

Structure, Alignment and Optimality in Swedish

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Introduction

The main focus of this work is the analysis of Object Shift in Swedish. A few years ago my developing interest in this topic fortunately coincided with the appearance of Holmberg (1997b) (and later Holmberg (1999)) and Kaiser (1997), which are all excellent sources of data and interesting ideas for analysis. Using the framework of Optimality-Theoretic Lexical-Functional Grammar (OT-LFG), as originally developed in Bresnan (2000b), here I present an account for Object Shift which is in a rather different style from any other in the existing literature, as far as I am aware.

1.1 Outline

This monograph has 6 chapters following this brief introductory chapter, which outlines the basic facts and issues concerning Object Shift, and then presents a simple introduction to Lexical-Functional Grammar (LFG: see Bresnan (1982), Bresnan (2001)).

Chapter 2 discusses the general structure of Swedish clauses, presented within the LFG approach. The main arguments are that V2 clauses are rooted in the functional projections of IP or CP, for subject-initial and non-subject-initial clauses respectively, and that the notion of ‘specifier’ is a functional one (in the LFG sense): a specifier is not necessarily an XP, as is standardly assumed, but can also be an X^0 ; rather what is uniform across all specifiers is that they must bear one of the Grammaticalized Discourse Functions in LFG, namely one of SUBJ, TOPIC, or FOCUS.

Chapter 3 concentrates on the phenomenon of Object Shift, which affects the positioning of weak pronouns in Swedish. After an overview of the facts essentially common to all the Mainland Scandinavian languages, some Swedish-specific structures are presented, namely Adverbial Intermingling and Long Object Shift, to illustrate how simply they fall into the emerging account, and how they all conform to the generalizations in (79), page 41, whose main thrust is summarized here immediately below in section 2. Following the data sec-

tions, the ideas of the OT account are presented, in terms of alignment constraints. The chapter concludes with a discussion of clitic pronouns, which have the same syntactic distribution as weak pronouns, and of negative quantifiers, which do not have the same syntactic distribution as weak pronouns, despite superficial appearances to the contrary.

Chapter 4 presents the basis of the formal OT-LFG part of the analysis, to show how the structures presented in chapters 2 and 3 can be generated in LFG reinterpreted along Optimality-Theoretic lines. Taking a perspective from constituent order typology, based on the pioneering work of Grimshaw (1997), I propose that clause-structure is determined fundamentally by two key constraints ‘Head-L’ and ‘Spine-R’, which put tight restrictions on (universally) available language types. I argue that these capture the relevant insights that led to the extreme antisymmetric view of Kayne (1995). These constraints form part of a larger system of alignment constraints for clausal ordering. Once the basic typological pattern for Swedish clauses has been established, chapter 5 presents the specific account of Object Shift and Long Object Shift using the constraints motivated in chapter 3, with refinements added to account for Adverbial Intermingling, and the optionality of Object Shift in certain cases.

The topic of chapter 6 is theoretical comparison, where I try to bring out some of the larger generalizations in the Swedish data and discuss how the analysis I have proposed compares with other proposals that have been made, mostly in Minimalist (and related) approaches.

Finally, chapter 7 presents some further issues regarding the analysis in terms of alignment constraints, and regarding clause structure and Object Shift beyond Swedish.

All examples are Swedish unless otherwise noted (or English). Some of them are taken from the publicly-available Parole corpus, which is currently at www.lexilogik.se/Demonstrations/svecorpus.htm. Where examples are taken from published sources, I have retained the spelling in the original text, even if not all texts are consistent. For example, the accusative pronoun meaning ‘me’ sometimes appears as *mig* in the examples below, and sometimes as *mej*.

1.2 Object Shift

A full description of Object Shift is presented in chapter 3, but here I will illustrate the most simple facts and discuss what theoretical issues have arisen out of them (see Thráinsson (2000) for a much more complete overview). Object Shift is the name given to the phenomenon where an object constituent appears further forward in the sentence than one would normally expect; in particular, it appears in front of negation and adverbial elements usually taken to mark the left edge of the VP. All the Scandinavian languages have Object Shift—in Ice-

landic any definite object may shift, while in the mainland languages (Norwegian, Danish, Swedish) only pronominal objects shift.¹ The following Swedish examples based on ones in Holmberg (1997b) illustrate pronominal Object Shift. The order with non-shifting objects is shown in the a examples in (1)–(2), while pronominal objects have the distribution shown in the b examples.

- (1) a. Jag kysste inte Anna.
I kissed not Anna
b. Jag kysste henne inte.
I kissed her not
- (2) a. Jag har inte kysst Anna.
I have not kissed Anna
b. Jag har inte kysst henne.
I have not kissed her

The pronominal object shifts in (2)a, but not in (2)b. For purposes of this simple illustration, I will present the data here as categorical: the object must shift in (1)b, and may not shift in any of the other examples above. This is correct for Danish and Norwegian, but Object Shift is actually optional in (1)b in Swedish,² and the order *Jag kysste inte henne* is also possible. This extra possibility in Swedish will be ignored here, but not in subsequent chapters. As I will show in detail in chapter 3, the shifted object in (1)b is positioned external to the VP within which it would normally be expected to appear, but it never precedes the main verb of which it is an argument—hence the contrast between (1)b with shift and (2)b with no shift. This sensitivity to the position of the verb (and possibly other elements in the clause) makes Object Shift appear rather different from other displacement constructions: thinking in terms of movement, leftwards movement for *wh*-movement or scrambling is not sensitive in this way. For instance, both questions in (3) are perfectly well-formed, regardless of whether there is just a main verb, or an auxiliary plus a main verb.

- (3) a. Vem kysste jag inte?
who kissed I not
'Who did I not kiss?'
b. Vem har jag inte kysst?
who have I not kissed?
'Who have I not kissed?'

The sensitivity of Object Shift to the position of other elements in the clause such as the verb is associated descriptively with 'Holmberg's Gener-

¹The other insular Scandinavian language, Faroese, patterns like the mainland languages in only allowing weak pronominal objects to shift (see Thráinsson (2000, 150)). In the rest of this work I do not discuss any facts of Faroese.

²It is also optional for definite non-pronominal objects in Icelandic.

alization', after the pioneering work of Holmberg (1986), and a key theoretical problem has been how to explain Holmberg's Generalization.

Although direct and indirect objects (not shown here) may undergo Object Shift, prepositional objects never do:

- (4) a. Jag tror inte på det.
I believe not in it
b. *Jag tror det inte på.
I believe it not in

These examples, from Holmberg (1986) illustrate another way in which Object Shift is sensitive to other elements in the clause.

So even the simple set of facts in (1)–(2) and (4) raises at least the following questions:

- (5) Questions about Object Shift
- a. Why do certain objects shift out of VP?
 - b. Why do only direct and indirect objects shift?
 - c. What is the surface position of shifted objects?
 - d. How does Object Shift fit in, in the typology of displacement constructions?
 - e. What explains Holmberg's Generalization?
 - f. Why do some languages (e.g., English) lack Object Shift?

Object Shift has figured prominently in the generative syntax literature of the Minimalist Program, due perhaps in large part to the impact of Bobaljik and Jonas (1996) and Chomsky (1995), and it has reemerged as an important construction for theoretical syntax due to Chomsky (2001). Without taking anything away from the many other works on Object Shift, cited below (see especially chapter 6), the works just mentioned have been extremely influential for many reasons beyond the account of the specifics of Object Shift. Moreover, they are all presented within a strongly derivational approach to syntax, which provides three analytical properties (though details vary with specific analyses): open positions external to the VP for VP-internal constituents to move to, a theoretical mechanism to motivate the movement, and sensitivity to the position of other clausal elements, in particular the main verb, to explain Holmberg's Generalization. As such these analyses appear to provide powerful support for a derivational architecture for syntactic theory. In chapter 6, section 1, I argue that these properties are only apparently constitutive of the correct analysis of Object Shift.

In chapter 3, I make a stronger claim: on the basis of the empirical generalizations there, I argue that there is no possible derivational account of Object Shift which can offer any explanation for those generalizations; rather it is only a base-generated non-derivational account which can directly show why

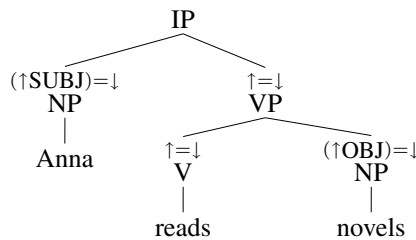
the observed restrictions on Object Shift hold. The essence of this argument is as follows: I show that at the clausal level, exactly the same generalizations about constituent order hold for structures with and without Object Shift: for example, a pronominal object never precedes a verb of which it is an argument. Now if shifted structures are derived from unshifted structures by movement, something must be added to the account to guarantee that the same generalizations about order hold in the two cases—the movements involved must conspire to recreate, or not alter, the original ordering generalizations. This can certainly describe the facts, but cannot explain them. On the other hand, if unshifted and shifted structures are (base-)generated independently, and are then subject to whatever ordering constraints the language imposes, it follows that there cannot be any discrepancy between the two cases.

This provides the barest outline of the arguments and issues that are addressed in this monograph. The formal analysis is developed in terms of OT-LFG, in chapters 4 and 5. In the following section, I provide a brief introduction to LFG, the representational basis for OT-LFG.

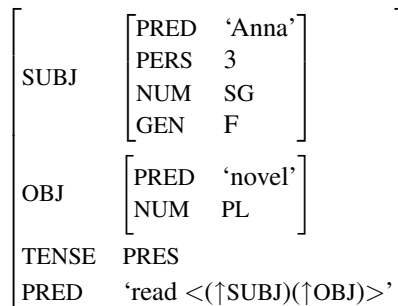
1.3 LFG

The syntactic analysis of any clause in LFG has two parts: the constituent structure (c-structure) and the functional structure (f-structure). The c-structure encodes phrasal dominance and precedence relations, represented as a phrase structure tree. In contrast, the f-structure encodes information about the functional relations between the parts, such as what is the subject and what is the predicate, what agreement features are present, and so on. A simple example is given in (6):

(6) a. C-structure:



b. F-structure:



In (6)b, the f-structure represents the collective sum of the grammatical information that each node carries, as attribute-value pairs in a matrix. One of the leading ideas of the LFG approach is that f-structure expresses grammatical information which is largely invariant across languages; functional and semantic information for example. However, the surface expression of these kinds of information may vary from language to language. So while the lexicon and c-structure are the loci of cross-linguistic variation, the level of f-structure is quite stable, in the sense that synonymous constructions in different languages might have radically different c-structure representations though very similar f-structures. In general there is no one-to-one correspondence between constituents of a c-structure and elements of the corresponding f-structure, though of course there is a consistent relation between the two structures.

Every node in a c-structure, with the exception of the root node, is annotated either with $(\uparrow \text{GF}) = \downarrow$, for some grammatical function, or else it is an f-structure head, and is annotated $\uparrow = \downarrow$. The relationship between c-structure and f-structure is given by a projection function from c-structure nodes to f-structure attribute-value matrices. The up- and down-arrows (“ \uparrow ” and “ \downarrow ”) refer to the f-structure that corresponds to the c-structure node where the arrow points: the “up” refers to the f-structure of the mother node and the “down” refers to the f-structure of the node itself. So the annotation $\uparrow = \downarrow$ indicates the functional information associated with a given node is the same as the functional information as the mother node, and an annotation like $(\uparrow \text{SUBJ}) = \downarrow$ indicates that the functional information associated with a given node is in the SUBJ value of the mother’s f-structure.

The main aspects of structure-function association are given in (7), based on the discussion in Bresnan (2001, 102ff.). I have added some brief commentary on each. They presume a clausal structure based on the standard CP-IP-VP configuration, discourse functions of TOPIC and FOCUS, and argument functions of SUBJ, OBJ and so on.

- (7) Principles of Structure-Function Association:
- a. C-structure heads are f-structure heads.
(Every head in the usual X' -theory sense is annotated $\uparrow = \downarrow$.)
 - b. Specifiers of functional categories are the grammaticalized discourse functions.
(SpecCP and SpecIP are annotated with one of $(\uparrow \text{SUBJ}) = \downarrow$, $(\uparrow \text{TOPIC}) = \downarrow$, or $(\uparrow \text{FOCUS}) = \downarrow$; see chapter 2.)
 - c. Complements of functional categories are f-structure co-heads.
(The IP complement within CP is annotated $\uparrow = \downarrow$, and the VP complement within IP is annotated $\uparrow = \downarrow$.)

- d. Complements of lexical categories are the non-discourse argument functions.
 (Each sister of the head V of VP is annotated with
 $(\uparrow \text{OBJ}) = \downarrow$, or $(\uparrow \text{OBL}) = \downarrow$, and so on.)

Functional information is also carried by lexical items. For example, the following shows partial lexical entries for the words used in sentence (6)a.

- (8) a. *Anna* N $(\uparrow \text{PRED}) = \text{'Anna'}$
 $(\uparrow \text{PERS}) = 3$
 $(\uparrow \text{NUM}) = \text{SG}$
 $(\uparrow \text{GEN}) = \text{F}$
- b. *novels* N $(\uparrow \text{PRED}) = \text{'novel'}$
 $(\uparrow \text{NUM}) = \text{PL}$
- c. *reads* V $(\uparrow \text{PRED}) = \text{'read' } <(\uparrow \text{SUBJ})(\uparrow \text{OBJ})>$
 $(\uparrow \text{SUBJ NUM}) = \text{SG}$
 $(\uparrow \text{SUBJ PERS}) = 3$
 $(\uparrow \text{TENSE}) = \text{PRES}$

The value of each PRED ('predicate') within the quotes indicates the semantic content of the item. The notation $(\uparrow \text{PRED})$ then can be read as "my mother's f-structure has a PRED value which is ...". The mother node will be the preterminal dominating the lexical item in question, and so in this way functional information passes from lexical items onto (f-structures associated with) constituents of the c-structure.

The verb carries the information that it has a subject and an object and that the tense is present. In fact, this corresponds to an f-structure, shown in (9). Due to the $\uparrow = \downarrow$ annotations on the V node and on VP, this f-structure is also associated with the VP and IP nodes; hence (9) is associated with the lexical entry of the V and the whole clause at the same time.

- (9)
$$\left[\begin{array}{l} \text{SUBJ} \left[\begin{array}{ll} \text{NUM} & \text{SG} \\ \text{PERS} & 3 \end{array} \right] \\ \text{OBJ} \left[\quad \quad \right] \\ \text{TENSE} & \text{PRES} \\ \text{PRED} & \text{'read' } <(\uparrow \text{SUBJ})(\uparrow \text{OBJ})> \end{array} \right]$$

Within the object NP, *novels* carries the information that its mother's f-structure PRED is 'novel'; hence this is the PRED of the N and of the NP. However, the f-structure of the NP is not directly inherited into the f-structure of the VP, but rather becomes part of the OBJ specification within that f-structure. Hence from the object NP part we get the f-structure shown in (10).

$$(10) \left[\text{OBJ} \left[\begin{array}{ll} \text{PRED} & \text{'novel'} \\ \text{NUM} & \text{PL} \end{array} \right] \right]$$

This unifies with the f-structure information coming from the V, yielding the f-structure in (11), associated with VP.

$$(11) \left[\begin{array}{ll} \text{SUBJ} & [\quad] \\ \text{OBJ} & \left[\begin{array}{ll} \text{PRED} & \text{'novel'} \\ \text{NUM} & \text{PL} \end{array} \right] \\ \text{TENSE} & \text{PRES} \\ \text{PRED} & \text{'read'} <(\uparrow\text{SUBJ})(\uparrow\text{OBJ})> \end{array} \right]$$

A similar unification to that described above happens at the IP level with the subject NP, and the result is the f-structure in (6)c.

In the rest of this work, the main features of LFG that will be relevant are the c-structures and the relation between the c- and f-structure as expressed in correspondence principles like those in (7). More details of the overall framework can be found in Bresnan (2001).