. Date of composition: 1375-1400.

[Sig]. *Sigurðar saga þögla*. Edited by M. J. Driscoll. Stofnun Árna Magnússonar in Iceland, Reykjavík, 1992. Icelandic romance. Date of composition: early fifteenth century.

[Vikt]. *Viktors saga og Blávus*. Edited by Jónas Kristjánsson. Riddarasögur II. Handrita-stofnun Íslands, Reykjavík, 1964. Chivalric romance. Date of composition: ca. 1470.

[Afs]. *Morðbréfabæklingar Guðbrands biskups Þorlákssonar, 1592, 1595 og 1608, með fylgiskjölum*. Sögufélagið, Reykjavík, 1902-1906. Afsökunarbréf Jóns Sigmundssonar. Document/formal letter. Date of composition: 1502-1506. Transcript made by Bishop Guðbrandur Þorláksson, 1592.

[Morð]. *Morðbréfabæklingar Guðbrands biskups Þorlákssonar, 1592, 1595 og 1608, með fylgiskjölum*. Sögufélagið, Reykjavík, 1902-1906. Morðbréfa-bæklingar Guðbrands

- biskups. Document. Date of composition: 1592.
- [Skál]. Sögu-þáttur um Skálholts biskupa fyrir og um siðaskiptin. *Biskupa sögur*. Second volume, pp. 235-265. Hið íslenska bókmenntafélag, Copenhagen, 1878. Story of bishops. Date of composition: late seventeenth century.
- [Árm]. *Ármanns rímur eftir Jón Guðmundsson lærða (1637) og Ármanns þáttur eftir Jón Þorláksson*, pp. 91-121. Edited by Jón Helgason. Íslensk rit síðari alda, first volume. Hið íslenska bókmenntafélag, Copenhagen, 1948. A short narrative story. Date of composition: late seventeenth century.
- [Munn]. *Munnmælasögur 17. aldar*. Edited by Bjarni Einarsson. Íslensk rit síðari alda, volume 6. Hið íslenska fræðafélag í Kaupmannahöfn, Reykjavík, 1955. Folk tales, in oral tradition. Date of composition: 1686-1687.
- [J.Ey.]. *Ferðasaga úr Borgarfirði vestur að Ísafjarðardjúpi sumarið 1709, ásamt lýsingu á Vatnsfjarðarstað og kirkju*. Eftir Jón Eyjólfsson í Ási í Melasveit. Blanda II. Fróðleikur gamall og nýr, pp. 225-239. Sögufélagið, Reykjavík, 1921-1923. Travelogue; a story from a journey. Date of composition: 1709.
- [Bisk]. *Biskupasögur Jóns prófests Haldórssonar í Hítardal*. Með viðbæti. Skálholtsbiskupar 1540-1801. Sögufélagið, Reykjavík, 1903-1910. Story of bishops. Date of composition: 1720-1730.
- [Próf]. *Æfisaga Jóns prófests Steingrímssonar eftir sjálfan hann*. Sögufélagið, Reykjavík, 1913-1916. Biography. Date of composition: 1785-1791.
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- [Esp]. *Íslands Árbækur í söguformi*. Af Jóni Espólín fyrrum Sýslumanni í Skagafjarðar Sýslu. Hið íslenska bókmenntafélag, Copenhagen, 1843. Jón Espólín. Annual stories, in epical form. Date of composition: first half of the nineteenth century.

## Appendix B: Bibliographical information for the nineteenth century letters

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*Frásögur um fornaldarleifar* 1817-1823. First volume. Edited by Sveinbjörn Rafnsson. Stofnun Árna Magnússonar, Reykjavík, 1983.

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*Gömul Reykjavíkurbref* 1835-1899. Edited by Finnur Sigmundsson. Íslensk sendibréf VI. Bókfellsútgáfan, Reykjavík, 1965.

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*Magnús Stephensen, Brjef*. Edited by Hið íslenska Fræðafélag í Kaupmannahöfn. Safn Fræðafélagsins um Ísland og Íslendinga IV. Copenhagen, 1924.

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*Skrifarinn á Stapa*. Sendibréf 1806-1877. Edited by Finnur Sigmundsson. Íslensk sendibréf I. Bókfellsútgáfan, Reykjavík, 1957.

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## Microvariation in object positions: Negative Shift in Scandinavian

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In the Scandinavian languages, sentential negation must be licensed outside VP, necessitating leftward movement of negative objects, *Negative Shift* (NegS). While string-vacuous NegS is possible in all Scandinavian varieties, there is a fair amount of cross-linguistic variation as to non-string-vacuous NegS. In particular, the varieties contrast in which constituents can be crossed by NegS and whether or not crossing of a certain constituent requires the presence of an intervening verb.

The paper discusses which difficulties for syntactic analysis arise from the variation as to the applicability of NegS and why other movement operations do not display such a range of variation.

### 1 Introduction

In the Scandinavian languages, there are two ways of formulating the negative sentence in (1), either with a negation marker and an indefinite quantifier, (1)a, or with a negative object, (1)b. The example in (1) illustrates this for Danish; the same alternation is found in the other Scandinavian languages.

- (1) a. Per læste måske ikke nogen bøger. *Danish*  
       *Per read maybe not any books*
- b. Per læste måske ingen bøger.  
       *Per read maybe no books*

The paper focuses on the latter construction and investigates the variation across the Scandinavian languages as to the distribution of negative objects.

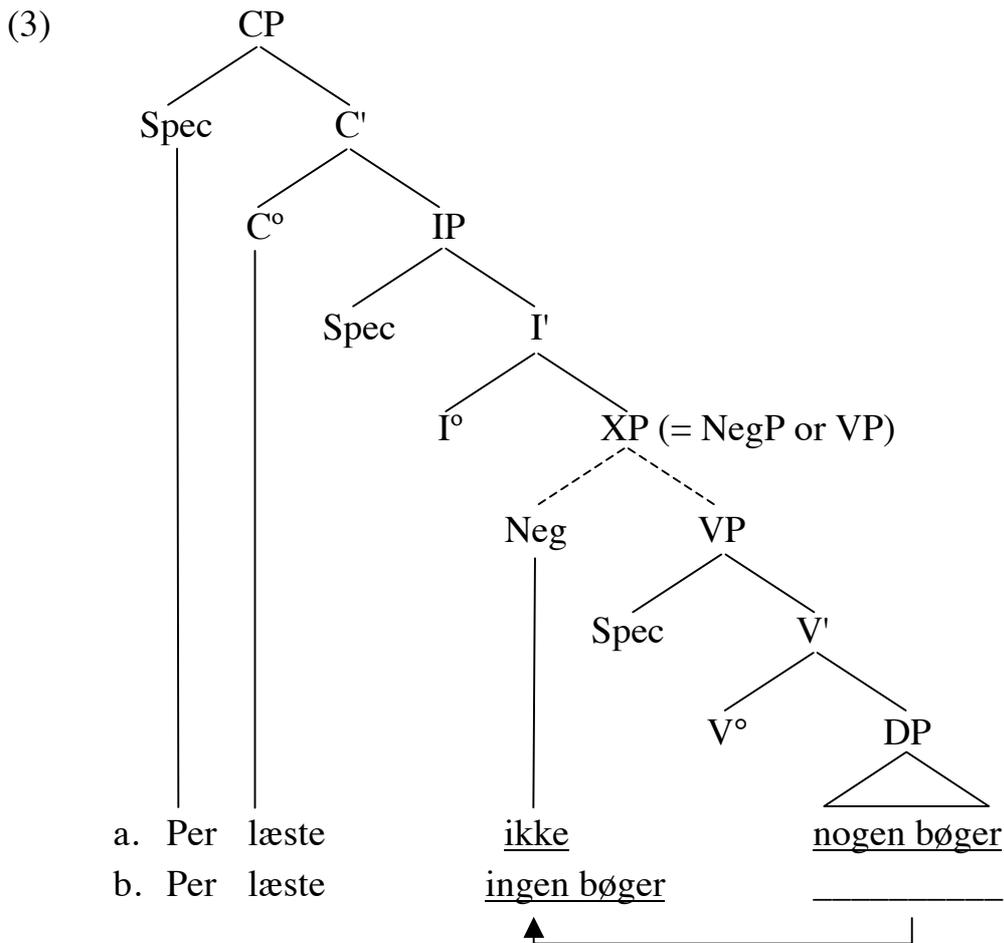
Negative objects are peculiar as they do not occur in the canonical object position under a sentential negation reading in Scandinavian. As shown in (2)b, a negative object cannot follow a non-finite main verb.<sup>1</sup>

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<sup>1</sup> Occurrence of a negative object in VP-internal position is possible if a narrow scope reading can be constructed; see Svenonius (2002).

- (2) a. Per har måske ikke [VP læst nogen bøger] Danish  
 Per has maybe not read any books
- b. \*Per har måske [VP læst ingen bøger]  
 Per has maybe read no books

The above data suggest that a negative object must undergo leftward movement out of VP, henceforth *Negative Shift* (NegS); cf. K. K. Christensen (1986, 1987), Rögnvaldsson (1987), Jónsson (1996), Svenonius (2000, 2002), and K. R. Christensen (2005). The present analysis takes NegS to be triggered by the need to license sentential negation outside VP. In the generative literature, the target position of NegS has been considered to be the specifier position of NegP (XP=NegP) or a position adjoined to VP (XP=VP); cf. (3). The exact structural position of negative objects will be left open as it does not matter here.



While string-vacuous NegS as in (1)b/(3)b is possible in all Scandinavian varieties, there is a considerable amount of cross-linguistic variation as to non-string-vacuous NegS. In particular, the varieties contrast in (a) which constituents may be crossed by NegS and (b) whether crossing of a certain constituent requires the presence of a main verb *in situ*. NegS across a verb, indirect object, preposition, and infinitive is discussed in section 2.1-2.4, respectively. The paper concentrates on the data, touching only briefly on the source of this variation and the difficulties for syntactic analysis that arise from this variation.

## 2 Non-string-vacuous Negative Shift

### 2.1 NegS across a verb *in situ*

As shown in (4), NegS of a direct object is permitted in all Scandinavian varieties (Ic=Icelandic, Fa=Faroese, Da=Danish, Sw=Swedish, No=Norwegian) if the verb has undergone V<sup>o</sup>-to-I<sup>o</sup>-to-C<sup>o</sup> movement.

- (4) a. Ég sagði ekkert \_\_\_\_\_<sub>v</sub> \_\_\_\_\_<sub>o</sub>. *Ic*  
 b. Eg segði einki \_\_\_\_\_<sub>v</sub> \_\_\_\_\_<sub>o</sub>. *Fa*  
 c. Jeg sagde ingenting \_\_\_\_\_<sub>v</sub> \_\_\_\_\_<sub>o</sub>. *Da*  
 d. Jag sa ingenting \_\_\_\_\_<sub>v</sub> \_\_\_\_\_<sub>o</sub>. *Sw*  
 e. Jeg sa ingenting \_\_\_\_\_<sub>v</sub> \_\_\_\_\_<sub>o</sub>. *No*  
     *I said nothing*

However, NegS across a verb *in situ* is subject to cross-linguistic variation. In the Insular Scandinavian languages (ISc), a negative object may occur to the left of a non-finite verb *in situ*; cf. (5).<sup>2</sup>

<sup>2</sup> Certain non-negative quantified objects may optionally move to the left of VP in Ic as well; cf. Rögnvaldsson (1987), Jónsson (1996), and Svenonius (2000).

- (5) a. Ég hef engan séð \_\_\_\_\_. *Ic*  
*I have nobody seen* (Rögnvaldsson 1987: 37)
- b. Petur hefur einki sagt \_\_\_\_\_. *Fa*  
*Peter has nothing said*

For the Mainland Scandinavian languages (MSc), in contrast, NegS across a verb is usually claimed in the literature to be stylistically marked (see K. K. Christensen 1986, Faarlund et al. 1997, Svenonius 2000 on No, Holmes & Hinchliffe 2003 on Sw, and K. R. Christensen 2005 on Da). It is found in literary or formal styles, referred to as Scan1, (6)a, but is ungrammatical in colloquial speech (Scan2), (6)b. Since NegS cannot not take place, (2)b, the *ikke...nogen*-variant, which is always acceptable, must be used in case NegS is blocked, (7).

- (6) a. Manden havde ingenting sagt \_\_\_\_\_. *Scan1*
- b. \*Manden havde ingenting sagt \_\_\_\_\_. *Scan2*  
*man-the had nothing said*
- (7) Manden havde ikke sagt noget. *Scan1/Scan2*  
*man-the had not said anything*

However, NegS across a verb *in situ* is not only a matter of style but also subject to dialectal and inter-speaker variation. Thelander (1980) observes differences between Northern (Västerbotten, Umeå) and Southern Swedish (Eskilstuna, Örebro) in the distribution of negative objects. Moreover, in a dialect study on Western Jutlandic (WJ), 15 out of my 16 informants judged NegS across a verb *in situ* as unmarked.<sup>3</sup> In contrast, the vast majority of my Norwegian informants did not accept it at all, not even in formal style.

In addition, in the *BySoc Corpus* of spoken Da 7% (= 8 out of 114) of the matches on the lexical items *ingenting/intet* 'nothing' are clause-medial objects preceding a verb *in situ*, indicating that the construction in (6) is in fact used in spoken language. Furthermore, a Google blog search (Google web for Fa) on

<sup>3</sup> The study was carried out within the NORMS Dialect Workshop in Western Jutland January 2008.

certain clauses, negated by *ingenting/intet* to the left of a VP-internal main verb or by *ikke...nogen*, produced the results in Figure 1: While clause-medial negative objects preceding a main verb *in situ* were quite frequent in ISc and possible in Da and Sw, there was no hit for this construction in No (Bokmål).

**Figure 1: Percentage of *negative object* < *main verb* orders**

	<i>Ic</i>	<i>Fa</i>	<i>Da</i>	<i>Sw</i>	<i>No</i>
<i>segja/siga/sigel/ säga/si</i> ('say')	100,0% (1/1)	63,6% (14/22)	7,7% (1/13)	17,4% <sup>4</sup> (8/46)	0,0% (0/3)
<i>heyra/hoyra/høre/ / höra/høre</i> ('hear')	88,9% (16/18)	90,0% (63/70)	55,6% (35/63)	11,3% (6/53)	0,0% (0/7)
<i>sjá/síggja/se/ se/se</i> ('see')	83,3% (10/12)	13,6% (8/59)	22,2% (4/18)	13,2% (5/38)	0,0% (0/7)
<i>fá/fáa/fá/ få/få</i> ('receive')	50,0% (1/2)	43,5% (10/23)	19,2% (5/26)	14,3% (5/35)	0,0% (0/2)
<i>gera/gera/gøre/ göra/gjøre</i> ('do')	20,0% (1/5)	48,1% (13/27)	15,2% (5/33)	18,4% (9/49)	0,0% (0/7)
<b>Total</b>	<b>76,3%</b> (29/38)	<b>53,7%</b> (108/201)	<b>32,7%</b> (50/153)	<b>14,9%</b> (33/221)	<b>0,0%</b> (0/26)

(including sentences of the format

(auxiliary) *subject*<sub>1SG</sub> (auxiliary) *negative object* *verb*<sub>present/past/participle</sub> and  
(auxiliary) *subject*<sub>1SG</sub> (auxiliary) *negation marker* *verb*<sub>present/past/participle</sub> *object*)

The cross-linguistic variation as to NegS is illustrated in Figure 2. NegS may apply string-vacuously in all of the Scandinavian varieties under discussion. Moreover, NegS across a verb *in situ* is possible in WJ, Ic, Fa, and Scan1 whereas it is ungrammatical in Scan2 and No.<sup>5</sup>

<sup>4</sup> Instances of the Swedish saying *Jag säger ingenting/inget så har jag ingenting/inget sagt* ('I could say a lot about this but I won't.') are excluded.

<sup>5</sup> On the basis of the fact that a negative object cannot follow a non-finite verb within VP, NegS is taken here to be obligatory. NegS must take place in the languages under discussion even if it is string-vacuous; see (3)b. See K. K. Christensen (1986, 1987) and Fox & Pesetsky (2005b: 240-242) for an alternative approach according to which an *ingen*-object is licensed under adjacency to sentential negation which may be established by movement in all varieties except No/Scan2.

**Figure 2**

NegS across	<i>WJ/Ic/Fa/Scan1</i>	<i>Scan2/No</i>
∅ (= string-vacuous)	+	+
V	+	-

Notice that object movement across a verb is not permitted/prohibited as such in these varieties. Rather, different types of movement contrast in whether or not they may cross a verb in VP-internal position. On one hand, Object Shift presupposes movement of the main verb, as captured by Holmberg's generalization (Holmberg 1986, 1999). It cannot apply across a verb in any of the Scandinavian languages; cf. the contrast between (8) and (9).

- (8) a. \*Jeg læste ikke dem. *Da*  
 b. Jeg læste dem ikke \_\_\_\_.  
*I read them not*

- (9) a. Jeg har ikke læst dem. *Da*  
 b. \*Jeg har dem ikke læst \_\_\_\_.  
*I have them not read*

On the other hand, *wh*-movement, topicalization, passivization, and subject raising can apply across a verb even in Scan2/No; cf. (10).

- (10) a. Hva har du **solgt** \_\_\_\_\_. *No*  
*what have you sold*
- b. Bøkene har jeg **solgt** \_\_\_\_\_.  
*books-the have I sold*
- c. I går ble bøkene **solgt** \_\_\_\_\_.  
*yesterday were books-the sold*
- d. Etter min mening har Pål alltid **sett ut til** \_\_\_\_ å være intelligent.  
*in my opinion has P always looked out to to be intelligent*

Accordingly, occurrence of a negative phrase in topic or subject position is acceptable. (Since definite phrases are better topics, an *ingen*-phrase with definite NP is used in (11)a.)

- (11) a. Ingen av bøkene har jeg **solgt** \_\_\_\_\_. *No*  
*none of books-the have I* *sold*
- b. I går ble ingen bøker **solgt** \_\_\_\_\_.  
*yesterday were no books sold*

Figure 3 summarizes the acceptability of movement across a verb *in situ* in the various varieties. The contrast between NegS on one hand and *wh*-movement, topicalization, passivization, subject raising, and Object Shift on the other hand as regards the emergence of cross-linguistic variation as to the ability to cross an intervening verb might have to do with the fact that there is an alternative expression for sentential negation, namely the *ikke...nogen*-variant, whereas there are no equivalent alternative options for the latter constructions. Thus, the variation found with non-string-vacuous NegS might be considered to reflect contrasts as to which extent the *ingen*-variant may arise alongside the alternative *ikke...nogen*-variant, which is always acceptable.

**Figure 3: Movement across a verb *in situ***

	<i>WJ/Ic/Fa/Scan1</i>	<i>Scan2/No</i>
<i>wh</i> -movement	+	+
topicalization	+	+
passivization	+	+
subject raising	+	+
Negative Shift	+	-
Object Shift	-	-

Finally note that in other languages, NegS need not take place overtly. For instance, a negative object may appear in VP-internal position in English (En), following the main verb.

- (12) a. Peter probably didn't [VP read any books] *En*  
 b. Peter probably [VP read no books]

Similarly, *in situ* occurrence of a negative object was apparently possible in Finland Swedish (FS) around 1900 (see Bergroth 1917), but the sentences in (13) seem to be ungrammatical in present-day FS (Caroline Sandström, p.c.). Instead, like in Standard Sw, licensing of sentential negation must be carried out by overt NegS or usage of the *ikke...nogen*-variant; cf. (14).

- (13) a. Jag har **haft** ingenting att skaffa med den saken. *FS*  
*I have had nothing to do with this affair*  
 b. Han hade **haft** ingen aning om hela saken.  
*he had had no knowledge about the whole case*  
 (Bergroth 1917: 173)

- (14) a. Jag har ingenting **haft** att skaffa med den saken. *FS*  
*I have nothing had to do with this affair*  
 b. Jag har inte **haft** någonting att skaffa med den saken.  
*I have not had anything to do with this affair*

However, as pointed out to me by Caroline Sandström (p.c.), an *ingen*-object may appear *in situ* in the presence of a VP-external negation marker in the Sibbo dialect of FS (Eastern Nyland). The sentence in (15) gives rise to a negative concord reading ('I haven't had anything to do with this affair!').<sup>6</sup>

- (15) Jag har inte **haft** ingenting att skaffa med den saken. *Si*  
*I have not had nothing to do with this affair*  
 (Caroline Sandström, p.c.)

<sup>6</sup> Thereby, an additional negation marker to the immediate left of the *ingen*-phrase sometimes emerges, emphasizing negation (Caroline Sandström, p.c.).

- (i) Han vill inte se inte ingenting. *Si*  
*he will not see not nothing* (Caroline Sandström, p.c.)



## 2.2 NegS across an indirect object

NegS of a direct object (DO) across an indirect object (IO) is possible in those and only those varieties which permit NegS across a verb *in situ*. In Scan2 and No, where a verb *in situ* blocks NegS, NegS across an IO is not acceptable either, (18). In Ic, Fa, WJ, and Scan1, in contrast, it is possible, (19).

(18) \*Jeg har ingen bøker lånt barna \_\_\_\_\_. Scan2/No  
*I have no books lent children-the*

(19) a. Jón hefur ekkert sagt Sveini \_\_\_\_\_. Ic  
*Jón has nothing said Sveinn (Rögnvaldsson 1987: 46)*

b. Petur hefur einki givið Mariu \_\_\_\_\_. Fa  
*Peter has nothing given Mariu*

c. Jeg har ingen bøger lånt børnene \_\_\_\_\_. WJ/Scan1  
*I have no books lent children-the*

However, NegS of the DO across the IO gives rise to a so-called *Inverse Holmberg Effect* (Fox & Pesetsky 2005a): It is acceptable if the main verb stays *in situ*, (19), but it is ungrammatical if the main verb undergoes leftward movement as well, (20).<sup>7</sup> (Holmberg's generalization, in contrast, states that movement of the main verb must take place for Object Shift to be possible, cf. examples (8) and (9) above.)

<sup>7</sup> Note that NegS of the DO is compatible with movement of the main verb if the IO undergoes leftward movement as well. In this case, NegS of the DO is string-vacuous and, accordingly, it is possible even in Scan2 and No.

(i) a. Jeg lånte dem faktisk ingen bøker. Scan2/No  
*I lent them actually no books*

b. Barna lånte jeg faktisk ingen bøker.  
*children-the lent I actually no books*

- (20) a. \*Jón sagði ekkert Sveini \_\_\_\_\_. *Ic*  
*Jón said nothing Sveinn* (Rögnvaldsson 1987: 46)
- b. \*Petur gav einki Mariu \_\_\_\_\_. *Fa*  
*Petur gave nothing Maria*
- c. \*Jeg lånte ingen bøger **børnene** \_\_\_\_\_. *WJ/Scan1*  
*I lent no books children-the*

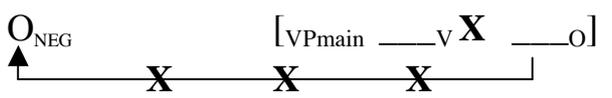
As NegS across an IO presupposes the presence of a verb *in situ*, it is not surprising that it is only possible in varieties which permit NegS across a verb in the first place (see Figure 4).

**Figure 4**

NegS across	<i>WJ/Ic/Fa/Scan1</i>	<i>Scan2/No</i>
∅ (= string-vacuous)	+	+
V	+	-
IO verb <i>in situ</i>	+	-
IO verb moved	-	-

The Inverse Holmberg Effect observed with NegS across an IO points to the conclusion that it is not the intervening constituent itself which blocks NegS, contrary to what e.g. K. R. Christensen (2005) suggests. A verb *in situ* may cancel out the blocking effect. The negative object may move across the IO if it also crosses the main verb. By the same reasoning, the base position of the object cannot be crucial for the availability of NegS either.

(21) **Inverse Holmberg Effect**

- a. \*S V O<sub>NEG</sub> [VP<sub>main</sub> \_\_\_\_<sub>v</sub> X \_\_\_\_<sub>o</sub>]  

- b. S Aux O<sub>NEG</sub> [VP<sub>aux</sub> \_\_\_\_<sub>Aux</sub> [VP<sub>main</sub> V X \_\_\_\_<sub>o</sub>]]  


At first glance, the fact that an intervening main verb cancels out the blocking effect would seem to indicate that the Inverse Holmberg Effect has to do with the target position of NegS to the left/right of the main verb (see Svenonius 2000 for an analysis along these lines). Apart from cross-linguistic variation, however, there is also variation across constructions as to the dependence of NegS on verb position, discussed in the following sections. This points out that the target position to the left/right of the main verb itself cannot be decisive for the acceptability of NegS either.

### 2.3 NegS across a preposition

According to K. R. Christensen (2005), NegS of the complement of a preposition is not permitted in MSc at all, neither in Scan1 nor in Scan2.

- (22) a. \*Jeg har ingen peget på \_\_\_\_\_. *Scan1/Scan2*  
*I have nobody pointed at*
- b. \*Jeg pegede ingen på \_\_\_\_\_.  
*I pointed nobody at* (K. R. Christensen 2005: 131)

However, my Danish informants, linguists at the University of Aarhus from different regions of Denmark, referred to as DaL below, showed an Inverse Holmberg Effect with NegS of a prepositional complement: They marginally accepted NegS across a preposition if the main verb occurred *in situ*, (23)a, but rejected NegS just across the preposition, (23)b.<sup>8</sup>

- (23) a. ?Jeg har ingen peget på \_\_\_\_\_. *DaL*  
*I have nobody pointed at*
- b. \*Jeg pegede ingen på \_\_\_\_\_.  
*I pointed nobody at*

<sup>8</sup> I found the same pattern with two of my six Swedish informants. In contrast, the other four informants rejected NegS across a preposition altogether, (22), although they accepted NegS across a verb, (6), reflecting the Scan1 pattern.

Likewise in Fa, NegS across a preposition was judged acceptable in the presence of a verb *in situ* whereas it was rejected by the majority of my informants if the main verb had undergone finite verb movement; cf. (24).<sup>9</sup>

- (24) a. Í dag hefur Petur ongan tosað við \_\_\_\_\_. *Fa*  
*today has Peter nobody spoken with*
- b. \*Í dag tosaði Petur ongan við \_\_\_\_\_.  
*today spoke Peter nobody with*

Moreover, Svenonius (2000) claims that NegS of the complement of a preposition in Ic improves if the movement also crosses the verb, though this contrast is not that strong, (25)b is degraded but not ungrammatical.<sup>10</sup>

- (25) a. Ég hef engan talað við \_\_\_\_\_. *Ic*  
*I have nobody spoken with*
- b. ?Ég talaði engan við \_\_\_\_\_.  
*I spoke nobody with* (Svenonius 2000: 272)

Finally in WJ, NegS just across the preposition is not even marked. NegS of the complement of the preposition is possible, independent of verb position.

- (26) a. Måske har hun ingen snakket med \_\_\_\_\_. *WJ*  
*maybe has she nobody spoken with*
- b. I går snakkede hun ingen med \_\_\_\_\_.  
*yesterday spoke she nobody with*

Summing up, there is not only cross-linguistic variation as to which constituent can be crossed by NegS (verb, IO, preposition) but also variation as

<sup>9</sup> The Faroese data was collected during the NORMS Dialect Workshop in the Faroe Islands August 2008.

Actually, in the absence of a verb *in situ*, NegS of a complement of a preposition seems to be subject to dialectal and inter-speaker variation as regards preposition stranding and pied-piping; see Engels (submitted-b).

<sup>10</sup> Depending on the verb-preposition combination, the preposition is stranded or pied-piped in Icelandic; see Jónsson (1996) and Svenonius (2000).

to whether crossing of a certain constituent requires the presence of a main verb *in situ* (see Figure 5).

**Figure 5**

NegS		<i>WJ/Ic</i>	<i>Fa/DaL</i>	<i>Scan1</i>	<i>Scan2/No</i>	
across	∅ (= string-vacuous)	+	+	+	+	
	V	+	+	+	-	
	IO	verb <i>in situ</i>	+	+	+	+
		verb moved	-	-	-	-
	P	verb <i>in situ</i>	+	+	-	-
		verb moved	+	-	-	-

## 2.4 NegS out of an infinitival clause

NegS out of a control infinitive is only acceptable in Ic if it also crosses the matrix main verb (cf. Svenonius 2000).<sup>11</sup>

<sup>11</sup> Though slightly more marked (possibly for pragmatic reasons), long NegS out of two infinitival clauses is possible as well:

- (i)
- a. Jeg har ingen penge **planlagt** **at opdrive** \_\_\_\_\_ ... *Da*  
*I have no money planned to find*  
 'I didn't plan to find any money ...'
- b. Jeg har ingen penge **prøvet** **at opdrive** \_\_\_\_\_ ...  
*I have no money tried to find*  
 'I didn't try to find any money ...'
- c. ?Jeg har ingen penge **planlagt at prøve** **at opdrive** \_\_\_\_\_ ...  
*I have no money planned to try to find*  
 'I didn't plan to try to find any money ...'  
 ... til at fortsætte projektet.  
*for to continue project-the*  
 '... to continue the project.' (Henrik Jørgensen, p.c.)
- (ii)
- a. Pétur hefur engu bréfi **lofað** **að svara** \_\_\_\_\_ . *Ic*  
*Petur has no letter promised to reply*  
 'Petur didn't promise to reply to any letter.'
- b. Pétur hefur engu bréfi **reynt** **að svara** \_\_\_\_\_ .  
*Petur has no letter tried to reply*  
 'Petur didn't try to reply to any letter.'
- c. Pétur hefur engu bréfi **lofað** **að reyna að svara** \_\_\_\_\_ .  
*Petur has no letter promised to try to reply*  
 'Petur didn't promise to try to reply to any letter.' (Ásgrímur Angantýsson, p.c.)

- (27) a. Hún hefur engan lofað að kyssa \_\_\_\_\_. *Ic*  
*she has nobody promised to kiss*
- b. \*Hún lofaði engan að kyssa \_\_\_\_\_, var það nokkuð?  
*she promised nobody to kiss was it rather*  
 'She didn't promise to kiss anybody (did she?)' (Hlíf Árnadóttir, p.c.)

Some of the DaL (DaL1) and WJ (WJ2) speakers show an Inverse Holmberg Effect with NegS out of an infinitival clause, too.

- (28) a. Han har ingen kager lovet at købe \_\_\_\_\_. *DaL1/WJ2*  
*he has no cakes promised to buy*
- b. \*Han lovede ingen kager at købe \_\_\_\_\_, vel?  
*he promised no cakes to buy well*  
 'He didn't promise to buy any cakes (did he?)'

The other DaL speakers (DaL2) do not permit long NegS at all, (29). Similarly, NegS out of a control infinitive seems to be ruled out altogether in Scan1 and Scan2; cf. see Christensen & Taraldsen (1989: 72).

- (29) a. \*Han har ingen kager lovet at købe \_\_\_\_\_. *DaL2*  
*he has no cakes promised to buy*
- b. \*Han lovede ingen kager at købe \_\_\_\_\_, vel?  
*he promised no cakes to buy well*  
 'He didn't promise to buy any cakes (did he?)'
- (30) a. \*Han har ingen bøger prøvd å lese \_\_\_\_\_. *Scan1/Scan2*  
*he has no books tried to read*
- b. \*Han prøvde ingen bøger å lese \_\_\_\_\_.  
*he tried no books to read*  
 'He didn't try to read any books.'

In contrast, the other WJ speakers (WJ1) permit NegS out of the infinitival clause, irrespective of the position of the matrix main verb; cf. (31). Likewise, NegS out of an infinitival clause is possible in Fa, independent of verb position, (32).

- (31) a. Han har ingen kager lovet at købe \_\_\_\_\_. WJ1  
*he has no cakes promised to buy*
- b. Han lovede ingen kager at købe \_\_\_\_\_, vel?  
*he promised no cakes to buy well*  
 'He didn't promise to buy any cakes (did he?)'
- (32) a. Allarhelst hevur Petur einki roynt at eta \_\_\_\_\_. Fa  
*probably has Petur nothing tried to eat*
- b. Allarhelst royndi Petur heldur einki at eta \_\_\_\_\_.  
*probably tried Petur also nothing to eat*  
 'Petur probably didn't try to eat anything.'

Hence, as with NegS across a preposition, there is cross-linguistic variation as to whether or not NegS out of a control infinitive is possible at all and, if so, whether it depends on the position of the matrix main verb. In addition, Figure 6 shows that there is variation across constructions with regard to these parameters. For instance, both Fa and DaL display an Inverse Holmberg Effect with NegS across a preposition. In contrast, NegS out of an infinitival clause gives rise to an Inverse Holmberg Effect in DaL1 whereas it is permitted in Fa and prohibited in DaL2, irrespective of verb position. These facts point to the conclusion that the target position to the left/right of the matrix main verb cannot be decisive for the availability of NegS as such.<sup>12</sup>

<sup>12</sup> However, NegS just across the infinitive is not prohibited altogether; it is possible under a narrow scope reading of negation in Da.

- (i) a. Han har lovet ingen kager at købe \_\_\_\_\_. WJ/DaL  
*he has promised no cakes to buy*
- b. Han lovede \_\_\_\_\_ v ingen kager at købe \_\_\_\_\_, ikke?  
*he promised no cakes to buy not*  
 'He promised not to buy any cakes (didn't he?)'

**Figure 6**

NegS across	WJ1	WJ2/ Ic	Fa	DaL1	DaL2	Scan1	Scan2 /No
∅ (= string-vacuous)	+	+	+	+	+	+	+
V	+	+	+	+	+	+	-
IO	verb <i>in situ</i>	+	+	+	+	+	+
	verb moved	-	-	-	-	-	-
P	verb <i>in situ</i>	+	+	+	+	-	-
	verb moved	+	+	-	-	-	-
Infin	matrix main verb <i>in situ</i>	+	+	+	+	-	-
	matr. main verb moved	+	-	+	-	-	-

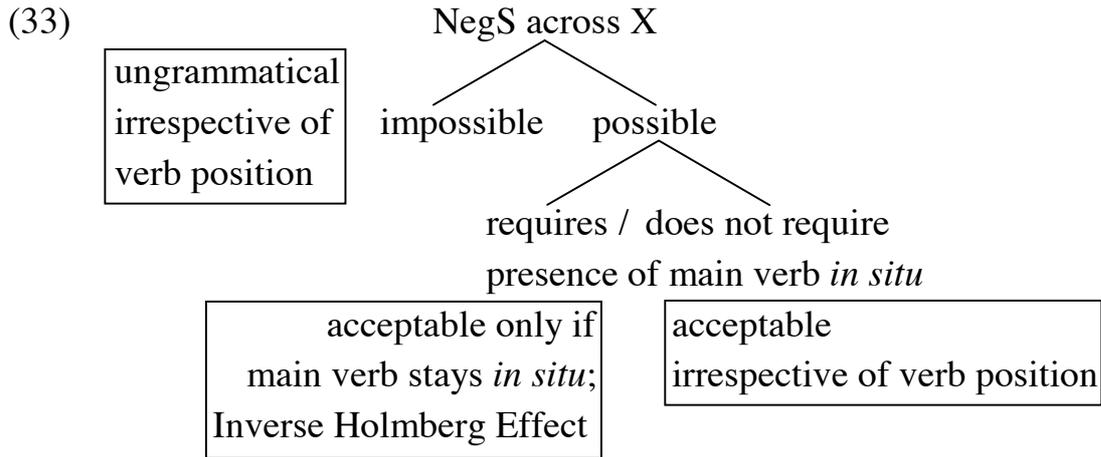
### 3 Conclusion

The preceding sections showed that while string-vacuous NegS exists in all the Scandinavian varieties, there is a considerable amount of variation as to the availability of non-string-vacuous NegS. In particular, the varieties contrast in which constituent can be crossed by NegS and whether or not crossing depends on the presence of a main verb *in situ*.

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The above data corroborate the hypothesis that it is not the intervening constituent itself which blocks NegS. Instead, it seems to depend on the target position/locality of movement whether NegS may cross just the infinitive.

- (ii) a. Han lovede [\_\_\_\_\_v [ingen kager at købe \_\_\_\_\_o]]  
✓WJ1/✓WJ2/✓DaL1/✓DaL2
- b. Han lovede ingen kager [\_\_\_\_\_v [ \_\_\_\_\_o]]  
✓WJ1/\*WJ2/\*DaL1/\*DaL2



Contrary to the widely held belief, non-string-vacuous NegS in MSc is not only a matter of style but it is also subject to dialectal and inter-speaker variation. While Scan2/No only permits string-vacuous NegS, the presence of a main verb *in situ* does not block NegS in Scan1, DaL, Fa, Ic, and WJ, and is even required during NegS across an IO (Inverse Holmberg Effect). In contrast, NegS across a preposition and NegS out of an infinitive are not necessarily dependent on the presence of a verb *in situ*; they may be permitted or prohibited, irrespective of the position of the matrix main verb; cf. Figure 6 above.

Furthermore, it was laid out that neither the intervening elements (main verb/indirect object/preposition/infinitive) nor the base position of the negative phrase (as complement of transitive/ditransitive verb/preposition/infinitival verb) or its target position (to the left/right of the matrix main verb) may capture the observed variation by themselves. An intervening verb makes NegS possible in some cases but not in others. Engels (submitted-a) accounts for Scandinavian NegS within Fox & Pesetsky's (2003, 2005a,b) cyclic linearization model. Under this approach, non-string-vacuous movement must proceed through the left edge of Spell-out domains. As a consequence, variation across languages and constructions as to the acceptability of non-string-vacuous NegS may be derived from differences in the availability of these intermediate positions.

Finally, the large range of variation as to the distribution of negative objects in Scandinavian was considered to be connected to the fact that there is an alternative expression for sentential negation, namely *ikke...nogen*. Thus, the variation found with non-string-vacuous NegS might be taken to mirror contrasts as to which extent the *ingen*-variant may arise alongside the alternative *ikke...nogen*-variant, which is always acceptable.

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# Notes on language change and grammar change

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## 1 Introduction

### 1.1 Overview

In this paper two different approaches to language change are presented: First, the E-language approach of traditional historical linguistics, in which language was studied as an entity and where the interest lay in its group properties, and second, the shift towards an I-language approach, in which the individual properties are central.

Following the generative view, children are internally endowed with Universal Grammar (UG), and they develop a grammar, a mature linguistic capacity, on exposure to primary linguistic data (PLD). It is important to make a distinction between the two notions grammar and language: GRAMMAR is an internal, individual system represented in people's mind/brain (I-language), whereas LANGUAGE is a group product of those systems and their use (E-language) (cf. Chomsky 1986). Likewise, we must distinguish between I-language changes and E-language changes: E-language changes are changes in the triggering experience (PLD), paving the way for a possible I-language change, a formal change in the grammar that takes place with a new generation acquiring the language.

The explanatory success of a diachronic change includes a three step process, with a) innovation of variation (E-language change), leading to b) acquisition-based grammar change (I-language change), and c) presumably two very different kinds of diffusion, beginning with gradual diffusion in language

use. The first process involves *historical* (or *genetic*) explanations, typical for evolutionary phenomena and often exemplified by the results of the historical-comparative method in linguistics, while the second process involves a *theoretical* explanation, typical of current generative grammatical research. The traditional view is that changes in the E-language reflect changes in the I-language (thus, such concepts as grammar competition, cf. Kroch 1989b). This leads us to the question of what exactly the E-language then is. Cues are generally taken to be certain elements of I-language in the input, but the input is E-language tokens. The notion of cues, then, (or parameter expression) defines a relation between E-language tokens and I-language parameter values. Roberts and Roussou (2003) and Trips (2001) argue for a crucial distinction between the notion of cues and the notion of parameters. In Lightfoot's (1999a) cue-based acquisition, on the other hand, cues are fragments of the trigger experience a learner is exposed to, a part of a structure, whereas parameters are abstract properties of grammars. Hence, the parameters are the cues.

### *1.2 Language versus grammar*

Within generative theory, the language system is generally conceived of as an internalized grammar. Hence, *grammar* is the cognitive capacity which determines what the shape of well-formed linguistic expressions are for the individual speaker. This notion of grammar is related to Chomsky's (1986) distinction between E(xternalized) and I(nternalized) language, where he claims that UG can be viewed as a function that maps observable utterances (an E-language) into an internalized grammar (I-language). The E-language is the set of sentences in the linguistic environment, whereas the I-language is the mental or internalized grammar that is developed on the basis of UG and the E-language. The two concepts are complementary as E-language represents observable linguistic expressions produced by a community and I-language represents the knowledge that the individual speaker puts to use when producing and perceiving linguistic expressions. That is, the processing mechanisms

involved in producing and comprehending utterances are claimed to be separate from the grammatical knowledge (competence) in the mind.

It is implicit in Chomsky's (1999) work that language variation may be a part of E-language rather than I-language. However, the I-language must still be able to derive all the variables. That is, the I-language's computational system must have the ability to make all the variants possible.

*Grammar* can be defined as a set of parameter values, and it is generally assumed that there are no changes in the grammar after the Critical Period. It consists of mental entities that arise in the mind/brain of individual speakers as they are exposed to the trigger experience, the input available to the child during language acquisition. The final state of children's mature capacity is a grammar. In other words, grammar is the cognitive structure that is used in producing and comprehending utterances, it is situated in the mind of an individual speaker and it contains all knowledge about the language. As the grammar of individual speakers is acquired on the basis of the trigger experience, the PLD they are exposed to, speakers may end up with slightly different grammars. *Language*, on the other hand, is the output of certain people's grammars, and it is generally assumed that changes in the E-language may take place after the Critical Period. It is an external entity, postulated to come into existence across a series of speakers along a certain time span. It is an actual occurrence of the product of human behavior in communicative interaction, as it is pronounced, grammatically structured, and semantically and pragmatically interpreted. Hence, it is the population of utterances in a speech community (see Croft 2000: 26). E-language is further a specification of the set of implementation strategies relating I-language constructs and their realizations in E-language (the user's intentions). In other words, it is a conception of language as a 'social practice', involving complex sociopolitical, historical and cultural elements (cf. Chomsky 2000: 49-50).

We can assume substantial changes in the E-language, such as alternations in frequency, without there being an immediate change in the I-

language. These would then reflect gradual (E-language) changes in the PLD, paving the way for an acquisition-based grammar (I-language) change. We can also assume that E-languages are the by-products of the diffusion of parameter settings associated with I-languages, where the diffusion takes place via further instances of acquisition.

## **2 From traditional language change to internal systems**

The nineteenth century scholars were concerned with finding out exactly how the contemporary languages had evolved. They looked at historical relationships to find the ancestral language. Language was observed as an external object, that changed according to fundamental laws, and it was believed that with enough research, these laws could be discovered. These linguists were primarily interested in sound changes – how one sound is replaced with another sound, and presumably, given enough of these cumulative sound changes, how the language would have transformed into a different language.

Eventually, it was believed that sound change was the principal manner in which languages changed, and that these changes were regular and systematic, and exceptionless. This manner of looking at change reflects the way *language* was perceived to be, a language was an object that had an independent existence. It did not seem to exist in the minds of its individual speakers as such, but as a property of the race, and changes were hence seen to be symptomatic of the people who spoke the language. The believers in this exceptionless regularity were called neogrammarians (*Junggrammatiker*). The research had mainly been done on Germanic and Romance languages, so the “evidence” was only valid for these languages, and their scientific evidence was based on the comparative method solely, wherein two languages are compared, and the differences are used to reconstruct a language they had no record of (Proto-Germanic), which again were used to reconstruct Indo-European.

However, the notion that language change is the same as law governed sound change does not give any explanation as to why the change took place.

After 1878, the interest shifted, and the scholars now wanted to find the *causes* for change, but they did not get very far. One early, possible explanation came from Rask (1818), who claimed that all change is towards something *simpler*. This does not explain the reason why, though, and *simplicity* was not defined. Another possibility lay in Darwinism, which inspired linguists to look at languages as organisms, which compete with each other for survival. Language was direction-driven, towards survival against others, but again, this does not explain exactly why some survive and some die out, or why one specific change should be better than another. Mainly one kind of scientific evidence was involved here, the comparative method. By this method, a common source is postulated for corresponding forms in different languages; the corresponding forms are derived from the common source by sound changes. Changes were taken to be directional as in biology, with languages changing in systematic ways, following fixed developmental laws, but there was active disagreement about which direction that was.

De Saussure (1915) gave linguists a new direction; that of “synchronic linguistics” – the study of languages as systems existing at a given point in time. For de Saussure, a language was an entity that has existence in a society. There is a distinction between the physical manifestation of language; *parole*, the sounds that people produce, and the underlying system of *langue*, which is what those physical manifestations exemplify. For de Saussure, as for the historians, language was an entity with a seemingly independent existence. Prior to de Saussure’s (1915) work, there did not exist a clear distinction between synchronic and diachronic linguistics; until then all work was diachronic. Saussure was the first to make a clear distinction between the notions of *synchrony* (the study of language in its static states) and *diachrony* (the study of language in its evolutionary stages). An important responsibility for the neglect of the study of language changes at this time is a consequence of emphasizing that the study of language structure from a synchronic viewpoint was a necessary prerequisite to the study of language change. The study of language

change, thus, was pushed aside for a long period of time. Besides, studying language change did not seem to be consistent with the current theories of synchronic linguistics.

Structuralists mainly studied the language structure (grammar) as a whole system, and assumed that the grammar could conceal a tendency towards harmony and simplification. They considered the language structure to be both independent and isolated, it is a community of the units of the language, working together, and fighting against each other, but the language users themselves are not really involved. The language structure is able to change itself in order to establish a harmony between the units of the language. The changes are *internal* and the language users are more like ‘consumers’ that do not have any other choice but to reflect the change in their language. Hence, we should expect the changes to occur at the same time through the language community instead of spreading from one user to the next. Since the changes are internal, due to a fault that needs to be repaired, it is natural to assume that this need does not only arise with one user, but everywhere where this language system exists. In sum, linguistic change takes place when the language structure changes itself. However, the question of how the system is able to change itself is left unanswered.

For the major part of the twentieth century, synchronic linguistics was considered to be prior to diachronic linguistics. One of the major problems of this view has to do with the directionality of change. It became central to the evolutionary view of biology at the time that the replacement of old species by new is not merely a process of random changes, but rather a movement from lower to higher; mutations which succeed in spreading are those which give their possessor an advantage in struggle for survival, while disadvantageous traits are eliminated.

In sum, traditional approaches to linguistic study saw language as external, as an object whose properties could be studied independently of its speakers. The historicists saw language and language change as something

relating to sound changes, which again was related either to something specific about a language's history, or by determinative forces of directionality, that languages followed a fixed development path (often towards simplicity), without giving a satisfactory definition of what the term meant. De Saussure and the descriptionists also looked at language from this external viewpoint. Saussure's notion of language as a social fact, existing in a language community rather than in individual minds, implied that change can only happen in the *parole*, in language use or production (E-language), because individuals do not have access to the *langue*, the system, as it exists in the collective mind of a society. Hence, the traditional view was to look at a speaker's output, in order to describe the properties of the language. The aim was not to discover general theories about language, but to describe a specific language under study. Languages were believed to have limitless diversity, so that no general theory was to be found. Under this traditional view, all changes in how individuals speak is therefore taken to be a change in the external production, in the *language*.

Chomsky (1986) distinguishes between language *competence* and language *performance*, in a similar fashion to de Saussure's *langue* and *parole*. The initial state, or UG, is a highly structured system of abstract principles and parameters, and the language learner 'sets' these parameters according to exposure to the language around her. What is attained by the learner is not a *language*, but an internal *grammar*, and changes, according to this view, take place in this abstract grammar, not in the performed language. A person's grammar competence (knowledge and understanding) is different from her performance (what she does with that knowledge). This difference between competence and performance is generally known as I-language versus E-language.

The most important consequence of this biological view of linguistics is the claim that language is a mental object related to the individual speaker (cf. e.g. Chomsky 1986: 21ff.). This, in turn, advocates a shift in focus from the

study of E-language to the study of I-language. Hence, the standard generative conceptualization of language became one where language is treated as species-defining genetically inherited phenomenon, where fundamental aspects of our knowledge of language is genetically determined or innate. Linguistics is thus a part of the scientific investigation of human nature, where grammar is a part of our mental organization. Our innate grammar (I-language) is clearly a *biological object* and should be analyzed by the methodology of natural sciences. It also follows that the linguistic study must go beyond linguistic description and explain what we know and how we acquire language. The biolinguistic perspective has had major effects on the study of both first language acquisition and language change, as evidence from both language acquisition and change may provide important insight into universal grammar.

Traditional nativist views of language acquisition argue for innate knowledge of the dimensions along which languages vary, emphasizing both the substantive and linguistically specific nature of the innateness and also the directive role of this knowledge in the learning process (Aslin, Saffran, and Newport 1999: 361). Chomsky (2000: 122), for instance, claims that the conditions of language acquisition make it plain that the process must be largely inner-directed, as in other aspects of growth, which means that all languages must be close to identical, largely fixed by the initial state. Hence, language acquisition is similar to the growth of organs generally; it is something that happens to a child, not that the child does (Chomsky 2000: 7). The child, endowed with certain innate capacities, automatically acquires knowledge of a language.

However, we still need a better understanding of the conditions under which grammars can emerge in the mind/brain of individual speakers as configurations of parameter settings with values very distinct from those characterizing the I-languages. We also need a better characterization of the relationship between specific aspects of the trigger experience (PLD) and the attainment of certain parameter values (cf. DeGraff 1999b: 9-11). Furthermore,

how exactly do PLD affect the development of grammatical systems, and what is the relationship between the initial (pre-experience) state of the innate language faculty and fully specified stable grammars (cf. DeGraff 1999b: 12)? Also, the interesting question remains if children really can acquire a language without well-formed input. For example in the creation of Creole languages and in other cases of insufficient language input, what enables them to do this? Bickerton's (1981) Language Bioprogram approaches the question of whether (and if so, how) there could exist a highly specified genetic program for language, capable of producing a well-formed language even if no well-formed language was available as a model. This new emphasis has resulted in a revived interest among linguists to study languages cross-linguistically.

### **3 Input data and cues**

The child-learner must derive her grammar from UG by fixing the values of the different parameters on the basis of PLD. However, we also need to explore how she can do this. We need to assume either a learning theory or cues in addition to UG and PLD.

Clark's (1992) approach to language learnability and acquisition uses natural selection, as simulated by a genetic algorithm, to stimulate parameter setting. By using the P&P-model with a finite set of parameters (with a finite set of possible values), he claims it to be possible to determine the size of the learner's hypothesis space simply by multiplying out the number of parameter values. If so, then the hypothesis space that the learner must consider at any given step in the acquisition process is reduced. In a system where the learner could reset any number of parameters, the hypothesis space would be the entire set of languages allowed by UG. In Clark's system, on the other hand, the number of hypotheses that the learner must entertain is reduced to the number of parameter settings. The constraint reduces the burden placed on the learner because a vastly smaller number of potential hypotheses would need to be sifted through at any given step in the procedure.

The child-learner translates each parameter value into a yes-no question, and then poses the resulting question to her linguistic environment. However, every given sentence that the learner encounters (meets) might be a positive answer for conflicting parameter settings; she might then have difficulty interpreting the relevance of the positive evidence for the linguistic environment. Clark's answer to this problem is that each parameter comes with description of a trigger; an abstract description of a syntactic structure that is decisive for setting the parameter to that particular value. When the child encounters a new input sentence, she would scan the set of parameters to see if the correct item matches a trigger associated with some value.

Clark and Roberts (1993) use this learnability framework to provide an analysis of diachronic change. However, the main problem with this account is that it is unclear whether the syntactic changes really *reflect* a single parameter resetting: Clark and Roberts seem to track the very changes that the new parameter setting is supposed to explain. They propose that grammar change occurs when the target of acquisition contains parameter values that cannot be uniquely determined on the basis of the linguistic environment. This can occur when the evidence presented to the learner is formally compatible with a number of different, and conflicting, parameter settings, although they do not specify explicitly how or why this would come about. They claim that a child must evaluate her hypotheses using criteria that are not purely a response to the external environment; in particular she must also consider factors like the Subset Condition (Berwick 1985) and what they call 'elegance of derivations' (Chomsky 1991). This account also comports well with Kroch's (1989b) view of grammar competition, however it does not explain where the winning grammar comes from.

In sum, this approach is claimed to be able to reduce the logical problem of language change to the logical problem of language acquisition, by relating both to the question of how learners set parameters to particular values.

Clark and Roberts (1993) also study how the fitness metric (of Clark) can model diachronic change. Their answer is that the fitness metric drives the child-learner toward a hypothesis that minimizes the number of violations and the number of superset settings and that generates the most elegant syntactic representations possible, given that grammatical violations are avoided. The fittest hypotheses will reproduce more frequently, and pass on their parameter settings to new hypotheses. Hence, the child will base her new hypotheses on those old ones that are relatively more fit, thus passing on the parameter settings that made those hypotheses fit to future generations. Those parameter settings that avoid grammatical violations relative to the input text will be preserved, and those that tend to generate violations will gradually disappear.

Note that it is implicit in Clark and Roberts' model that the child sets all the parameters at once, as a single unit. That is, they are making the idealization of instantaneous language acquisition, following the idealization of Chomsky (1965), where all parameters, all input data, are immediately available to the child from very early on. Furthermore, as within the standard input-matching models, this model also requires much memory and time. It requires multiple grammar testing on each input: The model records how successfully each grammar tested on a sentence can parse it, and it stores the success scores of all the grammars. However, this model is not meant to represent the actual process of language acquisition, including all actual cognitive and physical mechanisms, but should rather be taken as a metaphor for the process.

Dresher and Kaye (1990) and Dresher (1999) developed a "cue-based" theory of acquisition. Under this view, UG specifies not only a set of parameters, but also for each parameter a cue. As mentioned, Lightfoot (1999a) adopts this view. According to him, a cue is an element of I-language, which is derived from the input. If a cue is found, it is incorporated into the emerging grammar. Learners do not try to match the input; rather, they seek certain abstract structures derived from the input (elements of I-language), without regard to the final result. That is, a child seeks cues and may or may not find

them, regardless of what the emerging grammar can generate; the output of the grammar is entirely a by-product of the cues that the child finds, and the success of the grammar is not based on the set of sentences that it generates, unlike in input-matching models. Lightfoot argues that the child's triggering experience is best viewed as a set of abstract structures manifested in the mental representations which result from parsing utterances; some of those representations constitute partial parses, which lack some of the information found in mature, adult parses.

Now let us consider briefly the difference between Clark and Roberts, on the one hand, and cue-based acquisition (Lightfoot 1999a), on the other hand. One crucial difference is that Clark and Roberts rely on elegance, claiming that this can be made into the basis of a theory of markedness, which is something that Lightfoot's system does not have. Clark and Roberts see parameters as abstract properties of grammars whose values can be manifested in data in various ways. Another important difference between the two proposals is that Lightfoot does not distinguish cues from parameters while Clark and Roberts do, in their notion of parameter-expression, in terms of which trigger is defined. Lightfoot's model, on the other hand, takes the cues to be the parameters, that is, cues are a part of a structure, where various sentence types can express a given cue in different languages. The distinction between parameters and cues might be important for learnability, otherwise we have either too concrete (and hence theoretically not useful) a notion of parameter, or too abstract (and hence unlearnable) a notion of trigger.

Lightfoot (1999b) claims that the crucial difference between the two proposals is that his model does not need to assume perfect input-matching. However, he is incorrect in saying that Clark and Roberts' model is an input-matching one, since their parsing model is driven by elegance. Hence, if we have two grammars that can parse a set of sentences, then the one that actually matches the input perfectly can lose for the other that is more elegant (but does

not as perfectly match the input). However, then the question arises of why all grammars are not perfectly elegant.

## **4 Language change and grammar change**

### *4.1 Introduction*

In this section, we will approach the causality of change; that is, why linguistic change occurs in the first place, why one change takes place instead of another, and why languages do *not* change in many ways, often over many generations of speakers. Finally, we will focus on the distinction between grammar (I-language) change, and the changes in the linguistic environment (PLD) that precede a parameter change, trying to gain a balance between the language of the individual and the language of the population of speakers.

According to Lightfoot (1979, 1991, 1999a), a change in syntax consists of an abrupt grammatical reanalysis within the new generation acquiring the language. This approach assumes grammar change and language acquisition to be intimately connected: The child, due to some specific properties of the input at a given historical period, acquires a grammar which differs in at least one parameter value from the grammar of the previous generation. Lightfoot assumes the learning stage to be the place where grammar change occurs. Two different grammars may have a very similar underlying form, but different motivation and different transformations to derive their surface forms. The position that grammar change takes place during the process of language acquisition is also clearly expressed by Clark and Roberts (1993: 300): “the logical problem of language change cannot be separated from the logical problem of language acquisition”.

It is generally assumed that it is possible to use the generative framework to analyze the grammar not only of one language but also the differences between the grammars of two or more (comparable) languages. Furthermore, grammar change is also simply analyzed as a consequence of a new setting of a given parameter. However, we will show that the generative framework can

only provide us with tools for the descriptive part, and that it does not give us an answer to the question of why the change really took place. Of course, this leads to the question of whether changes are necessary directly for system-internal reasons, or whether some external (social) factors must always trigger the change. If so, how does language acquisition come into the picture? Even in the case of external factors, acquisition is arguably very important for change. In the spirit of Lightfoot (1999a) and Longobardi (1999, 2001), we will argue that syntactic change is not primitive. In other words, syntactic change should not arise unless it can be shown to be *caused*, either as a consequence of other types of change (phonological/ morphological), or other syntactic changes. Furthermore, external factors may cause small changes in the E-language (PLD), and that this may lead to a major change (grammar change) in the next generation's I-language.

In this section, we will focus on the question of why grammar changes take place. We will search for an answer in the nature of language acquisition and its implicational relationship to grammar change, where we will define grammar change as the difference between the grammar (I-language) of the mother and the grammar (I-language) of the child. The answer is, at least partly, to be found in the different parsing of information between generations. However, we also have to answer why the child-learner parses differently from her parents and how we might be able to explain the fact that a certain grammar that has survived for many centuries (many generations) is suddenly replaced. In our search for an answer, we will look at the interpretation process concealed in first language acquisition, along with children's ability to select from and reject information they receive through the language performance (output) of adults and the possible relationship of this selection with linguistic change.

The explanatory success of a diachronic change includes a three step process, with a) innovation of variation (E-language change), leading to b) acquisition-based grammar change (I-language change), and c) presumably two very different kinds of diffusion, beginning with gradual diffusion of language

use. First, we need to answer the question of why the innovation took place, and why we have variables in languages. Second, we need to account for the spreading of the innovation, why it sometimes succeeds and why it sometimes fails. Finally, we need to answer the question of how and why the E-language variables (the innovation of variation) become a part of the next generation's grammar (I-language). Many previous theories of diachronic change only account for one of these processes and thereby miss the link between the variation and the acquisition. It seems to be the case that sociolinguists focus mostly on the first process, the E-language change (and its diffusion), ignoring the second, while generative grammar only provides tools to account for the second process, the I-language change between generations, too often ignoring the prior E-language change in the PLD. In the spirit of Longobardi (2001), we will argue that the first process involves historical (or genetic) explanation, typical for evolutionary phenomena and often exemplified by the results of the historical-comparative method in linguistics, and the second process involves a theoretical explanation, typical for current generative grammatical research.

#### *4.2 Grammar change*

The diachronic generative syntax literature has been most concerned with parameter changes, that is, the process when a new generation of speakers sets a parameter of UG differently from the previous generation. The general assumption here is that diachronic study can shed light on syntactic theory in essentially the same way as comparative synchronic study, by revealing clusters of surface syntactic properties that are derivable from a single parameter setting. Hence, diachronic syntax is a kind of comparative syntax, where different I-languages are analyzed and compared, only executed along the *time*-dimension. What makes historical syntax a particularly interesting form of comparative syntax is that sometimes, if we have enough appropriate records, we can identify single points of change and prior changes in E-language, what children might

reasonably be thought to have heard, such that we can link the E-language change to the I-language change.

Language acquisition is minimized to word learning and the setting of a finite number of parameters and it follows that a grammar change takes place as child-learners come to set parameters differently from the previous generation. Since the general assumption is that speakers of each generation are bound to base their grammar on UG and the language they hear in their environment, that is, on the language (the output) of the previous generation, it has been claimed that it may seem peculiar and unexpected that any linguistic change occurs in the first place. In other words, it is “unexpected” given the poverty of the stimulus argument. This is also in the spirit of Longobardi’s (2001) principle of inertia: Most of the time, nothing ever changes. Bye (2001) discusses what he calls *high fidelity of acquisition hypothesis*: Given the opportunities to correct misapprehension, errors of interpretation are largely eliminated by the time the child reaches linguistic maturity. Assuming that acquisition gives ample opportunity to correct errors of interpretation, we are still left with a conundrum: How do errors in performance bypass the high-fidelity acquisition process? This is the logical problem of grammar change: Assuming that the end result of acquisition is a grammar which perfectly reflects the adult grammar, how does grammar change arise?

It is concealed in the generative approach to language change that children are expected to converge on the same grammar as their parents, as long as the produced utterances correspond relatively closely to the parents’ grammar (see, e.g. Lightfoot 1999a: 431). However, this process is not always so simple, as the E-language (PLD) can include different parsing possibilities. It is necessary to ask two pairs of questions: a) why do languages have histories, why do changes take place and why are languages not generally stable? and b) why do languages *not* change in many ways, and why do they often remain stable over many generations of speakers?

Within the generative approach, the cause of grammar change is by definition taken to include different parsing of certain linguistic phenomena from one generation to the next. However, we also have to ask why the child-learner parses in a different way from her parents and how we can explain the fact that a certain grammar that has survived for many generations is suddenly replaced. As noted by Kroch (2001: 5), the stability of many languages over long periods of time suggests that first language acquisition cannot be very inaccurate. Modern generative theory with the instantiation of UG also makes less room for erroneous learning; since so many principles are innate, the child-learner has to learn less.

Hale (1996: 127) mentions two types of “misparsing” as reasons for grammar changes, which he calls: a) no evidence and b) misparsing. ‘No evidence’ is taken to include misparsing because of insufficient input. This is consistent with Bickerton’s (1981, 1984) Language Bioprogram Hypothesis (LBH): The LBH claims that child-learners will fall back on an innate language capacity (default value) in cases of non-optimal or insufficient language input. See similar assumptions in Lightfoot (1999a), Bruyn, Muysken and Verris (1999), and Roberts (1999). In short, default or unmarked settings of UG are expected to emerge in the absence of relevant triggering experience. On the other hand, Hale takes ‘misparsing’ to occur in cases where the child-learner analyzes the input she receives incorrectly. That is, as noted by Lightfoot (1999a: 60-61) and Pinker (1999: 47-48), the child has to analyze and interpret the linguistic phenomena in her language-acquisition environment in order to be able to acquire the grammar of the previous generation. This task is twofold: First, the child has to analyze the surface phenomena in the PLD, and secondly, the child has to draw conclusions about the underlying grammar. Now, if the surface is analyzed incorrectly, the child’s goal is also incorrect. In other words, if the child’s task is to match her input data, she is bound to fail as she sets out with wrong conclusions. She has misinterpreted the final state. This type of misparsing can arise in cases of, for example, structural ambiguity. This

ambiguity may, in turn, have occurred in the language because of a previous E-language change.

Hence, a new parameter setting may arise either because of insufficient input data for a given parameter setting, or because changes in the PLD lead the child-learner to set the parameter in a new way.

Children only have access to the grammar (I-language) of their parents through their language use (E-language). Therefore it is natural to expect grammar changes to take place where there is no obvious connection between interpretation of the PLD and the underlying grammar. Grammatical phenomena cannot be acquired unless clearly reflected in the output. Hence, a grammar change may take place when there has been a change in the language use of the previous generation, paving the way for a new interpretation. We argue here that it is possible that gradual changes in PLD play a central role in the explanation. Lightfoot (1999a) has argued at length that there cannot be gradual evolution in an acquisition-based theory of change. What we are arguing, instead, is for a gradual evolution within the E-language, leading to an (acquisition-based) I-language change. Lightfoot (1979, 2002 and elsewhere) has also proposed that variation in the grammars of successive generations is responsible for grammar change.

We assume that the E-language can develop gradually between generations, without this causing a major grammar change. In this way, language use can go through a gradual development/changes from generation 1 to generation 2, and so on. This is a natural process of development from one generation to another. At one point in the development, the language use (PLD) may reach a certain threshold where it no longer reflects the underlying grammar (I-language) completely and a grammar change (parameter change) may take place. But why would this happen? We assume the answer to this question to be concealed in (innovation of) variation in PLD. We take the PLD to be influenced by external factors. Hence, we need to assume (at least) two important steps in order to have an explanatory success of a diachronic change:

a) innovation of variation (E-language change), and b) acquisition (I-language change). That is, we must account for both the initiation of the change, the variation and innovations, on the one hand, and the integration of these E-language innovations into a stable I-language, on the other hand. The exposition of these steps are in the spirit of Lightfoot (1991), Roberts (1993) and Willis (1998).

However, many generative approaches in recent literature do not offer a complete explanation of a syntactic change, as they only focus on the precise nature of the parameter change in question, ignoring the prior (external) change in the trigger experience (PLD). The two different steps in the diachronic change, the change in PLD, (the E-language change) and the following I-language change, can be regarded as i) an external change (caused by language contact or (other) changes in the society) and ii) a biological (internal) change.

The essence of the generative explanation of diachronic change goes back to Andersen (1973). The child generates her grammar on the basis of the language the older generation produces, their output. UG and specific parameters in addition to PLD (the E-language of the first generation) are the model for the language acquisition process of the next generation. More exactly, UG or the language acquisition device (LAD) is a function that maps the experience (the PLD) into the steady state attained (cf. Chomsky 1981: 34).

Given that the child-learner indeed does not have any direct access to the grammar of the previous generation, how is perfect language learning possible? Our answer is that it is only possible in cases where the output clearly reflects the underlying grammar. Variation and change in the PLD may lead the child-learner to construct a different grammar from that of the previous generation.

The locus of change within Andersen's model is the acquisition process. As grammar change is assumed to only take place between generations, with a new generation of children acquiring the language, each mature individual I-language is in a steady state as concerns the value of the parameters. Potential change only takes place in the shift from the grammar of one generation to the

grammar of the next. The child-learner makes hypotheses about the grammar on the basis of the trigger experience (the parent's E-language). Then, she must test these hypotheses against more input data, revising them if necessary.

According to Andersen's (1973) and Lightfoot's (1979) model, reanalysis or grammar change then consists of a change of syntactic structure perception by the language learners when exposed to an increased number of sentences which favor one structure before another. In terms of the P&P theory, reanalysis can work as follows: At a certain stage of a language's history, the basic structure of sentences has a certain order of constituents, for example, the object precedes its associated verbal head. If the surface order of constituents follows this underlying structure closely in a majority of cases, this structure will be easily learnable for the new language learner. If for some reason the frequency of derived word order (for example, the verb appearing in front of its object in the surface structure) increases, the child's language acquisition device may assume this order to be underlying, and the other one (as long as it continues to exist) derived. Thus, both the underlying structure and the available transformations in this child's internal grammar will be different from its predecessors'. Once this happens, the number of sentences with the new order might increase in this speaker's idiolect, due to them being "simpler" in terms of her grammar. This, in its turn, leads to a facilitated acquisition of the same structure by the next generation as the amount of such speakers grows. Finally, the older structure will be excluded from the language completely.

We may ask whether it is plausible to assume that two grammars can differ although (parts of the) outputs might be identical. This means that while the different I-languages may generate identical E-languages, the child's and the parent's I-language representation for a certain E-language utterance can differ. Neither the grammar of the mother nor the children's grammar has changed; the change in question is concealed in the *difference* between the two grammars. This is not a development from one stage to the next, but the formation of a new grammar, where the grammar of the former generation is an indirect model, with

the language (performance) of that generation as an intermediary (see Hale 1998: 2-3).

As mentioned, a *language* is mainly defined in terms of the I-language in a P&P theory, or as grammar plus use factors, with *language change* being analyzed as a consequence of a new setting of a given parameter. Hence, the generative syntactic framework mainly provides us with tools for the descriptive part, and it does not always give us an answer to the question of why the change really took place, that is, it does not always provide insights into the source of the change (although the emphasis on the poverty of the stimulus might give us a way of thinking about this). These are the main shortcomings of the generative view on diachronic change. In other words, although the P&P framework assumes E-language variation, it usually does not explain the E-language variation or change that paved the way for the grammar change. Too many works in diachronic generative linguistics assume cultural and/or social factors to be irrelevant in the explanation, as they are irrelevant to structural linguistic theory. Contra this view, we argue that social factors are an important link in explaining diachronic change, and relevant to linguistic theory as they affect the E-language. Indeed, variation and change in recorded (E-) language may be evidence for changes in the I-language. This kind of variation is familiar from studies in population genetics, as argued by Lightfoot (1991: 67). Note, however, that we do not take variation in the frequency of different word order types to reflect grammatical change, but rather a significant factor in causing a grammar change as it alters the PLD for the next generation of speakers.

Once we have established (acquired) a certain parameter *P*, the computational system simply takes over and sets all related parameters accordingly. It is anticipated in the P&P theory that some cross-linguistic variation can be attributed to the setting of a single parameter. A change in a parameter setting may thus simultaneously affect all the constructions controlled by the parameter; once a new parameter setting has been adopted, several simultaneous changes in features linked to that parameter will follow naturally.

Hence, setting or changing the setting of just one variable (one parameter) can give rise to a number of immediate changes, some perhaps quite distinct. This means that two completely distinct (and seemingly unrelated) parameter settings can be triggered by the value of a single other parameter, as the execution of one parameter may imply an entire block of subsequent parameter value changes.

#### *4.3 The different role of children and adults*

In recent years, there has been much debate in the literature about the respective roles of children and adults in diachronic changes. The controversial viewpoints are, on the one hand, that language acquisition by children is crucial to understanding diachronic change. This child-based theory has a long history, dating back at least to the late 19th century (see the historiography in Harris and Campbell 1995: 29-30). This view has also been adopted by most generative linguists, with the first major explication by Halle (1962). Indeed, child language acquisition is assumed to be the locus of diachronic change in generative approaches. On the other hand, sociolinguists tend to argue that children do not play an essential role in diachronic changes. Both parts have put much energy in the debate, and especially the sociolinguists have argued at length against the child-based theory of diachronic change.

We argue that the two different standpoints are not necessarily controversial, as they focus on different steps in the diachronic change. Indeed, we argue that *both* viewpoints are not only correct but also necessary in order to have an explanatory success of a diachronic change. While the sociolinguists are concerned with the external *language change* within social groups where minor alternation, or innovations of variation, may take place in the language of *adult* speakers, generative linguists are concerned with the internal *grammar change* where *children* are the real agents, as they integrate a subset of the available innovations into an emerging stable I-language during language acquisition. Hence, on the one hand, we are looking at minor, gradual, changes in the PLD, partly due to social influences in adolescent years and adulthood. These are the

E-language changes, taking place after the Critical Period. On the other hand, we have a (major) grammar change, or in other words, an acquisition-based I-language change. The former changes cause an altered triggering experience, that in turn may lead the next generation of child-learners to change some parameter settings and a grammar change takes place. While the adults are the central agents of the former language change, as introducers of instability and innovations, the children are the agents in the acquisition-based grammar change, especially because of their specific cognitive skills, access to UG, and their cue-seeking disposition. The language acquisition is mainly driven by the child's innate instinct to parse and generate utterances, to create a grammar, according to the constraints of UG. See also the discussion in DeGraff (1999c).

This is what we are arguing here: The initial change is within the language of the adults, (presumably) through their live span as they change their language in minor ways. This can for example take place where the grammar already had optionality, then one of the options becomes more frequent during the life span. Another (presumably frequent) means by which innovation can occur is via language contact. Teenagers and adults can also introduce innovations to the language. All these factors make the PLD for the next generation of speakers slightly different from the PLD of the previous generation, paving the way for a parameter change. Hence, it is too simple to claim that either children or adults play the central role in the diachronic change. It is generally assumed that there cannot be a grammar change after the Critical Period, that is, in the grammar of adults. However, adult language is susceptible to variation and innovation, as already proposed by King (1969), although there in the form of rule addition and minor rule changes. The child-learner of the next generation must build her grammar on the basis of the output available to her during language acquisition. This is to a large extent the language of her parents and older peers, and hence, she arrives at a grammar not radically different from that of the older generation. However, the child-learner must also account for the innovations that the adult language may have undergone, and

this may result in a parameter change. Note, however, that innovations of course do not always have to lead to a grammar change within the next generation. Presumably, many different factors affect the probability for a (micro)-variation in E-language to become a part of a stable I-language.

Since we take the parameter settings of the adult's grammar to be fixed, the innovation only occurs in the language use, that is, in the E-language. Croft (2000) takes a radically different view: "If linguistic variables are a part of the grammar..., then changes in use are changes in grammatical knowledge. In other words, changes can occur in the grammar of adults in the course of language use" (Croft 2000: 57). We disagree with this point, claiming instead that the grammar is the I-language but that the variables are a part of the E-language; hence, one I-language can crystallize into several E-languages. Newport (1999) and Kegl, Senghas and Coppola (1999) also claim that children learning sign language as a first language are capable of outperforming their models drastically, creating systematic, UG-compatible grammars, whereas the adults cannot. This indicates a deep gap between the ability of adults and children to recover from limited PLD.

The ongoing debate about the different role of children and adults is mostly due to an unclear distinction between *language change*, on the one hand, and *grammar change*, on the other hand. That is, we must make a distinction between the initiation of the change (innovation) and the parameter change. In other words, we have to make it clear whether we are dealing with 'language' as the language of the speech community or as the grammar in the mind/brain of an individual speaker.

Language change (innovation) is often not held distinct enough from the *diffusion*. Of course, this may be correct with regard to the initial language change in the PLD, depending on which age group is the most important source of the PLD. If we assume this to be the *parent's* E-language, then this view is presumably right. Other children, e.g. siblings, may also play an important role in shaping the trigger experience. *Grammar change*, on the other hand, reflects

an abrupt change taking place during first language acquisition, where language acquisition is the activity of an individual acquiring her particular idiolect.

One of Croft's (2000) arguments against the child-based theory is related to the difference between abrupt and gradual diachronic change, where the source of the criticism is the unclear distinction between language and grammar change. We are arguing here that language change with innovation of variation is usually gradual, even taking place through several generations without this (necessarily) causing a major parameter change.

#### *4.4 Internal and external reasons for diachronic change*

Diachronic research should be primarily concerned with the investigation of what type of changes can be explained by factors operative in language acquisition alone, and which type of changes assume 'external' factors. Hence, the question becomes important of whether we think that diachronic change can be explained solely in terms of spontaneous change or do we assume that some external (social) factors are necessary to trigger the change. There is also a fundamental question about diachronic change that does not get posed very often; namely: How accurate is language learning in the ideal case of a monolingual community without outside contact? If it is very accurate, then all change must come from outside the grammatical system. If it is imperfect, there is room for internally generated change. The notion 'outside the system' is, however, dubious. For example, phonetic pressures could be thought of as external to the phonology, and phonology and morphology are external to the syntax.

Chomsky and other generative linguists have for a long time shown a thoroughgoing skepticism in regard to functional explanations of language structure. This skepticism is (in part) related to the view that the study of language *use* is very distinct from the study of language *structure*, and hence not of importance; more exactly, syntax is generally assumed to be autonomous and the language faculty is taken to be an innate structure isolated from social

interaction. While we take this assumption to be correct, we cannot forget that grammars are *used*. While we agree with the generative view that the cause of *grammar* change may often be internal, that is, factors inherent in and arising out of a given synchronic state of the language system, we take the cause of *language* change to be external, where ‘external’ has a twofold meaning: Type A: internal to the grammar but outside the syntax. Hence we have interaction with other components, where change at other levels of the structure can lead to a change in the syntactical component, and Type B: outside the system, that is, change due to social and/or cultural factors.

Kroch (1989b) argues that it is necessary to look at other developments in the grammar in order to explain a grammar change. Pintzuk, Tsoulas and Warner (2000: 3-4) mention three different types of E-language change that may each pave the way for a grammar change: (i) antecedent change, such as the loss or weakening of overt morphological contrasts; (ii) external factors, such as contact or sociolinguistically motivated alternations in frequency; (iii) chance fluctuation in frequency. Apart from special cases of external factors, such as foreign influences and expressivity, it seems to be a widespread view that grammar (I-language) change is caused mainly by internal factors while E-language changes may be caused by both internal and external factors, where *external* generally means external to the syntactical component, for example, but still internal to the grammar. A common example is that the occurrence of structurally ambiguous surface structures may be the result of loss of inflectional endings on verbs and nouns. Hence, external factors may create the conditions that induce grammar change. Finally, diffusion is generally assumed to be determined by external factors such as social standing, age, sex, and prestige (see discussion in Gerritsen and Stein 1992: 5).

Before the structuralist period, where the focus was mostly on historical (E-language) changes, both internal and external factors were taken into consideration. Structuralists, on the other hand, considered the language structure to be both independent and isolated, hence, the explanation for

historical change lies within the system itself; changes are necessarily internal. As mentioned, structuralists mainly studied the language structure (grammar) as a whole system, and assumed that the grammar could conceal a tendency towards harmony and simplification. Hence, linguistic change was assumed to take place when the language structure changes itself. However, the question of how the system is able to change itself was left unanswered. This view is very common among linguists concerned with reanalysis. The locus of change within Andersen's model, and many generative approaches, is the acquisition process where grammar change is seen as an internal change, taking place as a failure in the parsing or transmission of certain linguistic phenomena over time. Lightfoot's (1979) hypothesis is a good example of an autonomous position.

Weinreich, Labov and Herzog (1968) clearly made room for both internal and external causes of diachronic change. They put forward several principles which define the nature of linguistic change. One of these is *Principle 7: Linguistic and social factors are closely interrelated in the development of language change*. Explanations which are confined to one or the other aspect, no matter how well constructed, will fail to account for the rich body of regularities that can be observed in empirical studies of language behavior. Weinreich (1953) also emphasizes that a coupling of both internal and external factors is necessary in order to define the space of predictable courses of development and change. Thomason and Kaufman (1988) is another example of the renewed interest in external explanations of syntactic change.

Lightfoot (1991, 1995) makes strong claims against the hypothesis that change is inherent to syntax. Instead, he claims that grammar change only takes place when there is sufficient change in the data used by the learner to set grammatical parameters. In other words, grammar change takes place because of a prior language change. Otherwise, grammars are stably transmitted. Lightfoot (1999a) also claims that we cannot expect to find internal explanations for change, that is, tendencies for languages to simplify or to grammaticalize. Rather, change can only happen when there is a shift in primary linguistic data;

a given child will acquire a different grammar from its mother if and only if it is exposed to different input.

#### 4.5 Language change

In this section, we will investigate the distinction between grammar change and the changes in the linguistic environment that precede parameter changes in languages in general. Following Lightfoot (1991, 1999a) we argue that certain changes in language use, that is, changes in *language*, that do not involve an immediate change in the underlying grammar, can (gradually) lead to an abrupt *grammar* change.

Much work on historical syntax within a generative framework is in fact *synchronic* in nature rather than diachronic. That is, two (or more) different stages in the history of a particular language are compared and analyzed (synchronously) and the difference is typically illustrated in terms of a parameter change; for instance, a certain movement was lost due to a loss of the strong triggering feature. Although this is interesting, it can only be a part of the historical story of the change, where we are leaving out the *initiation* of the change, the linguistic variation reflected in most historical data and the sociolinguistic factors underlying this variation. Many major parametric changes such as the loss of V2 word order and the change from OV to VO order indeed involve a lengthy period of variation. In other words, we too often ignore the prior changes in the PLD that must have paved the way for the grammar change in question.

Speakers in the language community may consciously or unconsciously choose to alter their language use in various ways for reasons that may be non-linguistic in nature: A certain variant of language use may be fashionable, or it may serve as a social identity marker. They can do this by either creating a new variant in their language use, or starting to favor the use of a certain structure over another variant. Hence, the E-language may gradually become different from the E-language that served as the triggering experience for the I-language

earlier. These changes in the E-language also constitute changes in the input available to the child-learners of the next generation and a motivation for a different parameter setting may have arisen. In other words, a change in linguistic behavior may lead to a grammar change within the next generations of speakers. We argue that two main types of language change may alter the triggering experience: a) innovation: the creation of novel forms in the language, and b) shift in frequency.

Innovation, also known as actuation, is the process by which a change is begun. It occurs at the moment when a new linguistic form or structure is created. Innovation produces a new variant of a structure and thereby leads to variation. The second type of language change can occur by shift in the frequencies of the variants of a structure. This second type of change is closely related to diffusion. Since innovations begin life at the bottom of the S-curve of diffusion, they are very difficult to pin down, and it is also very difficult to distinguish them from their diffusion.

One type of language change that is possible without a change in grammar is a change in *usage*; that is, a change where a certain structure or word order gains a (gradual) frequency over time. This type of change does not involve an immediate change in the grammar, as the set of grammatical sentences remains the same. However, the increased frequency of a particular variant may reduce the availability of another variant for a particular parameter setting within the trigger experience, and hence, it may (over time) trigger a change in the grammar (of following generations). The occurrence of this type of change seems to presuppose optionality.

Kroch and his associates (Kroch 1989a, b; Pintzuk 1991; Santorini 1989; Taylor 1990; Fontana 1993, among others) have expressed the necessity of studying relative frequencies of variants (competing forms) as part of generative diachronic studies. Niyogi and Berwick (1995) also claim that in cases of linguistic environment with mixed PLD, that is, in cases in which children hear sentences from a grammar that presents evidence consisting with a given

parameter setting as well as from a distinct grammar that presents evidence inconsistent with that parameter setting, the percentage of input they receive for each variant plays a crucial role in how that particular parameter will be set. See further discussion of frequency effects in setting the stage for parametric change in, for instance, Roberts (1993), Lightfoot (1999b) and Briscoe (2000).

As many sociolinguists, Croft (2000) claims that the mechanisms for innovation are functional; they involve remappings of the link between form and function in a conventional linguistic sign or *lingueme*. E-language change in the form of an innovation leads to the existence of variants in the language (Croft 2000: 31).

However, we also need to address the question of why the innovation took place in the first place; that is, how and why specific variants arise and become part of the variable linguistic system. Weinreich, Labov and Herzog (1968: 102) call this the *Actuation Problem*: One of the central issues here is whether languages are stable or unstable by nature. Once we have solved the Actuation Problem we know what drives language change. Croft (2000) puts forward what he calls the *Theory of Utterance Selection* for language change, assuming that utterance selection (in social intercourse) is the primary locus of language change. Linguistic innovations emerge from complexity of communication in social interaction.

Bye (2001) mentions that the basis of biological evolution is differential reproductive success. As an alternative approach, Bye approaches the question of whether changes in PLD may be byproducts of demographic factors (individuals entering and leaving the population). In the absence of such factors, is there change at all? If there is change, does it proceed neutrally by drift or are there selective (evolutionary) mechanisms at work?. He concludes that autochthonous innovations take place in peripheral (monolingual, closed, endocentric) speech communities as well, implying that some other evolutionary mechanism is at work. Recent articles (Lass 1990; Ohala 1989) have stressed that the re-use of old forms for new purposes, that is “exaptation” (cf. Gould

1991; Gould and Lewontin 1979), may be an important factor in language change. The idea is that most language changes result from variation which has always been present in language. Variation in language is due to the inevitable deviations caused by the interplay between variation in pronunciation in the speaker and under- and over-correction (reconstruction of the speech signal) by the listener (Ohala 1989) and to the historical accumulation and selection of such variation (Lass 1990).

#### *4.6 Diffusion*

A change diffuses from the innovator to (a subset of) those with whom the innovator comes into contact. Once an innovation has arisen, it may in principle be actuated/diffused in two main ways. It can either spread at different rates in different contexts or it can spread at the same rate in each context (see the discussion in Kroch 1989b: 205 and Pintzuk 1991: 316). Bailey (1973), among other researchers, has proposed a wave-model for language change actuation that is motivated by two principles. The former principle entails that the gradual replacement of one linguistic form by another over time follows an S-shaped curve. See also Kroch (1982, 1989b). According to this principle, the replacement of old forms by new ones occurs slowly in the beginning of the change, then faster in the middle of the replacement, and finally, it tails off at the end of the development, when the old forms have become rare, until the replacement reaches completion. See also the discussion in Pintzuk (1991: 313-318).

Bailey's (1973) later principle for language changes entails that the actuation of a language change occurs sequentially, spreading at different rates in different contexts, first in the most preferable one; "differences in the rate of use of a new form in different contexts reflect both the relative time at which the new form began to appear in those contexts and a differential rate of acceptance of that form in those contexts" (Kroch 1989b: 203).

Contra Bailey, Kroch (1989b) proposes the *constant rate hypothesis*, that entails that although the frequency of alternating linguistic forms may differ across contexts at each point in time during a language change, the rate of the change for each context remains the same. Kroch (1989b) presents arguments from various language changes that have been studied quantitatively. He claims that all these changes show that when one linguistic form is replaced by a new one with which it is in competition in several contexts, then the rate of the replacement is the same, independent of the context. Diffusion through a population has temporal attributes: each step in the diffusion requires that an acquirer comes into contact with an innovating prestige speaker and learns and uses the innovating structure. Hence, diffusion is gradual; it can even take centuries, depending on the population (cf. Hale 1998: 5).

Diffusion is generally assumed to be determined by external social factors such as social standing, socioeconomic class, age, sex, ethnicity, prestige, and social and geographical mobility. The mechanisms for spreading of innovation is social as it involves the relationship between the speaker, the interactor, and the society she belongs to (cf. Croft 2000: 173). Croft (2000) argues that the basic mechanism for propagation is the speaker identifying with a social group, and that patterns of propagation in social populations that are parallel in significant respects to patterns of selection in biological populations.

Various explanations that have been put forward in recent years about language changes do not strictly speaking explain the *source* of the innovation but rather its *spreading*. A possible reason for this is that diachronic linguists do not have a long tradition for searching for answers to their questions in the spirit of generative grammar. A theory of language change must distinguish between two processes; it must distinguish innovation (of variation) from its diffusion through the language community. Explanations based on people's social position, for example, must be connected to spreading rather than the source of the change. Explanations for language changes based on topographical

information, transportation, geographical isolation, etc. must also take to the prerequisite for the spreading of changes that already have arisen.

Aitchison's (1991) view is an example of the failure to distinguish between language changes and diffusion so that the discussion becomes very confusing, and she even claims at one point that language changes do not exist: "[changes] usually originate from elements already in the language which get borrowed and exaggerated ..." (Aitchison 1991: 74). Labov (1994) looks for explanations for language changes in both regional and social variation. However, he is mostly concerned with the *spreading* of changes rather than their origin. We disagree with this claim, it is indeed very important to try to keep the origin (innovation) and the diffusion of a change distinct.

So far, we have mainly been concerned with diffusion of innovation (language change). However, we should also address the question of whether, and then how, diffusion of grammar change may take place. Parameter settings themselves cannot diffuse but each individual speaker must acquire the parameter change anew. "A parametric shift spreads in so far as the change of parameter setting in one speaker or group of speakers tilts the trigger experience of children towards the new setting. That is, once one speaker shifts to the new setting, the amount of data in favour of the old parameter setting falls, whilst the amount of data in favour of the new parameter setting rises" (Willis 1998: 47-48). In other words, the diffusion of a grammar change is very different from diffusion of language change (innovation of E-language token), there the diffusion is much more similar to diffusion of phonological change. Diffusion through a population is not an I-language phenomenon.

## 5 Summary

In this paper we have discussed different explanations for diachronic change. We focused on the distinction between language change and grammar change, changes in E-language and I-language. Language change as a whole is a group phenomenon. E-languages reflect the output of grammars, the varying use of

those grammars in discourse. Grammars, on the other hand, may change between two generations. A change is initiated when (a population of) learners converge on a grammatical system that differs in at least one parameter value from the system internalized by the speakers of the previous generation.

Grammatical phenomena cannot be acquired unless clearly reflected in the output. Hence, a grammar change may take place when there has been a change in the language use of the previous generation, paving the way for a new interpretation. The PLD is influenced by external factors, hence, we need to assume (at least) two important steps in order to have an explanatory success of a diachronic change: We must account for both the initiation of the change, the variation and innovations and the integration of these E-language innovations into a stable I-language.

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# Stylistic fronting as remnant movement\*

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## Abstract

This paper presents a novel analysis of the phenomenon of stylistic fronting in Icelandic. It is argued that stylistic fronting is not a head-movement operation, but rather phrasal movement to subject position. In many cases, however, independent factors determine evacuation of the phrase prior to raising, i.e. the fronted phrase can be a remnant. It is shown that this approach can account for a variety of otherwise puzzling properties of stylistic fronting.

## 1 Introduction

This paper argues that the fronting operation known as *Stylistic Fronting* (henceforth, SF) should be uniformly analyzed as phrasal movement. Throughout, the discussion will focus on Icelandic, although SF also exists in Faroese and perhaps other languages (for a survey, see Holmberg 2006).<sup>1</sup>

SF was first discussed by Maling (1980) (reprinted as Maling 1990), who observed that under certain conditions, Icelandic allows for inversion of the finite verb and some postverbal element, e.g. the negation:

- (1) a. Þetta er tilboð sem er ekki hægt að hafna  
this is an offer that is not possible to reject  
b. Þetta er tilboð sem ekki<sub>i</sub> er t<sub>i</sub> hægt að hafna  
this is an offer that not is possible to reject

As (1) shows, SF is optional. It is “stylistic” in the sense of not having any semantic or pragmatic implications; in particular, it has no emphasis or focus effect as is typically associated with topicalization (see Holmberg 2006 and references cited there).

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<sup>1</sup> On (what appear to be) very similar phenomena in Old English, see Platzack (1995), Kroch and Taylor (2000), Trips (2002), Biberauer and Roberts (2005), and Mathieu (2006) for Old French. SF in these languages will not play a role in what follows.

Superficially, SF comes in two basic varieties: The fronted element is either an XP or an  $X^0$ -category (a single terminal). The most obvious instances of the latter type are cases in which a verb particle or a participle verb undergoes SF (examples from Hrafnbjargarson 2003: 165):

- (2) a. Hann sýndi mér flöskurnar sem inn<sub>i</sub> hafði verið smyglað  $t_i$   
 he showed me the bottles that in had been smuggled  
 b. Hann sýndi mér flöskurnar sem smyglað<sub>i</sub> hafði verið  $t_i$  inn  
 he showed me the bottles that smuggled had been in

Data of this kind have led many to believe that SF of head-like categories is the general case (see, e.g., Anderson 1993: 93). However, it has since been recognized that there are clear instances of *phrasal* elements undergoing SF, i.e. fronting of full NPs or PPs (Holmberg 2000, 2006):

- (3) a. Þeir sem hafa búið [<sub>PP</sub> í Óslo ] segja að ...  
 those that have lived in Oslo say that  
 b. Þeir sem [<sub>PP</sub> í Óslo]<sub>i</sub> hafa búið  $t_i$  segja að ...  
 those that in Oslo have lived say that  
 (4) a. Hver heldur þú að verði að taka [<sub>NP</sub> þessa erfiðu ákvörðun ]  
 who think you that has to take this difficult decision  
 b. Hver heldur þú að [<sub>NP</sub> þessa erfiðu ákvörðun]<sub>i</sub> verði að taka  $t_i$   
 who think you that this difficult decision has to take

These and similar instances of SF cast serious doubt on any account that uniformly analyzes SF as head movement (e.g. Jónsson 1991). The facts leave room, however, for a hybrid view of SF as either head or phrasal movement, depending on the fronted element (cf. Hrafnbjargarson 2003, 2004). Other than all existing analyses of SF that I know of, I will argue in this paper that *all* SF is in fact movement of a phrasal category.<sup>2</sup>

The paper is structured as follows. After a presentation of the key properties of SF in §2, I will discuss some aspects of previous approaches to SF in §3, pointing out some weaknesses that I will try to overcome with my own analysis, which will be presented in §4. I will discuss case by case, i.e. SF of NPs/PPs, adverbs/negation, adjectives, participles, and particles, and argue in each case that the fronting operation should be analyzed as phrasal movement, allowing for a uniform treatment. To this end, I will argue that in some cases SF involves *remnant movement* (in the sense of Webelhuth and den Besten 1987), i.e. fronting of an “incomplete” category containing traces.<sup>3</sup> The analysis will be refined in §5, where it is argued that SF is one among several “EPP strategies” available in Icelandic. Some tentative remarks about the parametric source of SF will be made in §6; §7 concludes the paper.

<sup>2</sup> According to Platzack (2009: 15), a remnant-movement analysis is also proposed in Håkansson 2008. I have not seen this work, hence cannot include discussion of it here.

<sup>3</sup> I will set aside here the various problems and questions that remnant movement raises for syntactic theory; see Müller (1998) and Abels (2008) for some pertinent discussion.

## 2 Key properties of SF

SF is an operation that fronts some element to a position immediately preceding the finite verb. One of the key characteristics of SF is the “subject-gap condition”: SF can only apply if there is no overt subject present in the canonical subject position (examples from Holmberg 2006: 535):

- (5) a. Hver<sub>i</sub> heldur þú að  $t_i$  hafi stolið hjólinu  
 who think you that has stolen the bike  
 b. Hver heldur þú að stolið<sub>i</sub> hafi  $t_i$  hjólinu  
 who think you that stolen has the bike
- (6) a. Hvaða hjóli<sub>i</sub> heldur þu að hann hafi stolið  $t_i$   
 which bike think you that he has stolen  
 b. \*Hvaða hjóli heldur þu að stolið<sub>i</sub> hann hafi  $t_i$   
 which bike think you that stolen he has

From the subject-gap condition it follows that there are essentially three types of environments in which SF is licensed (cf. Maling 1990: 77, 79f.): embedded clauses with a relativized or extracted subject, clauses with “late” indefinite subjects, and impersonal clauses that are subject-less.<sup>4</sup> The following examples illustrate (cf. Holmberg 2006: 535; Thráinsson 2007: 353; Jónsson 1991: 24):<sup>5</sup>

- (7) SF in embedded clauses with subject gap:  
 a. Hver heldur þú [<sub>CP</sub> að stolið<sub>i</sub> hafi  $t_i$  hjólinu ]  
 who think you that stolen has the bike  
 b. Þetta er mál [<sub>CP</sub> sem rætt<sub>i</sub> hefur verið  $t_i$  ]  
 this is an issue that discussed has been
- (8) SF in clauses with “late” subject:  
 a. Ég hélt að kysst<sub>i</sub> hefðu  $t_i$  hana margir stúdentar  
 I thought that kissed had her many students  
 b. Keypt<sub>i</sub> hafa  $t_i$  þessa bók margir stúdentar  
 bought have this book many students
- (9) SF in impersonal clauses:  
 a. Keypt<sub>i</sub> hefur verið  $t_i$  tölva fyrir starfsfólkið  
 bought has been a computer for the staff  
 b. Verðbólgan varð verri en við<sub>i</sub> hafð verið [<sub>VP</sub> búist  $t_i$ ]  
 inflation was worse than PRT had been expected

In (7a), the subject has undergone long *wh*-movement into the matrix clause, hence SF is licensed in the lower clause. Relativization of the subject (7b) has the same effect

<sup>4</sup> Extraction of a promoted object (as in passives) likewise licenses SF (cf. Rögnvaldsson and Thráinsson 1990: 27), a case I will set aside here; but see §4.4 on unaccusatives.

<sup>5</sup> For now, I’m omitting the subject trace in the examples with SF; I will return to this problem in §5 below.

of allowing SF to apply optionally. Likewise, when the subject is indefinite and does not raise to Spec-T (8), or when a subject is not licensed by the predicate (9), SF can apply.

As (8) shows, SF requires *the derived subject position* (Spec-T) to be empty. Since the definiteness restriction applies in Modern Icelandic (Thráinsson 1979: ch. 7), it follows that SF can only apply in connection with indefinite subjects, which need not raise. Witness the following contrast (from Maling 1990: 80):

- (10) a. \* bæinn þar sem byrjað<sub>i</sub> höfðu  $t_i$  trésmiðirnir  
           the town where that begun had the carpenters  
       b. bæinn þar sem byrjað<sub>i</sub> höfðu  $t_i$  nokkrir trésmiðir  
           the town where that begun had some carpenters

(10a) is bad because either the definite subject stays low (incurring a definiteness effect), or else it raises, but then SF applies despite there not being a subject gap. Either way, the result is bad. By contrast, a subject that can stay low does not interfere with SF (10b). I will not attempt to explain the fact that definite subjects in Icelandic have to raise to Spec-T in this paper, but simply take it as given.

It is known that SF can target a fairly broad variety of categories (for examples and discussion, see §4 below). Given that SF targets a position to the left of the finite verb, SF of phrasal categories such as NPs and PPs (as shown in (3–4) above) bears some resemblance to (embedded) topicalization. Notice, however, that an antecedent reason for disdistinguishing the two movement types is that SF is natural in embedded clauses, while topicalization (in Icelandic as in Germanic in general) is severely restricted in non-root environments (Maling 1990: 76).<sup>6</sup> Recall also that topicalization typically facilitates an emphasis/focus reading of the fronted constituent, whereas SF is information-structurally vacuous.

The aforementioned subject-gap requirement on SF represents a further asymmetry between SF and topicalization. This is illustrated transparently by the following examples (from Holmberg 2000: 449), which should be compared to (3) and (4), respectively:

- (11) SF of PP without subject gap (compare to (3)):  
       a. \* vinnan sem hann [<sub>PP</sub> í Ósló]<sub>i</sub> hefur haft  $t_i$   
           the job that he in Oslo has had  
       b. \* vinnan sem [<sub>PP</sub> í Ósló]<sub>i</sub> hann hefur haft  $t_i$   
           the job that in Oslo he has had  
       c. \* vinnan sem [<sub>PP</sub> í Ósló]<sub>i</sub> hefur hann haft  $t_i$   
           the job that in Oslo has he had  
 (12) SF of NP without subject gap (compare to (4)):  
       a. \* þegar hann [<sub>NP</sub> þessa erfiðu ákvörðun]<sub>i</sub> hafði tekið  $t_i$   
           when he this difficult decision had taken

<sup>6</sup> Embedded topicalization in Icelandic is limited to complements of (some) bridge-verbs and generally impossible in embedded questions and relative clauses (cf. Thráinsson 2007: 41, 352 and Vikner 1995: 71f.).

- b. \* þegar [<sub>NP</sub> þessa erfiðu ákvörðun]<sub>i</sub> hann hafði tekið *t<sub>i</sub>*  
 when this difficult decision he had taken
- c. \* þegar [<sub>NP</sub> þessa erfiðu ákvörðun]<sub>i</sub> hafði hann tekið *t<sub>i</sub>*  
 when this difficult decision had he taken

Moreover, SF is strictly clause-bound (Thráinsson 2007: 373; cf. also Jónsson 1991: 15), contrasting with A'-movement such as topicalization:

- (13) \* Bókin [<sub>CP</sub> sem stolið<sub>i</sub> var sagt [<sub>CP</sub> að þú hefðir *t<sub>i</sub>* ]  
 the book that stolen was said that you had

A further asymmetry arises in connection with extraction. While embedded topicalization creates a topic island (14a), extraction across an element that has undergone SF is possible (14b) (cf. Maling 1990, Rögnvaldsson and Thráinsson 1990, Jónsson 1991, Holmberg 2006):

- (14) a. \* Maríu<sub>i</sub> veit ég [ að þessum hring<sub>k</sub> lofaði Ólafur *t<sub>i</sub> t<sub>k</sub>* ]  
 Maria<sub>DAT</sub> know I that this ring<sub>ACC</sub> promised Olaf<sub>NOM</sub>  
 'I know that Olaf promised Maria this ring.'
- b. þennan mann<sub>i</sub> hélt ég [ að farið<sub>k</sub> hefði verið með *t<sub>k</sub> t<sub>i</sub>* á sjúkrahús]  
 this man think I that gone had been to hospital  
 'This man I thought had been taken to hospital.'
- (15) a. \* Hversu lengi heldur þú [<sub>CP</sub> að [<sub>PP</sub> í Ósló]<sub>i</sub> hafi hann búið *t<sub>i</sub>* ]  
 how long think you that in Oslo has he lived
- b. Hversu lengi heldur þú [<sub>CP</sub> að [<sub>PP</sub> í Ósló]<sub>i</sub> hafi verið búið *t<sub>i</sub>* ]  
 how long think you that in Oslo has been lived  
 'How long do you think that people have lived in Oslo?'

Uncontroversially, I assume that the topicalized phrase in (14a) and (15a) occupies Spec-C of the embedded clause, which can therefore not function as an "escape hatch" for further elements to be extracted. By contrast, the escape hatch is evidently available in (14b) and (15b), i.e. the fronted element in this case does not occupy Spec-C. With Maling (1990) and Holmberg (2006), among others, I conclude that SF is distinct from embedded topicalization in terms of underlying operations.

I will now turn to a brief discussion of previous theoretical analyses of SF in Icelandic before turning to my own proposal in §4.

### 3 Previous approaches to SF

SF has been analyzed in various ways since Maling's seminal work on this topic. In this section, I will briefly discuss some previous approaches to SF, outlining their strengths and weaknesses.<sup>7</sup>

<sup>7</sup> Two theories of SF I will not discuss here are those outlined in Poole 1997 (prosodic inversion) and Sells 2002 (base generation). These accounts diverge sharply from my basic assumptions, which is why a

Platzack (1987) argues that stylistic fronting is simply movement into the subject position (Spec-T, in my terms). This is problematic, since he seems to assume that the moving elements are heads, e.g. participles and particles. It is left open by his theory why  $X^0$ -categories should be allowed to move to a phrasal position. Neither Platzack nor Maling discuss SF of NPs or PPs as described in §2. Likewise, neither author explains why SF can target the subject position, given that – at least in embedded clauses with subject extraction or relativization – this position is standardly taken to be occupied by a trace. Even if we assume that the subject trace is somehow deleted after further movement of the subject, subsequent SF in the lower clause would be countercyclic.

In response to these problems, Rögnvaldsson and Thráinsson (1990) (building on Rögnvaldsson 1982) propose an analysis that amounts to a denial that SF exists as a separate operation in the grammar; rather, it is reduced to a subcase of topicalization, analyzed as movement to Spec-T. I gave some (to my mind, conclusive) arguments to the opposite conclusion in the preceding section, and in fact none of the asymmetries described there can be made to follow from their account. Perhaps even more problematically for this reductionist account, standard cases of SF involve nonfinite verbs and verb particles, but both categories cannot be topicalized in Icelandic (Thráinsson 2007: 343). Despite these grave problems, there is one aspect of Rögnvaldsson and Thráinsson’s account which I will adopt in my own approach (see §5 below): In order to avoid the problem of moving an element into a position occupied by a trace, they assume that the subject trace is in a lower position than Spec-T (adjoined to VP, in their terms). My slightly modified version of this claim will be that subjects are extracted directly from their base position within  $vP$ .

A novel movement-to-subject account of SF is developed in Holmberg 2000. Holmberg suggests to split the EPP-requirement of Icelandic T into two parts: One feature ([D]) of T requires agreement with a nominal category, another feature ([P]) requires filling of Spec-T. The idea is that in SF constructions, both features are satisfied (checked) by distinct means: [D] (agreement with a nominal category) can be satisfied under Agree; the [P]-feature can then be satisfied by movement of some other category to Spec-T. But this movement, Holmberg argues, inserts only the phonological features of the attracted element into Spec-T, leaving behind formal and semantic features. In effect, the fronted element is “derived expletive”, and the semantic vacuity of SF follows.

While Holmberg’s is clearly more satisfying than earlier accounts, it faces some non-trivial challenges (cf. the discussion in Thráinsson 2007: 386). First of all, once we allow phonological features of elements to be dissociated from semantic/formal features by means of movement, the question of how to constrain this feature-splitting capacity

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thorough discussion of their proposals is beyond the scope of the present work. See Bošković (2004: 58 fn. 1) for a brief discussion of (and decisive arguments against) Poole’s analysis. I will also not discuss Poole 1996 specifically, since it is a variation of the head-movement approach of Jónsson (1991) and Holmberg and Platzack (1995). The hybrid theory developed in Hrafnbjargarson (2003, 2004) appears to be on thin ice empirically (see Sigurðsson 2008: 24, fn. 37, Thráinsson 2007: 389) and will also not be considered here (see Poole 2007 for some discussion).

of movement operations arises immediately. Another problem that Holmberg addresses insufficiently is that of heads moving to Spec-T. He indicates (p. 461) that his theory allows for this, and adds that there is no phrase-structural reason to ban substitution of non-projecting heads into specifiers. Whether or not this assumption is problematic is a matter of theoretical choice; I think that it sacrifices too many crucial generalizations and explanations by effectively abandoning the  $X^0/XP$ -distinction. If restrictiveness of the theory is to be maintained, Holmberg's account is untenable.

Returning to head-movement analyses, Jónsson (1991) proposes to analyze SF as movement of heads (see also Holmberg and Platzack 1995, Poole 1996) – that is, as adjunction of the fronted  $X^0$ -category to Infl (T, in my terms).<sup>8</sup> I have already noted the most obvious problem for this approach: As shown in §2, there are clear cases of SF that involve maximal categories and hence cannot possibly be analyzed as head movement.<sup>9</sup>

Jónsson (1991) proposes to account for the subject-gap requirement by a stipulation to the effect that head-adjunction/cliticization of the fronted element to T renders the latter incapable of assigning nominative case to the subject position.<sup>10</sup> A problem for this analysis (which Jónsson himself notes) is that SF does not seem to generally lead to a suppression of nominative case, in particular in cases where an indefinite subject stays low, or where nominative is assigned to a passive object (cf. Ottósson 1994: 114):

- (16) a. Ég veit [<sub>CP</sub> að til<sub>i</sub> eru t<sub>i</sub> [<sub>NP</sub> önnur lönd                    ]]  
           I know       that PRT       are       other countries.NOM
- b. ... hvort drukkið<sub>i</sub> hafi einhverjir Danir       t<sub>i</sub> bjór  
           if       drunk    have some       Danes.NOM   beer
- c. Keypt<sub>i</sub> hefur varið t<sub>i</sub> tölvu                    fyrir starfsfólkið  
           bought has   been   a computer.NOM for   the staff

A further problem (noted by Sigurðsson 1997: 5) is that the subject-gap restriction does not only require absence of *nominative* subjects; oblique subjects are likewise impossible (cf. also Maling 1990: 83).<sup>11</sup> Clearly, then, even if it is granted that adjunction to T somehow renders that head incapable of assigning nominative case, this cannot properly derive the subject-gap requirement of SF.<sup>12</sup>

<sup>8</sup> According to Holmberg and Platzack (1995: 116), a similar analysis was proposed independently by Platzack (1991).

<sup>9</sup> Although Jónsson mentions leftward movement of negative objects and indicates that he takes it to be an instance of SF, he does not discuss SF of XPs any further.

<sup>10</sup> Thus, Jónsson in effect treats SF as a case of clitic movement. But, as noted by Holmberg (2000: 455), the fronted elements (even those that are head-like) are in no way defective, syntactically or prosodically. As will be shown below, modified heads can undergo SF. Moreover, the elements that undergo SF can do so even when conjoined (Sigurðsson 1997: 8). Hence, it is unclear why these elements should have to undergo cliticization at all, and why only in the context of SF. In addition, it can be objected that while clitics normally never occur sentence-initially, SF targets the initial position when it applies in impersonal main clauses.

<sup>11</sup> The problem is also noted by Holmberg and Platzack (1995: 119), who propose an amendment to the effect that if SF to Infl applies, Spec-T is not licensed as an A-position. I will not discuss this equally stipulative account here.

<sup>12</sup> The arguments given here apply equally to Platzack (1987), where it is argued that nominative case is absorbed by C, assumed to be pronominal in Icelandic.

A head-movement approach is also developed by Bošković (2004), who argues that SF targets a null head F above T. At PF, affixal F and the T-head must undergo morphological merger, which requires both heads to be adjacent – this accounts for the subject-gap requirement. The most obvious problem for the analysis is, of course, that it has no way of accounting for SF of XPs, i.e. NPs and PPs, since all SF is necessarily taken to be head-movement to F. It is clearly not feasible to assume that some XP raised to Spec-F could undergo PF-merger with T. Moreover, Bošković’s account relies entirely on the existence of the affixal head F, to which the fronted element adjoins, but no empirical justification for the existence of this head is given.

Overall, we have good reasons to dismiss a theory that tries to account for all cases of SF in terms of head movement. The two virtues that such a theory has (by assuming head movement, it explains the clause-boundedness and semantic vacuity of SF) will receive an alternative explanation in the approach to be developed below: SF is clause-bound because it is A-movement, and it reconstructs because there is no case-assignment involved.

None of the accounts briefly surveyed here can explain why SF can move seemingly diverse categories into the derived subject position, and why SF should be constrained by the subject-gap requirement. My own theory, developed in what follows, relies on a significantly smaller set of assumptions than the approaches discussed in this section but can account for the observed peculiarities without inelegant stipulations.

## 4 SF as (remnant-)XP fronting

In this section, I will discuss the various manifestations of SF, arguing in each case that the fronted category moves as a phrase, not as a head. Importantly, in order to achieve this unification it is necessary to show that the apparent cases of head movement are actually remnant-XP movements.

### 4.1 NPs and PPs

In this section, I want to discuss cases of SF in which the fronted category is an object NP or PP. For now I will confine the discussion to a description of the facts, while my theoretical analysis of NP/PP-fronting will be stated in §§4.4 and 4.5, in order to avoid redundancy.

Consider the following examples, which Sigurðsson (1997: 6) attributes to Rögnvaldsson (1982, 1984a):

- (17) a. sem [<sub>NP</sub> þessa erfiðu ákvörðun ]<sub>i</sub> verða að taka *t<sub>i</sub>*  
           who    this   difficult decision    have to take
- b. sem [<sub>PP</sub> um þetta ]<sub>i</sub> hafa rætt *t<sub>i</sub>*  
           who    about this    have discussed

Since topicalization is not an option in relative clauses, (17) must be instances of SF. Further examples are given in Jónsson (1998), Hrafnbjargarson (2004), and Holmberg (2000, 2006).<sup>13</sup>

- (18) a. Peir sem [<sub>NP</sub> bestum áragri ]<sub>i</sub> hafa náð *t<sub>i</sub>*  
 those who the best result have got  
 b. Peir sem [<sub>PP</sub> til hans ]<sub>i</sub> myndu hafa verið sendir *t<sub>i</sub>*  
 those who to him might have been sent  
 c. Allir sem [<sub>PP</sub> í bókinni ]<sub>i</sub> höfðu lesið *t<sub>i</sub>* voru hrifnir  
 all that in the book had read were impressed  
 d. Peir sem [<sub>PP</sub> í Óslo ]<sub>i</sub> hafa búið *t<sub>i</sub>* segja að ...  
 those who in Oslo have lived say that

Clearly, none of these examples could be analyzed as movement of an  $X^0$ -category. Holmberg (2006: 545ff.) argues at length that these cases of NP/PP-fronting exhibit all relevant properties of SF and can be shown to be distinct from topicalization, relying on the asymmetries discussed in §2.

Some details with regard to SF of PPs require clarification. As noted by Jónsson (1991: 14) and Sigurðsson (1997: 6), SF cannot remove bare prepositions from their complements:

- (19) a. \*að um<sub>i</sub> yrði rætt [<sub>PP</sub> *t<sub>i</sub>* tillögurnar ]  
 that about would-be talked the proposals  
 b. \*þegar um hafði verið rætt [<sub>PP</sub> *t<sub>i</sub>* þetta ]  
 when about had been talked this

As noted by Holmberg (2006: 555), however, fronting of (what looks like) a bare preposition is possible if the PP contains the trace of a null operator (or of the head noun, depending on one's theory of relative clauses):

- (20) maðurinn<sub>k</sub> [<sub>CP</sub>  $Op_k/t_k$  sem [<sub>PP</sub> um *t<sub>k</sub>* ] var rætt *t<sub>i</sub>* ]  
 the man that about was talked

A comparison between (19) and (20) strongly suggests that what is going on in (20) cannot be fronting of a bare preposition (which is bad, as (19) shows), but rather of a PP.

Finally, it should be mentioned that not any NP or PP can undergo SF. The notoriously ill-understood notion of *heaviness* clearly plays a role here: In general, “heavy” constituents resist SF more strongly than “lighter” constituents (Gunnar Hrafn Hrafnbjargarson, p.c.). For instance, NPs or PPs that contain a further NP complement or a relative clause cannot undergo SF; likewise, clausal complements resist fronting:

- (21) a. \*Allir sem [<sub>NP</sub> eyðileggingu borgarinnar Hirosima ]<sub>i</sub> fengu að  
 all that the destruction.DAT the city.GEN Hiroshima got to  
 fylgjast með *t<sub>i</sub>* fylltust hryllingi  
 follow with were-filled fear

<sup>13</sup> See Holmberg and Platzack (1995: 115) for similar examples from Faroese, attributed to Barnes 1987; Falk (1993: §6.4) discusses cases of phrasal SF in Old Swedish.

- b. \* Allir sem [<sub>PP</sub> um manninn sem druknaði höfðu ]<sub>i</sub> heyrt *t<sub>i</sub>* voru  
all that about the man that drowned had heard were  
sorgmæddir  
sad
- c. \* Allir sem [<sub>CP</sub> að Jón hafði sagt að konan hans væri í  
all who that John had said that wife his was in  
Kaupmannahöfn ]<sub>i</sub> vissu *t<sub>i</sub>* urðu hissa þegar þau komu saman  
Copenhagen knew became surprised when they came together  
í veisluna  
to the party
- d. \* sá sem [ að lyfta steininum ]<sub>i</sub> reyndi *t<sub>i</sub>*  
he that to lift the stone tried

Presumably for the same reason (heaviness), SF of complete VPs is impossible (see, e.g., Holmberg 2000: 470):

- (22) a. \* þeir sem [<sub>VP</sub> búið í Ósló ] hafa *t<sub>i</sub>* segja að ...  
those that lived in Oslo have say that
- b. \* Hann segir að [<sub>VP</sub> komið betra veður ] sé *t<sub>VP</sub>*  
he says that come better weather is
- c. \* [<sub>VP</sub> Fallið margir hermenn ] hafa *t<sub>VP</sub>* í þessu stríði  
died many soldiers have in this war

Notice that what SF does is moving a non-subject constituent to the subject position – in many cases, a constituent that is of a type (nonfinite verb, particle, adverb) that is incompatible with subjecthood at all. It is therefore not surprising to find that the complexity of the fronted category is more tightly constrained than in the case of canonical subjects, given the potentially heavy burden this fronting puts on processing (Cedric Boeckx, p.c.).

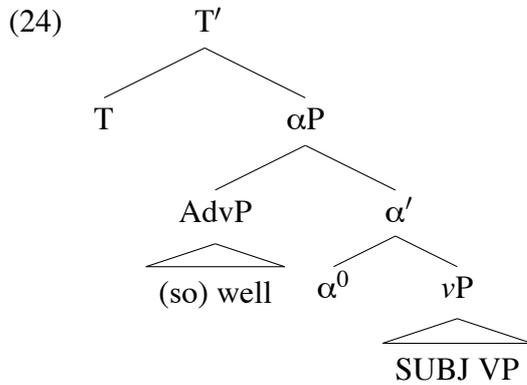
The data I presented in this section show unambiguously that SF can not be uniformly analyzed as head movement (*pace* Jónsson 1991, Holmberg and Platzack 1995, Poole 1996, Bošković 2004). This leaves us with two theoretical options: Either we conclude that *both* XPs *and* X<sup>0</sup>s can undergo SF (and hence that SF can target different positions in the tree); or else we conclude that all SF is phrasal. A uniform analysis of all types of SF – which I will take to be more desirable from a theoretical point of view – must take the latter route.

## 4.2 Adverbs and negation

Let us now turn to SF of adverbs, illustrated in the following example (from Holmberg 2006: 539):

- (23) sem sennilega<sub>i</sub> er *t<sub>i</sub>* hægt að gera við  
that probably is possible to fix PRT

Given that the fronted element in (23) is a single “word” (terminal), it is tempting to conclude (with Jónsson 1991, Holmberg and Platzack 1995 and others) that SF targets an  $X^0$ -category in such cases. However, according to Kayne (1994), Alexiadou (1997), Cinque (1999) and others, adverbs are specifiers of dedicated functional projections (termed the “functional specifier approach” by Cinque 2004: 684). Schematically, this can be represented as follows:<sup>14</sup>



Assuming the Cinquean theory of adverbs to be on the right track (cf. Thráinsson 2007: 370), it follows straightforwardly that adverbs are actually phrasal categories, hence that SF of adverbs should be seen as XP-movement. That this is the case is also shown by the fact that adverbs can be modified, in which case the entire AdvP undergoes SF (the example is originally from Rögnvaldsson 1982):

- (25) sem [<sub>AdvP</sub> svona vel ]<sub>i</sub> hafa talað t<sub>i</sub> um þig  
 who so well have talked about you

I will assume a parallel analysis for the negation, which I take to be an AdvP in the specifier of a dedicated negation phrase (as argued in Jónsson 1996: 95–100):<sup>15</sup>

- (27) þegar [<sub>AdvP</sub> ekki ]<sub>i</sub> var [<sub>NegP</sub> t<sub>i</sub> [<sub>Neg'</sub> Ø-Neg<sup>0</sup> [<sub>vP</sub> búið að borða ]]]  
 when not was finished to eat

Like  $\alpha$ P<sub>s</sub> hosting adverbs, the phrase hosting the negation is hierarchically ordered above the thematic ( $v$ P) domain. This makes a prediction about locality conditions relevant to SF. If, in an SF environment, T simply attracts the closest XP it can (*Attract*

<sup>14</sup> “ $\alpha$ ” here is shorthand for the various categories encoded in Cinque’s hierarchy, i.e.  $\alpha \in \{\text{Mod, Asp, Pol, ...}\}$ .

<sup>15</sup> There are independent reasons to take the negation in Icelandic to be phrasal (cf. Ouhalla 1990). Negation (and adverbs) can be topicalized in this language (see Holmberg and Platzack 1995: 17). Moreover, and more directly relevant to our purposes here, negation can be modified, in which case the entire phrase undergoes SF (examples from Sigurðsson 1997: 8 and Thráinsson 2007: 82):

- (26) a. sem [<sub>AdvP</sub> alls ekki ]<sub>i</sub> hefur [<sub>NegP</sub> t<sub>i</sub> Ø-Neg<sup>0</sup> ] skrifað þessar bækur  
 who at all not has written these books  
 b. sem [<sub>AdvP</sub> alls ekki ]<sub>i</sub> geta [<sub>NegP</sub> t<sub>i</sub> Ø-Neg<sup>0</sup> ] unnið saman  
 that at all not can work together

The examples in (26) are cases of phrasal movement; hence, cases in which negation appears to be moving as a head must be cases of phrasal fronting, too. We have thus more direct support for the hypothesis that SF is generally phrasal movement.

*Closest*, Chomsky 1995: 311), then adverbs and the negation will always block SF of any vP-internal material.<sup>16</sup> This prediction is borne out. According to Maling (1980, 1990), SF is governed by the following “accessibility hierarchy”:<sup>17</sup>

- (28) *Accessibility hierarchy* (based on Maling 1990: 81)
- $$\left\{ \begin{array}{l} \text{negation} \\ \text{adverbs} \end{array} \right\} \gg \left\{ \begin{array}{l} \text{past participle} \\ \text{verb particle} \end{array} \right\} \gg \text{predicative adjectives}$$

Maling supports the hierarchy in (28) by showing that adverbs and the negation uniformly block SF of lower material. A nonfinite verb cannot undergo SF when the negation is present:

- (29) þegar búið<sub>i</sub> var t<sub>i</sub> að borða  
when finished was to eat
- (30) a. þegar ekki<sub>i</sub> var t<sub>i</sub> búið að borða  
when not was finished to eat
- b. \*þegar búið<sub>i</sub> var ekki t<sub>i</sub> að borða  
when finished was not to eat

Transparently, AdvP in Spec-Neg is the closest XP for T’s EPP-feature to attract.

SF of adverbs/negation allows us to empirically distinguish between head-movement theories of SF and a phrasal-movement analysis of the kind developed here. For Jónsson (1991) and Bošković (2004), SF is head movement, hence governed by the Head-movement Constraint (HMC, Travis 1984). On the theory developed here (as well as for Holmberg 2000), SF is governed by Attract Closest. Consider now the following data from Thráinsson (2007: 381) (cf. also Holmberg 2000: 454f.):

- (31) a. Þeir sem hafa ekki verið í Danmörku  
those that have not been in Denmark
- b. Þeir sem ekki<sub>i</sub> hafa t<sub>i</sub> verið í Danmörku  
those that not have been in Denmark
- c. \*Þeir sem í Danmörku<sub>i</sub> hafa ekki verið t<sub>i</sub>  
those that in Denmark have not been
- (32) Þeir sem í Danmörku<sub>i</sub> hafa verið t<sub>i</sub>  
those that in Denmark have been

The contrast between (31b) and (31c) demonstrates that presence of a negation blocks SF of a lower PP. When the negation is removed, PP-fronting is possible (32). This shows that the HMC cannot be the relevant locality condition on SF; the PP, being a maximal projection, cannot be governed by this constraint. The interaction (blocking) between the negation and the PP shows, then, that fronting of the negation cannot be governed by the

<sup>16</sup> I will remain agnostic about the precise formalization of the relevant locality constraint. As an alternative to Attract Closest, one could invoke, for instance, the *Minimal Link Condition* (Chomsky 1995: 355f.) or some formulation of *Shortest Move*.

<sup>17</sup> Adverbs were not included in Maling’s original formulation of the hierarchy.

HMC, either. An Attract Closest-based account, however, can easily explain the facts, since both the negation and the PP are XPs. The head-movement account of SF must be rejected. See §4.4 below for further evidence from SF that the negation moves as an XP.

It is necessary at this point to rule out a further option to satisfy EPP on T, namely raising of the entire complement of T (NegP/AdvP). What we want to say, intuitively, is that T attracts the closest *specifier*, but in the light of what I will have to say in §§4.4 and 4.5 below, I will instead assume the following natural principle:

- (33) *Anti-locality constraint* (cf. Abels 2003: 12)  
 $*[_{XP} YP [_{X'} X^0 t_{YP} ]]$

It follows from (33) that in a configuration [T XP], attraction of XP to Spec-T in order to satisfy an EPP-requirement on T is impossible. This captures the standard (though standardly implicit) assumption that EPP on T cannot be satisfied by raising of T's complement (for related discussion in a broader context, see Abels 2003, and Boeckx 2008: ch. 3 for an attempt to derive anti-locality from deeper principles).<sup>18</sup> Movement must be sufficiently non-local, hence in the cases relevant here, T must attract the AdvP in Spec-NegP/Spec- $\alpha$ P.

So far, we have seen that at least part of Maling's accessibility hierarchy follows from Attract Closest, once SF is analyzed as phrasal movement (attraction by T): NegP and phrases hosting adverbs block SF of lower material. In the following section, we will see that the same holds when the predicate is adjectival. For the remaining cases the theory outlined in §§4.4 and 4.5 makes the right predictions, once properties of the vP phase are taken into account. I conclude that adverbs and the negation, being specifiers of functional heads above vP (as in Cinque 1999), move as full maximal projections; no further manipulation is necessary for these categories to undergo SF. A minimal view of locality (Attract Closest), supplemented with the anti-locality requirement (33), straightforwardly accounts for the facts.

### 4.3 Predicative adjectives

A further category that can undergo SF is that of predicative adjectives. The following examples (from Holmberg 2006: 535 and Jónsson 1991: 2) illustrate:

- (34) a. hún sem var fyrst til að lýsa stílfærslu  
 she that was first to investigate Stylistic Fronting  
 b. hún sem fyrst<sub>i</sub> var t<sub>i</sub> til að lýsa stílfærslu  
 she that first was to investigate Stylistic Fronting
- (35) a. nokkuð sem er hægt að gera við  
 something that is possible to fix PRT  
 b. nokkuð sem hægt<sub>i</sub> er t<sub>i</sub> að gera við  
 something that possible is to fix PRT

<sup>18</sup> The notion of anti-locality used here is different from that in Grohmann 2003 and related work.

- (36) Þeir sem ánægðir<sub>i</sub> eru [<sub>AP</sub> *t<sub>i</sub>* með kaupið ] kvarta ekki  
 those who content are with the pay complain not

Notice that the fronted adjective in (34b) and (36) has left behind its complement. By contrast, modifiers generally cannot be stranded by SF of the adjective in this way (Jónsson 1991: 13):

- (37) \* Þetta er maður [<sub>CP</sub> sem skyldur<sub>i</sub> er mjög *t<sub>i</sub>* Maríu ]  
 this is a man that related is very much Maria.DAT

Similarly, modifiers cannot undergo SF by themselves, stranding an adjective (example from Sigurðsson 1997: 6):<sup>19</sup>

- (39) \* sem svakalega<sub>i</sub> var *t<sub>i</sub>* klár  
 who terribly was bright

Such cases generally improve significantly when the entire AP moves:<sup>20</sup>

- (40) a. ? sem [<sub>AP</sub> mjög skyldur ]<sub>i</sub> er *t<sub>i</sub>* Maríu  
 that very much related is Maria.DAT  
 b. ? sem [<sub>AP</sub> einstaklega klár ]<sub>i</sub> var *t<sub>i</sub>*  
 that extraordinarily bright was  
 c. ? sem [<sub>AP</sub> afskaplega erfið ]<sub>i</sub> hafa verið *t<sub>i</sub>* viðureignar  
 that very hard have been dealing-with

I propose to account for the data in the following way. Roughly following Bowers (1993), Baker (2003: ch. 4) and others, I assume that a copula (relative) clause with an AP predicate as in (34a) has the following structure:

- (41) [<sub>CP</sub> *Op* [<sub>C'</sub> C-that [<sub>TP</sub> T-was<sub>i</sub> [<sub>PredP</sub> *t<sub>Op</sub>* [<sub>Pred'</sub> Pred-*t<sub>i</sub>* [<sub>AP</sub> first [<sub>CP</sub> PRO to investigate SF ]]]]]]]

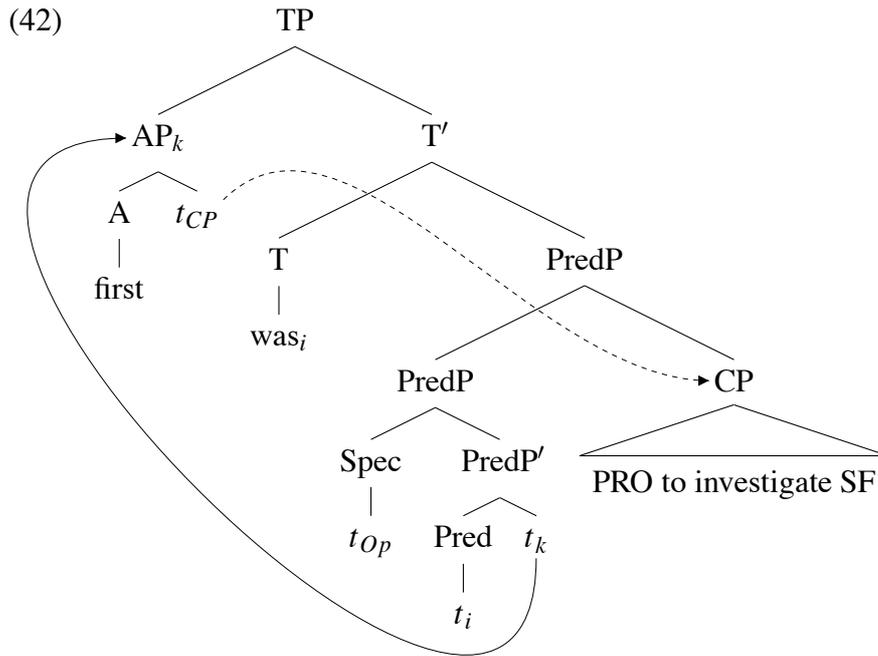
Thus, I take a predicative adjective in this context to be the head of an AP which is dominated by some kind of predicate phrase PredP (perhaps a bare VP), which is in turn selected by T; the copular verb raises from Pred/V to T, unless an auxiliary is chosen. Now, given that PredP cannot raise to Spec-T by anti-locality (33), T attracts the remnant AP containing the trace of the extraposed complement (the dashed arrow indicates application of a transformation at an earlier step in the derivation, not meant to imply countercyclic application):

<sup>19</sup> By contrast, topicalization of these modifiers appears to be generally possible; compare (39) to the following:

- (38) Svakalega<sub>i</sub> held ég að hann hafi verið *t<sub>i</sub>* klar  
 terribly think I that he has been bright

In fact, Thráinsson (2007: 347) claims that topicalization of the whole AP in such cases is strongly degraded.

<sup>20</sup> Some speakers find these cases marked (whence the question mark), but it is sufficiently clear that they are much better than the counterparts with stranded modifiers.



Since the entire AP is too heavy to undergo SF (recall the discussion in §4.1), I assume that the CP complement must extrapose (right-adjoin to PredP) for SF to yield a licit result.<sup>21</sup> Given the option of extraposition of CPs and PPs, fronting of AP is predicted to strand complements while always pied-piping modifiers (located in Spec-A), as shown in (40).<sup>22</sup>

It is natural to assume that adverbs and the negation are ordered hierarchically above PredP (just like they are ordered above *v*P). Recall that in the preceding section it was shown how presence of an adverb or a negation blocks SF of lower material; under the Attract Closest account developed here, we expect the same blocking effect with predicative APs. This prediction is again borne out. As already shown by Maling (1980), negation blocks SF of AP:

- (43) nokkuð sem hægt<sub>i</sub> er t<sub>i</sub> að gera við  
 something that possible is to fix PRT
- (44) a. nokkuð sem ekki<sub>i</sub> er t<sub>i</sub> hægt að gera við  
 something that not is possible to fix PRT
- b. \*nokkuð sem hægt<sub>i</sub> er ekki t<sub>i</sub> að gera við  
 something that possible is not to fix PRT

Although Maling's original hierarchy did not mention adverbs, it is clear that these block SF of other categories in just the same way (as already indicated in the revised hierarchy in (28)). Consider the following examples (from Holmberg 2006: 539), which show the same contrast as the pair in (44):

<sup>21</sup> Notice that evacuation-*qua*-extraposition from AP is not a case of "look-ahead" if it is assumed that CP and PP objects extrapose either optionally (in which case a non-extraposition derivation will be filtered) or obligatorily.

<sup>22</sup> Notice that for a case like (40a), it is necessary for me to assume that the dative complement is actually a covert PP, hence an extraposable category.

- (45) a. nokkuð sem sennilega<sub>i</sub> er *t<sub>i</sub>* hægt að gera við  
 something that probably is possible to fix PRT  
 b. \* nokkuð sem hægt<sub>i</sub> er sennilega *t<sub>i</sub>* að gera við

All of these facts follow directly from the assumption that adverbs are hierarchically higher than the predicate (AP or *vP*, as shown in §4.4), hence Spec-Neg/Spec- $\alpha$  is the closest goal for T whenever a negation or an adverb is present. Consequently, SF of lower material is blocked in these environments.

Notice that this analysis proposed above easily handles the case in (36), in which the fronted adjective (phrase) leaves behind a PP. The derivation is exactly parallel: PP extraposes, and the remnant AP is fronted to Spec-T. I conclude that predicative adjectives uniformly undergo SF as phrases, potentially containing the trace of an extraposed complement. Pied-piping of AP-internal modifiers follows straightforwardly, since the entire AP raises. No recourse to head movement is necessary.

Let us now turn to the two remaining cases: participial verbs and particles. These are the instances of SF that, *prima facie* at least, strongly militate against a phrasal-movement account of SF.

#### 4.4 Nonfinite verbs

Having established that SF in Icelandic is phrasal (remnant) movement in the cases of NPs/PPs, adverbs/negation and predicative adjectives, let us now consider the case of nonfinite verbs undergoing SF. I will argue that SF of participles is actually movement of a remnant verb phrase (*vP*).<sup>23</sup>

Unlike NP and PP, a verb phrase can never be fronted as a whole, i.e. containing a nonfinite main verb and its complement (recall the cases in (22))<sup>24</sup>; only fronting of *either* the participle *or* its complement is allowed:

- (46) a. Þeir sem [<sub>PP</sub> í Ósló ]<sub>i</sub> hafa búið *t<sub>i</sub>*  
 those that in Oslo have lived  
 b. Þeir sem búið<sub>i</sub> hafa *t<sub>i</sub>* [<sub>PP</sub> í Ósló ]  
 those that lived have in Oslo

That is, complements must either be stranded or else undergo SF themselves (see also the examples in Holmberg 2006: 540 and Jónsson 1991: 2).<sup>25</sup> (46a) and (46b) are equally acceptable, and both are clear cases of SF (recall the discussion in §2). It thus

<sup>23</sup> It is noteworthy at this point that Wiklund et al. (2007) – building on Nilsen (2003) and Müller (2004) – have proposed to analyze verb movement in Icelandic (and Norwegian) as remnant-*vP* fronting. Since their analysis relies on various *ad-hoc* assumptions and is in general not very explicit about theoretical details (in particular, evacuation movements), I will not attempt in this paper to relate their approach and the one proposed here.

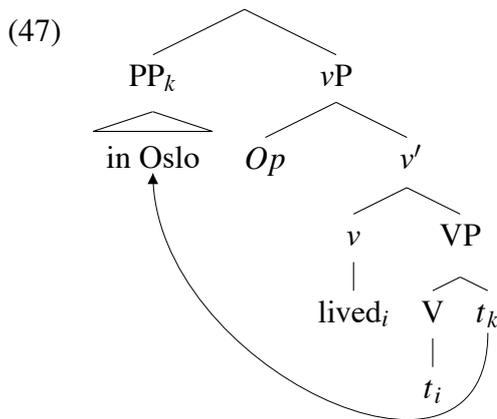
<sup>24</sup> Holmberg has no way to account for these facts and resorts to a stipulation that verb phrases lack the relevant phonological features (“p-features”) of their constituents. In his system, one would expect verb phrases to undergo SF freely, since they have both phonological and semantic content (recall the discussion of his approach in §3).

<sup>25</sup> SF is still optional in either case, of course.

looks as if *búið* and *í Ósló* are in some sense *equidistant* for purposes of SF. The account I will propose presently will derive both this optionality and the phrasal nature of the movement in (46b).

I will assume, as is standard, that *búið* and *í Ósló* start out as sisters in VP. Furthermore, I will assume that merger of *v* results in (optional) movement of the PP to the outer edge of *vP* (as well as V-to-*v* movement). In this I am building on proposals in Chomsky 2000, 2001, where it is argued that *v* can be optionally endowed with an EPP-property that triggers this movement to its edge. In the framework of “phase theory”, this kind of movement is the only way for a complement XP to be available for further operations at the next phase (CP). For instance, Chomsky assumes that an additional rule (which he calls “Disl”) yields Scandinavian-type object shift (cf. Chomsky 2001: 30), raising the XP at the edge to a higher position above adverbs; other languages allow only A'-movement to proceed from the edge. In the present context, my proposal is that SF of complements of V (like object shift or A'-movement of an object) is parasitic on this edge-driven movement.

Hence, I will follow Chomsky in attributing movement of a complement XP to the edge of *vP* to a special *edge property* of that phrase, following from its status as a “phase” (cf. Chomsky 2001: 33):



On the CP level, C attracts the operator, while T’s EPP-feature scans the tree for a phrase to be attracted. Notice that PP and *vP* are equidistant from T (in the sense of Chomsky 2001: 27), since both are sisters and neither asymmetrically c-commands the other. I claim that this is what yields the optionality illustrated in (46).

Assume now that the multiple-specifier configuration in (47) must be reduced at the next cycle by means of movement: one of the symmetrically aligned phrases has to raise.<sup>26</sup> One reason for this might be that (47) is an ‘unstable’ structure in the sense of Moro (2000, 2007), and that subsequent movement of one of the equidistant XPs has to occur in order to allow for linearization. Alternatively, we might speculate that a structure like that in (47) does not permit proper identification of a label (Chomsky, p.c.), assuming that a labeling algorithm that relies on minimal search (“pick simplex object as label”; cf. Chomsky 2008, 2007) yields no output for XP-YP structures. In this case,

<sup>26</sup>Or, alternatively, the subject: see §5 below.

again, something has to move from (47). For the purposes of this paper, I will stick to the more traditional formulation in terms of “EPP”, noting that this stipulative notion may well turn out to be a shorthand for other, primitive mechanisms. I will, however, follow proposals by Hornstein and Nunes (2008) and represent the output of movement to the phase edge as label-less, if only to make the resulting symmetry transparent.

The crucial point here is that the symmetry shown in (47) renders PP and vP in (47) equally accessible for attraction by T, yielding two derivational options:<sup>27,28</sup>

- (48) a.  $[[_{PP} \text{ in Oslo } ] [_{vP} Op [_{v'} v\text{-lived } t_{PP} ]]] \Rightarrow \text{merge C, T}$   
 b. that  $[_{TP} T\text{-have } [[_{PP} \text{ in Oslo } ] [_{vP} Op [_{v'} v\text{-lived } t_{PP} ]]]] \Rightarrow \dots$   
 i. *Option 1*: raise PP (= (46a))  
 $Op \text{ that } [_{TP} [_{PP} \text{ in Oslo } ] [_{T'} T\text{-have } [ t'_{PP} [_{vP} t_{Op} [_{v'} v\text{-lived } t_{PP} ]]]]]$   
 ii. *Option 2*: raise vP (= (46b))  
 $Op \text{ that } [_{TP} [_{vP} t_{Op} [_{v'} v\text{-lived } t_{PP} ] ] [_{T'} T\text{-have } [ [_{PP} \text{ in Oslo } ] t_{vP} ] ]]$

Relying on the special *edge property* of vP (attraction of complements to its left edge), the account predicts the optionality illustrated in (46a) vs. (46b): Both phrases are equidistant from T, hence either one may raise. Notice that neither option violates the anti-locality constraint (33): Since movement to the edge has created an additional node, movement of PP or vP will count as sufficiently non-local (PP/vP do not move from complement position).

My proposal, then, is that SF of nonfinite verbs can be re-analyzed as fronting of (reduced) verb phrases, with evacuation movement of the object triggered by vP’s edge property. I have illustrated how the account makes empirically correct predictions, in particular concerning head-complement optionality.<sup>29</sup> Notice also that Attract Closest directly predicts SF of participles (vP, on my terms) to be blocked by higher material, such as the negation. That this is borne out was shown by cases like (30), repeated here:

- (49) a. þegar ekki<sub>i</sub> var t<sub>i</sub> búið að borða  
 when not was finished to eat  
 b. \*þegar búið<sub>i</sub> var ekki t<sub>i</sub> að borða  
 when finished was not to eat

If SF of participles verbs were head movement (as argued by Jónsson 1991, Bošković 2004), the negation (being an XP; Ouhalla 1990, Jónsson 1996) should not block SF in such cases, just like it does not block regular V-to-T movement:

- (50) Jón las ekki t<sub>i</sub> bókina  
 John read not the book

<sup>27</sup> This analysis might provide an explanation for other cases of optionality, such as “A-scrambling” in Japanese, discussed by Miyagawa (2001, 2003). Miyagawa argues that SOV and OSV orders are possible in Japanese because T’s EPP can attract either the subject or the object.

<sup>28</sup> I am setting aside here the possibility of “defective intervention” by an edge element; see Broekhuis 2007 for discussion.

<sup>29</sup> To the best of my knowledge, my account is the first to provide a structurally grounded rationale for this effect, although Holmberg (2000, 2006) clearly recognizes the role of sisterhood of V and the object.

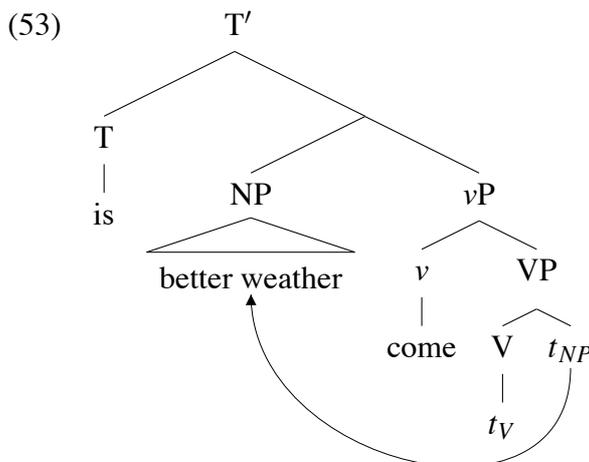
The remnant-*vP* fronting account developed here is thus clearly superior to head-movement theories in its empirical predictions concerning locality. But the discussion so far leaves open the question of why this kind of remnant-*vP* movement disallows further overt material within *vP* to be pied-piped. Hence, I will now address this important issue.

Recall from §2 that SF is possible in the presence of low subjects. There are two relevant cases to consider: unaccusative/passive verbs with indefinite subjects (51) and indefinite subjects of unergative verbs (52) (Rögnavaldsson and Thráinsson 1990: 27):<sup>30</sup>

- (51) a. Hann segir að komið<sub>*i*</sub> sé *t<sub>i</sub>* betra veður  
       he says that come is better weather  
       b. Fallið hafa *t<sub>i</sub>* margir hermenn í þessu stríði  
       died have many soldiers in this war
- (52) a. Ég hélt að kysst<sub>*i*</sub> hefðu *t<sub>i</sub>* hana margir stúdentar  
       I thought that kissed had her many students  
       b. Keypt<sub>*i*</sub> hafa *t<sub>i</sub>* þessa bók margir stúdentar  
       bought have this book many students

In these cases, the indefinite subject *can* raise to Spec-T, but SF is equally possible (as shown above), with the subject surfacing to the right. That is, T's EPP-feature has three different options in these cases, there being three equidistant XPs.

Consider first unaccusatives/passives (51), where the surface subject starts out as a complement of V. I follow Legate (2003) and Centeno and Vicente (2008) in that I take unaccusative/passive *vPs* to be phases, at least in the sense relevant here: They have a designated edge to which complements of the lexical verb can raise, in virtue of an optional extended EPP of *v* (see the discussion above). The difference is simply that *v* in this case does not select an external argument and does not bear agreement features. In a case like (51a), this yields the following:



The logical object raises to the phase edge, where it and *vP* are equidistant from T, hence either one can raise further to Spec-T. This makes exactly the right prediction:

<sup>30</sup> Recall from §2 that definite subjects must always move to Spec-T and thus generally preclude SF (Thráinsson 2007: 364).

- (54) a. *Option 1*: attraction of NP:  
 að [TP [NP betra veður ] sé [ t'NP [vP komið tNP ]]  
 that better weather is come
- b. *Option 2*: attraction of vP:  
 að [TP [vP komið tNP ] sé [[NP betra veður ] tVP]  
 that come is better weather

We also correctly predict vP as a whole to be immobile in case NP does not move to its edge: in this case, no additional node above vP is created, hence SF of vP is ruled out by anti-locality (33) (recall the cases in (22)). There seems to be no case where SF of an internal argument is possible while SF of the participle (vP) is impossible, a fact that shows that NP has to raise to the vP edge in order to be visible at the next cycle. If subjects of unaccusatives optionally move to the phase edge, they are automatically evacuated from vP in the relevant cases, so that vP-fronting to Spec-T is possible without any look-ahead. Alternatively, the raised object can move further to Spec-T, in virtue of it and vP being equidistant from T.

Next, consider a case like (52b), where the predicate is transitive. Since indefinite agentive subjects do not have to raise to Spec-T, SF is possible, as before. The internal argument raises to the vP edge, as proposed above. But notice now that if nothing else is said, we incorrectly predict vP (including the indefinite subject and the nonfinite verb) to be able to raise to Spec-T. This is not an option:

- (55) a. \*að [vP margir stúdentar kysst ]<sub>i</sub> hefðu t<sub>i</sub> hana  
 that many students kissed had her
- b. \* [vP Margir stúdentar keypt ]<sub>i</sub> hafa t<sub>i</sub> þessa bók  
 many students bought have this book

I suggest that cases like those in (55) are bad for reasons of heaviness, as discussed in §§4.1 and §4.3: vP cannot raise to Spec-T when it contains a full subject NP. Whatever the precise reason for this constraint, it is shown independently by the data that subjects must be postposed (rightward moved) in order for vP to be able to raise. Consider the following paradigm from Holmberg (2000: 465):

- (56) a. Margir stúdentar hafa lesið þessa bók  
 many students have read this book  
 b. \*Lesið<sub>i</sub> hafa margir stúdentar t<sub>i</sub> þessa bók
- (57) a. Það hafa lesið þessa bók margir stúdentar  
 there have read this book many students  
 b. ?Lesið hafa þessa bók margir stúdentar

The fact that SF is possible in (57b), where the subject appears postposed to the right of the direct object, but not in (56b), where it appears to be *in situ*, suggests that subjects must be shifted to the right in order to allow for SF of vP, by creating a remnant that can occupy Spec-T. I submit that in the latter case, the subject NP leaves vP when SF of that phrase applies, via the rule of “indefinite-NP postposing” (INPP) (see, e.g.,

Rögnavaldsson 1984b, and Maling 1990: 79 in the context of SF). Following Platzack (1987: 378), I assume that INPP is implemented as right-adjunction to the verb phrase ( $vP$ , in my terms).

With this in mind, consider the derivation for (52a):

- (58) a. [ $vP$  many students kissed her ]  $\Rightarrow$  raise object to edge  
 b. [ her [ $vP$  many students kissed  $t_{OBJ}$  ] ]  $\Rightarrow$  INPP of subject  
 c. [[ her [ $vP$   $t_{SUBJ}$  kissed  $t_{OBJ}$  ] ] many students ]  $\Rightarrow$  INPP of subject  
 d. [ C-that [ $TP$  T-had [[ her [ $vP$   $t_{SUBJ}$  kissed  $t_{OBJ}$  ] ] many students ]]]  $\Rightarrow$  merge C, T  
 e. [ C-that [ $TP$  [ $vP$   $t_{SUBJ}$  kissed  $t_{OBJ}$  ] [ $T'$  T-had [[ her  $t_{vP}$  ] ] many students ]]]  $\Rightarrow$  SF of  $vP$

When  $vP$  is constructed, the subject shifts to the right by INPP (this requires the assumption that right-adjunction does not obey anti-locality, but notice that (33) is not defined for adjuncts or rightward movement in general). This freely available movement thus evacuates  $vP$ , which then fronts as a remnant XP, reduced to its head. INPP serves as an instance of “repair-driven movement”, since  $vP$  is too heavy to occur in Spec-T unless evacuated. As discussed in §4.3, no look-ahead is implied, since INPP applies freely.<sup>31</sup>

I propose, then, that the reason why subjects cannot be pied-piped in a fronted  $vP$  is that these must be evacuated first – either by movement to the phase edge in the case of V-complements (the passive/unaccusative case) and by rightward INPP in the case of agentive subjects (the unergative case), for otherwise SF moves a phrase to Spec-T that is too heavy to occur in that position (notice that a non-subject constituent is moved to the canonical subject position). Other possible derivations are ruled out by anti-locality (33).

Notice that my line of reasoning makes a potential prediction:<sup>32</sup> Very light subjects could be pied-piped when  $vP$  is fronted to Spec-T. According to Hrafnbjargarson (2003, 2004), SF is marginally possible in the presence of a weak pronominal subject, which

<sup>31</sup> It might be objected that INPP of the subject creates a larger  $vP$ , which should then, by minimality, undergo SF. This means that we have to ensure that the postposed subject, which I have argued to be right-adjoined to  $vP$  prior to SF (INPP) – does not interfere with SF. But this “invisibility” of the evacuated subject for SF need not be stipulated, since it is a property of right-adjoined material in general (cf. Holmberg 2006: 540):

- (59) a. Peir sem hitt<sub>i</sub> hafa  $t_i$  konuna sina í Óslo  
 those that met have wife their in Oslo  
 b. \*Peir sem [ $PP$  í Óslo ]<sub>i</sub> hafa hitt konuna sina  $t_i$   
 those that in Oslo have met wife their

Recall from §4.1 that PP-complements can undergo SF. However, in (59) *í Óslo* is a PP-adjunct, not a complement. As (59b) shows, a right-adjoined PP of this kind cannot undergo SF, despite being seemingly closer to T.

<sup>32</sup> The prediction is “potential” insofar as there might be other factors that force subjects to leave  $vP$  in general, as argued by Bobaljik and Jonas (1996). For reasons of space, I cannot thoroughly discuss this question here.

appears to be pied-piped under SF (not Hrafnbjargarson's analysis). The result is considerably worse when the pronoun is stressed, i.e. made more "heavy":<sup>33</sup>

- (60) a. Allt sem 'ann hafði lesið í bókinni var rétt  
all that he.WEAK had read in the book was correct
- b. ? Allt sem 'ann lesið<sub>i</sub>; hafði  $t_i$  í bókinni var rétt  
all that he.WEAK read had in the book was correct
- c. \*? Allt sem hann lesið<sub>i</sub>; hafði  $t_i$  í bókinni var rétt  
all that he read had in the book was correct

A case like (60b) can plausibly be argued to involve SF of a  $vP$  that contains a very light *in situ* subject.<sup>34</sup> Overall then, it seems likely that some kind of heaviness constraint is indeed what prohibits  $vPs$  with heavier subjects to be fronted as a whole. The precise formulation of the relevant threshold for heaviness must be left for future work.

I conclude that bare verbs never undergo SF. I have argued in this section that SF instead targets  $vP$ , while potentially present indefinite subjects and objects are evacuated.<sup>35</sup> I have argued that evacuation of the object  $XP$  follows naturally from  $v$  (a phase head) triggering movement to its edge, at the same time yielding the alternative derivational option of fronting  $XP$  itself (due to equidistance/symmetry of  $XP$  and  $vP$ ). There is no reason, then, to assume that SF of nonfinite verbs is head movement. As I have shown, analyzing the relevant cases as remnant- $vP$  fronting allows us to derive head-complement optionality and avoid the undesirable conclusion that heads can move to Spec-T. I will now turn to the second problematic case, SF of particles, and argue that here, too, SF is best analyzed as  $XP$ -movement.

#### 4.5 Particles

A further case that seems to lend support to a head-movement analysis of SF is the case of particles, these being  $X^0$  categories. In the following, I will argue that SF of particles is actually movement of a reduced Part(icle) $P$  (a possibility hinted at in Holmberg 2006: 555). Once this is established, the unification of all cases of SF is achieved, simplifying its theoretical analysis considerably while suggesting solutions to some long-standing problems posed by SF (see §5 below).

<sup>33</sup> Apparently these cases are not accepted by all speakers and marginal even to those who accept them.

<sup>34</sup> Platzack (1988: 227f.) mentions a similar case in Old Swedish (which had SF); see also Falk (1993: 165). But, as mentioned by Platzack, it is conceivable that the weak pronoun has shifted to some Wackernagel-like position and/or is cliticized onto the complementizer.

<sup>35</sup> To address an obvious objection against the analysis outlined in this section, it is of course the case that  $vP/VP$  appears to be otherwise rather immobile in Icelandic. In particular, in this language topicalization of verb phrases is generally impossible (Thráinsson 2007: 349), while my analysis obviously implies that A-movement of  $vP$  is possible (as in Wiklund et al. 2007). While I do not know what exactly the source of this discrepancy is, it should be noted that it seems to be more general – in particular, particles (which, on my analysis, move as PartPs; see below) can undergo SF but cannot be topicalized (Thráinsson 2007: 343f., 370). While I cannot provide a full explanation here, I ascribe the discrepancies mentioned above to language-specific options as to which kind of constituent can undergo which kind of movement (A or A'). While A'-movement of  $vP$  is not part of Icelandic grammar, A-movement of  $vP$  is, if my proposal is on the right track.



undergo further fronting. The parallel structure correctly predicts the same optionality in both cases.

There is, in fact, direct evidence for particle fronting being phrasal movement. Holmberg (2006: 555) notes an important restriction: Particles can undergo SF only if they do not have an overt complement, as in impersonal passives and when the object is extraposed:

- (66) a. Verðbólgan varð verri en við<sub>i</sub> hafð verið [<sub>VP</sub> búist <sub>t<sub>i</sub></sub>]  
inflation was worse than PRT had been expected
- b. Fram<sub>i</sub> hefur [<sub>VP</sub> [<sub>VP</sub> komið <sub>t<sub>i</sub></sub> <sub>t<sub>k</sub></sub>] [<sub>CP</sub> að fiskað hefur verið í leyfisleysi á  
forth has come that fished has been illegally in  
chílensku fiskisvæði ]<sub>k</sub>]  
the Chilean fishing zone

By contrast, SF of a particle is strongly degraded with transitive verbs:<sup>36</sup>

- (67) \* Stelpan sem út<sub>i</sub> hefur [<sub>VP</sub> sleppt <sub>t<sub>i</sub></sub> kettinum]  
the girl that out has let the cat

Holmberg hints at the possibility of this being evidence for movement of a particle *phrase* “consisting of just the particle and in some cases the trace of an extracted or extraposed object” (2006: 555), but (as he notes) it is unclear why the particle phrase is unable to move as a whole, i.e. without previous evacuation of the object (on this, see below). We have already seen on independent grounds that heaviness of the fronted phrase influences acceptability of SF (recall (55) and the cases in §4.1), and I will assume that the same is true in this case.

The data so far thus suggest the following analysis. SF of PartP can apply if PartP is either sufficiently light (as in (66a)), or else if it is evacuated by some independently available movement rule, such as extraposition in (66b). A potential prediction of this account is that objects which can be evacuated should then allow for fronting of the remnant PartP. In particular, we might expect that indefinite objects can be postposed, and that heavy NPs can undergo heavy-NP shift, allowing PartP to be fronted.<sup>37</sup> Some evidence that this is indeed the case (at least for indefinite objects) is provided by Thráinsson (2007: 331); compare (68b) to (67):

- (68) a. \* þá sem út<sub>i</sub> voru [<sub>NP</sub> einhverjir kettir ] reknir <sub>t<sub>i</sub></sub>  
then that out were some cats driven
- b. þá sem út<sub>i</sub> voru reknir <sub>t<sub>i</sub></sub> [<sub>NP</sub> einhverjir kettir ]  
then that out were driven some cats

With a definite object, (68b) is much worse:

- (69) ?\* þá sem út<sub>i</sub> voru reknir <sub>t<sub>i</sub></sub> [<sub>NP</sub> allir kettir ]  
then that out were driven all cats

<sup>36</sup> As expected, pied-piping of the object is not an option either (Holmberg 2006: 556).

<sup>37</sup> See Rögnvaldsson (1984b) for a discussion of INPP of subject and object NPs, and Thráinsson (2007: 361) on heavy-NP shift in Icelandic.

The contrast with (68a) shows that INPP of the object (i.e., evacuation of PartP *in the syntax*) is necessary for SF.<sup>38</sup> Thus, I take these data to indicate that SF is possible only in case the indefinite object is postposed by means of INPP. In the system developed above, the derivation runs as follows:

- (71) a. [<sub>vP</sub> driven [<sub>PartP</sub> out [<sub>NP</sub> some cats ]]] ⇒ INPP of object, raising-to-edge of PartP remnant  
 b. [[<sub>PartP</sub> out *t*<sub>NP</sub> ] [<sub>vP</sub> [<sub>vP</sub> driven *t*<sub>PartP</sub> ] [<sub>NP</sub> some cats ]]] ⇒ SF of PartP to Spec-T  
 c. [<sub>CP</sub> that [<sub>TP</sub> [<sub>PartP</sub> out *t*<sub>NP</sub> ] T-were [*t*<sub>PartP</sub> [<sub>vP</sub> [<sub>vP</sub> driven *t*<sub>PartP</sub> ] [<sub>NP</sub> some cats ]]]]]

Consider also the following paradigm, the judgments representing relative acceptability as perceived by some informants:

- (72) a. ?\* *stelpa sem út hefur sleppt kettinum*  
 the girl that out has let the cat  
 b. ?? *stelpa sem út hefur sleppt kettinum sem venjulega veiðir margar mýs*  
 the girl that out has let the cat that usually catches many mice  
 c. ? *stelpa sem út hefur sleppt fjórtán köttum*  
 the girl that out has let some fourteen cats

It seems like a regular definite-NP object as in (72a) (= (67)) cannot be easily evacuated from PartP. By contrast, evacuation is more readily available with a heavy definite-NP object (72b) or an indefinite/nonspecific NP (72c).<sup>39</sup> Heavy-NP shift and INPP can (marginally; cf. note 39) evacuate the PartP in (72b) and (72c), respectively; but no standard rule allows for evacuation of the definite NP in (72a).

There is, then, some evidence that PartP can be evacuated by means of general rightward-movement operations applying to indefinite and heavy NPs prior to PartP undergoing SF. If this is indeed the case, then it strongly supports a remnant-movement account, since it is otherwise mysterious why properties of the particle *phrase* should affect the acceptability of particle fronting. It seems that if evacuation cannot apply, SF cannot apply either.

<sup>38</sup> Thráinsson notes that both positions of the indefinite object in (68a) and (68b) are possible if SF does not apply:

- (70) a. *þá sem það voru [<sub>NP</sub> einhverjir kettir ] reknir út*  
 then that EXPL were some cats driven out  
 b. *þá sem það voru reknir út [<sub>NP</sub> einhverjir kettir ]*  
 then that EXPL were driven out some cats

<sup>39</sup> But notice that evacuation of PartP is still more marked than one might expect, given the general availability of heavy-NP shift/INPP. This may be due to the fact that the NP to be evacuated is a specifier (Ramchand and Svenonius 2002), i.e. a left branch, and also farther away from its eventual adjunction site (*vP*) than a direct object.

This concludes our discussion of the various cases of SF. In all cases, I have argued that the moved element is a phrase, hence obviating the need for a head-movement account of SF. In addition to the advantages of this approach that were already mentioned throughout the preceding discussion, I will now turn to further empirical evidence supports the account developed here over the approaches sketched in §3.

## 5 The subject-gap requirement, the EPP, and optionality

In this section, I will refine my analysis by making explicit some of the underlying assumptions of the discussion in the previous sections. In particular, I will address two closely related questions:

1. What is the nature of the subject-gap requirement?
2. What is the syntactic trigger for SF, and why is it optional?

The answers to both questions will turn out to be closely intertwined.

Recall from §2 that SF can only apply if the canonical subject position, which I take to be Spec-T, is not lexically filled. When a definite subject is present, SF can never apply, since (for some reason) definite subjects *must* raise to Spec-T. If we extract or relativize the subject, SF becomes possible. In main clauses, SF can only apply if the construction is impersonal, i.e. subject-less, either by passivization (Icelandic allows impersonal passives of the *It was danced*-type) or by an inherent lexical property of the predicate. An impersonal construction in which SF has applied is shown in (73a); an example for the third possibility, namely a main clause with a low subject, is given in (73b). SF with low subjects is also possible in embedded clauses, as (74) shows (cf. Holmberg and Platzack 1995: 119):

- (73) a. Keypt<sub>*t*</sub><sub>*i*</sub> hefur varið *t*<sub>*i*</sub> tölva fyrir starfsfólkið  
bought has been a computer for the staff
- b. Keypt<sub>*t*</sub><sub>*i*</sub> hafa *t*<sub>*i*</sub> þessa bók margir stúdentar  
bought have this book many students
- (74) Ég hélt að keypt<sub>*t*</sub><sub>*i*</sub> hefðu *t*<sub>*i*</sub> þessa bók margir stúdentar  
I thought that bought had this book.ACC many students.NOM

These facts led Maling (1980) to propose that SF requires a subject gap, which it then (optionally) fills. One problem for this view is that (according to standard assumptions) Spec-T is occupied by the trace of the extracted subject in embedded clauses, hence it should not be possible to move an additional constituent to this position. While not addressing this particular problem, Maling noted that presence of a trace in Spec-T appears to preclude another “EPP strategy” that is in principle available in the absence of a definite subject, namely insertion of an a subject expletive pronoun (*það*). In the words of Maling (1990: 85), “*það* can never be used to fill a subject gap created by an extraction

rule.” That is, when the subject is extracted or relativized, SF applies optionally, while insertion of the expletive pronoun (*það*) is impossible (75c) (Holmberg 2006: 541):

- (75) a. Hver<sub>i</sub> heldur lögreglan að t<sub>i</sub> hafi framið glæpinn  
 who think the police that has committed the crime  
 b. Hver heldur lögreglan að framið<sub>i</sub> hafi t<sub>i</sub> glæpinn  
 c. \*Hver heldur lögreglan að það hafi framið glæpinn  
 who think the police that there has committed the crime

By contrast, impersonal constructions *require* either SF or *það*-insertion, showing clearly that both are alternative strategies to fulfill T’s EPP requirement (cf. Holmberg 2006: 540):

- (76) a. Keypt<sub>i</sub> hefur varið t<sub>i</sub> tölva fyrir starfsfólkið  
 bought has been a computer for the staff  
 b. Það hefur varið keypt tölva fyrir starfsfólkið  
 EXPL has been bought a computer for the staff  
 c. \*Hefur varið keypt tölva fyrir starfsfólkið  
 has been bought a computer for the staff

The same holds for embedded impersonal clauses (cf. Thráinsson 2007: 355), which also require either SF or expletive-insertion, but are degraded when the subject gap is not filled:<sup>40</sup>

- (77) a. Þeir segja [<sub>CP</sub> að keypt<sub>i</sub> hefur varið t<sub>i</sub> tölva fyrir starfsfólkið ]  
 they say that bought has been a computer for the staff  
 b. Þeir segja [<sub>CP</sub> að það hefur varið keypt tölva fyrir starfsfólkið  
 they say that EXPL has been bought a computer for the staff  
 ]  
 c. ?? Þeir segja [<sub>CP</sub> að hefur varið keypt tölva fyrir starfsfólkið ]  
 they say that has been bought a computer for the staff

I argued above that all SF is EPP-driven phrasal movement to Spec-T, obeying Attract Closest and anti-locality. Thus, I claim that SF is on a par with regular subject movement, as in the case of definite subjects. With some additional, independently motivated assumptions, the optionality of SF in embedded clauses and the observed interaction of SF and expletive-insertion follow immediately from this account.

As we saw in §4.4 and §4.5, movement of an XP-complement of V to the phase edge leads to a situation of equidistance, in that either the XP at the edge of *vP* or *vP* itself can raise to Spec-T. Assume that in cases where a low indefinite subject is present, there is a third option: T can raise the phrase it agrees with, i.e. the subject (starting out in Spec-*v*). This follows from the relevant XPs being equidistant from T:

<sup>40</sup> Thráinsson assigns only one question mark to examples like (77c), but other authors deem similar cases strongly degraded. There is some idiolectal variation with regard to expletive-insertion.

- (78) Terms of the edge of [a phase] HP are equidistant from probe P. (Chomsky 2001: 27)

Based on this principle, Chomsky argues (*ibid*) that in a configuration where an object raises to the phase edge, “the shifted object and the *in-situ* subject ... are equidistant from the probe T”. Furthermore, assume that – as proposed by Chomsky (2008, 2007) – A-chains (triggered by attraction by T) and A'-chains (triggered by attraction by C) are formed *simultaneously* when both heads enter the derivation. That is, C and T are “parallel probes”, attracting XPs to their specifier positions at the same derivational step. This view entails that C raises A'-moved subjects directly from their base position (Spec-*v*), since the A-chain formed by T raising the subject to its specifier is invisible to C. In English, when the subject is a *wh*-phrase, it will be attracted by both C and T, leading to two occurrences, the lower one of which is deleted under identity (Chomsky 2007: 25):

- (79) [<sub>CP</sub> *wh* C [<sub>TP</sub> ~~*wh*~~ T [<sub>VP</sub> *t* ... ]]]

This view of chain formation provides a straightforward answer to the question why movement into subject position by means of SF is possible: C extracts subjects directly from their base position; there is no intermediate trace in Spec-T. Any A-chain that terminates in Spec-T is formed independently at the same derivational step. In a language like English, T always raises the phrase it agrees with (the subject); if the subject is also A'-moved by C, the situation in (79) arises. In Icelandic, however, C and T can target *different* XPs in this case: While C attracts the subject (*wh*-phrase or operator) to its specifier, T merely agrees with this subject in its base position and assigns nominative, but is free to attract some other XP to its specifier. I claim that this is responsible for the phenomenon of SF in this language (see §6).

But notice that this system also provides a simple solution to the problem of optionality. If SF applies in an embedded clause with extracted or relativized subject, this is because C has raised the subject while T has raised some other (closest) XP to its specifier. But if in addition T always has the option of raising the phrase it agrees with (the subject, equidistant by (78)), then the situation shown in (79) will always be available as an alternative to SF in embedded clauses with extracted/relativized subject. In other words, if C and T raise the subject, this will result in both Spec-C and Spec-T hosting copies of the subject, one of them deleted under identity, yielding what looks like a subject gap (81a).<sup>41</sup> By contrast, if C and T raise different XPs, this will yield SF (81b):

<sup>41</sup> Notice that when the subject raises to Spec-T, the object is linearized in its base position, not in the edge position:

- (80) Ég hélt að margir stúdentar hefðu kysst hana  
I thought that many students had kissed her

This follows straightforwardly from the effect-on-output condition postulated by Chomsky (2001: 34, his (60)): Movement to the edge can only apply if it has an effect on outcome. This is the case when either the element in the edge undergoes further movement or its complement raises; but when the subject moves, movement to the edge is superfluous and hence does not apply. See Chomsky (2001: 34f.) for reasons why this is not a case of look-ahead, if properly formulated.

(81) Options with subject extraction (= (75)):

a. Subject attracted by both probes (“subject gap”):

[<sub>CP</sub> who<sub>i</sub> that [<sub>TP</sub> ~~who<sub>i</sub>~~ has [<sub>VP</sub> t<sub>i</sub> committed the crime ]]]

b. Subject attracted by C, SF triggered by T:

[<sub>CP</sub> who<sub>i</sub> that [<sub>TP</sub> [<sub>VP</sub> t<sub>i</sub> committed t<sub>k</sub> ] has [[<sub>NP</sub> the crime ]<sub>k</sub> t<sub>VP</sub> ]]]

The question remains, however, why expletive-insertion cannot apply in the situation in (81b) as an alternative to SF, while this is possible in impersonal constructions.

To solve this remaining problem, I assume that *það* is merged in Spec-T (cf. Ottósson 1989, Rögnvaldsson and Thráinsson 1990, Hornstein 1991, Thráinsson 1996, Holmberg 2000), but that it has to raise to Spec-C. It is well-known that there is a strong preference for *það* to be the leftmost element in a clause (Thráinsson 1979: 187), hence that Spec-C must be available when *það* is merged, as argued by Cardinaletti (1990) (see also Vikner 1995: 186). I take this requirement to be evaluated at each CP (phase) level:

(82) \* [<sub>CP</sub> XP [<sub>TP</sub> það [<sub>T'</sub> ... ]]]

This constraint on *það*-insertion suffices to derive the pattern described above. In impersonal constructions, T can attract some postverbal element (yielding SF) or the object, if present. Similarly, in clauses with late indefinite subjects, T can either attract the subject (by (78)) or else some other phrase (SF), as outlined above. In either case, expletive-insertion in Spec-T is possible as an alternative strategy, since nothing is raised to Spec-C; the situation in (82) cannot arise in principle.

By contrast, in embedded clauses with extracted or relativized subjects, the situation in (82) *always* arises if expletive-insertion applies, since the subject must raise successively through Spec-C. Hence, at the CP-level, some XP occupy Spec-C, preventing movement of *það*. In a nutshell, the natural constraint in (82) rules out A'-movement of some XP to Spec-C in the same clause in which expletive-insertion takes place. The underlying reason for this constraint might be that the expletive itself must raise to Spec-C, as argued by Cardinaletti, Vikner, and others.

In this section, I have argued for two claims. Adhering to my general assumption that SF is EPP-driven movement to Spec-T, I have shown that the optionality of SF in embedded clauses is only apparent. Following recent proposals concerning chain formation, it is much more natural to assume, as I have argued, that in the “subject-gap” case it is actually the subject itself that is in Spec-T, but deleted under identity with an occurrence in Spec-C. Secondly, I have argued that the interaction of SF and expletive-insertion follows from a simple *leftmost*-constraint (82) on the latter operation: Within a given CP, *það* can only be merged in Spec-T if C has not attracted anything to its specifier. No further assumptions are necessary.

Notice that the account allows for an elegant reformulation of Maling’s original idea, according to which SF fills an empty subject position. Most of the later accounts reviewed in §3 abandoned this view in favor of head movement, providing no satisfactory account

for the subject-gap requirement. On my account, there is no subject-gap requirement either, strictly speaking; rather, T has the option of attracting some constituent other than the subject (unless independent principles force the subject to raise, as is the case with definite subjects). The (remnant-)XP-movement account of SF developed above allows for a coherent formulation of this traditional view of SF.

## 6 The parametric perspective

In this final section, I will address the parameters underlying SF. Why is it that Icelandic and some other languages have SF, but others do not?

It has been claimed (e.g., Jónsson 1991, Holmberg 2000) that SF is contingent on V-to-T movement, since the otherwise closely related Mainland Scandinavian languages lack SF. It must be noted, however, that Faroese is a likely counterexample to the purported correlation: For many speakers, the finite verb in this language follows the negation and adverbs in relative clauses and embedded interrogatives, but nevertheless SF is attested in these environments (see Hrafnbjargarson 2004: 89, Thráinsson 2007: 377f., 385). Likewise, a recent survey finds that “there is no direct connection between V-to-I movement and SF” (Angantýsson 2009).<sup>42</sup>

Although I cannot resolve the issue conclusively here, I tentatively propose that not V-to-T, but rather the dissociation of  $\varphi$ -features of T and its EPP-property are the underlying reason for SF, and perhaps also responsible for morphological subject-verb agreement (active in Icelandic, but not in the Mainland Scandinavian languages; Platzack 1987). In non-SF languages, the EPP-property of T must be directly connected to (abstract) agreement: T universally raises the phrase it agrees with, i.e. it is invariably the subject that gets attracted to Spec-T. By contrast, in Icelandic agreement (valuation of  $\varphi$ -features) does not imply movement; subject case is assigned under Agree at a distance, but some other category can be raised (*pace* Rizzi 2006: 121).<sup>43</sup>

Given all this, it is tempting to ascribe the difference between Icelandic and Mainland Scandinavian to a difference in the feature-inheritance relation between C and T, in the sense of Chomsky (2007). As suggested by Christer Platzack (p.c.), one might conclude that T in Icelandic optionally inherits an indiscriminate *edge feature* (in the sense of Chomsky 2008) from C. This idea supports the parallelism between SF and

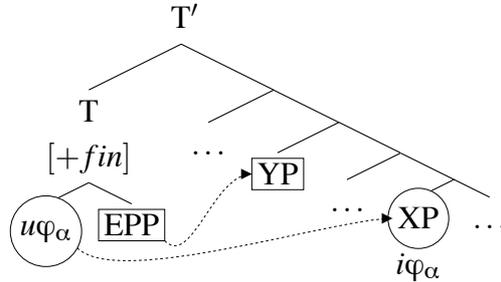
<sup>42</sup> The assumption that V-to-T alone licenses SF falsely predicts SF to be available in Romance (and many other languages). But even if we restrict our attention to Icelandic, that V-to-T movement cannot be *sufficient* for SF is clear from the fact that SF is acceptable only in finite clauses (as observed by Holmberg and Platzack 1995: 117), despite the fact that Icelandic has V-to-T even in infinitival clauses:

- (83) a. \*María lofaði [ að ekki<sub>i</sub> lesa *t<sub>i</sub>* bókina ]  
 Maria promised to not read the book  
 b. \*María lofaði [ að tekið<sub>i</sub> hafa *t<sub>i</sub>* út peninga úr bankanum í morgum ]  
 Maria promised to taken have out money from the bank tomorrow

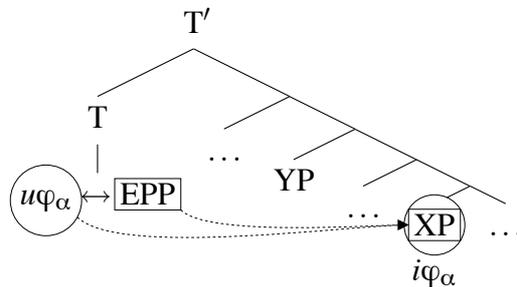
<sup>43</sup> This is a possibility in principle in frameworks like that of Chomsky (2000), where agreement relations are not established in Spec-head relations, and all movement is triggered by EPP-features.

Japanese-style ‘‘A-scrambling’’ (movement of a non-subject NP to Spec-T) noted in fn. 27, although I cannot pursue this idea here. The following figures illustrate schematically:

(84) a. Icelandic/Faroese:



b. English *et al.*:



While in English, Mainland Scandinavian, etc. the EPP on T is a ‘feature of a feature’ (cf. Pesetsky and Torrego 2001), it is an independent probe in Icelandic. Therefore, in Icelandic but not in Mainland Scandinavian, any phrase can move to the derived subject position (provided that no definite subject is present), as long as the movement complies with locality (Attract Closest). Notice that in this respect, quirky subjects, found only in Icelandic and Faroese among the Scandinavian languages, bear some resemblance to (the output of) SF: In this case, too, a non-agreeing category can occupy Spec-T. Like SF, quirky subjects are not found in Mainland Scandinavian.

This view of SF gives us a handle on another property of SF which as not been discussed so far, namely its semantic neutrality. There is a consensus in the literature that SF does not alter scopal relations (Jónsson 1991: 35, fn. 1) and is generally neutral with regard to emphasis/focus on the fronted constituent (Holmberg 2006). While the account developed above sharply distinguishes SF and topicalization, it can easily account for the different information-structural implications (none in the case of SF) of both movement types. But we also predict that SF fully reconstructs (despite being A-movement to Spec-T), at least if we follow Boeckx (2001), who argues that A-moved elements are interpreted only in the position where their Case-feature is deleted. According to this theory, A-movement does not reconstruct whenever case is assigned in the derived position; but if no case is assigned there, reconstruction takes place. The semantic neutrality of SF then simply follows this movement type never being driven by a Case-assigner. The clearest indication of this asymmetry is the fact that SF standardly targets categories which do not require Case.<sup>44</sup> Moreover, I have argued that SF is driven by an EPP-property of T

<sup>44</sup> Other than, say, object shift, which only targets NPs (Vikner 1994) and is known to alter scopal

that probes independently of T's  $\varphi$ -features, the latter I take to be responsible for Case assignment to a goal (Chomsky 2000).

Finally, let me mention that the claim made in this section (SF is the result of a parametrically variable composition of the features in T) dovetails neatly with existing proposals about the general nature of parametric variation. Biberauer and Roberts (2005) propose that the nature of the EPP is of central importance to crosslinguistic variation (see also Biberauer 2003, Biberauer and Richards 2006). In particular, they propose that a language can choose to attract  $vP$  to Spec-T in order to satisfy T's EPP-requirement; this happens either because the [D]-feature that EPP looks for is on the finite verb in  $v$  (German), or because EPP-driven movement pied-pipes the larger XP containing the goal NP (Old English). In other languages, EPP on T attracts the NP in Spec- $v$  (the subject, bearing [D]).<sup>45</sup> An example of the former type (attraction of  $vP$  to Spec-T) is German<sup>46</sup>, while English and many other languages choose the second option (subject raising). Crucially, for Biberauer and Roberts, EPP on T in both instances attracts an element bearing a [D]-feature, located on the finite verb (German) or on the subject NP (English). In this theory, then, "German differs [from Modern English] only in respect of the D and EPP features assumed to be (obligatorily) associated with  $v$ , and, secondly, in respect of the mechanism by means of which the EPP feature on T is satisfied (i.e., pied piping rather than ... subject raising)" (Biberauer and Roberts 2005: 13). Old English, finally, allows  $vP$  to be pied-piped to Spec-T, EPP on T attracting an NP contained in it.

Icelandic can be neatly integrated into this system.<sup>47</sup> The obvious conclusion is that the existence of SF in this language is the result of two parameters: First, the [D]-feature is present on definite NPs in Spec- $v$  *only*; and second, the Icelandic EPP on finite T is maximally underspecified, allowing for attraction of *any* closest XP in the absence of a [D]-feature. Presence of a [D]-feature (= presence of a definite subject) overrides all other options, yielding the "English way" (subject raising). By contrast, absence of a [D]-feature issues a *carte blanche* to T's EPP-property (not an option in German, Mainland Scandinavian, etc.), without further qualifications except general locality constraints.<sup>48</sup> I take it to be a virtue of the theory of SF developed in the preceding sections that it conforms to – and supports on independent grounds – Biberauer and Roberts's general hypothesis that "the only [crosslinguistic] variation lies in the mode of satisfaction of [EPP features]" (2005: 20).<sup>49</sup>

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relations (Vikner 2006, Diesing 1996).

<sup>45</sup> Needless to say, Biberauer and Roberts's model is more complex than presented here; they assume that further "modes of EPP satisfaction" exist. See Biberauer and Roberts (2005: 8f.).

<sup>46</sup> Biberauer and Roberts assume a Kaynean universal-base framework, in which German is underlyingly SVO.

<sup>47</sup> In fact, Biberauer and Roberts (2005: 26) briefly discuss instances of SF in Old English, arguing (without presenting a detailed analysis) that it represents "a further perfectly regular case of  $vP$ -fronting to SpecTP".

<sup>48</sup> Likewise, EPP on  $v$  (which also plays a role in Biberauer and Roberts's theory) cannot be specified for [D], since – as we saw above – it uniformly attracts the complement of V. This dissociation of EPP and agreement features in  $v$  may be the reason for defective (unaccusative/passive)  $v$  being phasal in Icelandic but not in English, as argued in §4.4.

<sup>49</sup> EPP-related variation is, of course, also a point of variation in the diachronic dimension. Thus, Biber-

## 7 Conclusion

As Holmberg (2006: 554) observes, “The hypothesis that SF moves heads is primarily based on the case of the non-finite verbs.” In this paper, I have argued against this hypothesis. I have shown that all cases of SF in Icelandic can be analyzed as phrasal A-movement to Spec-T, with the fronted phrase often being a remnant. Supplemented with a small number of independently motivated assumptions (such as Attract Closest, anti-locality, and movement to the phase edge), this rather simple theory of SF was shown to allow for an elegant treatment of various properties of SF, such as the head-complement optionality, the interaction with expletive-insertion, and locality/blocking. In effect, this theory vindicates the null hypothesis about SF – stated but not explicated in any theoretical detail in Maling (1980, 1990) – that SF moves a category into an empty subject position.

To summarize the main findings of the paper, let me revisit the crucial properties of stylistic fronting in Icelandic and recap how the theory proposed here accounts for each in turn.

**SF is phrasal movement to subject position.** My account takes this claim to be literally true, and can do so in connection with the assumptions that a) all SF is XP-movement and b) subject extraction proceeds from the base position. From a) it follows that SF of adjectives, nonfinite verbs and particles is remnant fronting if these strand complements; assumption b) allows Spec-T to be the landing site of the fronted nonsubject-XP since it does not contain a trace in the relevant contexts.

**SF requires a subject gap.** While definite subjects must move to Spec-T, indefinite or extracted/relativized subjects need not do so, “freeing up” Spec-T for the closest non-subject XP. Where the subject is extracted or relativized, hence attracted by C, there are several options for T: Either it also attracts the subject, which does however not get pronounced in this derived position, yielding the impression of a subject gap; or else T attracts some other phrase, yielding SF. In impersonal constructions, expletive-insertion is available as an alternative to fronting of a nonsubject, since nothing is raised to Spec-C. Hence, on this view, it is somewhat misleading to say that “SF requires a subject gap”; rather, it is one of several options in a derivation where there is no definite subject. Notice that this way of deriving the subject-gap requirement of SF is fully compliant with strict cyclicity of operations.

**SF is EPP-driven and obeys Attract Closest.** EPP on T in Icelandic is disconnected from agreement: T can agree with some XP while raising YP to its Spec. This is impossible

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auer and Roberts argue at length that English had vP-raising to Spec-T at earlier stages, but has now lost this option, replacing it with the more specific EPP-requirement that Spec-T be filled with a nominal element (Biberauer and Roberts 2005: 40). Icelandic may be undergoing a similar change right now; notice that SF sounds rather formal and/or archaic to most younger speakers (Angantýsson 2008).

in a language like English, where agreement of T with XP (= the subject) always leads to raising of that XP to Spec-T. I have shown that this general idea, combined with standard assumptions about clause-structure, allows for the reduction of (a revised version of) Maling's hierarchy to a natural locality condition of the Attract Closest-type. Since SF is never case-driven (but, on the contrary, in principle dissociated from agreement with the attracting head), it is semantically vacuous A-movement.

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