THE SYNTAX OF OBJECT SHIFT IN ICELANDIC

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by

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Abstract

The focus of this thesis is an investigation of object shift in Icelandic within the Minimalist framework. Object shift here involves movement of a direct object or an indirect object from base position to a position higher in the syntactic structure. Adverb placement is often employed as evidence for object shift: *in situ* elements follow, and shifted elements precede a sentential adverb such as negation.

A description of the object shift phenomenon is presented in Chapter One. Background research is discussed, including a description of Icelandic verb properties by Holmberg and Platzack (1995), an investigation of the category E by Travis (1994), and work on negator movement by Moritz and Valois (1994).

Chapter Two illustrates various hypotheses concerning the syntactic derivation of the word order combinations involved in (double) object shift, with an emphasis on Icelandic data. These include work by Groat and O'Neil (1996), Collins and Thráinsson (1993), and Bobaljik (1995). Problems with each of the proposals are laid out after the respective analyses.

Chapter Three represents an alternative analysis to the previous works. The analysis assumes the lowest position of an indefinite subject and the vP-external position of a shifted direct object to be the same position [Spec, EP]; and overt Shift of the negator to [Spec, NegP] is proposed. Object shift is derived by a process whereby the presence of strong features is triggered in a head whose maximal projection is immediately dominated by the maximal projection of another head which itself contains strong features. The implication of the latter is that shift of an indirect object alone is actually shifting of the indirect object, the negator, and the direct object to higher positions. The posibility of vP-internal shift of the direct object is also raised.

Contents

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Chapter 1

Background

1.1 Introduction

The presentation I make in this thesis involves word order phenomenon observed in Icelandic, particularly related to the shifting of objects within the sentence structure. My aim is to account for the word order variations described in the data presented throughout the paper. Much of this data comes from works by other authors involving Icelandic, but I have also employed an Icelandic informant, a male native speaker from northwest Iceland. With the help of the informant, I have collected a large portion of my own data which I use to further delineate and distill my hypotheses regarding Icelandic object shift. My goal is to make an accurate and logical account of the mechanisms through which the overt syntax arises.

I begin my investigation by presenting some background information. In this chapter, I explain what object shift in Icelandic is comprised of in terms of word orders and the constituents involved therein, and I present the framework which I employ in my investigation, that being Minimalist theory as proposed by Chomsky (1995). I set out my objectives and present some of my general proposals. Continuing with the background information, I relate work by Holmberg and Platzack (1995) to give a description of the verb in Icelandic, including their analysis of inversion structures. Finally, I present proposals by Travis (1994) and Moritz and Valois (1994) which I adopt for my own investigation, those being the existence of an E projection within the syntax, and the movement of the negator to [Spec, NegP] respectively. Note that I have regularized the

glosses to represent the position of the definite article in Icelandic, where I gloss, for example, *bækurnar* 'the books' as 'books-the'. Any gloss or translation of examples from other authors which appear in square brackets are my own; and I keep the designation NP where it appears in works that I review, but I adopt the designation DP in my own analysis.

1.2 Foundations and Objectives of the Investigation

1.2.1 Background on Icelandic Object Shift

Icelandic is a language where definite object DPs of transitive and ditransitive verbs can occupy different positions within a sentence, as exemplified by the following sentences in (1a-e) (from Collins and Thráinsson (1996)).

(1) a. Jon las ekki bækurnar(DO)
Jon read not books-the
'Jon did not read the books.'

b. Jon las bækurnar(DO) ekki
Jon read books-the not

c. Ég lána ekki Maríu(IO) bækurnar(DO)
I loan not Maria books-the
'I do not loan Maria the books.'

d. Ég lána Maríu(IO) ekki bækurnar(DO)
I loan Maria not books-the

e. (?)Ég lána Maríu(IO) bækurnar(DO) ekki

I loan Maria books-the not

(2) a. ?*Ég lána bækurnar(DO) ekki Maríu(IO) (flat intonation)

I lend books-the not Maria

'I do not loan Maria the books.'

b. *Ég lána bækurnar(DO) Maríu(IO) ekki

I lend books-the Maria not

It is evident that direct and indirect objects may vary in their placement within the sentence structure. Sentence (1a-b) represent the phenomenon of single object shift with a transitive verb, where (1a) shows a direct object (henceforth DO) DP *bækurnar* 'the books' which follows the negator *ekki* 'not', and (1b) shows the shifted position of a DO where it precedes the negator. Double object shift with a ditransitive verb is illustrated in (1c-e), which involves the leftward movement of objects to positions higher in the syntax than their original positions. The example in (1c) shows that an unshifted DO *bækurnar* 'the books' follows an unshifted indirect object (henceforth IO) DP *Maríu* 'Maria', where both follow the negator *ekki* 'not'. Example (1d) shows a shifted IO preceding the negator where an unshifted DO follows the negator. (1e) shows a shifted IO preceding a shifted DO, both of which precede the negator, with marginal results ((1e) is said with flat intonation; neither of the objects can receive stress, otherwise the sentence becomes more degraded). The examples in (2a-b) illustrate what is unacceptable in terms of object shift (from Collins and Thráinsson (1996)), where in (2a) the DO has shifted over the *in situ* IO and the negator, and in (2b) both the DO and IO have shifted, but the DO

precedes the IO. Thus there are combinations of word order which produce ungrammatical sentences, those being where a DO shifts across an IO.

As recorded by Holmberg (1986), and often described as Holmberg's Generalization, raising of the verb in Scandinavian must precede any shifting of the objects; as a result, objects cannot overtly shift across a verb. This is illustrated in (3a-b) (from Collins and Thráinsson (1996)).

(3) a. *Jón$_i$ hefur bækurnar (ekki) lesið

Jon has books-the not read

['Jon has not read the books.']

b. *Ég hef Maríu(IO) ekki lánað bækurnar(DO)

I have Maria not lent books-the

['I have not lent Maria the books.']

The sentence in (3a) shows that the DO *bækurnar* 'the books' cannot raise over the non-finite lexical verb *lesið* 'read', the latter being unable to raise itself due to the presence of the auxiliary verb *hefur* 'has' (compare with the data in sentences in (1a-b), where the lexical verb, being finite, has raised and where shifting of the DO is legitimate). In (3b) it is clear that the same applies to the IO *Maríu* 'Maria', where shifting over the non-finite lexical verb *lánað* 'lent' results in ungrammaticality (compare with the data shown in (1c-e) where the IO can shift when the lexical verb is finite and has raised).[1] This will also be discussed later in section 2.3.2 on Collins and Thráinsson's (1996) account of object shift in Icelandic.

As the above exemplify, objects within Icelandic transitive and ditransitive constructions have variable positions within the sentences, moving from their original positions within the verb shell to positions farther up in the structure, barring certain restrictions on movement as discussed.

1.2.2 Theoretical Framework

In my investigation of object shift in Icelandic, I employ a Minimalist framework to make an account of considerations such as the positions available for shifted objects within the structure, and to explain the distribution of shift in terms of what word orders are and are not acceptable. Within the Minimalist model of grammar as put forth by Chomsky (1995) is the hypothesis that case features on objects must be checked through structural arrangement within the syntax. Case is checked when an object DP enters a specifier-head relationship; in this instance the position acquired by the object DP to check case is the specifier position of a projection of a functional head AgrO. The function of AgrO is to check case on an object DP, but it cannot assign case, thus the AgrO acquires its capacity to assign case from the verb through an adjunction operation as the derivation progresses. The syntactic position of AgrOP appears above the VP in Chomsky's account, where AgrO exists between T and V. With the presence of strong features, AgrO attracts V through adjunction or an object DP in [Spec, AgrOP] by substitution, and where an object DP appears overtly in [Spec, AgrOP] position is an

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[1] For a more detailed description of Holmberg's generalization, and an account of its workings, see Holmberg (1997).

instance of overt object raising. By the principle of Economy, raising of features covertly at logical form (LF) is preferred, thus Procrastinate is invoked to delay raising until LF, as less cost is incurred through LF operations. But in the case of such things as overt object shift, all features, including phonetic features, raise before LF and thus appear overtly in the raised position at surface structure (SS). This is the result when movement at SS is forced by the Last Resort principle so that the resulting form will be interpretable at LF. If SS movement were not to take place, some features would not be checked at LF and the derivation would crash. With respect to state of AgrO as a functional head, its existence is indicated only by the presence of constituents which it attracts when it is strong.

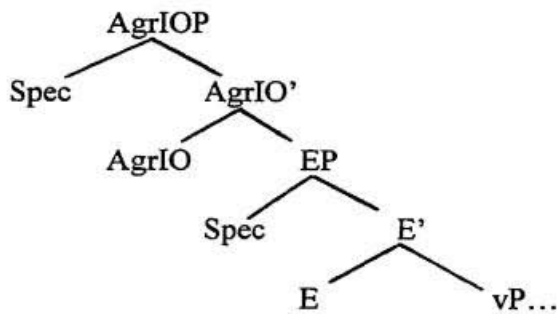
1.2.3 Objectives

Given the nature of object shift in Icelandic, and the Minimalist foundation which guides my research, I intend to present an examination which more accurately explains the phenomenon than previous investigations. My aim is to give an accurate description while reducing the number of stipulations and asymmetries within the work to as few as possible.

Assuming, after Chomsky (1995), that objects require case to be checked in the specifier position of appropriate functional projections, and where it appears that both the IO and DO can shift external to the vP, as examples (1a-e) illustrate, one could take this to indicate vP-external case checking positions. I maintain the existence of a vP-external case checking position for the IO in Icelandic, that being the specifier position of an Agr

head projection, which I designate as AgrIOP. As for the vP-external constituent between v and T to which a DO shifts, my investigation has led me to conclude that it is not a case checking position. In my analysis, I hold that a DO in Icelandic does not get its case checked in the specifier position of a vP-external AgrO projection. Rather, I maintain that this vP-external position to which a definite DO DP can overtly shift is in fact the specifier of an EP; this is the projection of a category E (following Travis (1994): see section 1.4), which exists between v and T in the syntax. Further, I present evidence that [Spec, EP] is also the position in which an indefinite subject can overtly appear in Icelandic, and that the Icelandic non-finite past participle adjoins to E, which encodes certain non-finite verbal morphology.

(4)



As for the actual case checking position of an Icelandic DO, I propose that it is the specifier of a vP-internal AgrO projection (see also Koizumi (1993) on vP-internal AgrO), and that overt shift of the DO to this position is possible. I use the sentences in (5a-b) to illustrate (from Collins and Thráinsson (1996)).

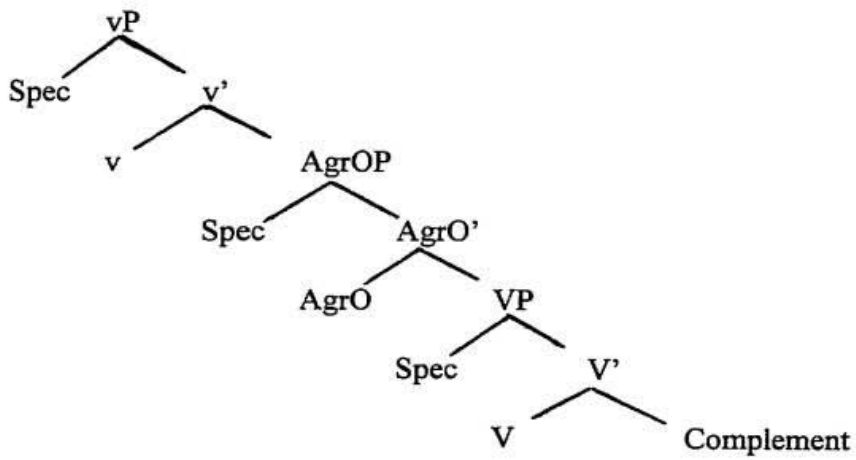
(5) a. Í gær hafa þeir sent peningana beint upp
yesterday have they sent money-the straight up
'Yesterday they have sent the money straight up'

b. *Í gær hafa þeir sent beint upp peningana

yesterday have they sent straight up money-the

Assuming that the adverb of manner *beint* 'straight' is adjoined to the VP within the outer vP, that the particle *upp* 'up' is stranded under V when the verb raises, and that the non-finite past participle *sent* 'sent' is adjoined to E where EP immediately dominates the vP, then it is evident that the DO *peningana* 'the money' can appear in two positions relative to these elements. Appearing to the left and below the adverb, verb, and particle, as in (5a), the DO is *in situ* in complement position within the VP, and appearing to the right of the adverb and particle but below the past participle, as in (5b), it is higher in the structure. I postulate that this latter position is the specifier position of an AgrO projection between V and v, as shown in (6).

(6)



1.3 On Icelandic Verb Properties Including Inversion

In this section I set out some background on the nature of the ditransitive verb in Icelandic, presenting the work of Holmberg and Platzack (1995). This is to describe the

nature of the verb in general, in selecting objects and so forth, but also to explain the phenomena of inversion in Icelandic double object constructions. As noted earlier, and exemplified by (2a), when a DO shifts across an IO in a sentence spoken with flat intonation, the results are unacceptable. But there are constructions where just such a word order is apparent. The difference is that these represent the phenomenon of inversion, not object shift.

Collins and Thráinsson (1996) note that there is the word order possibility in Icelandic, whereby the DO comes to precede the IO, even though this has been shown to be an illegitimate construction in terms of object shift (see section 2.3.4). It is not possible for a DO to shift over an *in situ* IO; what is possible is base generated inversion of the objects. Data in (7a-b) from Collins and Thráinsson (1996) serve to exemplify the phenomenon of inversion in Icelandic.

(7) a. Hann gaf konunginum(IO) ambáttina(DO)
he gave king-the maidservant-the
'He gave the king the maidservant.'

b. Hann gaf ambáttina(DO) konunginum(IO)
he gave maidservant-the king-the
'He gave the maidservant to the king.'

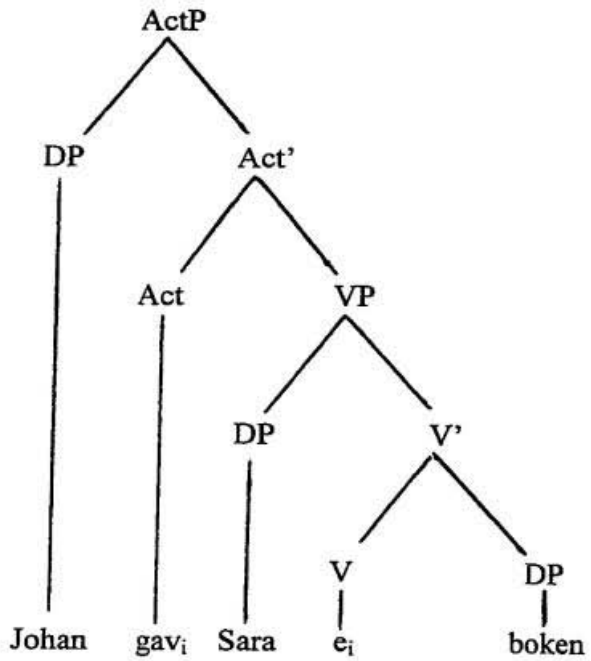
The example in (7a) shows the objects in their normal word order, with the IO *konunginum* 'the king' preceding the DO *ambáttina* 'the maidservant.' The example in (7b) illustrates the inverted object order, where the DO has come to precede the IO. Any DO-IO word order is the result of inversion, not object shift. The following section is an

exposition of work from Holmberg and Platzack (1995), where they present hypotheses on the double object construction in Scandinavian, with much focus on Icelandic. They investigate the properties of the double object construction with different verbs, and present some hypotheses on the phenomena. They investigate Icelandic verbs in terms of the types of objects they may take, the case marking properties, and other characteristics such as inversion, and they conclude that ditransitive verbs in Icelandic fall into two groups, *gefa*-verbs and *skila/ræna*-verbs. Verbs belonging to the former group are the focus of my investigation.

1.3.1 The Double Object Construction and Two Verb Classes

Holmberg and Platzack (1995) present the structure of the double object construction, and they state that the analysis presented is akin to proposals from other researchers including Larson (1988), Falk (1990), Johnson (1991), and Speas (1990).

(8)



'Johan gave Sara(IO) the book(DO)'

With regard to the double object construction, they state that Icelandic ditransitive verbs can be relegated to one of two classes, which they label the *gefa*-class (*gefa* 'give') and the *skila/ræna*-class (*skila* 'return', *ræna* 'rob'). The majority of verbs belong to the *gefa*-class, and it is characteristic of these verbs to take an IO morphologically marked in the dative and a DO marked in the accusative. The *skila/ræna*-class differs from the foregoing in that these verbs assign lexical case to a DO, which can take the form of dative, genitive, or lexical accusative. Their examples in (9a-d) serve to illustrate.

(9) a. Jón gaf Ólafi bókina *gefa*-verb

Jon gave Olaf(DAT) book(ACC)

['Jon gave Olaf a book.']

b. Hún sagði þeim sögu *gefa*-verb

she told them(DAT) story(ACC)

['She told them a story.']

c. María skilaði mér bókinni minni *skila/ræna*-verb

Maria returned me(DAT) book-the(DAT) my(DAT)

['Maria returned my book to me.']

d. þeir rændu Ólaf peningunum *skila/ræna*-verb

they robbed Olaf(ACC) money-the(DAT)

['They robbed the money from Olaf.']

1.3.2 Differences between the Verb classes

Holmberg and Platzack (1995) show that verbs from the two classes exhibit different characteristics. They first discuss how the verb classes select case, following Emonds (1991) in their analysis. For the Icelandic double object construction, they propose that the verb checks case on the IO by means of a selectional feature, and that, in fact, the head is strictly subcategorized for this in its lexical representation. The verb's subcategorization also includes the selection of the category of its complement (what Holmberg and Platzack call the complement's "categorial properties"). As well, they propose that a feature in the verb's subcategorization may possibly designate the particular case assigned to the complement. With respect to this, Holmberg and Platzack contend that the case assigned to an experiencer argument may be determined in the lexical representation of the verb. With the notion of prespecified case for experiencer

arguments, they note that Icelandic benefactives are usually placed in the dative, and malefactives tend to be in the accusative (to a lesser extent than the former). But there are exceptions to these tendencies, and so they maintain that the assignment of case to an experiencer in Icelandic is not driven by a rule of case assignment dependant on the particular theta-role; they hold that the case which marks experiencer arguments is idiosyncratic. They propose as well that the projection of an Act head by a verb, a process not entirely dependant on semantics, is also the result of information stored in the lexical representation. Both *gefa-* and *skila/ræna*-verbs project Act (whereas an ergative would not), and they present the following verbs in (10a-b) to exemplify the respective underlying representations from each class.

(10) a. gefa [exp_{Dat}, Act]

b. ræna [_Dat, exp, Act]

Holmberg and Platzack (1995) point out that there is no strict subcategorization for the DO (the theme) of *gefa* 'give,' as it is not assigned a lexical case here, thus it is marked by accusative case when the verb is active, and nominative case when the verb is passive. As well, as its lexical representation in (10a) shows, the verb assigns dative case to its experiencer theme; there is also an Act projected, having been specified in the lexical representation. As for the *skila/ræna*-verb *ræna* 'rob' shown in (10b), dative case is assigned to the DO, and this verb also has an Act projection specified, but the case of any experiencer argument is not defined in the lexical representation, and so it is assigned structural accusative case. In summary, Holmberg and Platzack propose the following about the respective case properties:

> the Icelandic DOC [double object construction] exemplifies (at least) three different kinds of Cases: structural Case (e.g. the DO of *gefa*), lexical idiosyncratic Case (e.g. the DO of *ræna*), and "thematic Case", that is a Case which is associated with a role (the IO of *gefa*), although, as an additional complication, the association between role and Case is only a tendency in this case, which motivates representing it as part of the lexical representation of each verb. The three kinds of Cases are clearly distinguished in the lexical representations in [(42a-b)]: structural case is indicated by absence of lexical Case specification, lexical idiosyncratic Case is represented as a strict subcategorization feature, and "thematic Case" is represented as a strict subscript on a role feature. (Holmberg and Platzack 1995: 201)

Continuing with their description of differences between the verb classes, Holmberg and Platzack (1995) describe how each class responds to a *to*-construction, which is the replacement of the IO by a PP. They note that in Icelandic double object constructions, *skila/ræna*-verbs tolerate the *to*-construction. In contrast, they note that replacement of the IO by the *to*-construction is not a legitimate process for the *gefa*-verbs.

With respect to the *gefa*-verbs, Holmberg and Platzack state that it is the contents of the lexical representation which explains the less than favourable position of the *to*-construction with this class. They posit that because the lexical representation specifies that dative case be assigned to an experiencer argument, the presence of a PP complement would not be acceptable with this verb class, as it would violate a selectional requirement. Having a PP present would largely result in illegitimate constructions, as they illustrate with the (11a-b).

(11) a. *? Hún gaf bókina til Jóns

She gave book-the to Jon

['She gave the book to Jon.']

b. * Ég sagði söguna til þeirra/fyrir þeim

I told story-the to them/for them

['I told the story to/for them.']

In investigating the *skila/ræna*-class, Holmberg and Platzack note that these verbs have three possibilities with regard to the IO: the IO can be present, marked as such by morphological case; the IO can be omitted, with the *to*-construction replacing the experiencer argument; the IO can be omitted entirely. They exemplify each point in (12a-c).

(12) a. hún skilaði bókinni til Jóns

she returned book-the(DAT) to Jon

['She returned the book to Jon.']

b. þeir ætluðu að ræna veskinum af mér

they intended to rob purse-the(DAT) from me

['They intended to rob the purse from me.']

c. hún hefur ekki skilað bókinni

she has not returned book-the(ACC)

['She has not returned the book.']

To explain the data, Holmberg and Platzack propose that *skila* 'return' assigns case to the IO optionally, and that *ræna* 'rob' has no requirement to take an IO marked by any case. Thus they maintain that the IO is an optional element in a construction with verbs of this class, as they are not required to assign any case to an IO. The implication is that a PP can be employed to realize the experiencer argument, as it does not violate any

selectional feature. They state that, in fact, *skila/ræna*-verbs are not required to have any realization of an experiencer argument; it is present as an IO or a PP optionally. In contrast, the authors point out that *gefa*-verbs require that the IO, an experiencer argument marked by dative case, must be present, as specified in the lexical representation (see (10a)). They exemplify this difference between the *skila/ræna*- and *gefa*-verbs respectively in sentences (13a-b).

(13) a. Hún hefur ekki skilað bókinni

she has not returned book-the

['She has not returned the book.']

b. * Hún hefur ekki gefið bokina

she has not given book-the

['She has not given the book.']

It is evident in the above that an IO need not be present with *skila*, but the ungrammaticality of its absence with *gefa* indicates that it is a necessary element.

1.3.3 Inversion versus Heavy NP Shift

Holmberg and Platzack (1995) discuss inversion of the objects in the Icelandic double object construction. They state that inversion of the objects to DO-IO order is fine for the *gefa*-class verbs (with some exceptions), as they illustrate in the examples (14a-b).

(14) a. Jón ætlar að gefa bókina einhverju bókasafni

Jon intends to give book-the(ACC) (to) some library(DAT)

['Jon intends to give the book to some library.']

b. Hann sýndi bókasafnið öllum n*jum [sic] stúdentum

he showed library-the(ACC) (to) all new students(DAT)

['He showed the library to all new students.']

Holmberg and Platzack note that there is a condition which must be met in order for *gefa*-verbs to show inversion acceptably. They state that while the IO in the inverted construction is indefinite, heavy, or both, these are not the pivotal preconditions for inversion. Rather, both these qualities lead to a DP being interpreted as focused; thus they propose that it is focus which is responsible for licensing inversion. They explain that specifically the IO must be focused and the DO non-focused. They illustrate this point by showing the different focus possibilities given in (15a-g) (the authors note that (15a-f) are sentences constructed around ones from Ottósson (1991), and that (15g) was presented to them by Halldór Á. Sigurðsson).

(15) a. Ég ætla að gefa bókina einhverju bókasafni

I will give book-the(ACC) some library(DAT)

['I will give the book to some library.']

b. ?? Ég ætla að gefa bók einhverju bókasafni

I will give (a) book(ACC) some library(DAT)

['I will give a book to some library.']

c. Ég ætla að gefa einhverja bók einhverju bókasafni

I will give some book(ACC) some library(DAT)

['I will give some book to some library.']

d. *Ég ætla að gefa einhverja bók bókasafninu

I will give some book(ACC) library-the(DAT)

['I will give some book to the library.']

e. *Ég ætla að gefa einhverja bók bókasafni

I will give some book(ACC) library(DAT)

['I will give some book to a library.']

f. Ég ætla að gefa bókina bókasafni

I will give book-the(ACC) library(DAT)

['I will give the book to a library.']

g. *Ég ætla að gefa bókina bókasafninu

I will give book-the(ACC) library-the(DAT)

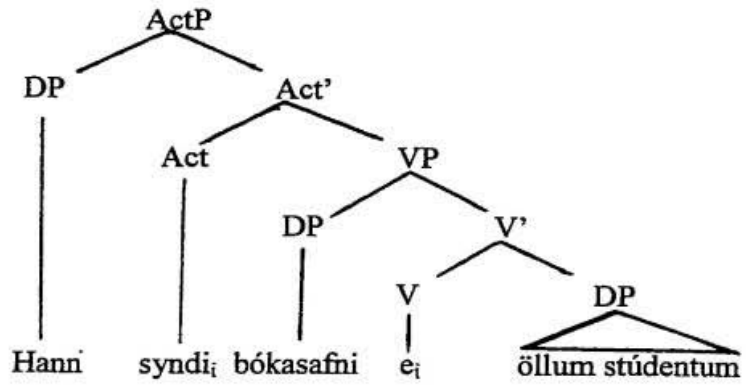
['I will give the book to the library.']

Holmberg and Platzack indicate two examples which illustrate that focus relegated to the IO is more significant to the inversion structure than the focus given to the DO, where the definiteness of the DO is not the main contributor. They note this in (15c), which shows that as long as the IO is indefinite and interpreted as focused, then the DO can also be indefinite. And further, they note (15g), which shows that the structure is also not dependent on the DO being definite. Thus focus on the IO is the prime condition.

Holmberg and Platzack (1995) present (16) as the structure for the inverted double object construction, based in part around Falk (1990) and Holmberg (1991)[2].

[2] This reference to Holmberg (1991) in Holmberg and Platzack (1995) does not appear in their biliography.

(16)



['He showed a library to all students.']

They maintain that, in a general way, this structure represents the same structure underlying the *to*-construction, except that morphological case marking of dative on the IO, in combination with focus, meet the same underlying syntactic conditions as a PP in Mainland Scandinavian. As well, the selectional features simultaneously present within the lexical representation of the verb are still met, where they would not be if there were a PP present. To illustrate their point, Holmberg and Platzack recall the lexical representation of the verb *gefa* in (17).

(17) gefa [exp_{Dat}, Act]

They give the process thusly:

> The verb takes an obligatory experiencer argument with a specified Case, namely dative. The structural position of the argument is not specified. Hence the verb may assign the Case to the lower argument in [(16)]. The DO will be assigned the ordinary structural accusative Case by Act+V. Note that the DO is formally a specifier, not a complement, of V in [(16)], since (dative) Case is checked in V' (cf. [(27)]). The DO is still within the checking domain (government domain) of V and Act. (Holmberg and Platzack 1995:207)

Holmberg and Platzack state further that inversion of the double object construction is not possible in Mainland Scandinavian, and that it does not matter what the focus conditions are, as they illustrate in the Swedish example (18).

(18) *Han ska ge boken något bibliotek

He will give book-the some library

[translation unavailable]

They explain that there is nothing to interfere with the checking of both objects here, given their postulated case rule (19) for the IO in Mainland Scandinavian.

(19) accusative is licit in Spec-VP

(20) actor < experiencer < theme < adverbial

But to explain why inversion is disallowed, they adopt the proposal by Speas (1990) of a universal theta hierarchy shown in (20). Therefore, through the universal theta hierarchy, the experiencer role will be assigned to the object higher up in the structure (the DO in inversion), and the lower object (the IO) will get the theme role; thus the resulting structure in terms of the case marking would not make sense.

Holmberg and Platzack point out that the same structure in Icelandic is grammatical, as inverted double object constructions are legitimate given the conditions set out earlier in this section. Their conclusion is that the morphological thematic case assigned to the IO by *gefa*-verbs bars it from receiving the theme role. Thus this "stray" role gets assigned to the object higher up in the structure, the DO. However, they point out that if the IO is what they call a "pure experiencer" then inversion of the double objects is barred. This has to do with the thematic properties, in that they become more

like those of a PP construction in Mainland Scandinavian with respect to the *to*-construction. They present sentences (21a-b) from Swedish.

(21) a. Han gav alla lärare huvudvärk

He gave all teachers (a) headache

[translation unavailable]

b. ??Han gav huvudvärk åt alla lärare

He gave (a) headache to all teachers

[translation unavailable]

Using the universal theta hierarchy again, they explain the degradation of the sentence in (21b). They propose that *alla lärare* 'all teachers' is a 'pure experiencer' role, not a goal, and should come before the theme role. Because 'a headache' does not have an original source from which it gets passed along to a goal, it develops in someone as an experience, as the result of something or someone; thus it is an experiencer in whom the headache arises. They present a similar example from Icelandic in (22).

(22) a. Hann gaf öllum kennurum sama tækifærið

He gave all teachers(DAT) (the) same chance(ACC)

['He gave the same chance to all teachers.']

b. *Hann gaf sama tækifærið öllum kennurum

He gave (the) same chance(ACC) all teachers(DAT)

It is apparent that inversion of the double object construction is unacceptable in (22b), even though the verb is a *gefa*-verb, and even though the IO is focused by being indefinite (and the DO non-focused by being definite). Holmberg and Platzack explain

that the cause for the ungrammaticality of (21b) is probably the same as for (22b), as the IO should be assigned a goal role, but this is not in this case. They propose that 'a chance' exists in the same manner as 'a headache' above - it is a thing that is experienced, and not something originating at a source and directed to a goal. Therefore, the universal theta hierarchy is violated, and the sentence is ungrammatical.

Holmberg and Platzack (1995) state that inversion of the double object construction with *skila/ræna*-verbs results in degraded or ungrammatical sentences. They illustrate this in examples (23a-b).

(23) a. ??Hann skilaði peningunum einhverju lögreglumanni
he returned money-the(DAT) some policeman(DAT)
['He returned the money to some policeman.']

b. *Þeir leyndu sannleikanum öll börn
they concealed truth-the(DAT) all children(ACC)
['They concealed the truth from all children.']

Holmberg and Platzack point out that the generalization made concerning the inadmissibility of inverted double object constructions for the *skila/ræna*-verbs is not entirely accurate; there do exist examples where it appears inversion has taken place. They hold that when the evidence is considered, this cannot be considered inversion. The main characteristic associated with this phenomenon is that the IO must be very heavy. With a relative clause serving to create a very heavy IO, they present the sentences in (24a-b) as examples.

(24) a. ?Þeir leyndu sannleikanum [alla sem tillheyrðu ekki flokknum]

they concealed truth-the(DAT) all(ACC) who belonged not party-the

'They concealed the truth from all those who didn't belong to the party.'

b. ??Sjórinn svipti manninum [gömlu konuna sem bjó

the.sea deprived husband-the(DAT) old woman-the (ACC) who lived

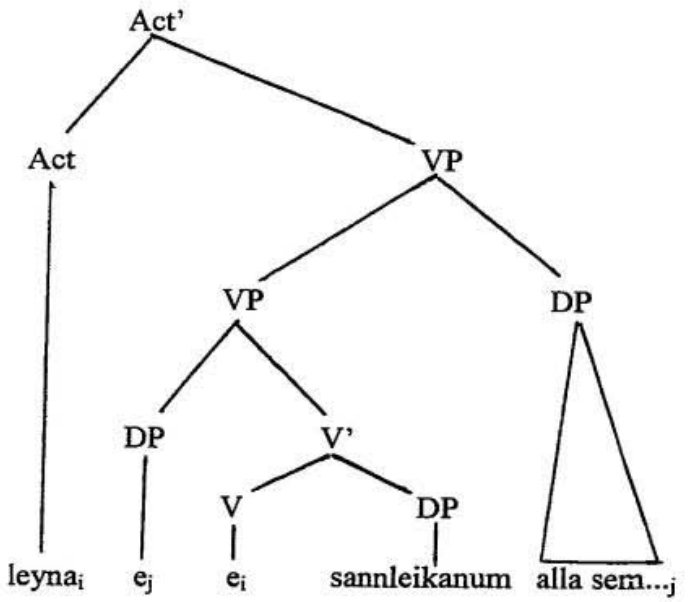
á eyjunni]

on island-the

'The sea deprived of her husband the old woman who lived on the island.'

Holmberg and Platzack consider the above word order variation DO-IO to be a case of heavy NP movement, after Ottósson (1991), and not inversion; they propose the structure in (25) as underlying the construction for the relevant portion of sentence (24a).

(25)



Holmberg and Platzack (1995) hypothesize as to why inversion is not possible for *skila/ræna*-class; they state that it is mainly due to case assignment to the DO. These *skila/ræna*-verbs are strictly subcategorized to assign idiosyncratic case to the DO (see section 1.3.3), and it is implicit that only a complement position can receive this case; but in an inverted structure, the verb checks case on the IO in that position, not the DO. They exemplify with the legitimately inverted structure of the *gefa*-verb in (26a), and examples involving a *skila/ræna*-verb in (26b-c).

(26) a. $gefa_i$ [$_{VP}$ bókina [$_V$ V_i [$_{DP}$ einhverju bókasafni]]]

give book-the (to) some library

b. *skila [$_{VP}$ bókunum [$_{V'}$ Vi [$_{DP}$ einhverju bókasafni]]]

return book-the(DAT) some library(DAT)

c. skila [$_{VP}$ bókunum [$_{V'}$ Vi [$_{PP}$ til einhvers bókasafns]]]

return book-the(DAT) to some library(GEN)

d. skila [_DAT, (exp $_D$), ACT)

They explain that the case on the IO of the legitimately inverted construction in (26a) is checked by the verb in V', and the DO higher up cannot be counted as a complement according to Holmberg and Platzack's definition of a complement given in (27).

(27) A is a complement of an X^0 head B if and only if

(a) A is the daughter of B' (a first order projection of B), or

(b) A is a sister of B' and B has not checked Case in B'

In sentence (26b) with illegitimate inversion, they point out that the dative case is checked by the verb in V'; this being the case the object higher in the structure cannot

count as a complement, only as a specifier. The problem is that the idiosyncratic case specified in the lexical representation of the verb shown in (26d) cannot be checked on an object in specifier position, only on one as complement, and so the sentence is unacceptable. As for sentence (26c), case is not checked in V' because the verb has an option to leave out a morphologically marked experiencer role (see section 1.3.2); it is the object higher in the structure which is therefore counted as the complement, and so it has its case checked by V. Holmberg and Platzack conclude by stating that this can be argued for all the *skila/ræna*-verbs.

1.3.4 Properties of inversion and Heavy NP Shift

Given the above propositions on the nature of inversion and heavy NP shift for the different classes of verbs, Holmberg and Platzack (1995) propose that certain effects should be apparent for the respective movement types as well. With respect to inversion, one is that the theme argument manifested as a DO can be an antecedent to an anaphor associated with the IO. They use the sentence in (28) to illustrate.

(28) Jón gaf ambáttina$_i$ konungi sinum$_i$

Jon gave maidservant-the(ACC) king(DAT) REFL(DAT)

'Jon gave the maidservant to her king'

They note that this type of behaviour should not be, and is not possible for *skila/ræna*-verbs. They cite Rögnvaldsson (1982) in stating that a DO positioned before the IO cannot bind an anaphor associated with the IO, and use examples (29a-b), taken from Rögnvaldsson (1982), to exemplify this.

(29) a. *Sjórinn svipti manninum$_i$ [gömlu konuna sina$_i$, sem ...]

sea-the deprived husband-the(DAT) old woman(ACC) REFL(ACC) who...

'The sea deprived the old woman of her husband who...'

b. * Þeir rændu veskinu$_i$ [eigendur sína$_i$, sem...]

they robbed purse-the(DAT) owner REFL(ACC) who...

[translation unavailable]

Holmberg and Platzack state that (29a) would mean 'The sea deprived the old woman of her husband', if it were actually a grammatical sentence. They posit that the reason the two sentences (29a-b) are ungrammatical is that even though the DO looks as if it could act as an antecedent to the phrase containing the anaphor, the phrase is left-adjoined to the VP, and so the DO does not c-command it. As a result, the reflexive element contained within the experiencer segment cannot be properly bound by the DO theme. Holmberg and Platzack maintain that these observations further support that the DO-IO word order is the result of different underlying structures for the two verbs: the inverted double object construction with the *gefa*-verbs, and Heavy NP Shift of the IO with *skila/ræna*-verbs.

1.3.5 Passivization of the objects

Holmberg and Platzack (1995) continue their investigation of the properties of the two classes of verbs with respect to the double object construction by turning to the properties inherent in passivization. They state that only the verbs of the *gefa*-class will

allow the DO to be passivized without restriction ((30a-c) below), and that the *skila/ræna*-verbs only allow passivization of the DO if the IO is omitted ((30d) below).

(30) a. Jóni voru gefnar bækur[sic] (Note a mistake in the gloss: *bækur* is indefinite in this form)

Jon(DAT) were given books-the(NOM)

['The books were given to Jon.']

b. Bækurnar voru gefnar Jóni

[books-the(NOM) were given Jon(DAT)]

['The books were given to Jon.']

c. Jóni var skilað bókunum

Jon(DAT) was returned books-the(DAT)

['The books were returned to Jon.']

d. Bækunum var skilað (*Jóni)

book-the(DAT) was returned (*Jon(DAT))

['The book was returned (*to Jon).']

Holmberg and Platzack explain that in passive constructions, the verb projects a Pass head (not Act); this Pass head lacks the properties to assign a role to its specifier position, and it cannot license an accusative case on the complement position to the verb. They postulate that what Pass does license is "non-thematic spec-position which may host a DP moved there if other licensing conditions are satisfied... or an intermediate trace of a DP moved to Spec-IP. The verb moves to Pass, in overt syntax..., to have its passive morphology checked." (Holmberg and Platzack 1995:215)

The phenomena that Holmberg and Platzack (1995) are concerned about here are that the *gefa*-verbs allow passivization of either object, and that the *skila/ræna*-verbs always allow passivization of the IO, but only allow the DO to be passivized if there is no IO present. They hold that these differences arise as the result of the underlying structures by which the *gefa*-verbs allow inversion, but *skila/ræna*-verbs do not (adopted from Falk (1990) and Holmberg (1991); see footnote 2 in this chapter on the latter reference). They propose that passivization of both objects is fine for *gefa*-verbs because they retain the possibility of optionally projecting one of two predicate structures – one with the regular IO-DO order, and the other with the inverted DO-IO order. In the former structure, the IO is positioned in [Spec, VP], and in the latter the DO is in the same [Spec, VP] position. Following Vikner (1990), Holmberg and Platzack maintain that if the underlying structure is that of the inverted double object construction, there would be no violation of Relativizeed Minimality in passivizing a DO from [Spec, VP] position. They illustrate with sentences (31a-b) (after (30a-b)).

(31) a. $[_{IP}$ Jóni$_i$(IO) $[_{I'}[_{I}$ voru $[_{PassP}$ (e$_i$) $[_{Pass}$ gefnar$_j$ $][_{VP}$ e$_i$ $[_{V'}$ V$_j$ bækur(DO)]]]]]

Non-inverted structure; IO passivized from [Spec, VP]

b. $[_{IP}$ Bækurnar$_i$(DO) $[_{I'}[_{I}$ voru $[_{PassP}$ e$_i$ $[_{Pass}$ gefnar$_j$ $][_{VP}$ e$_i$ $[_{V'}$ V$_j$ Jóni(IO)]]]]]

Inverted structure; DO passivized from [Spec, VP]

They note that Relativized Minimality is respected here, in that the IO in the non-inverted structure and the DO in the inverted structure are not blocked from raising by any categories that would intervene, as they are both in [Spec, VP] in their respective structures.

Holmberg and Platzack (1995) point out that in comparison, the *skila/ræna*-verbs can have no inversion of the double object construction. They state that if an IO is present in [Spec, VP], then the DO cannot be passivized (as (30d) shows) because it would have to move from complement position and across the IO in specifier position. This would violate Relativized Minimality and result in ungrammatical constructions.

Holmberg and Platzack elaborate by stating that passivization of the DO for the *skila/ræna*-verbs is only barred when there is a IO DP in the sentence (again, as (30d) shows). But the IO has been shown to be an optional element for this class of verbs, and as such these verbs can also have it manifested as a PP (see section 1.3.2). Therefore, if the IO is not present, or is present as a PP, then there will be no violation of Relativized Minimality if the DO is passivized, because, as I assume, the DO gets idiosyncratic case properly assigned to it, and there is nothing in a higher position which would block its raising up. This point is illustrated in their sentences (32a-b).

(32) a. Bókunum var skilað (til bókasafns)
books-the was returned (to (a) library)
['The books were returned to a library.']

b. Sannleikanum var leynt (fyrir mér)
truth-the was concealed (from me)
['The truth was concealed from me.']

Holmberg and Platzack note a parallel between the inverted double object construction in an active sentence with the same in a passive. In the former, the IO must be focused. The same condition is preferred (but not necessary) when the DO is

passivized (this having the same base generated inverted object orders as the inverted double object construction in the active). The IO prefers to be focused in both instances, both having the objects inverted when base generated. Any combination of focus of the DO is acceptable in a passive where the IO is passivized ((33a,c)). But they point out that in a sentence where the DO has been passivized, it is preferred that the IO left *in situ* within the VP is of a category which is easily and naturally focused. An indefinite NP is such a category, as opposed to a pronoun with weak stress as in (33b,d). They exemplify the above points in (33a-d) (note that the verbs belong to the *gefa*-class and allow inversion).

(33) a. Þeim var sýnd hún

they(DAT) was shown it(NOM)

['It was shown to them.']

IO passivized; any focus of the DO is acceptable

b. Hún var sýnd einhverjum börnum/ ?þeim

it(NOM) was shown some children(DAT)/them(DAT)

['It was shown to some children/them.']

DO passivized

c. Þeim var sögð hún

they(DAT) was told it

['It was told to them.']

IO passivized; any focus of the DO is acceptable

d. Hún var sögð einhverjum börnum/?? þeim

it(NOM) was told some children(DAT)/them(DAT)

['It was told to some children/them.']

DO passivized

Holmberg and Platzack qualify their statement though, in that focus is not crucial for the construction the same way it is for an inverted double object construction in the active. By this I assume that if a category can be focused naturally, then it may be focused, as stated above, but not necessarily.

1.4 Background on the Category E

As earlier stated, I do not consider the vP-external position to which the DO shifts to be the specifier of an AgrO projection. I base this hypothesis on the observation that the vP-external position to which a DO can shift is also a position targeted by an indefinite subject. It is thus doubtful that the nature of this Spec-head relationship involves object case checking, where both a definite object or an indefinite subject can appear here in the specifier of this category's projection. Considering the position of this category between T and V, and its ability to accept either subject or DO, thus excluding AgrO as the candidate, I will adopt the analysis given by Travis (1994). She considers the element in this position to be the category E, which binds an event theta-role and projects an EP. As well, I hold that the non-finite past participle in Icelandic appears under E in the syntax. This is in agreement with Travis, who proposes that French infinitives and the English infinitival marker *to* appear under E between V and T, and that infinitival

morphology on French future and conditional tenses is encoded by E. Following from this last point, the non-finite past participle in Icelandic appears with distinct morphology, which also leads me consider its position as under E.

In Travis (1994), the author investigates the nature of the functional category hypothesized to lie in a position between V and T. She states that Pollock (1989) has investigated this with infinitival placement in French, wherein he designates the category as Agr. Travis refers to the functional category simply as F throughout the larger part of the work, but she later alters its designation to E (for Event) as she considers its characteristics, holding that it binds an event related theta-role within the head of its complement. I will use only her final label E throughout my discussion of her work.

1.4.1 Evidence for the Existence of E

Travis (1994) begins with an investigation of infinitivals and the proposed functional category E between T and V. She states that Pollock (1989) uses head movement to determine infinitival position, and she postulates that morphology associated with infinitival forms may also be generated in this position.

Travis shows the relationship between E and infinitivals in French, including the overt positioning of infinitivals and the generation point of infinitival morphology, and between subjunctives in English. On the former point, she cites Pollock (1989), who employs surface word order differences between finite and non-finite verbs as evidence for a functional category positioned between V and T. His argument involves infinitivals of lexical verbs and short verb movement, where the relative position of the infinitivals

versus finite verbs are judged against the position of the negative element *pas* and sentential adverbs. (This is also covered in section 1.5 regarding Moritz and Valois (1994) and their proposal on LF movement of negation). His evidence shows that the finite verb appears in a position preceding *pas*, and that the infinitival lexical verb appears in a position following *pas* but preceding the sentential adverb; the arrangement is shown as [V_f *pas* V_{inf} *adv* [Ve]]. Travis gives the sentences in (34a-c) to illustrate.

(34) a. Ne **pas** sembler heureux est une condition pour écrire des romans.

b. *Ne sembler **pas** heureux...

c. Parler **à peine** l'italien après cinq ans d'étude dénote un manque de don pour les langues.

Travis expands Pollock's proposals about the lack of short verb movement for infinitivals in English in pointing out that the infinitival marker *to* takes up position between the negative element *not* and the sentential adverb, the same position of short verb movement in French. She gives the arrangement as [V_f *not* to *adv* [$_V$ V]] and presents the sentences in (35a-d) to exemplify.

(35) a. **Not** to seem happy is a prerequisite for writing novels.

b. *To seem **not** happy is a...

c. To **hardly** speak Italian after years of hard work...

d. *To speak **hardly** Italian...

Travis believes the foregoing to be support for the positioning of the functional category E between the V and T positions.

Continuing with an investigation of infinitivals, Travis (1994) suggests the possibility that the associated morphology in French is generated in E. She proposes (in line with work like Baker (1988), as she points out) that an analysis where head movement establishes morpheme order could describe the morpheme arrangement whereby infinitival morphology appears between V and tense/agreement. She explains that this is visible in French future and conditional tenses, and she proposes that a phrase structure where E appears between V and T can produce the ordering of the morphemes. Her morpheme analyses in (36) serves to illustrate.

(36)

	V	E	T/agreement	
future:	parl +	er +	a	's/he will speak'
	sort +	ir +	a	's/he will go out'
conditional:	parl +	er +	ait	's/he would speak'
	sort +	ir +	ait	's/he would go out'

Travis maintains that the same could be argued for the positioning of the infinitival marker *to* in English, as it holds the same position as a French infinitival after undergoing short verb movement. Further, the finite verb precedes the negator *not*, and the infinitival marker *to* follows *not*. (She indicates that instances where *to* appears before *not*, *not* may be the constituent negator variant, as in 'to not leave would be difficult.') Travis states that one position marking both [+tense] and [-tense] does not explain the word order facts, giving the arrangement as [V_{finite} NOT to (NOT) V] and exemplifying in (37a-c).

(37) a. Not to leave would be difficult.

b. *John not will leave.

c. John will not leave.

Travis (1994) notes that the subjunctive form in English also appears following the negator, in the same position acquired through short verb movement; this she illustrates with the comparison in (38a-b).

(38) a. Sally would prefer that I not be reading that book. (subjunctive)

b. Sally said that I was not reading that book. (indicative)

This, together with the infinitival data, leads to her proposal that the category E between V and T encodes verbal inflection amounting to less than tense, as in the French examples in (36), where tense/agreement morphology appears after the infinitival morphology. As for the absence of short verb movement in English, she postulates that if E marks infinitival morphology, and where the English infinitival marker *to* is not a bound morpheme, then there is nothing to force the verb to undergo movement.

1.4.2 E and Malagasy Data

Continuing her investigation, Travis (1994) looks at evidence from Malagasy, a Western Malayo-Polynesian language. Her analysis again indicates that E functions to encode information which is not tense, and that the position of such information appears closer to the verb than does tense. Within the tense system of the language, a number of NPs may function as the subject by means of an alternation in the topic morphology displayed on the verb. The assignment of subject is accomplished through three paradigms, whereby the subject is allocated either to the highest theta-role as Actor

Topic, to the second theta-role as Theme Topic, or to other arguments such as benefactive, instrumental, locative, and so on as Circumstantial Topic. She presents a description of the morphemes involved in (39).

(39)

	Actor Topic	Theme Topic	Circumstantial Topic
present	m-	Ø	Ø
past	n-	no	n-
future	h-	ho	h-

Travis observes that the forms of the morphemes of the past and future tenses across the various Topics resemble each other. But she notes that the present tense the Actor Topic is marked by *m-*, whereas the Theme and Circumstantial Topics have no overt morphology. Acknowledging work by Hung (1988), she postulates that the zero morpheme is the marker of the present tense in Malagasy, that all tenses employ *m-* as the Actor Topic marker, and that *m-* is deleted when another consonant precedes it, as in the past and future tenses. (Travis states, in fact, that the conclusions which she draws pertaining to Malagasy are based around ideas presented in Hung (1988)). My sense of the author's exposition is that the Actor Topic is preceded by a zero morpheme in the present, and is preceded by *n-* and *h-* in the past and future respectively (thus it is deleted) with the contention that the Actor Topic marker *m-* follows the morphemes that encode tense.

Travis (1994) hypothesizes on why only the Actor Topic is marked by *m-*. Again following the work of Hung (1988), she investigates with regard to the topic morphology of the language. She states that the morpheme *m-* is in complementary distribution with

the morpheme *-na*, and that the other morphemes have independent functions. Example (40) illustrates her point.

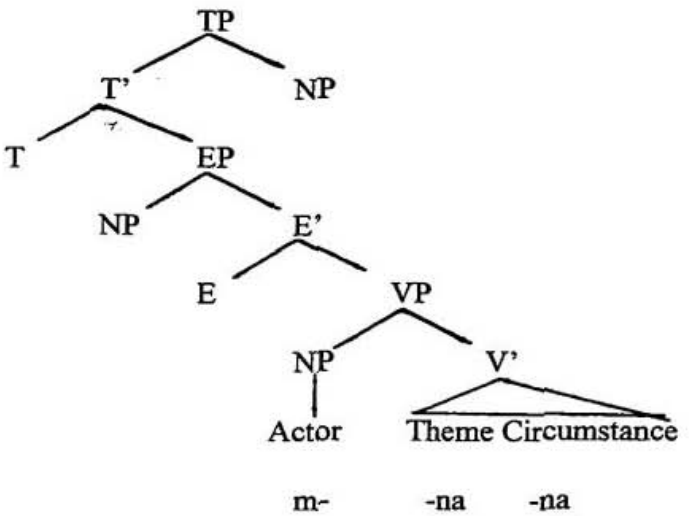
(40) √foha 'wake up'

Actor Topic	Theme Topic	Circumstantial Topic
m-an1-√	√-**na**	an1-√-an2-**na**
mamoha	fohazina	amohazana

Travis holds that *an1* is a transitivizing morpheme with its origin in V, and that *an2* relates to the formation of Circumstantial Topic, where it indicates the preposition incorporation which occurs therein.

Having assessed the two morphemes above, Travis discusses the status of both *m-* and *-na*. She indicates that they exist in complementary distribution, and that *m-* occurs in a position following tense (as she has shown earlier) but preceding *an1* and thus V. Her conclusion is that both *m-* and *-na* are generated in E between T and V. She expounds on the function of E in this instance, and presents an explanation for its appearance in two different forms. Still following Hung's analysis, she assumes that differing case assignment properties are the reasons behind the two different forms of E, and she presents the tree in (41) to relate the morphology of the Topics to the existing syntax.

(41)



With respect to (41), Travis states that movement to [Spec, TP] of the Actor Topic NP in [Spec, VP] occurs if the associated topic morphology is carried by the verb. As well, the Theme or Circumstantial Topic in V' is moved to [Spec, TP], if the associated topic morphology is present. She explains that the properties of the morphemes *m-* and *-na* can be delineated with respect to the above: when the morpheme *m-* appears, it indicates that movement from [Spec, VP] has occurred, and the appearance of *-na* indicates that movement from [Spec, VP] has not occurred. Furthermore, stating that it is Case which licenses movement to [Spec, TP] in most cases, Travis outlines proposals by Hung (1988) on the roles of *-na* and *m-*: that *-na* can check Case only in the [Spec, VP] position; and that *m-* cannot check Case; thus Case must be checked in [Spec, TP] and therefore movement to that position occurs.

Given the foregoing, Travis proposes that it is appropriate (at least intuitively) to have these morphemes appear in this particular structural position, and to have them function as they do. These morphemes appear in a functional category closest to [Spec,

VP] and so may have some case relation to the latter, and *m-* and *-na* can be linked to the difference in their case checking abilities. (She holds that structural case is checked in a Spec-head relationship whereby the NP in [Spec, VP] moves to [Spec, EP] at LF, but does not elaborate on this proposal).

Give everything outlined in the above, Travis has proposed that E is associated with morphology on the verb but is not considered tense, and that it appears associated with infinitivals, subjunctives, and case assigning morphemes.

1.4.3 Causatives and their Relation to E

Travis (1994) investigates how EP may be selected by causatives, and discusses causative constructions in Malagasy. Citing Hung (1988), she states that the language appears to display two causatives, but can be analysed as having just one if it is assumed that there is a head which occurs between the single cause V and the root V in some but not all causative constructions. She proposes that the above mentioned transitivizing morpheme *-an-* (see section 1.4.2) can be considered the first causative. She exemplifies this with the variation given in (42a-b) displaying the alternation *man-* and *mi-* respectively. These sentences compare the contrast created by the presence of *-an-* within a transitive verb with the presence of *-i-* within an unaccusative.

(42) a. manala

'to take x out'

b. miala

'to go out'

Travis now compares the morpheme *-an-* with the morpheme *-amp-*. She refers to Hung's proposal that *-an-* adds Case and an Agent, and adds further that the morpheme *-amp-* produces a causative and adds Case and an Agent as well. Her comparisons in (43a-b) illustrate the effects of the morphemes.

(43) a. manala **mampanala**

'to take X out' 'to cause y to take x out'

b. miala **mampiala**

'to go out' 'to cause y to go out'

According to Travis, Hung considers that the transitivizing morpheme *-an-* is generated in the highest V, and it is responsible for both the external argument and the accusative case. As for Hung's view of *-amp-*, Travis explains that *-amp-* is actually composed of the morpheme *-an-* followed by what is underlyingly *-f-*, and not the surface representation *-p-*. The example in (44) is Travis' morpheme analysis.

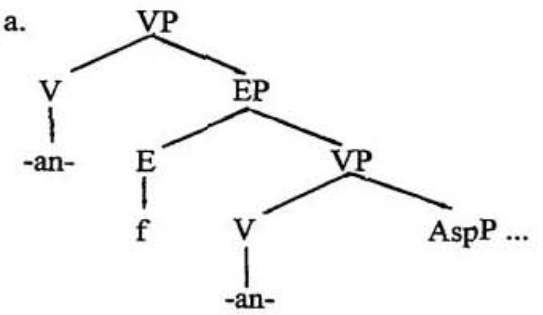
(44) $m + an + f + an + \sqrt{ala} \Rightarrow mampanala$.

Continuing under Hung's analysis, Travis states that this particular *-an-* is the actual causative morpheme, and as such its complement selection will be an EP; and that *-f-* is actually generated in E. The implication is that only the morpheme acting as the real causative and thus selecting an EP complement will be followed by the *-f-* morpheme. Thus it arises in the form of *-amp-*, rather than just *-an*.

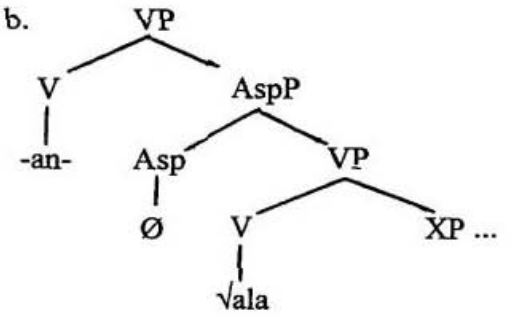
Travis (1994) sums up by stating that in the analysis, just one morpheme *-an-* is employed for both the real causative and the transitivizer. (I assume that Travis considers the transitivizer to be a causative construction of some type when she states that both

morphemes serve the same function). The only difference concerns the realization of EP as complement to the real causative *-an-*, and the realization of the transitivizer within the complement to EP. The form *-f-*, having been generated in E, follows the true causative *-an-* with the resulting morpheme realization as *-amp-*, which is then followed by the transitivizer form *-an-*. Thus the morpheme can arise in two apparently different forms depending on the complement selection, and Travis presents the structural arrangements of the transitivizer and the causative respectively as (45a-b). (I believe Travis has made an error in the designation of the trees, as it appears that (45a) would represent the structure of the causative as outlined by the author, and that (45b) would be the structure of the transitivizer, not visa versa).

(45) a.



b.



1.4.4 E and its Characteristics as a Category

Travis expounds on the nature of the functional category E in the position between V and T. Because she labels it as EP, she does not hold to other hypotheses that the category is Agr, or AgrO (proposals such as Pollock (1989) and Chomsky (1991)).

Travis (1994) takes the position held by other researchers, such as Sportiche (1991), and considers structural relations as the trigger for morphological agreement, where agreement occurs through a Spec-head relationship between the maximal projection of a head with a functional projection. Her statement on the point is that "Agreement, therefore, isn't so much an indication of an Agr head as it is an indication of a functional head. If agreement is viewed in this way, functional heads may be reserved for adding information (tense, definiteness, aspect) rather than encoding existing information (number and gender of an NP)." (Travis 1994:6).

1.4.4.1 E as a Lexical and Functional Category

Travis (1994) proposes that E can act like a lexical category by allowing A-movement of a head through it, and she also proposes that it can act as a functional category by encoding agreement, thus it replaces Chomsky's notion of the functional AgrO category. As for the first point, she posits that head movement from V (lexical category) to E (functional category) to V (lexical category) occurs in Malagasy causatives, with the arrangement given in (46).

(46) Ø + m + an + f + an + √ala

T E V E V V

=> mampanala

'to make x take y out'

As for E having the quality of a functional category, Travis points to work by Baker (1985), in which he shows that the position between the causative morpheme and the verb stem in Chamorro can display agreement. She states that in (47a) (with (47a-b) originally form Baker (1985)), the morpheme *fan-* marking plural agreement takes up a position between the causative morpheme *na'-* and the passivized lower verb. She proposes that in this instance, E positioned between the causative marker and the verb is acting as a functional category, given that she sees agreement as occurring through a Spec-head relationship with a functional category.

(47) a. Hu#na'-fan-s-in-aolak i famagu'un gi as tata-n-niha

1sS-CAUS-PL-PASS-spank the children OBL father-their

'I had the children spanked by their father.'

b. Para#u#fan-s-in-aolak i famagu'un gi as tata-n-niha

IRR-3pS-PL-PASS-spank the children OBL father-their

'The children are going to be spanked by their father.'

1.4.4.2 E and Theta-binding

Travis (1994) posits that the category E binds event theta-role within the head of its complement. She cites Higginbotham (1985), where he proposes with respect to Infl,

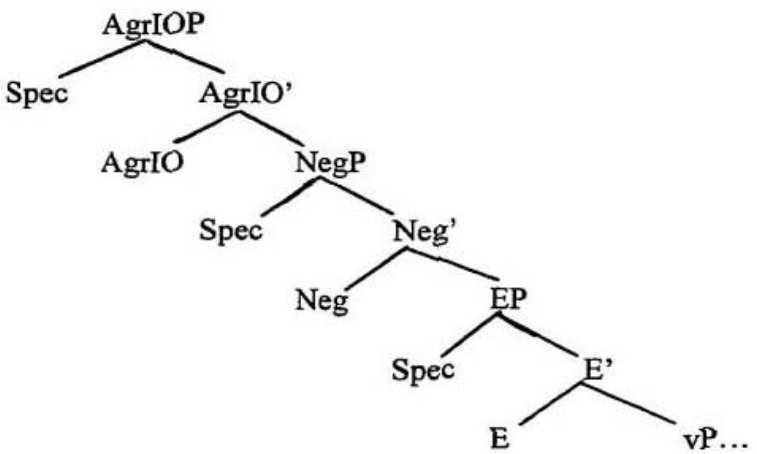
that theta-binding is one means of discharging theta-roles, and that "Infl theta-binds the event theta-role of the verb, and D theta-binds the R theta-role of the N" (Travis 1994:7). Travis keeps with this hypothesis, but adapts it to her proposal of the functional category E. She states that the morphology associated with infinitival and subjunctive forms originate from E; these forms bind the E-theta role within the V, as well as having other possible functions. To illustrate, she reiterates the examples of *m-* and *na-* in Malagasy, stating that they both bind the E-theta role, and that *na-* has an additional role as a case checker.

Travis continues by stating that causatives having a position above E, an arrangement which she has argued for the Malagasy causative morpheme *-amp-*, select a VP which she calls fully saturated, that being a VP which has its E theta-role discharged. She hypothesizes as to its effects where it binds the E theta-role. She states that the scope of E would encompass the whole event. As well, the subjunctive forms originating from E may be the differentiation between realis/irrealis usage; and the causative constructions may be forms of E used referentially. Travis cites Ritter and Rosen (1993) on this last point, where they propose a distinction between the constructions *make V* and *have V* in English, with the former encoding two events and the latter only one. Travis closes by stating that E would encode mood ideally, and this function would produce a more comprehensive system when working in conjunction with T associated with tense and Asp with aspect.

1.5 Negation and Movement

In the course of my analysis, I propose that the negative element in an Icelandic sentence, specifically the negative adverb *ekki* 'not', has variable position within the syntax. I propose that it is this variability in the position of the negator which underlies some of the word order phenomena. The foundation of my theory is that a preferred symmetry in feature strength is set through syntactic position, where immediate dominance of a category's projection by the projection of another category containing strong features will cause the lower category to be strong as well. The structural arrangement I assume for the categories involved appears in (48).

(48)



In my hypothesis, I hold that overt shift of the IO to [Spec, AgrIO] occurs when AgrIO is strong. The presence of strong features in AgrIO will elicit strong features in Neg, and the negator will appear overtly in [Spec, NegP]. The structural arrangement of the constituents' projections is involved in the process; AgrIOP immediately dominates NegP and thus the presence of the strong AgrIO will create a preference for a strong Neg. Further, when Neg is strong, then the preference is for a strong E, as NegP immediately

dominates EP, and thus the preference is for a shifted DO in [Spec, EP]. I maintain that this preference is indicated by the contrast in (49a-b) ((1e,d) repeated respectively), where in (49a) the IO and DO have shifted overtly over the negator adjoined to vP, but with some marginality. The sentence in (49b) indicates the preferential arrangement that I have stated above, even though this surface structure arrangement appears to indicate that only the IO has shifted overtly. I hold that the IO has shifted to [Spec, AgrIOP], the negator to [Spec, NegP], and the DO to [Spec, EP], where all the heads contain strong features triggered by the above mentioned process.

(49) a. ?Ég lána Maríu(IO) bækurnar(DO) ekki

I loan Maria books-the not

'I do not loan Maria the books.'

b. Ég lána Maríu(IO) ekki bækurnar(DO)

I loan Maria not books-the

1.5.1 Moritz and Valois and LF Movement to [Spec, NegP] in Negation

In my investigation, I consider that the negative adverb *ekki* 'not' moves overtly from its position adjoined to vP to the specifier position of a NegP. Moritz and Valois (1994) deal with a related phenomenon in French, presenting evidence that negator movement to [Spec, NegP] occurs at LF in the language (see Laka (1990) as well for an investigation of negation). Their investigation employs mainly the DP *personne* 'nobody' as an example of a French negative phrase. Moritz and Valois present support for their hypothesis on LF raising of the negative phrase to [Spec, NegP] through data indicating

that *personne* 'nobody'shows much the same distribution as *wh*-phrases, indicating that the negative phrase undergoes movement. They also propose that *personne* licenses an empty category in a nonpartitive quantificational NP construction of the form [Ø de NP], again indicating movement; and that the two negative elements *pas* and *personne* cannot occur together in a sentence to produce negative concord, as *personne* cannot move to [Spec, NegP] because it is already filled by *pas*.

1.5.2 Evidence in Favour of LF Movement of French Negation

Moritz and Valois present evidence involving ECP violations, and effects concerning theta-hierarchy to support their proposal of LF movement to [Spec, NegP] of a negative phrase. They reference work by Stowell (1989) and Culicover and Rochemont (1992), showing that ECP violations occur when there is extraction out of DP adjuncts; these are observable for the negative phrase *personne* 'nobody', and mirror *wh*-traces in the same environments.

(50) a. Tu avais vu [$_{DP}$ la pétition contre le premier ministre]
you had seen the petition against the prime minister
'You had seen the petition against the prime minister.'

b. *Tu n'avais vu [$_{DP}$ la pétition contre personne]
you NEG-had seen the petition against nobody
'You had not seen the petition against anybody.'

c. *Qui$_i$ as-tu vu [$_{DP}$ la pétition contre t_i]
'Who did you see the petition against?'

Moritz and Valois note that ECP violations are elicited in (50c), where a *wh*-phrase has raised out of the DPs, producing an ungrammatical construction. This mirrors the effects produced when *personne* 'nobody' appears DP-internally, as in (50b). Moritz and Valois take this to indicate that the negative element *personne* is undergoing LF movement out of the DP, thus producing ECP violations and therefore ungrammatical constructions. Thus they consider LF movement of the negative phrase to be a mechanism involved in sentence negation.

Moritz and Valois (1994) present further evidence for movement in French negation through an investigation of the effects of thematic hierarchy on movement. They explain that when a noun co-occurs with another that is higher in the thematic hierarchy, extraction of an argument from the former is barred. They cite work pursued in Romance by Milner (1978), Cinque (1980), Torrego (1986), Zubizarreta (1987), Giorgi and Longobardi (1991), and Valois (1991), wherein it is indicated that *wh*-phrases can only be extracted from the DP in which the head noun is highest in the thematic hierarchy possessor>agent>theme. The sentences in (51a-b) from Moritz and Valois serve to illustrate.

(51) a. *l'homme dont$_i$ Claude a vu [$_{DP}$ la photo t_i (theme) du
the-man of-whom Claude has seen the picture of-the
photographe (agent)]
photographer
'the man whose picture by the photographer Claude saw.'

b. *le photographe dont$_i$ Gustave a vu [$_{DP}$ la photo t_i (agent)/(theme)

the photographer of-whom Gustave has seen the picture

de ce collectioneur (possessor)]

of this collector

'The photographer of whom Gustave saw this collector's picture.'

Moritz and Valois (1994) state that this condition also affects extraction of *personne*, and they illustrate this in (52a-b).

(52) a. * Claude n'a vu [$_{DP}$ la photo de personne t_i (theme) du

Claude NEG-has seen the picture of nobody of-the

photographe (agent)]

photographer

'Claude did not see the photographer's picture of anybody.'

b. *Gustave n'a vu [$_{DP}$ la photo de personne (agent)/(theme)

Gustave NEG-has seen the picture of nobody

de ce collectioneur (possessor)]

of this collector

'Gustave did not see this collector's picture of anybody.'

With the data in (53a-b), Moritz and Valois show that the *wh*-phrases can be extracted without problem when they are the element highest in the thematic hierarchy in a 'nominal expression'. The distribution of a negative phrase parallels the *wh*-phrase data, where their examples in (53c-d) show that *personne* mirrors the *wh*-extraction data.

(53) a. le photographe dont$_i$ Claude a vu [$_{DP}$ la photo

the photographer of-whom Claude has seen the picture

de Madrid (theme) t_i (agent)]

of Madrid

'the photographer whose picture of Madrid Claude saw.'

b. le collectioneur dont$_i$ Jules a vu [$_{DP}$ la photo

the collector of-whom Jules has seen the picture

de ce photographe (agent) t_i (possessor)]

of this photographer

'the collector whose picture by this photographer Jules saw.'

c. Claude n'a vu [$_{DP}$ la photo de Madrid (theme) de personne (agent)]

Claude NEG-has seen the picture of Madrid of nobody

'Claude did not see anybody's picture of Madrid.'

d. Jules n'a vu [$_{DP}$ la photo de ce photographe (agent) de

Jules NEG-has seen the picture of this photographer of

personne (possessor)]

nobody

'Jules did not see anybody's picture by this photographer.'

1.5.3 General notes on French Negation, and the Positioning of pas in [Spec, NegP]

With respect to the positioning of the negative adverb *pas* 'not' in [Spec, NegP], Moritz and Valois (1994) discuss negation in French in general. They state that [ne...XP]

is the form that negation takes in French. It is a discontinuous constituent, where *pas* or various other negative words compose the second part of the constituent (but that *ne* is an optional element for the most part). They cite Pollock (1989) for the proposal that *ne* is a clitic which attaches to the inflectional head appearing higher in the structure, but that it originates as heading a NegP intervening between TP and AgrP. Still following Pollock (1989), Moritz and Valois state that *pas* 'not' is seen to be positioned in [Spec, NegP], based on data showing that an infinitival verb is able to precede a VP adverb, but the infinitival verb cannot precede *pas*. This contrasts with the positioning of a finite verb, which always precedes *pas*. They note that Pollock (1989) considers the foregoing consistent with an analysis whereby a non-finite verb raises only to Agr, and precedes the adverb but follows *pas*, whereas a finite verb raises higher up to T, and thus precedes both *pas* and the adverb. Their sentences in (54a-d) involving *souvent* 'often' as the VP adverb illustrates this.

(54) a. ne pas [$_{VP}$ souvent manger]

NEG not often to-eat

'not often to eat'

b. ne [$_{TP}$ pas $_{AgrP}$ manger$_i$ [$_{VP}$ souvent t_i]]]

NEG not to-eat often

c. *ne manger pas souvent

NEG to-eat not often

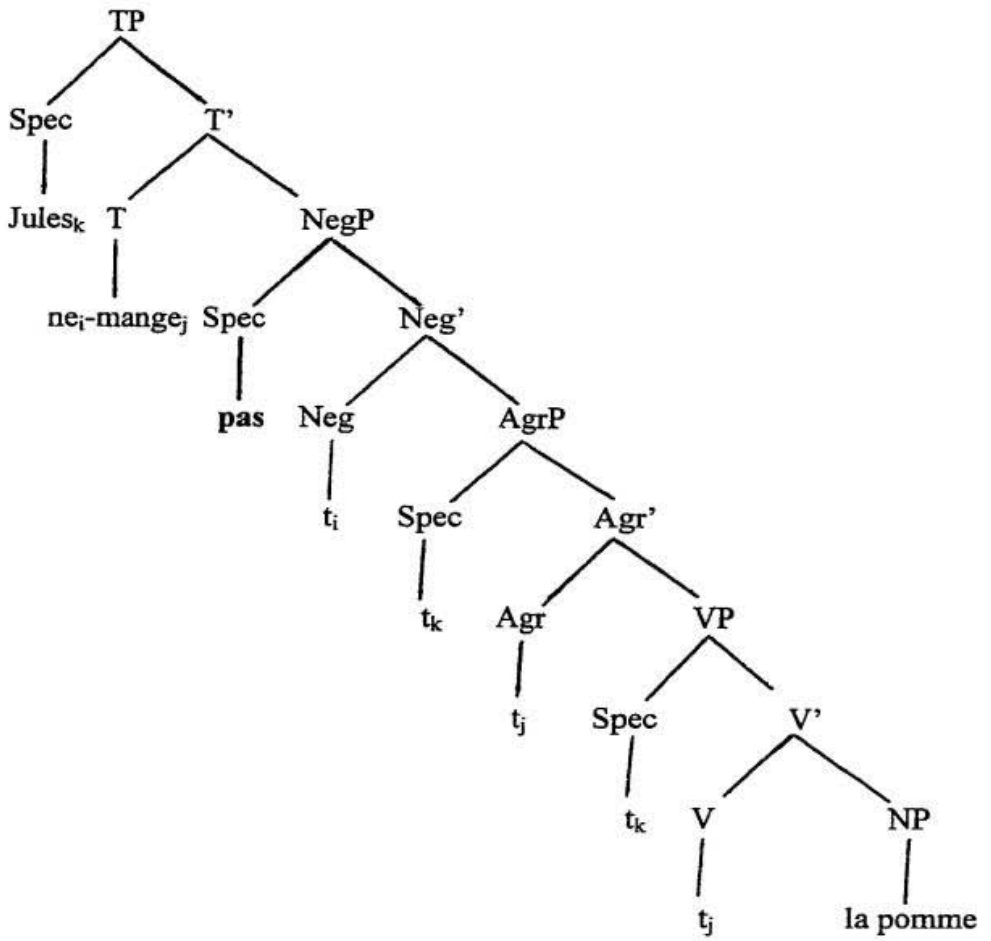
d. Jules ne mange pas la pomme

Jules NEG eats not the apple

'Jules does not eat the apple.'

Moritz and Valois indicate that (54a-d) display the earlier distribution of non-finite and finite verbs with regard to *pas* 'not' and a VP adverb. In (54a) the non-finite verb *manger* 'to eat' follows *pas* 'not' and the VP adverb *souvent* 'often'. In (54b) the non-finite verb *manger* follows *pas* but precedes *souvent*; and in (54c) the non-finite verb *manger* cannot appear in a position preceding *pas*. In (54d) the finite verb *mange* 'eats' precedes *pas*. They state that because the non-finite verb at Agr and the VP adverb follow *pas*, and because the finite verb at T precedes *pas*, then the position of *pas* within the syntax is between these two other positions. That *pas* could be in [Spec, AgrP] is ruled out, as Moritz and Valois note that because two elements are employed in combination to express sentence negation, *ne* and *pas*, then they are selectionally related, whereby *ne* as the head of Neg selects a specifier *pas*. As well, they state that because there is a negation phrase projected with an associated specifier position, and that when *pas* is used in sentence negation, it would have a greater connection with a Neg constituent rather that an inflectional one like Agr. They present the tree in (55) to illustrate the position of *pas* 'not' within the syntax.

(55)



1.5.3.1 The Effects of personne with Nonpartitive [Ø de NP]

Moritz and Valois (1994) propose that good evidence of LF movement of a negative phrase to [Spec, NegP] is displayed through the licensing of [Ø de NP], which acts as a nonpartitive quantificational form. They state that a quantifier can appear internal to a quantified NP, and that an empty category within a nonpartitive quantificational NP construction of the form [Ø de NP] can be bound by a quantifier in a

position preceding the verb. They exemplify both situations respectively with *beaucoup* 'much' in (56a-b), citing Obenauer (1984). The observation is that *beaucoup* 'much' can appear overtly within the NP, and overtly in preverbal position. Moritz and Valois show that the same results hold for the negative phrase *personne* 'nobody' in French when used with such a construction. The point they note is that for *personne* to license the empty category in some instances, movement of the negative element must occur at LF to raise it higher in the structure than its SS position.

Moritz and Valois give the examples in (56a-b), where in (56a) the quantifier *beaucoup* 'much' can appear internal to the NP, and in (56b) it appears overtly in preverbal position but binds the empty category. They point out that their examples in (56a-b) show what Kayne (1984) has stated, that the empty category must be c-commanded by *beaucoup*.

(56) a. Jean a mangé [$_{NP}$ beaucoup de chocolat]

Jean has eaten much of chocolat

'Jean ate a lot of chocolate.'

b. Jean a [$_{VP}$ beaucoup$_i$ mangé [$_{NP}$ Ø $_i$ de chocolat]]

Jean has much eaten of chocolat

'Jean ate a lot of chocolate.'

(57) a. Il est [$_{VP}$ beaucoup venu [$_{NP}$ Ø d'enfants]] cette semaine

there is many come of-children this week

'There came many children this week.'

b. *[$_{NP}$ Ø d'enfants]$_i$ sont beaucoup venus t_i cette semaine

of-children are many come this week

'Many children came this week.'

Their examples above show that in the ungrammatical construction (57b), the sentence has become degraded because the quantifier does not c-command the empty category within the NP object, and therefore cannot license it as it does in the grammatical example (57a).

Moritz and Valois (1994) continue with reference to Kayne (1984), showing that the empty category within the NP can also be licensed by *pas* 'not', as shown in (58a) below.

(58) a. Jean ne mange pas [$_{NP}$ Ø de pain]

Jean NEG eats not of bread

'Jean does not eat bread.'

b. Jean mange pas [$_{NP}$ Ø de pain]

Jean eats not of bread

'Jean does not eat bread.'

c. *Jean ne mange [$_{NP}$ Ø de pain]

Jean NEG eats of bread

'Jean does not eat bread.'

They propose that the negative element *pas* c-commands the empty category in the NP from [Spec, NegP]. As well, Moritz and Valois point out that it is *pas* and not the other negative element *ne* that licenses the empty category. As shown in (58b), *ne* is an

optional element in the sentence, whereas (58c) shows that *pas* is not optional, due to the ungrammaticality produced when it is omitted.

Moritz and Valois (1994) continue by indicating that in a sentence where *pas* 'not' is omitted, the sentence will not be ungrammatical if the negative phrase *personne* 'nobody' is present, indicating that it too can license the empty category. They illustrate this point in example (59).

(59) Personne ne mange [Ø de pain]
nobody NEG eats of bread
'Nobody eats bread.'

Given that *personne* can license the empty category, and given the foregoing evidence that the quantifier must c-command the empty category in order for it to be licensed, Moritz and Valois show in (60a-b) that *personne* undergoes LF movement to [Spec, NegP]. In this position, the negative phrase can c-command the empty category.

(60) a. Lucie n'a donné [$_{NP}$ Ø de livres] [$_{PP}$ à personne]
Lucie NEG-has given of books to nobody
'Lucie has not given books to anybody.'

b. Lucie n'a donné [$_{NP}$ Ø de livres] [$_{PP}$ à l'ami de personne]
Lucie NEG-has given of books to the-friend of nobody
'Lucie has not given books to anybody's friend.'

(61) [$_{NegP}$ personne$_i$ [$_{Neg'}$ ne...[Ø de NP t_i]]]

In their data in (60a-b), neither of the sentences has the negative phrase *personne* in a position at SS where it can c-command the empty category, but the presence of *personne*

does appear to license it. They propose that *personne* undergoes movement at LF to [Spec, NegP], and from this higher syntactic position it can c-command and thus license the empty category. They show this arrangement in (61).

1.5.4 Refutation of a QR Analysis

Moritz and Valois (1994) state that the position to which the negative phrase moves is [Spec, NegP], and that the apparent alternate analysis involving quantifier raising and adjunction to IP is not applicable. They state that if it were quantifier raising, then an empty category within a subject NP would be licensed by the presence of the negative phrase adjoined to IP at LF, where it could c-command the subject position. This is not the case, as indicated by the sentences in (62a-c).

(62) a. *[Ø d'articles] n'ont été donné à personne

of-articles NEG-have been given to nobody

'Articles were given to nobody.'

b. [$_{IP}$ personne$_i$ [$_{IP}$ [Ø d'articles] n'ont été donné (à) t$_i$]]

c. [$_{TP}$ [Ø d'articles][$_{T'}$ [$_{NegP}$ personne$_i$ [$_{Neg'}$ n'a été donné (à) t$_i$]]]]

Their example in (62a) shows an ungrammatical sentence, where *personne* 'nobody' is present, but where the empty category is contained within a subject NP. If quantifier adjunction to IP were the mechanism behind the LF raising of *personne*, then the negative phrase would be in a position from which it would be able to c-command and license the empty category, as shown in (62b). Thus the sentence would be grammatical. This is not the case, and so strengthens their analysis whereby *personne* has raised at LF

to [Spec, NegP], which is a position where it cannot c-command the empty category, and thus cannot license it, as displayed in (62c).

1.5.5 Multiple Negative Phrases, Absorption, and pas in [Spec, NegP]

Moritz and Valois (1994) continue with their argument in favour of LF movement of negation to [Spec, NegP] with data involving the presence of multiple negative phrases. They point out that when *pas* 'not' and *personne* 'nobody' co-occur in a sentence, the result is not single sentence negation (in their text, they denote lack of single sentence negation in examples (14a-b) by [*]). They take this to indicate that *personne* cannot attain [Spec, NegP] position at LF because it is filled by the presence of *pas*. Moritz and Valois state that single sentence negation will not result, regardless of the SS position of *personne*. In the resulting construction the double negative is cancelled to become a positive (see the paraphrase in (63a)), as *pas* and *personne* lack negative concord (citing Hægeman and Zanuttini (1991)). They propose that this results because *personne* cannot move to [Spec, NegP] due to the presence of *pas* already filling this position, and they exemplify with the sentence in (63) below.

(63) [*] Jean n'a pas vu personne

Jean NEG-has not seen nobody

'Jean did not see nobody.'

paraphrase: 'It is the case that Jean saw someone.'

Moritz and Valois continue by explaining that negative concord does occur in cases involving other negative phrases. They illustrate this with an example where

personne 'nobody' co-occurs with *rien* 'nothing' (64), where the presence of two negative phrases show negative concord and so do not cancel each other out. In contrast with (63), the resulting sentence displays single sentence negation, and they give the interpretation in (64b).

(64) a. Personne n'a rien vu

nobody NEG-has nothing seen

'Nobody saw anything.'

b. for all x, and all y, ¬ [x saw y]

To explain the different effects displayed in the data, where some negative phrases cannot co-occur and elicit single sentence negation, while others can, Moritz and Valois consider the possibility that Absorption occurs in some instances, but not in others. They propose that movement to a single [Spec, NegP] position is required for single sentence negation. When there are multiple, co-occurring negative phrases, some combinations allow for movement to the single position in conjunction with Absorption, as with the pairing of *personne* 'nobody' with *rien* 'nothing' in (64a). Other combinations will not allow for movement and absorption, with no single sentence negation resulting, as with the combination of *pas* 'not' and *personne* 'nobody' in (63).

Moritz and Valois draw a comparison between the data on negation and question constructions involving multiple *wh*-phrases, citing Higginbotham and May (1981) on the latter. They present the examples in (65a-b), whereby paired *wh*-phrases result in paired answers in French and English, and they state that the general assumption about such constructions is that the two *wh*-phrases are present in a single [Spec, CP] position at LF.

(65) a. Tu as vu qui où

you have seen who where

'Who did you see where?'

b. Who bought what?

Moritz and Valois note that a possible answer for the sentence in (65a) could pair the people seen with the place in which they were seen, and might be presented as: "I saw Jack in Montreal, Kim in Los Angeles, etc.," and that (65b) might elicit an answer such as: "Jack bought a cake, Mona bought candles, etc." As previously explained, the paired *wh*-phrases are present at LF in one [Spec, CP] position, but Moritz and state that the paired reading possibility displayed by the answer is the result of Absorption, citing Higginbotham and May (1981), Aoun, Hornstein, and Sportiche (1981), and May (1985) for the foregoing analysis.

Moritz and Valois (1994) cite Aoun, Hornstein, and Sportiche (1981), who propose that the rule of Absorption does not affect all forms of *wh*-phrases. The French example *pourquoi* 'why' and English *whether* illustrate this phenomenon in sentences (66a-b), where the ungrammaticality indicates that Absorption does not take place.

(66) a. *Quand a-t-il mangé pourquoi?

when has-he eaten why

'When did he eat why?'

b. *I wonder whether John saw who?

Moritz and Valois conclude that there is a parallel here, that single sentence negation involving multiple negative phrases as seen in (64a) is akin to paired readings with

multiple *wh*-phrases as in (65a-b). They state that the situation surrounding the lack of negative concord and single sentence negation in (63) is similar to the *wh*-phrase in (66a), which produces an ungrammatical construction when combined with other *wh*-phrases in a sentence, with no chance of a paired reading. Based on the data presented, their concluding hypothesis is "that single sentence negation readings involve movement to a single NegP and that, like *wh*-phrases, some negative phrases allow absorption (e.g., *personne*, *rien*, and *jamais*), whereas others do not (e.g., *pas*)." (Moritz and Valois 1994:681)

Chapter 2

Previous Research

2.1 Introduction

In this section, I present previous research pertaining to object shift in Icelandic. Included are a proposal by Groat and O'Neil (1996) for single object shift within the framework of their own syntactic proposals, Collins and Thráinsson's (1996) account of double object shift in Icelandic, and the stacked double object structure presented in Bobaljik (1995).

2.2 Introduction to the Minimalist Syntactic Proposals of Groat and O'Neil

In this portion of my exposition, I will be presenting syntactic hypotheses set out by Groat and O'Neil (1996) as complement to the Minimalist framework. They propose that there exist certain asymmetries in the functioning of the syntactic computational system as set out under the Minimalist model; these pertain mainly to the pre- and post-Spell-out levels within the grammar. They attempt to reconcile the apparent disjunction between the two with their notion of the Strong Cycle, which they derive using concepts pertaining to the creation of structure already inherent within the Minimalist framework.

2.2.1 Groat and O'Neil's Critique of the Extension Requirement, Post- and Pre-Spell Out Operations, and Economy

In their presentation, Groat and O'Neil point to certain asymmetries and stipulations which are present in the MPLT (Chomsky's (1993) "A Minimalist Program

for Linguistic Theory") model of grammar, and show how their own model can account for, or eliminate these. Of interest to Groat and O'Neil are three considerations pertaining to the Minimalist framework. The first is that the Extension Requirement only constrains overt substitution. Secondly, between pre- and post-Spell-out there are three asymmetries, the Extension Requirement, access to lexicon, and Economy (Procrastinate). Finally, that Procrastinate, driven by requirements of Economy, works across derivations.

2.2.2 The Asymmetrical Relationships Between Post- and Pre-Spell Out

The first problem which Groat and O'Neil (1996) perceive as present in the Minimalist framework is that the Extension Requirement only constrains overt substitution. They explain that what is presented in the MPLT as the Strict Cycle Condition, they present under the term of The Extension Requirement, and give it in (1).

(1) Suppose we restrain the substitution operations still further, requiring that Ø be external to the targeted phrase-marker K. Thus GT [Generalized Transformations] and Move α extend K to K*, which includes K as a proper part. For example, we can target K=V', add Ø to form [ß Ø V'], and then either raise from within V' to replace Ø or insert another phrase-marker K^1 for Ø. In either case, the result must satisfy X-bar theory, which means that the element replacing Ø must be a maximal projection YP, the specifier of the new phrase-marker V"=ß". (Chomsky 1993: 22-23)

Groat and O'Neil (1996) point out that with this stipulation, countercyclic substitution operations are prohibited, because the original phrase-marker would not be contained as a "proper part" in a newly formed phrase-marker. As well, they note that the phrase-marker is not extended with the head-movement adjoining a head X to a head Y. To illustrate the above statement, they maintain that before the adjunction of V to Agr,

the structure $[_{Agr'}$ Agr$][_{VP}$ ...V...]] for the agreement phrase is a possible one; and after adjunction the structure $[_{Agr'}$ $[_{Agr}$ V Agr$][_{VP}$ ...t_V...]] is the result. Here there is no extension of the phrase-marker, as the old phrase-marker is not included as a "proper part".

Groat and O'Neil question whether the Extension Requirement applies to instances where a phrase adjoins to another phrase. They point out that countercyclic adjunction of phrases is addressed in the MPLT as being allowable in theory, thus they maintain that the Extension Requirement is only applicable to operations involving substitution. As well, they note that the Extension Requirement does not apply to covert operations, and so does not apply after Spell-out; they present Chomsky's statement on this point: "The extension requirement holds only for substitution in overt syntax". (Chomsky 1993:24)

In summary of the above, Groat and O'Neil state that all overt substitution, as presented in terms of the Extension Requirement, is required to be cyclic, but that that the Extension Requirement must be qualified in order to obtain this desired outcome. They state in sum that stipulations are attached to the Extension Requirement; stipulations are attached to release Adjunction operations from the Extension Requirement; and stipulations are attached to release covert operations from the Extension Requirement.

Having explained the first asymmetry within the Minimalist model of grammar, Groat and O'Neil (1996) discuss another, that being the inability of the lexicon to be referenced after Spell-out occurs. Their reason for this stipulation is that in a derivation where the LF representation could include additional lexical items, the resulting

interpretation could in part consist of lexical items that are absent phonologically, regardless of whether they have phonological forms or not.

The final asymmetry Groat and O'Neil discuss pertains to Economy, where a Form-chain operation is more costly if it occurs at pre-Spell-out than if it occurs at post-Spell-out. Because operations have a preference governed by Economy for post-Spell-out execution, Groat and O'Neil state that this principle is termed Procrastinate. The result is that operations affecting the overt syntax are kept to as few in number as possible, as they incur more cost than identical ones occurring in the covert syntax.

To exemplify this, the authors present a contrast between Verb-raising in English and French. In English, the main verbs have no strong inflectional features which need checking, and so do not raise prior to Spell-out. Thus main verbs will raise covertly at LF, as this operation incurs less cost under Economy. Given that cheaper derivations will occur over more costly ones (i.e. overt operations), the overall result is that overt raising of the main verb is barred in English. In French, Agr/Tense are considered to be strong, and thus cannot be interpreted at PF, therefore the verb must raise and have these features checked before Spell-out, so that they will be deleted before the derivation reaches PF. Thus despite being more costly than raising covertly after Spell-out, Verb-raising must occur overtly in French in order to keep the derivation from crashing.

2.2.3 Motivation to Level these Asymmetric Relationships

Groat and O'Neil (1996) present arguments for eliminating the asymmetries present in the Minimalist framework, and the excerpt in (2) summarizes their reasoning.

(2) ...pre- and post-Spell-out operations are exactly the same: both operate on phrase-markers through both binary and singularly transformations (and perhaps deletion), both create chains through the operation of FORM-CHAIN; both are constrained by the Greed principle. To the extent that the asymmetries between them must be stipulated and are not derived from independent principles, we effectively end up with *two* computational systems that are nearly identical. (Groat and O'Neil 1996:119)

Thus they are attempting to make the components more similar by reducing the asymmetries between the two. In this way, they hope to render a single, more uniform computational system.

Continuing their discussion of problems within the Minimalist framework, Groat and O'Neil expand on the notion of Procrastinate. They state that it exists as a transderivational principle by which derivations are compared, and through which a cheaper derivation blocks more costly ones, despite the fact that they may all be convergent and have the same form at LF. So, with regard to the earlier example of Verb-raising in English, covert and overt operations involving Verb-raising are 'observed' and their costs 'calculated', and as a result overt Verb-raising is blocked in favour of the post-Spell-out counterpart, as the latter is cheaper.

Groat and O'Neil (1996) note that computations occur locally and derivationally in the Minimalist view, as with the notion of Minimal Domain as it exists in MPLT; it is characterized in terms of a particular category contained in a particular phrase-marker, which is present at a particular locus in the derivation. As well, the concept of Greed as a

principle whereby the impetus for movement of a category is to have only its own features checked, also locally confines categorial movement. The question they raise to illustrate this point is whether the occurrence of Form-chain lends any justification for a category within a derivation.

With relevance given to the domain of a category and to the principle of Greed, Groat and O'Neil state that it is through the derivation that the boundaries for computation within the system are set up. They illustrate this in terms of the English Verb-raising example: a verb raising to a C^0 position would violate the Greed principle, as C^0 has no features defined for verbs, and so movement of this sort is disallowed in English. But they continue by stating that whether something moves covertly or overtly is not determined by any rule acting in a single derivation. Instead, with relevance to Procrastinate, derivations are compared and the cheapest one comes to block other more costly ones. They again discuss the English Verb-raising example, where there is no principle applying within the derivation which acts to block overt raising of a main verb. Instead, it is comparative process which blocks the derivation as a whole because it is costlier that the identical derivation with covert raising. Groat and O'Neil propose that it is the intraderivational character of a computational system under the Minimalist view that leads to incongruity if transderivational economy provisions have to be considered as a component therein.

2.2.4 Using Greed and Economy to Form an Alternative to Procrastinate: The Strong Cycle and Derivational Operations

Groat and O'Neil (1996) hypothesize that local computations can be employed to determine whether movement is covert or overt, using the notions of Greed and Economy. In this way they present an alternative to Procrastinate as a principle of comparison working across different derivational systems. They hold that a phrase-marker present at Spell-out is the same one that enters LF, thus no post-Spell-out syntax occurs. With this in mind, they present their proposal of the Strong Cycle, which is an outline of how the Extension Requirement can be elicited using structure building tenets of Minimalism, but which will bar post-Spell-out countercyclic substitution.

In presenting their theory, Groat and O'Neil discuss Minimalist ideas on the construction of phrase-markers as presented in the MPLT. They explain that Generalized Transformation (GT) is the structure building process, which either takes one phrase-marker and places it into another (a binary operation), or copies and then places a category within the same phrase-marker (an operation working singularly). They present in (3) the GT operation as explained by Chomsky (1993).

(3) a. a category X is targeted and projected in a manner consistent with X-bar theory;
b. a sister Ø to X is created;
c. a category is inserted into Ø (a separate phrase-marker in the case of binary GT, a subtree of the phrase-marker in the case of singularly GT) which yields an X-bar consistent structure. (Groat and O'Neil 1996:121)

They explain that the above process leads to the formation of a new phrase-marker. Where substitution is overt, the target X must be contained in this new phrase-marker, as X is the root node of the earlier phrase-marker before extra structure was built and overt

substitution targets the root node. As well, they note that a particular category X may also be targeted and projected, but no Ø need be created so that another category can be placed therein as a sister to X.

Groat and O'Neil describe an instance where the category which is the target is not acting as the root node of the phrase-marker. To exemplify, they present an arrangement where an $AgrOP_1$ is in complement position to T, thus yielding the structure in (4a).

(4) a. $[_{T'}\ T^0\ [_{AgrOP1}\ [_{AgrO'}\ AgrO^0\ [_{VP}\ ...]]]]$

b. $[_{AgrOP2}\ DP\ [_{AgrO'}\ AgrO^0\ [_{VP}\ ...\ ]]]$

When a direct object moves at LF to get its case checked in [Spec, AgrOP], the Extension Requirement does not apply because the movement is covert. The direct object could take up a [Spec, AgrOP] position through a process whereby AgrO' is targeted, a new $AgrOP_2$ is projected, Ø arises as a sister to AgrO', and the direct object could be placed into Ø. The result would be the structure represented in (4b). Groat and O'Neil observe how this poses a problem with how the new $AgrOP_2$ is associated with the other constituents in the phrase-marker. They state that $AgrOP_2$ bears no resemblance to $AgrOP_1$ which used to immediately dominate AgrO', and it is not a constituent within $AgrOP_1$, as substitution is the working mechanism (and not adjunction). Given this, both $AgrOP_1$ and $AgrOP_2$ would immediately dominate AgrO', and this structure is not acceptable in X-bar theory. Thus a phrase cannot be inserted into a specifier position using countercyclic substitution and GT, because the structure would be improperly formed.

Groat and O'Neil state that the desired results are possible to achieve, but extra stipulations would have to be added, and so the theory would incur a cost in this respect. To avoid this, they state that countercyclic substitution is not permitted. They propose that their Strong Cycle makes all countercyclic substitution impossible, whether it is covert or overt. This ban on covert operations like object shift and covert *wh*-movement in languages where *wh*-phrases remain *in situ* poses a problem for the notion of the Strong Cycle. But they maintain that it is a better hypothesis than one which needs the inclusion of extra conditions, as it is based on Minimalist proposals for structure building.

Groat and O'Neil (1996) hypothesize on how to deal with covert operations under the notion of the Strong Cycle. In their theoretical proposal of a single level model, all weak and strong features are checked throughout the course of a derivation, and the outcome is a single and, as they put it, "final" phrase-marker K_f. No post-Spell-out syntax occurs, as all operations, including covert movement, have been called into play at points before LF and PF. This single phrase-marker acts as the unit to which the mechanisms of interpretation and the phonological component make reference, and so the same phrase K_f is fed into Spell-out and LF.

2.2.4.1 Cost in Terms of Strong and Weak Features, and an Alternative View to Overt and Covert Movement

Groat and O'Neil hold that all movement has occurred before the derivation reaches Spell-out. They propose that the definition of strong and weak features needs to be qualified, as well as notion of chain-formation, where in their view, the trace of a

moved category is not characterized as phonologically null without option. They present the following rules in (5a-b) as alternative mechanisms.

(5) a. Strong features may be checked only in a checking relation with a node specified for phonological features.
b. Moving Phonological features to the head of a chain is more costly than leaving them in the tail of a chain. (Groat and O'Neil 1996:124)

For Groat and O'Neil, these two principles replace the proposals in Chomsky (1993) which they give as: "first, that strong unchecked features are visible PF objects and are uninterpretable (forcing pre-Spell-out checking and deletion of strong features), and second, that pre-Spell-out movement is more costly than post-Spellout movement." (Groat and O'Neil 1996:124). They explain that by the principle in (5a), the licensing of strong features acts in a fashion akin to affixation, in that they require a host which has an explicit phonological representation. In contrast, weak features do not require a host to be phonologically present, as they are licensed through their relationship in the syntax with a category. And with respect to (5b), they explain their modification of cost: if a category has its phonological features copied, it is a costlier operation than not having them copied, for the relative 'proportion' of more versus less cost is one of more features versus less features to copy.

2.2.4.2 Implications for Copy Theory

In terms of Copy Theory, Groat and O'Neil (1996) maintain that they augment the Form-chain principle in that when a category is moved, all syntactic features are copied in the process of forming a chain, but the phonological features of the category are not copied during that particular process. Instead, it can either shift the phonological form to

where the category has moved, or leave it *in situ* where it originated. In this way they propose an alternative to the hypothesis in Chomsky (1993) whereby, through some operation, the tail of a chain is marked as phonologically null, and so is not pronounced.

To exemplify the foregoing proposals, Groat and O'Neil again contrast Verb-raising in English with that of French. For English, Procrastinate operates by not having the main verb raise until after Spell-out; only then would tense and agreement features be checked. Under their hypothesis, the verb raises to AgrO, and then on to T and AgrS (with T having adjoined to AgrS before the verb raises, forming $[_{AgrS}$ T AgrS] to which the verb adjoins). But the V-features of Agr and T are weak, therefore the verb's phonological material is not copied. Not copying this material is the least costly alternative in terms of Economy. Thus at Spell-out there is a chain formation in the phrase-marker, but the verb's phonological form remains in base position at the tail of the chain, and so the verb is pronounced *in situ*. This contrasts with French in that T and AgrS in this language contain strong V-features. The strong features must be checked by the presence of the phonological representation, otherwise the features are uninterpretable at PF. Thus the phonological features cannot be left in base position; they must be moved along with the syntactic features. If this were not the case, then the chain formed would not observe the Greed principle, as the strong features need the phonological material in order to be checked.

2.2.4.3 The Consequences for the MPLT

In sum, Groat and O'Neil explain that in their theory, a principle of local economy and the principle of Greed can effect the same phenomena as Procrastinate; there is no need to invoke a transderivational comparison process. As a further consequence, they explain that the notions of the Strong Cycle rids the grammar of the asymmetries explained earlier. By barring countercyclic substitution, and in particular, by disallowing it after Spell-out, the Extension Requirement is no longer needed. As well, because no processes occur after Spell-out in their proposal, the problem with the inaccessibility of the lexicon after Spell-out is eliminated. As for the asymmetry associated with Procrastinate, which works across computational systems to compare identical operations, and where cost is determined through overt versus covert movement, Groat and O'Neil propose that operations in their view are now identical. Cost is not a phenomenon defined by derivational occurrence, instead, cost is associated with the checking of strong features which require movement of phonological form, versus weak features which do not require such movement. These feature checking operations are not identical where they contrast in the requirement of phonological movement, and the cost is assessed by the number of features involved in a movement operation within a single derivation.

2.2.5 A Possible Application of Groat and O'Neil's Model to Icelandic Object Shift

Shaping an account for object shift phenomena in Icelandic, Groat and O'Neil (1996) make some proposals based on their model. They posit that what appears to be object shift to [Spec, AgrOP] in Icelandic is actually base generation of the object in this position. They present the sentences in (6a-d), taken from Holmberg (1986).

(6) a. Jón keypti ekki [$_{VP}$ t_V **bókina**]

John bought not book-the

'John didn't buy the book'

b. Jón keypti [$_{AgrOP}$ **bókina** ekki [$_{VP}$ t_V]]

John bought book-the not

'John didn't buy the book'

c. Jón hefur ekki [$_{VP}$ keypt **bókina**]

John has not bought book-the

'John has not bought the book'

d. *Jón hefur [$_{AgrOP}$ **bókina** ekki [$_{VP}$ keypt]]

John has book -the not bought

'John has not bought the book'

They state, after Holmberg (1986), that negation is assumed to be adjoined to the VP. They propose that in (6a), the inflectional features of the verb are checked by raising to T/AgrS with the object *bókina* 'the book' staying behind in the position where it was base generated. In (6b), the [Spec, AgrOP] case-position is the assumed position of the object

bókina 'the book', thus it precedes negation. Groat and O'Neil maintain that in their model, the objects in both of the sentences above must have shifted to [Spec, AgrOP]. In their view, all movement arises prior to Spell-out, given that the object is visibly in this position in (6b), but not so in (6a). In the examples, it appears that the N-features in AgrOP are strong in (6b), resulting in the copying and movement of the phonological material, and weak in (6a), as no phonological material appears in that position. Groat and O'Neil note that from these data, it would be possible to conclude that there are two versions of AgrO in Icelandic: one with weak N-features, the other with strong N-features. But they state that such an assumption would prove problematic, as it could not account for the phenomena witnessed in (6c-d). In these examples, an auxiliary verb is in T/AgrS position. The Greed principle accounts for the main verb *keypt* 'bought' remaining *in situ*, as it has no inflectional features to be checked. The problem is that the object is barred from appearing in [Spec, AgrO] position when the auxiliary is present, as seen in (6d), and the authors question how an AgrO with strong N-features is excluded from a construction like this.

To explain the apparent contradiction given above, Groat and O'Neil (1996) propose that AgrO in Icelandic has only weak N-features. To explain why the object appears in [Spec, AgrOP] position in (6b), where it should not appear given that the N-features of AgrO are weak, they first consider the structure of the chain which arises when the verb moves to $AgrO^0$ and T^0. They start by considering the derivation for (6a). Their sentences in (7a-c) serve to illustrate.

(7) a. $[_{AgrO'}\ [_{AgrO^0}$ keypti AgrO^0] ekki $[_{VP}$ Jón **keypti** bókina]]

b. $[_{AgrOP}$ **bókina** $[_{AgrO^0}$ keypti AgrO^0] ekki $[_{VP}$ Jón keypti **bókina**]]

c. $[_{T'}$ **T^0** $[_{AgrOP}$ bókina $[_{AgrO^0}$ keypti AgrO^0] ekki $[_{VP}$ Jón keypti bókina]]

i) The derivation starts with the verb raising to AgrO^0, reflected in (7a). Assuming that AgrO^0 has weak features, no phonological material is moved (the underlined elements denote the positions of the phonological material).

ii) As shown in (7b), in a move occurring before AgrO^0 becomes dominated by extra structure, the object assumes [Spec, AgrOP] position under the Strong Cycle. But it is the tail of the case-chain which retains the phonological material (and thus is later pronounced) because AgrO^0 contains weak N-features.

iii) (7c) shows that T' is then projected from T^0 (having been drawn from the lexicon), and through GT, AgrOP takes up the complement position therein.

iv) Because T has strong V-feature (after Jonas and Bobaljik (1993)), when the verb adjoins to T^0 to have its tense features checked, its phonological material is also moved from the verb's base position in the VP. This is accomplished through the formation of a V^0-chain to T^0 (rather than an AgrO^0-chain to T^0). Groat and O'Neil consider this point to be extremely important, because a V-chain is created from the verb's base position to T^0, as the [Spec,AgrOP] position is now within the chain's Internal

Domain. Internal Domain is defined in the MPLT, and according to the authors it is proposed therein that a verb's internal arguments are assigned their theta-roles at LF within this domain. With this in mind, they suggest that the direct object is base generated in [Spec, AgrOP] after the verb shifts to T^0. The object is still contained within the Internal Domain in this position, and so could obtain its internal theta-role at LF. This they show with the structure in (8) representing the sentence in (6b).

(8)

Jón...[$_{T'}$ [$_{T^0}$ keypti T^0 [$_{AgrOP}$ **bókina** [$_{AgrO'}$ keypti AgrO^0] ekki [$_{VP}$ Jón keypti]]]

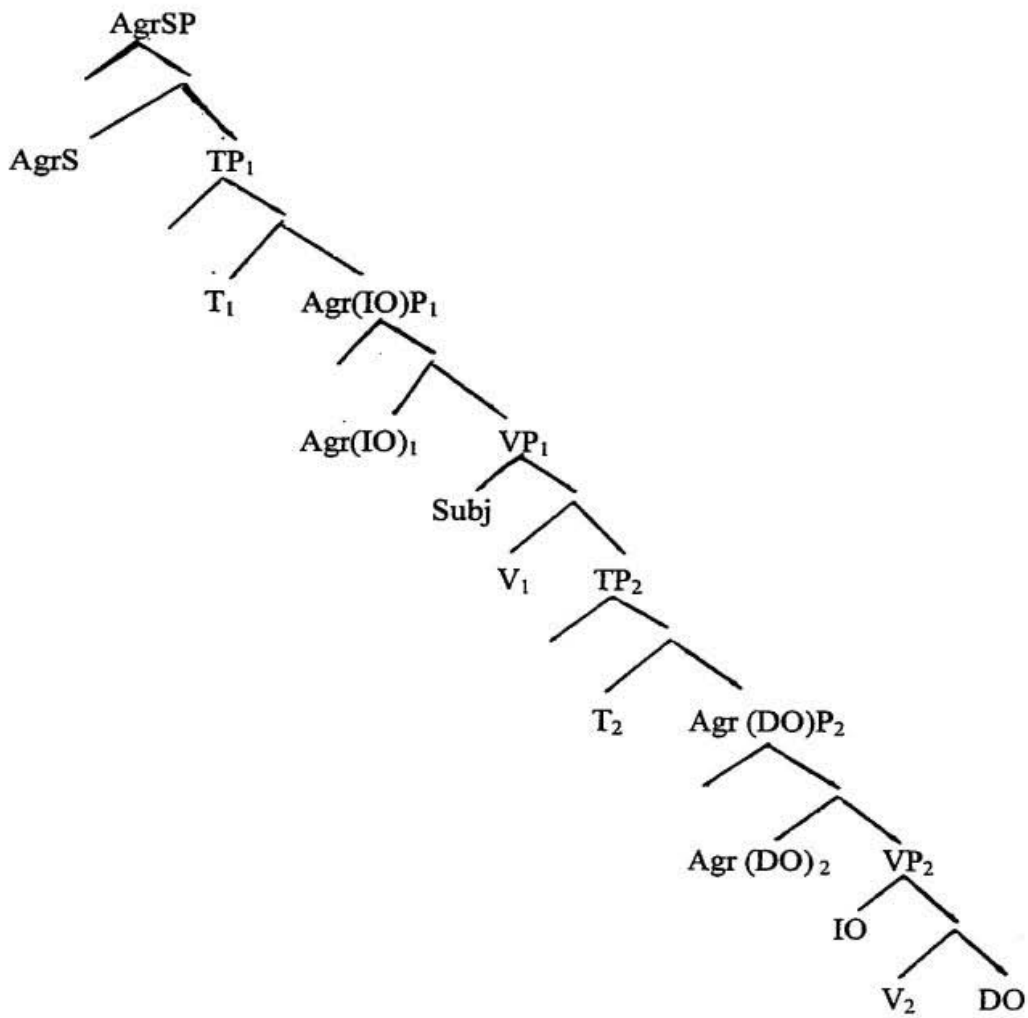
Groat and O'Neil state that in this example, binary GT base generates the object in [Spec, AgrOP] position, and thus it can have its Case and Agr features checked, and its internal theta-role can be assigned at LF through the V-chain. No shifting at all is involved to get the object into [Spec, AgrOP]. Instead, it is the result of an option to base generate the object in this position.

Given the above analysis, Groat and O'Neil explain the phenomena displayed in (6c-d). The [Spec, AgrOP] position does not exist within the Internal Domain of the verb, as the verb has no inflectional features to be checked, and so no V-chain is formed from the verb's base position to T^0. Therefore, the option to base generate the object in [Spec, AgrOP] does not apply, because it would not be in a theta-position by LF. Thus the object must be base generated in complement position to the verb. From there it raises to [Spec, AgrOP] to have its N-features checked, and because AgrO has weak N-features, no phonological material will be copied and transferred there.

2.2.6 Problems with Application to Double Object Shift

In terms of double object shift, a process like the following could apply under Groat and O'Neil's model (they do not delve into double object shift, and so do not present any structural requirements thereof, so I must use those from elsewhere). Consider the structure below (after Collins and Thráinsson (1996)).

(9)



Consider the movement of the verb throughout the derivation (from Collins and Thráinsson (1996)): V_2 to embedded Agr_2 producing the chain ($[V_2\ Agr_2]$, t_{V2}); complex

Agr_2 to embedded T_2; complex T_2 to V_1; complex V_1 to Agr_1 producing the chain ([V_1 Agr_1], t_{V1}); and finally complex Agr_1 to T_1. When the verb joins with T_2, [Spec, $AgrP_2$] is within the internal domain of the chain ([V_2 T_2], t_{V2}) and can be considered a theta-position. This may portend the base generation of one of the objects in this position, but which one would it be? If no other object is base generated within VP_2, it would have to be the DO, as the IO would have to appear higher up in the tree (in [Spec, $AgrP_1$] presumably). As the verb moves throughout the derivation, and the complex V_1 joins to Agr_1, then T_1, the position [Spec, $AgrP_1$] is within the internal domain of the chain ([V_1 T_1], t_{V1}), and the IO could be base generated in [Spec, $AgrP_1$].

Another problem has to do with the ordering of theta-role assignment. In Groat and O'Neil's model, the direct object must receive its theta-role at some time before the IO does. In this way the DO would not appear at a higher position in the structure. This is only if the positions of the IO and DO are not determined structurally (as in a structure like Collins and Thráinsson's in section 2.3.3).

Other questions arise for Groat and O'Neil (1996). In their analysis of single object shift, why would the verb 'hesitate' in assigning a theta-role to a DO until after it moved to T. What would be the motivation behind such a pause, and why would the verb move at all before assigning its theta-role? What is the link between movement and the timing of theta-role assignment? If the verb could do this in their analysis of single object shift (i.e. hesitate), then why could it not do the same for assigning a theta-role to the IO in double object shift constructions?

This problem would relate to Groat and O'Neil's use of internal domain in having the V-chain assign theta roles to the objects. In my analysis of double object shift within a Groat and O'Neil model, I have the verb assigning a theta-role to the [Spec, AgrP] when it reaches each T position just above the relevant AgrP node. This is so that each object is assigned to its 'proper' position, in accordance with some mechanism that orders the theta-role assignment. My question is, when the verb reaches the matrix T_1 position, is there a V-chain ($[V_2\ T_1]$, t_{V2}) formed? If this is the case, then [Spec, $AgrP_1$] and [Spec, $AgrP_2$] are still within the internal domain of the V-chain. Thus it is plausible, that the theta-roles could be assigned at this point in the derivation. This raises a problem: if the verb could continue to 'hesitate' and not assign theta-roles until it is in T_1, then what is it that would determine which position the objects appeared in? I would postulate that the DO (being assigned the first theta-role) could be base generated in any available position within that domain, either [Spec, $AgrP_1$], [Spec, $AgrP_2$], [Spec, VP_2], or as complement to VP_2. As well, I would assume that the IO (next in line for a theta-role) could then be base generated in any other position not filled by the DO. This would result in much more word order variation than is visible given the facts.

With the above in mind, there must be another mechanism inherent in Groat and O'Neil's model which, during the derivation, determines the appropriate positions the verb must be in when it assigns the theta roles in the correct order. The process might follow a progression such as follows: if the position is T_2, then assign Patient to [Spec, $AgrP_2$]. But even this raises a problem, as when the V_2 is in T_2, wouldn't [Spec, VP_2] and the complement position to V_2 still be in the internal domain of the chain ($[V_2\ T_2]$, t_{V2})? If

this is the case, then there needs to be another stipulation to keep the DO from being base generated in these positions when the V_2 is at T_2. The same also applies for the base generation of the IO, as when V_2 reaches T_2, both [Spec, $AgrP_1$] and [Spec, VP_2] are within the internal domain of the V-chain ([V_2 T_1], t_{V2}), and so either of these positions could receive a theta role.

The main essence of the problem is that as the verb moves during the derivation, more and more positions become possible theta positions. Thus some special constraints must be applied to specify at what points in the derivation the theta roles are assigned and where they are to be assigned to. These constraints would exist in conjunction with the stipulation of a set order in which the theta roles are assigned.

2.3 Collins and Thráinsson's Analysis of the Icelandic Double Object Construction

Collins and Thráinsson (1996) propose that ditransitive constructions allowing double object shift and prepositional ditransitive constructions are causative constructions underlyingly, and have a causative light verb with embedded TP and Agr_2P projections.

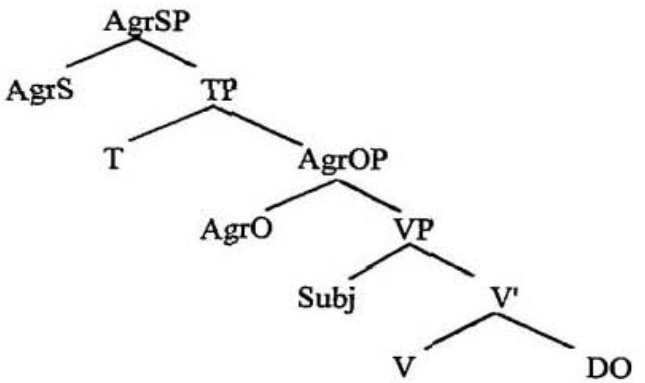
2.3.1 General Overview

Collins and Thráinsson (1996) state that they consider object shift in Icelandic to be a process by which Case on an object is checked through A-movement to the specifier position of an AgrOP projection. They point out that this analysis agrees with the work of Jonas and Bobaljik (1993), Bures (1992a), and Thráinsson (1993). Collins and Thráinsson hypothesize that VP-internal projections of the functional categories Agr and

T are necessary to keep within the Minimalist view of Chomsky's (1993) locality theory. They conceive of these projections by proposing that ditransitive verbs in Icelandic are underlyingly causative constructions, where a TP complement is embedded within a causative verb. As well, they maintain that their analysis including VP-internal functional projections can be employed to explain the word order variations exhibited by particle constructions in Icelandic.

Collins and Thráinsson present their view of the basic structure underlying the single object construction in Icelandic shown below in (10), and sentences to illustrate in (11a-b).

(10)



(11) a. Jón las bækurnar ekki

Jon read books-the not

'John did not read the books.'

b. Jón las ekki bækurnar

John read not books-the

(Collins and Thráinsson consider the negator *ekki* 'not' to be adjoined to the VP, as they point out that this is generally accepted for Germanic, following Vikner (1994:140) and

Jonas and Bobaljik (1993)). They present the derivation required for single object shift displayed in (11a) as follows: the verb raises to the AgrO and adjoins there; AgrO raises to T, which raises to AgrS. The object NP *bækurnar* 'the books' moves to [Spec, AgrOP] to get its structural ACC case checked; and the subject moves to [Spec, TP] and then to [Spec, AgrS]. In (11b) the object has not undergone any overt movement, as it remains *in situ*, but at LF it raises to [Spec, AgrOP] to check its Case.

2.3.2 Verb Movement Precedes Object Shift

Collins and Thráinsson cite Holmberg (1985:184, 1986:175) in stating that verb movement is a prerequisite for object shift in Icelandic (where this phenomenon in Icelandic also falls under the more general observation known as Holmberg's Generalization). The verb must raise, otherwise object shift cannot occur. Adapting Holmberg's proposals to their own framework, Collins and Thráinsson present (12) as this observation governing object shift, and the sentences in (13a-c) to illustrate

(12) Move an object NP leftwards within the X' projection of its governing verb, when this verb is phonetically empty.

(13) a. $Jón_i$ las_j $bækurnar_k$ $[_{VP}$ (ekki) $[_{VP}$ t_i $[_{V'}$ t_j t_k]]]

John read books-the (not)

'Jon did not read the books.'

b. *$Jón_i$ hefur $bækurnar_k$ $[_{VP}$ (ekki) $[_{VP}$ t_i $[_{V'}$ lesið t_k]]]

John has books-the (not) read

c. Jón hefur (ekki) lesið bækurnar

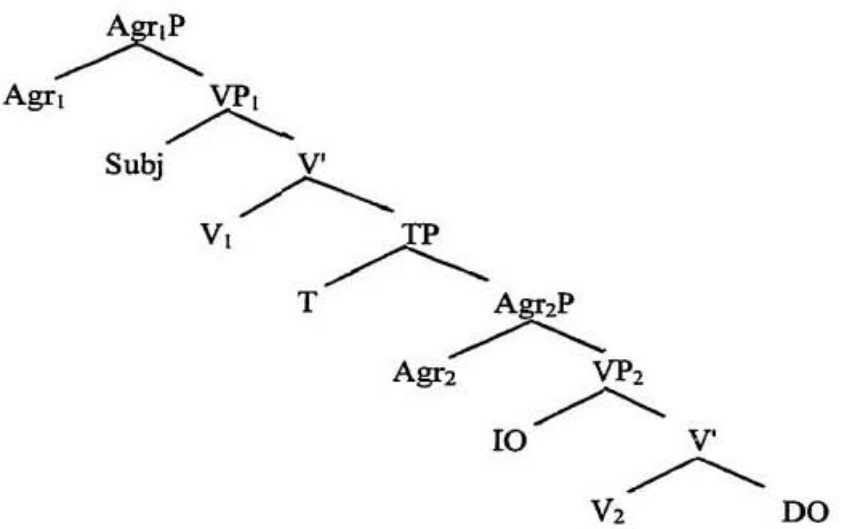
John has (not) read books-the

In (13a) verb movement has taken place, and the object can undergo shift. In (13b) there is an auxiliary verb present occupying the position T, to which the lexical verb can no longer raise; the result is an ungrammatical sentence if the object is shifted when no verb movement has occurred. A grammatical sentence results when the object remains *in situ* (i.e. has not undergone shift), as in (13c).

2.3.3 Case Checking Positions and Underlying Structure

Collins and Thráinsson (1996) maintain that all arguments in Icelandic get their Case checked in [Spec, AgrP] positions. If there are two internal arguments present, then there must be two [Spec, AgrP] positions to check the Case of each argument. They present the structure in (14) (after Bures (1992b)) as underlying many of the word order phenomena in Icelandic double object constructions (as well as particle placement).

(14)



They propose that the double object construction in Icelandic is a two-verb construction, where V_1 selects a TP, within which is a VP with the head V_2. In addition, a causative verb heads VP_1 (see section 2.3.6).

2.3.4 Double Object Shift

Collins and Thráinsson discuss the various word order phenomena which are observable in Icelandic double object shift. These include shifting of the IO, of the IO and the DO, the inability of an object to shift across a verb, and the inability of the DO to shift across the IO.

i) On the first point that the IO alone can overtly shift while the DO remains *in situ*, Collins and Thráinsson use (15a-b) as examples.

(15) a. Ég lána Maríu [$_{VP1}$ ekki [$_{VP1}$ bækurnar/bækur]]

I lend Maria(DAT) not books-the/books(ACC)

'I do not lend Maria the books/ books.'

b. Ég kenndi Jóni [$_{VP1}$ alveg [$_{VP1}$ kvæði]]

I teach John(DAT) completely poem-the(ACC)

'I taught Jon the poem completely.'

They consider negation and manner adverbs (respectively, *ekki* 'not' in sentence (15a) and *alveg* 'completely' in (15b)) to be adjoined to VP_1, and in sentences (15a) and (15b) the IOs *Maríu* 'Maria' *Jóni* 'Jon' and precede them both. Taking account of this data,

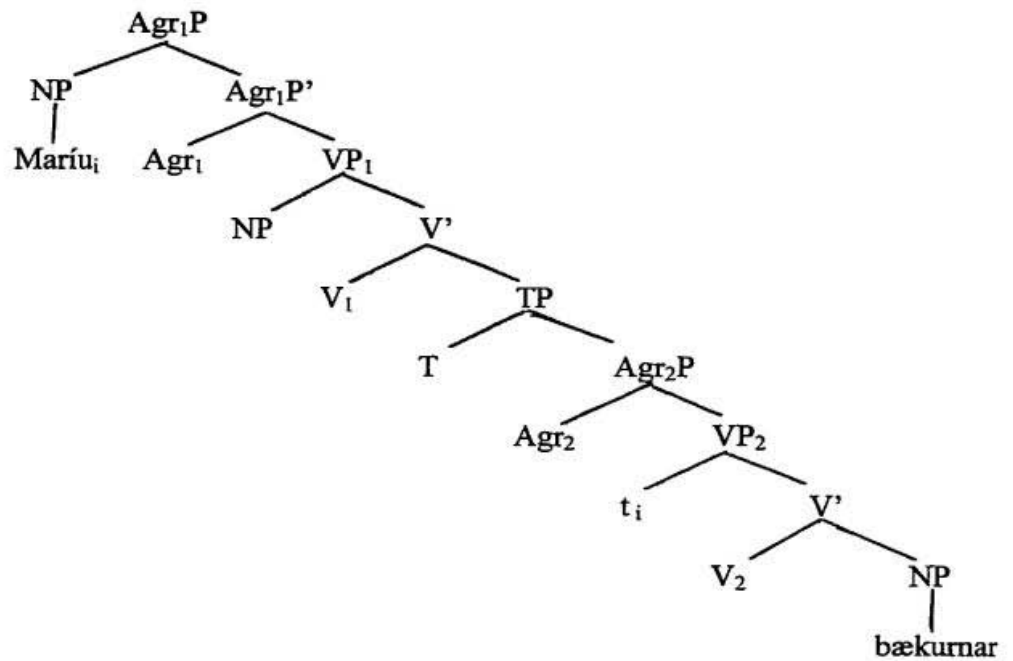
Collins and Thráinsson suggest that the IO has shifted to [Spec, Agr_1] at some point before SS.

Collins and Thráinsson propose that the word order phenomena displayed in (15a-b) can be explained using their proposed structure given in (10). They give the derivation as follows:

> First, the verb V_2 moves and adjoins to the embedded Agr_2, forming the chain ([V_2 Agr_2], t_{V2}). Then the complex Agr_2 moves to the embedded T, T adjoins to V_1, and V_1 adjoins to the matrix Agr_1. This last movement forms the chain ([V_1 Agr_1], t_{V1}). Since [Spec, VP_1] and [Spec, Agr_1] are in the minimal domain of the same chain, they are equidistant from [Spec, VP_2]. Therefore, it is possible for the indirect object to shift over the subject in [Spec, VP_1] into [Spec, Agr_1].
>
> Second, Agr1 moves to T, rendering [Spec, Agr_1] and [Spec, TP] equidistant from [Spec, VP_1]. Therefore, the subject can move to [Spec, TP] (and onto [Spec, AgrS]. Finally, at LF the direct object will move to [Spec, Agr_2], crossing over [Spec, VP_2]. This is made possible by the chain ([V_2 Agr_2], t_{V2}), which renders [Spec VP_2] and [Spec, Agr_2] equidistant (from any other position). (Collins and Thráinsson 1996: 404-405)

They present the structure in (16) to illustrate the object positions for example (15a) before SS.

(16)



Collins and Thráinsson (1996) note again that movement of the verb to the matrix T position is a prerequisite to object shift in double object shift as well.

(17) a. Ég hef [$_{VP1}$ ekki [$_{VP1}$ lánað Maríu bækurnar]]

I have not lent Maria(DAT) books-the(ACC)

['I have not lent Maria the books.']

b. *Ég hef Maríu [$_{VP1}$ ekki [$_{VP1}$ lánað bækurnar]]

I have Maria(DAT) not lent books-the(ACC)

They give the examples in (17a-b) to show that the auxiliary verb *hef* 'have' occupies the matrix T position, so lexical verb *lánað* 'lent' cannot raise up to this position, and hence the placement of the lexical verb to the right of negation as in (17a-b) above. The sentence in (17a) is grammatical with the IO left *in situ* behind the unraised lexical verb. They account for the ungrammaticality of the sentence in (17b) by proposing that the

before SS, the lexical verb raises from V_2 to V_1, with intermediate steps at Agr_2 and T. They state that because of the position the lexical verb now holds, the indirect object positioned at [Spec, VP_2] is not equidistant from [Spec, VP_1] and [Spec, Agr_1], thus it cannot shift to [Spec, Agr_1].

ii) Collins and Thráinsson's second point is that the IO and DO can both undergo shift. To show that this occurs, they again use evidence from the distribution of the negator *ekki* 'not'.

(18) a. ?Ég lána Maríu bækurnar ekki
I lend Maria books-the not
'I do not lend Maria the books.'

b. ?Ég lána Maríu bækurnar ekki
I lend Maria books-the not

c. ?Ég lána Maríu bækurnar ekki
I lend Maria books-the not

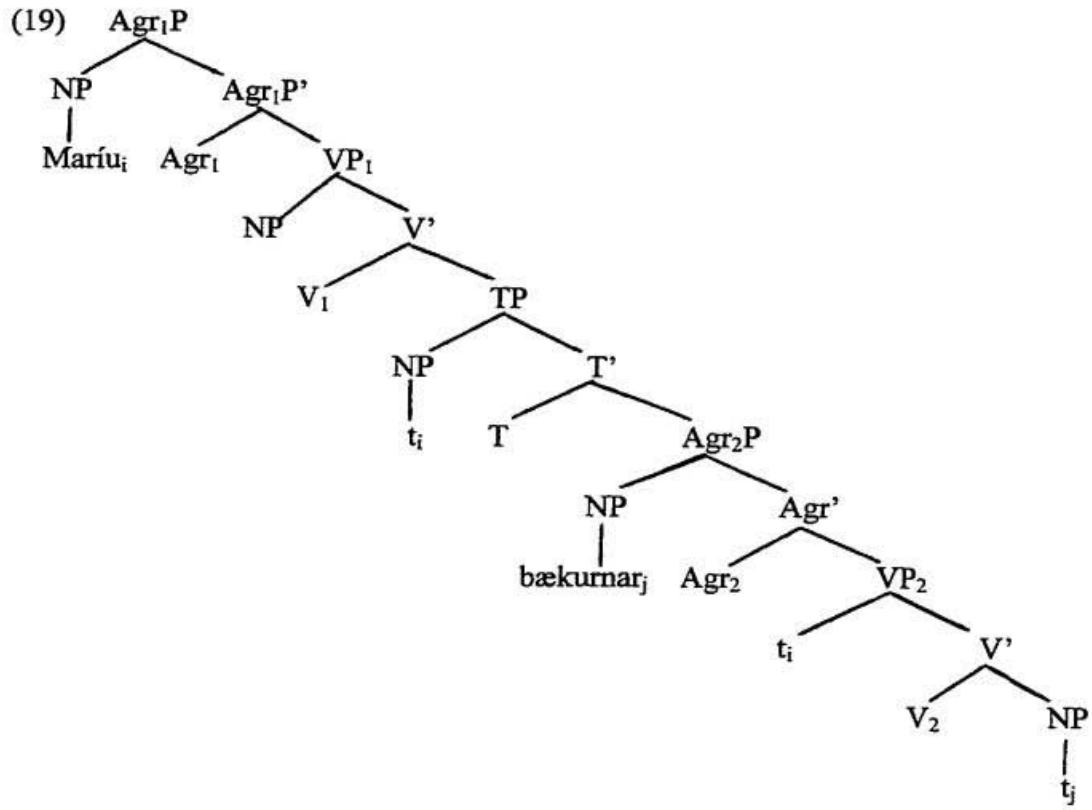
(Words that are underlined indicate that they are stressed; the authors maintain that the results in (18a-c) are more acceptable than if the object NPs are stressed, as stressing either of the objects degrades the sentence further). Collins and Thráinsson state that both objects have undergone shift, as indicated by the fact that they both the IO and DO precede the negator with acceptable results. (Compare this with the sentence in (17b) where no shift can occur).

Collins and Thráinsson explain how the IO and DO both undergo shift in (18a-c) with respect to their structure. They present the following derivation:

> First, the verb adjoins to Agr_2. The chain thus formed renders [Spec, VP_2] (the base position of the indirect object) and [Spec, Agr_2] equidistant from the complement of V_2. The object then moves into [Spec, Agr_2], skipping [Spec, VP_2].
>
> Second, Agr_2 adjoins to the embedded T, rendering [Spec, Agr_2] and [Spec, TP] equidistant from [Spec, VP_2]. The indirect object then moves to [Spec, TP], skipping [Spec, Agr_2].
>
> Third, the embedded T adjoins to V_1, and the complex V_1 adjoins to Agr_1. This renders [Spec, V_1] and [Spec, Agr_1] equidistant from the embedded [Spec, TP]. The indirect object then moves from the embedded [Spec, TP] to [Spec, Agr_1].
>
> Fourth, Agr_1 adjoins to the matrix T, rendering [Spec, Agr_1] and [Spec, TP] equidistant from [Spec, VP_1] (the base position of the subject). The subject then raises from [Spec, VP_1] to the matrix [Spec TP], skipping [Spec, Agr_1]. (Collins and Thráinsson 1996:407)

The structural representation of the object NP placement before SS is shown in (19) below.

(19)



Collins and Thráinsson note that their analysis carries a prediction, that an IO should be able to shift over an adverb in a position adjoined to VP_1, and the DO should be able to do the same with an adverb adjoined to VP_2. They present the data in (20a-b) to corroborate this.

(20) a. *Hann hefur lánað Maríu þessa bók aldrei

He has lent Maria this book never

'He probably never lends this book to Maria.'

b. ?Hann lánar Maríu líklega þessa bók aldrei

He lends Maria probably this book never

The ungrammaticality of (20a) shows that *aldrei* 'never' cannot appear VP-finally. Since the presence of the auxiliary verb bars movement of the lexical verb, and so no object shift has occurred (objects being unable to shift over the verb), then the position of the adverb must be VP-final. According to Collins and Thráinsson, the sentence final positioning of the adverb *aldrei* 'never' in (20b) is due to the objects shifting over it. The implication is that *aldrei* is adjoined to VP_2, and the DO has shifted over it to [Spec, Agr_2]; as well, the adverb *líklega* 'probably' is adjoined to VP_1, and the IO has shifted over it to [Spec, Agr_1].

With the IO and the DO shifting overtly to [Spec, Agr_1] and [Spec, Agr_2] positions respectively, Collins and Thráinsson describe why, when both objects have shifted, there is no instance where a DO can come to precede an IO by shifting into the IO position [Spec, Agr_1].

(21) *Ég lána bækurnar Maríu ekki

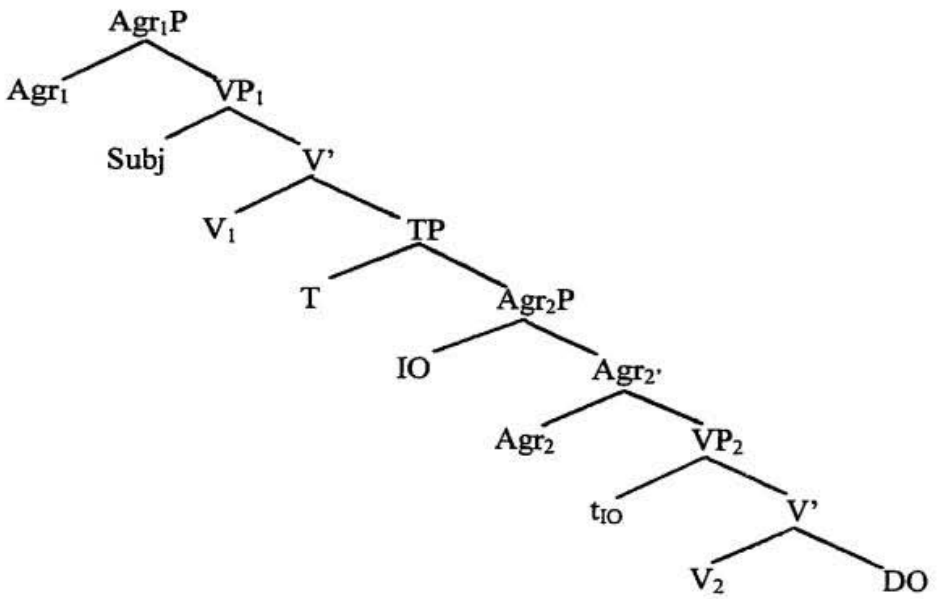
I lend books-the Maria not

'I do not lend Maria the books.'

For the sentence given in (21), they state that it makes no difference whether the stress falls on *Ég* 'I', *lána* 'lend', or *ekki* 'not', as the sentence will be ungrammatical. Referencing their proposed structural analysis given in (22), they posit that the DO would have to shift to [Spec, TP] position of the embedded TP after the IO has shifted to [Spec, Agr_2]. Such a move would be barred by Relativized Minimality because [Spec, VP_2] and [Spec, Agr_2P] are closer available landing sites. As well, they state that none of the three positions [Spec, VP_2], [Spec, Agr_2], or [Spec, TP] are in the minimal domain of any one

head chain; the first one is in the minimal domain of the head chain ([V_2 Agr_2], t_{V2}), and the and latter two in ([Agr_2 T], t_{Agr2}). With this arrangement, they hold that the Equidistance principle from Chomsky (1993) is non-applicable.

(22)



iii) Collins and Thráinsson (1996) investigate data where it appears that both the IO and the DO remain *in situ*. In sentences (23a-b), neither the IO nor the DO precede the negation; they take this to indicate that both objects have not undergone any overt object shift.

(23) a. Ég lána ekki Maríu bækurnar

I lend not Maria books-the

'I do not lend Maria the books.'

b. Ég kenndi ekki nemendunum kvæði

I taught not students-the poem-the

'I did not teach the students the poem.'

They state that the derivation for the sentences above is the same one which occurs when both objects shift overtly, taking up their [Spec, Agr] positions before the derivation reaches surface structure. The difference in the case, where the objects remain *in situ* at SS, is that the movement occurs covertly at LF.

iv) Finally, Collins and Thráinsson explain that the DO cannot shift across an *in situ* IO. They point out that a DO cannot move overtly to [Spec, Agr_1] across an *in situ* IO at [Spec, VP_2]. They also note that this order DO-IO is apparent, but it is the result of inversion of the objects, which is a property of Icelandic in some instances. To exemplify that the DO cannot shift over the IO, Collins and Thráinsson use a verb which does not allow inversion in the examples (24a-b).

(24) a. Ég skilaði manninum ekki bókinni

IO DO

I returned man-the(DAT) not book-the(DAT)

'I did not return the book to the man.'

b. *Ég skilaði bókinni ekki manninum

DO IO

I returned book-the(DAT) not man-the(DAT)

(Note that both of the objects are in the dative case; it is the nature of this verb to assign case to the objects in this manner, as well as having other properties including not

allowing inversion of the IO and DO. (See section 1.3 for Holmberg and Platzack's (1995) discussion of different verb groups in Icelandic, and the properties associated with them). The authors conclude that because of the contrast between (24a), where only the IO has overtly shifted, and (24b), where the DO has overtly shifted with bad results, the DO cannot shift past the IO remaining *in situ*. Thus Collins and Thráinsson propose that the DO can only shift over the IO if the IO itself undergoes object shift. They posit that for the DO to shift over the *in situ* IO (as in (24b)), the Spec features for Agr_1 must be strong, and those for Agr_2 weak. They maintain that this type of arrangement is not possible on morphological grounds.

2.3.5 Specifications for Agr_1 and Agr_2

To account for the inability of the DO to precede the IO, Collins and Thráinsson (1996) postulate that there is a constraint present on the specifications of strength of Agr_1 and Agr_2 (with its basis in the *I-II Constraint* of Bonet (1990:182, 1994)).

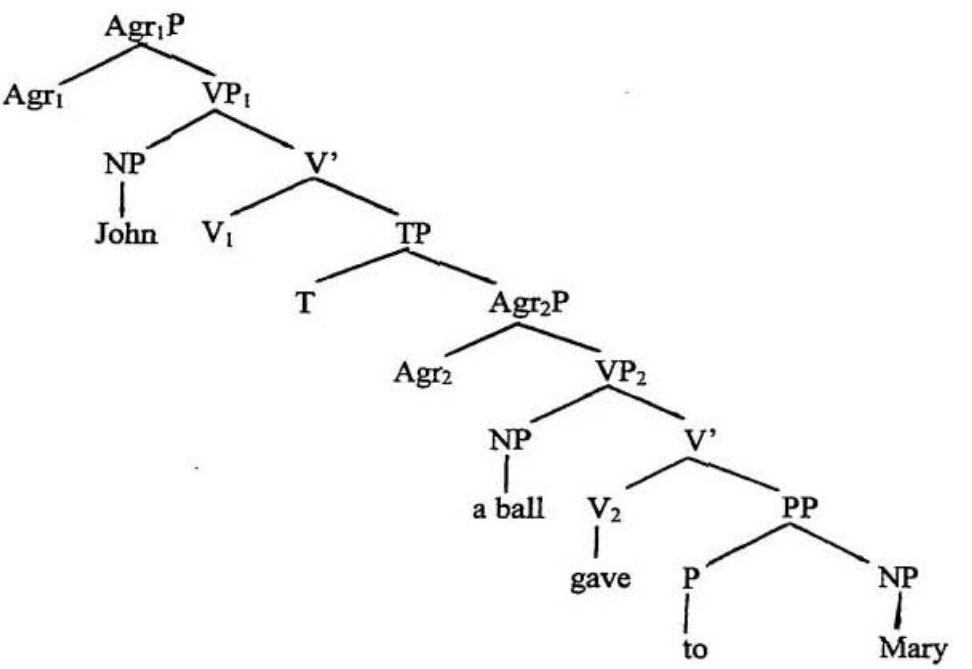
(25) The I-II Constraint (revised)
the person and strength features for Agr_1 at spell-out must be at least as specified as those for Agr_2.(Collins and Thráinsson 1996:423)

With this in mind, (24b) is not acceptable because if Agr_1 is strong and Agr_2 is weak, the constraint is violated. As well, this constraint serves to explain all the other word order phenomena. When Agr_2 and Agr_1 are both weak, then the IO and DO are *in situ*; when Agr_2 is strong and Agr_1 is weak, then only the IO shifts; when Agr_2 and Agr_1 are both strong, then the IO and the DO shift.

2.3.6 VP-Internal Structure and Prepositional Ditransitives

Having theorized that the TP and AgrP functional categories are internal to the VP in order to describe the facts apparent in double object shift in Icelandic, Collins and Thráinsson speculate as to whether they are present in prepositional ditransitive constructions. In a sentence like *John gave a ball to Mary*, they propose that the structure appears as in (26).

(26)

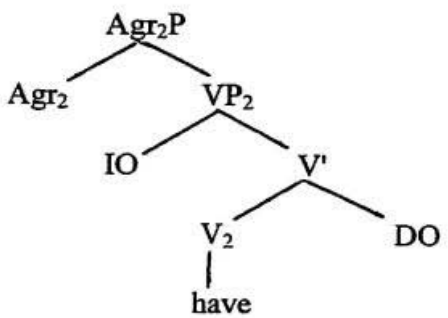


They suggest that the Case of the DO is checked in [Spec, Agr_1], and that the functional categories TP and Agr_2P exist VP-internally as well in these instances.

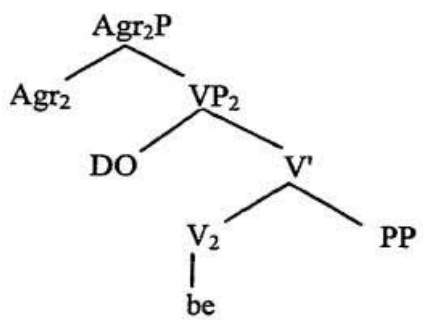
Collins and Thráinsson thus expand their analysis involving VP-internal functional projections, proposing that the same structure underlying the double object construction is also present in prepositional ditransitive constructions in Icelandic. Their hypothesis is that even these constructions contain VP-internal TP and Agr_2P projections.

Looking at the double object construction again, Collins and Thráinsson consider the characteristics of a verb like *give* which takes two internal arguments. They propose that it can be decomposed into *have/be* in the lowest VP_2, with the corresponding structures given in (27a-b), in conjunction with a causative verb at V_1. Thus a verb like *give* is the result of the combination CAUSE+*have/be*.

(27) a.



b.



According to the authors, the structure in (27a) contains the verb *have* underlyingly, and represents the manifestation of a double object construction. The structure in (27b) contains the verb *be* underlyingly, and represents the manifestation of a prepositional ditransitive. The form *give* arises as a result of the pre-Spell-out incorporation of *have/be* into the causative verb V_1.

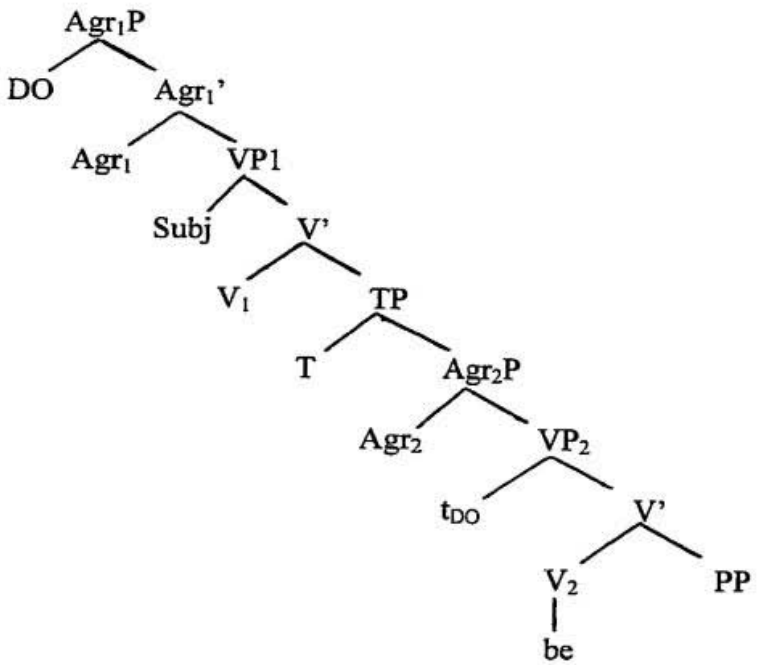
(28) a. Jón hefur köttinn

Jon has cat-the(ACC)

b. köttinn er *(hjá) Jón

cat-the is *(with) Jon

(29)



Collins and Thráinsson consider the sentences in (28a-b) in terms of their proposal. They state that the matrix clause in (28a) shows that *have* checks Case in [Spec, Agr2], whereas *be* in (28b) is intransitive and cannot check Case. Thus they posit that in the form of the double object construction, the embedded *have* raises to Agr_2 and the DO can have its Case checked; and CAUSE checks the Case of the IO in [Spec, Agr_1]. But when *be* is the embedded verb, as in a prepositional ditransitive, when it raises to [Spec, Agr_2] the DO cannot have its Case checked in [Spec, Agr_2P] because *be* cannot check Case. Thus the DO must raise to [Spec, Agr_1P] in order to have its Case checked. They present

the structure in (29) to illustrate. Collins and Thráinsson state that their analysis of *give* as CAUSE + *have/be* unifies the view holding that a VP-internal AgrO exists and the view holding a VP-external AgrO exists.

Collins and Thráinsson (1996) expand their analysis by stating that the VP-internal functional projections which they have postulated are applicable to any verb that has an external argument - that there will be an additional VP projection. As well, they propose that the CAUSE + *have/be* analysis can be seen as CAUSE + *give*1 and CAUSE + *give*2, with the case properties of *be* and *have* being identical to *give*1 and *give* 2 respectively. An applicative affix relates *give*2 to *give*1 (after Marantz (1993)). The applicative affix is a verb, and it checks Case in [Spec, Agr_2]; thus it fits into the structure as shown in (30).

(30) $[_{VP1}$ NP V_1 $[_{TP}$ T $[_{Agr2P}$ Agr_2 $[_{VP}$ NP Appl $[_{VP2}$ NP V_2]]]]]

2.3.7 Particle Constructions and VP-Internal Structure

Collins and Thráinsson (1996) propose that their analysis of the Icelandic double object construction also affords an analysis of particle constructions in Icelandic. They hold that object shift to [Spec, Agr_2], where Agr_2 dominates VP_2, can be seen as the process underlying the positions in which particles appear.

Collins and Thráinsson state that when the lexical verb cannot raise to T because of the presence of an auxiliary verb, the particle can appear before or after a direct object NP. Thus in (31a-b) the lexical verb *sent* 'sent' cannot raise due to the presence of the

auxiliary *hafa* 'have'; the particle *upp* 'up' can either follow the DO *peningana* 'the money', as in (31a), or precede it as in (31b).

(31) a. Í gær hafa þeir sent peningana upp

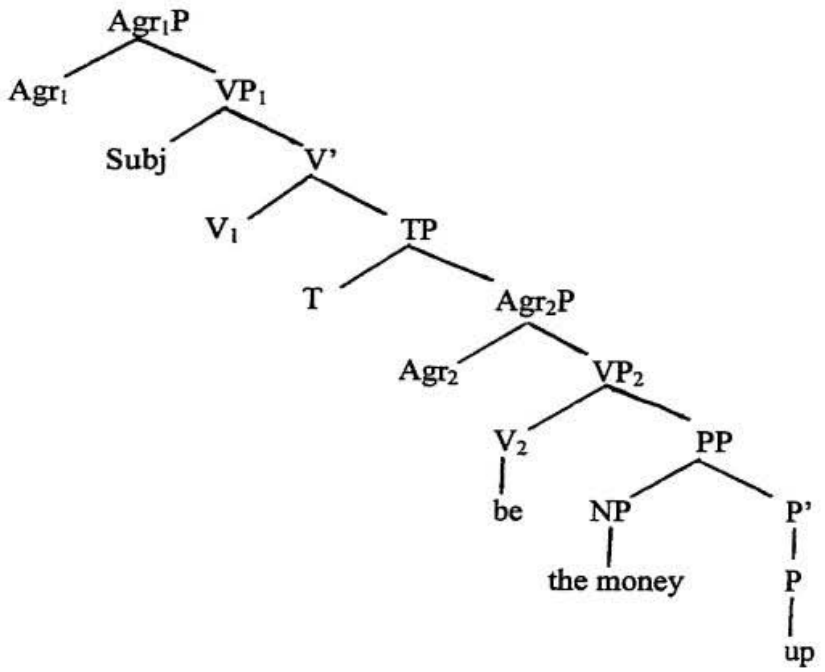
yesterday have they sent money-the up

'Yesterday they have sent the money up.'

b. Í gær hafa þeir sent upp peningana

yesterday have they sent up money-the

(32)



The structure in (32) represents their analysis of the construction. In example (31a) the position of the particle and the direct object corresponds to their base structure positions as shown in (32), where neither has moved. In (31b), the word order is the result of incorporation of the particle into the verb *be* during the derivation. In this way the particle comes to precede the direct object.

In Collins and Thráinsson's view, the reason underlying incorporation of the particle is that it may have the option of being analyzed as affixal. They formulate the derivation, having the covert verb *be* raise to Agr_2, then this complex Agr_2 raises to T; this complex T raises and adjoins to V_1, and this takes the form of *sent* 'sent' at surface structure in examples (31a-b). But Collins and Thráinsson state that only the covert verb raises to Agr_2; the particle adjoins to V_2 with the verb, but the verb excorporates and moves to Agr_2, leaving the particle adjoined to the former position. They show in sentences (33a-b) that the verb has raised up to verb-second position in the sentence, the C position according to the authors, but (33b) indicates that the particle cannot raise up along with the verb past V_2 (the position the particle holds in (33a)).

(33) a. Í gær sendu þeir upp peningana
yesterday sent they up money-the
'Yesterday they sent the money up.'

b. *Í gær sendu upp þeir peningana
yesterday sent up they money-the

Because the particle cannot move with the verb to C, as the above contrast shows Collins and Thráinsson propose a constraint on particles, citing the work of Johnson (1991:602). This is given in (34).

(34) The complex [$_V$ Prt V], where the particle has adjoined to V, cannot adjoin to T or Agr. (Collins and Thráinsson 1996:433)

2.3.8 Sum of Collins and Thráinsson's Analysis

In their analysis of the double object constructions, Collins and Thráinsson (1996) have attempted to describe the underlying structure of double object constructions in Icelandic. They have proposed TP and AgrOP projections internal to the VP, and they have posited reasons for the word order variation that is manifest with the revised I-II constraint. They have related their analysis of double object constructions to prepositional ditransitives, maintaining that their proposals on the former can also explain data involving the prepositional ditransitive constructions, and can account for word order data involving the placement of particles. With a view to lexical decomposition theory, they hold that a CAUSE+*give1*/*give2* construction underlies double object constructions and prepositional ditransitives. Constructions with *give1* can check the case of an IO, thus are double object constructions, while those with *give2* cannot check the case of an IO, and so are prepositional ditransitives.

2.3.9 Problems in Collins and Thráinsson's Analysis

One apparent problem with the analysis of double object shift as laid out by Collins and Thráinsson (1996) is their conception of the revised I-II constraint (Bobaljik (1995:181) also notes this point). This constraint entails an asymmetry in the nature of the Agr nodes, where one has some special status that the other does not. $AgrP_1$ has the option of being strong or weak without condition. $AgrP_2$ can only be weak when $AgrP_1$ is weak, but it can be strong or weak when $AgrP_2$ is strong; thus there are special conditions placed upon it. Why would there be an unconditional option strong/weak for $AgrP_1$, but

not the same for $AgrP_2$, and what is it that gives the former this special status? Therefore, to account for the ordering of the objects in the data, Collins and Thráinsson must invoke a special stipulation, for which they present no other evidence to back up their claim (such as comparative data).

Another problem is the positioning of the negator *ekki* 'not'. Note the following sentences (35a-d) from Collins and Thráinsson (1996), where in (35a) the IO and DO remain *in situ* and the negator is adjoined to a position higher than VP_2; I infer from their model that it is adjoined to VP_1. In (35b) the IO shifts and the DO remains *in situ*, and Collins and Thráinsson (1996) specify that the negator is adjoined to VP_1. In (35c) an auxiliary verb is present and Collins and Thráinsson specify that the negator is adjoined to VP_1. In (35d) the IO and the DO shift, and the negator is adjoined to a position below VP_1 and $AgrP_2$, presumably adjoined to VP_2.

(35) a. Ég lána [$_{VP1}$ ekki [$_{VP2}$ Maríu(IO) bækurnar(DO)]]

I lend not Maria books-the

'I do not lend Maria the books.'

b. Ég lána [$_{AgrP1}$ Maríu(IO) [$_{VP1}$ ekki [$_{VP1}$ bækurnar(DO)]]

I lend Maria not books-the

c. Ég hef [$_{VP1}$ ekki [$_{VP1}$ lánað Maríu(IO) bækurnar(DO)]]

I have not lent Maria books-the

d Ég lána [$_{AgrP1}$ Maríu(IO) [$_{VP1}$ [$_{AgrP2}$ bækurnar(DO) [$_{VP2}$ ekki]]

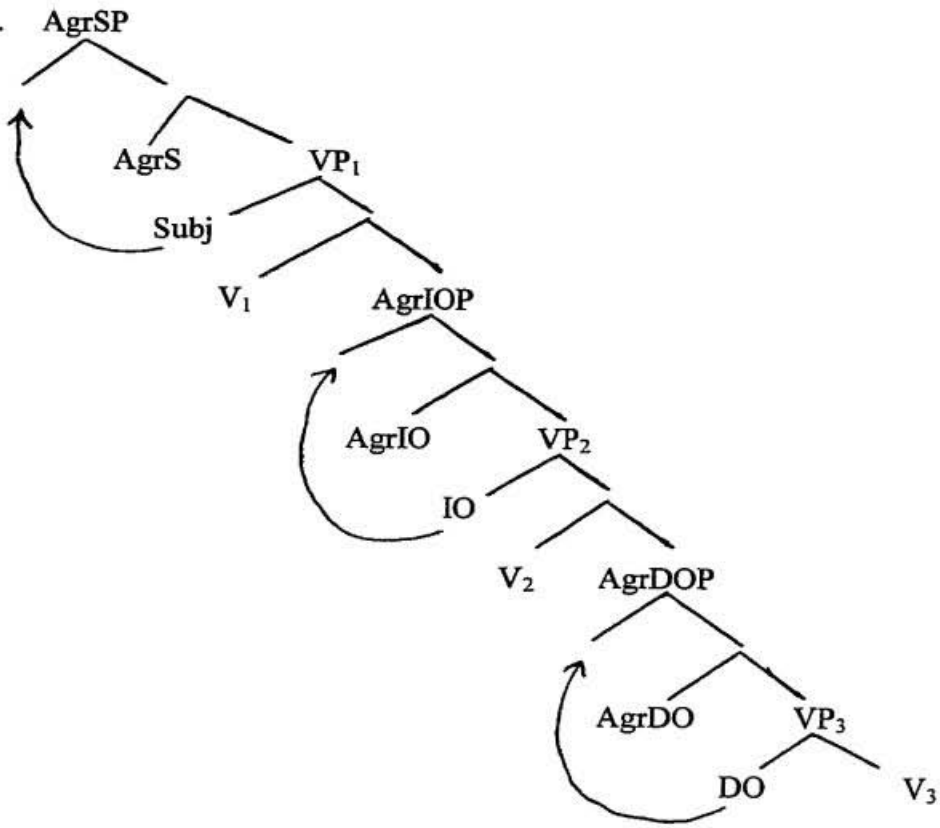
I lend Maria books-the not

The problem revolves around the position of negation in (35d). Collins and Thráinsson (1996) state that the negation appears to be sentential, even though it seems superficially that VP_2 is the element which is negated. They propose that when the negator *ekki* 'not' is generated, it can appear adjoined to VP_1, as with (35a-c), or VP_2, and at LF it may move to a [Spec, NegP] position dominating VP_1 or TP. They develop this further by postulating that "TP-level adverbs (*ekki* 'not', *líklega* 'probably', *eflaust* 'doutlessly') in Icelandic can be adjoined to any XP whose head X is in the checking domain of T before Spell-Out." (Collins and Tháinsson 1996:411). I show in chapter 3 that this can be handled in a less complicated manner, with the negator appearing in only two positions: adjoined to an outer vP, or in a higher [Spec, NegP] position. Both of these positions are above the highest vP, and so the verbal structure comes within the scope of the overt negator regardless of its position. As well, Collins and Thráinsson's analysis includes extra structure which I propose is unnecessary, that being the projection of a VP-internal TP; this is not required in my analysis.

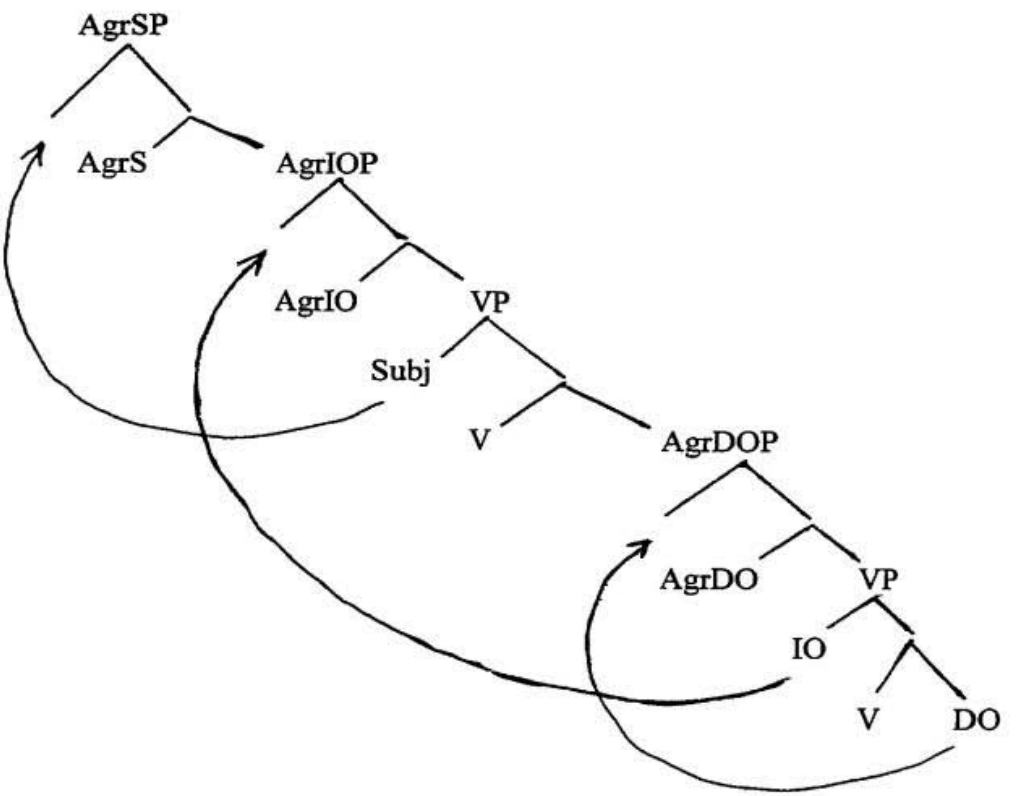
2.4 Bobaljik's Proposal

Bobaljik (1995) contrasts the strengths of a structure based on a stacking hypothesis with one based on leapfrogging, and in this section, I present his observations mainly with respect to the double object construction. He presents the stacking structure in (36a) and the leapfrogging structure in (36b) (citing Bures (1992b), Koizumi (1993), and Collins and Thráinsson (1993) on the latter).

(36) a.


AgrSP
AgrS
VP1
Subj
V1
AgrIOP
AgrIO
VP2
IO
V2
AgrDOP
AgrDO
VP3
DO
V3

b.



2.4.1 Relative Positions of the Subject and Direct Object

Although he states that no solid direct evidence exists, Bobaljik (1995) considers the stacked arrangement in (36a) to be the more legitimate structure based on analysis of word order data. He first investigates the positioning of the subject within the syntax of Icelandic, giving the data from Bobaljik and Jonas (1994) in (37a-c) to illustrate.

(37) a. Það hafa [$_{VP}$ sennilega [$_{VP}$ margir stúdentar lesið bókina]]

there have probably many students read book-the

'Many students have probably read the book.'

b. Það borðuðu margir strákar$_i$ bjúgun$_j$ [$_{VP}$ ekki [$_{VP}$ t_i (öll) t_j]]

there ate many boys sausages-the not (all)

'Many boys didn't eat (all of) the sausages.'

c. *Það borðuðu bjúgun$_j$ [$_{VP}$ ekki [$_{VP}$ margir strákar (öll) t_j]]

there ate sausages-the not many boys (all)

Bobaljik cites Ottósson (1989) as the first to note that subjects in transitive expletive constructions (TEC) in Icelandic follow sentential adverbs, and in which the adverb was taken to be adjoined to the highest VP projection. Thus the subject in a TEC was assumed to be in [Spec, VP] following the adverb. This analysis is shown in (37a), where the indefinite subject *margir stúdentar* 'many boys' follows the sentential adverb *sennilega* 'probably' adjoined to the VP. Bobaljik notes that a prediction can be made under such an analysis, that a DO which has shifted out of the VP should precede the subject still within the VP. The data he presents in (37b-c) indicates that this is not possible, where (37b) shows the DO *bjúgun* 'the sausages' has shifted past the negator *ekki* 'not' adjoined to the VP, but still follows the indefinite subject *margir strákar* 'many boys'. The ungrammatical arrangement in (37c) shows the VP-adjoined negator preceding the subject, indicating that it is VP-internal, but the DO has shifted to a VP-external position. These two examples indicate that the subject of a TEC does not appear in a VP-internal position, thus the subject must raise from its VP-internal position to a derived position outside the VP.

Bobaljik employs data indicating that the lowest position a subject can attain is still higher than the highest position a DO can attain. This points more logically to the

arrangement built into in the stacking structure (as opposed to a leapfrogging structure, where a raised DO crosses over the subject's base position). Consider his examples in (38a-b) from German, where the symbols. "≤, ≥" indicate positions that are mutually exclusive.

(38) a. ...weil ≤Kinder≥ ja doch ≤Kinder≥

since children(GENERIC) indeed children(EXISTENTIAL(or GENERIC))

Äpfel essen

apples eat

Generic -"...since children indeed eat apples."
Existential -"...since there are indeed (some) children eating apples."

b. ...weil Kinder ≤Äpfel≥ sorgfältig

since children apples(GENERIC) carefully

≤Äpfel≥ essen

apples(EXISTENTIAL(or GENERIC)) eat

Generic -"...since children (generally) eat apples carefully."
Existential -"...since some children are eating some apples carefully."
or -"...since children eat some (kinds of) apples carefully."

He notes that his analysis follows Diesing (1990, 1992) on subject positions, and that it extends her findings to object positions as well. The sentences in (38a-b) show respectively that both subject and object can appear in two different positions within the sentence structure, with a different interpretation resulting for each position. Given that the adverb is fixed (the sentential adverbial *ja doch* 'indeed' in the case of the subject in (38a), and the VP-/manner adverb *sorgfältig* 'carefully' in the case of the DO in (38b)),

Bobaljik indicates that an existential interpretation results for a subject or object in their respective lower positions to the right of an adverb. As well, a Generic interpretation results for the higher positions to the left of an adverb. Having indicated that two positions are available to both the subject and the object resulting in different readings for each position, Bobaljik notes Diesing's (1990, 1992) analysis of the structural positions: NPs with existential readings are in a VP-internal position, and NPs with a generic reading have a preference to shift out of the VP. Bobaljik states her assumption that the subject is in base position within the VP when it has an existential interpretation. He posits that it should be possible to extended her analysis to the DO, whereby the existential reading of a DO arises when it is left in its base position within the VP (its lowest position) and a DO shifted out of the VP will receive a generic reading. With respect to the foregoing, Bobaljik proposes that an underlying leapfrogging structure in German should allow for a DO to precede a subject if the subject follows a sentential adverbial showing it to be in its lowest, VP-internal position. As well, the DO would simultaneously acquire a generic interpretation if it were shifted to a higher position outside the VP, a position indicated when a manner adverb follows the shifted DO. His example in (39) indicates that this arrangement does not fully arise.

(39) ...weil ja doch Kinder Äpfel sorgfältig essen
since indeed children apples(GENERIC/*EXISTENTIAL) carefully eat
[translation unavailable]

As the example indicates, the DO *Äpfel* 'apples' has a generic reading associated with the position preceding the manner adverb *sorgfältig* 'carefully', thus it is in a position higher

than its base position; furthermore, it lacks the option of an existential interpretation in this position. But the DO in its highest position has not shifted across the lowest position of the subject *Kinder* 'children' following the adverbial *ja doch* 'indeed'. Thus Bobaljik maintains that the higher position of the DO is lower than the lowest position of the subject.

2.4.2 Positions of the Indirect Object

Having illustrated in Icelandic and German that two positions are available for both the subject and the DO, and that the subject in its lowest position is still higher in the structure than a DO in its highest position (as structurally inherent in a stacked arrangement), Bobaljik (1995) investigates the positioning of the IO in ditransitive constructions. He states that in SOV languages, and in Icelandic and Swedish, there is an inflexible ordering whereby the subject precedes the IO, which in turn precedes the DO. He uses Dutch data from Zwart (1993) to illustrate this observation, shown in (40a-f). As the examples indicate, the order subject-IO-DO is set; *Jan* 'Jan' is the subject; *de kinderen* 'the children' is the IO; and *het boek* 'the book' is the DO.

(40) a. ...dat Jan de kinderen het boek gaf
that Jan the children the book gave
'that Jan gave the children the book.'

b. ??...dat Jan het boek de kinderen gaf
that Jan the book the children gave

c. **...dat de kinderen Jan het boek gaf

that the children Jan the book gave

d. **...dat de kinderen het boek Jan gaf

that the children the book Jan gave

e. **...dat het boek Jan de kinderen gaf

that the book Jan the children gave

f. **...dat het boek de kinderen Jan gaf

that the book the children Jan gave

Bobaljik now presents evidence that the highest position an IO can attain in the structure is still lower than the lowest subject position. He notes that in Icelandic, the IO can shift and come to precede a VP-adjoined adverb such as negation, just as a shifted DO does (see (37b)).

(41) a. Ég lána Maríu ekki bækur

I lend Maria not books

'I do not lend Maria books.'

b. Það lánaði útlendingar Maríu þessa bók

there lent foreigner Maria this book

'A foreigner lent Maria this book.'

c. *Það lánaði Maríu útlendingar þessa bók

there lent Maria foreigner this book

He notes that where the indefinite subject *útlendingar* 'a foreigner' in the TECs in (41b-c) is in the lowest subject position, the example in (41c) indicates that the IO *Maríu* 'Maria'

cannot shift to a position preceding the subject. Thus Bobaljik proposes that even though shifting of the IO across a VP-adjoined adverb is possible, the highest position available to an IO is structurally lower than the lowest position available to a subject. He notes that in this regard, the subject and IO seem more to be in a stacking arrangement rather than leapfrogged.

Continuing his hypothesis, Bobaljik presents evidence that the IO in its lowest position is structurally higher than the DO in its highest position.

(42) a. Petur syndi oft Maríu bókina
Peter gave often Maria book-the
'Peter often gave Maria the book.'

b. Ég lána Maríu ekki bækurnar
I lend Maria not books-the
'I do not lend Maria the books.'

c. ?Ég lána Maríu bækurnar ekki
I lend Maria books-the not

d. *Ég lána bækurnar ekki Maríu
I lend books-the not Maria

He observes that (42a) shows the IO *Maríu* 'Maria' in its lowest, unshifted position below the negator *ekki* 'not', and (42b) shows the IO in its higher, shifted position preceding the negator. (42c) indicates that both the IO and the DO *bækurnar* 'the books' have raised to their respective higher positions, with both elements preceding the negator. But Bobaljik states that in (42d), the IO is in its lower position following the negator, and the DO is in

its higher position preceding the negator; the result is an ungrammatical arrangement. Thus the highest position for the DO lies below the lowest position for the IO. Again, a stacking architecture such as Bobaljik describes in (36a) provides a basic structural account for arrangement.

2.4.3 Strength Asymmetry in Leapfrogging

Bobaljik (1995) discusses the work of Collins and Thráinsson (1996), in which they postulate a constraint whereby when the lower AgrDO contains strong features, the higher AgrIO must as well (the revised I-II Constraint; see section 2.3.5). Thus instances where the IO can shift alone are grammatical, as in (42b), and they contrast with the unacceptability of DO shift over an IO in its lowest position, as in (42d). Bobaljik notes that it is definite NPs which can undergo overt shift in Icelandic, and not indefinite NPs; thus a problem arises with a leapfrogging account involving such a constraint if a definite DO NP shifts when the IO NP is indefinite. He contrasts the grammaticality of the examples in (43a-b) to illustrate.

(43) a. ?Ég gaf einhverjum stúdent bókina ekki

I gave some student book-the not

'I didn't give some student the book.'

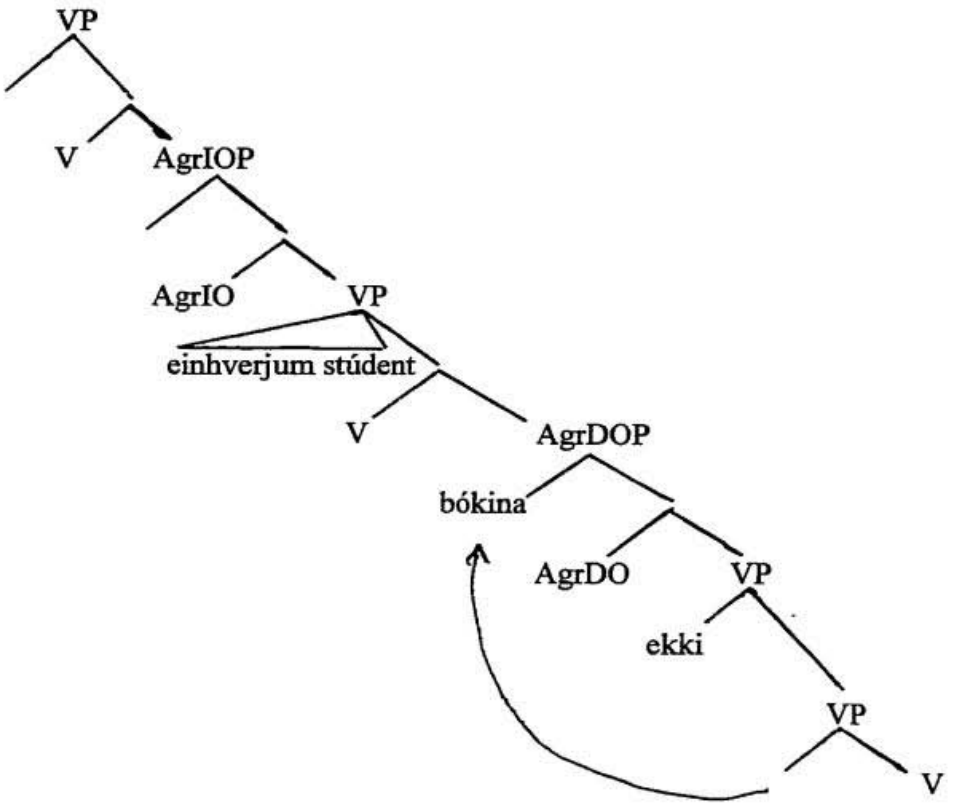
b. ?Ég lána Maríu bækurnar ekki

I lend Maria books-the not

'I do not lend Maria the books.'

Both sentences in (43a-b) show the DOs *bókina* 'the book' and *bækurnar* 'the books' shifted to their higher positions preceding the negator *ekki* 'not' and are equally acceptable, even though (43a) contains the indefinite IO *einhverjum stúdent* 'some student'. Bobaljik states that to account for the sentence in (43b) in the leapfrogging analysis, a constraint on feature strength of the Agr constituents must be invoked, whereby when AgrDO is strong and the DO shifts, then AgrIO must be strong and the IO must shift as well. He maintains that this strength constraint must apply as well to (43a), where the definite DO NP has shifted across the negator, even though the IO is indefinite and should not have undergone object shift. He concludes that shifting of indefinite objects is a consequence inherent in a leapfrogging analysis. In contrast, a structure based on stacking does not have this problem, because, as he has indicated, the highest position available for a DO is structurally lower than the lowest position available to an IO. Thus the DO, shifted or not, will always follow an IO, and his account for the arrangement in (43a) is that the IO is in its base position in the stacked structure, which is still higher than the position occupied by the shifted DO appearing in its highest position. Bobaljik presents the tree in (44) to show the relative positions of the elements, of which I present only a portion. This structure illustrates that the indefinite IO remains in its lower, unshifted position as it should, while the definite DO has shifted to its higher position.

(44)



Bobaljik continues with a discussion of unacceptable movement which would be forced under a leapfrogging analysis. He notes that in Swedish, only unstressed pronouns may undergo object shift, and that full NPs are barred from shifting (unlike Icelandic, which allows shifting of full object NPs), presenting the sentences in (45a-b) as examples.

(45) a. *Han såg Sara inte

he saw Sara not

'He didn't see Sara.'

b. Han såg henne inte

he saw her not

'He didn't see her.'

Bobaljik discusses the contrasts shown in (46a-c), which display the effects of object placement relative to the negative adverb *inte* 'not'.

(46) a. Han gav inte Sara boken

he gave not Sara book-the

'He didn't give Sara the book.'

b. ?Han gav Sara inte boken

he gave Sara not book-the

c. *Han gav Sara boken inte

he gave Sara book-the not

He observes that the sentence in (46b), where the IO NP *Sara* 'Sara' appears shifted across the negator *inte* 'not', is marked to a degree, whereas the arrangement where both the IO NP *Sara* 'Sara' and the DO NP *boken* 'the book' precede the negator in (46c) is unacceptable. His concludes that within a leapfrogging analysis, elements which are generally barred from shifting must indeed shift in order to account for the more acceptable reading shown for (46b) when compared with (46c). Thus his analyis is of full NP IOs in Swedish above, and the foregoing analysis of indefinite IOs in Icelandic, indicates that they can both shift under a leapfrogging analysis. This occurs even though they are not items which ordinarily shift (and where it appears to be optional in Swedish,

as shifting of the IO NP need not be forced by shift of the DO, as would be the case in Icelandic).

Bobaljik maintains that the Swedish data can be explained if the structure is stacked. For a sentence like (46b), he posits the negative adverb is adjoined to the VP projection which exists below the IO NP in its lower, unshifted position, but above the DO NP in its lower, unshifted position.

2.4.4 Conclusions in Favour of Stacking

Bobaljik (1995) has presented a number of arguments which favour an underlying structure based on stacking. He maintains that fewer constraints have to be imposed on a stacking hypothesis in order to explain the same data, whereby all that need be stipulated is that adverbs used as relative indicators of object shift can adjoin to lower VP positions below the highest VP. Thus the stacking analysis provides a basic structural account of the data without the need for extra assumptions or stipulations, whereas the leapfrogging analysis requires stipulation and is therefore a less attractive tool for analysis.

2.4.5 Problems with Bobaljik's Analysis

This model structurally describes a word order phenomenon for which Collins and Thráinsson (1996) must use an extra constraint to explain, that is, why the DO never precedes the IO. In Bobaljik's structure, the possible positions for the DO are [Spec,VP_3] or [Spec, AgrDO], and they appear lower in the structure than the positions the IO may take, those being [Spec, VP_2] or [Spec, AgrIOP].

There is an apparent problem with Bobaljik's presentation of a stacking structure. This pertains to the position to which the negator *ekki* 'not' is attached. Consider the following sentences in (47a-c) (from Collins and Thráinsson (1996); see (35a,b,d), page 102).

(47) a. Ég lána ekki [$_{VP2}$ Maríu [$_{VP3}$ bækurnar]]

I loaned not Maria(DAT) the-books(ACC)

'I did not loan Maria the books.'

b. Ég lána [$_{AgrIOP}$ Maríu ekki [$_{VP3}$ bækurnar]]

I loaned Maria(DAT) not the-books(ACC)"

c. ?Ég lána [$_{AgrIOP}$ Maríu [$_{VP2}$ [$_{AgrDOP}$ bækurnar ekki]]

I loaned Maria(DAT) the-books(ACC) not

In (47a), the IO and DO remain *in situ*, and *ekki* is adjoined to a position somewhere higher than the IO in [Spec, VP_2]. In (47b), the IO shifts and the DO remains *in situ*, and *ekki* is adjoined to a position below AgrIOP, but above the DO in [Spec, VP_3]. In (47c), both the IO and DO shift, and *ekki* appears to be adjoined to a position lower than VP_2 and AgrDOP. How can this be explained, as apparently *ekki* is disallowed from adjoining to the highest VP projection, but must move downwards in the structure when the DO shifts. This would require an extra stipulation to account for the variability of the position of the negator under the different conditions, not to mention the fact that the negator moves to positions progressively lower in the structure when the objects move to positions higher up.

Chapter 3

Strength and Object Shift in Icelandic

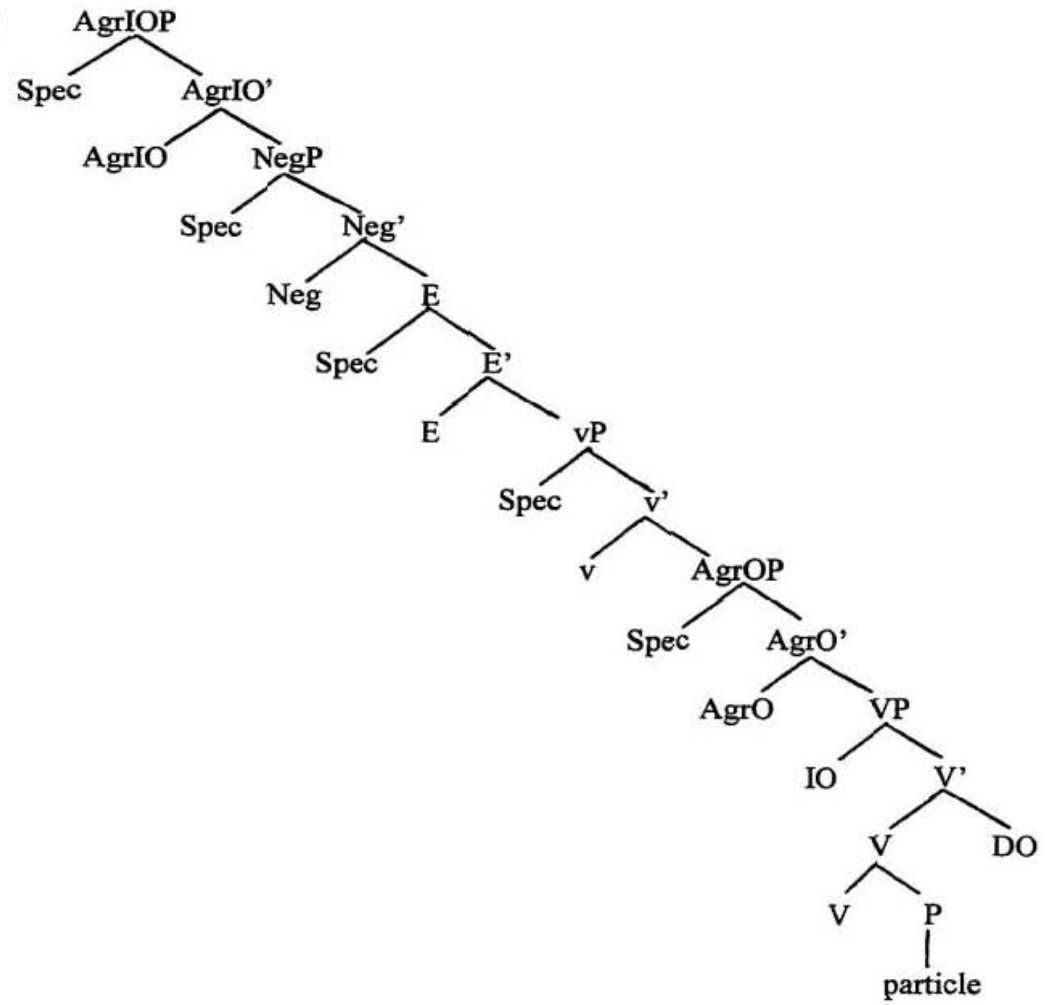
3.1 Introduction

In this section, I show that the word order possibilities realized in Icelandic double object shift are the result of symmetry in the strength of certain functional projections; while I deal specifically with observations from Icelandic, my view is that this symmetry holds in general, but I leave this for future investigation. I start out with an analysis of the structure which involves a vP external AgrIOP projection, and a NegP projection. I hold that the IO in an Icelandic double object construction can move overtly to [Spec, AgrIOP] when AgrIO is strong, and that the negator *ekki* 'not' is normally adjoined to the vP, but can appear overtly in [Spec, NegP] when Neg is strong.

I adopt the analysis of Travis (1994), as outlined in section 1.4, to explain the appearance of the DO external to the vP. I maintain that there is the category E in the position between vP and T. As well, I show that the DO moves overtly out of the vP and into [Spec, EP]. In fact, I hold that the position [Spec, EP] to which a DO moves when it shifts vP-externally is the same position which an indefinite subject occupies. To account for this I consider that E has the property of 'attract category'.

Returning to my hypothesis on strength, I hold that the word order phenomena are the result of AgrIO, Neg, and E being either all strong, or all weak. I present the structure in (1) as underlying the double object construction in Icelandic.

(1)



I will provide evidence that the verbal particle cannot raise out of the vP, and so is stranded under V; and that an adverb of manner can adjoin to the lower VP. Using these as starting propositions, I will present data which indicates that there is a vP-internal AgrOP projection intervening between the vP and VP to which the DO can shift overtly. Continuing with this analysis, I will propose that a non-finite verb raises from under V and moves to E, and that the IO can shift to [Spec, vP] position. I investigate the possible positions for the sentential adverb, the highest being adjoined to NegP, and this helps me

to determine that the indefinite subject is in fact positioned in [Spec, EP] at its lowest. As well, I will discuss apparent problems with my analysis, including the fact that Neg seems to be variable in its strength at times, and that certain phenomena, such as object pronoun shift, appear to contradict my proposals.

3.2 The Existence of E and The Possibility of Attract Category in Icelandic

I will not use the designation AgrOP to indicate the projection which dominates the vP. I present evidence that it is not in fact an AgrOP projection, but is instead a projection of E. I propose further that the specifier position of this projection is not a case checking position for the DO, but a position to which elements move by the property of 'attract category'.

3.2.1 The Position of Indefinite Subjects: Jonas and Bobaljik's Interpretation

Jonas and Bobaljik (1996) present evidence that the subject in Icelandic can take up two positions in the structure. They employ data in which they compare the relative position of the subject, as given in (2a-b)..

(2) a. Í gær kláruðu (þessar mýs) sennilega (*þessar mýs) ostinn
yesterday finished (these mice) probably (these mice) cheese-the
DEF DEF
'These mice probably finished the cheese yesterday'

b. Í gær kláruðu (?margar mýs) sennilega (margar mýs) ostinn

yesterday finished (?many mice) probably (many mice) cheese-the

INDEF INDEF

'Many mice probably finished the cheese yesterday'

With respect to the above data, Jonas and Bobaljik point out that there are preferred positions for each form of the subject. The definite subject *þessar mýs* 'these mice' in (2a) raises to the position preceding the sentential adverb *sennilega* 'probably', and the indefinite subject *margar mýs* 'many mice' in (2b) is more natural when following the sentential adverb. They take the sentential adverb to be adjoined to TP, and the indefinite subject *margar mýs* 'many mice' in (2b) prefers to follow it. The point which the data in (2a-b) illustrate, using the relative position to the sentential adverb *sennilega* 'probably', is that there are two subject positions available, and that the lower position reserved for indefinite subjects is below the sentential adverb adjoined to TP.

(3) a. * Í gær kláraði [$_{VP}$ alveg [$_{VP}$ *mús* ostinn]]

yesterday finished completely (a) mouse cheese-the

'A mouse finished the cheese completely yesterday'

b. *Í gær kláraði [$_{AgrOP}$ ostinn$_i$ [$_{VP}$ (alveg) [$_{VP}$ *mús* t$_i$]]]

yesterday finished cheese-the (completely) (a) mouse

c. Í gær kláraði [$_{TP}$ *mús*$_k$ [$_{AgrOP}$ ostinn$_i$ [$_{VP}$ alveg [$_{VP}$ t$_k$ t$_i$]]]]

yesterday finished (a) mouse cheese-the completely

Jonas and Bobaljik use the data in (3a-c) to determine what the lower subject position is relative to the manner adverb *alveg* 'completely', taken to be adjoined to VP. Thus they

maintain that the lower subject position cannot be within VP, because the subject DP *mús* 'a mouse' cannot appear to the right of the manner adverb *alveg*, shown in (3a-b). Because the subject DP can only appear to the left of the manner adverb, they take this in part to indicate that the position is higher than VP. They continue this analysis by using (4a-b) to illustrate that the subject in its lower position appears to the left of a shifted object, also indicating that it cannot be in the VP. (4c) shows the relative structural positions explicitly for (4a) (the analysis is my own).

(4) a. Það lauk *einhver*$_i$ verkefninu$_j$ [$_{VP}$ t$_i$ alveg t$_j$]
there finished someone assignment-the completely
'Someone completely finished the assignment'

b. *Það lauk verkefninu$_j$ [$_{VP}$ (alveg) *einhver* t$_j$]
there finished assignment-the (completely) someone

c. Það lauk [$_{TP}$ *einhver*$_i$ [$_{AgrOP}$ verkefninu$_j$ [$_{VP}$ t$_i$ alveg t$_j$]]]
there finished someone assignment-the completely

Jonas and Bobaljik (1996) propose that [Spec, TP] is the position lowest in the structure that an indefinite/nonspecific subject DP can attain, because the indefinite subject is higher than the shifted object is in [Spec, AgrOP]; this structural arrangement is shown in (4c). As well, the indefinite subject is lower that the sentential adverb adjoined to TP, as shown in (2a-b).

3.2.2 Indefinite Subject in [Spec, EP]

I modify this conclusion with additional observations inferred from the introduction of new data of my own, and I suggest that the lowest subject position available in Icelandic is actually the same position that a DO moves to when it shifts outside of the vP. I will refer to this position as [Spec, EP].

Consider the sentences in (5a-c), which I use to indicate the positions available to the sentential adverb *sennilega* 'probably'[1].

(5) a. Pétur gaf Maríu þessa bók *sennilega* ekki
Peter gave Maria(DAT) this book(ACC) probably not
'Peter probably did not give this book to Maria'

b. Pétur gaf Maríu *sennilega* þessa bók ekki
Peter gave Maria(DAT) probably this book(ACC) not

c. *Pétur gaf *sennilega* Maríu þessa bók ekki
Peter gave probably Maria(DAT) this book(ACC) not

d. Pétur gaf (*sennilega) Maríu_i [$_{EP}$ (sennílega) þessa bók_j [$_{vP}$ (sennilega) ekki[$_{vP}$ t_i t_V t_j]]]

Note the positions of the sentential adverb *sennilega* 'probably' in the sentences in (5a-c) with respect to the positions of the objects. These objects have shifted, as is apparent from the fact that the negator *ekki* 'not' comes below both the IO and the DO, and which

[1] The examples (5a-b) show both the IO and DO shifted past the negator with acceptable results. This is in contrast to other instances of this arrangement which produce marginal results (see (1e), page 4; (49a), page 45; (18a), page 87; (42c), page 110. I cannot account for this discrepancy; perhaps it has to do with the fact that the demonstrative *þessa* 'this' is present in (5), associated with the DO *bók* 'book'. This element is not present in the other examples.

I take to be adjoined to vP. This being the case, consider that the sentential adverb comes in three successively higher positions in the above examples, where in (5a) it precedes the negator, in (5b) it precedes the DO, and in (5c) it precedes the IO. The only sentence which has the adverb in an unacceptable position is (5c). Thus (5a) indicates that the sentential adverb can be adjoined to the vP; (5b) indicates that it can adjoin to EP or NegP (see section 3.2.3 for evidence that the sentential adverb adjoins to NegP). But (5c) indicates that it cannot adjoin to a position above EP or NegP, where, by preceding the IO and following the verb, the adverb would be adjoined at the lowest to AgrIOP dominating either NegP or EP. In (5d) I represent the distribution of structural positions of the sentential adverb shown in (5a-c).

To demonstrate my argument that the lowest position for the indefinite subject in an Icelandic transitive construction is [Spec, EP], I contrast the placement of the sentential adverb with respect to the indefinite subject when object shift of the DO has not occurred with when it has. My hypothesis is that the adverb will be able to precede the subject in the construction without object shift, as the DO is not in [Spec, EP], and so this position is open to the subject. As well, the adverb will not be able to precede the subject in the construction where object shift has occurred, where the DO is explicitly in [Spec, EP] and therefore the subject cannot attain this position. These two arrangements are observed in (6a-b). In (6a) the DO *ostinn* 'the cheese' appears *in situ* to the right of the negator. The negator is adjoined to vP indicated by its position following the indefinite subject, where the latter is preceded by the sentential adverb *sennilega* 'probably' adjoined to EP or NegP. My hypothesis is borne out given (6b), where the DO

ostinn has shifted over the negator adjoined to vP.

(6) a. Í gær kláruðu sennilega [$_{EP}$ margar mýs [$_{vP}$ ekki [$_{vP}$ ostinn]]

yesterday finished probably many mice not cheese-the

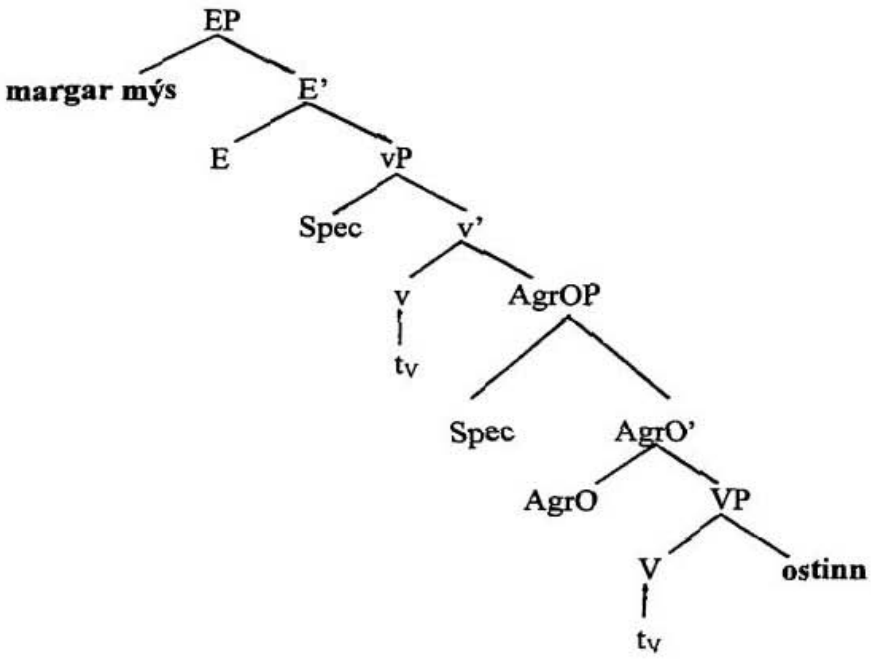
'Many mice probably finished the cheese yesterday'

b. *Í gær kláruðu sennilega margar mýs ostinn$_i$ [$_{vP}$ ekki [$_{vP}$ t$_i$]]

yesterday finished probably many mice cheese-the not

'Yesterday many mice probably did not finish the cheese.'

c.



In (6a) the sentential adverb *sennilega* 'probably' precedes the indefinite subject *margar mýs* 'many mice' in its lowest position ([Spec, TP] according to Jonas and Bobaljik (1996)). But in (6b) it is evident that the DO has shifted overtly, as it precedes the negator, and here the sentential adverb can no longer precede the indefinite subject. Because an ungrammatical sentence results from the arrangement in (6b), I conclude that

it is the result of one of two possibilities. The first is that the indefinite subject is forced to move higher in the structure, and thus the adverb appears in an illegitimate position above EP (as shown by the double object data in (5b-c)). The second is that the indefinite subject is still in [Spec, EP], but the DO DP is shifting to this position as well; thus the DO attempts to take up position in [Spec, EP] but is barred from shifting due to the presence of the indefinite subject, and the resulting derivation crashes.

Based on the foregoing evidence, I posit that the lowest position of an indefinite subject and the position to which a DO is shifted external to the vP are the same. I propose that both elements take up [Spec, EP] which has the property 'attract category'; the property 'attract category' is named to indicate that there are two possible sentence constituents which can occupy the position, thus the position does not attract any one element exclusively. The structural representation for (6a) I give in (6c). This analysis explains why the indefinite subject cannot follow the sentential adverb when the DO has shifted overtly: the shifted DO is in [Spec, EP], and so the indefinite subject cannot take this up as its lowest position. As I have already proposed, it must either appear higher than E, and so the sentential adverb cannot precede it, as it is barred from adjoining to a position higher than E. My other analysis suggests that the subject-filled position [Spec, EP] is not open to a shifting DO. Either way, the indefinite subject cannot appear to the right of the sentential adverb if shift of the DO occurs. I conclude that [Spec, EP] is the lowest position an indefinite subject can appear in. Thus where Jonas and Bobaljik (1996) consider that an indefinite/nonspecific subject can appear at the lowest in [Spec, TP], I

show that [Spec, EP] is a possible position for such a subject[2]. I show further that this position can also be assumed by a definite DO, but that there can be no object shift of the DO when the indefinite subject remains in this position.

3.2.3 The Indefinite Subject in [Spec, EP], the Position of Negation in [Spec, NegP], and the Adjunction of the Sentential Adverb to NegP

Having proposed that the indefinite subject can take up position in [Spec, EP], I use this as a basis to show that the negator can appear overtly in [Spec, NegP], and that the adverb of manner can adjoin to NegP. Consider the sentences in (7a-b).

(7) a. Í gær kláruðu sennilega [$_{NegP}$ ekki [$_{EP}$ margar mýs [$_{vP}$ ostinn]]]
yesterday finished probably not many mice cheese-the
'Many mice did not finish the cheese yesterday'

b. ?Í gær kláruðu sennilega [$_{EP}$ margar mýs [$_{vP}$ ekki [$_{vP}$ ostinn]]]
yesterday finished probably many mice not cheese-the
'Many mice probably finished the cheese yesterday'

---

[2]There is evidence that a definite subject moves through [Spec, EP] as well. Consider the sentence in (i) from Collins and Thráinsson (1996).

(i) Í gær hafa strákarnir$_i$ allir$_i$ málað húsið raut
yesterday have boys-the all painted house-the red
'Yesterday all the boys have painted the house red.'

Here the quantifier *allir* 'all' modifies the definite subject *strákarnir* 'the boys', but it appears in a position lower than the subject. I propose that the subject has moved up through [Spec, EP] and left the quantifier stranded there above the non-finite verb *málað* 'painted' which is under E (I give evidence for this verb position in section 3.5) as it raises to a higher position. That a definite subject does not appear in [Spec, EP] in general leads to the possibility that definite subjects prefer to raise up to the highest position that they can attain in the structure.

In (7a) the indefinite subject *margir* mýs 'many mice' appears in [Spec, EP], and thus follows the sentential adverb *sennilega* 'probably'. The indefinite subject is also is preceded by the negator *ekki* 'not' above [Spec, EP], which intervenes between the sentential adverb and the subject.

In section 1.5, I presented the proposal by Moritz and Valois (1994) that negative elements can move to [Spec, NegP] at LF. In (7b) the indefinite subject is in [Spec, EP] above the negator *ekki* 'not' adjoined to the vP. The position of the vP-adjoined negator contrasts with the negator position shown in sentence in (7a), where, as I have stated, it precedes the indefinite subject in [Spec, EP] but follows the sentential adverb. I take this to indicate that the negator has moved overtly to [Spec,NegP], where NegP dominates EP. Further, I propose that the sentential adverb can adjoin to NegP at the highest (having shown already that when the sentential adverb appears any higher in the structure the sentence will degrade (see (5c)).

An analysis where the indefinite subject has [Spec, EP] as its lowest position would also explain why the negator can precede it, as is the case in (8a).

(8) a. Í gær kláruðu [$_{NegP}$ ekki [$_{EP}$ margar mýs [$_{vP}$ ostinn]]]
yesterday finished not many mice cheese-the
'Many mice did not finish the cheese yesterday'

b. ?Í gær máluðu strákarnir$_i$ [$_{EP}$ húsið [$_{vP}$ ekki [$_{vP}$ allir$_i$ rautt]]]
yesterday painted students-the house-the not all red
'yesterday all the students painted the house red'

c. (?)Í gær máluðu [$_{TP}$ strákarnir$_i$ [$_{NegP}$ ekki [$_{EP}$ húsið [$_{vP}$ allir$_i$ rautt]]]]

yesterday painted students-the not house-the all red

Considering the contrast illustrated in (8b-c), there is further evidence that the negator can precede the [Spec, EP] position, and is preferred in this position in some instances. I follow Sportiche (1988) in assuming that floated quantifiers indicate trace positions. The sentence in (8b) shows that object shift to [Spec, EP] has occurred, where the DO *húsið* 'the house' is in a position higher than the negator adjoined to vP, and higher than the subject quantifier *allir* 'all' stranded in [Spec, vP]. In (8c), considered a little better by the informant, the DO is still in a position above the subject quantifier in [Spec, vP] indicating that it has shifted to [Spec, EP], but the negator is in a position below the subject in [Spec, TP]. I have already analyzed this negator position as [Spec, NegP], where NegP dominates EP; thus the negator precedes the shifted DO in [Spec, EP]. I propose that this is displayed as well in (8a), where the indefinite subject is in [Spec, EP], and the negator precedes it in [Spec, NegP], where NegP dominates EP.

Further evidence comes from (8c), where the negator has a preference to precede the shifted DO. That the DO has shifted to [Spec, EP] indicates that E is strong, and that the negator more naturally precedes the DO indicates that Neg is strong as well.

That the lowest indefinite subject position and the position of a DO shifted external to the vP appears to be [Spec, EP], but the position of the IO is [Spec, AgrIOP] above the position of the shifted DO is an indication of the nature of the attraction E elicits. I will tentatively hold that the position [Spec, EP] has the property 'attract

category', and more specifically has the property of 'attract non-oblique'. Whatever the differences are between oblique and non-oblique features I leave to future research.

3.3 Strength and Dominance

In this section I outline my hypothesis on the underlying cause of the word order combinations for objects in Icelandic. I propose that the mechanism by which the various word orders arise depends on the feature strength contained by a head and the syntactic relationship of dominance. I will show that when a head contains strong features, and its projection immediately dominates the projection of another head which can itself contain strong features, then this second head will be strong as well.

3.3.1 Strength of Neg and E in Single Object Shift

Having postulated that the Icelandic negator can appear overtly in [Spec, NegP], I begin my discussion by showing data from single object shift. The data indicates that where Neg contains strong features, and where NegP immediately dominates EP, then the selection of strong features for E is preferred. The data also shows that when E contains strong features, and where EP does not dominate NegP, then Neg need not be strong.

My first analysis involves the relationship of the negator to the shifted DO in [Spec, EP], which I infer from (9a-b) below. I show the structural relationship between NegP and EP in (9c), where NegP immediately dominates EP.

(9) a. ?Í gær máluðu strákarnir$_i$ [$_{NegP}$ [$_{EP}$ húsið [$_{vP}$ ekki [$_{vP}$ allir$_i$ rautt]]]]

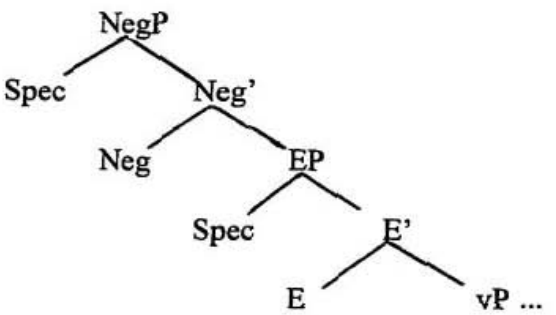
yesterday painted students-the house-the not all red

'yesterday the all the students painted the house red'

b. Í gær máluðu strákarnir$_i$ [$_{NegP}$ ekki [$_{EP}$ húsið [$_{vP}$ allir$_i$ rautt]]]

yesterday painted students-the not house-the all red

c.



The sentences in (9a-b) show respectively that the negator can follow or precede the shifted object in [Spec, EP], where the informant indicated that the construction with the negator preceding the shifted object in (9b) was a little better than (9a). The point to note is that the informant showed a preference for the arrangement shown in (9b), where the negator appears in [Spec, NegP] and precedes the shifted DO in [Spec, EP]. I propose that in this arrangement, Neg contains strong features, and that where NegP immediately dominates EP, E contains strong features as well. In my analysis, where dominance is the triggering factor for strong features, (9a) displays the arrangement where E is strong, but where EP does not dominate NegP, thus Neg is weak and results in the negator remaining adjoined to vP below the shifted DO. As for the preference for (9b), I maintain that it

suggests the necessity of a strong E when Neg is strong (as long as these strong features in E can be checked), thus creating a symmetry in terms of head strength.

This type of analysis can also explain the word order in the pair (10a-b), where the negator follows the indefinite subject in (10a) and precedes it in (10b).

(10) a. ?Í gær kláraðu sennilega [$_{NegP}$ [$_{EP}$ margar mýs [$_{vP}$ ekki [$_{vP}$ ostinn]]]]
yesterday finished probably many mice not cheese-the
'Many mice probably did not finish the cheese yesterday'

b. Í gær kláraðu sennilega [$_{NegP}$ ekki [$_{EP}$ margar mýs [$_{vP}$ ostinn]]]
yesterday finished probably not many mice cheese-the
'Many mice probably did not finish the cheese yesterday'

The word order displayed by the negator is the result of the same mechanism described above. In (10a) E is strong but EP does not dominate NegP, so Neg is free to be weak and the negator remains adjoined to vP. Thus the negator *ekki* 'not' follows the indefinite subject *margar mýs* 'many mice' in [Spec, EP] by the same analysis given for the object shift arrangement in (9a) – Neg does not contain strong features, whereas E does. This is a legitimate arrangement, as EP does not immediately dominate NegP, thus the indefinite subject appears in [Spec, EP] and the negator remains adjoined to the vP. The sentence in (10b) also has the same analysis as (9b) regarding object shift: Neg is strong, as shown by its appearance above the indefinite subject, and E is strong because EP is immediately dominated by the NegP projected by the strong Neg head, thus the position of the subject is [Spec, EP] below the negator. Furthermore, the preference shown in (10a-b) is the

same as that for (9a-b), as the informant indicated that (10b) was a little better than (10a). I again maintain that the preference shown for strong Neg and strong E in (10b), where both the negator and the indefinite object appear overtly in the respective specifier positions, indicates that symmetry in strength is preferred in the example, where when Neg is strong, E is preferred strong.

3.3.2 Strength and Dominance with AgrIO, Neg, and E in Double Object Constructions

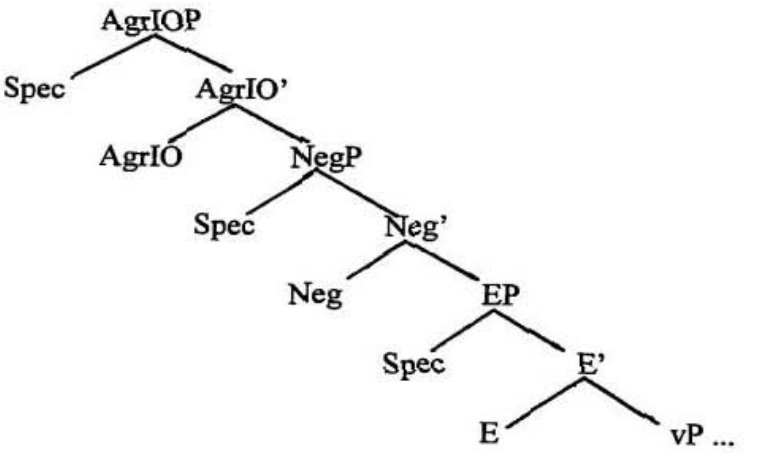
Keeping with my hypothesis on strength and structural dominance, I propose that there is a simpler way to describe the IO-DO word order in shifted double object constructions in Icelandic, which does not produce asymmetries like Collins and Thráinsson's revised I-II Constraint on the strengths of Agr elements. This constraint is repeated from (25) in section 2.3.5, and extended, given here as (11).

(11) I-II Constraint (revised):
At Spell-Out, Agr1 must be at least as specified as Agr2 for person and strength features....if Agr2 is first/second person, Agr1 must also be first/second person. If Agr1 is third person and Agr2 is first/second person, the structure is ruled out. (Collins and Thráinsson 1996:423)

My hypothesis is an extension of my proposal on strength and dominance, as I have laid out above as it pertains to single object shift and to the indefinite subject in [Spec, EP]. In the case of double object shift, the same conditions apply: when the projection of a strong head immediately dominates the projection of another head, then that other head is strong as well. Where it is a combination of the presence of strong features and immediate structural dominance which are the factors affecting the word order arrangements in the

double object construction, I give the structural arrangement of the pertinent syntactic elements involved in (12).

(12)



To exemplify my hypothesis, I present the sentence in (13a-c).

(13)a. Það gáfu [$_{AgrIOP}$ henni [$_{NegP}$ ekki [$_{EP}$ margir stúdentar [$_{vP}$ mikið hrós]]]]

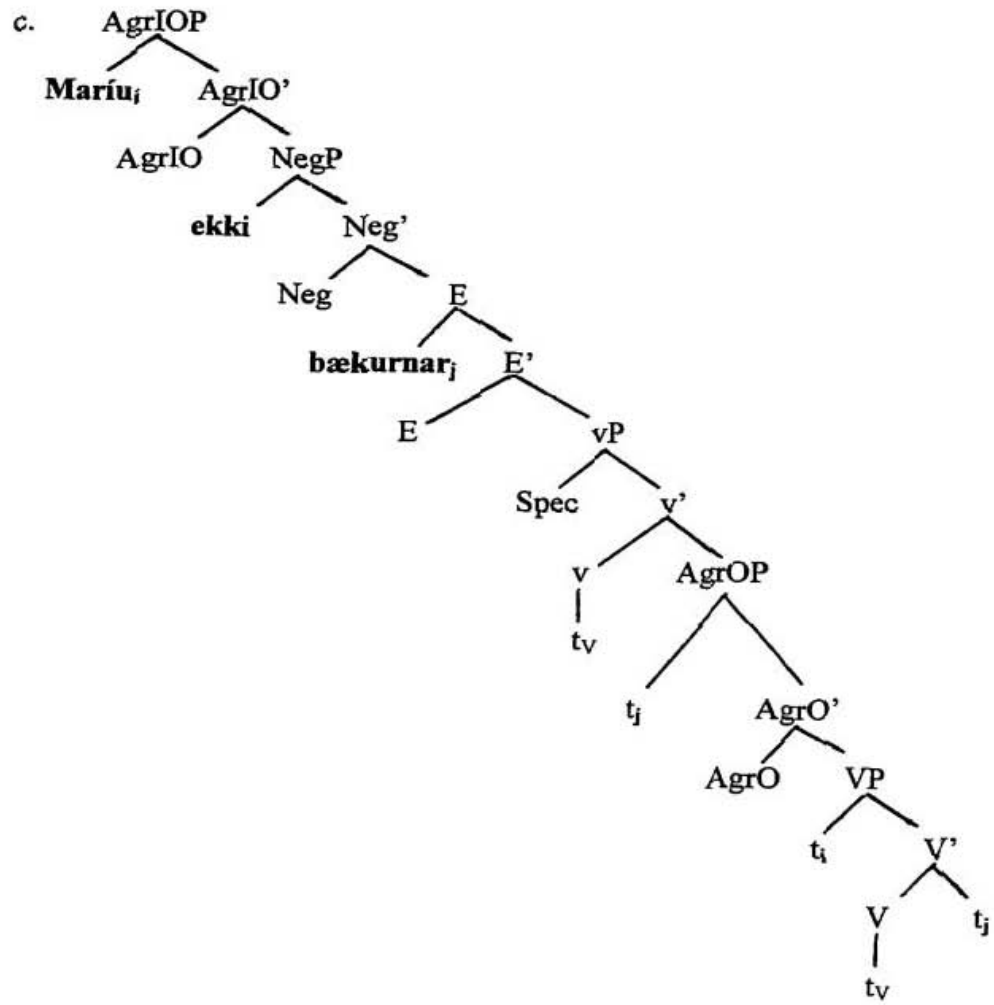
EXPL. gave her(DAT) not many students(NOM) much praise

['Many students did not give her much praise.']

b. Ég lána [$_{AgrIOP}$ Maríu [$_{NegP}$ ekki [$_{EP}$ bækurnar [$_{vP}$ t_{IO} t_{DO}]]]

I lend Maria not the.books

'I do not lend the books to Maria.'



The sentence in (13a), presented to me by an anonymous reviewer, serves to strengthen my arguments about strength, and its qualities are predicted in my proposal. This sentence is akin to that in (10b) with the negator in [Spec, NegP] and an indefinite subject in [Spec, EP], except that here there is an overtly shifted IO, *henni* 'her(DAT)' present. My proposal on the symmetry of strength (see sections 3.2.3-3.3.1) is exhibited here. There is a strong AgrIO present indicated by the shifted IO; AgrIOP immediately dominates NegP and thus triggers strong features in Neg, and so the negator *ekki* has

shifted to [Spec, NegP]. The NegP immediately dominates EP and triggers strong features in the head of the latter, except that it is the indefinite subject *margir stúdentar* 'many students' which has shifted to [Spec, EP] position instead of the DO. Given my discussion on the structural positions of the indefinite subject and shifted DO (see sections 3.2.2-3.2.3), I hold that (13a) shows the indefinite subject in the [Spec, EP] position; thus the DO *mikið hrós* 'much praise' is unable to shift and so remains within the vP below the indefinite subject. In sum, all the pertinent heads AgrIO, Neg, and E simultaneously exhibit strong features triggered through structural arrangement, and the IO, negator, and indefinite subject appear overtly shifted to the respective specifier positions.

Now consider the sentence in (13b) (from Collins and Thráinsson (1996), but with my own structural analysis; see also (35b), page 102)[3]. The word order in (13b) shows what seems to be shift of the IO *Maríu* 'Maria' alone, as it appears above the negator *ekki* 'not'; the DO *bækurnar* 'the books' appears to be left *in situ* below the negator. I suggest that this is a superficial analysis. Under my own proposal the analysis runs as follows: the IO *Maríu* 'Maria' has undergone shift to [Spec, AgrIOP], as indicated by its position preceding the negator. Where AgrIO is strong and AgrIOP immediately dominates NegP, then Neg is strong, therefore the negator is not adjoined to the vP but appears overtly in [Spec, NegP]. Where Neg is strong and where NegP immediately dominates EP, then E is strong, thus the DO is not left *in situ*, but rather appears in [Spec, EP]. The implication is

[3] My analysis holds that the IO, negator, and DO have undergone shift; Collins and Thráinsson only consider the IO to have shifted overtly in this example.

that what looks like leftwards movement of the IO alone, is in fact, double object shift; the IO shifts out of the vP to [Spec, AgrIOP]; the negator shifts from adjunction to vP to [Spec, NegP]; the DO shifts out of the vP to [Spec, EP]. I give the structural positions underlying of the objects and negation in (13c). The mechanism is attraction by a strong head, where a strong head whose maximal projection immediately dominates the maximal projection of another head triggers strong features in that head. Thus the presence of strong features is a characteristic transferred through the structural arrangement from AgrIO to Neg, and from Neg to E.

My argument is supported further by the sentence in (14) (from Collins and Thráinsson (1996), but with my own structural analysis; see also (35d), page 102).

(14) ?Ég lána [$_{AgrIOP}$ Maríu [$_{NegP}$ [$_{EP}$ bækurnar [$_{vP}$ ekki [$_{vP}$ t_{IO} t_{DO}]]]]

I lend Maria the.books not (neither object stressed)

'I do not lend the books to Maria.'

It is evident in this sentence that both the IO *Maríu* 'Maria' and the DO *bækurnar* 'the books' have undergone shift, as they both precede the negator *ekki* 'not' adjoined to vP. This indicates that AgrIO is strong and E is strong, but that Neg is weak. The point to note is that this sentence is not as natural as the one given in (13b) above, where the order is IO-negator-DO.

This is expected under my proposal, as when AgrIO is strong, the preference is for a strong Neg, as AgrIOP immediately dominates NegP. This is not the case; AgrIO is strong but Neg is weak. The conclusion is that the sentence in (14) is less acceptable than

the equivalent in (13b) because of a preference to have AgrIO, Neg, and E all strong, because the appearance of strong features in a head is triggered successively through the relationship of immediate dominance of one head's projection over another.

A sentence such as (15) (from Collins and Thráinsson (1996), but with my own structural analysis; see also (35a), page 102) is easily explained, where both objects appear below the negator indicating that no object shift has occurred.

(15) Ég lána [$_{AgrIOP}$ [$_{NegP}$ [$_{EP}$ [$_{vP}$ ekki [$_{vP}$ Maríu bækurnar]]

I lend not Maria the.books

'I do not lend Maria the books.'

None of the elements have shifted because none of the respective heads contain strong features. Where AgrIO is weak, Neg will be weak, and where Neg is weak, E will be weak, thus the negator appears adjoined to vP, and the IO and DO appear *in situ* within the vP.

As a consequence of my hypothesis, the same analysis can be applied to the data in (16a-b), from Bobaljik (1995) and involving an indefinite IO (for (16b) see (43b), page 112).

(16) a. Ég gaf [$_{AgrIOP}$ einhverjum stúdent [$_{NegP}$ ekki [$_{EP}$ bókina]]]

I gave some student not book-the

'I didn't give some student the book.'

b. ?Ég gaf [$_{AgrIOP}$ einhverjum stúdent [$_{NegP}$ [$_{EP}$ bókina [$_{vP}$ ekki]]]]

I gave some student book-the not

This represents the same contrast illustrated in (13) and (14) and I propose that the same analyses apply here. In (16a) the indefinite IO *einhverjum stúdent* 'some student', the negator *ekki* 'not', and the definite DO *bókina* 'the book' have all shifted to [Spec, AgrIOP], [Spec, NegP], and [Spec, EP] respectively, where all the heads contain strong features via the process I have described for (13) in the foregoing. The judgement given for (16b) is the result of the same lack of strong features for the Neg head as displayed by (14), where a strong AgrIO is present. This appearance of a strong AgrIO should result in the presence of strong features for Neg and E, but here Neg is weak and the negator remains adjoined to the vP. The conclusion is that indefinite DPs can undergo shift in the double object construction.

3.4 Adjunction of Adverbs to VP and vP-Internal Shift

In this section I show that adverbs of manner may be adjoined to the VP internal to vP, and that shift of the DO to the specifier position of a vP-internal AgrOP projection is a possibility in Icelandic. Consider the contrast shown by the sentences in (17a-b).

(17) a. *Stúdentarnir sýndu börnunum$_i$ ekki myndirnar fljótt öllum$_i$
students-the showed children-the(DAT) not pictures-the(ACC) quickly all
'The students did not show the pictures to all the children quickly'

b. Stúdentarnir sýndu börnunum$_i$ ekki myndirnar öllum$_i$ fljótt
students-the showed children-the(DAT) not pictures-the(ACC) all quickly

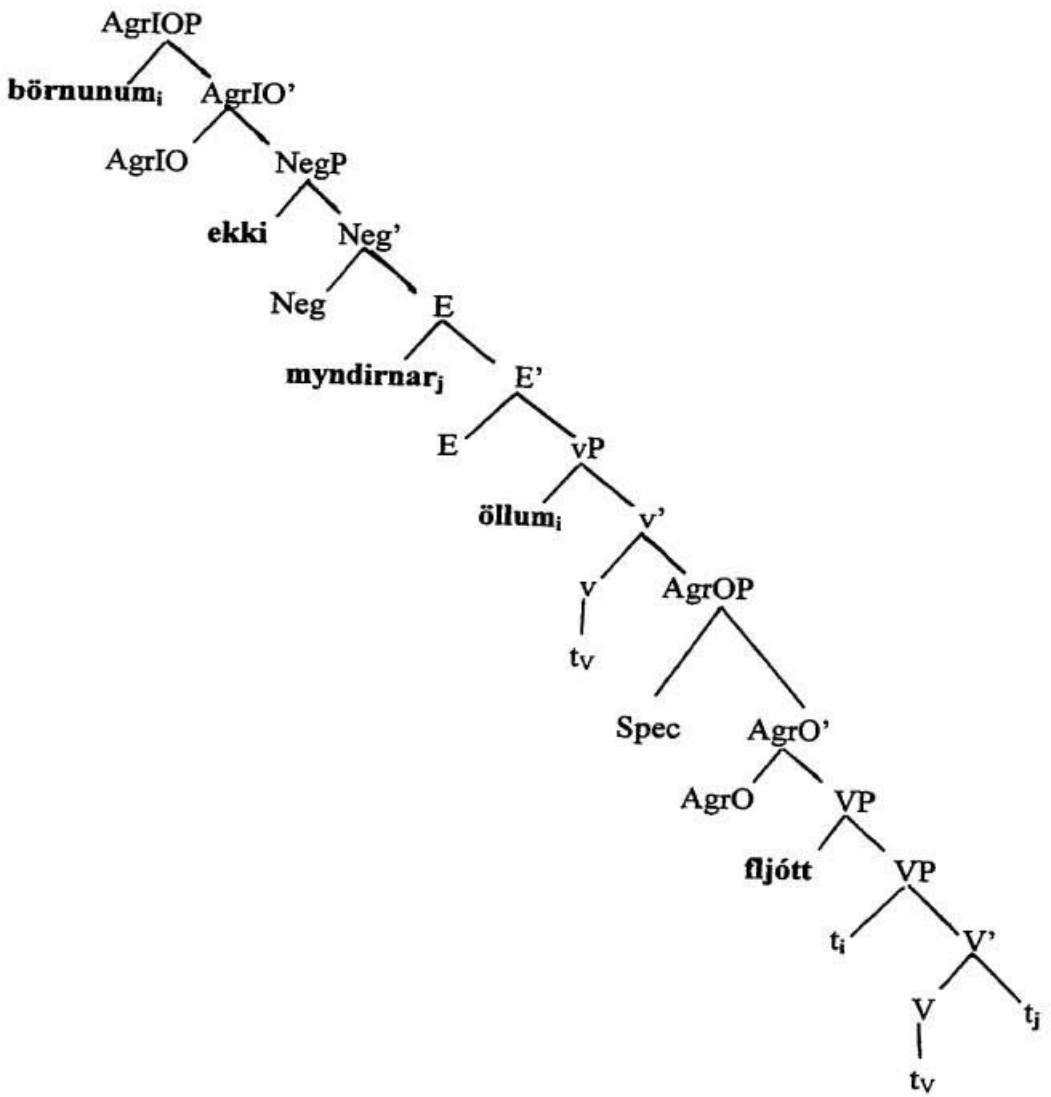
c. Stúdentarnir sýndu [$_{AgrIOP}$ börnunum$_i$ [$_{NegP}$ ekki [$_{EP}$ myndirnar [$_{vP}$ öllum$_i$ [$_{VP}$

students-the showed children-the not pictures-the all

fljótt]]]]]

quickly

d.



I have stated earlier that what appears to be shift of the IO alone in a double object construction is in fact full double object shift of both the IO and the DO out of the vP as a

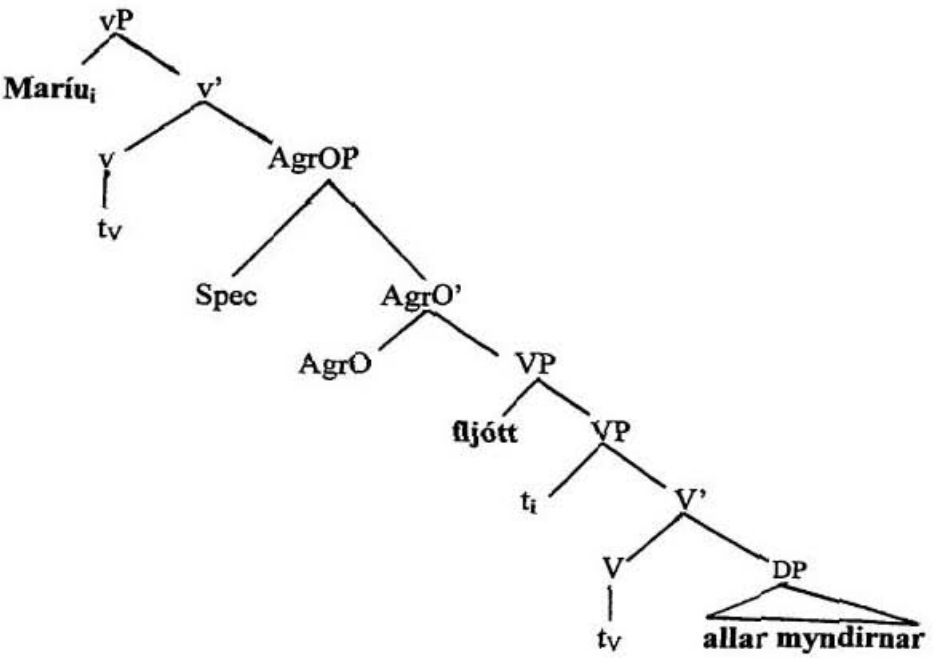
result of a symmetry in head strength. The sentences in (17a-b) show just such an arrangement, where it is apparent that double object shift has occurred due to the positioning of the IO and DO above the quantifier *öllum* 'all' coindexed with the IO and left stranded in the vP. Thus the word order IO-negator-DO is the result of all the heads AgrIO, Neg, and E being strong simultaneously. I propose that the contrast shown in (17a-b), where (17a) is unacceptable, is the result of the positioning of the manner adverb *fljótt* 'quickly'. In (17a) *fljótt* 'quickly' intervenes between the DO *myndirnar* 'the pictures' and the quantifier *öllum* 'all' associated with the shifted IO *börnunum* 'the children'. Under a number of analyses the position of the adverb here could be taken to be adjoined to vP, but the result is an ungrammatical sentence. The sentence in (17b) yields better results with an adjustment of the position of the adverb to follow the quantifier associated with the IO. The DO has shifted here, because it precedes a quantifier associated with the IO, but the adverb cannot follow the DO in this position (as in the unsatisfactory (17a)). When the adverb appears at the end of the sentence following the IO quantifier, as in (17b), then the problem abates. Because the adverb of manner cannot adjoin to vP and thus directly follow the DO in [Spec, EP] (in (17a)), I will take an analysis of the adverb whereby it can adjoin to the inner VP. Thus it follows the IO quantifier which I propose is stranded in [Spec, vP] (see sections 3.5-3.5.2 on evidence for movement of the IO to [Spec, vP]). I present this structural arrangement in (17d). In fact, I will tentatively assume that whenever the DO raises out of complement position to the VP, then a manner adverb prefers to adjoin to VP, where the incorporated particle would appear below it under V.

Further evidence that an adverb of manner can adjoin to the lower VP within an Icelandic sentence follows from the data in (18a-b).

(18) a. Stúdentarnir hafa gefið Maríu fljótt allar myndirnar
students-the have given Maria(DAT) quickly all pictures-the(ACC)
'The students have quickly given all the pictures to Maria.'

b. Stúdentarnir hafa gefið Maríu allar myndirnar fljótt
students-the have given Maria(DAT) all pictures-the(ACC) quickly

c.



Given that the informant had a preference for the construction in (18a) over that in (18b), considering the former to be the best construction, it appears that the more natural position for the manner adverb is adjoined to VP. That this is the position of the adverb is evident from the fact that it follows the IO *Maríu* 'Maria', but precedes the DO *allar myndirnar* 'all the books'. The DO I take to be *in situ* in complement position to the VP.

As well, this is an indication that the IO is in [Spec, vP] position, for if the IO were *in situ* in [Spec, VP], then the adverb would precede both it and the DO. This is not the case, and the IO is in fact in a position higher than the adverb, but below the non-finite verb *gefið* 'give'. (It is also indicative of what I state in more detail in section 3.5, that the non-finite verb is in a position under E outside the vP). This is evidently displayed here, for given that the adverb is adjoined to the VP, and that the IO is in [Spec, vP] above the adverb, then the verb must in a position higher than the IO, and thus outside the vP. I give the structural representation of (18a) in (18c).

3.4.1 vP-internal shift of the DO

Given the contrasting word orders displayed in (18a-b), there is evidence of vP-internal shift of the DO occurring in (18b). The informant indicated that this construction was good, and in this sentence the DO follows the IO in [Spec, vP], and precedes the manner adverb which I have taken to be adjoined to the VP. Thus I propose that the DO has shifted across the VP, and so across the adverb adjoined to that projection and into the specifier position of a vP-internal AgrOP projection. This projection intervenes between the vP and the VP in the structure.

An analysis of this sort explains data in Collins and Thráinsson (1996) given in (19a), where they state that the adverb *oft* 'often' can appear VP-finally without object shift occurring. They refer to vP-external shift, which is blocked due to the presence of a non-finite verb because the object is barred from shifting across it, as predicted by

Holmberg's Generalization, and as observed in (19b) (from Collins and Thráinsson (1996)).

(19) a. Jón hefur lesið bækurnar oft

Jon has read books-the often

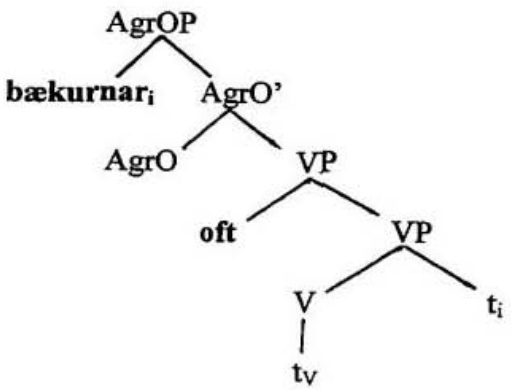
['Jon has read the books often.']

b. *Jón hefur bækurnar lesið (ekki)

Jon has books-the read not

['Jon has (not) read the books']

c.



Under my analysis, shown in the partial structure in (19c), the adverb *oft* 'often' is adjoined to the VP, and the DO *bækurnar* 'the books' undergoes vP-internal shift to [Spec, AgrOP] position between the vP and the VP. The DO therefore shifts across the adverb and comes to precede it, but still follows the non-finite verb *lesið* 'read'. Thus the reason for the sentence final position of the adverb is due to shift of the DO internal to the vP.

3.4.2 The Position of Modified Particles

An analysis by which the adverb of manner is adjoined to the inner VP can also explain the preference for sentence final particles and particles modified by adverbs. I have already proposed that adverbs of manner can adjoin to the lower VP. Continuing with my analysis which includes a vP-internal AgrOP projection, I use data involving particle and particle modified by an adverb as further evidence of vP-internal shift of the DO in Icelandic. This analysis explains the data whereby the DO must precede the modified adverb within the vP, as the examples in (20a-b) indicate (from Collins and Thráinsson (1996) but with my structural analysis).

(20)a. Í gær hafa þeir sent [$_{AgrOP}$ peningana [$_{AgrO'}$ [$_{VP}$ beint upp]]]

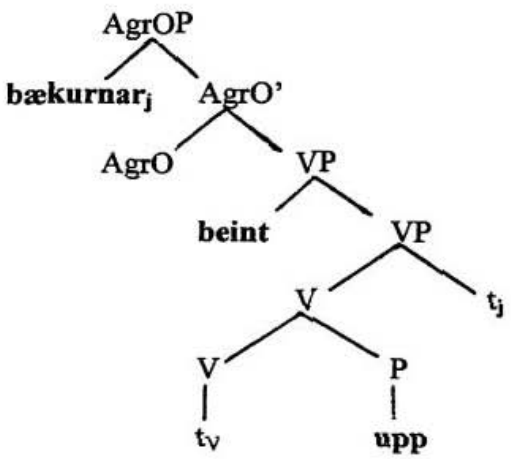
yesterday have they sent money-the straight up

'Yesterday they have sent the money straight up'

b. *Í gær hafa þeir sent [$_{AgrOP}$[$_{AgrO'}$[$_{VP}$ beint upp peningana]]]

yesterday have they sent straight up money-the

c.



It is evident that the only acceptable sentence is one where the adverb and the particle appear sentence finally, as shown in (20a). The DO *peningana* 'the money' has not undergone object shift to a position outside the vP, as the non-finite verb *sent* 'sent' is present and blocks raising of the DO, but the DO comes to precede the adverb *beint* 'straight' and the particle *upp* 'up'. As I have explained previously, I maintain that the adverb is adjoined to the lower VP, and that the particle is incorporated into the verb, but was stranded under V when the verb moves higher in the structure. The DO comes to precede these elements by raising to [Spec, AgrOP] position, which comes between the higher vP and the lower VP.

As a further observation, it appears that the vP-internal AgrO is strong when there is an adverb adjoined to the VP, as the construction in (20b) where the DO remains *in situ* is ungrammatical. (This contrasts with examples in (18a), where it appears that the adverb alone is more natural when it precedes the DO).

There appears to be a preference for a strong AgrO in general in double object constructions, at least when the verb is non-finite, where both objects appear within the vP (neither the DO nor the IO can shift across the non-finite verb). The sentences in (21a-b) illustrate this (from Collins and Thráinsson (1996)).

(21) a. Í gær hafa þeir [$_{E}$ sent [$_{vP}$ strákunum$_{i}$ [$_{AgrOP}$ peningana$_{j}$ [$_{VP}$ t$_{i}$ [$_{V'}$ upp t$_{j}$]]]]

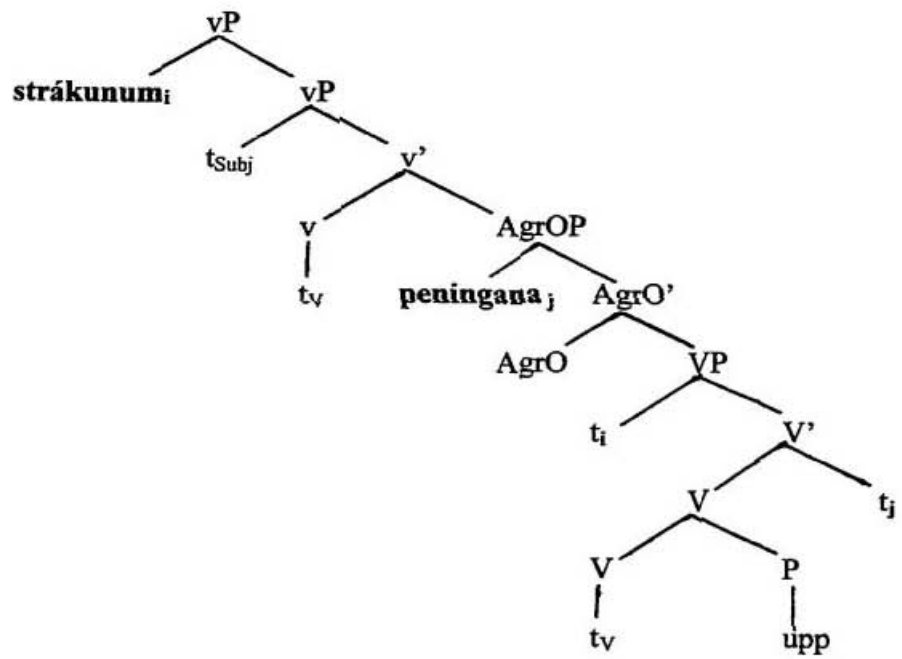
yesterday have they sent boys-the(DAT) money-the(ACC) upp

'Yesterday they have sent the money up to the boys.'

b. (?)Í gær hafa þeir sent strákunum [$_{V'}$ upp peningana]

yesterday have they sent boys-the(DAT) upp money-the(ACC)

c.



As indicated in the data, the IO *strákunum* 'the boys' and the DO *peningana* 'the money' are still within the vP, as they cannot raise above the non-finite verb *sent* 'sent', yet the DO comes to precede the particle. As displayed in (21c), I propose that this is due to movement of the IO into [Spec, vP] position from its base position in [Spec, VP], and vP-internal shift of the DO over the stranded particle under V and into [Spec, AgrOP]. In this way the DO comes to follow the IO which is above it in the structure, but precede the particle which lies below it. The fact that there is a preference for vP-internal shift of the DO in the double object construction, as in the contrast between (21a) and (21b), indicates that the vP-internal AgrO is more naturally strong in this construction.

3.4.3 Problem for vP-internal shift analysis

There is a complication for my analysis of (18b) as an instance of vP-internal shift of the DO; this has to do with the fact that the DO DP *myndirnar* 'the pictures' cannot shift and leave its quantifier *allar* 'all' stranded *in situ.*

(22) a Stúdentarnir hafa gefið Maríu allar myndirnar fljótt
students-the have given Maria(DAT) all pictures-the(ACC) quickly
'The students have quickly given all the pictures to Maria.'

b *Stúdentarnir hafa gefið Maríu myndirnar fljótt allar
students-the have given Maria(DAT) pictures-the(ACC) quickly all
'The students have given Maria all the pictures quickly.'

c Það borðuðu margir strákar bjúgun ekki öll
there ate many boys sausages-the not all
'Many boys didn't eat all of the sausages'

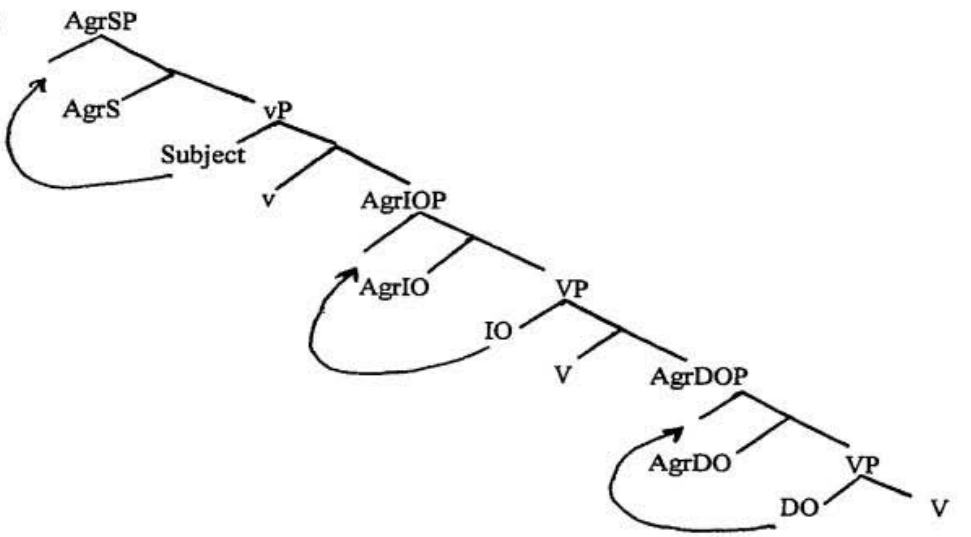
The sentence in (22a) shows what I propose to be vP-internal shift of the DO *allar myndirnar* 'all the pictures', where it follows the IO in [Spec, vP] and precedes the adverb adjoined to VP. The sentence in (22b) shows that shifting of the DO DP alone is not possible, as the sentence produced is ungrammatical. Thus the DO DP cannot shift over the adverb and strand the DO quantifier in complement position to the VP; both elements must move together. This contrasts with (22c) (from Bobaljik and Jonas (1996)), which shows that the DO can strand its quantifier when it shifts outside of the verb phrase in a simple transitive sentence.

3.5 The Non-finite Verb Under E, the Particle Position under V, and the Implication of the IO in [Spec,vP][4]

In my analysis, I maintain that the particle is positioned under V within the vP. I present evidence that this is apparently a fixed position for the particle in Icelandic. This ties in with my hypothesis about the possibility of movement of the IO to [Spec, vP], at least when there is internal shift of the DO to [Spec, AgrOP]. This proposal also leads to the possibility that a non-finite verb would have to be in a position higher than vP in order for it to precede an IO in [Spec, vP], which is the case. I present evidence that the

[4] An alternative to the hypothesis of the IO appearing in [Spec, vP] may be found in Bobaljik (1995). The notion of a vP-internal case checking position is presented, where an AgrIOP exists above a vP-internal AgrDOP. I have already dealt with Bobaljik's structure in section 2.4, and repeat it here in (ii):

(ii)



This structure would account for how the DO could shift vP-internally, but still follow the vP-internal IO. In my own analysis, I have the IO in [Spec, vP] above the DO in [Spec, AgrOP], but under Bobaljik's analysis, the DO would be in [Spec, AgrDOP] and it would still follow an IO shifted to [Spec, AgrIOP] vP-internally within the structure in (i). The problem with this analysis lies in the nature of the vP external position to which the IO can shift. This position, like the projection of E and its 'attract non-oblique' property in my own analysis, would not be a case checking position, but may have some property analogous to my interpretation of E, something like 'attract oblique'.

non-finite verb is under E, and give the data in (23a-d) showing that the verb particle cannot raise out of the vP (the examples are from Collins and Thráinsson (1996)).

(23) a. þeir sendu ekki peningana upp

they sent not money-the up

'They did not send up the money'

b. þeir sendu peningana ekki upp

they sent money-the not up

c. *þeir sendu upp peningana ekki

they sent up money-the not

d. *þeir sendu upp ekki peningana

they sent up not money-the

The examples in (23c-d) show that the particle *upp* 'up' cannot appear in a position above the negator *ekki* 'not'. It would not matter if the negator were adjoined to the vP or in [Spec, NegP], the particle cannot be carried along with the verb beyond the vP.

Now consider the data in (24a-d), with (24a-b) taken from Collins and Thráinsson (1996), but with my own structural analysis.

(24) a. Í gær hafa þeir [$_{E}$ sent [$_{vP}$ strákunum$_{i}$ [$_{AgrOP}$ peningana$_{j}$ [$_{VP}$ t$_{i}$ [$_{V'}$ upp t$_{j}$]]]]

yesterday have they sent boys-the(DAT) money-the(ACC) upp

'Yesterday they have sent the money up to the boys.'

b. (?)Í gær hafa þeir sent strákunum [$_{V'}$ upp peningana]

yesterday have they sent boys-the(DAT) upp money-the(ACC)

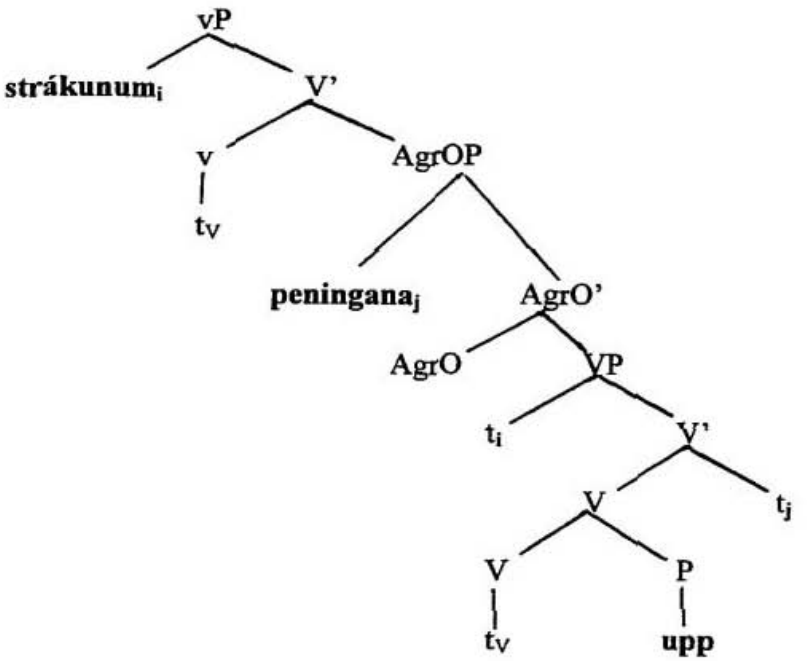
c. *Í gær hafa þeir sent upp strákunum peningana

yesterday have they sent up boys-the(DAT) money-the(ACC)

'Yesterday they have sent the money up to the boys.'

d. *Í gær hafa þeir [$_{E}$ sent upp [$_{vP}$ strákunum peningana]]

e.



As I have earlier postulated, I take the position of the particle *upp* 'up' to be under V, having been stranded there when the non-finite verb *sent* 'sent' raised to some higher position. One would expect that the non-finite verb might raise up under v in the structure; this analysis would account for the fact that the non-finite verb precedes the IO *strákunum* 'the boys' in [Spec, VP]. But consider the sentence in (24c) where the particle cannot accompany the non-finite verb to the position preceding the IO. Given the foregoing evidence which indicates that the particle cannot appear in a position outside the vP, I conclude that the non-finite verb is actually in a position external to the vP. I

give the structural arrangement of (24c) in (24d); the reason for the ungrammaticality in (23c-d) is the same for (24c) - the particle appears vP-externally.

I refer to Travis (1994) and her discussion on the function of E and infinitivals discussed in section 1.4.1. She theorizes that infinitival morphology is associated with E, and her evidence includes an exposition involving the French future and conditional tenses. As I have explained, she proposes that the appearance of infinitival morphology positioned between the verb and the tense marker in these tenses indicates the possibility of generation in E. I repeat her data analysis from (36), page 34 as (25) below.

(25)

	V	E	T/agreement	
future:	parl +	er +	a	's/he will speak'
	sort +	ir +	a	's/he will go out'
conditional:	parl +	er +	ait	's/he would speak'
	sort +	ir +	ait	's/he would go out'

In concord with Travis' work, I postulate that the non-finite past participle in Icelandic is under E, and that the morphology associated with the non-finite verb (the past participle) is generated therein. The morphology associated with the non-finite past participle in Icelandic are described by Einarsson (1945) thusly:

> The past participle is used with the auxiliaries *vera* ['to be,' used with intransitive verbs of motion (Einarsson 1945:13)],...[and] *hafa* ['to have'] to form compound tenses of verbs; after *vera*,... it agrees with the subject: *hann er farinn*, *hún er farin* he (she) has gone; after *hafa* its neuter form alone (accusative) is now used *hann hefur aukið eldana* he has stoked the fires, but in the older language the past participle could in such positions agree with the object (as in French): *hann hefir aukana eldana*. (Einarsson 1945:163)

Taking the sentences from the above reference and giving them my own analysis, I present the sentences in (26a-c).

(26) a. hann hefur auk-ið eld-a-na

he has stoke-NEUT+ACC+SG fire-MASC+ACC+PL-the+MASC+ACC+PL

'He has stoked the fires.'

b. hún er far-in

she is go-FEM+NOM+SG

'She has gone.'

c. hann er far-inn

he is go-MASC+NOM+SG

'He has gone.'

I hold that the non-finite past participle raises to E in order to acquire the appropriate morphology. This morphology is of the same form associated with neuter accusative case, as in *auk-**ið*** of (26a), or nominative case in agreement with the subject, as with *far-**in*** and *far-**inn*** of (26b-c) respectively (morphological analysis through consultation with Vit Bubenik, 1999). The conclusion is that the Icelandic past participle, like the French future and conditional tenses, display non-tense morphology generated in E.

3.5.1 The Negator must Precede the Non-finite Verb as Evidence of the Verb under E

A point to note is that the negator can never follow the non-finite verb, as the examples in (27a-b) illustrate.

(27) a. Í gær hafa strákarnir **ekki** rétt Jóni bækurnar niður
yesterday have boys-the not passed Jon(DAT) books-the(ACC) down
'Yesterday the boys have passed the books down to Jon.'

b. *Í gær hafa strákarnir rétt **ekki** Jóni bækurnar niður
yesterday have boys-the passed not Jon(DAT) books-the(ACC) down

The ungrammaticality of (27b) shows that the negator *ekki* 'not' is barred from appearing in a position following the non-finite verb. This is unexpected if the negator can adjoin to the vP with the non-finite verb *rétt* 'passed' under E, as I have proposed above. Given that the non-finite verb is in a position higher than the vP, the possibility that the negator could adjoin to the vP and therefore follow the verb seems evident. But this word order is illegitimate; the negator must precede the non-finite verb appearing outside the vP. The conclusion is that the negator must be in [Spec, NegP] above the vP when the verb is a non-finite past participle. As well, because the non-finite verb is above the vP but below the negator in [Spec, NegP], this is further evidence that the verb has taken up position under E between vP and NegP.

As for the obligatory positioning of the negator in [Spec, NegP], perhaps this has to do with considerations of negative scope, where, when the lexical verb raises only so far as E, the negator strongly prefers to appear overtly in scope position in [Spec, NegP].

3.5.2 Evidence Indicates the IO in [Spec, vP]

Having accounted for the fact that the particle is barred from raising with the non-finite verb, where the verb is in a position higher than the vP, I now account for the data

in (21a), repeated as (28). Here the DO *peningana* 'the money' can shift over the particle *upp* 'up' but still follow the IO. *strákunum* 'the boys'

(28) Í gær hafa þeir [$_{E}$ sent [$_{vP}$ strákunum$_{i}$ [$_{AgrOP}$ peningana$_{j}$ [$_{VP}$ t$_{i}$ [$_{V'}$ upp t$_{j}$]]]]

yesterday have they sent boys-the(DAT) money-the(ACC) upp

'Yesterday they have sent the money up to the boys.'

If the IO were to remain *in situ* in [Spec, VP], then there would be no position which the DO could acquire which follows the IO but precedes the particle under V; only if the IO shifted to some higher position could this word order be elicited. I maintain that this is the case. Because the particle cannot raise with the verb indicates that the verb is in a position higher than the vP, and because the DO is able to shift over the particle under V but still follow the IO indicates that the IO is in a position higher than [Spec, VP]. Thus I propose that the IO has actually taken up a position in [Spec, vP] (see Ura 1994). In this way it can follow the non-finite verb *sent* 'sent' under E and precede the DO which has shifted over the particle stranded under V to [Spec, AgrOP] internal to the vP. This I have shown structurally in (21c).

3.6 Presence of E Strengthens Support for vP-Internal AgrOP

The presence of a vP-external E with an 'attract category' nature lends credence to my proposal for a vP-internal AgrOP projection. It would be redundant structure to have an additional vP-external $AgrOP_2$ projection; the DO would only require one [Spec, AgrOP] position to have its case checked. As well, if there were a vP-external $AgrOP_2$, then the indefinite subject would appear to be in [Spec, $AgrOP_2$] in an example like (6a).

The fact that the DO could not raise overtly or covertly to this already occupied position is meaningless, as the result is still a grammatical sentence. Thus the *in situ* DO does not need to get its case checked in this position at LF; the vP-internal [Spec, AgrOP] position suffices to check case. The conclusion is that an external [Spec, $AgrOP_2$] position is unnecessary.

3.7 *Unresolved Issues*

3.7.1 The Behaviour of Double Object Pronouns with Negation

In this section, I present evidence that appears to contradict my proposal that when double object shift has occurred, all the heads AgrIO, Neg, and E are strong.

Consider the data in (29a-c) from double object construction where both the IO and the DO are pronouns. The IO here is *þeim* 'them' and the DO is *hana* 'it (FEM+ACC)'

(29) a. Stúdentarnir gáfu þeim hana (i.e. bókina) ekki
students-the gave them(DAT) it(ACC) (i.e. book-the) not
'The students did not give it (i.e. the book) to them.'

b. Stúdentarnir gáfu þeim ekki hana
students-the gave them(DAT) not it(ACC)

c. *Stúdentarnir gáfu ekki þeim hana
students-the gave not them(DAT) it(ACC)

The informant indicated that (29a) was the best construction, (29b) was ok, and (29c) was unacceptable. Thus the data in (29a-c) shows that there is a preference in a double object construction consisting of two object pronouns to have the negator *ekki* 'not' follow the

shifted DO, shown in the contrast in preference for (29a-b). As well, there is little tolerance for a sentence where they remain *in situ* in the vP, as in (29c). Apparently, when an IO pronoun and a DO pronoun are the shifted object components, the negator more naturally follows the shifted DO pronoun, as is indicated in (29a), considered to be the best construction by my informant. The construction where the negator precedes the DO pronoun shown in (29b) is good as well, although not as natural as the foregoing, as indicated the informant's preference for (29a). From these comparisons, it is evident that the IO and DO pronouns prefer to shift overtly to the highest available positions in the structure, and that Neg is preferably weak.

I have stated in my hypothesis that a preference for symmetry in head strength is a mechanism in Icelandic double object shift. As indicated in the examples, a preference is shown to an arrangement where AgrIO is strong, Neg is weak, and E is strong. This might appear to be a problem for my proposal that when AgrIO is strong, Neg will be strong, as AgrIOP immediately dominates NegP. And where Neg is preferably weak here, then E should as well be weak, as only the presence of strong features in Neg, where NegP immediately dominates EP, would elicit strong features in E.

To account for the data, I postulate that pronouns through their own nature raise to the highest positions which they can attain in the structure, and that feature strength is not a factor. Thus I hold that the IO pronoun *þeim* 'them' and the DO pronoun *hana* 'it (FEM+ACC)' have raised to [Spec, AgrIOP] and [Spec, EP] respectively, but of their own accord, not because AgrIO and E are strong. Thus, the pronouns raise overtly, but AgrIO is weak and thus Neg will be weak; this accounts for the appearance of the negator

adjoined to the vP. As well, where Neg is weak, E is weak, even though the DO pronoun has raised to [Spec, EP].

To account for the informant's preference for (29a) over (29b), I propose that the latter contains a strong Neg, as indicated by the position of the negator in [Spec, EP] above the DO pronoun in [Spec, EP]. I hold that where the NegP projection of a strong Neg immediately dominates EP and thus elicits strong features in E, the strong features in E are redundant because the DO pronoun can raise of its own accord, as it does not require attraction by a strong head.

3.7.2 The Behaviour of a full DP IO and DO pronoun with Negation

As the evidence in (29a-c) shows, IO and DO pronouns in a double object construction prefer to move to the highest positions which can accept them, those being [Spec, AgrIOP] and [Spec, EP] respectively. I now deal with an instance where the IO is a full DP and the DO is a pronoun, as is the situation in sentences (30a-c).

(30) a. ??Jón gaf ekki Maríu hana (i.e. bókina)
Jon gave not Maria(DAT) it(ACC) (i.e. book-the)
'Jon did not give it (i.e. the book) to Maria.'

b. Jón gaf Maríu hana ekki
Jon gave Maria(DAT) it(ACC) not

c. ?Jón gaf Maríu ekki hana
Jon gave Maria(DAT) not it(ACC)

Again, as with the double object pronoun examples, there is little tolerance for the IO DP and the DO pronoun to remain *in situ* in the vP, as indicated by (30a). As well, it is evident that the DO pronoun *hana* 'it (FEM+ACC)' is more natural in a position preceding the negator *ekki* 'not' according to the informant's preference; this indicates a propensity for overt object shift on the part of the DO pronoun. Thus, given the judgements above, the sentence in (30b) is the most natural, and so it is evident that the DO pronoun prefers to shift overtly the specifier position of E outside the vP. But in the above examples, there is the IO DP *Mariu* 'Maria'; this being the case, my foregoing hypothesis that pronouns move independently of object shift, and that AgrIO, E, and Neg are all weak cannot apply here due to the presence of a full IO DP. Because of the presence of the IO DP, I must assume that AgrIO is strong, and in my analysis, Neg should be strong as well, which in turn would cause E to be strong. This does not appear to be the situation in this instance, as the most natural word order indicates that Neg is weak, leaving the negator *ekki* adjoined to the vP and thus following the DO pronoun *hana* in [Spec, EP]. To account for this phenomenon, I tentatively claim that the movement of the IO DP is forced by the preference for overt movement by the DO pronoun.

Remembering that when a DO pronoun is present, E does not necessarily have strong features to check. Thus in a construction with an IO DP, a DO pronoun, and negation, the preference is to have a weak E. If Neg were strong, as it should be considering that NegP is immediately dominated by the AgrIOP projection of a strong AgrIO, then E would be strong as well. This would result in the negator appearing in

[Spec, NegP] preceding the DO pronoun in [Spec, EP]. This is the arrangement in (30c), considered a little worse than (30b) by my informant. I take the informant's preference for the construction in (30b) to indicate a preference for a lack of strong features for E. Here the pronoun raises of its own accord, thus strong features are redundant, as with the double object pronoun analysis. I postulate that structural considerations regarding strength take precedence over a feature redundancy. Therefore, in order for the preferred arrangement containing a weak E, Neg must be weak as well. Where the NegP projection of a strong Neg immediately dominates EP, E would contain unnecessary strong features, as the DO pronoun will shift without them. The conclusion is that a preference for a weak Neg takes precedence over a structural arrangement which would trigger a strong Neg (i.e. an AgrIOP with a strong AgrIO immediately dominating NegP) in order to keep E weak and avoid redundant strong features.

3.7.3 *Problem in Single Object Shift*

I have indicated that when one category is strong, then the preference is to have them all strong, where strength is triggered by syntactic configuration. I have taken this proposal to apply in single object shift as presented in section 3.3.1, and I repeat the examples used therein as (31a-b) below.

(31) a. ?Í gær máluðu strákarnir húsið ekki allir rautt

yesterday painted boys-the$_i$ house-the not all$_i$ red

'Yesterday all the boys did not paint the house red'

b. Í gær máluðu strákarnir ekki húsið allir rautt

yesterday painted boys-the$_i$ not house-the all$_i$ red

The informant indicated that the sentence in (31b) was a little better than (31a), and so it appears that the preference is to have the negator *ekki* 'not' precede the shifted DO *husið* 'the house'. This indicates a strong Neg in conjunction with a strong E. Now consider the sentences in (32a-c).

(32) a. ?Hann las ekki bókina oft

he read not book-the often

'He didn't read the book often.'

b. ?Hann las ekki oft bókina

he read not often book-the

c. Hann las bókina ekki oft

he read book-the not often

My informant indicated that (32c) was a little better than (32a-b). Thus the preferred form in (32c) shows the DO *bókina* 'the book' shifted past the adverb *oft* 'often', and as well as shifted over the negator *ekki* 'not' adjoined to vP. This would not be expected given my proposals on feature strength. In the example (32a), both Neg and E are strong, given that the DO NP *bókina* has shifted to precede the manner adverb *oft* adjoined to the VP (or perhaps the vP) and that the negator precedes the shifted DO in [Spec, NegP]. In the example (32b), the DO NP appears *in situ* within the VP, as it follows the manner adverb, indicating a weak E. I take Neg to be weak here, and so the negator *ekki* is adjoined to the vP. Other examples indicate that Icelandic shows a preference for symmetry in strength,

where a higher category is preferred strong in conjunction with a lower category, rather than just having a single strong lower category. This is displayed in the contrasting single object shift examples in (31a-b), and in examples (10a-b) showing the indefinite subject in [Spec, EP], where for both cases the higher Neg category and the lower E category are preferred strong simultaneously. (In double object shift, a similar preference to have all categories strong and all elements shifted, rather than have optional shift for any one element, is shown by the contrast between (13) and (14)). The preferential arrangement shown in (32c) does not follow this tendency, as it has strong features in E as indicated by the DO DP *bókina* shifted over the negator *ekki*, but the negator follows the shifted DO indicating that Neg is weak. Such a structure is not disallowed by my analysis, as I maintain that strong features can be triggered by the immediate dominance of a projection with a strong head. In the case of (32c), E can be strong without affecting the nature of Neg, as EP does not dominate NegP. It is just that the preference seems to be for all categories to be strong simultaneously when shift occurs.

Chapter 4

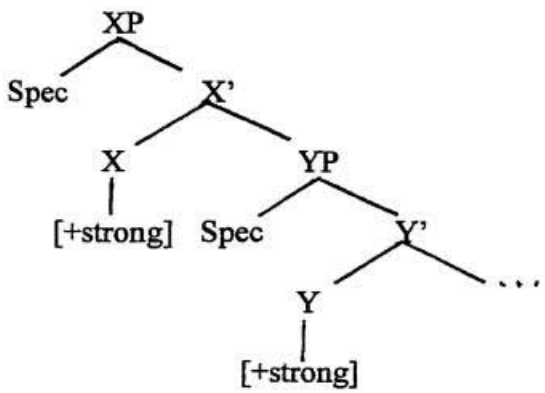
Conclusion

My analysis of Icelandic object shift has shown that various phenomena are apparent given the word order facts. My analysis on the vP-external position of a shifted definite DO DP in Icelandic differs from the other analyses that I have discussed in chapter 2. It is my contention, based on the word order data, that the external position is the specifier position of an EP projection, and not that of a vP-external AgrOP. This conclusion is based upon my observation that both an indefinite subject and a definite DO DP can both appear in this position. This leads me to further conclude that it cannot be associated with an AgrO, whose function is to check the case features on the DO. Following Travis (1994), I take E to be the position above the vP in my structural analysis. Because of its behavior in allowing both an indefinite subject and a definite DO DP in [Spec, EP], I must assume that E has some property 'attract non-oblique' which allows for its acceptance of either indefinite subject/definite DO DP. This also explains why a shifted IO does not appear in this specifier position. A further observation is that E acts as both a functional head and a head which encodes morphology, as proposed by Travis (1994). As a category acting as a functional head, it is invisible in the structure except when some element has shifted overtly to its specifier position, as with an indefinite subject or a definite DO DP, or has adjoined to the head, as with the non-finite past participle. As a category acting to encode morphology, it appears that E encodes forms associated with the non-finite past participle onto the verb root. In fact, in an instance where the non-finite past participle is present, E acts functionally, by having the

past participle adjoined to its head, and it acts to mark morphological information, by encoding the participial morphology.

My main observation involves the strength of the categories involved in shift, those being AgrIO, Neg, and E. My analysis indicates that the presence of strong features can be triggered in a category by virtue of its syntactic position. The data indicates that when a category contains strong features, and its projection immediately dominates the projection of another category which can itself contain strong features, then the preference is for strong features to be present in the latter, as illustrated in (1).

(1)



The assumption can be made that the potential for the [+strong] character bleeds down through the structure from one category to another in the syntax below, given the foregoing conditions. I maintain that Icelandic displays this phenomenon in the shifting of the IO, the negator, and the DO to the specifier positions of the respective projections AgrIOP, NegP, and EP. The triggering of this phenomenon occurs when an AgrIO contains strong features initially. When the preference is for a strong AgrIO, then it attracts the definite IO DP overtly to [Spec, AgrIOP]. This accounts for the shifting of the negator and the definite DO DP: AgrIOP immediately dominates NegP and EP is

immediately dominated by NegP. Thus Neg and E display strong features of their own, a character inherited via the structural position of the projection of a strong AgrIO, where [+strong] is elicited in the other categories because of the pattern of immediate domination beginning with AgrIOP. Thus the presence of [+strong] in Neg and E is a state transferred through structural considerations. This also explains the preference shown to structures where all heads contain strong features. In such an arrangement the IO, the negator, and the DO shift overtly, and so there is a grammatical contrast with the less acceptable structure where the IO and the DO have shifted, but where Neg is weak and the negator has not shifted. I postulate the same mechanism for single object shift as well, where a strong Neg triggers [+strong] in E by way of the immediate domination of EP by NegP.

Through the foregoing analysis of strength properties in the given functional heads, a simpler explanation of the word order displayed in Icelandic object shift is supplied than is offered by the other analyses I have presented. The most notable proposition is that the order IO-Neg-DO does not indicate shift of the IO alone, as in (2a) below. Instead, it represents a symmetry in the strength of the features contained within the heads of AgrIO, Neg, and E; I maintain that they are all strong, and that all the elements IO, negator, and DO have in fact shifted overtly.

(2) a. Ég lána $[_{AgrIOP}$ Maríu $[_{NegP}$ ekki $[_{EP}$ bækurnar $[_{vP}$ t_{IO} $t_{DO}]]]$

I lend Maria not books-the

'I do not lend the books to Maria.'

b. ?Ég lána [$_{AgrIOP}$ Maríu [$_{NegP}$ [$_{EP}$ bækurnar [$_{vP}$ ekki [$_{vP}$ t_{IO} t_{DO}]]]]

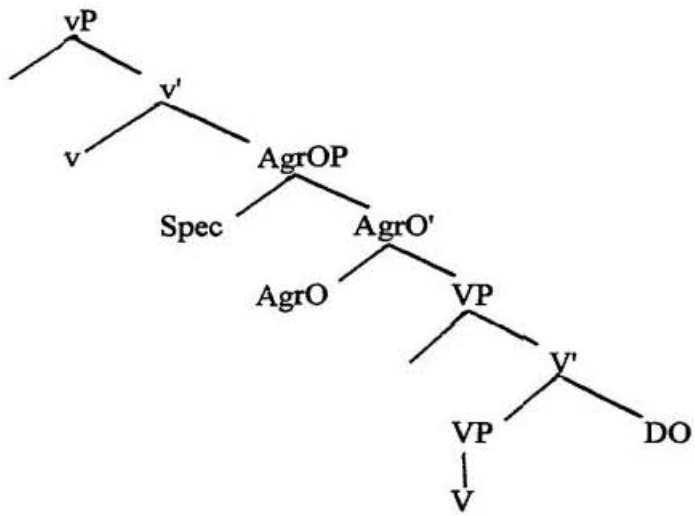
I lend Maria books-the not (neither object stressed)

Thus, where strong features in AgrIO triggers the presence of strong features in Neg and E through the process described above, all the elements shift overtly to the specifier positions of the respective projections. As well, my analysis accounts for the judgement given for (2b), which is often used as an example of double object shift in Icelandic. In this example, the sentence does not interpret as well as (2a). Under my analysis, the problem lies with the fact that the negator *ekki* 'not' has not shifted overtly, but remains adjoined to the vP. Given that AgrIO is strong, indicated by the IO in [Spec, AgrIOP], then Neg should be strong as well, but is not in this case. Therefore the less favourable judgement is the result of a preference to have a strong Neg, and thus to have strong features in all the heads AgrIO, Neg, E. Thus there is no option for the IO to shift alone, instead, the preference is for all the elements shift. Any problem involving asymmetric settings for feature strength does not arise (as with the revised I-II constraint in Collins and Thráinsson (1996)). The same analysis can also be extended to single object shift and to the appearance of an indefinite subject in [Spec, EP]. The data indicates that there are instances when the preference is to have Neg and E strong simultaneously (although there is some data which indicates a preference for a strong E alone, but I leave this unresolved for now). Thus my hypothesis on strength and symmetry finds expression here as well.

Given my proposal that the vP-external position of a shifted definite DO DP is [Spec, EP], I have proposed that the DO has its case features checked in the specifier

position of a vP-internal AgrO position, a position to which it can shift overtly. The structure in (3) illustrates the underlying arrangement.

(3)

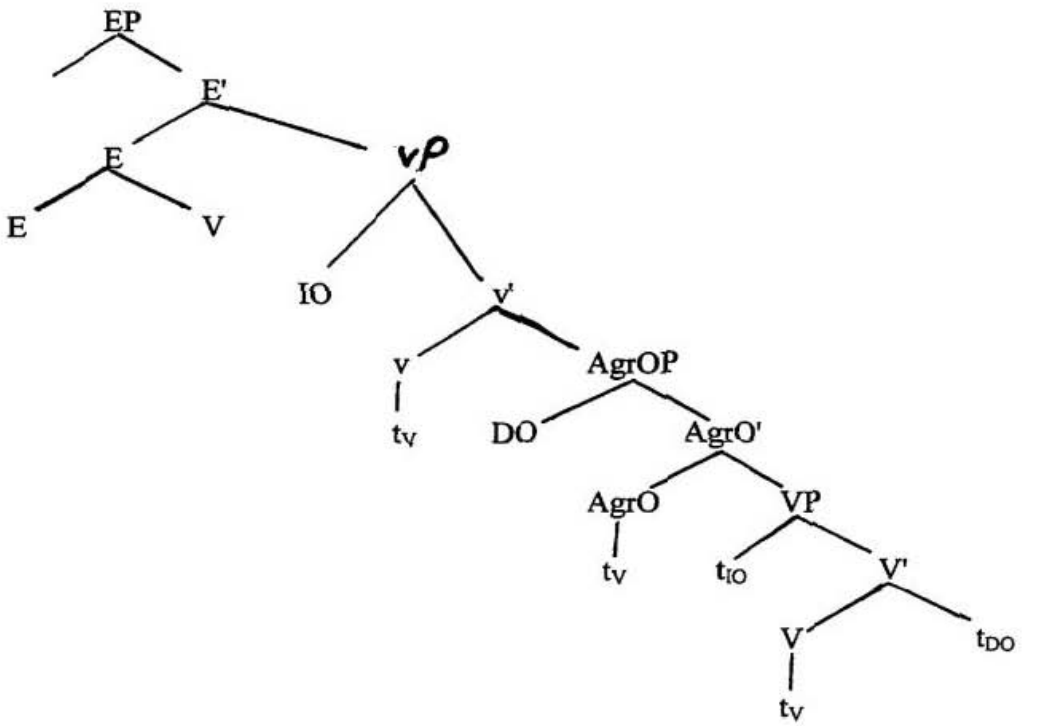


In this respect my proposal is similar to others like Koizumi (1993), who also considers a similar possibility. I have demonstrated that the variation of word order within the vP in relation to the DO DP, the manner adverb adjoined to VP, and the verb particle stranded under V show the variability of the DO position. Given that the DO can remain in its base generated position to the right of the adverb and the verb particle, or can appear overtly shifted to the left of both, my conclusion is that the DO can undergo object shift to [Spec, AgrOP] overtly within the vP. My analysis thus takes into account the sentence final position of verb particles.

A consequence of a vP-internal AgrO analysis is that an IO which remains vP-internal must appear in [Spec, vP] in order for it to precede the DO overtly in [Spec, AgrOP], otherwise the shifted DO in [Spec, AgrOP] would precede the *in situ* IO in [Spec, VP]. I have shown that the non-finite past participle form of the verb does not

appear vP-internally, having raised out of the vP to acquire its past participle morphology under E. This explains why an IO appearing in [Spec, vP] still follows the past participle, but precedes a DO shifted vP-internally to [Spec, AgrOP]. The structural arrangement is given in (4).

(4)



In sum, my analysis of object shift in Icelandic presents an account of the data concisely and simply within the Minimalist framework, requiring less structural architecture than Bobaljik (1995), especially with respect to the verb shell, and requires no asymmetrical constraints on feature strength, as with Collins and Thráinsson (1996). My analysis raises several issues about the interaction between feature characteristics and structural relations, as well as the existence of a projection of the category E and a vP-internal AgrO within the syntax.

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