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Evidential Moods in Attitude and Speech Reports (Slides).

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Evidential Moods in Attitude & Speech Reports

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Towards a combinatorics

• What are the building blocks for constructing attitude and speech reports?

• Wanted: a combinatorics of building blocks that predicts the typology of possible attitude and speech reports in natural languages.
The textbook analysis

Ralph believes that Ortcutt is a spy.

• Verbs like *believe* select propositional arguments as part of their meaning.

• Propositional arguments are provided by CPs.
The textbook analysis

[[believe]] =
\[ \lambda p \lambda x \lambda w \forall w' \, (\text{Dox}_x(w, w') \rightarrow p(w')) \]

- Attitude verbs and verbs of speech are a species of modal operators.
What’s ahead

The textbook analysis
Overlooked construction pieces

Moods, modals, and evidentials in the left periphery of the embedded clause.
The plan

• Some problems for the textbook analysis.
• *That*-clauses as nominal modifiers.
• *That*-clauses as verbal modifiers.
• The German reportative subjunctive as a probe into the syntax & semantics of sentential complementation.
Trouble For the Textbooks

The action is in the embedded clause
Forcing speech report interpretations

• The presence of a *that*-clause can force a speech report interpretation with unergative verbs.

• It must be possible for *that*-clauses to contain a source for speech interpretations.
Ralph tobte, dass man ihn nicht informiert habe.

Ralph raged that they hadn’t informed him.
Ralph seufzte, dass er betrogen worden sei.
Ralph sighed that he betrayed been

‘Ralph sighed that he had been betrayed.’
Verbs of manner of speaking

- Babble, bark, bawl, bellow, bleat, boom, bray, burble, cackle, call, carol, chant, chatter, chirp, cluck, coo, croak, croon, crow, cry, drawl, drone, gabble, gibber, groan, growl, grumble, grunt, hiss, holler, howl ...

- Complete list in Levin 1993.
Nominal modifiers

- *That-*clauses can appear with nouns where they don’t fill argument positions.

- The idea, the myth, the story that Ortcutt is a spy baffles me.

Needed

An analysis of *that*-clauses that allows them

• to be verbal modifiers & contain the source for speech reports.
• to be nominal modifiers & contain the source for the modal semantics of the construction.
Harmonic embedded modals

The textbook analysis does not predict the two available readings with harmonic embedded modals.
He
{motioned, proposed, insisted, suggested, recommended, advised, demanded, petitioned, urged, begged, requested, required, wanted, pleaded}
that we **should** set up an emergency fund.
Harmonic reportative modal

Die Legende sagt, dass er ein Spion
The legend says that he a spy

gewesen sein soll.
been be said is.

‘The legend says that he was a spy according to hearsay.’
Harmonic reportative modal

Ortcutt sagt, er will
Ortcutt says er reportative modal

im Kino gewesen sein.
in+the cinema been be.

‘Ortcutt says that he was at the movies according to what he himself reports.’
Building Attitude and Speech Reports

That-clauses as nominal modifiers
Next step

Take the nominal modification configuration of *that*-clauses as a starting point and see how far it takes us.
Always nominal modifiers?

“... what we think of as sentential complements (or sentential subjects or topics) are best taken to be relative clause structures ...”

• Kayne 2008.
Always nominal modifiers?

“Though further study is needed, languages offer puzzling examples suggesting that certain instances of sentential complementation involve relativization.”

Aboh 2010.
Old High German *thaz* developed from a relative pronoun into a relativization particle.

Sentential complements developed from relative clauses modifying a dummy noun.

Axel-Tober 2009, 2012
Noun modification

- *That*-clauses can denote properties of things that have propositional content.

Noun modification

\[ \text{the}_{\text{NP}} \text{[rumor}_{\text{CP}} \text{[that Ortcutt is a spy]}_{\text{CP}} \text{]}_{\text{NP}} \]

- The rumor such that Ortcutt is a spy in all worlds compatible with its content.
- Modalization comes from the \textit{that}-clause.
He believes $_{NP}[\text{thing}_{CP}[\text{that Ortcutt is a spy}]_{CP}]_{NP}$

- He believes something such that Ortcutt is a spy in all worlds compatible with it.

- Modalization comes from the $that$-clause.
Source of modalization?

Which element in the *that*-clause hosts the modal element that is responsible for the modal semantics of attitude and speech reports?
• The highest layer of a clause can host a variety of modal elements: moods, harmonic modals, evidentials, covert modality in infinitives ...

• A more differentiated left periphery. Rizzi 1997; Aboh 2004, 2006; Saito 2010.
Syntactic Regions

- Mood
- Left periphery:
- Davidsonian region: below Aspect
Schema for left peripheral modality

- $[[\text{Mood}]] = \lambda p \lambda x \forall w' (w' \in \mathcal{f}(x) \rightarrow p(w'))$

- **Modal anchor**
- **Free variable ranging over domain projection functions**
Projecting modal domains


• Modal domains are projected with fixed recipes from things and eventualities in the world of evaluation.
The rumor that Ortcutt is a spy

\( C_{\text{content}}(x) \) = the set of worlds that are compatible with the content of \( x \). Undefined if \( x \) doesn’t have intentional content.

Defeasible normalcy assumptions.
Factual domain projection

- The fact that a Yeti walked by
- $\text{fact}(x) = \text{the set of worlds that have a counterpart of } x.$
- Defeasible normalcy conditions.
[[\text{NP}\text{[rumor}_{\text{CP}}\text{[Mood [Ortcutt is a spy] }]}_{\text{CP}}\text{]}_{\text{NP}}]]

= 

\lambda x \lambda w \text{ rumor}(x)(w)

\oplus

\lambda x \forall w' (w' \in f(x) \rightarrow \text{spy}(\text{Ortcutt})(w'))
Composition

\[
[[\text{NP}[\text{rumor}_{\text{CP}}[\text{Mood [Ortcutt is a spy] }]_{\text{CP}}]\text{NP}]]
\]

\[
= \\
\lambda x \lambda w (\text{rumor}(x)(w) \& \forall w' (w' \in f(x) \rightarrow \text{spy}(\text{Ortcutt})(w'))) 
\]
Composition

\[\lambda x \lambda s \text{ believe}(x)(s) \oplus \lambda x \lambda w \text{ thing}(x)(w) \& \forall w' ( w' \in f (x) \rightarrow \text{ spy}(\text{ Ortcutt})(w'))\]
Composition

$$[[\text{believe}_{NP}[\text{thing}_{CP}[\text{Mood}[\text{Ortcutt is a spy}]]_{CP}]_{NP}]]$$

$$= \lambda s \lambda w \exists x \ (\text{believe}(x)(s) \land \text{thing}(x)(w) \land s \leq w \land \forall w' (w' \in f(x) \rightarrow \text{spy}(\text{Ortcutt})(w')))$$

• Restrict (Chung & Ladusaw 2001). The direct object position is restricted & existentially quantified.
Consequence

• The *that*-clause participates in saturating the direct argument position of *believe*.

• But: the *that*-clause does **not** provide a propositional argument.

• *That*-clauses relate to the **nominal** arguments of attitude verbs and verbs of speech.
Nominal arguments

• Believe rumors, myths, claims
• Tell me stories, phone numbers, interesting facts
• Explain facts
• Say something interesting
Accomplished

• An analysis where *that*-clauses are noun modifiers. ✓

• An analysis that locates the modal semantics of attitude ascriptions in the complement clause and thus accounts for harmonic embedded modals. ✓
Still to do

• An analysis that explains how *that*-clauses all by themselves can create speech reports.
Forcing Speech Report Interpretations

That-clauses as verbal modifiers
Proposal: The left periphery of a clause can contain a [say] head above Mood.
Syntactic Regions

[say]

Mood

Left periphery:

Davidsonian region: below Aspect
Ralph sighed that Ortcutt was a spy.

[Ralph sighed \([\text{CP} \ [\text{say}] \ [\text{MoodP} \text{that Ortcutt was ... } \]]\)]

- \([\text{[say]}\]) = \lambda x \lambda e \text{ say}(x)(e)
- \([\text{[sigh]}\]) = \lambda e \text{ sigh}(e)

- \(\lambda x \lambda e (\text{say}(x)(e) \& \text{sigh}(e))\)
[Ralph sighed [_{CP [say] [_{MoodP that Ortcutt was ... }]}]]
Coercion

• [say] coerces verbs into verbs of speaking.

• We predict variability in acceptability.

• For example, there is variation among Hebrew speakers as to whether they can have that-clauses with manner of speech verbs at all.
# Indo-Aryan final complementizers

<table>
<thead>
<tr>
<th>All derived from ‘say’</th>
<th>Bayer 1999</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bengali</td>
<td>bole</td>
</tr>
<tr>
<td>Oriya</td>
<td>boli</td>
</tr>
<tr>
<td>Assamese</td>
<td>buli</td>
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<tr>
<td>Marathi</td>
<td>mhanun</td>
</tr>
<tr>
<td>Dakhkhini-Hindi</td>
<td>bolke</td>
</tr>
</tbody>
</table>
Interim Summary

Two types of *that*-clauses
Nominal modifiers

As nominal modifiers (that is, without [say])

*that*-clauses

- Relate to the direct object positions of the embedding verb.
- are predicted to behave like DP-direct objects of those verbs.
Verbal modifiers

As verbal modifiers (that is, with [say]) *that*-clauses

• do not relate to an argument position of the embedding verb.

• are predicted to behave like adjuncts.

• always create speech reports in languages like German or English.
Plan

I will be using the German reportative subjunctive as a lens for testing the predictions of the proposed analysis of *that*-clauses.
The puzzle of the talking cat
A cat has a belief

(1) Die Katze dachte, es sei eine Maus
The cat thought it be.KONJ1 a mouse

im Loch.
in.the hole.

The cat thought there was a mouse in the hole.
The cat is talking

(2) # Die Katze dachte, es sei eine Maus
The cat thought it be.KONJ1 a mouse

im Loch, die noch am Leben sei.
in.the hole that still alive be.KONJ1

The cat thought there was a mouse in the hole that was still alive (she said).
The cat is talking

(3) # Die Katze miaute.
The cat meowed.

Es sei eine Maus im Loch.
It be.KONJ1 a mouse in the hole.

There was a mouse in the hole (she said).
(4) Ralph träumte, er habe einen Spion getroffen.
Ralph dreamed he have a spy met.

Ralph dreamed that he had met a spy.
Ralph träumte, er habe einen Spion getroffen, der Ortcutt geglichen haben.
Ralph dreamed he have a spy who Ortcutt resembled have.
Our analysis predicts that a non-speech interpretation for the German reportative subjunctive (Konjunktiv I) should only be available when the *that*-clause saturates the direct object position of the embedding verb.
Konjunktiv I

Making speech reports
Reportative moods in German

• (Mostly) in the written language: realized as Konjunktiv I.

• Realized as Konjunktiv II or indicative in more informal registers.

• Not discussed today: Distancing effect with Konjunktiv I; sequence of mood.
The right generalization?

The reportative subjunctive clause “is (in the same sentence or in the preceding context) the object of a verb of saying (claiming, asking, commanding), or it is understood as if it were.”

• Fabricius-Hansen & Sæbø (2004), 228.
Main clause

She called me first thing in the morning.

(1) Sie sei in Columbus.
She be.KONJ1 in Columbus.
‘She was in Columbus, she said.’

• (1) presupposes a speech event. It describes the content of what was said.
(4) Er war verzweifelt. Morgen sei seine Gerichtsverhandlung und er hatte noch keinen Anwalt.

He was desperate. Tomorrow be.KONJ1 his trial and he had.PAST.IND still no lawyer.
(7) Er wurde verhaftet, weil er gelacht habe. He was arrested because he laughed.
(9) There is a doctor in London who is said to be from Wales.

‘There is a doctor in London who is said to be from Wales.’
A speech report

(11) Ralph tobte, dass man ihn nicht informiert habe.

‘Ralph raged that they hadn’t informed him.’
Semantics

Lexically determined content-related domain projection
Proposal

• The reportative subjunctive is a mood that is interpreted as a modal with lexically determined content-related domain projection.

• The speech interpretation is contributed by [say].

• The indicative is NOT restricted to content-related domain restriction.
Konjunktiv 1

[[Konj¹]] =
\[\lambda p \lambda x \ \forall w' \ (w' \in C_{content} (x) \rightarrow p(w'))\]

Modal anchor

Content-related domain projection
Coërcion

Ralph seufzte, dass Ortcutt ein Spion sei.
[Ralph sighed \([\text{CP} \ [\text{say}] \ [\text{Konj}_1 \ \text{Ortcutt was ... }]]\)]

\[
\lambda e \lambda w \ \exists x \ (\text{say}(x)(e) \ \& \ \text{sigh}(e) \ \& \ e \leq w \ \& \ \text{thing}(x)(w) \ \& \ \forall w' (w' \in C_{\text{content}}(x) \ \rightarrow \ \text{spy}(\text{Ortcutt})(w')))\]

Flexible Factivity

Creating speech reports
Expressing criticism

(13) Sie kritisierte, dass er zu spät gekommen sei.
She criticized that he had arrived late.
Disclosures

(14) Sie verriet, dass sie verlobt
She disclosed that she engaged

sei.
be.KONJ1

She disclosed that she was engaged.
Expressing regret

(15) Sie bedauerte, dass sie zu laut sei.
She regretted that she too loud be.KONJ1
‘She regretted that she was too loud.’

• Contrast: She regretted that.
When verbs like *criticize*, *disclose*, *regret* have DP objects, those objects refer to facts.

Factive *that*-clauses saturate the direct object position.

Non-factive *that*-clauses have [say] and relate to the unergative variant of the verb.
Leftward Movement

Out!
Leftward movement?


• Topicalized clausal complements haven’t moved to the positions where you see them.

• The corresponding argument positions are occupied by pronouns.
(17) *Dass man ihn nicht informiert habe,  
That they him not informed have.SUBJ 

tobte er.  
raged he.  

‘He raged that they hadn’t informed him’.
(18)  a. He explained that he had five children to feed.

   b. That he had five children to feed was never explained.

• The speech report interpretation doesn’t survive leftward ‘movement’. Only the factive interpretation does.
• There can’t be left-dislocated clausal complements with verbs that do not take direct objects at all.

• There can’t be left-dislocated complements with interpretations that can’t be matched by a DP-direct object.
Extraction

Weak islands
(19) Warum hat er geseufzt, dass Ortcutt ihn getroffen habe?

Why did he sigh that Ortcutt met him?
(20) Warum hat er kritisiert, dass Ortcutt

    why has he sighed that Ortcutt

ihn getroffen habe?

him met have.KONJ1

Why did he criticize that Ortcutt met

him?
(21) Warum hat er bedauert, dass Ortcutt ihn getroffen habe? Why did he regret that Ortcuttt met him?
Extraction

No islands
(34) Why did Ralph believe that Ortcutt hid the letter under a rock?

• Extraction is from an argument of the verb.
(35) Why did Ralph believe that Ortcutt hid the letter under a rock?

- Also hope, imagine, assume, suspect, claim, deny, fear, etc.
Leftward Movement

In!
(36) Dass sich das ändern wird, hat niemand gedacht.

Nobody thought that that would change.

• The content interpretation of the *that*-clause survives leftward movement.
Leftward movement

(37) Dass sich das ändern wird, hat niemand gedacht.

Nobody thought that that would change.

- Also imagine, assume, suspect, claim, deny, fear, etc.
Time to conclude
Conclusion

• CPs are adverbial or nominal modifiers.

• The presence or absence of [say] determines what kind of modifiers they are.

• Embedded moods are crucial players in the construction of attitude & speech reports.
Conjecture

- Verbs never have propositional arguments.
Consequence

• A very different account of clausal selection.

• Consequences for current accounts of the acquisition of attitude ascriptions & speech reports?