

Detecting Speaker’s bias through questions and modals

Takanobu Nakamura

ILLC, University of Amsterdam

t.nakamura[at]uva.nl



Link for the handout

Introduction

- This work extends the typology of modal adverbs/particles by identifying **dependent modals** in Japanese, which are formed with two base forms and three modes of verbal conjugations.
- (1)

Two base forms and three conjugations of Japanese dependent modals
{hyo-tto / moshi-ka} - {shi-te / shi-ta-ra / sur-u-to}
{HYO-that / if-KA} - {do-CONJ / do-PAST-then / do-NPST-then}
- The three modes of conjugations respectively correspond to verbal conjunction, past conditional and present conditional (see handout for examples.)
 - Empirical observations:
 - (i) dependent modals may only occur in polar questions and epistemic possibility statements
 - (ii) they signal speaker’s expectation for the prejacent in both of these environments.
 - Analytical claims:
 - Dependent modals themselves do not contribute modal inferences but are dependent on inferences drawn with polar questions and epistemic possibility statements.
 - They uniformly contribute to speaker bias in questions and modal statements relative to *Question under Discussion* (QUD) (Roberts, 2012).

Dependent modals in questions

The conjoining dependent modals and the present conditional dependent modals may occur in polar questions while past conditional dependent modals are degraded.

- (2)
- Dependent modals in polar questions**
a. Yuji-wa {*hyottoshite* / *moshikashite*} ie-ni ir-u?
Yuji-TOP {conj dep mod / conj dep mod} home-at exist-NPST
b. ?? Yuji-wa {*hyottoshitara* / *moshikashitara*} ie-ni ir-u?
Yuji-TOP {past.cond dep mod / past.cond dep mod} home-at exist-NPST
c. Yuji-wa {*hyottosuruto* / *moshikasuruto*} ie-ni ir-u?
Yuji-TOP {pres.cond dep mod / pres.cond dep mod} home-at exist-NPST
“Is Yuji perhaps at home?”

The interpretation is similar to English “perhaps” in polar question: it does not introduce a modal interpretation of the prejacent, but “gives a suggestion as to a possible answer” (Bellert, 1977).

- (3)

Is it *perhaps* resin?
a. Yes, it is.
b. ?Yes, perhaps it is.
c. # Yes, but perhaps it is something else.

(4)

Might it be resin?
a. ?Yes, it is.
b. Yes, it might be.
c. Yes, but it might be something else.

(Incurvati and Schlöder, 2019, p.12: (19-20))

In polar questions, dependent modals contribute *question bias*, e.g., Ladd (1981); Sudo (2013) (see handout for further examples and contexts to distinguish *epistemic* and *evidential* bias.)

- (5)
- Diagnosing question bias**
Context: You have things to discuss with Yuji in person, but he is not in his office today.
a. Scenario 1 (**Evidence against the possible answers to “where is Yuji?” that were more likely than *p***):
Yuji usually works at his favorite cafe around this time of day, but you cannot find him there either. You ask his flatmate whether he is at home. → (2a) ok / (2b) ?? / (2c) ok
b. Scenario 2 (**Evidence against the most likely possible answer to “where is Yuji?”**):
Yuji usually works at his favorite cafe or at home around this time of day. You ask his flatmate whether he is at home. → (2a) ? / (2b) ?? / (2c) ?
c. Scenario 3 (**No evidence for any possible answers to “where is Yuji?”**):
You ask Yuji’s flatmate whether he is at home. → (2a) ?? / (2b) ?? / (2c) ??

Crucially, epistemic bias toward the prejacent alone does not make dependent modals felicitous.

- (6)
- Scenario 4 (**Epistemic bias toward *p***): You have things to discuss with Yuji in person today. It is Wednesday and he usually work at home on Wednesday. → (2a) ?? / (2b) ?? / (2c) ??

In contrast, a plain polar question is fine in all these contexts.

- (7)
- Plain polar questions do not introduce bias**
Yuji-wa ie-ni ir-u?
Yuji-TOP home-at exist-NPST
“Is Yuji at home?” → ok in Scenario 1-4

Dependent modals in polar questions express that the speaker did not think that the prejacent is likely compared with other alternatives, but they change their mind due to evidence against them.

Dependent modals in modal statements

All types of dependent modals may occur in epistemic possibility statements.

- (8)
- Dependent modals in an epistemic possibility modal statement**
a. Yuji-wa {*hyottoshite* / *moshikashite*} ie-ni ir-u kamoshirena-i.
Yuji-TOP {conj dep mod / conj dep mod} home-at exist-NPST might-NPST
b. Yuji-wa {*hyottoshitara* / *moshikashitara*} ie-ni ir-u kamoshirena-i.
Yuji-TOP {past.cond dep mod / past.cond dep mod} home-at exist-NPST might-NPST
c. Yuji-wa {*hyottosuruto* / *moshikasuruto*} ie-ni ir-u kamoshirena-i.
Yuji-TOP {pres.cond dep mod / pres.cond dep mod} home-at exist-NPST might-NPST
“Yuji might perhaps be at home.”

Here, dependent modals do not introduce (additional) modal interpretation of the prejacent, but are interpreted in concord with the epistemic possibility modal, cf. *modal concord* (Halliday, 1970; Lyons, 1977; Geurts and Huitink, 2006, a.o.).

- (9)
- Modal concord in English: two modal expressions express a single modal inference**
He *may perhaps* have forgotten.
a. He *may* have forgotten. b. *Perhaps* he has forgotten. (Huitink, 2008)

References

Bellert, Irena. 1977. On semantic and distributional properties of sentential adverbs. *Linguistic Inquiry* 8: 337–351. • **Brasoveanu, Adrian, and Donka Farkas.** 2011. How indefinites choose their scope. *Linguistics and philosophy* 34:1–55. • **Geurts, Bart, and Janneke Huitink.** 2006. Modal concord. *Concord phenomena and the syntax semantics interface* 15–20. • **Halliday, Michael.** 1970. Functional diversity in language as seen from a consideration of modality and mood in english. *Foundations of language* 322–361. • **Henderson, Robert.** 2014. Dependent indefinites and their post-suppositions. *Semantics and Pragmatics* 7: 1–58. • **Huitink, Janneke.** 2008. Modals, conditionals and compositionality. Doctoral Dissertation, Radboud University Nijmegen. • **Incurvati, Luca, and Julian J Schlöder.** 2019. Weak assertion. *The Philosophical Quarterly* 69:741–770. • **Ladd, Robert.** 1981. A first look at the semantics and pragmatics of negative questions and tag questions. In *Chicago Linguistic Society* 17, 164–171. • **Lyons, John.** 1977. *Semantics*. Cambridge University Press. • **Roberts, Craige.** 2012. Information structure: Towards an integrated formal theory of pragmatics. *Semantics and Pragmatics* 5:1–69. • **Sudo, Yasutada.** 2013. Biased polar questions in English and Japanese. In *Beyond expressives: Explorations in use-conditional meaning*, 275–295. Brill.

- However, dependent modals may not occur outside the scope of a licensor, i.e. ? and \diamond .
- (10)
- Dependent modals in declaratives without licensing epistemic modal**
a. # Yuji-wa {*hyottoshite* / *moshikashite*} ie-ni ir-u.
Yuji-TOP {conj dep mod / conj dep mod} home-at exist-NPST
b. # Yuji-wa {*hyottoshitara* / *moshikashitara*} ie-ni ir-u.
Yuji-TOP {past.cond dep mod / past.cond dep mod} home-at exist-NPST
c. # Yuji-wa {*hyottosuruto* / *moshikasuruto*} ie-ni ir-u.
Yuji-TOP {pres.cond dep mod / pres.cond dep mod} home-at exist-NPST
“Yuji is perhaps at home.”

Furthermore, they contribute an inference that is similar to that of the question bias shown in (5-6).

- (11)
- Diagnosing speaker expectations**
Context: New students came to your lab and some of them share research topics with Yuji. So, you wanted to introduce them to him, but he is not in his office today.
a. Scenario 1 (**Evidence against the possible answers to “where is Yuji?” that were more likely than *p***):
Yuji usually works at his favorite cafe around this time of day, but you cannot find him there either. You told the students that Yuji might be at home. → (10a) ok / (10b) ok / (10c) ok
b. Scenario 2 (**Evidence against the most likely possible answer to “where is Yuji?”**):
Yuji usually works at his favorite cafe or at home around this time of day. You told the students that Yuji might be at home. → (10a) ? / (10b) ? / (10c) ?
c. Scenario 3 (**No evidence for any possible answers to “where is Yuji?”**):
You told the students that Yuji might be at home. → (10a) ?? / (10b) ?? / (10c) ??
- (12)
- Scenario 4 (**positive epistemic bias toward *p***): New students came to your lab and some of them share research topics with Yuji. So, you wanted to introduce them to him. It is Wednesday and he usually work at home on Wednesday. → (10a) ?? / (10b) ?? / (10c) ??
- Compare them with a simple epistemic possibility statement (see discussion in the handout.)
- (13)
- Different prior expectations with different epistemic modals**
Yuji-wa ie-ni ir-u kamoshirena-i.
Yuji-TOP home-at exist-NPST might-NPST
“Yuji might be at home.” → ok in Scenario 1-4

Proposal

- These observations suggest parallelism in polar questions and epistemic possibility statements.
 - In both environments, dependent modals introduce question bias in regard to a contextually given question, i.e. *Question Under Discussion* (Roberts, 2012, a.o.).
- An informal felicity condition of dependent modals**
If $\diamond_{dep}(p)$ is part of ϕ , the speaker *S* may felicitously utter ϕ in a context *c* iff *c* involves an unresolved question *Q* such that:
 - p* is a possible answer to *Q*,
 - S* has evidence against some possible answers to *Q* that are more likely to resolve *Q* than *p*, and
 - Q* remains unresolved after *c* is updated with ϕ .
- Crucially, (14c) requires that $\diamond_{dep}(p)$ is embedded in a polar question or an epistemic possibility modal statement: both ensure that *Q* is not reslived by the utterance.
- This correctly predicts the observed distribution of dependent modals in Japanese.

Conclusion and further prospects

- This poster submitted two empirical observations:
 - (i) dependent modals may only occur in polar questions and epistemic possibility statements.
 - (ii) they signal speaker’s bias toward the prejacent in both environments in a similar manner.
- I proposed a felicity condition for utterances containing dependent modals such that:
 - (i) dependent modals express that the speaker thought that the prejacent is not likely to resolve the QUD, but it has become a better option because of evidence against other alternatives.
 - (ii) dependent modals themselves must not resolve the QUD, which require them to be embedded under the scope of the polar question operator or the epistemic possibility modal.
- Remaining issues and further prospects:
- Embedding under other non-vedicical operators**
 - The proposed felicity condition predicts that dependent modals are licensed under the scope of *non-veridical* operators, and one should test sentences in which dependent modals are embedded under the scope of non-veridical operators other than ? and \diamond .
- Strength of the requirement for evidence against competing answers**
 - I am assuming that dependent modals semantically require evidence against the more likely possible answers to the QUD, but it can also be a pragmatic condition, which shall be explored.
- Connection with other concord phenomena**
 - The proposed way of obligating embedding of \diamond_{dep} under ? or \diamond is reminiscent of analyses of *dependent indefinites* (Brasoveanu and Farkas, 2011; Henderson, 2014, a.o.):
 - dependent indefinites have to sit under the scope of (c)overt distributive quantifier because their value has to *co-vary* with another variable and distributivity is a prerequisite for co-variation.
 - More generally, the relation between dependent modals and other concord phenomena, e.g., *negative concord*, is worth exploring.
- Decomposition**
 - The distributional differences within the three types of dependent modals may suggest that the meaning of dependent modals may be obtained compositionally from its parts.
 - This provides further contributions to typology of modal adverbs/particles.