Building complex speech acts

Jess H.K. Law

UC Santa Cruz

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Contributors:

Diti Bhadra
UMN

Yaqin Wang
GDUFS

Haoze Li
GDUFS
The Austinian approach

Using speech-related **verbs** of English, Austin classified speech acts into different categories.

- giving of verdicts
- exercising of power
- committing to causes or actions
- convincing others
- ...

This approach was criticized: lexical gaps, imperfect mapping, etc (Searle 1975)
Small semantics, big pragmatics

Where is the boundary? Is there even one?
Look at other grammatical components that serve as a window into the organization of speech acts.

- Intonation
- Modal particles
- Utterance final particles
The intonation window

Complex Speech Act

Speech Act

John has a sister
Put on your jacket

Falling/Rising intonation

Declarative syntax
Imperative syntax

Falling vs. rising

- Stronger (presence of) vs. weaker (absence of) commitment
- Implicit vs. explicit request of addressee input

Gunlogson (2001, 2008); Portner (2018); Rudin (2018); Jeong (2018); a.o.
The particle window

Cantonese has around 35 - 50 particles marking speech acts (37 in a spoken corpus) (Law 1990):

Declarative: *gaa3, ge3, aa3, lo1* etc

(1) Aaman sik haa    *gaa3.*
    Aaman eat shrimp DEL
    ‘Aaman eats shrimp.’

Wh-question: *ne1, aa3*

(2) Mingzai heoi-zo bin   *ne1?*
    Mingzai go-ASP  where  WHQ
    ‘Where did Mingzai go?’

Polar question: *maa3, me1* (biased)

(3) Aaman sik haa    *maa3?*
    Aaman eat shrimp PQ
    ‘Does Aaman eat shrimp?’

Most cannot occur in embedded clauses.
Hierachical organization

Over 100 particle clusters:

(4)  Aaman sik haa  gaa3 wo3.
Aaman eat shrimp DEL
‘Aaman eats shrimp, I’m reminding you.’

(5)  Aaman sik haa  gaa3 le1.
Aaman eat shrimp DEL
‘Aaman eats shrimp. Trust me.’

(6)  Aaman sik haa  gaa3 me1?
Aaman eat shrimp DEL
‘Aaman eats shrimp? Is that really true?’

(7)  Aaman sik haa  gaa3 ho2?
Aaman eat shrimp DEL
‘Aaman eats shrimp. Would you agree?’

(8)  Aaman sik haa  gaa3 me1 ho?
Aaman eat shrimp DEL
‘Aaman eats shrimp? Is that really true? Would you ask, too?’
Observation 1:
Shifty declarative
Declarative commitment

(9) Aaman sik haa gaa3.
Aaman eat shrimp DEL
‘Aaman eats shrimp.’

(10) Aaman sik haa gaa3 wo1.
Aaman eat shrimp DEL wo
‘Aaman eats shrimp. You wouldn’t know.’

(11) Aaman sik haa gaa3 ho2?
Aaman eat shrimp DEL ho
‘Aaman eats shrimp. Would you agree?’

(12) Aaman sik haa gaa3 me1?
Aaman eat shrimp DEL ho
‘Aaman eats shrimp? I don’t believe it.’
Declarative strengthening?

\[ \text{Aaman eats shrimp gaa3} \]

\[ \text{del}(p)(s) := \lambda c \lambda c'. DC^s_c \cup \{p\} = DC^s_{c'} \]

\[ \text{if } \text{evidence}_{c'}(p)(s) > \sigma, \text{ else } \# \text{ (undefined)} \]

- Weak \textit{gaa} occurs with \textit{me1}: \( \sigma > \text{low} \)
- Strong \textit{gaa} occurs elsewhere: \( \sigma > \text{high} \)

But, there is no intermediate strength \textit{gaa3}. Instead, another particle is used:

(13)  \text{Aaman sik haa gwaax3.}  \\
Aaman eat shrimp PROBABLY  \\
‘Aaman eats shrimp.’  \\
intermediate
Observation 2:
Addressee attitude in declarative clusters
Declarative clusters

(14) Aaman sik haa gaa3.
Aaman eat shrimp DEL
‘Aaman eats shrimp.’

(15) Aaman sik haa gaa3 wo1.
Aaman eat shrimp DEL
‘Aaman eats shrimp. You wouldn’t know.’

(16) Aaman sik haa gaa3 le2.
Aaman eat shrimp DEL
‘Aaman eats shrimp. Trust me!’

(17) Aaman sik haa gaa3 lo1.
Aaman eat shrimp DEL
‘Aaman eats shrimp, obviously.’

Declarative clusters seem to involve addressee attitude towards the content.
Repp (2011) suggests the presence of similar modal particles in German responsible for managing the common ground:

\[
[\text{force operator} \ [\text{MP} \ [\text{proposition}] \ ]] 
\]

Dissimilarities:

- Resistance to embedding
- Position
  \[
  [[[\text{proposition}] \ \text{force operator}] \ \text{Del-modifier}] 
  \]
Observation 3:
Speech-act level questions

(collaborative work with Diti Bhadra and Haoze Li)
Declarative + ho2

The particle ho combines with a declarative and yields a question.

(18) Aaman sik haa gaa ho?
    Aaman eat shrimp DEL ho
    ‘Aaman eats shrimp. Right?’

Possible responses:

(19) a. Hai aa.
    right DEL
    ‘Right.’

b. Mhai aa.
   no DEL
   ‘No.’
Declarative + *ho*2 preserves speaker commitment

Declarative + *ho* differs from a regular polar question in the preservation of the commitment associated with *gaa3* (Lam 2014).

Context:
When approaching a stranger to fill out a survey:

(20) Nei jau sigaan maa?
you have time PQ
‘Do you have time?’

(21) #Nei jau sigaan gaa ho?
you have time DEL HO
‘You have time. Right?’
Declarative + me1 + ho2 has no speaker commitment

Context: Ada said Aaman eats shrimp. You were surprised to hear that and turned to your friend Beth (infelicitous if directed to Ada):

(22) Aaman sik haa gaa3 me1 ho2?
Aaman eat shrimp DEL RQ HO
‘Aaman eat shrimp? I don’t believe it. Would you agree with me?’

Agreement with the rhetorical question is unmarked:

(23) Hai lo4.
yes LO
‘Right, I doubt that, too.’

Agreement with assertion/content is marked:

(24) ??Hai aa3.
yes ASSERT
‘Yes, he does.’

Takeaway: ho2 does not operate on content, but something bigger!
WhQ-\textit{ho}

\textit{Ho} may also attach to a \textit{wh}-question and turn it into another question.

\begin{enumerate}
\item Mingzai heoi-zo bin ne1 \textit{ho}?
\item Mingzai go-ASP where \textit{whQ ho2}
\item ‘Where did Mingzai go? (Would you ask the same question?)’
\end{enumerate}

Possible responses:

\begin{enumerate}
\item K eo1 heoi-zo paaklam.
\item ‘He went to Berlin.’
\item Hai lo4. (#Keoi heoi-zo paaklam).
\item ‘Right. (#He went to Berlin.)’
\end{enumerate}

If \textit{ho2} actually operates on something bigger, we should expect...
Answer to Q expected

Speaker believes that Addressee can answer the question:

(28) Keoi gong matje ne?
    he say what ne?
    ‘What did he say?’

(29) #Keoi gong matje ne ho?
    he say what ho?
    ‘What did he say? Do you
    wonder the same thing?’
Speaker believes that Addressee may NOT be able to answer the question:

(30) #Koei gong matje ne? he say what wHq ‘What did he say?’

(31) Koei gong matje ne ho? he say what wHQ ho ‘What did he say? Do you wonder the same thing?’
Lesson from *ho2*: there are operations on what looks like speech acts.

Our goal: generalize this to understand all particle clusters.
Making sense of conversations

Why do people engage in conversations?

- To work towards achieving *shared* goals (Grice 1975, a.o.)
- To grow common ground, i.e., *shared* propositions (Stalnaker 1978, a.o.)
Approaching ‘sharedness’: content-level

▶ constitutive rules / social norms (Lewis 1975, a.o.)
▶ grammatical view (Beyssade and Marandin 2006, Heim et al. 2016)
  ▶ Speaker-oriented component
  ▶ Addressee-oriented component

SOC and AOC both directly operate on content and may introduce different speech act types.

(32) $\text{Quest}_s(\text{you pass the salt}) + \text{To-do}_a(\text{pass the salt})$

The Cantonese challenge:

(33) $\text{Aaman sik haa gaaw me1 ho2}$?
    Aaman eat shrimp DEL RQ HO
    ‘Aaman eat shrimp? I don’t believe it. Would you agree with me?’
Approaching ‘sharedness’: speech-act level

No looking back (strong compositionality):
Content → speech act-level object → speech act level object
force force modification
Speech act anchoring

- Speech acts need to be anchored to discourse participants (Gunlogson 2001)
  \[ \text{del}(p)(\text{spk}) = \text{chat.history} \ 1 \sim \text{chat.history} \ 2 \]

- Unanchored speech acts are from functions from discourse participants to speech acts (modeled as context change potentials)
  
  \[ \text{del}(p) = \lambda x \lambda c \lambda c'. DC_c^x \cup \{ p \} = DC_{c'}^x, \text{ if } \text{source'}(x)(p), \]
  
  \[ \text{else } c = c' \]

basic force operators like \textit{gaa3} and \textit{ne1} yield \textbf{unanchored speech acts} (USAs).
Speech act anchoring

USA:
\[ \text{del}(p) = \lambda x \lambda c \lambda c'. DC^x_c \cup \{p\} = DC^x_{c'}, \text{ if source}_{c'}(x)(p), \]
\[ \text{else } c = c' \]

Two ways of anchoring USAs:
- discourse participant values (type \( e \)) (Gunlogson 2001)
- anchoring functions (type \( e \rightarrow T \rightarrow T \)), which are force modifiers

(34) Aaman sik haa gaa3 wo1.
Aaman eat shrimp DEL wo
‘Aaman eats shrimp. You wouldn’t know.’
A bit more details
Basic discourse structure

Context:

- A context $c$ is a tuple consisting at least two sets of discourse commitments (Gunlogson 2001; Farkas and Bruce 2010, a.o.):
  - Speaker discourse commitments: $DC^s_c$
  - Addressee discourse commitments: $DC^a_c$

$Spk$ has said: \{ $p_1$, $p_2$, ... \}  \hspace{1cm} Add$ has said: \{ $q_1$, $q_2$, ... \}

Common ground (Stalnaker 1978; Lewis 1979):
$CG_c = \cap\{ DC^x_c \mid x \text{ is a discourse participant in } c \}$
ho2: Felicitous performance of the same act type
Informal schema

\[ \text{ho}_2^{s,a} := \lambda A. \lambda c \lambda c'. A(a)(c)(c') = \odot \lor A(a)(c)(c') = \ominus \]
\[ \text{if } A(s)(c)(c') = \odot \]
Declarative + ho2

Aaman eats shrimp gaa3 ho2.

\[ \text{del}(p) := \lambda x \lambda \lambda c \lambda c'. DC^x_c \cup \{p\} = DC^x_c, \text{if source}_{c'}(x)(p), \text{else } c = c' \]

\[ \text{ho2}_{s,a} := \lambda A. \lambda c \lambda c'. A(a)(c)(c') = \bigcirc \lor A(a)(c)(c') = \bigodot \]

\[ \text{if } A(s)(c)(c') = \bigcirc \]

\[ \text{del}(p) - \text{ho2}_{s,a} := \lambda c \lambda c'. (DC^a_c \cup \{p\} = DC^a_c \land \text{source}_{c'}(x)(p)) \]

\[ \lor c = c' \]

In plain words:
Is it felicitous for you to perform the declarative act, given that it is felicitous for me?
Responding to declarative + ho2

(35) Aaman sik haa gaa3 ho2?
Aaman eat schrimp ASS. HO
‘Aaman eats schrimp. Right?’

Responses to (35)

Add can claim p

Add cannot claim p

Hai aa right ASS ‘Right.’
M hai aa not right ASS ‘No.’
Ngo mzi wo I not.know SFP ‘I don’t know.’

1. ‘Right’ $\leadsto$ Add can perform the same declaration.
2. ‘No’ $\leadsto$ Add cannot perform the same declaration.
3. ‘I don’t know’ $\leadsto$ Add does not have enough evidence.
Question + ho2

\[ \text{quest}(Q) := \lambda x \lambda c \lambda c'. \exists p \in Q : CG_c \cup \{p\} = CG_{c'} \]

if \( \forall p \in Q : \neg \text{source}_{c'}(x)(p) \),

else, \( c = c' \)

Type: (((st)t)(eT))

\[ \text{ho2}_{s,a} := \lambda A. \lambda c \lambda c'. A(a)(c)(c') = \bigcirc \lor A(a)(c)(c') = \bigcirc \]

if \( A(s)(c)(c') = \bigcirc \)

\[ \text{quest}(Q) - \text{ho2}_{s,a} := \lambda c \lambda c'. \left( \begin{array}{c}
\exists p \in Q : CG_c \cup \{p\} = CG_{c'} \\
\land \\
\forall p \in Q : \neg \text{source}_{c'}(a)(p)
\end{array} \right) \lor c = c' \]

if \( \begin{array}{c}
\exists p \in Q : CG_c \cup \{p\} = CG_{c'} \\
\land \\
\forall p \in Q : \neg \text{source}_{c'}(s)(p)
\end{array} \), else \( c = c' \)

In plain words:
Is it felicitous for you to perform the question act, given that it is felicitous for me?
Responding to question + *ho2*

(36) **Bingo sik haa ne ho?**
who eat shrimp **whq ho**
׳Who eats shrimp? Would you ask, too?׳

Add can ask Q

1. **‘Right’ ↦ Add** doesn’t know the answer to Q
2. **‘I don’t know, either’ ↦ Add** doesn’t know the answer to Q
3. **‘Aaman’ ↦ Add** knows the answer to Q

Add cannot ask Q

Hai lo
right **CONCERNED**
׳Right. I wondered…׳

Ngo dou mzi wo
I also not know **SFP**
׳I don’t know, either׳

Aaman.
Addressee attitude in declarative clusters
Recall: declarative clusters

(37) Aaman sik haa **gaa3**.
Aaman eat shrimp Del
‘Aaman eats shrimp.’

(38) Aaman sik haa **gaa3 wo1**.
Aaman eat shrimp Del
‘Aaman eats shrimp. You wouldn’t know.’

(39) Aaman sik haa **gaa3 le2**.
Aaman eat shrimp Del
‘Aaman eats shrimp. Trust me!’

(40) Aaman sik haa **gaa3 lo1**.
Aaman eat shrimp Del
‘Aaman eats shrimp, obviously.’

Declarative modifiers seem to involve addressee attitude towards a semantic content.
Symmetric vs. asymmetric anchoring

Aaman eats shrimp gaa3 wo1.

\[ A := \lambda x \lambda c \lambda c'. DC^x_c \cup \{p\} = DC^x_c \]

if \( \text{source}_{c'}(p)(x) \), else, \( c = c' \)

Asymmetric anchoring:
\[ wo1/le2_{s,a}(A) := \lambda c \lambda c'. A(s)(c)(c') = \bigcirc \]
if \( A(a)(c)(c') = \bigotimes \)

‘I’m performing the declarative act, given that you can’t.’

Symmetric anchoring:
\[ lo1_{s,a}(A) := \lambda c \lambda c'. A(s)(c)(c') = \bigotimes \]
if \( A(a)(c)(c') = \bigotimes \)

‘I’m performing the declarative act, given that you also can.’
Shifty declarative
Recall: shifty declarative commitment

(41) Aaman sik haa gaa3.
Aaman eat shrimp DEL
‘Aaman eats shrimp.’

(42) Aaman sik haa gaa3 wo1.
Aaman eat shrimp DEL WO
‘Aaman eats shrimp. You wouldn’t know.’

(43) Aaman sik haa gaa3 ho2?
Aaman eat shrimp DEL HO
‘Aaman eats shrimp. Would you agree?’

(44) Aaman sik haa gaa3 me1?
Aaman eat shrimp DEL HO
‘Aaman eats shrimp? I don’t believe it.’
‘Cancelling’ declarative commitment

\[ A \alpha \lambda c \dot{\lambda} c'. DC^x_c \cup \{p\} = DC^{x}_{c'} \]

if \textbf{source}_{c'}(p)(x), else \( c = c' \)

\[ me_{1, a} (A) := \lambda c \lambda c'. A(a)(c)(c') = ☹ \lor A(s)(c)(c') = ☹ \]

if \( A(s)(c)(c') = ☹ \)

In plain words:
‘Can you perform the declarative act, given that I cannot?’
Predictions

Impossible combinations/contexts

- What’s your name + ho2?
- aa3+ho2: addressee-directed speech acts
- imperative + ho2
- gaa3+wo3/le2+ho
What is your name + *ho2?

*ho2 is not compatible with questions that the addressee clearly may answer.

(45)  #Nei jiu me meng ne ho?
you call what name ho
‘What’s your name? Do you wonder the same thing?’

Generally, the addressee knows his/her name. So, s/he can’t ask this question. Since only one answer is viable, this is a defective question.
Addressee-directed question + *ho2

Questions with aa3 or maa3 are generally incompatible with ho2:

(46) #Koei gong me aa ho?
    he say what whq ho
   ‘What did he say? Do you wonder the same thing?’

(47) #Koei sik haa maa ho?
    he eat sjrimp polq ho
   ‘Does he eat shrimp? Do you wonder the same thing?’
Conditions on the addressee

Self-directed questions: *ne*

(48) Me seng *ne*?
    what noise *wh*Q
    ‘What noise is it?’

Add-directed questions: *aa*

(49) Me seng *aa*?
    what noise *wh*Q
    ‘What noise is it?’
Addressee-directed questions (marked by *aa3*) + *ho2* says:

1. The speaker can ask ‘what noise is it’, because
   - I don’t know what noise it is;
   - I believe you know what noise it is. (*New!*)

2. Can the addressee ask ‘what noise is it’?
   - If the addressee can: s/he doesn’t know what noise it is and believes that s/he know what noise it is. (*contradiction!*)
   - Since only one answer is viable, this is a defective question.
Imperative + *ho2

Imperatives are generally incompatible with ho2:

(50) Mgeoi saan ceon  ho?
    please close window ho
    ‘Please close the window. Right?’
Imperatives

c+ IMP(p)-HO says:

▶ I can issue a command to you to bring about \( p \), because
  ▶ I believe \( p \) is better than \( \neg p \). (Lauer 2013, Starr, to appear)
  ▶ I believe I’m more authoritative than you. (Kaufmann 2012)

▶ Can you issue a command to yourself to bring about \( p \)?
  ▶ If you can: you believe \( p \) is better than \( \neg p \) and you’re more authoritative than yourself. (contradiction)
  ▶ Again, since one of the answers is not viable, the question is defective.
Zooming out
Speech act anchoring predicts many different anchoring strategies. However, only a subset of the combinations are observed:

Declarative clusters involving *gaa3*:

<table>
<thead>
<tr>
<th>Spk/Add</th>
<th>✓</th>
<th>X</th>
<th>✓ or X?</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>lo1 (obviously)</td>
<td>wo3, le2</td>
<td>ho2</td>
</tr>
<tr>
<td>X</td>
<td>Not attested</td>
<td>Not attested</td>
<td>me1</td>
</tr>
</tbody>
</table>

Question clusters:

<table>
<thead>
<tr>
<th>Spk/Add</th>
<th>✓</th>
<th>X</th>
<th>✓ or X?</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>aa1</td>
<td>Not attested</td>
<td>ne1-ho2</td>
</tr>
<tr>
<td>X</td>
<td>Not attested</td>
<td>Not attested</td>
<td>Not attested</td>
</tr>
</tbody>
</table>
Are there anchoring functions in English?

- Tag questions seem to involve content sharing rather than speech act-type sharing.

  (51) Sue loves music, doesn’t she?

- But the final rise could be ambiguous among a \textit{me1} (speaker commitment absent), \textit{ho2} (speaker commitment present), and something else (metalinguistic use).

  (52) Sue loves music?
Bibliography I


