Embedded V2, Factivity and Main Point of Utterance

Kajsa Djärv*, Caroline Heycock† and Hannah Rohde†
*University of Pennsylvania, †University of Edinburgh

kdjarv@sas.upenn.edu, caroline.heycock@ed.ac.uk, hannah.rohde@ed.ac.uk

February 26, 2016
DGfS
Introduction

- What are the constraints on where V2 can appear in complement clauses (one type of Embedded V2)?
- Is EV2 sensitive primarily to local lexical constraints or to pragmatic factors concerning the status of the embedded clause in the larger discourse context?
- Today: New experimental results.
Outline

Introduction

Background

Two Hypotheses
  Local Lexical Selection
  Global Pragmatic Effects

Experiment
  Experiment 1
  Experiment 2
  Conclusions

Acknowledgments
Background

• Swedish, like all Scandinavian languages, is robustly V2 in root clauses.
• In embedded clauses, V2 is never required, but is sometimes possible:

(1) EV2 evidenced by Subject Vfin-Neg/Adv order:

Han sa att han (har) aldrig (har) gillat broccoli.  
He said that he have never have liked broccoli.  
‘He said that he’s never liked broccoli.’

(2) EV2 evidenced by XP-Vfin-Subject order:

Han sa att broccoli har han aldrig gillat.  
He said that broccoli. TOP has he never liked.  
‘He said that broccoli, he has never liked.’

Embedded V2 has been linked to assertion...
Certain factive predicates claimed to resist EV2 (e.g. *be happy*):

(3) Han var glad att han (*behövde*) inte (behövde) betala
he was happy that he **needed** not **needed** pay
hela notan.
whole bill
‘He was happy that he didn’t have the pay the whole bill.’

(4) * Han var glad att hela notan **behövde** han inte
he was happy that whole bill.TOP **needed** he not
betala.
pay
‘He was happy that he didn’t have the pay the whole bill.’

Factive complements are presupposed; resist assertion...
Background

The so-called ‘semi-factives’ (e.g. *discover*) don’t presuppose their complements in e.g. questions and conditionals, but do presuppose their complements elsewhere—

(5) Han upptäckte att han *(behövde)* inte *(behövde)* betala.  
He discovered that he *needed* *not needed* pay.  
ˈheːlaː nɔtːan.  
whole bill.  
‘He discovered that he didn’t have the pay the whole bill.’

(6) Han upptäckte att hela notan *behövde* han inte.  
He discovered that whole bill.TOP *needed* he *not* pay.  
ˈbeːhɔvde hɑn iht.  
‘He discovered that he didn’t have the pay the whole bill.’

But they appear to allow EV2 **even when** their complements are presupposed!
Background

Sharpening the notion of assertion:
Simons’ (2007: 1035–6) “Main Point of Utterance” (MPU)

The MPU of an utterance U is the proposition p communicated by U that renders U relevant.
Questions/response sequences can be used as diagnostic: the proposition communicated by the response that answers the question is the main point of the response.

(7) Q. Why didn’t Kate come to the party?
   A. John thinks that she’s left town.

(8) Q. Why didn’t John invite Kate to the party?
   A. He thinks that she’s left town.
Background

Questions:

• What determines the distribution of EV2?
• How does factivity / assertion (MPU) interact with EV2?
Two Hypotheses

Local Lexical Selection (Wiklund et al. 2009):

Claims:

• Indirect relation between MPU and EV2: Both licensed by ForceP, selected by assertives and semifactives only.

• Factives select a smaller clause, incompatible with both EV2 and MPU. (MPU lexically licensed, contra Simons)

• EV2 and MPU-interpretation both optional, and independent, properties of ForceP.

Evidence: acceptable examples of …

a. … Embedded MPU, without EV2. \[\text{[MPU } \not\rightarrow \text{ EV2]}\]

b. … EV2 in non-MPU embedded clauses. \[\text{[EV2 } \not\rightarrow \text{ MPU]}\]
Two Hypotheses

Global Pragmatic Effects (Jensen & Christensen 2013):

Claim:

- MPU $\iff$ EV2.
- MPU pragmatic (following Simons), not lexically licensed.

Evidence:

- Corpus data: Correlation of EV2 and predicate class.
- Problem: Corpus in fact not coded for MPU.

This view is essentially an update of the classic analysis of embedded root phenomena in Hooper & Thompson 1973.
Experiment 1: Factivity & MPU in English

Testing:

- Can we use Simons’ (2007) Q&A paradigm to reliably manipulate MPU in an experimental setting?
- Can factives embed MPU clauses?
Experiment 1: Factivity & MPU in English

Experiment:

- L1 English speakers (n=47)
- Task:
  - Read short Q&A-pairs (24 items, 24 fillers).
  - Rate directness of answer on 1-5 scale
  - Factive predicates: ‘be happy’, ‘be disappointed’, ‘be relieved’, ‘be surprised’.
  - Non-factive predicates: ‘I got the impression’, ‘it seemed to me’.
Experiment 1: Factivity & MPU in English

Items: 2 discourse contexts × 3 embedding contexts:

A: I hear that you went to Paris last summer.
   - What was the city like? Specific (sets up MPU = EC)
   - How was it? General (sets up MPU = EC/MC)

B: I was surprised that the city was really great. Factive
   I got the impression that the city was really great. NonFact
   The city was really great. Unembedded

Relevant Predictions (Factives vs. Non-factives):

- If manipulation of MPU is successful, then the non-factives (at least) should be judged as more direct answers in the Specific than in the General condition.

- Difference between factive and non-factive in Specific condition: if factives can’t embed MPU, then the factive complement should not be a possible direct answer to the Specific question.
If manipulation of MPU is successful, then the non-factives (at least) should be judged as more direct answers in the Specific than in the General condition. → Confirmed.

Difference between factive and non-factive in Specific condition: if factives can’t embed MPU, then the factive complement should not be a possible direct answer to the Specific question. → Falsified: factives can embed MPU.
Experiment 2: Swedish Embedded V2

Now that we have established participants show sensitivity to Q&A manipulation, we can make use of this in experimental investigation of EV2 in Swedish.

- Test for the effect on acceptability of EV2 in Swedish of:
  - Local syntactic/semantic context (matrix predicate type);
  - Discourse pragmatic context (MPU).
Experiment 2: Swedish Embedded V2

- L1 Swedish speakers (n=118)
- Task:
  - Read short dialogues (16 items, 16 fillers).
  - Rate the acceptability of the answers on 1-6 scale.
  - 2 MPU contexts (main/embedded) × 4 predicate types × 2 word orders (EV2/EV3).
**Experiment 2: Swedish Embedded V2**

Clause-embedding predicates used in Expt 1, by predicate-type:

<table>
<thead>
<tr>
<th>Assertive (com)</th>
<th>Assertive (epist)</th>
<th>Factive</th>
<th>Semifactive</th>
</tr>
</thead>
<tbody>
<tr>
<td>säga</td>
<td>anta</td>
<td>vara lättad</td>
<td>upptäcka</td>
</tr>
<tr>
<td>say</td>
<td>suppose</td>
<td>be relieved</td>
<td>discover</td>
</tr>
<tr>
<td>berätta</td>
<td>förmoda</td>
<td>vara glad</td>
<td>märka</td>
</tr>
<tr>
<td>tell</td>
<td>assume</td>
<td>be happy</td>
<td>notice</td>
</tr>
<tr>
<td>förklara</td>
<td>gissa</td>
<td>vara leden</td>
<td>komma fram till</td>
</tr>
<tr>
<td>explain</td>
<td>guess</td>
<td>be sad/sorry</td>
<td>arrive at</td>
</tr>
<tr>
<td>hävda</td>
<td>vara säker</td>
<td>vara förvånad</td>
<td>få veta</td>
</tr>
<tr>
<td>claim</td>
<td>be sure</td>
<td>be surprised</td>
<td>come to know</td>
</tr>
</tbody>
</table>
Experiment 2: Swedish Embedded V2

**Background:** Little Albin and his mother Carina went to the cinema.

**Embedded Clause MPU:**

A: How did **Albin** find the cinema trip?

B: Carina gissade att **han** (hade) nog inte (hade) väntat sig så mycket action.
   ‘Carina guessed that he probably hadn’t expected that much action.’

**Main Clause MPU:**

A: How did **Carina** find the cinema trip?

B: **Hon** gissade att Albin (hade) nog inte (hade) väntat sig så mycket action.
   ‘She guessed that Albin probably hadn’t expected that much action.’

**Position of verb (V2, V3) and predicate type** varied in the Bs.
Experiment 2: Swedish Embedded V2

Predictions:

- **Local Lexical Selection:** EV2 will interact with predicate type, not MPU.
- **Global Pragmatic Effect:** EV2 will interact with MPU, not predicate type.
Experiment 2: Swedish Embedded V2

- Local Lexical Selection: EV2 interacts with pred. type, not MPU. → yes
- Global Pragmatic Effect: EV2 interacts with MPU, not pred. type. → no
- Results mirror pattern in EV2 in Jensen & Christensen’s (2013) corpus data.
Conclusions I

- Claims about the effect of MPU can be tested experimentally.
- Our results confirm Wiklund et al.’s observation (contra hypothesis in e.g. Christensen & Jensen) that MPU has no direct effect on EV2 in Swedish.
- Results show that there is still work to be done to explain effects of embedding predicates on possibility of EV2:
  - Factives **can** embed MPU but still resist EV2: problem for characterisation of “licensing” environment à la Wiklund et al 2009.
  - Semifactives allow EV2 even when truth of complement is presupposed: problem for accounts based on island effect of factivity.
Conclusions II

Empirical & theoretical follow-ups:

- Single experiment combining measure of perception of MPU and judgment of EV2.
- Closer examination of “true” factives and semifactives.
Acknowledgments

Thanks to:

Participants at the Experimental Study of Meaning Lab at the University of Pennsylvania for helpful feedback and comments; Audiences at MACSIM V at the University of Delaware, CSI Lisbon (2014), LEL Syntax and Semantics seminar, and the ULAB/LEL undergraduate conference; Research assistant Ivana Žetko for help with data processing for Experiment 2.
Particular thanks to Florian for guidance, feedback, and help with statistical analysis of Experiment 1.
Part of this work was supported by NSF grant BCS-1349009 to Florian Schwarz.
These judgments are mirrored in corpus data from Danish, reported by Jensen & Christensen (2013):

<table>
<thead>
<tr>
<th>Predicate Class</th>
<th>Assertive</th>
<th>Factive</th>
<th>Semifactive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example</td>
<td>säga</td>
<td>vara lättad</td>
<td>upptäcka</td>
</tr>
<tr>
<td></td>
<td>(tell)</td>
<td>(be relieved)</td>
<td>(discover)</td>
</tr>
<tr>
<td>% EV2</td>
<td>46%</td>
<td>15%</td>
<td>60%</td>
</tr>
</tbody>
</table>
Background

V2 as movement of $V_{fin}$ to Force-head in C-domain:

$\text{Force}^o$

$\text{ForceP}$

$\text{XP}$

$\text{broccoli}_i$

$\text{Force}^o$

$\text{V}_{fin}$

$\text{gillar}_j$

$\text{Subj}$

$\text{jag}_k$

$\text{TP}$

$\text{Subj}$

$\text{jag}_k$

$\text{t}_j$

$\text{vP}$

$\text{Neg}$

$\text{inte}$

$\text{vP}$

$\text{... <jag}_k\text{gillar}_j\text{broccoli}_i> \text{...}$
Two Hypotheses

Local Lexical Selection (Wiklund et al. 2009):

Evidence: Primarily own judgments.

Q. Varför kom han inte på mötet igår?
   ‘Why didn’t he come to the meeting yesterday?’

A. Vi upptäckte att han (hade) tyvärr inte (hade)
   we discovered that he had unfortunately not had
   fått på vinterdäcken än nu.
   put on winter-tires. def yet
   ‘We discovered that he unfortunately hadn’t changed to
   winter tires yet.’

→ Embedded clause is MPU, but both V-in-situ and EV2
   claimed to be grammatical. So: MPU $\not\rightarrow$ EV2
Two Hypotheses

Local Lexical Selection (Wiklund *et al.* 2009):

Evidence: Primarily own judgments.

Q. Varför kom han inte på festen?
   Why came he not to party.DEF
   ‘Why didn’t he come to the party?’

A. Kristine sa att han fick inte.
   Kristine said that he was-allowed not
   ‘Kristine said that he wasn’t allowed to.’

→ Embedded clause is EV2, but both main and embedded MPU claimed to be available. So: EV2 $\n\not\rightarrow$ MPU.