

# S-ADVERBS IN ICELANDIC AND THE FEATURE THEORY OF ADVERBS

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## Abstract

This paper examines the distribution of five classes of S-adverbs in Icelandic and concludes that the adjunction theory of adverbs is superior to Cinque's (1999) feature theory in accounting for the data. In particular, the relative freedom in the order of S-adverbs and the thematic subject in the double subject construction is expected if the subject occupies a unique position and the adverbs can adjoin recursively to maximal projections preceding or following the subject. By contrast, the feature theory necessitates an excessive functional architecture with multiple subject positions in between the adverb-related projections and this is both theoretically problematic and unmotivated.

The ordering relations among S-adverbs in Icelandic are also discussed in this paper and shown to be much freer than the feature theory would predict. Conjunctive adverbs are especially problematic as they do not behave as specifiers of any functional projection.

## 0. Introduction

Many recent studies have argued that adverbs are specifiers of functional projections (see e.g. Laenzlinger 1996, 1998 and Alexiadou 1997). Of particular interest is Cinque (1999) who argues for a universal set of distinct functional projections hosting adverbs as their specifiers within Kayne's (1994) framework of antisymmetry. In this theory, adverbs are licensed by the (possibly null) heads of these projections which carry the appropriate features for the adverbs. Since the heads of the adverb-related projections are strictly ordered and specifiers are universally on the left, this theory makes strong predictions about the syntax of adverbs cross-linguistically, especially with respect to the relative order of adverbs.<sup>1</sup>

The feature theory of Cinque contrasts with the more traditional theory where adverbs adjoin to independently motivated projections of various kinds and recursive adjunction is allowed. The adjunction theory is well-suited to capture the fact that adverbs may have a rather free distribution with respect to other elements in the clause and this manifests itself in different ways in different languages. The big challenge for this theory is to account for the strict ordering requirements among adverbs in many languages. The obvious solution is to rule out excluded adverb orders on semantic grounds but this is a complicated issue that will not be addressed here (see Ernst 2002 for a comprehensive defence of a scope-based approach to adverb licensing and Svenonius 2002 for a similar analysis in the context of the Germanic languages).

My goals in this paper are quite modest. I will test Cinque's feature theory against data on five classes of sentential adverbs (S-adverbs) in Icelandic to see how it compares to the adjunction theory. I will concern myself with two issues: the relative

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order of S-adverbs and thematic subjects and the relative order among S-adverbs. It will be argued that the adjunction theory is better with respect to the first issue as it avoids the need for unmotivated functional projections hosting various subject positions. However, the second issue is problematic for both theories since the relative order of S-adverbs is much freer than expected. The overall conclusion is that the adjunction theory is superior to the feature theory in accounting for the behaviour of S-adverbs in Icelandic.

### 1. S-adverbs in Icelandic

S-adverbs split into many different classes (see e.g. Jackendoff 1972, Bellert 1977, Ernst 1984, 2002, Travis 1988 and Parsons 1990:62-67) but for concreteness I will focus on the following classes in Icelandic exemplified in (1)-(5):

(1) Speech act adverbs:

*í hreinskilni sagt* ‘frankly’, *í stuttu máli* ‘briefly’, *nánar tiltekið* ‘more specifically’, *satt að segja* ‘honestly’, *þér að segja* ‘sincerely’.

(2) Evaluative adverbs:

*sem betur fer* ‘fortunately’, *skiljanlega* ‘understandably’, *til allrar hamingju* ‘luckily’, *því miður* ‘unfortunately’.

(3) Evidential adverbs:

*að því er talið er* ‘allegedly’, *að því er virðist* ‘apparently’, *augljóslega* ‘obviously’, *greinilega* ‘clearly’, *sannarlega* ‘truly’, *vissulega* ‘certainly’.

(4) Modal adverbs:

*hugsanlega* ‘possibly’, *líklega* ‘probably’, *nauðsynlega* ‘necessarily’, *óhjákvæmilega* ‘inevitably’, *sennilega* ‘probably’, *tæplega* ‘hardly’, *varla* ‘hardly’.

(5) Conjunctive adverbs:

*að lokum* ‘finally’, *engu að síður* ‘nevertheless’, *í fyrsta lagi* ‘firstly’, *samt (sem áður)* ‘still’, *þar af leiðandi* ‘hence’, *þess vegna* ‘therefore’.

In keeping with common practice, I use the term *adverb* to refer not only to lexical adverbs but also to phrases of various kinds that function like adverbs. As illustrated in (1)-(5), many such phrases in Icelandic correspond to lexical adverbs in English.<sup>2</sup> Since most of these phrases are idiomatic, we can assume that they are lexical items just like lexical adverbs and subject to the same syntactic and semantic conditions. It can also be deduced from the discussion in Cinque (1999) that he makes no principled distinction between lexical adverbs and adverb-like phrases of other kinds.

Semantically, S-adverbs are not a coherent class as can be seen with the adverbs discussed in this paper. The adverbs listed in (1)-(4) above belong to the class of

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<sup>2</sup> Thus, the phrase *í hreinskilni sagt* (literally ‘in honesty told’) corresponds to the lexical adverb *honestly*. Icelandic has the adverb *hreinskilnislega* ‘honestly’ but it only has a manner interpretation as in (i). As shown in (ii), it cannot be used as a speech act adverb:

(i) Hann sagði frá öllu hreinskilnislega  
he told about everything honestly

(ii) \*Hreinskilnislega veit ég það ekki  
honestly know I that not ‘Honestly, I don’t know that’



Cinque claims that adverb sequences in a variety of languages conform to the predictions of his theory. As shown in (8) (from Cinque 1999:12), speech act adverbs in Italian must precede evaluative adverbs:

- (8) a. Francamente ho purtroppo una pessima opinione di voi  
'Frankly I have unfortunately a very bad opinion of you'  
(speech act- evaluative)
- b. \*Purtropo ho francamente una pessima opinione di voi  
'Unfortunately I have frankly a very bad opinion of you'  
(evaluative - speech act)

In turn, evaluative adverbs must precede evidential adverbs in Italian and evidential adverbs must precede modal adverbs. This is illustrated in (9)-(10) (from Cinque 1999:174):

- (9) a. Gianni ha purtroppo chiaramente esagerato (evaluative - evidential)  
'Gianni has unfortunately clearly exaggerated'
- b. \*Gianni ha chiaramente purtroppo esagerato (evidential - evaluative)  
'Gianni has clearly unfortunately exaggerated'
- (10) a. (?)Evidentemente Gianni ha probabilmente deciso di partire  
'Evidently Gianni has probably decided to leave'  
(evidential - modal)
- b. \*Probabilmente Gianni ha evidentemente deciso di partire  
'Probably Gianni has evidently decided to leave'  
(modal - evidential)

By transitivity, speech act adverbs must precede evidential and modal adverbs and evaluative adverbs must precede modal adverbs.

Cinque's hierarchy cannot be circumvented by fronting because movement of a lower adverb across a higher adverb violates Relativized Minimality (Rizzi 1990) as the higher adverb would be an intervening specifier for that movement. Hence, adverb fronting should not affect possible adverb orders. However, there is a strong preference in English for breaking up strings of lexical S-adverbs by fronting the highest one. For example, (11a) is judged to be much better than (11b):

- (11) a. Frankly, John is unfortunately the wrong man for the job  
b. ??John is frankly unfortunately the wrong man for the job

The same preference is also found in Icelandic, although it is perhaps weaker than in English (see section 4 below).

## **2.2 Head movement into the adverb-related projections**

The feature theory predicts that movement into the head position of an adverb-related projection should be possible. Cinque (1999:49-51) argues that this is the case in Italian where the finite verb can be in any position within a string of S-adverbs as in the following examples:

- (12) a. **Mi ero** francamente purtroppo evidentemente formato una pessima opinione di voi  
 b. Francamente **mi ero** purtroppo evidentemente formato una pessima opinione di voi  
 c. Francamente purtroppo **mi ero** evidentemente formato una pessima opinione di voi  
 d. Francamente purtroppo evidentemente **mi ero** formato una pessima opinione di voi  
 ‘Frankly I unfortunately had clearly formed a very bad opinion of you’

According to Cinque, the finite verb occupies the head position of the functional projection hosting *francamente* ‘frankly’ in (12b), *purtroppo* ‘unfortunately’ in (12c) and *evidentemente* ‘evidently’ in (12d). This is shown in (13):

- (13) [ F1P francamente [ F1’(**mi ero**) [ F2P purtroppo [ F2’ (**mi ero**) [ F3P evidentemente [F3’ (**mi ero**) ... ] ] ] ] ] ] ]

Alternatively, these data can be accounted for on the adjunction theory by assuming a fixed position for the finite verb and two different sites for (possibly recursive) adjunction of the adverbs: one site above the finite verb and another site below it. Cinque rejects this possibility on the basis of examples like (14):

- (14) a. Gianni saggiamente **ha** accettato  
 ‘Gianni wisely has accepted’  
 b. Gianni **ha** fortunatamente accettato  
 ‘Gianni has luckily accepted’  
 c. \*Gianne saggiamente **ha** fortunatamente accettato  
 ‘Gianni wisely has luckily accepted’

A subject-oriented adverb like *saggiamente* ‘wisely’ can precede a finite auxiliary as in (14a) and an evaluative adverb like *fortunatamente* ‘luckily’ can follow a finite auxiliary as in (14b). Still, these two orders cannot be combined as in (14c), creating the sequence subject-oriented adverb - finite auxiliary - evaluative adverb. The ill-formedness of (14c) follows straightforwardly from Cinque’s hierarchy where evaluative adverbs are higher than subject-oriented adverbs. There is no problem in the other cases since the finite verb is in a lower head position in (14a) than in (14b).

The contrast between (14a,b) and (14c) presents a challenge for the adjunction theory. However, it is important to note that ordering restrictions among adverbs hold whether the adverbs are separated by an intervening element (the finite auxiliary in (14c)) or not (as in (8b), (9b) and (10b)). Since the adjunction theory would have to resort to the same semantic mechanisms to account for all these cases, the examples in (14) provide no particular support for the feature theory.

### 2.3 The relative order of adverbs and other elements

The preceding discussion reveals an important aspect of the feature theory of adverbs: If some element A precedes or follows a class of adverbs B it must be the case that A moves around B rather than the other way round. Thus, the finite verb moves to

different head positions to yield the alternative orders in (12) while the adverbs stay put. As discussed in section 3 below, the same holds for cases where NPs are found on both sides of the same adverb class: The NPs move around the adverbs.<sup>5</sup>

Other ways of accounting for such alternate orders within the feature theory seem to be problematic. One possibility is to assume that the same adverb can be hosted by more than one adverbial projection but this is only plausible for adverbs that are clearly ambiguous between two different readings (such as *honestly*). It would be strange e.g. to account for the difference between (12b) and (12c) by putting *purtroppo* ‘unfortunately’ in the specifier position of two distinct adverbial projections since there is no semantic contrast between these examples.

Another option is some kind of short adverb movement but this would seriously undermine the whole premise of the feature theory that adverbs have a fixed position in the clause. It would also be difficult to find any driving force behind such a movement.

A third possibility would be to invoke some PF-realization rule that allows an element to be in one syntactic position and yet to be realized either before or after a class of adverbs. Crucially, such a rule would only be allowed to affect the relative order of adverbs and other elements in the clause, not the ordering relations among adverbs themselves. This may be possible but it is difficult to evaluate in the absence of any specific proposals.

It is important to note that Cinque’s analysis of (12) and (14) assumes optional verb raising into various functional head positions. As is well-known, optionality is highly problematic within a restrictive theory of movement. All else being equal, an analysis avoiding optional movement should be preferred to an analysis postulating optional movement. This should be kept in mind in the cases discussed in section 3 below.

### 3. S-adverbs and subjects in Icelandic

#### 3.1 The double subject construction

Icelandic has what is sometimes referred to as the double subject construction. In this construction, an expletive subject precedes the finite verb and the thematic subject as shown in (15):

- (15) Það hafa margir lesið bókina  
       there have many read the book

The main verb in (15) is transitive but the double subject construction is possible with all kinds of verbs in Icelandic. Therefore, the familiar term transitive expletive construction only covers examples like (15) where the verb is transitive.

For concreteness, I will assume a clausal architecture where the “traditional” IP is split into two functional projections: AgrSP and TP. In such a clause structure, the thematic subject in the double subject constructions is located in Spec,TP (see Vangsnes 1995, Bobaljik & Jonas 1996 and Jónsson 1996:51-58 among others):

- (16) [<sub>AgrSP</sub> Það [<sub>AgrS'</sub> hafa [<sub>TP</sub> margir [<sub>T'T</sub> [ ... ] ] ] ] ]  
       there       have       many

<sup>5</sup> It is quite clear from Cinque’s (1999) discussion in chapter 5 (especially pages 110-116) that this is how such cases should be treated in his theory.

The S-adverbs discussed in this paper preferably precede the thematic subject in the double subject construction. This is shown in (17)-(21):<sup>6</sup>

- (17) a. Það hafa satt að segja **margir** lesið bókina  
 there have frankly many read the book  
 b.?Það hafa **margir** satt að segja lesið bókina  
 there have many frankly read the book
- (18) a. Það hafa sem betur fer **margir** lesið bókina  
 there have fortunately many read the book  
 b.?Það hafa **margir** sem betur fer lesið bókina  
 there have many fortunately read the book
- (19) a. Það hafa greinilega **margir** lesið bókina  
 there have clearly many read the book  
 b.?Það hafa **margir** greinilega lesið bókina  
 there have many clearly read the book
- (20) a. Það hafa sennilega **margir** lesið bókina  
 there have probably many read the book  
 b.?Það hafa **margir** sennilega lesið bókina  
 there have many probably read the book
- (21) a. Það hafa þess vegna **margir** lesið bókina  
 there have therefore many read the book  
 b.?Það hafa **margir** þess vegna lesið bókina  
 there have many therefore read the book

As is well-known, quantified NPs like *margir* ‘many’ are ambiguous between a partitive reading (‘many of a particular set’) and an existential reading (‘a significant number’). Both of these readings are possible in (17)-(21), i.e. *margir* is ambiguous whether it follows or precedes the S-adverb. As shown in (22), an NP that is unambiguously partitive like *flestir* ‘most’ can be on either side of the adverb:

- (22) a. Það hafa sennilega **flestir** lesið bókina  
 there have probably most read the book

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<sup>6</sup> Some S-adverbs in Icelandic follow the thematic subject in the double subject construction, e.g. subject-oriented adverbs:

- (i) Það hefðu margir fúslega gert þetta  
 there had many happily done this ‘Many would have done this happily’
- (ii) \*Það hefðu fúslega margir gert þetta  
 there had happily many done this ‘Many would have done this happily’



- b. ?Það hafa satt að segja sem betur fer **margir** sennilega lesið bókina  
 there have frankly fortunately many probably read the book
- c. ?Það hafa satt að segja **margir** sem betur fer sennilega lesið bókina  
 there have frankly many fortunately probably read the book
- d. ?Það hafa **margir** satt að segja sem betur fer sennilega lesið bókina  
 there have many frankly fortunately probably read the book

Sequences of S-adverbs like those in (28) sound very stilted in Icelandic but still all of these examples are acceptable in my judgment. As in (17)-(21), the placement of the thematic subject in (28) has no semantic effect. The subject is ambiguous between a partitive reading and an existential reading in all cases. The possibility of a partitive reading in all these cases is further supported by examples like (29) where the subject is unambiguously partitive:

- (29) a. Það hafa satt að segja sem betur fer sennilega **flestir** lesið bókina  
 there have frankly fortunately probably most read the book
- b. ?Það hafa satt að segja sem betur fer **flestir** sennilega lesið bókina  
 there have frankly fortunately most probably read the book
- c. ?Það hafa satt að segja **flestir** sem betur fer sennilega lesið bókina  
 there have frankly most fortunately probably read the book
- d. ?Það hafa **flestir** satt að segja sem betur fer sennilega lesið bókina  
 there have most frankly fortunately probably read the book

On the adjunction theory, examples like (28) and (29) simply illustrate the possibility that many adverbs can be attached to the same node. Thus, (29a) involves triple adjunction to TP, whereas (29d) involves triple adjunction to a projection immediately dominated by TP. There is double adjunction to TP in (29b) and double adjunction to the lower projection in (29c). In all cases, the thematic subject is in the same position, Spec,TP.

The feature theory would have to assume four different subject positions to account for the variation in (28)-(29) and optional movement to all of these positions. This is problematic not only because of optional movement but also because there is no semantic evidence for four different subject positions. Moreover, it may be difficult to justify the existence of four functional projections hosting subjects as their specifiers within a restrictive theory of phrase structure.

In contrast to Icelandic, Mainland Scandinavian does not have the double subject construction. This is exemplified for Danish in (30) (from Vikner 1995:189), Swedish in (31) (based on Holmberg & Platzack 1995:126) and Norwegian in (32) (from Vangsnes 1995:91):

- (30) \*Der har nogen spist et æble  
 there has someone eaten an apple
- (31) \*Det har många män kommit hit idag  
 there has many man come here today

- (32) \*Det har ein katt ete mysene  
there has a cat eaten the mice

This contrast is easier to understand if the double subject construction is about only one position: Spec,TP which is available in Icelandic but not in Mainland Scandinavian.<sup>9</sup> This is a simple parametric variation that is consistent with the adjunction theory of adverbs. However, if many positions are involved as required by the feature theory, this contrast becomes rather mysterious and raises an important question: Why should Icelandic have a multitude of subject positions below AgrSP that are not found in Mainland Scandinavian? In short, the contrast between Icelandic and Mainland Scandinavian with respect to the double subject construction would seem to involve more than one parameter and that is rather implausible.

The conclusion of the foregoing discussion is clear: The adjunction theory of adverbs is superior to the feature theory in that Spec,TP can be identified as the unique position for the thematic subject in the double subject construction in Icelandic.

### 3.2 Subjects in Spec,AgrSP

The S-adverbs discussed in this paper typically follow a subject in Spec,AgrSP and the finite verb. This is illustrated in (33) below:

- (33) a. ...að **Jón** hefur því miður stolið hjólinu  
that John has unfortunately stolen the bike  
b. ...að **Jón** hefur sennilega stolið hjólinu  
that John has probably stolen the bike  
c. ...að **Jón** hefur þess vegna stolið hjólinu  
that John has therefore stolen the bike

Since Icelandic is a V2 language, an embedded clause is used in (33) to ensure that the subject is in Spec,AgrSP rather than Spec,CP.

Except for a few phonologically light adverbs in main clauses (see Sigurðsson 1986), the order adverb-subject is impossible in Icelandic if the subject is in Spec,AgrSP. This is shown in (34):

- (34) a. \*...að því miður **Jón** hefur stolið hjólinu  
that unfortunately John has stolen the bike  
b. \*...að sennilega **Jón** hefur stolið hjólinu  
that probably John has stolen the bike  
c. \*...að þess vegna **Jón** hefur stolið hjólinu  
that therefore John has stolen the bike

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<sup>9</sup> For an account of this fact, see Bobaljik & Jonas (1996) and Bobaljik & Thráinsson (1998).

In contrast to Icelandic, Norwegian allows an adverb to immediately precede a subject in Spec,AgrSP.<sup>10</sup> This shown in (35) – (36) (from Nilsen 1997:21):<sup>11</sup>

- (35) a. ...at **Per** tydeligvis ikke lenger bestandig vinner  
that Per evidently not any longer always wins
- b. ...at tydeligvis **Per** ikke lenger bestandig vinner  
that evidently Per not any longer always wins
- c. ...at tydeligvis ikke **Per** lenger bestandig vinner  
that evidently not Per any longer always wins
- d. ...at tydeligvis ikke lenger **Per** bestandig vinner  
that evidently not any longer Per always wins
- e. ...at tydeligvis ikke lenger bestandig **Per** vinner  
that evidently not any longer always Per wins
- (36) a. Etter dette vant heldigvis ikke lenger alltid **en utlending**  
after this won fortunately not any longer always a foreigner
- b. Etter dette vant heldigvis ikke lenger **en utlending** alltid  
after this won fortunately not any longer a foreigner always
- c. Etter dette vant heldigvis ikke **en utlending** lenger alltid  
after this won fortunately not a foreigner any longer always
- d. ?Etter dette vant heldigvis **en utlending** ikke lenger alltid  
after this won fortunately a foreigner not any longer always
- e. Etter dette vant **en utlending** heldigvis ikke lenger alltid  
after this won a foreigner fortunately not any longer always

Nilsen (1997) notes that the indefinite subject in (36a-c) is most naturally interpreted as non-specific, the subject in (36d) is ambiguous and the most natural reading of the subject in (36e) is specific. However, since both readings are possible in all the examples, there are good reasons to believe that the subject occupies the same position in all cases. This is easily accommodated under the adjunction theory, assuming that adverbs preceding the subject adjoin to AgrSP in Norwegian. Hence, the difference between Norwegian and Icelandic would be that adjunction to AgrSP is allowed in Norwegian but impossible or at least heavily restricted in Icelandic.<sup>12</sup>

On the feature theory, examples like (35) and (36) call for various subject positions interspersed among the adverb-related projections even if there is no real

<sup>10</sup> Swedish patterns with Norwegian in this respect (Holmberg 1993) but Danish seems to be like Icelandic (Haeberli 1999 and Svenonius 2002).

<sup>11</sup> Examples with the word order XP – finite verb – adverb(s) – indefinite subject (as in (36a-d)) are possible in Icelandic but the subject would presumably be in Spec,TP in such cases. The expletive *það* is absent in such cases as it must be clause-initial.

<sup>12</sup> This cannot be the whole story because there are various restrictions on adverb-subject orders in Norwegian (see Haeberli 1999 and Svenonius 2002) but they will not be discussed here.

semantic evidence for all these positions. Moreover, this would force us to postulate a rather implausible parametric difference between Norwegian and Icelandic, namely that Norwegian has a number of subject positions that are unavailable in Icelandic. In essence, this is the same problem that we discussed with respect to the double subject construction: The feature theory requires a much richer functional architecture for hosting subjects than we have any evidence for and this makes it more difficult to make sense of cross-linguistic differences within the Scandinavian languages.

#### 4. The relative order of S-adverbs in Icelandic

This section presents data on the relative order of S-adverbs in Icelandic. It will be shown that the predictions of the feature theory are borne out in that adverb orders consistent with Cinque's hierarchy are always preferred to orders that violate it. However, the expected contrasts are rather weak in many cases. Moreover, conjunctive adverbs have a rather free distribution with respect to the other S-adverbs discussed here, suggesting that they cannot be analysed as specifiers of some adverb-related functional projection.

To be sure, the data discussed in this section would also be problematic for the adjunction theory even if it is supplemented with the scope-based approach to adverb licensing advocated by Ernst (2002). The reason is that this approach makes essentially the same predictions as the feature theory with respect to ordering restrictions among the adverbs under discussion. Hence, it appears that relative order of S-adverbs in Icelandic provides no real evidence for either theory of adverbs.

##### 4.1 Speech act, evaluative, evidential and modal adverbs

The expected order of the relevant S-adverbs under Cinque's hierarchy was shown in (7), repeated here as (37):

(37) speech act adverbs > evaluative adverbs > evidential adverbs > modal adverbs

As illustrated by Cinque (1999), the predictions of his hierarchy are fulfilled in a number of languages but the facts in Icelandic are considerably less clear. Let us now illustrate this, beginning at the top of the hierarchy and working our way downwards. As shown below, speech act adverbs in Icelandic preferably precede evaluative adverbs:<sup>13</sup>

(38) a. Jón hefur satt að segja því miður engan áhuga (speech act - evaluative)  
 John has frankly unfortunately no interest

b. ?Jón hefur því miður satt að segja engan áhuga (evaluative - speech act)  
 John has unfortunately frankly no interest

That (38b) is only slightly degraded is unexpected under the hierarchy in (37). Note that this has nothing to do with the fact that (38) involves full phrases rather than lexical adverbs. As shown in (39), the evaluative adverb *skiljanlega* 'understandably' behaves just like the phrase *því miður* 'unfortunately' in (38):

<sup>13</sup> Cinque (1999:30-32) observes that his hierarchy does not apply to cases involving parenthetical uses of adverbs (set off by a pause) or focusing uses of adverbs (where the adverb modifies directly various constituents). I have excluded these cases in my judgments on the examples in this section.

- (39) a. Jón hefur satt að segja skiljanlega engan áhuga (speech act - evaluative)  
John has frankly understandably no interest
- b. ?Jón hefur skiljanlega satt að segja engan áhuga (evaluative - speech act)  
John has understandably frankly no interest

Speech act adverbs precede evidential as well as modal adverbs in Icelandic. Placing evidential or modal adverbs in front of speech act adverbs is seriously degraded or impossible:

- (40) a. Jón hefur satt að segja greinilega gert mistök (speech act - evidential)  
John has frankly clearly made a mistake
- b. \*Jón hefur greinilega satt að segja gert mistök (evidential - speech act)  
John has clearly frankly made a mistake
- (41) a. Jón vill satt að segja sennilega fara heim (speech act - modal)  
John wants frankly probably to go home
- b. ??Jón vill sennilega satt að segja fara heim (modal - speech act)  
John wants probably frankly to go home

Evaluative adverbs follow speech act adverbs as we have seen but they preferably precede evidential and modal adverbs:

- (42) a. María er sem betur fer greinilega mjög ánægð (evaluative - evidential)  
Mary is fortunately clearly very happy
- b. ?María er greinilega sem betur fer mjög ánægð (evidential - evaluative)  
Mary is clearly fortunately very happy
- (43) a. María er sem betur fer sennilega í bænum (evaluative - modal)  
Mary is fortunately probably in town
- b. ?María er sennilega sem betur fer í bænum (modal - evaluative)  
Mary is probably fortunately in town

As in (38), it can be shown that the relative acceptability of the b-examples above has nothing to do with the fact that the evaluative adverb is phrasal. This is illustrated below where *sem betur fer* ‘fortunately’ has been replaced by *skiljanlega* ‘understandably’:

- (44) a. ?María er skiljanlega greinilega mjög ánægð (evaluative - evidential)  
Mary is understandably clearly very happy
- b. ??María er greinilega skiljanlega mjög ánægð (evaluative - evidential)  
Mary is clearly understandably very happy
- (45) a. ?María er skiljanlega sennilega í bænum (evaluative - modal)  
Mary is understandably probably in town

- b.??María er sennilega skiljanlega í bænum (modal - evaluative)  
 Mary is probably understandably in town

Both (44a) and (45a) are degraded because of the adjacent lexical adverbs with the suffix *-lega* but crucially (44b) and (45b) are not significantly worse than (44a) and (45a) in my judgment.

We are now left with the relative order of evidential and modal adverbs. For semantic reasons, it is difficult to combine evidential and modal adverbs but in so far as that is possible, evidential adverbs precede modal adverbs:

- (46) a.?Hann er vissulega sennilega hæfur (evidential - modal)  
 he is certainly probably competent

- b.\*Hann er sennilega vissulega hæfur (modal - evidential)  
 he is probably certainly competent

The examples in (38) - (46) involve two adverbs but examples with more than two adverbs seem to work essentially the same way. This is shown in (47):

- (47) a. María hefur satt að segja sem betur fer greinilega lesið bókina  
 Mary has frankly fortunately clearly read the book
- b.?María hefur satt að segja greinilega sem betur fer lesið bókina  
 Mary has frankly clearly fortunately read the book
- c.?María hefur sem betur fer satt að segja greinilega lesið bókina  
 Mary has fortunately frankly clearly read the book
- d.\*María hefur sem betur fer greinilega satt að segja lesið bókina  
 Mary has fortunately clearly frankly read the book
- e.\*María hefur greinilega satt að segja sem betur fer lesið bókina  
 Mary has clearly frankly fortunately read the book
- f.\*María hefur greinilega sem betur fer satt að segja lesið bókina  
 Mary has clearly fortunately frankly read the book

Example (47a) illustrates the expected order speech act adverb - evaluative adverb - evidential adverb. All the other examples deviate from this order and they are either marginal or impossible as comparable examples with two adverbs.

The data in (38) – (47) show that orders consistent with (37) are always better than orders that violate it. Apart from that, these data are rather bewildering as no clear pattern can be detected.

#### 4.2 Conjunctive adverbs

Cinque's hierarchy does not include conjunctive adverbs. Interestingly, conjunctive adverbs are not strictly ordered with respect to speech act adverbs or evaluative adverbs:

- (48) a. Hann gerði samt satt að segja mörg mistök (conjunctive - speech act)

he made still frankly many mistakes

b. Hann gerði satt að segja samt mörg mistök (speech act - conjunctive)  
he made frankly still many mistakes

(49) a. Hann hafði samt sem betur fer sloppið ómeiddur (conjunctive - evaluative)  
he had still fortunately escaped unharmed

b. Hann hafði sem betur fer samt sloppið ómeiddur (evaluative - conjunctive)  
he had fortunately still escaped unharmed

In my judgment, there is a clear preference for conjunctive adverbs to precede evidential and modal adverbs:

(50) a. Hann hefur samt greinilega megrast (conjunctive - evidential)  
he has still clearly lost weight

b.?Hann hefur greinilega samt megrast (evidential - conjunctive)  
he has clearly still lost weight

(51) a. Hann veit samt sennilega svarið (conjunctive - modal)  
he knows still probably the answer

b.?Hann veit sennilega samt svarið (modal - conjunctive)  
he knows probably still the answer

This patterning of conjunctive adverbs is not restricted to Icelandic as basically the same facts also hold in English:

(52) a. Nevertheless, John is frankly the wrong man for the job  
(conjunctive - speech act)

b. Frankly, John is nevertheless the wrong man for the job  
(speech act - conjunctive)

(53) a. Nevertheless, this is unfortunately the only possibility  
(conjunctive - evaluative)

b. Unfortunately, this is nevertheless the only possibility  
(evaluative - conjunctive)

(54) a. Nevertheless, Mary is apparently very happy (conjunctive - evidential)

b.?Apparently, Mary is nevertheless very happy (evidential - conjunctive)

(55) a. Nevertheless, they will probably be prosecuted (conjunctive - modal)

b.??Probably, they will nevertheless be prosecuted (modal - conjunctive)

As shown in (11), there is a strong tendency in English to avoid adjacent lexical adverbs by fronting one of the adverbs as in (52)-(55). However, this should not have any effect on possible orders of adverbs for reasons discussed in 2.1.

Conjunctive adverbs are problematic for the feature theory because they should be associated with some functional projection which is strictly ordered with respect to

all the other adverb-related projections. Of course, one should not infer from (48)-(51) that conjunctive adverbs in Icelandic are more or less freely ordered with respect to all other adverbs in the language but they are nevertheless much freer in their distribution than one would expect under the feature theory.

The behavior of conjunctive adverbs is more in line with the adjunction theory where adverb attachment is syntactically quite free and illicit adverb orders are usually ruled out on semantic grounds. Since conjunctive adverbs are not predicational, the data in (48)-(51) are unsurprising from a semantic point of view but this is something that requires further investigation.

## **5. Concluding remarks**

In this paper I have discussed the distribution of five classes of S-adverbs in Icelandic and argued that the adjunction theory of adverbs is superior to Cinque's (1999) feature theory of adverbs in accounting for the data. The main advantage of the adjunction theory is the fact that it can tackle variation in the relative order of S-adverbs and NPs by recursive adjunction of adverbs to the same projection. This makes it possible to identify Spec,TP as the unique position for the thematic subject in the double subject construction in Icelandic. By contrast, the feature theory is forced to postulate multiple subject positions in between all the adverb-related projections. As we have seen, there is no semantic evidence for all these subject positions and the optional movement to these positions is theoretically problematic. For similar reasons, the adjunction theory is superior to the feature theory in deriving adverb-subject orders in Norwegian and cross-linguistic differences in subject and adverb placement within the Scandinavian languages.

The relative order of S-adverbs in Icelandic has been discussed and shown to be problematic for both theories. In particular, the ordering restrictions among S-adverbs are much looser than one would expect from Cinque's hierarchy of adverb-related functional projections. In addition, conjunctive adverbs undermine the whole premise of the feature theory as they do not behave as specifiers of any such projections.

Clearly, some of the conclusions reached in this paper are rather tentative as there is a lot more to be said about important issues and more research is needed. Still, I hope that my discussion here can be the beginning of a lively debate about the proper analysis of S-adverbs in Icelandic and its cross-linguistic implications.

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