**OV and V-to-I in the history of Swedish**

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### 1. Introduction

Word order of the type illustrated in (1) below occurred in Swedish texts up until the beginning of the 18th century. In (1a), the finite verb (Vf) is preceded by an argument (Arg), in (1b) it is preceded both by an argument and a non-finite verb (Vnf), and in (1c) the finite verb is preceded by an argument but followed by a non-finite verb. Finally, in (1d), there is an argument preceding the non-finite but not the finite verb. As a general expression referring to all the patterns in (1), the label OV is used. In Present-day Swedish, OV is ungrammatical.

(1) a. *Som ok denne Mäster Pär en förträffelig* ArgVf
   
   as also this master P a terrific

   *Logicus war* (Columbus: 10)

   logician was

   ‘since this master Pär too was a terrific logician’

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2 (1d) is the only pattern that is found in both main clauses and subordinate clauses. The patterns in (1a–c) are obscured by V2 in main clauses.
In this paper, we argue that OV is derived by left movement inside the V-domain, i.e. below \( \Pi^0 \): either within the finite VP (1a), within the non-finite VP (1d), or within both the finite and non-finite VP (1b–c).

Treating OV as a phenomenon that is derived below \( \Pi^0 \) enables us to link the development of OV to the general development of subordinate clause word order in Swedish. Prior to ca. 1600, it was possible for finite verbs to precede negation in subordinate clauses (cf. (2a)), where the modern language only accepts pre-verbal negation (cf. (2b)).
OV in Swedish has been investigated in part before, but compared to the development of V-to-I, our overall knowledge of OV is fairly sketchy. Delsing (1999) has studied the pattern shown in (1d) in Old Swedish (1225–1526), Platzack (1983) the patterns in (1a–b) and (1d) in Early Modern Swedish (1526–). Neither of them addresses the pattern in (1c). The lack of full coverage of OV phenomena is probably – at least to some extent – explained by the long-lasting view in the literature that some of the patterns in (1), in particular (1a) and (1b) where the finite verb is clause final, constitute a mere style of writing, an artificial trait adopted from
German that was never part of the spoken language (see e.g. Wenning 1930, Larsson 1931, Åkerlund 1944, Wessén 1965, Platzack 1983, Nyström 1985, Delsing 1999; for a more moderate view, cf. Höder 2010:240). It is certainly possible that some OV patterns were typical of a more formal style than others, but to go from there to claiming that a pattern is completely superficial is hardly motivated. The null hypothesis for any historical linguist is, of course, that what is found in a text is a realization of natural language unless there is exceptional evidence that suggests otherwise.

The rest of the paper is outlined as follows. First, in section 2, a corpus study of OV is presented. In section 3, the implications of the empirical findings are discussed, both with regard to the syntactic analysis of OV and to the loss of V-to-I. Finally, the paper is summarized in section 4.

2. OV in Swedish

In this section, we present the results from a survey of OV in the history of Swedish. First, the corpus of older Swedish is introduced (2.1). Second, the word order categories that are excerpted are exemplified and motivated (2.2). The investigation itself is presented in 2.3.

2.1 The corpus

The corpus of older Swedish is a compilation of texts from approximately 1250 until 1850; see the summarized Table 1 below, and for details, the appendix.3 Traditionally, both Old

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3 The indication of time (of production) rather than date of birth in the third column should be seen as a last resort solution when we lack exact knowledge about author/authors.
(1225–1526) and Early Modern Swedish (1526–) are divided into an Early and a Late part. For Old Swedish, this binary division is used here as well. Early Modern Swedish is, on the other hand, divided into three parts, i.e. Early, Middle, and Late. In addition, there is a separate section for the 16th century biblical texts.4

Table 1. The corpus of older Swedish

<table>
<thead>
<tr>
<th>Period</th>
<th>Nr. of words</th>
<th>Time/Date of birth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early Old Swedish (EOS)</td>
<td>14778</td>
<td>1240-1330</td>
</tr>
<tr>
<td>Late Old Swedish (LOS)</td>
<td>7528</td>
<td>1380-1460</td>
</tr>
<tr>
<td>New Testament (NT)</td>
<td>12945</td>
<td>1541</td>
</tr>
<tr>
<td>Early Early Modern Swedish (EEMS)</td>
<td>8256</td>
<td>*1495-1574</td>
</tr>
<tr>
<td>Middle Early Modern Swedish (MEMS)</td>
<td>86944</td>
<td>*1621-*1680</td>
</tr>
<tr>
<td>Late Early Modern Swedish (LEMS)</td>
<td>48866</td>
<td>*1706-*1789</td>
</tr>
</tbody>
</table>

With respect to text type, the corpus is both heterogeneous and homogeneous. From Anna Vasa (*1568) and onwards, all the texts are quite informal, typically comprising private letters, diaries and memoirs. Such texts are hardly available from earlier stages. Instead, we basically have to take what we can find. There is both religious and profane prose as well as one legal text (UL) in the Old Swedish part of the corpus. The first three texts in the Early Modern part are chronicles (historical narratives), just as the youngest Old Swedish text (P. krön.).

4 The whole bible was translated into Swedish in 1541; it is usually referred to as Gustav Vasa’s Bible after the king who brought reformation to Sweden. The two gospels that are included in the corpus are from this version of the scripture. It was used more or less unaltered until 1917.
As a rule, only a limited sample of each text is included. Horn’s (*1629) and Columbus’ (*1642) texts constitute the exceptions; they have been excerpted in full. Horn’s memoirs are traditionally considered to be close to the spoken language (cf. Holm 1967, 2000), which make them especially interesting when we are dealing with word order patterns that are expected to vary with level of formality (cf. section 1). The same description applies to Columbus; his text Mål-Roo has been characterised as a text, the author of which has the ambition to be close to the spoken language of the time, in practice often realised as dialogues (Hesselman 1935:vf.). The results from Horn’s and Columbus’ texts will be discussed in some detail at the end of section 2.3.

2.2 The OV patterns

The main aim of the survey is to acquire an overview of the usage of OV in the history of Swedish. For a clause to be included in the sample, it must contain at least one pre-verbal non-subject argument (an object or a predicative) that would be ungrammatical in that position in Present-day Swedish. Since pre-verbal negated objects are licit in the modern variety, no such examples have been excerpted. Furthermore, all possible instances of Stylistic Fronting (SF), i.e. subordinate clauses containing no overt subject and only one constituent before the finite verb, have been excluded.5

The most basic distinction that is used in the following is the one between finite OV and non-finite OV. Within the finite group, there are clauses containing a simple finite main verb

5 It has been suggested that also clauses with pronominal subjects could involve SF in older Swedish, since sentence adverbials (one type of element that may undergo SF) could precede Vf in such clauses before the loss of V-to-I (Platzack 1988). Such an account, however, fails to explain why no other types of elements that may undergo SF, e.g. particles and participles, show the same distribution (cf. Falk 1993:191, Hrafnbjargarsson 2003).
and those containing a finite auxiliary and a non-finite main verb; see the three sub-patterns of finite OV in (3) (cf. also (1a–c) above).

**Finite OV**

(3)  

a. \( \text{När käringen dät hörde} \) (Columbus:13) ArgVf

when woman-DEF it heard-PST

‘when the woman heard that’

b. \( \text{then pijgan som oss folgt} \) ArgVnfVf

the girl-DEF that us followed-PTC

\( \text{hade} \) (Gyll:22)

had-PST

‘the girl that had followed us’

c. \( \text{När han Virginius sådant länge} \) ArgVfVnf

when he W. such for-long

\( \text{hade förteegat} \) (Columbus:14)

had-PST concealed-PTC

‘when he had concealed this from W for a long time’

Within the non-finite group, we will identify two sub-patterns. First, in (4a), there is the VfArgVnf-pattern that was illustrated above (cf. (1d)). Second there are clauses where a finite form of the auxiliary \( ha \) is omitted, leaving a single participle behind; cf. (4b), where such a participle is preceded by an argument.
Non-finite OV

(4)  a. *så finge alla dät sj* (Columbus:16)  VfArgVnf
so got-PST all it see-INF
‘thereby, all got to see it’

b. *Sedan denna verlden så undersam*  ArgVnf
since this world-DEF so wonder-like

*Oeconomie fâdt* (Linné:3)

economy got-PTC

’since this world has developed such a wonderous economy’

Finite *ha*-omission was introduced in Swedish during the 17th century (cf. Johannisson 1945, Platzack 1983). OV clauses like (4b) are thus unattested prior to this date.

2.3 Empirical results

The results from the survey are presented below. In Table 2, the proportion between all OV patterns and all instances of unambiguous non-OV is given. The latter category includes clauses with a finite auxiliary and a non-finite main verb, where an argument follows both verb forms. Clauses containing a simple finite verb followed by an argument – VfArg – are not, however, unambiguously non-OV: in main-clauses, Vf always raises to C° (V2), which obscures the underlying order between argument and verb; in subordinate clauses, at least until the early 1600s, Vf could raise to I°, an operation that, just like V2, moves the finite verb to a position where it precedes both pre- and post-verbal arguments.
Table 2. OV and non-OV - over all proportions

<table>
<thead>
<tr>
<th>Period</th>
<th>OV</th>
<th>non-OV</th>
<th>% OV</th>
</tr>
</thead>
<tbody>
<tr>
<td>EOS 1240-1330</td>
<td>129</td>
<td>50</td>
<td>72</td>
</tr>
<tr>
<td>LOS 1380-1460</td>
<td>56</td>
<td>41</td>
<td>58</td>
</tr>
<tr>
<td>NT 1541</td>
<td>131</td>
<td>135</td>
<td>49</td>
</tr>
<tr>
<td>EEMS *1495-1574</td>
<td>109</td>
<td>85</td>
<td>56</td>
</tr>
<tr>
<td>MEMS *1621-*1680</td>
<td>188</td>
<td>751</td>
<td>20</td>
</tr>
<tr>
<td>LEMS *1706-*1789</td>
<td>49</td>
<td>386</td>
<td>11</td>
</tr>
</tbody>
</table>

The development of the OV proportion shown in the table does not – from a broad diachronic perspective – contain any major surprises, given what we already know of the phenomenon from previous studies. The oldest sources clearly show the highest proportion – almost three quarters of the clauses in the EOS sample are OV. This result certainly corroborates Delsing’s (1999) claim that pre-verbal placement of arguments was the un-marked scenario during the earliest stages of Swedish. The dramatic proportional drop for OV occurs in the 17th century, which is in line with the results from Platzack’s (1983) investigation of OV in Early Modern Swedish; from being at least as common as non-OV, OV suddenly loses ground comprising only a fifth of the sample in MEMS, and then a tenth in LEMS.

However, there is much more to the development of OV in Swedish than these overall figures. The three intermediate periods – LOS, NT and EEMS – all display an OV proportion of around or just above 50 %. Still, this is not an era characterized by equilibrium. The relative distribution amongst the OV patterns changes profoundly during the transition from Old to Early Modern Swedish. The details of this shift are investigated below.

The results for the different OV patterns are presented in Table 3a (Finite OV) and Table 3b (Non-finite OV). As a measurement of frequency, instances per 1000 words are used here;
proportional tendencies in relation to non-OV are hardly meaningful to recognize, seeing that many of the individual numbers are quite small.

### Table 3a. Finite OV

<table>
<thead>
<tr>
<th>Period</th>
<th>ArgVf</th>
<th>ArgVnfVf</th>
<th>ArgVfVnf</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>tot/w</td>
<td>/1000 w</td>
<td>tot/w</td>
<td>tot/w</td>
</tr>
<tr>
<td>EOS</td>
<td>1240-1330</td>
<td>20</td>
<td>1,35</td>
<td>10</td>
</tr>
<tr>
<td>LOS</td>
<td>1380-1460</td>
<td>10</td>
<td>1,33</td>
<td>5</td>
</tr>
<tr>
<td>NT</td>
<td>1541</td>
<td>50</td>
<td>3,86</td>
<td>59</td>
</tr>
<tr>
<td>EEMS</td>
<td>*1495-1574</td>
<td>36</td>
<td>4,36</td>
<td>42</td>
</tr>
<tr>
<td>MEMS</td>
<td>*1621-*1680</td>
<td>103</td>
<td>1,18</td>
<td>32</td>
</tr>
<tr>
<td>LEMS</td>
<td>*1706-*1789</td>
<td>16</td>
<td>0,33</td>
<td>12</td>
</tr>
</tbody>
</table>

### Table 3b. Non-finite OV

<table>
<thead>
<tr>
<th>Period</th>
<th>ArgVnf (ha-omission)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>tot/w</td>
<td>/1000 w</td>
</tr>
<tr>
<td>EOS</td>
<td>1240-1330</td>
<td>95</td>
</tr>
<tr>
<td>LOS</td>
<td>1380-1460</td>
<td>40</td>
</tr>
<tr>
<td>NT</td>
<td>1541</td>
<td>22</td>
</tr>
<tr>
<td>EEMS</td>
<td>*1495-1574</td>
<td>29</td>
</tr>
<tr>
<td>MEMS</td>
<td>*1621-*1680</td>
<td>30</td>
</tr>
<tr>
<td>LEMS</td>
<td>*1706-*1789</td>
<td>13</td>
</tr>
</tbody>
</table>

Let us first consider the development of finite and non-finite OV respectively. Finite OV shows a clear increase in frequency during the 16th century, which is followed by a decrease.
in the 17th and 18th centuries. By contrast, non-finite OV reaches its frequency peak in Old Swedish; later on, the frequency drops considerably in NT, raises slightly in EEMS, and then drops again in MEMS and LEMS.

Within the finite group, ArgVf and ArgVnfVf develop along similar lines. In Old Swedish, the former pattern is more common than the latter. This relative distribution is reversed in the 16th century, when ArgVnfVf increases its frequency more dramatically than ArgVf. Then, in the 17th and 18th centuries, both patterns decrease. Like the previous increase, the decrease is more radical for ArgVnfVf than for ArgVf; in MEMS, the preponderance for ArgVf over ArgVnfVf is even greater than in Old Swedish. The third finite OV pattern, ArgVfVnf exhibits an overall low frequency. Yet, it is striking that it is least frequent in EEMS and non-existent in NT, where the other two patterns are the most common.

The non-finite group comprises only one pattern in the four earliest periods: VfArgVnf. As mentioned above, ha-omission was introduced in Swedish during the 17th century, at a time when OV in general was becoming less frequent than before. Consequently, OV with ha-omission, i.e. ArgVnf, occurs only during the two later periods (MEMS, LEMS), but is – like other OV patterns at this time – not very common.

Finally, we will briefly compare the results from Horn and Columbus, two authors whose prose is presumably close to the spoken language (cf. 2.1 above), to the average results from contemporary texts. Consider Table 4 below.
Table 4. OV in Horn, Columbus and MEMS

<table>
<thead>
<tr>
<th>Text/Period</th>
<th>VfArgVnf</th>
<th>ArgVnf</th>
<th>ArgVf</th>
<th>ArgVnfVf</th>
<th>ArgVfVnf</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>/1000</td>
<td>/1000</td>
<td>/1000</td>
<td>/1000</td>
<td>/1000</td>
</tr>
<tr>
<td>Horn #1625</td>
<td>7</td>
<td>0,17</td>
<td>0</td>
<td>29</td>
<td>0,72</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>0,07</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0,10</td>
</tr>
<tr>
<td>Columbus #1642</td>
<td>10</td>
<td>0,56</td>
<td>2</td>
<td>0,11</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MEMS #1680</td>
<td>30</td>
<td>0,35</td>
<td>10</td>
<td>0,12</td>
<td>103</td>
</tr>
</tbody>
</table>

As we can see, all the OV patterns are less common than average in Horn’s text. Columbus, on the other hand, uses more OV than average in most cases. Still, the two texts exhibit similarities that might indicate what was preferred and what was avoided in natural speech at the time. ArgVnfVf is very rare in Horn’s and non-existent in Columbus’ texts. As a consequence, the predominance for ArgVf over ArgVnfVf is striking in both texts, and even more so, of course, in the latter one. Also, it is note-worthy that ArgVfVnf is more than twice as common as average in Columbus’ text; as noted above, this pattern was almost completely absent a century before. In sum, it appears to have been more typical for a single Arg to precede Vf than for an Arg accompanied by Vnf to do so in the spoken language of the 17th century. Earlier scholars, who have disregarded many of the OV patterns that have been identified here, fail to come across such distributional facts.6

6 The only survey of the correlation between OV and level of formality in a Scandinavian language that I know of is Hróarsdóttir’s study of OV in the history of Icelandic (2000). She illustrates that OV in general is slightly more common in formal texts than in informal ones (without, unfortunately, specifying whether there is any discrepancy between different sub-types of OV). Still, there seems to be no correlation between OV and level of education. Apparently, Icelandic students in Copenhagen do not use more OV in their letters back home than their uneducated but literate fiancées do in their letters back to the continent (ibid.:70−71).
3. Interpreting the data

In this section, we first present our analysis of OV (3.1) and then discuss the implications of the proposed analysis for the development of V-to-I (3.2).

3.1 Deriving OV

Within the Principles and Parameters framework, one has traditionally analysed the difference between pre-verbal and post-verbal placement of arguments as a difference regarding the value of a parameter that regulates the position of heads within a phrase (cf. e.g. Stowell 1981:74). If the parameter is set for head-initial, the outcome is VArg, and with the parameter set for head-final, the outcome is instead ArgV. Since Kayne’s (1994) proposal that all phrases are universally head-initial, alternative analyses of OV have emerged, deriving all sorts of pre-verbal placement of arguments by left movement. The debate on how to analyse OV has been especially lively in the literature on historical English. There are recent works that argue for a traditional head-parameter analysis (cf. Pintzuk 2005, Pintzuk & Taylor 2006), as well as those arguing for a left-movement approach (e.g. Roberts 1997, Biberauer & Roberts 2005).

We will not go deeper into the discussion of different analyses of OV, but simply conclude that it would be more difficult to successfully account for the Swedish development if one would assume some type of head-parameter analysis. Only if pre-verbal elements are treated as being derived by left movement is it possible to relate the Early Modern Swedish system to the modern one. Although OV is no longer an option, Present-day Swedish still allows pre-
verbal placement of adjuncts that are normally placed at the end of the VP; see (5a–b) below. The pre-verbal placement of [under förmiddagen] in (5a) is clearly not the product of some varying head-parameter setting, since such an analysis would predict no sensitivity regarding the type of pre-verbal element. Also, we would not expect any difference between pre-finite and pre-non-finite placement; yet, pre-non-finite placement of [under förmiddagen] is not possible (cf. (5c)).

(5) *Man gladdes åt ...

one was-pleased at

a. att han [under förmiddagen] hade cyklat på vägen
   that he during morning-DEF had-PST bikedPTC on road-DEF
b. att han hade cyklat på vägen [under förmiddagen]
   that he had-PST bikedPTC on road-DEF during morning-DEF
   ‘One was pleased that he had ridden his bicycle on the road in the morning.’
c. *att han hade [under förmiddagen] cyklat på vägen

The most straightforward way to account for the data in (5) would be to assume that there is an optional pre-posing operation at work that targets adjuncts and moves them to the left edge of the highest VP; see (6).

7 In finite clauses, the highest VP is always finite. Adjunct pre-posing does, however, occur in non-finite clauses as well, where the same restriction regarding landing site holds. The pre-posed element must end up at the left edge of the highest VP; cf. (i)–(ii).

(i) att under förmiddagen ha cyklat på vägen
to during morning-DEF haveINF bikedPTC on road-DEF
(ii) *att ha under förmiddagen cyklat på vägen
to haveINF during morning-DEF bikedPTC on road-DEF
The various OV patterns that are found in older Swedish could be derived by the same preposing operation that is still active today. As in Present-day Swedish, the operation is optional; yet, it is less restricted both with respect to the pre-posed element and to possible landing sites within the V-domain: unlike its modern counterpart, it targets arguments and moves them either to the left of the finite or the non-finite VP. Assuming (with e.g. Roberts 1997) that OV is derived below I° is a crucial part of our analysis, since it enables us to indirectly link the Swedish development of OV to the loss of V-to-I. This link is investigated in more detail in section 3.2.

The derivation of OV is illustrated in (7) below: in (7a), Arg moves to the left edge of the single finite VP generating the OV pattern ArgVf; in (7b), Arg first moves to the left edge of the non-finite VP, and then the entire non-finite VP moves to the left edge of the finite VP generating the OV pattern ArgVnfVf; in (7c), Arg moves via the left edge of the non-finite VP to the left edge of the finite VP generating the OV pattern ArgVfVnf; in (7d), finally, Arg moves to the left edge of the non-finite VP without proceeding to the finite one, generating the OV pattern VfArgVnf.

(7) a. \[\text{VP} \text{Arg} \text{Vf} \text{t}_j\] \[\text{[H, Sg]}\]
    b. \[\text{VP} \text{Arg} \text{Vnf} \text{t}_j \text{VPnf} \text{Vf} \text{tVPnf}\] \[\text{[H, Db]}\]
    c. \[\text{VP} \text{Arg} \text{Vf} \text{VPnf} \text{Vnf} \text{t}_j\] \[\text{[H, Db]}\]
    d. \[\text{VP} \text{Vf} \text{VPnf} \text{Arg} \text{Vnf} \text{t}_j\] \[\text{[L, Sg]}\]
These four OV derivations can be grouped structurally according to what type of movement is involved. Hereby, we could focus either on movement level or on movement complexity. With respect to movement level, (7a–c) are structural parallels insofar as they all involve movement to the highest VP, i.e. the single finite VP in (7a) and the higher of two VPs in (7b–c) (H-movement). By contrast, (7d) only involves movement within the lower of two VPs (L-movement). On the other hand, if movement complexity is the dividing factor, (7d) goes together with (7a), since they both involve single movement within one VP (Sg-movement), whereas (7b) involves double movement within two VPs (Db-movement) as well as (7c). The two distinctions – H/L-movement and Sg/Db-movement respectively – overlap in a way that prepares the ground for reanalysis. Db always implies H (ArgVnfVf, ArgVfVnf), Sg on the other hand can be either H (ArgVf) or L (VfArgVnf). Similarly, L implies Sg (VfArgVnf), whereas H can be either Db (ArgVnfVf, ArgVfVnf) or Sg (ArgVf). As we will see below, there is reason to believe that movement complexity was the more prominent structural factor in Old Swedish, but that movement level, instead, was more important in Early Modern Swedish.

Following Biberauer and Roberts (2005), we treat movement of the entire VP in (7b) as a form of pied-piping. This means that Arg is the element that is fronted to the higher VP, but Arg drags the rest of the VP with it, just as a wh-pronoun may pied-pipe an entire PP to the beginning of the clause. In effect, the structural unification of (7b) and (7c) is tightened. In addition to involving Db-movement, they are both derived by Arg-movement to the highest

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8 Clauses containing a perfect participle but no finite form of the auxiliary ha (cf. (4b) above) are ambiguous with respect both to movement level and movement complexity. In these cases, it is not possible to determine whether the pre-verbal argument has moved only to the left edge of the non-finite VP, where the participle resides, or higher up, to the invisible finite VP where the null auxiliary resides.
VP, either accompanied by pied-piping of the entire VP ((7b)) or not ((7c)).9

3.2 The relation between OV and V-to-I

From previous generative studies of subordinate clause word order in the history of Swedish we know that V-to-I was lost around the year 1600 (cf. Platzack 1988, Falk 1993, Holmberg & Platzack 1995). As was shown in the introduction, the effect of V-to-I is that the finite verb precedes sentence-negation in subordinate clauses; cf. (2a) above, repeated below as (8a)

With no raising of the finite verb to I°, sentence-negation precedes the verb; see (8b) (=2b)).

\[(8) \quad a. \quad när \text{ thet är ey stenoght (ca. } −1600) \quad \text{V-to-I} \]
\[
\text{when it is not rocky}
\]
\[
\text{b. } när \text{ det inte är stenigt (ca. } 1600–) \quad \text{V in situ}
\]
\[
\text{when it not is rocky}
\]

In the following, we develop our proposal, that the loss of V-to-I is connected to the development of OV. Although V-to-I and OV are not related structurally, it is evident that

9 Note that the pied-piping analysis makes it possible to block the unattested pattern VnfArgVf assuming the Phase Impenetrability Condition of Chomsky (2001). There is no room to go deeper into the mechanisms of this sort of analysis here; for details, see Biberauer & Roberts (2005) (cf. also Pintzuk 2005). Still, it is worth mentioning that older Swedish patterns with all other Germanic OV varieties with respect to the non-occurrence of VnfArgVf. This fact is an argument against the traditional view discussed in section 1 above, that certain types of OV in Swedish (finite verb final in particular) constitute an artificial trait of the written code. If older Swedish contains one type of OV word order that is non-natural (as traditionally claimed about finite verb final), there should be no reason why the non-natural order VnfArgVf could not occur as well. But it never does. In other words, the OV usage in Swedish texts does not contain any anomalies that would suggest that it is unnatural.
certain shifts in the relative frequencies of different OV patterns critically change the set of available cues for language acquirers with regard to the status of Iº.

3.2.1 Changing OV

In Table 5 below, we present the development of OV in Swedish with respect to the two structural perspectives on movement that was discussed in 3.1: movement level (H or L) and movement complexity (Sg or Db). The H/L-distinction coincides with the distinction between finite (H) and non-finite (L) OV (excluding ambiguous examples), whereas the Sg/Db-distinction cuts through the non-finite and finite types: ArgVf (H) and VfArgVnf (L) are derived by Sg-movement, ArgVnfVf (H) and ArgVfVnf (H) by Db-movement.

Table 5. OV proportions: movement level and movement complexity

<table>
<thead>
<tr>
<th>Period</th>
<th>Movement level</th>
<th>Movement complexity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>H</td>
<td>L</td>
</tr>
<tr>
<td>EOS 1240-1330</td>
<td>26%</td>
<td>74%</td>
</tr>
<tr>
<td>LOS 1380-1460</td>
<td>29%</td>
<td>71%</td>
</tr>
<tr>
<td>NT 1541</td>
<td>83%</td>
<td>17%</td>
</tr>
<tr>
<td>EEMS *1495-1574</td>
<td>73%</td>
<td>27%</td>
</tr>
<tr>
<td>MEMS *1621-*1680</td>
<td>80%</td>
<td>15%</td>
</tr>
<tr>
<td>LEMS *1706-*1789</td>
<td>55%</td>
<td>20%</td>
</tr>
</tbody>
</table>

Let us first consider movement complexity. In Old Swedish, there is a clear preponderance for Sg-movement (89 % in both EOS and LOS). Sg-movement loses ground as from the 16th
century, but it is still more common than Db-movement throughout the period. The proportional shift is, by contrast, much more remarkable when we review the development of movement level. From comprising only slightly over a fourth of the sample in Old Swedish (26 % in EOS and 29 % in LOS), H-movement is clearly the most favoured structural type in Early Modern Swedish. It reaches over 80 % in NT, drops a bit in EEMS, but then goes up to 80 % in MEMS again. How we should interpret the weakened majority for H-movement in LEMS is hard to determine. Seeing that the ambiguous examples constitute over a fourth of the sample from this period, we will refrain from speculations. The important overall point to be made is that H-movement becomes the prevalent type during the first century of the Early Modern period.

An important question is what caused H-movement to increase so dramatically. The increase is probably best characterized as a consequence of a reanalysis of what structural type is favoured in the derivation of OV. Recall, first, that ArgVf is the most common H-type in Old Swedish (see Table 3a). ArgVf is also the only H-type that involves Sg-movement. As noted, Sg-movement is the preferred derivation of OV in Old Swedish (see Table 5). Most evidently, this preference manifests itself in a high frequency for VfArgVnf, but from a structural point of view it could just as well favour the generation of ArgVf.

For a child acquiring the language, ArgVf is ambiguous with respect to what structural preference it reflects: does it occur because H-movement is preferred or because Sg-movement is preferred? In Old Swedish, where VfArgVnf is the predominant OV pattern, it is unlikely that the child interprets ArgVf as an effect of H-preference, since such an interpretation is contradicted by the abundance of VfArgVnf (L-type) elsewhere in the Primary Linguistic Data (PLD) available to the child. However, if VfArgVnf becomes less common, and ArgVf increases its proportion, a reanalysis is plausible. Such a reanalysis of Sg-preference as H-preference is expected to push back the VfArgVnf (L, Sg) option but to
have a promoting effect on the previously unfavoured ArgVnVf pattern (H, Db). As we have seen, this is exactly what happens in the beginning of the Early Modern period. Thus it seems reasonable to assume that the critical reanalysis occurred around the turn of the 15th century.

As already noted, the H-preference is preserved throughout the Early Modern period. Yet, as we reach the 17th century, there is a proportional shift between the two H-types that involve Db-movement (not visible in Table 5): ArgVfVnf more than doubles its frequency, while ArgVnVf does not reach even a tenth of its former level; cf. Table 3a. Structurally, this shift can be characterized as a favouring of Arg movement over VP pied-piping, a tendency that is particularly strong in the informal texts by Horn and Columbus (cf. the discussion at the end of section 2.3).10

Although OV is ungrammatical in Present-day Swedish, left-movement of non-subjects within the V-domain still occurs. As noted in 3.1, the modern language allows adjuncts to be moved to the left edge of the highest VP, but not to the left edge of the lower of two VPs; cf (5–6). There is no reason why the modern construction could not be analysed as involving the same basic movement operation that derives OV. The crucial difference is that the modern version of the operation is highly restricted both with respect to what element may move (adjuncts only) and to movement level (H-movement obligatory).

3.2.2 The loss of V-to-I

Let us now return to the distinction between OV involving H-movement (7a, b, c) and OV involving L-movement (7d). L-movement is structurally compatible with Vf having moved to I′; see (9). On the other hand, if the finite verb is preceded by an element that has ended up there through a V-domain internal operation – this is the case when OV is derived by H-movement – Vf must be in situ; cf. (10).

10 Interestingly, English appears to have undergone a parallel development; see Biberauer & Roberts (2005:36).
In the beginning of the Early Modern period, there was quite a drastic change in the proportional distribution between the L-type and H-type (cf. Table 5 above). This shift would have had a crucial affect on the PLD available for children acquiring the language. During the Old Swedish period, three quarters of all OV strings were derived by L-movement and thereby compatible with an interpretation of Vf having moved to I_o. L-movement does not generate strings that would be cues for V-to-I in the sense of Lightfoot (1979 and subsequent work), but they would neither be cues against it. As from the 16th century, however, OV structures of the H-type, generating strings that signal that V-to-I does not apply (i.e. cues for V in situ), quite dramatically increase in relative frequency. In the light of this OV shift, it is perfectly predictable that V-to-I is lost around the year 1600.

This explanation does not necessarily exclude the possibility that the loss of subject-verb agreement had something to do with the loss of V-to-I (as suggested by e.g. Platzack 1988, Falk 1993). Still, the correlation between agreement and V-to-I is far from empirically robust. There are certainly Scandinavian varieties that display both rich subject-verb agreement in the
sense of Rohrbacher (1999) and obligatory V-to-I (Icelandic), as well as varieties with neither of these properties (e.g. Present-day Swedish). But we also find varieties that display V-to-I although lacking rich subject-verb agreement, e.g. the dialect of Kronoby (cf. Holmberg & Platzack 1995, Alexiadou & Fanselow 2002), and varieties where V-to-I has developed into a highly marginal phenomenon without any corresponding weakening of the agreement system, e.g. Övdalian (Garbacz 2010).

Pettersson (1988) suggests that V-to-I was lost in Swedish as a consequence of a reanalysis of SF involving negation. Instead of interpreting the pattern negVf as a verb in I° being preceded by a stylistically fronted head, the string would have been reanalysed as a verb in situ being preceded by a sentence adverbial. The problem with Pettersson’s suggestion is that it is unclear a) why the reanalysis occurs when it does – SF involving negation does not appear to increase over time – and b) why the modern word order (V in situ) is not introduced earlier in subject-less clauses, where SF occurs, rather than gaining ground independently of clause-type (which is what actually happens).

By contrast, our proposal that changes in the OV system affected the acquisition of V-to-I provides answers to both these questions. V-to-I was lost around the year 1600 because the OV change during the 1500s lead to a massive increase in the relative frequency of patterns indicating that V-to-I did not apply. Unlike SF, OV occurred in all types of clauses, which is in line with the fact that V-to-I was lost across the board.

4. Summary

This paper deals with OV and V-to-I in the history of Swedish. Although OV is not lost until the 18th century, the OV system undergoes drastic changes during the transition from Old to

Early Modern Swedish. These changes, it is argued, are connected to the loss of V-to-I, which occurs around the year 1600.

In Old Swedish, OV is predominantly derived by single movement of Arg (Sg-movement) generating the patterns VfArgVnf (Sg, L) and ArgVf (Sg, H). However, in the beginning of the Early Modern period, as VfArgVnf becomes less frequent and ArgVf more frequent, Sg-preference is reanalysed as H-preference, since it favours the latter (H) but not the former (L). H-preference also favours the previously marginal pattern ArgVnfVf (H, Db), which is the most common OV pattern in the 16th century.

All types of H-movement generate strings that children acquiring the language must interpret as structures where Vf remains in situ rather than moves to I0. Only from a string obtained via L-movement is a V-to-I interpretation possible. An indirect consequence of the reanalysis of Sg-movement as H-movement is that L-movement decreases its proportion dramatically. In other words, the usage of OV changes in the 16th century so that it typically provides cues for new acquirers that Vf does not move to I0. In effect, V-to-I was lost in the beginning of the 17th century.
Investigated texts\textsuperscript{11}

EOS = Early Old Swedish:


\textsuperscript{11} Entries marked with a * are available in an electronic format via Forsvenska textbanken ("The Old Swedish Text Bank"), a web site created by prof. Lars-Olof Delsing, Dept. of Scandinavian Languages, Lund University; see \url{http://www.nordlund.lu.se/Forsvenska/Fsv%20Folder}. In my investigation, I have used some of these electronic texts in the initial excerption process (marked with another *), but I have, eventually, also consulted the actual editions. Kiöping and Salvius are electronically available as well: \url{http://spraakbanken.gu.se/ktext/kioping}. In these cases, there are no complete editions available; instead, I have consulted the original prints.

OV and V-to-I in the history of Swedish


LOS = Late Old Swedish:


NT = New Testament:

John = Evangeliet enligt Johannes (‘The gospel according to John’). In: Nya Testamentet i Gustaf Vasas Bibel ed. 1941 by Natan Lindqvist. Stockholm: Svenska kyrkans diakonistyrelsens bokförl. (nwe: 7020; top: 1541)

EEMS = Early Early Modern Swedish:


**Brahe = Ahnfelt, Otto, ed. 1897. *Per Brahe den äldres fortsättning af Peder Svarts krönika* (Lunds Universitets årsskrift 34:1:1). Lund. (tt: chronicles; nwe: 1873; *ca.1520)


MEMS = Middle Early Modern Swedish:

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LEMS = Late Early Modern Swedish:


Linné = Linné, Carl von. 1739. *Tal, om märkwärdigheter uti insecterne […]*. Stockholm. (tt: academic lecture; nwe: 2880; *1708)*

OV and V-to-I in the history of Swedish


Osbeck = Osbeck, Pehr. 1757. *Dagbok öfwer en ostindisk resa åren 1750. 1751. 1752*. [...] Stockholm. (tt: travel diary; nwe: 4320; *1723)


References


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