On the Structure of Swedish Subordinate Clauses[*]

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ABSTRACT

In this paper I will discuss the distributional variations of different kinds of sub-jects in Swedish subordinate clauses. The discussion is based on a novel obser-vation: in embedded V2 clauses, negation may only precede quantified subjects in the position following the complementizer. Exactly the same restriction is found in the first position of Swedish main clauses. This correlation I take to provide a strong argument for assuming V-to-C movement in embedded V2 clauses. Non-V2 complements do not display such a restriction: any type of negated subject may follow the complementizer. Thus I argue that by focusing on the position immediately to the right of the complementizer, we are offered a new tool for dis-tinguishing the structural properties of different subordinate clause types in Swedish.

1. Introduction

Swedish subordinate clauses come in two varieties: the prototypical non-V2 complement and the somewhat marked embedded V2 clause. In this respect, Swedish patterns with Danish, Norwegian and German: the distinct property of verb second (meaning that no more than one constituent may precede the finite verb) is primarily associated with main clauses, but is occasionally found also in complement clauses. The relevant variation is illustrated below:

(1) a. Sven **gillar** *inte* princesstårta   (V2 main clause)
     Sven likes   not princess cake

  b. …att Sven *inte* **gillar** princesstårta (standard non-V2 complement)
      that Sven not likes princess cake

  c. …att Sven **gillar** *inte* princesstårta (embedded V2)
      that Sven likes   not princess cake

Note that the embedded V2 clause in (1c) mirrors the main clause structure in (1a). As has been argued ever since Andersson (1975), the possibility of V2 in subordinate clauses is closely linked to the semantic status of the embedded proposition; I will review the relevant arguments in more detail below.

Much of the discussion on Swedish clause structure in general and subordinate clause structure in particular has focused on the position of the finite verb in relation to negation and clause adverbials. In this paper, I will shift focus and zoom in on the subject instead, discussing its distribution with regards to the finite verb and negation. As is well established but rarely discussed, the Swedish middle field allows for some variation when it comes to the relative ordering of the subject and negation. Although the subject prototypically follows to the immediate right of the finite verb preceding negation (2a), it may also be found further to the right following negation (2b):

(2) a. Den tårtan ville **Sven** *inte* äta   (prototypical)
        that cake   wanted Sven not eat

   b. Den tårtan ville *inte* **Sven** äta
        that cake wanted not Sven eat

Note that this distributional variation cannot be fully explained in terms of focus or contrast: the subject in (2b) need not be contrastively stressed[1]. Subordinate clauses display a similar pattern: the subject may be preceded by negation without any obvious contextual trigger. Without stress on the subject, the interpretation of (3b) does not differ from (3a) in any significant sense:

(3) a. …att **Sven** *inte* gillar princesstårta   (prototypical)
        that Sven not   likes   princess cake

   b. …att *inte* **Sven** gillar princesstårta
        that not Sven   likes   princess cake

Interestingly, the comp + neg + subject sequence of (3b) has received little attention in the literature. Not even within traditional, descriptive grammar is this possibility discussed in any detail.

From this very brief overview, Swedish subordinate clauses have been shown to allow for two deviations from the standard word order, one having to do with the position of the finite verb in relation to negation and clause adverbials, the other having to do with the subject in relation to negation and clause

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[1] Unstressed pronominal subjects behave somewhat differently, however, in that most speakers prefer them to precede negation (Teleman 1999:4, p. 94-95).

adverbials. In what follows, I will argue that these variations can be intrinsically linked to each other. In short, I aim to show that the possibility of having negated subjects following the complementizer is heavily restricted in embedded V2-clauses. Only quantified subjects are possible in such complements. The position immediately to the right of the complementizer in embedded V2-clauses thus displays exactly the same restriction as we find in the first position of declarative main clauses (to be discussed in section 4). This distributional fact I take to provide a very strong argument for assuming that the embedded structure in (1c) is identical to the structure of the Swedish main clause. No such restriction is found for non-V2 complements, which is expected given the standard view on subordinate clause structure. The observation is supported by a corpus study, presented in section 5.

2. The Swedish clause structure

Within the generative framework, the characteristic V2 property of Swedish declarative main clauses is standardly taken to follow from V-to-C movement: the finite verb must obligatorily raise from V to C. Following the general assumption of a NegP marking the lower boundary between IP and VP (Pollock 1989), a raised finite verb will thus precede the negative particle in Swedish. Note also that verb movement to C enables topicalization: Spec-CP is arguably the only position in the Swedish clause structure to which movement is motivated by pragmatic/semantic considerations rather than syntactic[2].
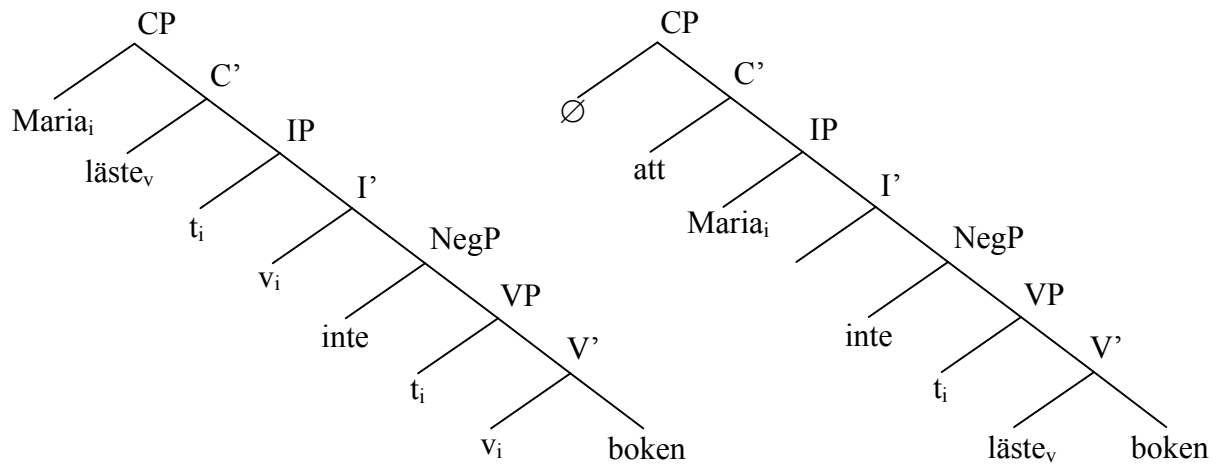
The presence of a complementizer effectively blocks verb movement to C in subordinate clauses, forcing the verb to remain in situ in V (see Platzack 1986 for arguments). This has at least two obvious structural consequences: a) the finite verb will remain in a position lower than any clause adverbial b) topicalization is not possible, since Spec-CP is not available in the structure:

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[2] However, Spec-CP must be obligatory filled by an overt element in main clauses. Thus movement to Spec-CP may be seen as syntactic, whereas the choice of the moved constituent is subjected to semantic/pragmatic considerations.

Figure 1: Swedish clause structure

1a. Main clause   *1b. Subordinate clause*

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          CP                                     CP
        /    \                                 /    \
  Maria_i    C'                              ∅      C'
       läste_v   \                                /    \
            t_i    IP                           att     IP
                  /  \                               /    \
                v_i   I'                         Maria_i   I'
                    inte  \                            inte  \
                       t_i  NegP                          t_i  NegP
                              \   VP                             \   VP
                               \   V'                             \   V'
                              v_i   boken                     läste_v   boken
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Following Vikner (1995), I will assume that I never provides a possible landing site for the finite verb in Swedish: the verb either has to raise to C or remain in V. This claim is supported by the data in (4): the fact that the finite verb is preceded by negation whenever it is not in second position suggests that it has remained in situ in V.

(4) a. Han kanske *inte* **kommer** ikväll
        he   maybe   not   comes   tonight

    b. *Han kanske **kommer** *inte* ikväll
        he   maybe   comes   not   tonight

Swedish differs in this respect from Icelandic, which is generally assumed to display V-to-I movement (see e.g. Vikner 1995 and Thráinsson 1995, but also Bentzen et al 2007 for a different view).

2.1 Embedded V2

Subordinated *that*-clauses may display main clause properties in certain restricted environments, for example when embedded under assertive verbs, such as *say, claim, believe* and *think* (see e.g. Andersson 1975, Vikner 1995, Julien 2007). The main clause properties referred to here are basically that the verb may precede negation and any clause adverbial (5a), and that the clause need not be subject initial (5b). The latter fact is especially important, since the possibility of a topicalized non-subject constituent is suggestive of V-to-C movement (given that V-to-C movement is a prerequisite for the availability of

Spec-CP as discussed above). As expected, topicalization is not possible if the finite verb remains low in the structure (5c):

(5) a. Jag tror att Maria **har** *ännu inte* läst <u>den boken</u>
    I believe that Maria has still not read that book

  b. Jag tror att <u>den boken</u> **har** Maria *ännu inte* läst
      I believe that that book has Maria still not read

  c. *Jag tror att den boken Maria *ännu inte* **har** läst
      I believe that that book Maria still not has read

Embedded V2 has gained considerable interest in the literature, and it has seen somewhat of a revival in later years (see e.g. de Cuba 2007, Julien 2007 and Bentzen et al 2007). Most researchers agree that embedded V2 follows from V-to-C movement, but disagree on the actual trigger of embedded V2. As touched upon above, embedded V2 is only possible in certain environments, and I will return to the licensing question in 5.1 below.

    But let us now turn our attention to the other variation we set out to discuss, namely the distribution of the subject in relation to negation and clause adverbials.

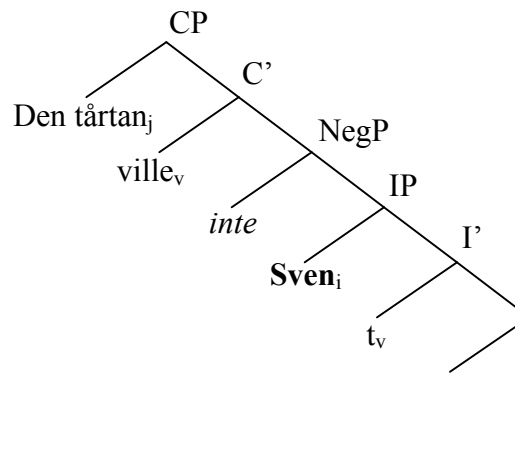## 2.2 Subject and clause adverbials

Even though the subject is frequently found in the first position of the Swedish main clause, it is assumed to have moved there from its position to the immediate right of the finite verb. The distributional fact that the subject prototypically precedes clause adverbials provides a clear indication of movement out of VP. However, different analyses have proposed different subject positions; for the present purposes I will simply assume movement to Spec-IP (see e.g. Waldmann 2008, Vikner 1995, Holmberg & Platzack 1995)[3].

    In line with Platzack (2006), I will assume two available NegPs: one marking the lower boundary of the I-domain and one marking the upper. This move allows a straightforward account of the variation illustrated in examples (2) and (3) above:

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[3] Holmberg & Platzack (2005) – working with a split C-domain – argues that the subject moves through Spec-TP to Spec-FinP. The motivation for distinguishing between Fin(ite)P and T(ense)P is that finiteness and tense need not co-occur (cf. Sells 2007). As has been proposed by Platzack (2006), the FinP may host tenseless constituents, most notably *kanske* ('maybe') as illustrated in (4).

Figure 2: The Swedish I-domain

1a. Main clause   *1b. Subordinate clause*
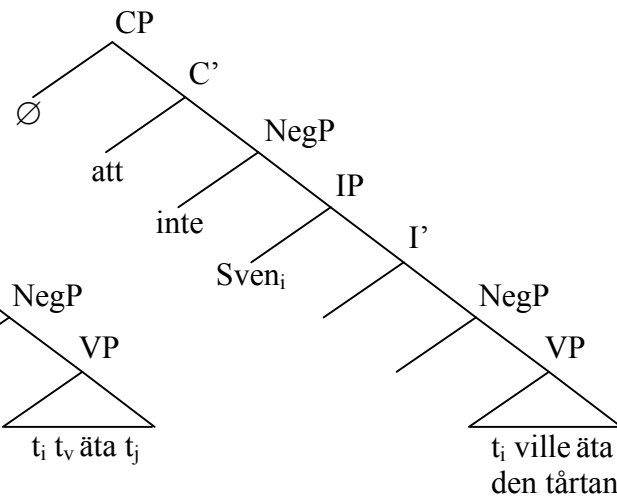
It might be tempting to alternatively analyze the subjects as VP-internal, thus being in a position lower than any clause adverbial (which would render an upper NegP superfluous). But this is clearly not a correct assumption: as is illustrated in (6) and (7) the subject must precede a negative polarity item (NPI), a fact that strongly suggests movement out of VP[4]:

(6) a. Den filmen ville *inte* **Sven** *någonsin* se
         that movie wanted not Sven   ever   see

    b. *Den filmen ville *inte någonsin* **Sven** se
         that movie wanted not   ever   Sven see

(7) a. …att *inte* **Sven** *någonsin* har varit i Paris
         that not Sven   ever   has been to Paris

    b. *…att *inte någonsin* **Sven** har varit i Paris
         that not   ever   Sven has been to Paris

It should be emphasized that the clause structure presented here is quite simplified; for a thorough discussion on subject positions in relation to adverbials the reader is referred to Svenonius (2002) and the references cited therein. For our

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[4] The polarity item *ens* ('even') may occur in pre-subject position, though: *att inte ens Sven*…. But the distribution of *ens* differ from *någonsin* ('ever') in main clauses as well. Thus (i) is grammatical, whereas (ii) is not:
    (i) Inte ens Sven har varit i Paris
    (ii) *Inte någonsin Sven har varit i Paris

present purposes, however, I think we are sufficiently equipped to proceed to the next section.

4. The prediction

We have now spent some time discussing the structural properties of three different sentence types in Swedish: main clauses, subordinate clauses and embedded V2-clauses. Now, if the assumption of V-to-C-movement in embedded V2 clauses is correct, this means that the complementizer will embed a CP rather than the prototypical IP. Consequently, we would predict the position immediately to the right of the complementizer to be different in V2 and non-V2 complements: Spec-CP and Spec-IP, respectively. One argument for such an assumption has already been touched upon: only embedded V2 clauses allow topicalization of a non-subject constituent. However, this fact does not in itself provide solid evidence for the availability of Spec-CP, even though it is suggestive of it. As Reinholtz (1989) argues for Danish, topicalization in subordinate clauses may take place at a lower level, i.e. in the I-domain.

Assuming that a CP may embed another CP is not wholly unproblematic. Not only does it cast doubt on the notion of syntactic subordination; it also forces the assumption of a recursive C-domain. Since languages are recursive, this assumption would not be theoretically dubious in itself were it not for the fact that its application is limited to one cycle. This problem has of course been duly acknowledged (see e.g. Vikner 1995), even though CP-recursion is frequently assumed in the literature (see e.g. Julien 2007 and Bentzen et al 2007). In what follows, I will nevertheless defend the view of an embedded CP based on the distribution of negated subjects in the position immediately to the right of the complementizer.

4.1 Specifying the restrictions

As I discuss in Brandtler (2006), Spec-CP posits clear restrictions on the choice of possible negated subjects. Only quantified subjects may occur in this position: negated definite, generic or bare plural NPs are banned[5]:

(8) a. Inte alla ville se den filmen
      not everyone wanted (to) see that movie

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[5] Crucially, it is the semantic interpretation rather than the morphological form of the subject that poses this restriction. Thus, an indefinite NP is grammatical with non-specific reference (*Not a soul came to the party*), whereas a specific indefinite is banned (**Not a forum like this is the right place*).

b. Inte många ville   se den filmen
    not   many wanted (to) see that movie

c. Inte en bil stod på gatan
    not   a car   was on street-the

(9) a. *Inte Sven ville   se den filmen
       not   Sven wanted (to) see that movie

b. *Inte pojkar ville   se den filmen
    not   boys wanted (to) see that movie

c. *Inte tigrar är randiga
    not tigers are striped

Note that no such restriction holds of the I-domain – a clause adverbial may precede or follow any type of NP subject (cf. the definite subject of (3b) above). This difference can be readily accounted for with reference to the structural properties of the C- and I-domain respectively, the possibility of negation preceding the subject in the I-domain being the result of an upper NegP. In Spec-CP, the negative particle must form a constituent with the subject NP in order to uphold V2. In Brandtler (2006) I argue that the observed restriction on which constituents may incorporate negation reflects the semantic fact that the topic of an utterance must be outside the scope of negation[6].

Now, putting the pieces together we would assume that if the position following the complementizer in embedded V2 clauses is Spec-CP the same restriction would hold: i.e. we would only expect to find negation preceding quantified subjects. In non-V2 complement clauses we would not expect such a restriction, however, since the projection following the complementizer is the upper NegP followed by Spec,IP[7]. To put it differently: the assumed V-to-C movement in embedded V2 clauses restricts the number of constituents between the complementizer and the finite verb to only one. Thus, only a subject that may incorporate negation may follow the complementizer, so only quantified subjects may come in question. This restriction is of course not relevant for non-

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[6] Note also that this observation is a very strong argument for assuming V-to-C movement in subject initial main clauses. It has sometimes been proposed that only non-subject initial main clauses are V-to-C, whereas subject initial are V-to-I (see e.g. Travis 1991 and Zwart 1993). If the position of a clause initial subject were to be Spec-IP, the uneven distribution of subjects in (8) and (9) would be unexpected.

[7] It should be emphasized that Spec-IP according to all relevant criteria is a *syntactic* subject position, and hence not sensitive to the topical status of the subject. Thus we will find both expletive and quantified subjects in this position.

V2 complement clauses, since they would not exhibit any limitation on the number of constituents that may precede the finite verb.

4.2 Testing the prediction

One way of testing the prediction outlined above is naturally to form intuition based judgments on the grammaticality of comp+neg sentences. In order to do so, we must be able to differentiate between V2 and non-V2 sentences. This is not a wholly trivial problem. Negation is standardly used as a visible element marking the IP/VP boundary. But naturally, negation does not work for our purposes, since it is taken to occupy the upper NegP in the relevant variation. But negative polarity items (NPIs) do work – from (7b) above we saw that the NPI *någonsin* ('ever') seems to occupy the lower NegP. Thus, if the finite verb is in a position higher than the NPI, it has raised out of V to C (remember that I never provides a possible landing site in Swedish). And vice versa: if the finite verb remains in a position lower than the NPI, it must be in VP.

Let us now test the correctness of the following prediction:

PREDICTION
In embedded V2 clauses only quantified subjects are grammatical following negation in the position immediately to the right of the complementizer. Negated definite subjects are banned. In non-V2 complements no such restriction holds: negation may precede all kinds of subjects.

Using NPIs as IP/VP boundary markers, the prediction seems to be borne out. Whenever the verb precedes the NPI (and hence has moved out of VP) the negated subject must be quantified:

(10) a. Jag <u>tror</u> att inte Sven *någonsin* **har** varit i Tibro
        I believe that not Sven   ever   has been to Tibro

    b. Jag <u>tror</u>   att inte alla *någonsin* **har**   varit i Tibro
        I believe that not everyone even   har   been to Tibro

                                       −V2

                                                     Assertive

    c. *Jag <u>tror</u> att inte Sven **har** *någonsin* varit i Tibro
    d. Jag <u>tror</u> att inte alla **har** *någonsin* varit i Tibro

                                       +V2

(11) a. Jag <u>vet</u> att inte Sven *någonsin* **har** varit i Tibro
      I know that not Sven   ever   has been to Tibro

   b. Jag <u>vet</u> att inte   alla *någonsin* **har** varit i Tibro
      I   know that not everyone ever   has been to Tibro

   c. *Jag <u>vet</u> att inte Sven **har** *någonsin* varit i Tibro
   d. Jag <u>vet</u> att inte alla **har** *någonsin* varit i Tibro

                        −V2 (a, b); +V2 (c, d) — Semi-factive

(12) a. Jag <u>beklagar</u> att inte Sven *någonsin* **har** varit i Tibro
      I   regret   that not   Sven   ever   has   been to Tibro

   b. Jag <u>beklagar</u> att inte alla *någonsin* **har** varit i Tibro
      I   regret   that not everyone ever   has been to Tibro

   c. *Jag <u>beklagar</u> att inte Sven **har** *någonsin* varit i Tibro
   d. *Jag <u>beklagar</u> att inte alla **har** *någonsin* varit i Tibro

                        −V2 (a, b); +V2 (c, d) — Factive

(13) a. Det <u>är möjligt</u> att inte Sven *någonsin* **har** varit i Tibro
      it   is possible that not Sven   ever   has   been to Tibro

   b. Det <u>är möjligt</u> att inte   alla *någonsin* **har** varit i Tibro
      it   is possible   that not everyone   ever   has   been to Tibro

   c. *Det <u>är möjligt</u> att inte Sven **har** *någonsin* varit i Tibro
   d. *Det <u>är möjligt</u> att inte alla **har** *någonsin* varit i Tibro

                        −V2 (a, b); +V2 (c, d) — Non-assertives

In (10) and (11) the complement is embedded under an assertive and a semi-factive verb respectively, known to allow V2. Consequently, verb movement to C (as diagnosed by the post-verbal NPI) renders (10c) and (11c) ungrammatical, because the V2 restriction is violated: since negation cannot be incorporated into a definite noun phrase, two elements precede the finite verb. This restriction is of course only expected if the verb has raised all the way up to C; there are neither structural nor theoretical arguments for assuming a V2 restriction in the I-domain. By the same reasoning, the examples (10d) and (11d) are correctly predicted to be grammatical, however, since negation may be incorporated into quantified noun phrases; thus neg+QP will not lead to a violation of V2. This is the exact same restriction as was shown for main clauses in (8) and (9) above: only quantified subjects can be preceded by negation in Spec-CP in Swedish.

Naturally, both (10a) and (11a) are grammatical. From the NPI-diagnostic, we see that the verb has remained in situ in V. The complementizer takes the I-domain as a complement rather than the C-domain, hence no V2 restriction may apply. The structure can be accounted for by assuming an upper NegP as proposed above.

The predicates in (12) and (13) (factive and non-assertive) may never embed V2 complements in Swedish. Hence, we would expect all instances of the NPI following the finite verb to be ungrammatical – and this is also the case. We are then left with the grammatical examples in (12a, b) and (13a, b) which of course follow from the standard description of Swedish clause structure: an upper NegP precedes the subject in Spec-IP, and the verb (remaining in V) is preceded by the NPI.

All in all, the sentences in (10) to (13) provide solid evidence for our prediction: the position following the complementizer in embedded V2-clauses displays exactly the same restrictions as Spec-CP in main clauses. This distributional fact I take to constitute a very strong argument for assuming V-to-C movement in embedded V2 clauses in Swedish.

If the findings can be supported by the results from an empirical survey, the implications from the intuition based judgments would be further strengthened.

5. The Survey

The sentences in (10) to (13) above suggest that the assumption of V-to-C movement in embedded V2 clauses is correct. Intuition based judgments are important and might be sufficient, but should be backed up by actual language use in order to be entirely reliable. Testing the above prediction of subject distribution in different subordinate clauses is not entirely unproblematic, however. The obvious problem concerns how to successfully delimit V2-environments; remember that embedded V2 is never obligatory in Swedish. Furthermore, to the best of my knowledge there are no frequency studies on embedded V2, i.e. we do not know to which extent it occurs[8]. Thus, if we find a definite subject following negation in a V2 environment (which we wouldn't get if the prediction is correct), we cannot exclude the possibility that it is a non-V2 structure if no clause adverbial or polarity item is present in the structure. Consequently, we run into a vicious loop of circularity: we test the hypothesis on presumed V2-

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[8] Embedded V2 is prescriptively incorrect, which makes it rare in formal writing. Jörgensen (1978) provides some insight to the frequency of embedded V2 in different genres, both in spoken and written discourse. But only a few matrix verbs (among them *say* and *think*) are included in his material.

sentences (without actually knowing that they are V2), and any obvious counter-evidence can be explained by simply saying that the sentence in question is not V2 after all. So before moving any further, let us at least restrict the environments to V2-favourable ones.

5.1 V2-environments in Swedish

Much of the work on embedded V2 has been directed to the licensing problem, i.e. why only certain environments license V2. The details of the analyses differ, and I will only present a very brief overview here. For Andersson (1975), an embedded V2 clause is not semantically subordinated, even though syntactically so. A similar idea is echoed in Julien (2007), in that she argues that an embedded V2 clause is syntactically coded for the same illocutionary force as main clauses. Bentzen et al (2007) see embedded V2 as resulting from the complement clause being the "main point of utterance", following Simons (2007). Common to these analyses is the observation that the embedded proposition must be asserted (in some sense of the term[9]): presupposed or backgrounded propositions will not license embedded V2. This observation in turn goes back to the hugely influential studies by Hooper & Thompson (1973) and Hooper (1975) on the applicability of root transformations in English. Ever since Andersson (1975), a direct correlation has been assumed between root transformations in English and the possibility of embedded V2 in Swedish: the same environments that license root transformations in English will license V2 in Swedish.

As Hooper (1975) points out, one characteristic property of predicates allowing root transformations in English is that they allow a parenthetical reading. This notion originates with Urmson (1952), who distinguished a group of predicates "whose peculiarity is that they can be used either parenthetically in the normal grammatical sense, or else followed by *that,* in either case with an indicative clause" (1952:495). Examples of such verbs are *think, believe, realize* and *afraid* (emphasis mine):

> when these verbs are used *in the first person of the present tense*, as is very clear when they occur grammatically in parenthesis, *the assertion proper is contained in the indicative clause with which they are associated, which is implied to be both true and reasonable*. They themselves have not, in such a use, any descriptive sense but rather function as signals guiding the hearer to a proper appreciation

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[9] The importance of assertivity goes back to Hooper & Thompson (1973). It should be noted, however, that their definition of assertion is different from that of Stalnaker (1978), and closer to Simons' (2007) notion of "main point of utterance". For Hooper & Thompson (1973:473), "The assertion of a sentence may be identified as that part which can be negated or questioned by the usual application of the processes of negation and interrogation".

> of the statement in its context, social, logical, or evidential. (…) They [the paren-
> thetical verbs] help the understanding and assessment of what is said rather than
> being a part of what is said.
>
> (Urmson 1952:495)

As Hooper (1975:94) shows, Urmson's claim is supported by the syntactic behavior of parenthetical verbs: these verbs allow preposing of the complement clause, as opposed to non-parenthetical (factive) predicates such as *forget, regret* and *be sorry*:

(14) a. He wants to hire a woman, he said

      b. This war will never end, we concluded

      c. The winters are very cold here, the guide explained

(15) a. *She was a compulsive liar, he forgot

      b. *It was difficult to make ends meet, they regretted

      c. *Herman has not finished his work, I'm sorry

Only when the main clause is interpreted parenthetically are root transformations in the complement clause possible, and hence also V2 in Swedish. Note that if a parenthetical reading is less accessible – e.g. if the matrix clause is emphasized – V2 in the complement clause becomes considerably worse.

(16) a. Jag tror att Maria **har** *inte* läst boken
         I believe that Maria has not read book-the   } +V2

      b. ??Jag TROR att Maria **har** *inte* läst boken

      c. Jag TROR att Maria *inte* **har** läst boken   } –V2
         I believe that Maria not has read book-the

(17) a. Jag antar att Maria **har** *inte* läst boken
         I suppose that Maria has not read book-the   } +V2

      b. ??Jag ANTAR att Maria **har** *inte* läst boken

      c. Jag ANTAR att Maria *inte* **har** läst boken   } –V2
         I suppose that Maria not has read book-the

Admittedly, the distinction between parenthetical/non-parenthetical verbs is rather rough, especially considering the fact that all parenthetical verbs allow for non-parenthetical readings. Simons (2007) builds on Urmson's idea, but focuses on the complement itself rather than the embedding predicate. Only when the

embedded proposition contains "the main point of utterance" are V2 and root transformations licensed. In an attempt to avoid the difficulties associated with parenthetical readings, Simons goes on to propose certain tests for distinguishing the main part of the utterance. Unfortunately, there are problems connected with this approach as well, as discussed by Julien (2007).

However, the general tendency can be stated as follows: embedded V2 is sensitive to the semantic status of the proposition. If it is asserted (or constitutes the main part of the utterance) V2 will be licensed. If for some reason the assertive status of the complement clause is weakened, embedded V2 may not apply. This is why we do not find V2 in presupposed complements following factive verbs. Also, embedded V2 is rarely found in clause initial complements (since such propositions often have a presuppositional flavor, see Horn 1986:172-3), or in complements following negated predicates. Other environments disfavoring V2 are questions and complement clauses embedded under another complement clause:

(18) a. *Att Bush **kunde** *inte* deltaga   rapporterades av Reuters
        that Bush   could   not   participate was reported   by Reuters

    b. *Han sa inte att han **kommer** *förmodligen* ikväll
        he said not that he   comes   probably   tonight

    c. *Vet du att han **vill** *inte*   komma ikväll?
        Know you that he wants not (to) come   tonight
        'Are you sure he doesn't want to come tonight?'

    d. *Jag undrar om han sa att han **kommer** *inte* ikväll
        I wonder   if he said that he   comes   not tonight

5.2 Methodology

I have surveyed the complements of 22 different predicates in Swedish. 13 of these are known to allow embedded V2 and may be used parenthetically. The remaining predicates are observed to disallow parenthetical readings or embedded V2 in their complements. The material is taken from Internet using Google. This was really a necessity, since no available language corpora proved big enough for any significant result. Even with Google, I only found a handful of examples for some predicates. For this reason, it was impossible to restrict the survey to sentences with an overt clause adverbial/polarity item marking the IP/VP boundary as in sentences (10) to (13) above. Predicates with less than five occurrences have been left out of the study.

In an attempt to eliminate all environments known to disfavor V2, I only surveyed predicates in the first person present tense (in accordance with Urm-

son's notion of parentheticals). The following principles guided the excerpting process:

- For each predicate, I searched the string "subj.1p + verb.pres + comp + neg", e.g. *jag tror att inte* ('I think that not').
- Only complement clauses containing a finite verb were included, since auxiliary deletion is a well-known property of standard subordinate clauses in Swedish.
- The subordinating predicate had to be part of a main clause, i.e. not embedded in other clauses (see 18d) above).
- Both direct and indirect questions were omitted.

In the following section, the results from the survey are presented.

5.3 Results

The fact that embedded V2 never is obligatory in Swedish complement clauses severely complicates our understanding of the results. That is, we cannot expect an exact correlation in accordance with the prediction: a certain number of definite subjects following negation may occur even in complements to parenthetical verbs (i.e. when they are not used/interpreted parenthetically, see the discussion above). Hence, the occurrence of negated definite subjects in V2-environments does not in itself falsify the hypothesis. But if the number of negated definite subjects is significantly higher in non-V2 environments, it will constitute support for the intuition based judgments presented above.

Let us now consider the parenthetical predicates (in the first person present tense), all known to allow embedded V2. Note that table 1 contains the three distinct groups noted to allow root transformations in English: strong and weak assertives and semi-factives. If our prediction is correct, we would assume few definite subjects following negation (in the post-complementizer position). But as is evident from table 1, the predicates display rather big differences:

Table 1: Parentheticals

Predicate	Definite NPs	Total	% def. NP
Rädd att (afraid')	3	10	30
Hävda att (claim')	-	5	-
Mena att (mean')	1	15	7
Anta (presume')	6	25	24
Säker på att (sure of')	3	23	13
Tycka (think')	6	14	43
Tro (believe')	10	25	40
Gissa (guess')	5	25	20
Förmoda (assume')	1	7	14
Förstå (understand')	3	25	12
Tänka sig (imagine')	5	25	20
Se (see')	-	7	-
Inse (realize')	1	21	5
Total	**44**	**227**	**19**

For both *tro* ('believe') and *tycka* ('think') the numbers are unexpectedly high, 40% and 43% respectively. However, these numbers correlate quite well with Jörgensen's (1976:71) findings: according to his survey, 52% of subordinated clauses following *tro* and 69% of complements following *tycka* take embedded V2. The predicates *rädd* ('afraid') and to a lesser extent *anta* ('presume') also show rather high numbers of definite subjects following negation: 30% and 24% respectively. But since the hits for each predicate are quite few, the total amount of definite subjects following negation may give a better overview: 44 of a total of 227 subjects were definite following negation, or 19%. Omitting *tro* and *believe* the total is 15% (28/188).

Even though the results from this survey do not uniformly conform to the prediction, it should be noted that the numbers should reflect each predicate's tendency to take embedded V2. If this assumption is correct, *mena* ('mean') is more likely to take V2 complements than *tycka* ('think'), since the number of definite subjects is fewer.

Let us now turn our attention to the non-parenthetical verbs (in Hooper & Thompson 1973 distinguished as factives and non-assertives). These predicates are well-known to disallow V2 in their complements. Consequently, we should expect no limitation of the kind of subject that follows negation. The results are presented in table 2 below:

Table 2: Non-parentheticals

Predicate	Definite NPs	Total	% def. NP
Ångra (regret')	9	9	100
Vara glad (be glad')	23	25	92
Vara ledsen (be sorry')	13	15	87
Beklaga (regret')	12	24	50
Förvånad över (surprised')	17	24	71
Vara möjligt (be possible')	12	25	48
Vara konstigt (be strange')	16	25	64
Vara underligt (be strange')	12	18	66
Total	**130**	**190**	**68**

By comparing the numbers in table 1 and 2, we may distinguish an obvious difference: every single predicate in table 2 has a higher percentage of definite subjects following negation than any predicate in table 1. For some predicates the percentage of definite subjects is very high: *ångra* ('regret') 100%, *vara glad* ('be happy') 92% and *vara ledsen* ('be sorry') 87%. In sum, 130 negated subjects out of 190 were definite, or 68% - that is 49 percentage units higher than for the parenthetical predicates.

The findings of this quantificational study may not seem entirely convincing in itself. However, taken together with the intuition based judgments in the previous section, it clearly points to a difference between parenthetical and non-parenthetical verbs which is in line with the prediction of subject distribution sketched above. The fact that negated definite subjects are less likely to occur in complements following parenthetical verbs is important: there is no obvious reason for this distributional restriction if do not assume V-to-C movement.

6 Conclusion

In this paper, I have argued that embedded V2-clauses unambiguously display V-to-C movement in Swedish. The observed distributional facts provide strong arguments for this assumption. Since embedded V2 clauses display the exact same restriction we find in the Spec-CP of main clauses, we have a solid argument for assuming that the position following the complementizer in embedded V2 clauses is not any random A'-position but Spec-CP. The claims are supported by both intuition based judgments and the results from a corpus survey. I have argued that the position following the complementizer can be used in distinguishing between V2 and non-V2 complements in Swedish, and thus presented a new tool for analysing the different structures.

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