Embedded V2 in Scandinavian: Empirical observations

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1 V2 and assertion

- Since Hooper and Thompson (1973), it has been known that so-called root phenomena are not confined to root clauses.
- This has been discussed extensively for V2 in the Germanic languages, see e.g. den Besten (1977/1983), Holmberg and Platzack (1995), and Vikner (1995). See also Heycock (2006) for a recent overview.

(1) Han sa [att han **kunde inte** sjunga]. (Subject-intial V2)
he said that he could not sing
'He said the he couldn't sing.'

(2) Han sa [att **den sången** kunde han inte sjunga]. (Non-subject-initial V2)
he said that that song-the could he not sing
'He said that that song he couldn't sing.'

- The traditional view about the Scandinavian languages:[1]
  - → Icelandic has generalized embedded V2 (i.e. V2 in all embedded contexts).
  - → The Mainland Scandinavian languages have limited embedded V2 (Vikner 1995, among others, argues that embedded V2 is limited to complements of *bridge* verbs).
- Hooper and Thompson (1973) observed that root phenomena in English are restricted to asserted clauses. The relevance of assertion has also often been linked to V2 in Germanic (see e.g. Andersson 1975, Green 1976, Wechsler 1991, and Julien 2006):

(3) **The Assertion Hypothesis:**
The more asserted (the less presupposed) the complement is, the more compatible it is with V2 (and other root phenomena).

[1] Faroese has also been noted to display variation with respect to embedded V2, see e.g. Jonas 1996, Petersen 2000, Þráinsson 2001, and Þráinsson et al. 2004.

- **The aims of this study:**
  1. Identify distribution of embedded V2 in Swedish, Norwegian, and Icelandic.
  2. Test the Assertion Hypothesis.
  3. Present an analysis in progress.

- **Testing for embedded V2:**
  → Availability of the word order V-Neg in subject-initial clauses, (4a).[2]
  → Availability of non-subject topicalization, (4b).

(4) a. He said that [Subject $\mathbf{V_{Fin}}$ **Neg**]
b. He said that [**Non-Subject** V_{Fin} Subject (Neg) _]

2 V2 in (finite) embedded clauses

- Following Hooper and Thompson (1973), we divide predicates into five classes in terms of assertion vs. presupposition, (see also Julien 2006).

2.1 Class A: Strongly assertive predicates

- Class A predicates embed complements that are not presupposed but rather cited or reported assertions in the discourse.
- The class includes *say, claim, report*, and *assert*.

Swedish

(5) Han sa att han **kunde inte** sjunga på bröllopet.
he said that he could not sing on wedding-the

(6) Han sa att **den här sången** kunde han sjunga på bröllopet.
he said that this here song-the could he sing on wedding-the

Northern Norwegian

(7) Han sa at han **kunne ikke** syng i bryllupet.
he said that he could not sing in wedding-the

(8) Han sa at **den her sangen** kunne han syng i bryllupet.
he said that this here song-the could he sing in wedding-the

Icelandic

(9) Hann sagði að hann **gæti ekki** sungið í brúðkaupinu.
he said that he could not sung in wedding-the

[2] In Icelandic, the word order V-Neg is also found in contexts which do not allow root phenomena, such as relative clauses, conditionals, and embedded *wh*-questions, see Hróarsdóttir et al. 2006 for discussion.

(10) Hann sagði að **þetta lag** gæti hann ekki sungið í brúðkaupinu.
he said that this song could he not sung in wedding-the

- **Summary**: All three varieties allow both V-Neg and topicalization of non-subjects under Class A predicates.

2.2 Class B: Weakly assertive predicates

- Class B predicates embed assertions, like Class A predicates.
- Class B predicates differ from Class A predicates in that the speaker is indicating that he (or the matrix subject referent) is not fully committed to the truth of the assertion.
- The class includes *believe, think*, and *mean*.

Swedish

(11) Han trodde att vi **hade inte** sett den här filmen.
he believed that we had not seen the here film-the

(12) Han trodde att **den där filmen** hade vi inte sett.
he believed that that there film-the had we not seen

Northern Norwegian

(13) Han trudde at vi **hadde ikke** sett den her filmen.
he believed that we had not seen this here film-the

(14) Han trudde at **den her filmen** hadde vi ikke sett.
he believed that this here film-the had we not seen

Icelandic

(15) Hann hélt að við **hefðum ekki** séð þessa mynd.
he believed that we had not seen this film

(16) Hann hélt að **þessa mynd** hefðum við ekki séð.
he believed that this film had we not seen

- **Summary**: All three varieties allow both V-Neg and topicalization of non-subjects under Class B predicates. Class B thus patterns with Class A.

2.3 Class C: Non-assertive predicates

- Class C predicates embed complements that are neither asserted nor presupposed. Some of these predicates serve to deny the truth of the complement.
- The class includes *doubt* and *deny*.

Swedish

(17) *Han tvivlar på att hon **har inte** träffat den här mannen.
he doubts on that she has not met this here man-the

(18) *Han tvivlar på att **den här mannen** har hon inte träffat.
he doubts on that this here man-the has she not met

Northern Norwegian

(19) *Han tvilte på at ho **hadde ikke** møtt den her mannen.
he doubted on that she had not met this here man-the

(20) *Han tvilte på at **den her mannen** hadde ho ikke møtt.
he doubted on that this here man-the had she not met

Icelandic[3]

(21) Hann efast um að hún **hafi ekki** hitt þennan mann.
he doubts about that she has not met this man

(22) *Hann efast um að **þennan mann** hafi hún ekki hitt.
he doubts about that this man has she not met

- **Summary**: The relevant Swedish and Norwegian varieties disallow both V-Neg and topicalization of non-subjects under Class C predicates. Icelandic allows V-Neg, but crucially disprefers topicalization of non-subjects under predicates of this class.

2.4 Class D: Factives

- Class D predicates embed complements that are facts. They express some emotion or subjective attitude about an event, the existence of which is presupposed.
- The class includes *be proud of, be ashamed, be annoyed*, and *regret*.

Swedish

(23) *Han var stolt över att hon **hade inte** rökt den där cigarren.
he was proud over that she had not smoked this there cigar-the

(24) *Han var stolt över att **den där cigarren** hade hon inte rökt.
he was proud over that this there cigar-the had she not smoked

Northern Norwegian

(25) *Han va stolt over at ho **hadde ikke** røyka den der sigaren.
he was proud over that she had not smoked this there cigar-the

[3] In complements of some Class C and Class D verbs, topicalization is marginally accepted by speakers of Icelandic although there is a clear contrast between complements of these verbs and complements of Class A, B, and E verbs, see Appendix I.

(26) *Han va stolt over at **den der sigaren** hadde ho ikke røyka.
he was proud over that this there cigar-the had she not smoked

Icelandic

(27) Hann var stoltur yfir að hún **hafði ekki** reykt þennan vindil.
he was proud over that she had not smoked this cigar

(28) *Hann var stoltur yfir að **þennan vindil** hafði hún ekki reykt.
he was proud over that this cigar had she not smoked

- **Summary**: The relevant Swedish and Norwegian varieties disallow both V-Neg and topicalization of non-subjects under Class D predicates. Class D thus patterns with Class C. Again, Icelandic allows V-Neg, but crucially disprefers topicalization of non-subjects under predicates of this class.

2.5 Class E: Semi-factives

- Class E predicates embed complements that are facts, like Class D predicates. They are typically verbs of perception and knowledge.
- Complements of Class E predicates differ from complements of Class D predicates in that they lose their factivity in questions, if embedded in the antecedent of a conditional, and under certain modals, cf. Karttunen (1971).
- The class includes *discover, understand, realize*, and *know*.

Swedish

(29) Jag upptäckte att jag **hade inte** läst den.
I discovered that I had not read it

(30) Jag upptäckte att **den här boken** hade jag inte läst.
I discovered that this here book-the had I not read

Northern Norwegian

(31) Æ oppdaga at æ **hadde ikke** lest den.
I discovered that I had not read it

(32) Æ oppdaga at **den her boka** hadde æ ikke lest.
I discovered that this here book-the had I not read

Icelandic

(33) Ég uppgötvaði að ég **hafði ekki** lesið hana.
I discovered that I had not read it

(34) Ég uppgötvaði að **þessa bók** hafði ég ekki lesið.
I discovered that this book had I not read

- **Summary**: All three varieties allow both V-Neg and topicalization of non-subjects under Class E predicates. Class E thus patterns with Class A and Class B.

2.6 Summary of the data

(35) **The distribution of embedded V2:**

		Swedish	Norwegian	Icelandic
Class A	V-Neg	✓	✓	✓
	Top	✓	✓	✓
Class B	V-Neg	✓	✓	✓
	Top	✓	✓	✓
Class C	V-Neg	*	*	✓
	Top	*	*	*
Class D	V-Neg	*	*	✓
	Top	*	*	*
Class E	V-Neg	✓	✓	✓
	Top	✓	✓	✓

- In Swedish, Norwegian, and Icelandic, the complements of Class A, B, and E predicates pass the two tests we have applied to identify embedded V2: The word order V-Neg and topicalization of non-subjects.
- In Swedish and Norwegian, the complements of Class C and D predicates fail both the tests for embedded V2. In Icelandic, these complements pass only one of the tests, namely the word order V-Neg. This is traditionally accounted for by assuming that Icelandic has V-to-I movement independently of V2.

3 A note on verb movement in Icelandic embedded clauses

- Hróarsdóttir et al. (2006) argue that Icelandic does not have independent verb movement to the IP domain; rather all verb movement is to the CP domain.
- Icelandic verb movement in traditional non-V2 contexts differs from the verb movement found in certain varieties of Mainland Scandinavian (Ostrobothnian, Northern Norwegian):

  → Icelandic verb movement can cross negation; Ostrobothnian and Northern Norwegian verb movement cannot.

  → Icelandic verb movement cannot intervene between adverbs; Ostrobothnian and Northern Norwegian verb movement can.

- Icelandic verb movement is to the CP domain; Ostrobothnian and Northern Norwegian verb movement is to the IP domain.
- Further support for generalized embedded V-to-C in Icelandic:

  → ECM infinitives (lacking CP, but containing IP), do not allow verb movement.

- Icelandic *has* generalized embedded verb movement to the CP domain. However, it does *not* have generalized embedded root phenomena.
- In Class C and Class D, non-subject topicalization is dispreferred in Icelandic and impossible in Swedish and Norwegian.

4 Discussion

4.1 Are embedded V2 clauses really embedded?

- It has been argued in the literature that embedded clauses showing root phenomena are actually matrix clauses (cf. among others de Haan 2001 on Frisian and Biberauer 2002 on Modern Spoken Afrikaans).
- We argue that (at least for the Scandinavian languages) they *are* embedded clauses:

I. Most embedded clauses are obligatorily selected for by the matrix verb:

(36) Han sa *(at ...). (NN)
he said that

II. Some matrix verbs impose selectional restrictions on their complement. E.g. in Icelandic, the matrix verb selects for an embedded clause in a specific mood (subjunctive or indicative):

(37) a. Hann sagði að hún hefði ekki lesið bókina. *say* → subjunctive
he said that she had$_{\text{sub}}$ *not read book-the*
b. Hann vissi að hún hafði ekki lesið bókina. *know* → indicative
he know that she had$_{\text{ind}}$ *not read book-the*

III. The complementizer is preferred in embedded V2 contexts, and sometimes even obligatory.

IV. Extraction from V2 clauses is allowed in Icelandic and Norwegian:[4]

(38) Den her sangen forstod æ at æ sang ikke _ så bra. (NN)
this here song-the understood I that I sang not so well

4.2 Assertion vs. Main point of utterance

- Recall that embedded V2 (and other root phenomena) has been linked to assertion:

(39) **The Assertion Hypothesis:**
The more asserted (the less presupposed) the complement is, the more compatible it is with V2 (and other root phenomena).

- At first sight, this hypothesis seems to be supported:
  - → Complements under Class A and B predicates are indeed asserted and they allow both the order V-Neg and topicalization of non-subjects in all three Scandinavian varieties.
  - → Complements under Class C and D predicates are non-asserted and although V-Neg is allowed in Icelandic, topicalization of non-subjects is impossible or otherwise marked in all three variations.
- However, complements under Class E predicates appear problematic. These pattern both with complements of assertive predicates (Class A and B) and complements of factive predicates (Class D), which are not asserted.

[4] See Appendix II for more empirical details on extraction in Swedish, Norwegian, and Icelandic.

→ Complements under Class E predicates allow topicalization of non-subjects, like Class A and B complements.

→ Complements under Class E predicates seem presupposed, like Class D complements.

- Test for factivity: Entailment preservation under negation (Kiparsky and Kiparsky 1970):

(40) a. Vi upptäckte att han inte hade fått på vinterdäcken ännu. (non-V2)
we discovered that he not had got on winter.tires-the yet

b. Vi upptäckte att ännu hade han inte fått på vinterdäcken. (V2)
we discovered that yet had he not got on winter.tires-the

c. Han hade inte fått på vinterdäcken ännu.
he had not got on winter.tires-the yet

→ Both (40a) and (40b) entail (40c).

(41) a. Vi upptäckte faktiskt inte att han inte hade fått på vinterdäcken. (non-V2)
we discovered actually not that he not had got on winter.tires-the

b. Vi upptäckte faktiskt inte att ännu hade han inte fått på vinterdäcken. (V2)
we discovered actually not that yet had he not got on winter.tires-the

c. Han hade inte fått på vinterdäcken ännu.
he had not got on winter.tires-the yet

→ Negation in the matrix clause does not affect the entailment relations: Both (41a) and (41b) entail (41c).

⇒ Class E predicates are factive, just like Class D; they presuppose the existence of the event referred to by the embedded clause.[5]

- As expected, we cannot question/predicate truth or falsity of the embedded clause alone (when the relevant predicates are used factively). In this sense, complements of both Class D and Class E predicates are not asserted:

(42) a. #De upptäckte att han inte hade fått på vinterdäcken ännu, men det var fel.
they discovered that he not had got on winter.tires-the yet but that was wrong

b. #De upptäckte att ännu hade han inte fått på vinterdäcken, men det var fel.
they discovered that yet had he not got on winter.tires-the but that was wrong

- Can complements of Class E predicates be called *asserted* in any other sense?

> "The assertion of a sentence is its core meaning or main proposition. [...] 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." (Hooper and Thompson 1973: 473).

[5] As noted in section 2.5, Class E predicates can lose the factivity in certain contexts.

(43) (Possibility of being) main assertion ↔ Proposition

→ (43) holds when semifactives are used non-factively, in e.g. questions and conditionals (Karttunen 1971, Hooper and Thompson 1973, and Hooper 1975).

→ However, as shown in (42), when these predicates are used factively, their complements are obviously not propositions. Can they still be main assertions?

- The notion of *main assertion* in Hooper and Thompson (1973) seems to correspond to *main point of utterance* in Simons (2006):

> "[T]he main point of an utterance U given in answer to a question is that part of the content of U which constitutes the proffered answer to the question." (Simons 2006: fn2).

→ We adopt this diagnostic here.

- Test for main point of utterance: Can the embedded clause alone constitute the proffered answer to a question?

(44) Q: Varför kom han inte på mötet igår? (Class E)
why came he not on meeting-the yesterday

A_1: Vi upptäckte att **han inte hade fått på vinterdäcken ännu**. (non-V2)
we discovered that he not had got on winter.tires-the yet

A_2: Vi upptäckte att **ännu hade han inte fått på vinterdäcken**. (V2)
we discovered that yet had he not got on winter.tires-the

A_3: **Han hade inte fått på vinterdäcken ännu**.
he had not got on winter.tires-the yet

⇒ Complements of Class E predicates may constitute main point of utterance on their own.[6]

- In the above respect, complements of Class E predicates pattern with Class A and B, (45)-(46), but not with Class C and D, (47)-(48):

(45) Q: Koffer kom han ikke på festen? (Class A)
why came he not on party-the

A_1: Han sa at **han ikke hadde tid**.
he said that he not had time

A_2: **Han hadde ikke tid**.
he had not time

(46) Q: Koffer avbestilte ho flybilletten? (Class B)
why cancelled she flight.ticket-the

A_1: Ho trudde at **ho ikke hadde tid til å dra likevel**.
she believed that she not had time to to go after.all

A_2: **Ho hadde ikke tid til å dra likevel**.
she had not time to to go after.all

[6]This has noted before, and has been called a *parenthetical* use of the matrix verb (Urmson 1952, Hooper and Thompson 1973, Simons 2006, and references cited therein).

(47) Q: Koffer måtte han i fengsel? (Class C)
why must he in jail

A$_1$:#Han benekta at **han ikke hadde betalt skatt**.
he denied that he not had paid tax
A$_2$: **Han hadde ikke betalt skatt**.
he had not paid tax

(48) Q: Koffer kjøpte du ikke nåkka på salget? (Class D)
why bought you not anything on sale-the

A$_1$:#Æ angra på at **æ hadde brukt opp alle pengan mine før jul**.
I regretted on that I had used up all money-the my before Christmas
A$_2$: **Æ hadde brukt opp alle pengan mine før jul**.
I had used up all money-the my before Christmas

- **Conclusion:** The possibility of being the main point of an utterance seems to go hand in hand with the option of employing embedded V2 in all three varieties (Class A, B, and E vs. Class C and D).

⇒ **Proposal:**
Embedded V2 is dependent on the possibility of being a main point of utterance.

- As we have seen, neither embedded V2 nor main point of utterance (main assertion in Hooper and Thompson 1973) necessarily imply that the clause is a proposition, cf. (42) and (44).

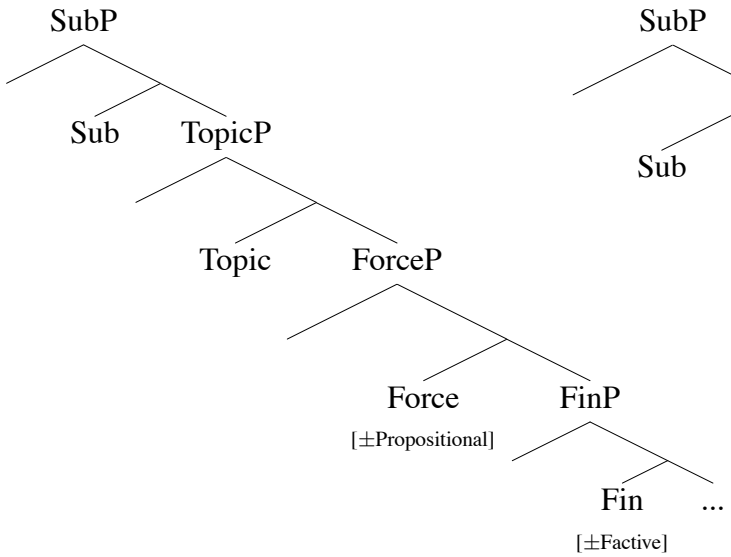
(49) a. V2 $\nrightarrow$ Proposition
b. Main point of utterance $\nrightarrow$ Proposition

- Note that the verb is still used factively in the relevant contexts, cf. Simons (2006). This holds regardless of whether or not the embedded clause involves V2 and regardless of whether or not the embedded clause constitutes the main point of the utterance.

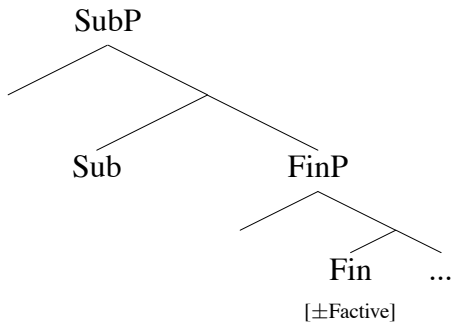
4.3 More vs. less structure

- The difference between Class A, B, and E, and Class C and D lies in the size of the complement (see e.g. Hooper and Thompson 1973 and Haegeman 2006). We base our structures on Haegeman (2006).

(50) Class A, B, and E:

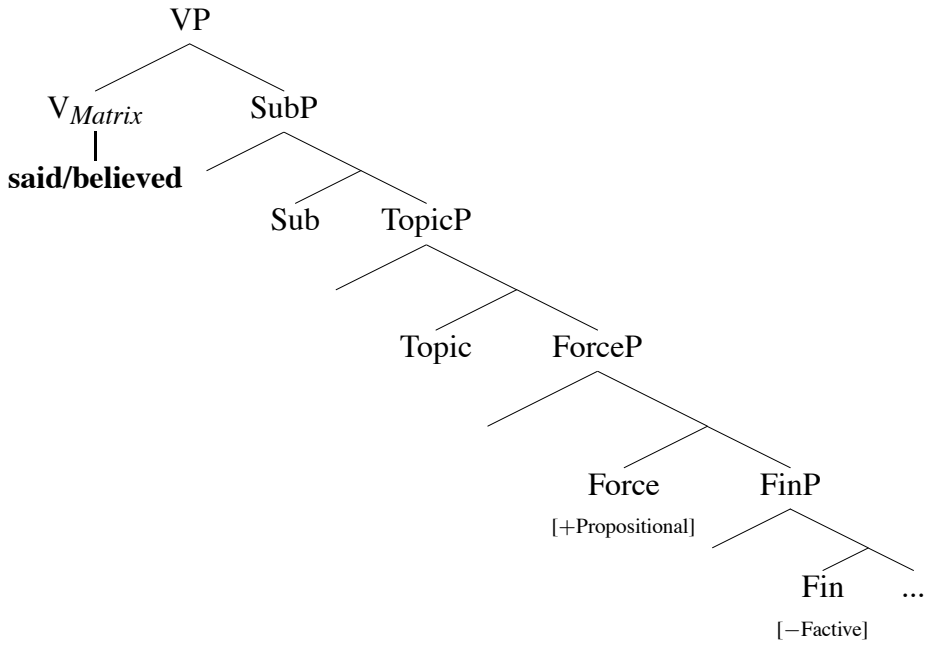


Class C and D:

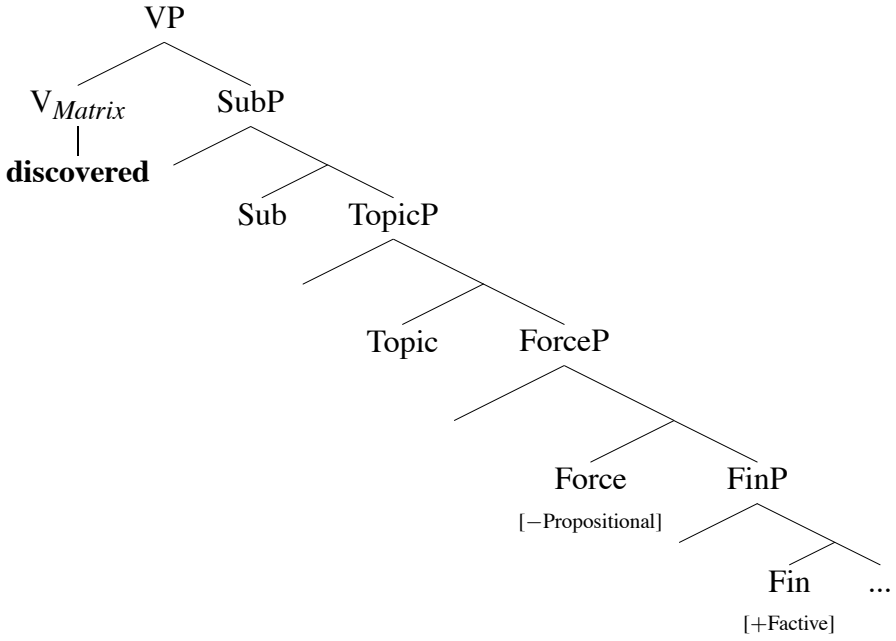


- ForceP:
  - → specifies [±Propositional]
  - → licenses the presence of TopicP
  - → encodes main point of utterance
- FinP:
  - → specifies [±Factive]
- Class A, B, and E predicates, containing ForceP, are specified for both [±Propositional] and for [±Factive] (obviously the combination [+Propositional] [+Factive] is impossible):
  - (i) Class A and B predicates: [+Propositional], [−Factive]
  - (ii) Class E predicates: [−Propositional], [+Factive]

(51) Class A and Class B (strongly and weakly asserted complements):



(52) Class E (semi-factive complements):

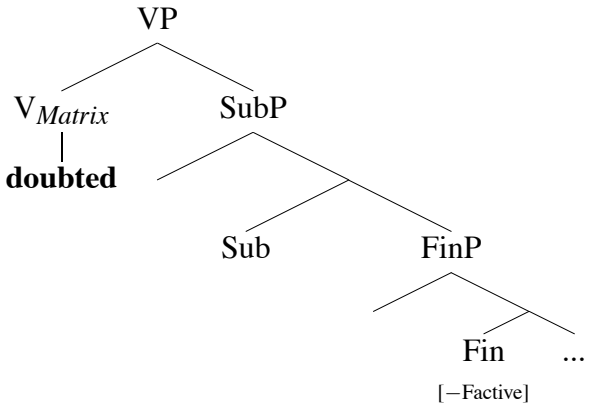


- Class C and D predicates, lacking ForceP, may only be specified for [±Factive]:

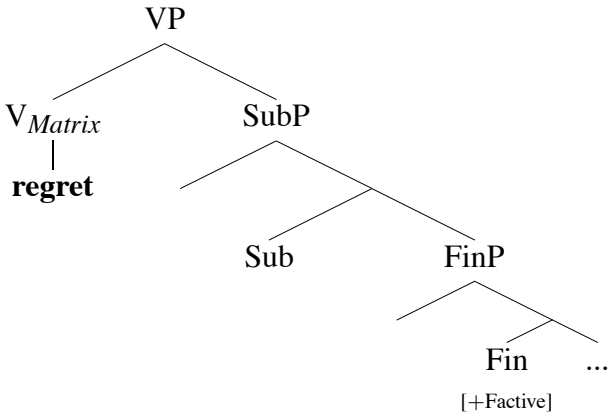
  (iii) Class C: [−Factive]

  (iv) Class D: [+Factive]

(53) Class C (non-asserted, non-presupposed complements):



(54) Class D (factive complements):



4.4 Further data supporting structural differences

Modal auxiliaries

- In classes A, B, and E, modal auxiliaries can get either an epistemic or a deontic reading:

  Class A: Strongly asserted complements:

(55) Han sa at dem måtte være der. (epistemic / deontic)
he said that they must be there

(56) a. Hann sagði að þau hlytu að vera þar. (epistemic)
he said that they must to be there

b. Hann sagði að þau mættu vera þar. (deontic)
he said that they must be there

Class B: Weakly asserted complements:

(57) Han trudde at dem måtte være der. (epistemic / deontic)
he believed that they must be there

(58) a. Hann hélt að þau hlytu að vera þar. (epistemic)
he thought that they must to be there

b. Hann hélt að þau mættu vera þar. (deontic)
he thought that they must be there.

Class E: Semi-factive complements:

(59) Han oppdaga at dem måtte være der. (epistemic / deontic)
he discovered that they must be there

(60) a. Hann uppgötvaði að þau hlytu að vera þar. (epistemic)
he discovered that they must to be there

b. Hann uppgötvaði að þau mættu vera þar. (deontic)
he discovered that they must be there

- In classes C and D, modal auxiliaries can only get a deontic interpretation:

Class C: Non-asserted complements:

(61) Han benekta at dem måtte være der. (*epistemic / deontic)
he denied that they must be there

(62) a. *Hann neitaði að þau hlytu að vera þar. (*epistemic)
he denied that they must to be there

b. Hann neitaði að þau mættu vera þar. (deontic)
he denied that they must be there

Class D: Factive complements:

(63) Han skjemtes over at dem måtte være der. (*epistemic / deontic)
he was.ashamed over that they must be there

(64) a. *Hann sá eftir að þau hlytu að vera þar. (*epistemic)
he regretted that they must to be there

b. Hann sá eftir að þau mættu vera þar. (deontic)
he regretted that they must be there

Epistemic adverbs

- In classes A, B, and E, epistemic adverbs are possible:

  Class A: Strongly asserted complements:

(65) a. Han sir at dem sannsynligvis har kjøpt en Toyota.
he says that they probably has bought a Toyota
b. Hann segir að þau hafi sennilega keypt Toyotu.
he says that they have probably buy Toyota

  Class B: Weakly asserted complements:

(66) a. Han trur at dem sannsynligvis har kjøpt en Toyota
he believes that they probably have bought a Toyota
b. Hann heldur að þau hafi sennilega keypt Toyotu.
he believes that they have probably bought Toyota

  Class E: Semi-factive complements:

(67) a. Han oppdaga at dem sannsynligvis hadde kjøpt en Toyota.
he discovered that they probably had bought a Toyota.
b. Hann uppgötvaði að þau höfðu sennilega keypt Toyotu.
he discovered that they had probably bought Toyota.

- In classes C and D, epistemic adverbs are impossible:

  Class C: Non-asserted complements:

(68) a. *Han tvile på at dem sannsynligvis har kjøpt en Toyota.
he doubts on that they probably have bought a Toyota
b. *Hann efast um að þau hafi sennilega keypt Toyotu.
he doubts on that they have probably bought Toyota

  Class D: Factive complements:

(69) a. ??Han skjemmes over at dem sannsynligvis har kjøpt en Toyota.
he is.ashamed over that they probably have bought a Toyota
b. Hann skammast sín fyrir að þau hafi sennilega keypt Toyotu.
he is.ashamed REFL over that they have probably bought Toyota

5 Summary and concluding remarks

- In Swedish, Norwegian, and Icelandic embedded V2 is restricted to the complements of Class A, B, and E predicates.
- The notion of assertion is relevant to embedded V2 but it has been used to refer to two components, *proposition* and *main point of utterance*.
- We argue that only one of these (main point of utterance) is crucial for embedded V2.

- The possibility of being the main point of an utterance goes hand in hand with the option of employing embedded V2 in all three varieties (Class A, B, and E vs. Class C and D).
- On our account, this is captured by assuming that the two sets of predicates differ with respect to the size of their complement: Complements of class A, B, and E predicates contain ForceP, whereas this projection is lacking in complements of class C and D.

Appendix I: Topicalization in classes C and D

• Variation in Icelandic with respect to topicalization of non-subjects in Class C and Class D:

	1	2	3	4	5
efast um	*	*	??	?	??
neita	?	?	??	✓	✓
sjá eftir	*	*	??	*	??
pirra sig/furða sig	*	*	??	?/✓	✓
vera stoltur yfir	??	??	✓	✓	✓
skammast sín	??	??	?	?	?
vera ánægður með	??	??	✓	?	?
vera leiður yfir	*	*	?	?	?

Appendix II: Embedded V2 - structural island?

- We have tested the possibilities of extraction out of embedded V2 clauses in Swedish, Norwegian, and Icelandic with respect to the five predicate classes.

I. Argument extraction

(70) (i) Possibility of extracting subject from clause involving verb > negation order (71a)
(ii) Possibility of extracting object from clause involving verb > negation order (71b)
(iii) Possibility of extracting subject from clause involving topicalization (71c)
(iv) Possibility of extracting object from clause involving topicalization (71d)

(71) a. **wh-subject** said he that [_ V_{fin} Neg].
b. **wh-object** said he that [subject V_{fin} Neg _].
c. **wh-subject** said he that [non-subject V_{fin} _ Neg].
d. **wh-object** said he that [non-subject V_{fin} subject Neg _].

Class A: *say*

(72) a. *Vem$_i$ sa han (att) t$_i$ kunde inte sjunga den här sången? (Sw)
who said he (that) could not sing this here song-the

b. *[Den här sången]$_i$ sa han att han kunde inte sjunga t$_i$ på bröllopet.
this here song-the said he that he can not sing on wedding-the

(73) a. *Vem$_i$ sa han att den här boken hade t$_i$ inte gett till Karin? (Nor)
who said he that this here book-the had not given to Karin

b. *[Till vem]$_i$ sa han att den här boken hade hon inte gett t$_i$?
to whom said he that this here book-the had he not given

(74) a. Kem$_i$ sa han at t$_i$ kunne ikke syng den her sangen? (Nor)
who said he that could not sing this here song-the

b. [Den her sangen]$_i$ sa han at han kunne ikke syng t$_i$ i bryllupet.
this here song-the said he that he can not sing in wedding-the

(75) a. *Kem$_i$ sa han at den her boka hadde t$_i$ ikke gitt til ho Kari? (Nor)
who said he that this here book-the had not given to she Kari

b. *[Til kem]$_i$ sa han at den her boka hadde ho ikke gitt t$_i$?
to whom said he that this here book-the had he not given

(76) a. Hver$_i$ sagði hann að t$_i$ gæti ekki sungið þetta lag? (Ice)
who said he that could not sing this song

b. [Þetta lag]$_i$ sagði hann að hann gæti ekki sungið t$_i$.
this song said he that he could not sing

(77) a. *Hver$_i$ sagði hann að þessar bækur hefði t$_i$ ekki gefið börnunum? (Ice)
who said he that these books had not given children-the

b. *Hverjum$_i$ sagði hann að þessar bækur hefði hann ekki gefið t$_i$?
who said he that these books had he not given

Class B: ***believe***

(78) a. *Vem$_i$ trodde han (att) t$_i$ sjöng inte bra? (Sw)
who believed he (that) sang not well

b. *[Den där sången]$_i$ trodde han att han sjöng inte t$_i$ bra.
that there song-the believed he that he sang not well

(79) a. *Vem$_i$ trodde han att den här boken hade t$_i$ inte gett till Karin? (Sw)
who believed he that this here book-the had not given to Karin

b. *[Till vem]$_i$ trodde han att den här boken hade hon inte gett t$_i$?
to whom believed he that this here book-the had he not given

(80) a. Kem$_i$ trudde han at t$_i$ hadde ikke sett den her filmen? (Nor)
who believed he that had not seen this here film-the

b. ?Ka$_i$ trudde han at vi hadde ikke sett t$_i$?
what believed he that we had not seen

(81) a. *Kem$_i$ trudde han at den her boka hadde t$_i$ ikke gitt til ho Kari? (Nor)
who believed he that this here book-the had not given to she Kari

b. *[Til kem]$_i$ trudde han at den her boka hadde ho ikke gitt t$_i$?
to whom believed he that this here book-the had he not given

(82) a. Hver$_i$ heldur hann að t$_i$ syngi ekki vel? (Ice)
who believes he that sings not well

b. [Þetta lag]$_i$ heldur hann að hann syngi ekki t$_i$ vel.
this song believes he that he sings not well

(83) a. *Hver$_i$ hélt hann að þessar bækur hefði t$_i$ ekki gefið börnunum? (Ice)
who believed he that these books had not given children-the

b. *Hverjum$_i$ hélt hann að þessar bækur hefði hann ekki gefið t$_i$?
who believed he that these books had he not given

Class C: ***doubt***

(84) a. *Vem$_i$ tvivlar han på (att) t$_i$ har inte träffat Karin? (Sw)
who dobts he on (that) has not met Karin

b. *Karin$_i$ tvivlar han på att hon har inte träffat t$_i$.
Karin doubts he on that she has not met

(85) a. *Vem$_i$ tvivlade han på att den här boken hade t$_i$ inte gett till Karin? (Sw)
who doubted he on that this here book-the had not given to Karin

b. *[Till vem]$_i$ tvivlade han på att den här boken hade hon inte gett t$_i$?
to whom doubted he on that this here book-the had he not given

(86) a. *Kem$_i$ tvilte han på at t$_i$ hadde ikke møtt ho Kari? (Nor)
who doubted he on that had not met she Kari

b. *Ho Kari$_i$ tvilte han på at ho hadde ikke møtt t$_i$.
she Kari doubted he on that she had not met

(87) a. *Kem$_i$ tvilte han på at den her boka hadde t$_i$ ikke gitt til ho Kari? (Nor)
who doubted he on that this here book-the had not given to she Kari

b. *[Til kem]$_i$ tvilte han på at den her boka hadde ho ikke gitt t$_i$.
to whom doubted he on that this here book-the had she not given

(88) a. Hver$_i$ efast hann um að t$_i$ hafi ekki hitt forsetann? (Ice)
who doubts he about that has not met president-the

b. Forsetann$_i$ efast hann um að hún hafi ekki hitt t$_i$.
president-the doubts he about that she has not met

(89) a. *Hver$_i$ efast hann um að þessar bækur hafi t$_i$ ekki gefið börnunum? (Ice)
who doubts he on that these books has not given children-the

b. *Hverjum$_i$ efast hann um að þessar bækur hafi hann ekki gefið t$_i$?
who doubts he on that these books has he not given

Class D: ***be proud of***

(90) a. *Vem$_i$ var han stolt över (att) t$_i$ hade inte rökt den der cigarren? (Sw)
who was he proud over (that) had not smoked this there cigar-the

b. *[Den där cigarren]$_i$ var han stolt över att hon hade inte rökt t$_i$.
this there cigar-the was he proud over that she had not smoked

(91) a. *Vem$_i$ var han stolt över att den här boken hade t$_i$ inte gett till Karin? (Sw)
who was he proud over that this here book-the had not given to Karin

b. *[Till vem]$_i$ var han stolt över att den här boken hade hon inte gett t$_i$?
to whom was he proud over that this here book-the had he not given

(92) a. *Kem$_i$ var han stolt over at t$_i$ hadde ikke røyka sigaren? (Nor)
who was he proud over that had not smoked cigar-the

b. *[Den der sigaren]$_i$ var han stolt over at ho hadde ikke røyka t$_i$.
this there cigar-the was he proud over that she had not smoked

(93) a. *Kem$_i$ var han stolt over at den her boka hadde t$_i$ ikke gitt til ho Kari? (Nor)
who was he proud over that this here book-the had not given to she Kari

b. *[Til kem]$_i$ var han stolt over at den her boka hadde ho ikke gitt t$_i$?
to whom was he proud over that this here book-the had he not given

(94) a. Hver$_i$ var hann stoltur yfir að t$_i$ hafði ekki reykt vindilinn? (Ice)
who was he proud over that had not smoked cigar-the

b. [Þennan vindil]$_i$ var han stoltur yfir að hún hafði ekki reykt t$_i$.
this cigar was he proud over that she had not smoked

(95) a. *Hver$_i$ var hann stoltur yfir að þessar bækur hafði t$_i$ ekki gefið börnunum? (Ice)
who was he proud over that these books had not given children-the

b. *Hverjum$_i$ var hann stoltur yfir að þessar bækur hafði hún ekki gefið t$_i$?
who was he proud over that these books had she not given

Class E: *discover*

(96) a. *Vem$_i$ upptäckte du (att) t$_i$ hade inte läst boken? (Sw)
who discovered you (that) had not read book-the

b. *[Den här boken]$_i$ upptäckte jag att jag hade inte läst t$_i$.
this here book-the discovered I that I had not read

(97) a. *Vem$_i$ upptäckte han att den här boken hade t$_i$ inte gett till Karin? (Sw)
who discovered he that this here book-the had not given to Karin

b. *[Till vem]$_i$ upptäckte han att den här boken hade hon inte gett t$_i$?
to whom discovered he that this here book-the had he not given

(98) a. Kem$_i$ oppdaga du at t$_i$ hadde ikke lest boka? (Nor)
who discovered you that had not read book-the

b. [Den her boka]$_i$ oppdaga æ at æ hadde ikke lest t$_i$.
this here book-the discovered I that I had not read

(99) a. *Kem$_i$ oppdaga han at den her boka hadde t$_i$ ikke gitt til ho Kari? (Nor)
who discovered he that this here book-the had not given to she Kari

b. *[Til kem]$_i$ oppdaga han at den her boka hadde ho ikke gitt t$_i$?
to whom discovered he that this here book-the had he not given

(100) a. Hver$_i$ uppgötvaðir þú að t$_i$ hafði ekki lesið bókina? (Ice)
who discovered you that had not read book-the

b. [Þessa bók]$_i$ uppgötvaði ég að ég hafði ekki lesið t$_i$.
this book discovered I that I had not read

(101) a. *Hver$_i$ uppgötvaði hann að þessar bækur hafi t$_i$ ekki gefið börnunum? (Ice)
who discovered he that these books has not given children-the

b. *Hverjum$_i$ uppgötvaði hann að þessar bækur hafi hann ekki gefið t$_i$?
who discovered he that these books has he not given

(102) Overview of argument extraction in Swedish, Norwegian, and Icelandic:

		Swedish	Norwegian	Icelandic
Class A	Subj-ext	*	✓	✓
	Obj-ext	*	✓	✓
Class B	Subj-ext	*	✓	✓
	Obj-ext	*	?	✓
Class C	Subj-ext	*	*	✓
	Obj-ext	*	*	✓
Class D	Subj-ext	*	*	✓
	Obj-ext	*	*	✓
Class E	Subj-ext	*	✓	✓
	Obj-ext	*	✓	✓

→ Swedish never allows argument extraction out of embedded V2-clauses.

→ Norwegian allows argument extraction out of embedded V2-clauses in complements of Class A, B, and E predicates.

→ Icelandic allows argument extraction out of all kinds of embedded V2-clauses.

II. Adjunct extraction

(103) a. Possibility of extracting an adjunct from and embedded clause (regardless of V2).
b. **wh-adjunct** said Subj [that Subj Neg V_{fin} Obj _]

Swedish and Norwegian:

(104) Varför$_i$ sa du t$_i$ att du inte hade träffat drottningen t$_i$? (Embedded non-V2)
why said you that you not had met queen-the

a. Jag sa det för att jag tyckte att du borde veta om det. (WH > matrix)
I said it because I thought that you should know about it

b. Hon hade inte tid att träffa mig. (WH > embedded)
she had not time to meet me

(105) Varför$_i$ sa du t$_i$ att du hade inte träffat drottningen *t$_i$? (Embedded V2)
why said you that you had not met queen-the

a. Jag sa det för att jag tyckte att du borde veta om det. (WH > matrix)
I said it because I thought that you should know about it

b. #Hon hade inte tid att träffa mig. (WH > embedded)
she had not time to meet me

(106) Koffer$_i$ sa du t$_i$ at du ikke hadde møtt dronninga t$_i$? (Embedded non-V2)
why said you that you not had met queen-the

a. Æ sa det førrdi æ syntes du burde vite om det. (WH > matrix)
I said it because I thought you should know about it

b. Ho hadde ikke tid til å møte mæ. (WH > embedded)
she had not time to to meet me

(107) Koffer$_i$ sa du t$_i$ at du hadde ikke møtt dronninga *t$_i$? (Embedded V2)
why said you that you had not met queen-the

a. Æ sa det førrdi æ syntes du burde vite om det. (WH > matrix)
I said it because I thought you should know about it

b. #Ho hadde ikke tid til å møte mæ. (WH > embedded)
she had not time to to meet me

→ Adjuncts may be extracted from embedded non-V2 clauses in Swedish and Norwegian, cf. (104) and (106).

→ Adjuncts may not be extracted from embedded V2 clauses in Swedish and Norwegian, cf. (105) and (107).

Icelandic:

(108) Af hverju$_i$ sagðirðu t$_i$ að þú hafðir ekki hitt drottninguna t$_i$? (Embedded V2)
why said.you that you had not met queen-the

a. Ég sagði það af því að mér fannst þú ættir að vita það. (WH > matrix)
I said it because I found you should to know it

b. Hún hafði ekki tíma til að hitta mig. (WH > embedded)
she had not time to to meet me

→ Adjuncts may be extracted from embedded V2 clauses in Icelandic, cf. (108).

- Variation in the possibility of argument and adjunct extraction and the islandhood of embedded clauses in Swedish, Norwegian, and Icelandic (binding facts are also included in the table, although we have not given the relevant examples here):

	Argument extraction	Adjunct extraction	Binding	Islandhood
Icelandic	✓	✓	✓[7]	–
Norwegian	✓	*	*	weak
Swedish	*	*	*	strong

[7]Note that binding is only possible whenever the matrix verb selects a clause in the subjunctive mood.

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