Chapter 10  

The Final-over-Final Condition in a mixed word order language  

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10.1. Introduction  

Finnish is classified as an SVO language because the unmarked word order in transitive clauses is Subject (Aux) VO, as in (1):  

(1) a. Anne osti auton.  
Anne bought car  
‘Anne bought a car.’  

b. Minä olen juonut kahvia.  
I have drunk coffee  
‘I’ve had coffee.’  

But SOV and SOVAux are possible as well, as marked alternatives. The condition is, primarily, that a constituent is focused by movement to, or base-generation in, the C-domain (internal or external merge in the C-domain), as in (2); Vilkuna (1988, 1995), Holmberg (2000a, 2001).  

(2) a. Milloin Anne auton osti?  
when Anne car bought  
‘When did Anne buy a car?’
b. Kyllä minä kahvia juonut olen.

   indeed I coffee drunk have

   ‘I have indeed had coffee.’

The SOV and SOVAux order seen in (2a,b) is sharply ungrammatical in sentences without initial focus. The initial focus can be the subject.

(3) a. ANNE auton osti.

   Anne car bought

   ‘It was Anne that bought a car.’

b. MINÄ kahvia juonut olen.

   I coffee drunk have

   ‘I’m the one who has had coffee.’

We will assume that the explanation for this condition proposed in Holmberg (2001) is basically right: The effect of linearizing the complement of V, and other VP-internal constituents, to the left of V, is that they are de-focused. In Vilkuna’s (1995) words: “/.../the verb-final, XV ordered V-field does not contain the Main News.”2 In the unmarked case the information focus of a sentence is VP, or some constituent of VP. With SOV order, this is excluded in Finnish. But a sentence must have a focus; this is a universal of language (more specifically a universal of information structure). 3 There are two ways to express focus in Finnish: (a) focus in situ and (b) focus in the C-domain. If (a) is not available, then (b) is the only option.4

In this chapter we will discuss the basic facts concerning SOV order in Finnish, and propose a formal account of them in terms of a version of the theory of the mapping between
structure and word order articulated in Sheehan (2011, 2013a,b) also introduced in chapter 3. One reason for discussing the case of Finnish in such detail here, is that when head-final order is used in the clause, the syntax really looks like that of a head-final language; in particular it conforms to FOFC. This has consequences for the theoretical explanation of the phenomenon, which we intend to explore in this chapter.

Finnish is a case of a mixed language. There are, as it were, two grammars at work, an SVO grammar, having the properties familiar from SVO languages such as English, Swedish, or Thai, and an SOV grammar, with properties familiar from SOV languages such as Turkish or German. Recently Haider (2012) has argued that, alongside VO and OV languages, there is a third type, characterized by allowing both VO and OV, and therefore exhibiting properties of both the VO and OV system. For one thing, this means that the languages exhibit very ‘free word order’ in sentential constructions (the extended projection of V). Haider’s example of a third type language is Russian, along with (some) other Slavic languages, known for exhibiting much word order variation in sentential constructions. Finnish would be another example. The question is how to account for this freedom of word order. Is it a matter of V, and other functional heads in the extended projection of V, having dual linearization instructions (or even lacking linearization instructions), or, in a model where there are no directionality parameters/linearization parameters, a matter of greater freedom of movement?

We will argue that Finnish does not exhibit any special movement properties. In particular we will show that movement of V-complements is subject to Holmberg’s Generalization. In terms of a model which assumes that heads are supplied with a linearization instruction, we will argue that Finnish V, which in the unmarked case is marked for linearization preceding its complement, can optionally be marked for linearization following its complement.
10.2 Object position facts

The following paradigm shows that in a sentence where there is initial focus, here a questioned wh-phrase, there is considerable freedom of order for the constituents in the presupposed part of the clause. The sentence in (4) is glossed in detail only once; thereafter the glosses are simplified (PRTC = participle).

(4) a. Milloin hän ol-i osta-nut auton-n?
   when she-NOM be-PST buy-PST.PRTC car-ACC
   ‘When would she have bought a car?’

b. Milloin hän oli auton ostanut?
   when she had car bought

c. Milloin hän auton oli ostanut?
   when she car had bought

d. Milloin hän auton ostanut oli?
   when she car bought had

e. *Milloin hän ostanut auton oli?
   when she bought car had

f. ? Milloin hän ostanut oli auton?
   when she bought had car

(4a) is the straightforward SAuxVO alternative, which is always grammatical, with or without initial focus. (4b,c,d) are all well-formed, and pragmatically equivalent. None of them would be well-formed without the initial focus. (4e) is the FOFC-violation. (4f) may
appear very marginal when taken out of context. However, Maria Vilkuna (p.c.) found quite a few examples when searching a corpus of dialects (*Syntax Archive Data/Lauseopin arkisto* Clarin). The following examples are adapted from that corpus. It seems to be particularly frequent in sentences introduced by the focal particle *kyllä* ‘indeed, surely’, common in spoken Finnish (PRT = particle).

(5)  
a. *Kyllä* minä ampunut olen useampiakin (mutta ne on mennyt pohjaan)  
Indeed I shot have several but they have gone bottom to  
'I have shot several (but they have sunk to the bottom)'

b. vaikka *kyllä* mar te nähnyt olette semmoisia vanhanaikaisia kraakkuja?  
although surely PRT you seen have such old-fashioned hooks  
‘but surely you have seen such old-fashioned hooks?’

c. *Kyllähän* minäkin nähnyt olen karhut niin kuin tuolla Helsingissäkin  
indeed-PRT I too seen have bears as like there Helsinki in even  
‘I’ve seen bears, too, like over there in Helsinki.’

It seems, therefore, that this word order cannot be ignored. Like (4b,c,d) it is completely impossible in the absence of initial focus.

Note that the FOFC-violating order (4f) is marginally possible when the verb is contrastive, as in (5):

(6) *Kyllä* minä KUULLUT sen olen, mutta en koskaan NÄHNYT.  
indeed I heard it have but not ever seen  
‘I have HEARD it, but never SEEN it.’
Following a suggestion by Maria Vilkuna (p.c.) we will propose below that the verb and the object do not form a constituent in (6), but instead the verb and the object have moved independently, the verb as a remnant VP. Consequently the construction is not a violation of FOFC.¹ See Biberauer, Holmberg and Roberts (2014) for discussion of FOFC in the nominal extended projection in Finnish, where the word order is likewise quite free.

In the following we will go through the derivation of the various OV constructions, assuming a modified version of the model in Sheehan (2011, 2013a,b).

### 10.3 Sheehan’s model (modified)

The theory articulated in Sheehan (2011, 2013a,b) was presented in chapter 4.10, with some implementations discussed in chapters 5, 6, and 7. The following is a summary of the main points, although with one important difference in (7d).

(7)a. A head and its projections form a single category.

b. Categories are lexically marked as either preceding or following the category they select, as part of their c-selection features. The notation is $X_P$ for ‘the category $X$ precedes the category it c-selects’, and $X_F$ for ‘$X$ follows the category it c-selects’.

c. The total linear order among the categories in a linearization domain is determined without reference to dominance (i.e. phrases are not linearised relative to heads or other phrases).

d. Where the linear order is not given by the lexical directionality feature, either directly or by transitivity, it is determined by asymmetric c-command: If a copy A
asymmetrically c-commands B, and is not linearized in relation to B by virtue of (b), then A precedes B.

This version of the theory deviates from Sheehan (2013b) in one respect, pertaining to (7d). In Sheehan (2013b), what gets linearized are categories, where a category is a set of copies, derived by projection (projection/labelling being regarded as copying) and by movement. Thus copies of a category A do not get independently linearized. The formulation in (7d) would be: If a category A asymmetrically c-commands B, and is not linearized in relation to B by virtue of (b), then A precedes B. We will see below when it makes a difference which formulation we adopt. I will refer to the model assumed here as Sheehan (m), m for ‘modified’. The original theory, articulated in greatest detail in Sheehan (2013b), will be referred to as Sheehan (o), o for ‘original’.

As an illustration of how the system works, consider how FOFC is derived in this theory (both versions). Consider the tree (8), a representation of the ‘inverse FOFC’ type of disharmonic structure.

(8)

\[
\begin{array}{c}
  \text{AUX} \\
  \text{AUX}_p \\
  \text{O} \\
  \text{V} \\
  \text{V}_F
\end{array}
\]

When linearized, this comes out as

(8’)

\[
\begin{align*}
  \text{AUX} & \triangleright \text{V} & \text{(by virtue of c-selection, henceforth selection)} \\
  \text{O} & \triangleright \text{V} & \text{(by virtue of c-selection, henceforth selection)} \\
  \text{AUX} & \triangleright \text{O} & \text{(by virtue of asymmetric c-command, henceforth a-cc)}
\end{align*}
\]
This yields the total order AUX>O>V. This shows the effect of (the residue of) the LCA, (7d): When the linear order between two categories A and B is not determined by selection, directly or by transitivity, the LCA steps in, with asymmetric c-command deciding the order between A and B.

Now consider (9), a FOFC-violating disharmonic structure.

\[
V \rightarrow A \rightarrow O
\]

When linearized, this comes out as

\[
(9')
\]

V>AUX (selection)

V>O (selection)

AUX>O (a-cc)

This yields the total order V>AUX>O. That is to say, the ‘FOFC-violating order’ V>O>AUX is underivable. The structure is not ill-formed, even in combination with the linearization instructions, but it cannot be linearized with the order which we recognize as a FOFC-violation.

An interesting property of Sheehan’s model, which will be made use of here, is that suffixation, derived by head-movement in standard generative grammar, following Travis (1984), Pollock (1986), Baker (1988), can be modelled as an effect of linearization. Consider, for instance, the Finnish participial VP in (10) (cf. (4a)).
The structure of the participle phrase is (11) (quite uncontroversially, aside from the linearization diacritics, given that functional categories are syntactic heads).

(11)

\[
V \rightarrow \text{PRTC} \rightarrow \text{O}
\]

Linearization will yield the following relations:

(11') \ V > \text{O} \ (\text{selection}) \\
\quad \ V > \text{PRTC} \ (\text{selection}) \\
\quad \text{PRTC} > \text{O} \ (\text{a-cc})

This yields the total order \( V > \text{PRTC} > \text{O} \). This is indeed the linear order seen in (11), with the participle head suffixed to the verb. Being a suffix is an additional morphological property of the participial head, but does not, by itself, determine the word order. Nor is there any head movement or other syntactic operation involved, in the formation of the inflected word; it is simply a consequence of how linearization works, in conjunction with the affixal property of the participial head. Note that (11) is the same configuration as (9), the ‘FOFC-violating structure’, well-formed as such but not linearizable as [head>complement]>head.

As will be demonstrated below, we still need to allow for some head movement in the theory. But we can dispense with very local affix-driven head-movement, as would apply in
the participle phrase in (10), for example; this would instead be a linearization effect without any movement.

10.4 Finnish SOV: derived by movement or by selection

An important question is whether the order of O and V in the Finnish SOV constructions is a matter of V being optionally marked V_F instead of the unmarked value V_P, or whether it is an effect of movement applied to a harmonically head-initial base. In other words, is Finnish a mixed VO-OV language, with VO as the unmarked alternative, or is it a VO language with unusually free movement of complements? Are there any mixed VO-OV languages in this sense (as Haider 2012 would have it)?

We may note first that, for example, the orders (4b,c,d,f), repeated here, could be derived by movement applied to a ‘head-initial base’, in Sheehan’s model.

(4) a. Milloin hän ol-i osta-nut auton-n?

   when she-NOM be-PST buy-PST.PRTC car-ACC

   ‘When would she have bought a car?’

b. Milloin hän oli auton ostanut?

   when she had car bought

c. Milloin hän auton oli ostanut?

   when she car had bought

d. Milloin hän auton ostanut oli?

   when she car bought had

e. *Milloin hän ostanut auton oli?

   when she bought car had
f.  *Milloin hän ostanut oli auton?*

when she bought had car

As movement is always upwards, movement of a category A which is the complement of B will always put A in a position asymmetrically c-commanding B, hence preceding B by virtue of the (residue of the) LCA. In some of the constructions (4b,c,d) the movement analysis would be relatively straightforward. In (4f) it would have to be more complex, including at least two movements and an additional abstract head.\(^6\) Obviously, this level of complexity is not unheard of in recent generative grammar. As always, the challenge is to devise a theory which allows the complexity required to generate all well-formed constructions, yet does not allow generation of the ill-formed ones, in this case, a theory which can derive (4f) but not (4e).

Consider also the following word order facts (ALL = allative):

\[(12)\]

a.  Minä ole-\(n\) pan-\(n\)t kirja-\(t\) hylly-lle.

I have-\(1SG\) put-PST.PRTC book.PL.ACC shelf-ALL

‘I have put the books on the shelf.’

b.  Kyllä minä olen kirjat hyllylle pannut.

indeed I have books on.shelf put

‘I HAVE put the books on the shelf.’

c.  Kyllä minä olen kirjat pannut hyllylle.

indeed I have books put on.shelf

‘I HAVE put the books on the shelf.’
If a *put*-type verb, taking a complex two-part complement, is put in a context licensing OV order, either the whole complement is (optionally) preverbal, as in (12b), or only one of the two parts is, with no effect on the interpretation. This is not characteristic of ‘consistent SOV languages’ (which typically allow just the order corresponding to (12b), with both parts of the complement preceding V), and may suggest that the OV order in Finnish is derived by movement, which may affect the whole complement phrase, or (if locality conditions on movement are met) a part of the complement.

Under a movement account of SOV order, the defocusing effect could be modelled as an effect of the movement: The domain between C and VP would be a non-focus domain. Movement of a verb complement to that domain will mean that it cannot be assigned focal interpretation. Matters are complicated, though, by the observation that, in for example (12c), not only the fronted direct object but also the postverbal locative phrase, and indeed the verb itself, are necessarily defocused. Another complication is that the domain between C and VP is not a defocused domain for the *subject*. Instead, the subject has a high topic position, which is either the highest spec-position in the IP domain or the lowest in the C-domain (see Holmberg and Nikanne 2002 for discussion). Below this position, the subject gets assigned focal interpretation (Holmberg and Nikanne 2002, 2008).

Why do VO languages such as English, Swedish, French, Arabic, and Thai (to mention a few) resist object movement in the IP-domain, deriving SOV order? There is a well known typological generalization according to which OV languages often have movement of the object within the IP-domain (so called scrambling), with more or less free order in the IP-domain as a result, while VO languages much less often have such movement (Saito and Fukui 1998). There is another more specific word order generalization much discussed in recent literature which bears on this issue, namely Holmberg’s Generalization (HG), according to which the object of a verb V cannot move across V into the IP-domain, unless V
itself moves even higher. In OV-languages HG is trivially satisfied, since the object already precedes (thus, under an LCA-based theory, asymmetrically c-commands) the verb at the relevant point in the derivation.

If Finnish is essentially a VO language with SOV order derived by scrambling, this implies that HG is parametrized, holding in some languages but not in others. Alternatively, Finnish operates with two grammars, a VO and an OV grammar. In terms of Sheehan (m or o) model, V could be marked either V_P or V_F, and likewise other heads in the extended projection of the verb (up to negation, which always precedes its sister; Holmberg 2000a). In this sense Finnish would belong to a third type, alongside the ‘pure’ VO and OV types (in the spirit of Haider 2012).

In order to determine this we need to consider HG in more detail, and particularly in the context of Finnish.

10.5 Object shift and Holmberg’s Generalization

Two versions of Holmberg’s Generalization (HG) can be found in the literature; see Holmberg (1986, 1999), Holmberg and Platzack (1995: ch. 6), Vikner (1995), Fox and Pesetsky (2006). Where the distinction is crucial, we shall refer to one as HG(s), for ‘HG simplified’, and the other as HG(r) for ‘the real HG’.

(13) HG(s): No V-movement $\rightarrow$ no object shift

(14) HG(r): No object shift across a phonologically spelled out category in VP.
In the following we will first discuss the implications of HG(s) for linearization in a mixed order language like Finnish. In section 10.8 we will get back to HG(r), and make an amendment to the theory required to explain this generalization.

In the references mentioned, HG is discussed in particular in connection with object shift, as found in Scandinavian.

(15) Object shift: Movement of object DP out of VP but within IP, across adjuncts and other constituents outside VP, but not across the subject.\(^8\)

In Mainland Scandinavian object shift applies to weak pronouns only, in Icelandic also to lexical DP.\(^9\)

(16) a. Elsa har tydligen inte hittat den. \([\text{Swedish}]\)
   Elsa has apparently not found it

b. *Elsa har den (tydligen inte) hittat.

c. Elsa hittade den tydligen inte.
   Elsa found it apparently not

(17) a. Ég hef ekki lesið þessa bók. \([\text{Icelandic}]\)
   I have not read this book

b. *Ég hef þessa bók (ekki) lesið.

c. Êg las þessa bók ekki.
   I read this book not
   ‘I didn’t read this book.’
The contrast between (16b) and (16c), and (17b) and (17c), show that the object pronoun cannot move out of VP, across sentential adverbs (including the negation), unless the main verb has moved as well, as it does in Scandinavian when it is the finite verb in a main clause, ending up in ‘second position’ (the V2 condition; Holmberg 1986, Holmberg and Platzack 1995: ch. 2, Vikner 1995). The adjuncts are in parentheses in (16b) and (17b) to show that the word order with the object preceding the verb is ungrammatical with or without adjuncts. Object shift is not a matter of VP-movement taking along the object pronoun. This is shown by the fact that the verb and the object are not necessarily contiguous, even when both are moved out of VP.

(18) a. Hittade Elsa *den inte?

found Elsa it not

‘Did Elsa not find it?’

b. Elsa hittade tydligen *den inte.

Elsa found apparently it not

‘Apparently Elsa didn’t find it.’

c. *Elsa tydligen hittade *den inte.
Pesetsky 2006, Engel and Vikner 2014). In these terms the generalization is that the V > O order established between the verb and the object at the VP-level must be preserved throughout the derivation, so the object can move but only if the verb moves higher, preserving their linear relation (with some systematic exceptions, notably if the object moves by A’-movement to the C-domain, as with wh-movement. We will get back to Fox and Pesetsky’s implementation of the shape conservation idea in 10.8.

Consider how shape conservation works in the theory assumed here. Consider (19), the structure of the Swedish participle-headed phrase of (16a).

\[(19)\] 
\[
\begin{array}{c}
\text{PRTC} \\
\text{V} \\
\text{PRTC} \\
\text{F} \\
\text{V} \\
\text{P} \\
\text{O}
\end{array}
\]

The linear relations are as in (19’):

\[(19’)\] 
\[
\begin{align*}
\text{V} & > \text{O} \quad \text{(selection)} \\
\text{V} & > \text{PRTC} \quad \text{(selection)} \\
\text{PRTC} & > \text{O} \quad \text{(a-cc)}
\end{align*}
\]

This yields the total order V > PRTC > O: *hitta-t den*. Now assume that the object moves to a position where it c-commands PRTC, which is the case in (16b). The structure is (20). The linear relations are as in (20’). We ignore the adjuncts for the time being. The object has moved past the adjuncts in (16b), but this is of no direct consequence for HG, as the sentence is equally bad without the adjuncts.
There are conflicting linear statements in (20'): (i) and (iv), as well as (iii) and (v). This, I propose, is what rules it out. The word order in (16b) and (17b), violating HG, is unlinearizable.

In (16c, 17c) the object has moved. We can tell that it has, because it precedes the adjunct, but the verb is linearized preceding it, and the sentence is well formed. Assume that the verb has moved to a position c-commanding the moved object (to C in Holmberg 1986, Holmberg and Platzack 1995 and Vikner 1995). The linear relations are as in (21’), still ignoring the adjunct.
This can be characterized as V-movement rescuing the linear conflict caused by object shift. The selection-based order is re-established by V-movement. This is a case where we have to assume head movement, after all. HG cannot be purely a linearization effect. This is because other categories than the verb and its selected object are involved as well, notably adjuncts. If the object moves across an adverb adjoined to VP or higher, this will create an ordering conflict between the verb and the adverb, resolved if the verb moves.

We can account for this formally by the following postulate:

(22) For the linear relation between two categories, the linearization algorithm ignores all but the selection-based relation and the final relation (final in terms of bottom-up derivation).\(^{10}\)

That is to say, the relation (21’ii) is ignored, hence the structure is well formed from a linearization point of view. (22) also accounts for why the adverb in (21) does not cause a linearization conflict, even though it both precedes and follows the object: The adverb has no selection-based relation to O, only two a-cc-based relations. Following the postulate (22), the lower one is ignored.

The difference between HG(s) and HG(r) shows when other constituents than V appear in VP, getting linearized along with the verb and the object. (23) is one such case. In Swedish, verb particles corresponding to in, out, up, down, etc., obligatorily precede the object, even a pronominal object, as shown in (23a,b). Verb movement, as in (23c), does not license movement of the object.
(23)  

a. Elsa har tydligen inte skrivit **upp det**. [Swedish]

   ‘Apparently Elsa has not written it up.’

b. *Elsa har tydligen inte skrivit **det upp**.

c. *Elsa skrev **det tydligen inte upp**.

   Elsa wrote it apparently not up

In the present model this is accounted for as follows: The structure of the VP in (23) is (24), and the linear relations therefore are as in (24’). We ignore the participial suffix, for ease of exposition. PRT = verb particle.

(24)

```
  V
 /\  
PRT  PRT
  \ /
   O
```

(24’)

i. PRT>O (selection)

ii. V>PRT (selection)

iii. V>O (transitivity)

This yields the total order V>PRT>O. (23b) has the (simplified) structure (25) and the linear relations (25’):

(25)

```
  V
 /\  
PRT  PRT
  \ /
   O
```

(25’)

i. PRT>O (selection)

ii. V>PRT (selection)

iii. V>O (a-cc and transitivity)

iv. O>PRT (a-cc)
There is a conflict between (25’i) and (25’iv), the linear relation caused by movement of the object. In (23c) the verb has moved, as well as the object. This does not alter the linear relations between the particle and the object, though, so (23c) is ruled out just as (23b) is.

In Danish, where the object can (and in fact must) precede the particle in the PrtP, which we assume is because the particle selects a preceding object in Danish, the object can shift, provided the verb moves as well (Holmberg 1999, Engels and Vikner, 2014). As the particle selects the object on its left, there is no linear order conflict.

(26)  

a. Elsa har ikke skrevet det op. [Danish]

Elsa has not written it up

b. Elsa skrev det ikke op.

Elsa wrote it not up

’Elsa didn’t write it up.’

In fact, this is still not enough to fully account for HG(r). We will return to this issue in section 10.8. SOV languages do not show any effects of HG, because the object precedes the verb by virtue of selection. This explains, at least in part, the generalization that SOV languages have more or less free object scrambling, while SVO languages do not (Saito and Fukui 1998). Scrambling is movement of the object (or objects, in the case of ditransitive verbs) to a position outside VP but inside IP. That is to say, it is another name for object shift in SOV languages. In SVO languages this movement is ‘blocked by the verb’, by virtue of linearization of VP, unless the verb also moves, as in the Scandinavian languages. In SOV languages, where the object is linearized preceding the verb by selection, object shift/scrambling will preserve the selected linear order.11
10.6. **Object Shift in Finnish**

In Finnish, we can see the effect of HG in examples such as (28):

```
(28)  a. Anne on jo heittänyt kukat/ne pois.
    Anne has already thrown flowers/them away
    ‘Anne has already thrown the flowers/them away.’

b. *Anne on kukat/ne jo heittänyt pois.
    Anne has flowers/them already thrown away

c. Anne heitti jo kukat/?ne pois.
    Anne threw already flowers/them away

d. Anne heitti kukat/ne jo pois.
    Anne threw flowers/them already away
```

(28a) has the unmarked SVO order, compatible with wide focus or any narrow focus. (28b), where the object is outside VP, as if object-shifted (or scrambled), is ungrammatical. The word order in (28b) is well formed if preceded by, for example, the focused affirmative adverb *kyllä* or a whP. In such a case it falls under the ‘SOV grammar’ option. (28d), where the main verb has moved to T (see Holmberg & al. 1993, Holmberg & Nikanne 2002), is perfectly well formed with the object moved out of VP, with wide focus. (28c) is there to show that movement of the object across the adverb is optional (although in this case weakly preferred with a pronominal object), as is characteristic of object shift of lexical objects in Icelandic, too.
(29) a. Kyllä Anne on kukat/ne jo heittänyt pois.
   indeed Anne has flowers/them already thrown away
b. Miksi Anne on kukat/ne jo heittänyt pois?
   why Anne has flowers/them already thrown away

(30) is another set demonstrating the same effect (ILL = Illative).

(30) a. Kyy oli heti purrut poikaa jalkaan.
   adder had immediately bit boy foot-ILL
   ‘The adder had immediately bit the boy in the foot.’
b. *Kyy oli poikaa heti purrut jalkaan.
   adder had boy immediately bit foot-ILL
c. Kyy puri heti poikaa jalkaan.
   adder bit immediately boy foot-ILL
d. Kyy puri poikaa heti jalkaan.
   adder bit boy immediately foot-ILL
   ‘The adder immediately bit the boy in the foot.’

Again, the word order in (30b) is fine if the sentence has initial focus, as when it is introduced by the focused adverb kyllä or a whP.

(31) a. Kyllä kyy oli poikaa heti purrut jalkaan.
   indeed adder had boy immediately bit foot-ILL
   ‘The adder had actually immediately bit the boy in the foot.’
b. Milloin kyy oli poikaa heti purrut jalkaan?

*when adder had boy immediately bit foot-ILL*

‘When had the adder immediately bit the boy in the foot?’

What these examples demonstrate, is that there are two ways that an object can move out of the VP to a position in the IP-domain in Finnish: One is by the ‘SOV-option’, always occurring in conjunction with initial focus. The other way, and the only possible way when the initial focus condition is not met, is by object shift, respecting HG. The importance of this observation is that it is not the case that Finnish is insensitive to HG. We can thus maintain that HG is universal: Movement of a complement across the selecting head will always yield an ungrammatical result, unless the head moves even higher, because of conflicting linearization instructions. This, in turn, means that when Finnish exhibits SOV order, with the object or other verb complement preceding V, this is because the linearization instruction of V is set to V_F. What makes Finnish different from Swedish, English, French, Thai and other more consistent SVO languages is that V can be set to either V_P or, as a marked alternative, to V_F.

Next, it will be demonstrated how the various word orders are derived in Sheehan (m), including, in section 10.8, some word orders not derivable by Sheehan (m) or (o) without further modification. We will then return to the formal account of the initial focus condition.

10.7 Deriving SOV order in Sheehan (m)

Consider again the sentences in (4), repeated here:
(4) a. Milloin hän ol-i osta-nut auton-n?
   when she-NOM be-PST buy-PST.PRTC car-ACC
   ‘When had she bought a car?’

b. Milloin hän oli auton ostanut?
   when she had car bought

c. Milloin hän auton oli ostanut?
   when she car had bought

d. Milloin hän auton ostanut oli?
   when she car bought had

e. *Milloin hän ostanut auton oli?
   when she bought car had

f. ?Milloin hän ostanut oli auton?
   when she bought had car

Consider first the structure of the lower part of (4a).

(32)

This tree will be linearized as follows:

(32’) V > O (selection)
      V > PRTC (selection)
      PRTC > O (a-cc)
This yields the total order $V > PRTC > O$, which is the order in (4a), with PRTC attached as a suffix on $V$. When Aux is merged, marked Aux$_P$, as in (33), the linear relations will be as in (33').

(33)

```
       Aux
      /   \  
    Aux$_P$  PRTC
   /  \    /  \  
  V    PRTC$_{pf}$
 /    /  
O    V$_f$
```

(33')

- $O > V$ (selection)
- $V > PRTC$ (selection)
- $O > PRTC$ (transitivity)
- Aux > PRTC (selection)
- Aux > O (a-cc)
- Aux > V (a-cc)

This yields the total order Aux$>O > V > PRTC$, where in Finnish, $V$ and PRTC form a single word.

Consider (4c). The structure is (34), which is = (33), except that $O$ has moved and adjoined to Aux.$^{13}$ The linear relations are listed in (34').

(34)

```
       Aux
      /   \  
    O    Aux
   /  \    /  
  Aux$_P$  PRTC
   /  \    /  \  
  V    PRTC$_{pf}$
 /    /  
O    V$_f$
```

25
(34')

i. $O > V$ (selection and a-cc)

ii. $V > \text{PRTC}$  (selection)

iii. $O > \text{PRTC}$  (transitivity)

iv. $\text{Aux} > \text{PRTC}$  (selection)

v. $\text{Aux} > O$  (a-cc)

vi. $\text{Aux} > V$  (a-cc)

vii. $O > \text{Aux}$  (a-cc)

The only conflicting linear statements are (v) and (vii) (shaded). However, since Aux and O are not in a selection relation, the lower relation (v) is ignored. This yields the total order $O > \text{Aux} > V > \text{PRTC}$. The movement of the object does not yield any conflicting ordering statements, because the verb selects a preceding object.

Consider (4d), the consistently head-final structure. The structure is (35), the linear relations (35').

(35)

```
O       Aux
      /     />
PRTC          Aux
     /       />
V            PRTC
    /     />
O       Aux
      /     />
PRTC          Aux
     /       />
V
```

(35')

$O > V$  (selection)

$V > \text{PRTC}$  (selection)

$O > \text{PRTC}$  (transitivity)

$\text{PRTC} > \text{Aux}$  (selection)

$V > \text{Aux}$  (transitivity)

$O > \text{Aux}$  (transitivity)
The total order is $O > V > PRTC > Aux$. Now consider (4e), the ‘FOFC-violation’. This was dealt with above, already, in section 10.3. The structure is (36), with the linear relations (36’), which yield the total order (37), i.e. the order seen in (4f), which, as discussed in section 10.2, is a word order which is highly marked, yet does occur in spoken Finnish, in the contexts which license OV order.

\[ (36) \]
\[
\begin{array}{c}
V \\
\hline
PRTC \\
\hline
Aux \\
\hline
PRTCf \\
\hline
O \\
\hline
\end{array}
\]

\[ (36') \]

- $V > O$ (selection)
- $V > PRTC$ (selection)
- $PRTC > O$ (a-cc)
- $PRTC > Aux$ (selection)
- $V > Aux$ (transitivity)
- $Aux > O$ (a-cc)

\[ (37) \]

$V > PRTC > Aux > O$

It was noted in section 10.2 that the FOFC-violating order (4f) is marginally possible when the verb is contrastive, as in (38) (= (5)):

\[ (38) \]

Kyllä minä KUULLUT sen olen, mutta en koskaan NÄHNYT.

indeed I heard it have but not ever seen

‘I have HEARD it, but never SEEN it.’
As suggested by Maria Vilkuna (p.c.), this is presumably derived by separate movement of the object and the verb. Assume that the tree (34), the partial structure of (4c), is first derived. Subsequently the remnant PRTC is moved to a position c-commanding the moved object, possible only if it is accompanied by contrastive stress and interpretation. Under this analysis, (38) is not a counterexample to FOFC.

Now consider the case of put-type verbs, where, as discussed, either the whole complex complement can precede the verb, or just one part.

(39) a. Kyllä minä olen kirjat hyllyle pannut.
    indeed I have books shelf.ALL put
    ‘I HAVE put the books on the shelf.’

b. Kyllä minä olen kirjat pannut hyllyle.
    indeed I have books put shelf.ALL

We propose to describe this as follows: The complex complement of put-type verbs has the structure in (40), with an abstract head, call it G, mediating between the two constituents.\[15\]

\[
\text{(40) } V \quad \downarrow \\
\quad \downarrow \\
\text{put} \quad \downarrow \\
\text{DP} \quad \text{G} \quad \\
\text{the book} \quad \\
\quad \downarrow \\
\text{G'} \quad \downarrow \\
\text{G} \quad \text{PP} \\
\text{on the table}
\]

The variation between (39a,b) can now be described as variation in the selectional properties of G in Finnish (mirroring the variation in the selectional properties of other V-related heads), either G\text{P} or G\text{F}.\[16\] Consider first the case of G\text{F}, combined with V\text{F} (I refer to the specifier and complement of G as DP and PP, respectively, for ease of exposition, even though D and P
would be formally more appropriate in the model under discussion. The structure is (41), the linear relations (41’), and the total order (42).

\[
\text{(41)} \quad \begin{array}{c}
\text{DP} \\
\text{PP} \\
\text{Gr} \\
\text{Gr} \\
\text{V} \\
\text{Vr}
\end{array}
\]

\[
\text{(41’)} \quad \begin{align*}
\text{i.} & \quad \text{PP} > \text{G} \quad \text{(selection)} \\
\text{ii.} & \quad \text{DP} > \text{G} \quad \text{(a-cc)} \\
\text{iii.} & \quad \text{DP} > \text{PP} \quad \text{(a-cc)} \\
\text{iv.} & \quad \text{G} > \text{V} \quad \text{(selection)} \\
\text{v.} & \quad \text{PP} > \text{V} \quad \text{(transitivity)} \\
\text{vi.} & \quad \text{DP} > \text{V} \quad \text{(transitivity)}
\end{align*}
\]

\[
\text{(42)} \quad \text{DP} > \text{PP} > \text{G} > \text{V}
\]

This is the order in (39a), with G null. Now consider the case of \(G_P\). The structure is (43) (= (41) except for the selection feature of G), and the linear relations are as in (43’).

\[
\text{(43)} \quad \begin{array}{c}
\text{DP} \\
\text{Gr} \\
\text{PP} \\
\text{V} \\
\text{Vr}
\end{array}
\]

\[
\text{(43’)} \quad \begin{align*}
\text{i.} & \quad \text{G} > \text{PP} \quad \text{(selection)} \\
\text{ii.} & \quad \text{DP} > \text{G} \quad \text{(a-cc)} \\
\text{iii.} & \quad \text{DP} > \text{PP} \quad \text{(a-cc)} \\
\text{iv.} & \quad \text{G} > \text{V} \quad \text{(selection)}
\end{align*}
\]
v.  \( V \rhd PP \) (a-cc)

vi.  \( DP \rhd V \) (transitivity)

The only difference between \( (41') \) and \( (42') \) is (v). This yields the total order \( (44) \) for \( (43') \) (where \( G \) is null), that is the order in \( (39b) \).

\[(44)\quad DP > G > V > PP\]

10.8  HG\( (r) \) and the linearization algorithm

The construction \( (39) \), with the underlying structure \( (40) \), raises a problem, though, for the theory, as articulated so far. Consider the following construction, which manifests the problem even more obviously.

\[(45)\]

a. Maria sjöng halsen  hes.  
   Maria sang  the.throat hoarse  
   ‘Maria sang her throat hoarse.’

b. Maria ...

The embedded result clause is labelled IP to indicate that it has clausal structure but is not a full CP. Consider \( (46) \), testing the effect of Object Shift on the construction.

\[(46)\]

a. Maria har inte sjungit den hes.  
   Maria has not sung  it hoarse
b. *Maria har den inte sjungit hes.
   Maria has it not sung hoarse

c. Maria sjöng den inte hes.
   Maria sang it not hoarse
   ‘Maria didn’t sing it hoarse.’

c’. Maria sjöng den inte <sjöng> [ɪp <den> hes ]

The point is that the subject of the IP complement undergoes object shift just like a direct object of a transitive verb would, even though there is clearly no selection relation between the verb and embedded subject. In this case the verb, being intransitive, does not select any part of the complement. (47) would be the schematic structure of the ungrammatical (46b).

(47)

\[
\text{IP} \rightarrow \text{den} \\
\text{NEG} \rightarrow \text{V} \\
\text{IP} \rightarrow \text{den} \\
\text{I} \\
\text{A}
\]

The problematic linearization relations here are (48i,ii):

(48) i. V > den (a-cc)  
    ii. den > V (a-cc)
These are conflicting statements. We know that they are the source of the ungrammaticality, because the construction is saved by verb movement, a shown in (48c), with the structure (c’). This is not predicted, though, as the theory now stands, because neither of the relations (50i,ii) is a selection-based relation. According to (22), only the final relation should count in this case; object shift across the verb is predicted to be as good as object shift across the negation, in this case.

We find the same situation in all ‘small clause type’ constructions, where a verb has a sister constituent with subject-predicate structure but no C; (40) is another such case. In this case, as well known, the embedded subject behaves like an object of the verb in some respects, most famously by being assigned object Case (Stowell 1983). In Scandinavian they behave like a direct object of the verb under object shift, as shown by (47). Not surprisingly that is true of Finnish as well, exemplified here with a result clause (TRA = transitive).

(49)  a. *Marja on kurkkunsan varmaan laulanut käheäksi. [Finnish]

Marja has throat. her surely sung hoarse.TRA

b. Marja lauloi kurkkunsan varmaan käheäksi.

Marja sang throat. her surely hoarse.TRA

‘Marja surely sang her throat hoarse.’

Sheehan (o and m) is based on the idea that UG characterises one syntactic relation as privileged with respect to linearization, namely, the selection relation. Categories are lexically marked to precede or follow their c-selected complement, as formulated in (7b). Only if there is no selection relation between two heads, does asymmetric c-commands step in to fix their linear relation. Cases like (46) and (49) show that that cannot be right, or cannot be the whole story.
One way to accommodate cases like (46) and (49) would be to reformulate (22) as follows:

(51) When computing the linear relation between two chains A and B, the linearization algorithm ignores all but (a) the linear relation based on external merge within the minimal lexical projection which contains A and B and (b) the final relation.

In the cases at hand this means that when computing the linear order between the verb and the small clause subject, the linearization algorithm will ignore all but the V-internal relation and the final relation. In the structure (47), we have the following relations:

(52) i. \( V > \text{den} \) (a-cc, V-internal)  
    ii. \( \text{den} > V \) (a-cc)

At this point there is a linearization conflict, as the algorithm will count both relations. The situation can be resolved by V-movement to a position c-commanding \( \text{den} \). In that case the relation (52ii) is demoted to an intermediate relation, and the final relation between the higher copy of the verb and the object pronoun will accord with the V-internal relation, the relation based on external merge within V/VP. We still have to assume a selection relation between ‘sing’ in (45) and (49) and its complement, even though there is no theta-relation between them. We need this in order to account for the head-final version of the structure. In Finnish it could be (53):
(53) Kyllä minäkin kurkkuni käheäksi laulanut olen.
   indeed I.too throat.my hoarse sung have
   ‘I, too, have sung my throat hoarse.

The variation between the head-initial and head-final version would be accounted for by a
linearization feature P or F, which, by hypothesis, the verb would have even though it does
not actually c-select the complement.

Small clause subjects is not the only case where HG depends on syntactic relations
which are not c-selection-based. Consider, for example, the following facts, argued in the
literature to fall under HG(r) (Holmberg 1986, 1999, Holmberg and Platzack 1995, Fox and
Pesetsky 2005): Object shift cannot apply across a phonologically spelled out category in VP.

What (54) below shows is that object shift of the direct object of a double object construction
across the indirect object is ruled out, even though the verb has moved. (54a) shows the order
in the VP when the verb stays in situ. (54b) shows the order when the main verb moves,
being the finite verb of a main clause. The lexical indirect object stays in situ and the
pronominal direct object follows it.

(54)  a.   Jag har inte givit Elsa den.   [Swedish]
       I have not given Elsa it
       ‘I haven’t given it to Elsa.’

       b.   Jag gav inte Elsa den.
       I gave not Elsa it
       ‘I didn’t give it to Elsa.’

       c.   *Jag gav den inte Elsa.
       I gave it not Elsa
(54c), finally, shows that object shift of the pronominal direct object across the indirect object and the negation is ruled out. This is not predicted by the theory where only the selection relation is privileged, as there is no selection relation between the two objects. It is predicted by the theory incorporating (51), though: The linear order of the two objects based on external merge (i.e. prior to any movement) is indirect object > direct object, on the basis of asymmetric c-command, so movement of the direct object across the direct object yields a linearization conflict.

With this modification of the linearization principles, the theory moves closer to the theory articulated in Fox and Pesetsky (2005). They propose a phase-based account of linearization, the biggest virtue of which is an elegant explanation of HG(r). It is based on the following theoretical assumptions:

(a) Syntactic derivation proceeds in phases (Chomsky 2001).
(b) VP is a linearization domain, in the sense that once vP, the projection of the phase head which has VP as complement, is complete, VP is linearized.\textsuperscript{17}
(c) Linearization of A and B, in the course of the derivation of a sentence S, means that the linear order between A and B must be preserved at every subsequent stage of the derivation of S.

That is to say, unlike the model in Chomsky (2001), VP is not opaque to syntactic relations even after the vP phase is constructed. A constituent A of VP can be moved to a position in the IP-domain; however, any such move must respect the linear order between A and the other constituents of VP, established when VP is linearized. For example, once the linear relation between the verb and a direct object has been fixed as V > Obj as part of spell-out of VP, the spell-out domain of the vP phase, movement of the verb is possible with no consequence for the object, but movement of the object is possible but only if the verb moves
higher, re-establishing the linear relation (which explains HG). Or once the linear relation of the direct and indirect object of a double object construction has been fixed as IO > DO as part of the spell-out of VP, the indirect object can move with no consequences for the direct object, but the direct object can move across the indirect object only if the latter moves even higher, re-establishing the IO > DO order, explaining HG(r), as seen in (55), to be compared with (54c).

(55) Elsa gav jag den inte.

Elsa gave I it not

‘I didn’t give it to ELSA.’

However, the theory presented in this chapter has a number of empirical consequences which the theory in Fox and Pesetsky (2005) does not have. In particular, their theory does not explain FOFC. Nor does it have the interesting consequence for head-movement which our present theory has.

10.9 Formal properties of the initial focus requirement

In a model where structures are built derivationally from bottom up, how does the system know that the object cannot be focus (or Main News in Vilkuna’s (1995) sense) when the verb is marked V_F? As discussed, this makes object movement out of VP possible (without verb movement), and by assumption VP is a focus domain for the object. But nothing in the system as described so far forces movement of the object out of VP. Instead, it seems that something prevents assignment of focus to VP, or any constituent of VP, making initial focus necessary, when V is marked F. As discussed in section 10.4, this accounts for why not just
the preverbal object, but all other constituents of VP, including postverbal ones, and the verb itself are defocused. A way to deal with this is to assume Finnish has a rule of the information structure module which ‘defocalizes’ the projection of \( V_F \). The rule can be stated as follows:

\[
\alpha \text{ is } [\neg \text{Foc}] \text{ if dominated by the projection of } V_F.
\]

If we adopt Vilkuna’s (1995) category Main News as an information-structural feature (primitive or derived), then the rule could be ‘\( \alpha \) is [\neg \text{Main News}] \text{ if dominated by } V_F’. Since the constituents dominated by \( V_F \) can be moved out of VP, preserving their defocused property, it would be the case that (47) applies early, presumably at the point when the projection of \( V_F \) is complete, and [\neg \text{Foc}] is carried along under movement.

10.10 Conclusions

Finnish is a mixed word order language with VO as the unmarked order, but OV as an option in sentences with initial focus. Notably, when the initial focus condition is met, the order of the sentential constituents in the TP is very free. For example, Aux-O-V, O-Aux-V, O-V-Aux and even V-Aux-O all occur, but, predictably, the ‘FOFC-violating order’ V-O-Aux does not. The big question focused on in this paper is how to account for this freedom of word order. What is it that distinguishes Finnish from, for example, the neighbouring Scandinavian languages, which makes the considerably greater freedom of word order in the lower part of the sentence possible in Finnish? Two possibilities have been considered. One is based on the traditional hypothesis that heads are lexically marked for linear order, specifically whether they precede or follow their complement. In terms of this hypothesis, if Finnish verbs and
auxiliaries are marked as allowing both options, this can account for the greater freedom of word order. The other possibility is based on the hypothesis that all word order variation is a matter of movement, following Kayne (1994). What is special about languages with more freedom of word order (in some domain), would then be that complement movement is, for some reason, freer (in that domain).

It was shown that object movement in Finnish is subject to Holmberg’s Generalization, involving a restriction on movement of objects of verbs in VO languages. This was taken to imply that object movement is not freer in Finnish than in, for example, Swedish. In addition it was shown that the defocusing effect of OV order cannot be explained as an effect of (just) object movement. Instead, it was hypothesised that verbs and auxiliaries in Finnish are marked to either precede or follow the category they select. This hypothesis was embedded in a version of the theory proposed by Sheehan (2011, 2013a,b) (see also chapter 4.10), referred to as Sheehan (m). The theory, enriched with the additional constraint (51) governing the computation of linear relations, was shown to predict correctly which permutations of the constituents in TP are grammatical and which are not. The initial-focus condition on OV order was taken to be a consequence of the defocusing effect of OV order (following Vilkuna 1995). The defocusing effect, in turn, can be expressed in terms of a rule, assuming Sheehan’s theory.

---

1 There are one or two other contexts where OV order is also found; see Vilkuna (1988, 1995) and Holmberg (2000a) for discussion.

2 Main News in Vilkuna (1995) is information which “is New with respect to the immediate premise of the sentence”.
This universal is not often discussed, perhaps because it is so self-evident that it tends to go unnoticed. Sentences can be very short, and may have very little content, as in (i), a possible answer to the question Isn’t it cold in here?.

(i) It is.

Yet there is always a focus. In this case it is the polarity, the truth of the proposition ‘It is cold in here’, indicated phonologically by focal stress on is: (ii) is therefore not an option.

(ii) *It’s.

There are some other contexts which also allow SOV order, discussed in Vilkuna (1988, 1995). We will return to them briefly at the end of the section.

Thanks to Maria Vilkuna and Pauli Brattico for discussion of these data.

The object could first move to the spec of an abstract head G, as in (i).

(i) \[GP \text{ auton } G \{PRTCP \text{ ostanut auton}\}\]

Once Aux is merged, the remnant PRTCP could then move to the spec of AuxP.

(ii) \[AuxP \{PRTCP \text{ ostanut auton}\} \{AuxP \text{ oli } GP \text{ auton } G \{PRTCP \text{ ostanut auton}\}\}\]

Holmberg (2000a) postulated a head labelled New, with the property that its c-command domain is the domain of new information, i.e. information focus. This is one way to formalize the idea in the text. Movement of the object out of VP, merging it with NewP moves it out of the information-focus domain.

Some varieties also allow object shift across the subject, under more restricted conditions, so called Long Object Shift; Holmberg and Platzack (1995: ch. 6).

(i) Varför gör mej Helge alltid irriterad? [Swedish]

why makes me Helge always annoyed

‘Why does Helge always make me annoyed?’

Object shift across lower adverbs can apply to lexical DPs in Mainland Scandinavian as well, subject to dialectal variation; see Nilsen (2002), Bentzen (2007).
In Sheehan (o) this auxiliary hypothesis is not needed. In that version of the theory copies of a category are not linearized independently. Instead, once the linear order between (in the case discussed) the verb and the object is determined by the lexical specification of V as V>O this is sufficient to ensure this linear order wherever the object moves. The notion of verb movement applying to restore a linear relation does not play a part in that theory.

On the other hand, since it turns out that verb movement is called for anyway, for other reasons, and has the effect of restoring linear order by virtue of asymmetric c-command, if copies are linearized independently, I have taken the step to assume that this is, indeed, how it works. As will be discussed in section 8, another reason for not adopting Sheehan (o) wholesale is that the impression that HG depends on a selection relation between verb and object is mistaken.

Another challenge for the present theory (and any other theory assuming shape conservation) is that some SOV languages allow V-movement to override the selection-based linear order between V and O, as in the Germanic SOV languages, where main clauses have V2 order, including SVO.

The Slavic languages, notorious for their free word order, do not constitute counterexamples if the free order is a consequence of dual selection specifications, as argued by Haider (2012).

The structural representation is simplified, for ease of exposition; actually T is merged at this point, and O adjoins to TP.

Given the definition of c-command in Sheehan (2013b) this structure would, in fact, give rise only to O > Aux.

Compare den Dikken’s (2006) Relator head, which, however, differs from the head proposed in the text in that it does not select its complement.
The notion that a head which is never actually spelled out may still have parametrized linearization properties is obviously not uncontroversial. How would they be learnt? We assume that the head is universally present, though, for structural reasons. If so, it seems not implausible that it is automatically assigned the same structural and linearization properties as other verbal heads.

Our (51) could have been formulated in terms of phases instead of lexical projections. Fox and Pesetsky (2005) make use of the phase formalism in their account of wh-movement and other A-bar movement to the CP-domain, which presents a challenge for the shape conservation idea. Following Chomsky (1986, 2001) they postulate that an object wh-phrase moves first to the edge of VP, where it gets linearized as preceding V, when VP is spelled out. This order is then preserved under further wh-movement. This solution is not open to us, though, as intermediate structures are ignored by the linearization algorithm.