

SUBJECT AND OBJECT POSITIONS IN SWEDISH

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## 1. Introduction<sup>1</sup>

The issue of how to analyse so-called verb second languages has received a lot of attention in the recent theoretical literature. In most approaches, the analysis relies heavily on structure for the explanation of the word order phenomena. Starting with den Besten (1983), the finite verb is assumed to head a functional projection, whose specifier position provides the landing site for the sentence initial phrase. The main ideas behind this theoretical approach has been taken up not just within Chomskyan approaches, but can also be said to underlie aspects of Sells' (2001) analysis within LFG. These hierarchically based analyses contrast sharply with the flat analysis in the field approach which is commonly used in standard reference grammars of the Scandinavian languages. Its most well-known formulation can be found in Diderichsen (1946), but there are also more formal implementations of similar ideas by for instance Ahrenberg (1992).

In this paper, we will focus on the part of the clause that follows the finite verb, the so called midfield. We will argue that the flexibility in midfield word order which we find in Swedish as well as in the other Scandinavian languages is best captured by a flat structure and that the approach to c-structure formulated within Lexical Functional Grammar (Bresnan, 2001) is best equipped to capture this. The actual constituent ordering is taken care of by Optimality Theoretic constraints. We will show that the order between the elements results not just from syntactic factors, but that information structure, morphology and prosody play an important role.

## 2. The flexibility of Swedish clause structure

As is well-known, Swedish is a verb-second language, with the unmarked word order standardly assumed to be as in (1). Examples with subject, object and an adverbial in initial position are provided in (2) and (3). In (2), the clause contains only a lexical verb, whereas (3) also involves an auxiliary verb.

(1)	SUBJECT/TOPIC/FOCUS	$v_{fin}$	(SUBJECT)	ADVERBIALS	(REST OF) VP
(2) a.	Eva	gav	förmodligen	inte	Oscar några pengar.
	Eva	give.PST	probably	not	Oscar any money
	SUBJ	$V_{fin}$	ADV	NEG	OBJ <sub>ind</sub> OBJ <sub>dir</sub>
b.	Några pengar	gav	Eva	förmodligen	inte Oscar.
	OBJ <sub>dir</sub>	$V_{fin}$	SUBJ	ADV	NEG OBJ <sub>ind</sub>
c.	Förmodligen	gav	Eva	inte	Oscar några pengar.
	ADV	$V_{fin}$	SUBJ	NEG	OBJ <sub>ind</sub> OBJ <sub>dir</sub>
(3) a.	Eva	har	förmodligen	inte	gett Oscar några pengar.
	Eva	have.PRS	probably	not	give.PPART Oscar any money
	SUBJ	$V_{fin}$	ADV	NEG	$V_{non-fin}$ OBJ <sub>ind</sub> OBJ <sub>dir</sub>

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- b. Några pengar har Eva förmodligen inte gett Oscar.  
 OBJ<sub>dir</sub> V<sub>fin</sub> SUBJ ADV NEG V<sub>non-fin</sub> OBJ<sub>ind</sub>
- c. Förmodligen har Eva inte gett Oscar några pengar.  
 ADV V<sub>fin</sub> SUBJ NEG V<sub>non-fin</sub> OBJ<sub>ind</sub> OBJ<sub>dir</sub>

The string between the finite verb and the elements which are usually assumed to belong to the VP is traditionally referred to as the MIDFIELD. Its right edge is standardly assumed to be marked by the position where the negative adverbial *inte* would go (Ahrenberg, 1992, Diderichsen, 1946, Heltoft, 1986, Platzack, 1985). The elements assumed to belong to the midfield are then the subject — when this is not in clause initial position — and adverbials. However, under certain circumstances an unstressed pronominal object can also occur in the midfield, this is so-called OBJECT SHIFT, it is illustrated in (4a). As (4b) and (4c) show, a stressed pronoun cannot occur in this position, but must occur after the negation.<sup>2</sup>

- (4) a. Eva gav <sub>o</sub>honom förmodligen inte några pengar.  
 Eva give.PST he.ACC probably not any money  
 SUBJ V<sub>fin</sub> OBJ<sub>ind</sub> ADV NEG OBJ<sub>dir</sub>
- b. \*Eva gav «honom förmodligen inte några pengar.  
 Eva give.PST he.ACC probably not any money
- c. Eva gav förmodligen inte «honom några pengar.  
 Eva give.PST probably not he.ACC any money

If the subject is also found in the midfield, a shifted weak object pronoun may precede the subject as in (5a); this is usually referred to as LONG OBJECT SHIFT (cf. Josefsson, 1992, Josefsson, 1993). As the grammaticality of (5b) shows, long object shift is optional so that the subject can also occur immediately after the finite verb.

- (5) a. Då gav <sub>o</sub>honom Eva förmodligen inte några pengar.  
 then give.PST he.ACC Eva probably not any money  
 ADV V<sub>fin</sub> OBJ<sub>ind</sub> SUBJ ADV NEG OBJ<sub>dir</sub>
- b. Då gav Eva <sub>o</sub>honom förmodligen inte några pengar.  
 ADV V<sub>fin</sub> SUBJ OBJ<sub>ind</sub> ADV NEG OBJ<sub>dir</sub>
- ‘Then Eva probably didn’t give him any money.’

A central restriction on object shift is that it cannot shift an object in front of the verb of which it is an argument. As (6) and (7) show, when the second position is filled by an auxiliary verb and the lexical verb is found lower down, within the VP, the pronoun must also occur within the VP, to the right of its selecting verb.

<sup>2</sup> We use <sub>o</sub> to indicate that the word which follows is unstressed, « to indicate word stress and » for emphatic stress.

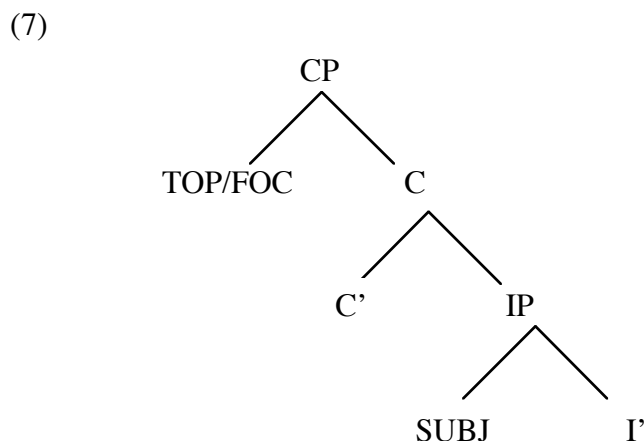
- (6) a. \*Eva har <sub>o</sub>honom förmodligen inte gett några pengar.  
 Eva have.PRS he.ACC probably not give.PPART any money  
 SUBJ V<sub>fin</sub> OBJ<sub>ind</sub> ADV NEG V<sub>non-fin</sub> OBJ<sub>dir</sub>
- b. \*Då har <sub>o</sub>honom Eva förmodligen inte gett några pengar.  
 then have.PRS he.ACC Eva probably not give.PPART any money  
 ADV V<sub>fin</sub> OBJ<sub>ind</sub> SUBJ ADV NEG V<sub>non-fin</sub> OBJ<sub>dir</sub>
- (7) a. Eva har förmodligen inte gett <sub>o</sub>honom några pengar.  
 Eva have.PRS probably not give.PPART he.ACC any money
- b. Då har Eva förmodligen inte gett <sub>o</sub>honom några pengar.  
 then have.PRS Eva probably not give.PPART he.ACC any money

The most influential theoretical work on object shift is due to Holmberg (1986, 1999) and since his first discussion of the phenomenon, many different generative accounts have been proposed, for instance by Collins & Thráinsson (1996), Hellan & Platzack (1995), Josefsson (1992), Kaiser (1997), Sells (2001) and Vikner (1994, 1997).

Even though object shift is a well-described phenomenon, the word order in the midfield is even more flexible than noted in most theoretical approaches. Under certain circumstances we find subjects following adverbials, objects occurring between adverbials — “adverb intermingling” — and under certain specific circumstances — objects preceding the main verb. In this paper we will propose an analysis of Swedish subject and object placement which takes into account morphological, prosodic and information structural constraints. We take our point of departure from Sells (2001).

### 3. Sells’ 2001 LFG-OT analysis of Swedish clause structure

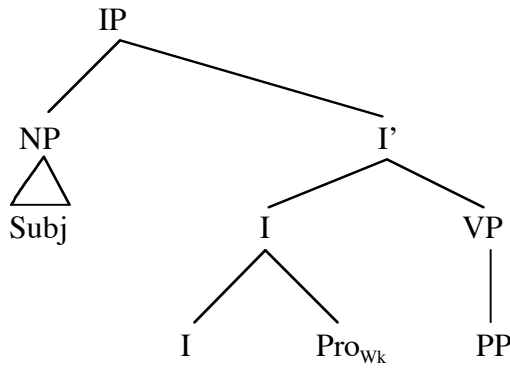
Sells (2001) assumes the structure in (7) for Swedish clauses.



For the position of TOP/FOC and SUBJ, Sells (2001:6, 16) refers to the Structure-Function Association Principle (SFAP) (cf Bresnan 2001:102), which states that grammaticalised discourse functions (GDFs) like TOP, FOC and SUBJ occur in the specifier position of a functional category. In Sells’ analysis, this constraint is not assumed to be part of GEN, but is captured as a violable constraint \*GDF-in-VP. However, this constraint is sufficiently highly ranked for the subject always to occur in Spec of IP (or if it is TOP/FOC, in Spec of CP) in winning constructions.

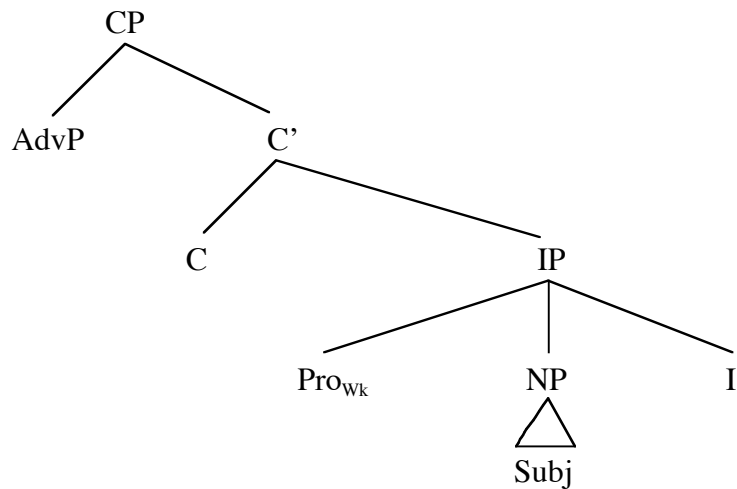
It is then also assumed that the position of  $Pro_{wk}$  can be established in relation to the position of the subject. Hence, a weak pronoun is normally found adjoined under I (8a), but when it precedes a lexical subject, as in long object shift, it is assumed to be found under IP, since the subject occupies the Spec-IP position, as illustrated in (8b).

(8) a.



(cf Sells 2001:63)

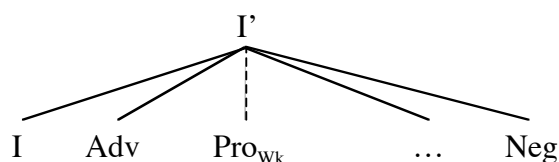
b.



(cf Sells 2001:66)

The adverbials which occur in the midfield show flexibility in ordering and in a striking departure from previous generative work, Sells (2001:56–63) argues convincingly in favour of a flat structure with a multiple branching  $I'$  for these elements, using alignment constraints to give the correct linear order. If a weak pronoun occurs between adverbials, then it is found under  $I'$ , as in (9).

(9)



These rather unorthodox structures involving  $Pro_{wk}$  are generated because  $Pro_{wk}$  in Sells' approach is of a special category type,  $X$  (rather than  $X^0$ ), which GEN generates in these special structural positions. When an  $X^0$  is generated in these positions, it may carry any GF (Sells 2001:117). Given these definitions, GEN drastically overgenerates and the actual distribution and linear order is determined by a family of constraints,  $*DOM(element, node)$ , which puts constraint on which node can dominate elements of category  $X$  (Sells 2001:117–118). Even though Sells' analysis involves a flat  $I'$  structure, his account of the distribution of weak pronouns relies quite heavily on structure.

#### 4. A more radical approach to the midfield

##### 4.1 The basic constraints

Given the flexibility in the positioning of the object illustrated by (4) and (5) above, we will explore an analysis involving a flat midfield, where linear order is determined by OT constraints. The strong association between second position in the clause and the finite verb is usually assumed to result from the presence of a functional category which attracts the finite verb.<sup>3</sup> The specifier position of this functional category then provides the only phrase which can precede the finite verb. This idea goes back to den Besten (1983) and the list of more recent references to such work is almost endless, for Scandinavian languages see for instance Rögnvaldsson and Thráinsson (1990) Holmberg and Platzack (1995), Schwartz and Vikner (1996). Alternative explanations for the second position of the finite verb has been proposed which treat the finite verb much like a clitic (Anderson, 1993, Anderson, 1996, Kaiser, 1997). We shall follow the former line here and assume that there is a clause level functional category  $F'$  which hosts a finite verb. However, we depart from some of the previous analyses, including Sells (2001), in that we assume the existence of only one such category. In order to avoid getting caught in the debate about the roles of the two clause level functional categories  $I$  and  $C$  (see §2.2 in Sells (2001)), we refer to this functional category as  $F$  (for finite). The so-called midfield then consists of the daughters of  $F'$ . We shall provide evidence in this paper that the subject as well as non-pronominal objects can, under certain circumstances, be part of the midfield and hence should be included under  $F'$ . For a detailed discussion of the structure of GEN, we refer to Sells (2001:112–129), our assumptions about the c-structure of Swedish can be illustrated in terms of c-structure rules as in (10).<sup>4</sup>

<sup>3</sup> We use 'attract' here in a non-technical sense, not necessarily implying movement.

<sup>4</sup> It should be pointed out that the structure we propose here is similar to that which Sells (2001:190–192) sketches for Icelandic.

- (10) a.  $FP \rightarrow F', NP$   
 $\uparrow=\square, \uparrow GDF=\square$
- b.  $F' \rightarrow F, NP, NP, NP, AdvP, VP \dots$   
 $\uparrow=\square, \uparrow SUBJ=\square, \uparrow OBJ=\square, \uparrow OBJ_0=\square, \uparrow ADJUNCT=\square, \uparrow=\square$
- c.  $VP \rightarrow V, NP, NP, \dots$   
 $\uparrow=\square, \uparrow OBJ=\square, \uparrow OBJ_0=\square$

Within  $F'$ , OT constraints predict the correct linear order between constituents. We shall assume that there are two major types of constraints.<sup>5</sup>

- (i) T-CONSTRAINTS, which determine the typological class of the language, the major ordering between lexical heads and their arguments and between major constituents. These constraints may refer to GFs and DFs (SU<OBJ) or to information structural notions (GROUND<RHEME) and their domain is the clause nucleus.
- (ii) A-CONSTRAINTS, which align certain classes of elements within a particular subtree, these constraints determine the placement of elements like for instance weak pronouns, negation and certain scope taking elements. Given that such elements may need to be aligned with respect to GFs, A-CONSTRAINTS may also involve GFs as their parameters.

Given the general ideas underpinning this approach, Lexical-Functional Grammar and its approach to X-bar structure becomes the obvious framework within which to formulate the analysis. The fact that, as will become clear, the order within  $F'$  is determined by competing constraints referring not to structure, but to functional, information structural and phonological notions argues for an OT approach. Within the constraint set, it is particular the T-CONSTRAINTS which places this as an LFG-OT analysis; the fact that these constraints refer directly to GFs and DFs means that the ideas could not easily be translated into Minimalist-OT.

Turning now to the basic constraints, we assume that the unmarked word order between grammatical relations of Swedish is due to the constraints in (11), where OBJ generalises over direct and indirect objects, which do not straight forwardly correspond to OBJ and OBJ<sub>0</sub>.

$$(11) \quad SU < OBJ \quad \text{and} \quad OBJ_{IND} < OBJ_{DIR}$$

As the examples in (12) and (13) illustrate, these constraints hold regardless of whether the noun phrases to which the functions correspond are both weak pronouns, full pronouns or lexical noun phrases.

- (12)  $D\ddot{a} \text{ s\ddot{a}g} \quad Maria \quad Oscar. \quad \text{SUBJ} < \text{OBJ}$   
 then see.PST Maria Oscar  
 'Then Maria saw Oscar.' NOT 'Then Oscar saw Maria.'

<sup>5</sup> Sells (2001:71) assumes a distinction between two types of constraints which in some ways is similar to the one we make.

- (13) a. Då såg <sub>o</sub>han <sub>o</sub>henne inte.  
 then see.PST he.NOM(Pro<sub>wk</sub>) she.ACC(Pro<sub>wk</sub>) not  
 b. \*Då såg <sub>o</sub>henne <sub>o</sub>han inte.  
 then see.PST she.ACC(Pro<sub>wk</sub>) he.NOM(Pro<sub>wk</sub>) not  
 ‘Then he didn’t see her.’
- (14) Oscar gav vargen grodan. OBJ<sub>IND</sub> < OBJ<sub>DIR</sub>  
 Oscar give.PST wolf.DEF frog.DEF  
 ‘Oscar gave the wolf the frog.’ NOT ‘Oscar gave the frog the wolf.’
- (15) a. Oscar gav « honom « den.  
 Oscar give.PST 3SG.MASC.ACC 3SG  
 b. \*Oscar gav « den « honom.  
 ‘Oscar gave it to him.’

However, if an object is a TOPIC or FOCUS, it can precede the subject as in (16a), similarly, a direct object can precede an indirect object as in (16b).

- (16) a. Den filmen såg Oscar igår.  
 that film.DEF see.PST Oscar yesterday  
 ‘That film, Oscar saw yesterday.’  
 b. Stekt kyckling gav Oscar hunden ofta.  
 fried chicken give.PST Oscar dog.DEF often  
 ‘It was fried chicken that Oscar often gave to the dog.’

Adding a constraint relating to TOPIC and FOCUS, the constraint ranking in (17) gives us the correct basic word order for Swedish. In what follows, we will abbreviate TOP/FOC-L to TOP-L just to simplify the presentation of the rankings. Also, we shall have little to say about [OBJ<sub>IND</sub> < OBJ<sub>DIR</sub>] in what follows and often it will be omitted from rankings.

- (17) TOP/FOC-L >> [OBJ<sub>IND</sub> < OBJ<sub>DIR</sub>] >> [SU < OBJ]

#### 4.2 Object placement

In standard OT, alignment constraints formally have four parameters: ALIGN(X, L/R; Y, L/R), where X is the element and Y its domain. However, given that we are focusing here on the midfield, i.e. F’, the domain in all A-constraints that we discuss will be understood to be F’, so that we shall use X-L as an abbreviation for ALIGN(X, L; F’, L).<sup>6</sup>

As illustrated by the examples (4) and (5) above, Pro<sub>wk</sub> (normally) occurs on the left edge of F’, immediately following the finite verb, i.e. there is a high ranked alignment constraint PRO<sub>wk</sub>-L which is, however dominated by HEAD-L. As illustrated by (6) and (7), if there is an auxiliary verb, so that the lexical verb of which Pro<sub>wk</sub> is a complement is found in the VP, then Pro<sub>wk</sub> must follow that verb. We represent this as a constraint on verbs and their complements V < COMPL,

<sup>6</sup> The distinction between X and X<sup>o</sup> which plays a crucial part in Sells’ analysis will not be important to us here.



but it is most likely that this is a T-constraint, hence a more general constraint on heads and their complements. V < COMPL must then dominate PRO<sub>wk</sub>-L.

The data presented so far indicates that the negation always occurs on the right edge of the midfield and we assume a low ranked A-constraint NEG-L. The ranking between the three constraints we have just introduced is then clear, what is not immediately obvious, however, is how these constraints fit into the ranking we established in (17). In particular, the ranking between [ SUBJ < OBJ ] and PRO<sub>wk</sub>-L needs to be established. The examples which contain both a non-pronoun subject and a Pro<sub>wk</sub> object in the midfield are then of special interest, these are the so-called long object shift constructions. As (5) illustrates, the shift is optional in these constructions, but the one where the Pro<sub>wk</sub> object precedes the subject, i.e. (5a), sounds more marked. There are presumably other factors determining when long object shift applies but until these factors have been established we adopt the constraint ranking in (18).

(18) HEAD-L >> [ V < COMPL ] >> [ SUBJ < OBJ ] | PRO<sub>wk</sub>-L >> NEG-L

The examples in (19) illustrate that this ranking can account for the basic order discussed in §1, including long object shift (19b):

- (19) HEAD-L >> PRO<sub>wk</sub>-L
- a. Eva gav <sub>o</sub>honom inte några pengar.  
 Eva give.PST he.ACC not any money  
 SUBJ < OBJ >> PRO<sub>wk</sub>-L
- b. Då gav <sub>o</sub>honom Eva inte några pengar.  
 then give.PST he.ACC Eva not any money
- c. Då gav Eva <sub>o</sub>honom inte några pengar.  
 ‘Then Eva probably didn’t give him any money.’
- [ V < COMPL ] >> PRO<sub>wk</sub>-L
- d. Eva har inte gett <sub>o</sub>honom några pengar.  
 Eva have.PRS not give.PPART he.ACC any money
- e. \*Eva har <sub>o</sub>honom inte gett några pengar.  
 Eva have.PRS he.ACC not give.PPART any money  
 ‘Eva hasn’t given him any money.’

As a consequence of the c-structure we assume in (10) and the principle of Economy of Expression (Bresnan, 2001:91), whenever F is filled by a main verb, as in (19a,b) there is no VP node, but all elements except the initial one are part of the F’ midfield. Only when the lexical verb is not in F will there be a VP. This in turn means that we cannot rely on GEN or hierarchical constraints to predict the correct order in (19a/b). Instead our alignment constraints must be able to account for the order. In particular, the position of the negation in (19a) must be accounted for if there is no VP, since the negation has been assumed to mark the left edge of the VP, or as in Sells’ account, the right edge of I’. We shall assume the alignment constraints and ranking in (20) to account for the order within F’:

(20) SU-L >> NEG-L >> OBJ-L

In fact, NEG in this constraint refers not just to the negation *inte*, but to any phrase carrying a feature [NEG], including full lexical objects. As shown in (21), negation can be expressed either

at phrase level, with the adverb *inte*, or with an noun phrase internal negation on the object, either in the form of a determiner *ingen* or as (part of) a pronoun as in (21b).

- (21) a. Hon sa inte nånting.  
 she say.PST not anything  
 ‘She didn’t say anything.’
- b. Hon sa ingenting.  
 she say.PST nothing  
 ‘She said nothing.’

Such a phrase containing a NEG marker must appear under F’ (unless it is FOC/TOP) and may not be part of another phrasal projection such as PP or VP. Consequently we only expect the version with clausal negation to be possible in these cases. This contrasts sharply with the constraints which apply to negative phrases in English as (22c) illustrates. The other Scandinavian languages do, however, have constraints similar to Swedish (see Christensen (2003) for an overview of the data and a Minimalist OT analysis).

- (22) a. Vi [pratar inte [med nån]<sub>PP</sub>]<sub>F’</sub>.  
 we talk.FIN not with anyone  
 ‘We don’t talk to anyone.’
- b. \*Vi [pratar [med ingen]<sub>PP</sub>]<sub>F’</sub>.  
 we talk.FIN with no-one
- c. We talk to nobody.

Swedish has strategies for getting around the restriction on the distribution of negative elements. Either the clausal negation is used with a positive noun phrase, as in (23a) or with a negative polarity item, as in (23b). Alternatively, a noun phrase with internal negation can be used, but then it has to occur higher up, under F’, thus preceding its lexical verb, as illustrated by (23c-d).

- (23) a. Jag har inte sett en hund.  
 I have.PRS not see.PPART a dog  
 ‘I haven’t seen a dog.’
- b. Jag har inte sagt nånting.  
 I have.PRS not say.PPART nothing  
 ‘I haven’t said anything.’
- c. \*Jag har sagt ingenting / sett ingen hund.  
 I have.PRS say.PPART nothing see.PPART no dog
- d. Jag har ingenting sagt / ingen hund sett.  
 I have.PRS nothing say.PPART no dog see.PPART  
 ‘I’ve said nothing.’

We will not analyse this further here, just note that it provides further support for our proposal that OBJ can be generated under F’.

#### 4.3 The role of morphological marking

The partial ranking in (24) correctly predicts that an object can precede a subject as long as the object is  $Pro_{wk}$  and the subject is not. This is borne out by data such as (25).

(24)  $PRO_{wk}\text{-L} \gg SU\text{-L} \gg OBJ\text{-L}$

- (25) a. Där mötte  $_{o}honom$  François Mitterand.  
 there meet.PST he.ACC FM  
 ‘There François Mitterand met him.’
- b. \*Där mötte  $_{o}honom$   $_{o}hon$ .  
 there meet.PST he.ACC she.NOM

The pronoun *honom* in (25) shows overt marking for [CASE *acc*]. There are several pronouns in Swedish which do not have overt case distinctions; *den* ‘3SG.NON-NEUT.NOM/ACC’ and *det* ‘3SG.NEUT.NOM/ACC’. In the spoken language and increasingly also in the written language *dom* ‘3PL.NOM/ACC’ also replaces the two case marked forms *de* ‘3PL.NOM’ / *dem* ‘3PL.ACC’. When the weak form of the pronouns lacking a case distinction precedes a noun phrase which is not overtly marked for case, then the pronoun will always be interpreted as the subject as indicated by (26). The intuition here is that in order for a non-TOP/FOC object to precede a subject, it must firstly be  $Pro_{wk}$  and secondly be explicitly marked as an object.

- (26) Där mötte  $_{o}dom$  François Mitterand.  
 there meet.PST they.NOM/ACC FM  
 ‘There they met François Mitterand.’ NOT ‘There FM met them.’

Given that lexical noun phrases are not marked for case in Swedish, *dom* could in principle be mapped onto OBJ and François Mitterand to SUBJ in (26). However, assuming that *dom* is unspecified for CASE, the interpretation in which the subject precedes the object in (26) will always win since if the lexical NP is interpreted as the subject, SUBJ-L is violated more than when the pronoun is and SUBJ-L is ranked higher than OBJ-L in (24). On the assumption that subjects are generally non-accusative, if the pronoun has the feature [ACC], as in (25), mapping it to the function SUBJ would incur a PARSE violation. Hence the constraint rankings we have assumed so far predict the correct interpretation of (26).

#### 4.4 The role of scope

As examples like (2b) and (3b) illustrate, adverbials generally follow the subject in F’. If we distinguish between negation and other adverbials, then the adverbials tend to occur immediately before the negation. Like Sells (2001), we assume a family of constraints ADV-L whose members are ranked fairly low (NEG-L can be described as a special case of ADV-L). Given the other constraints we assume, we get the ranking in (27). Examples motivating this order can be found in (28).

(27)  $PRO_{wk}\text{-L} \gg SU\text{-L} \gg ADV\text{-L} \gg NEG\text{-L} \gg OBJ\text{-L}$

- (28) a. Oscar såg  $_{o}den$  väl förmodligen inte.  
 Oscar have.PRS it surely probably not  
 ‘I guess Oscar probably didn’t see it.’

- b. Då såg Oscar ju troligtvis aldrig filmen.  
 then see.PST Oscar evidentially probably never film.DEF  
 ‘Then Oscar must probably never have seen the film.’

The order between adverbials is generally assumed to be rather fixed, but there is some variation, both with respect to the order between adverbials and arguments and with respect to the ordering between adverbials. Some of this variation can be accounted for in terms of scope (cf Svenonius, 2002: esp §3.1). In particular if the subject is scope sensitive, the order between the adverbials and the subject is sometimes important. This is illustrated by (29).

- (29) a. Där vill någon aldrig bo.  
 there want.PRS someone not live.INF  
 ‘There is someone who never wants to live there.’  
 b. Där vill aldrig någon bo.  
 there want.PRS not someone live.INF  
 ‘No-one ever wants to live there.’

In (29a), the subject precedes the negation and is interpreted as being outside its scope whereas in (29b), the subject is interpreted as being under the scope of negation. We can assume then that there is a constraint requiring a scope taking element to immediately precede the constituent over which it takes scope and that this constraint is ranked above SU-L and ADV-L:

(30) SCOPE >> SU-L >> ADV-L

#### 4.5 The role of information structure

Proper names and definite descriptions are normally not scope sensitive and such subjects may occur on either side of negation. In these cases, the reason behind the ordering has more to do with information structure than with scope, (although sometimes the two interact). In these cases, information structural notions beyond the standardly assumed FOCUS and TOPIC are required. There is evidence from many languages that more subtle information structural distinctions need to be made in order to account for word order (e.g. for general word order in languages such as Finnish (Kaiser, 2000, Vallduví, 1991, Vilkuna, 1989) and for certain phenomena like verb clusters in German (Cook, 2001) and work on a more fine grained i-structure has been done within LFG (Choi, 1997, Choi, 1999, King, 1997)). We do not aim to give a complete account here, but only to indicate some of the distinctions which need to be made. Consider the examples in (31).

- (31) a. Då skulle alla grodorna antagligen dö. SUBJ<ADV  
 then shall.PST all frog.PL presumably die.INF  
 b. Då skulle antagligen alla grodorna dö. ADV<SUBJ  
 then shall.PST presumably all frog.PL die.INF

Both orders in (31) are perfectly grammatical, but they would be used in different contexts. The difference between these two examples lies in what is assumed to be already known (ground) and what is new to the hearer, or rhematic (cf. Vallduví, 1991, Vallduví and Engdahl, 1996). In (31a), *alla grodorna* (‘all the frogs’) is part of the ground, and it is only their presumed dying that is new (or rhematic). In (31b), on the other hand, the information that ‘all the frogs might die’ is

new. There is a general tendency in Swedish for rhematic, i.e. informationally new material to come late in the sentence, preceded by ground (=thematic) material. There are additional factors affecting information structure, such as the placement of the focal accent, which we will not go into here. For now we will just assume a global constraint GROUND < RHEME. This constraint is ranked above SU-L, which means that the language sometimes violates the tendency to have subjects on the left provided that the subject is rhematic. We then get the subhierarchy in (32).

(32) HEAD-L >> [ V < COMPL ] >> SUBJ<COMPL >> PRO<sub>wk</sub>-L >> GROUND<RHEME >> SU-L >> NEG-L

Rhematic subjects are normally accented and hence subjects which appear to the right of adverbials cannot usually be unstressed (t.ex. SAG 1999:4:40). Expletives are never accented, as (33a) indicates, hence an expletive subject cannot follow and adverbial as the ungrammaticality of (33b) shows.

- (33) a. Här regnar <sub>0</sub>det / \*»det aldrig.  
 here rains it(EXPL) never  
 'It never rains here.'
- b. \*Här regnar aldrig <sub>0</sub>det / »det.  
 here rains never it(EXPL)

If a pronominal subject follows an adverbial, as in (34a), it is interpreted as rhematic and has to be accented.

- (34) a. Då kommer <sub>0</sub>vi / »vi tyvärr för sent.  
 then come we unfortunately late
- b. Då kommer tyvärr \*<sub>0</sub>vi / »vi försent.  
 then come unfortunately we late  
 'In that case **we** will unfortunately be late.'

Before the adverbial, a pronominal subject may be unaccented (ground) or accented (rheme).

The tendency to put rhematic subjects late in the sentence is seen most clearly in presentational constructions as in (35) where what appears to be the logical subject appears after the lexical verb.

- (35) Det har ringt en massa människor till dig.  
 it have.FIN phone.PPART a lot people to you.ACC  
 'A lot of people have phoned you.'

Lødrup (1999) analyses these as 'agentive objects' but in our approach it is more natural to think of them as highly rhematic subjects.

In (36) we give a ranking of all the constraints we have referred to in this analysis. This ranking is still partial since there are many issues which we have only skimmed the surface of.

- (36) TOP-L >> HEAD-L >> [ V < COMPL ] >> [OBJ<sub>IND</sub><OBJ<sub>DIR</sub>] >> [SUBJ<COMPL] >> PRO<sub>wk</sub>-L >>  
 GROUND<RHEME >> SCOPE >> SU-L >> ADV-L >> NEG-L >> OBJ-L

One interesting point to note about this ranking is that the T-constraints, which determine the broad typological status of the language, tend to be ranked higher than the A-constraints, which are responsible for the local ordering facts.

#### 4.6 Conclusions and outstanding issues

We have argued here that the word order flexibility in Swedish midfields is best captured by assuming a flat c-structure with OT constraints determining the linear order between constituents. This way we do not just allow the different orders, we are also able to account for when the different orders are preferred. The constraints which we use refer to syntactic notions, but also to information structural notions and morphological and phonological information. Our approach relies on a number of assumptions within Lexical Functional Grammar; the separation between structure and function, for instance, is essential to our analysis. It is difficult to see how an approach within which functions are defined structurally could capture the spirit of this proposal. Similarly, the approach to X-bar structure which does not require binary branching and which assumes a Principle of Economy such as that assumed within LFG is essential. OT constraints allow us to capture the interaction between different dimensions, such as information structure, syntax and morphology. Our analysis constitutes a departure from many previous LFG approaches in that we do not assume that the Structure Function Association Principle holds absolutely for Swedish. Contrary to Sells (2001), we do not even assume that it should be expressed as a high ranking constraint in Swedish.

The analysis which we have formulated forms a point of departure for some further issues in the syntax of Swedish and Scandinavian in general. In particular, given that the structural assumptions we make for Swedish are very similar to those made by Sells (2001:190–192), for Icelandic, it will be natural to try to account for the differences between these two languages with respect to the midfield word order in terms of constraint reranking. We plan to extend our analysis to Icelandic and the other Scandinavian languages.

The analysis of negative object, which we touched on in Section 2.2, also requires further study. Negative objects can not just occur in the midfield immediately above their selecting verb, they can also “climb” to a higher clause as the examples in (37) show. Our initial sense is that an analysis involving functional uncertainty offers the best option for this data.

- (37) a. Jag har ingenting sagt.  
I have.FIN nothing say.PPART  
'I have said nothing.'
- b. Jag har ingenting velat säga.  
I have.FIN nothing want.PPART say.INF  
'I haven't wanted to say anything.'
- c. Jag har ingenstans kunnat sätta mig.  
I have.FIN nowhere can.PPART sit.INF me  
'I haven't been able to sit myself down anywhere.'
- d. Jag har ingenting velat be henne göra.  
I have.FIN nothing want.PPART ask.INF her do.INF  
'I haven't wanted to ask her to do anything.'

Our analysis deals with a small subset of properties of Swedish clause structure and leaves many issues — like presentational constructions and negation climbing — open, but to our minds the results so far are encouraging enough for the analysis to be pursued further.

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