Evidentiality Conditioned Partial-WH Movement

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Wh-Movement in German

- **Full wh-movement**
  - Highest wh-phrase moves to the specifier position of the highest [+WH] CP

(1)　**Wen** meinst du daß Peter Hans vorgestellt hat?
　　Who think.2SG you that Peter Hans introduced has
　　Who do you think that Peter has introduced to Hans?
　　　　　　　　　　　　　　　　　　　　(Sabel 2000)

- **Partial wh-movement**
  - Highest wh-phrase moves up to some intermediate spec-CP position
  - All spec-CP positions which c-command it are saturated with the scope marker *was*

(2)　**Was** meinst du **wen** Peter Hans vorgestellt hat?
　　What think.2SG you who Peter Hans introduced has
　　Who do you think that Peter has introduced to Hans?

Direct vs. Indirect Dependency

- **Direct Dependency**
  - Scope marker is an expletive which indicates the scope of the wh-phrase (McDaniel 1989, Dayal 1994)

(3)　Was_i meinst du $[wen]_i$ Peter Hans vorgestellt hat?

- **Indirect Dependency**
  - Two separate wh-questions
  - Scope marker in the matrix clause is coindexed with the entire embedded clause (Dayal 1994)

(4)　Was_i meinst du $[wen$ Peter Hans vorgestellt $hat]_i$?

- Supported by the fact that the denotation of the question (described by its set of propositional answers (Hamblin 1973)) is not changed when the questions are separated into two sequential single-clause questions (Dayal 2000, Reis 2000).

(5)　Was_i meinst du? $[Wen$ hat Peter Hans $vorgestellt]_i$?

Matrix Verb Requirements

- **Dayal (1994)**:
  - Must be able to **take [-WH] CP complements**

(6) a.　Was glaubst du, mit wem Maria gesprochen hat?
　　　　what **think** you with whom Maria spoken has
　　b.　*Was fragst du, mit wem Maria gesprochen hat?
　　　　what **ask** you with whom Maria spoken has
　　　　　　　　　　　　　　　　　　(Dayal 1994:141)

- **Beck & Berman (2000)**:
  - **Bridge verbs** - verbs which allow extraction from their sentential complements (Erteschik-Shir 1973)

(7)　*Was hast du mir zugeflüstert, wen ich beobachten soll?
　　what have you to-me whispered whom I observe should
　　　　　　　　　　　　　(Stechow & Sternefeld 1988:357)

- Consistent with a direct dependency approach, in which the wh-phrase does move to the matrix spec-CP at LF.
- Inconsistent with indirect dependency, which appeals only to coindexation, rather than movement.
- The main argument against indirect dependency as a theory for German partial wh-movement.

- **A new proposal**:
  - **Evidential verbs** - verbs which provide not only a claim, but an indication of the type of evidence for the claim
  - A subset of bridge verbs
  - Would allow us to regard partial wh-movement questions and sequential questions as having the form:
    What evidence do you have? What do you claim?

- **If correct**:
  - Matrix verb requirements are no longer movement based
  - Indirect dependency can account for German, providing major support for the theory

- To prove: German speakers must find evidential verbs to be grammatical and non-evidential bridge verbs to be ungrammatical in partial wh-movement constructions and sequential questions

Support from English

- "Scope marking is a universal phenomenon" (Dayal 2000:171)

- English has scope marking in sequential questions:

(8)　a. Who do you think Mary will see?
　　b. What do you think? Who will Mary see?
　　c. I think Mary will see Tom.

- (8a) has the same set of propositional answers (Hamblin 1973) as (8b). (8c) shows a possible propositional answer.

- English sequential questions require **evidential matrix verbs***:

Evidential:
(9)　a. Who do you think Mary loves?
　　b. What do you think? Who does Mary love?

(10)　a. Who do you believe Mary loves?
　　　b. What do you believe? Who does Mary love?

Non-Evidential:
(11)　a. Who do you hope Mary loves?
　　　b. *What do you hope? Who does Mary love?

(12)　a. Who do you expect Mary loves?
　　　b. *What do you expect? Who does Mary love?

*In some dialects

Preliminary Data

Expected grammaticality from **bridge verb** theory:

Example verb	whisper (non-bridge)	hope (bridge)	think (evidential)
Full movement	*	✓	✓
Partial movement	*	✓	✓
Sequential questions	*	✓	✓

Expected grammaticality from **evidentiality** theory:

Example verb	whisper (non-bridge)	hope (bridge)	think (evidential)
Full movement	*	✓	✓
Partial movement	*	*	✓
Sequential questions	*	*	✓

Grammaticalities* from interviews with native speakers:

Example verb	whisper (non-bridge)	hope (bridge)	think (evidential)
Full movement	2/5	5/5	5/5
Partial movement	2/5	2/5	3/5
Sequential questions	4/5	1/5	4/5

*numbers denote the number of speakers (out of five) who found the sentence grammatical

Summary

Based on evidence from English and preliminary interviews with native German speakers, we have reason to believe that matrix verbs in partial wh-movement questions and sequential questions are required to be **evidential** verbs.

The previous theory (Beck & Berman 2000), which required matrix verbs to be bridge verbs, provided evidence against an indirect dependency approach to partial wh-movement, but an evidentiality theory would instead provide support for indirect dependency as the proper analysis.

Upcoming Experiment

- Adult native German speakers (who find at least some partial wh-movement constructions grammatical) will participate in an online survey.

- Participants will be asked for grammaticality judgements on a scale of 1-9.

- Participants will first be trained on 2-3 "bad" example sentences and 2-3 "good" example sentences that are roughly the same length and complexity as the test questions
  - Rating: 8-9. Sentences will be totally normal, and will not exhibit partial wh-movement
  - Rating: 1-2. Sentences will have a clear but unrelated grammatical problem

- Each participant will see 25 target sentences and 50 filler sentences in a random order.
  - Target sentences will have the 25 target verbs:
    - 10 evidential bridge verbs
    - 10 non-evidential bridge verbs
    - 5 non-bridge verbs (control)
  - Each verb will have 6 sentences, which will be nested into 6 lists (each participant will see one list)
    - Full wh-movement, context/embedded sentence 1
    - Partial wh-movement, context 1
    - Sequential questions, context 1
    - Full wh-movement, context 2
    - Partial wh-movement, context 2
    - Sequential questions, context 2

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