

# **When does a clause become a question?**

## **On the fine structure of the interrogative left periphery**

Veneeta Dayal  
Yale University

August 20, 2020

### **Overview**

**Section 1: Splitting up the interrogative left periphery**

**Section 2: The proposal in a nutshell**

**Section 3: Embedding SAP -- Alternative questions  
Questions with quantifiers**

**Section 4: Further Implications**

# I: THE INTERROGATIVE LEFT PERIPHERY

## 1.1. The profile of matrix vs. embedded questions

### ENGLISH:

Matrix Q: subject-aux inversion, wh fronting, ↑matrix intonation.

Embedded Q: no inversion, no discernible Q intonation, dedicated wh C for polar questions, wh fronting

**1a.** Will Mary leave?

**b.** John knows whether/if Mary will leave.

**2a.** Who will Sue see?

**b.** John knows who Sue will see.

## I: THE INTERROGATIVE LEFT PERIPHERY

### HINDI-URDU:

Matrix Q: Optional polar question particle (PQP) *kyaa*, ↑matrix intonation,  
Wh in situ/preverbal-focus mvt

Embedded Q: Optional neutral C, no discernible Q intonation,  
no monoclausal polar Q, wh in situ/preverbal-focus mvt

**3a.** (*kyaa*) *anu jaaegii?*

PQP Anu will-go

“Will Anu go?”

**b.** \* *ravi jaantaa hai ki (kyaa) anu jaaegii*

Ravi knows SUB PQP Anu will-go

Intended: “Ravi knows whether Anu will go.”

**c.** *ravi jaantaa hai ki anu jaaegii yaa nahiiN*

Ravi knows SUB Anu will-go or not

“Ravi knows whether Anu will go or not.”

**4a.** *anu kis-se milegii*

Anu who-with will-meet

“Who will Anu meet?”

**b.** *ravi jaantaa hai (ki) anu kis-se milegii*

Ravi knows SUB Anu who-with will meet

“Ravi knows who Anu will meet.”

## I: THE INTERROGATIVE LEFT PERIPHERY

### JAPANESE:

Matrix Q: optional Q-Particle *ka/no*, ↑matrix intonation, wh in situ.

Embedded Q: obligatory Q-Particle *ka/no*, no discernible Q intonation, wh in situ

**5a.** Mary-wa hon-o kai-masi-ta (ka)?

M-TOP book- ACC buy-POL-PAST Q

“Did Mary buy a book?”

**b.** Tanaka-kun-wa [Mary-ga hon-o kat-ta ka] sit-tei-mas-u.

T- TOP M- NOM book- ACC buy- PAST Q know-PROG- POL- PR

“Tanaka knows whether Mary bought a book.”

**6a.** Mary-wa nani-o kai-masi-ta (↑/ka)?

M- TOP what- ACC buy-POL-PAST Q

“What did Mary buy?”

**b.** Tanaka-kun-wa [Mary-ga nani-o kat-ta ka] sit-tei-mas-u.

T- TOP M- NOM what- ACC buy- PAST Q know- PROG-POL-PR

“Tanaka knows what Mary bought.”

# I: THE INTERROGATIVE LEFT PERIPHERY

## 7. Matrix vs. Embedded Interrogative Profiles

	Matrix Questions	Embedded Questions
<b>English</b>	↑ <sub>MATRIX</sub>	
	Subj-Aux Inversion	
	Wh Fronting	Wh Fronting
		Wh-Complementizer
<b>Hindi-Urdu</b>	↑ <sub>MATRIX</sub>	
	Optional PQP	
	Monoclausal Y/N Question	
	Possible Wh Focus Movement	Possible Wh Focus Movement
		Optional <i>ki</i> Complementizer
<b>Japanese</b>	↑ <sub>MATRIX</sub>	
	Optional Q-particle	Obligatory Q-particle
	Wh in-situ	Wh in-situ

Matrix Q = [SAP [CP [TP]]]

Embedded Q = [...V [CP [TP]]]

But this picture is incomplete – cross-linguistically, there is evidence of interrogative clauses with mixed properties.

# I: THE INTERROGATIVE LEFT PERIPHERY

## 1.2: A three-way distinction among rogative predicates

### INVERSION AND SPEAKER-ORIENTED EXPRESSIONS

McCloskey (1992, 2006) & Henry (1995) discuss embedded inversion in Irish English.

The possibility holds across dialects, or at least the contrast between (8)-(9) is generally accepted. The predicates in (8) are rogative, those in (9) responsive

**8a.** I wondered [was he illiterate ↑].

**b.** I asked him [from what source could the reprisals come↑].

**9a.** \* I knew [was he illiterate ↑].

**b.** \* I told him [from what source could the reprisals come↑].

These cases of embedded inversion have the characteristic ↑<sub>MATRIX</sub> and a slight pause before the embedded Q, but they are not quotations (10b, slightly modified to make it gender neutral):

**10a.** Everybody wants to know [did I<sub>SP</sub> succeed in buying chocolate for Winifred↑].

**b.** Every physicist wonders [will they<sub>AGENT</sub> be awarded the Nobel prize↑].

McCloskey 2006

## I: THE INTERROGATIVE LEFT PERIPHERY

Rogative predicates that do and do not allow embedded inversion

DO -- *The question is, wonder, ask, want to know*

DO NOT -- *Depend on/be up to/investigate*

**11a.** The question is [whether Mary will leave]/[who Mary will see].

**b.** The question is, [will Mary leave↑]/ [who will Mary see ↑]

**12a.** [Whether Mary will leave]/[Who Mary will see] depends on/is up to Sue.

**b.** \*[Will Mary leave ↑]/\*[Who will Mary see↑] depends on/is up to Sue.

## I: THE INTERROGATIVE LEFT PERIPHERY

Predicates that allow embedded inversion (*the question is, wonder*) nevertheless resist (non-neutral) declarative questions (Gunlogson (2003, 2008, McCloskey 2006)):

- 13a. *Is it raining outside* ↑                      *felicitous with/without evidence of p*  
b. *It's raining outside* ↑                      *felicitous only with evidence of p*

- 14a. The question is, [*is it raining* ↑]  
b. She wondered, [*did he have a haircut* ↑]

- 15a. \* The question is, [*it's raining* ↑]  
b. \* She wondered, [*he had a haircut* ↑]

*Ask*, selects for interrogative quotations (Grimshaw 2012).

It accepts declarative questions, attesting to bona fide status of declarative questions as questions.

- 16a. She asked, "*Is it raining* ↑"  
b. \*She asked, "*It's raining.*"  
c. She asked, "*It's raining* ↑"

### 3 Subgroups of Rogatives

- |   |  |
|---|--|
| (i) rogatives ( <i>depend on, investigate</i> ):        | Only Qs with embedded profile                                    |
| (ii) rogatives ( <i>ask, wonder, the question is</i> ): | A subset of Qs with matrix profile<br>& Qs with embedded profile |
| (iii) rogatives: ( <i>ask</i> ):                        | All Qs with matrix profile                                       |

# I: THE INTERROGATIVE LEFT PERIPHERY

## INTERROGATIVE PARTICLES (Q-PARTICLES, POLAR Q-PARTICLES, META Q-PARTICLES)

**Japanese Q-particle *ka*:** required for all embedded questions - clause typing

- 5b.** Tanaka-kun-wa [Mary-ga hon-o kat-ta (ka)] sit-tei-mas-u.  
T- TOP M- NOM book- ACC buy- PAST Q know-PROG- POL- PR  
“Tanaka knows whether Mary bought a book.” *With ka*  
“Tanaka knows that Mary bought a book.” *Without ka*

**Hindi-Urdu PQP *kyaa*,** and Mandarin *ma*, cannot be considered Q-particles of the Japanese kind, they do type a clause +WH (Bhatt and Dayal 2020, contra Cheng 1991):

- 3b.** ravi jaantaa hai ki anu jaaegii  
Ravi knows SUB Anu will-go  
“Ravi knows that Anu will go.” *Without kyaa*
- b’.** \*ravi jaantaa hai ki kyaa anu jaaegii *With kyaa ⇒ unacceptable*  
Ravi knows SUB PQP Anu will-go  
Intended: “Ravi knows whether Anu will go.”

## I: THE INTERROGATIVE LEFT PERIPHERY

**Kyaa**, furthermore, only occurs with polar questions;  
its distribution closely tracks that of English embedded inversion.  
The same holds for Mandarin *-ma* (see also Song 2018).

*kyaa* is acceptable with *know* (3b'), OK with *ask*, *the question is*, but not with *depend on*:

- 17a.** Tiichar-ne anu-se puuchaa **ki kyaa vo caai piyegii**↑  
Teacher-ERG anu-INSTR asked SUB PQP she tea will-drink  
“The teacher asked Anu if she will drink tea.”
- b.** savaal yeh hai **ki kyaa nayii vyavasthaa kaagar saabit hogii** ↑  
question this is SUB PQP new arrangement effective prove will-be  
“The question is whether the new arrangement will prove effective.”
- c.** \* **(kyaa) vo jaayegii yaa nahii** uske mood par nirbhar kartaa hai  
PQP she will-go or not her mood on depend does  
“Whether she will go or not depends on her mood.”

## I: THE INTERROGATIVE LEFT PERIPHERY

**Meta Question Particles (MQP):** interrogative particles that can only appear in matrix questions or quotations: *English quick* (Dayal 2016), *again*, *Japanese kke* (Sauerland and Yatsushiro 2017), *Mandarin nandao* (Xu 2017), *Bangla naki* (Bhadra 2017, 2020)

- 18a.** Quick/quickly, where did you hide the matza↑ Dayal (2016)  
**b.** What is your name, again↑ Sauerland and Yatsushiro (2017)

- 19a.** Mary asked Sue \*quick/quickly where she hid the matza  
where did she hide the matza↑  
**b.** ? Mary asked Sue what was her name, again↑

- 20a.** *namae-wa nan-da-kke*  
name-Top what-Cop-kke  
“What is your name, again?” Sauerland and Yatsushiro (2017: 653)

- b.** \*Boku-wa [(kimi-no) namae-ga nan-da-kke (ka)] siri-ta-i.  
I-top you-gen name-nom what-COP-KKE Q know-want-PRES  
'I want to know what your name is again.'

Takeo Kurafuji, Satoshi Tomioka, Yoshiki Fujiwara (p.c)

# I: THE INTERROGATIVE LEFT PERIPHERY

There are 3 points in the left periphery for a clause to become a question

22a.

[<sub>SAP</sub> SA<sub>ASK</sub>      [<sub>ForceP</sub> Force<sub>+CTR</sub>      [<sub>CP</sub> C<sup>0</sup><sub>+WH</sub>      [<sub>TP...</sub>] ] ] ]

MQP, Declarative Q      inversion, PQP, ↑<sub>MATRIX</sub>      Q-particles, wh fronting      nucleus

These distinctions explain a potential puzzle (Donka Farkas, p.c.): how can we refer to declarative questions as a “question” but block them from being embedded under a rogative predicate ?

23a. The question is, **did he pass the exam** ↑ / \* **he passed the exam** ↑

- b. Speaker A: Oh, **he passed the exam**↑  
Speaker B: That’s a silly **question**.

There are three interrogative structures, with distinct grammatical properties.

Different rogative predicates select for different interrogative structures.

All three structures can all be referred to by the term “question”

(apropos discussion following Bernard Schwarz’s talk yesterday).

## II: THE PROPOSAL IN A NUTSHELL

### 2.1. What Happens Where

#### What Happens Where: CP<sub>+WH</sub>

Clause-typing happens at CP:  $\llbracket \text{CP}_{+WH} \rrbracket \neq \llbracket \text{CP}_{-WH} \rrbracket$

24a.  $\llbracket \llbracket \text{CP}_{+WH} \text{ Whether Sue will leave} \rrbracket \llbracket \text{VP depends on Mary} \rrbracket \rrbracket$

b.  $\llbracket \text{C}_{+WH} \rrbracket = \lambda q \lambda p [p = q]$

$\llbracket \llbracket \text{TP Sue will leave} \rrbracket \rrbracket = \wedge \text{sue will leave}$

$\llbracket \llbracket \text{CP whether Sue will leave} \rrbracket \rrbracket = \{ \wedge \text{sue will leave}, \wedge \neg \text{sue will leave} \}$

*special OP/coercion*

$\llbracket \llbracket \llbracket \text{TP} \llbracket \text{CP whether sue will leave} \rrbracket \text{ depends on Mary} \rrbracket \rrbracket =$

$\wedge \text{depend-on (m) (Ans(\{ \wedge \text{sue will leave}, \wedge \neg \text{sue will leave} \}))}$

Clause-typing happens at the lowest of the three projections.

Putting clause-typing lower in the structure explains

(i) the selectional difference between *believe* and *depend on*.

(ii) the obligatoriness of Q-morphemes (Japanese *ka/no*) in all embedded Qs.

## II: THE PROPOSAL IN A NUTSHELL

### What Happens Where: FORCE<sub>+CTR</sub>

Force has a feature +CTR (Perspectival Center, judge) which:

is prosodically interpreted as  $\uparrow$ matrix (rising for info-seeking polar questions);

syntactically triggers inversion;

does not make an at-issue contribution

but:

(i) it introduces an argument whose perspective wrt Q is relevant

(ii) it introduces a not-at-issue proposition: Q is potentially ACTIVE for the center.

(this not-at-issue proposition enters CG without negotiation: Murray 2014)

25a. [<sub>ForceP</sub> PRO [<sub>Force'</sub> FORCE<sub>+CTR</sub> [<sub>CP</sub> will Sue leave]]]]

b. [[Force<sub>+CTR</sub>]] =  $\lambda Q \lambda x$ : Q is P-ACTIVE for x. Q

c.  $\forall x \forall Q$  [P-ACTIVE-for(Q, x)  $\leftrightarrow$   $\diamond \neg$ Know(x, Ans(Q))] *information seeking Q*

The term ForceP is from Rizzi (1997) but used differently here:

ForceP is not associated with illocutionary force (which is located at SAP)

ForceP is not associated with clause-typing (which is located at CP)

ForceP is a centered question.



## II: THE PROPOSAL IN A NUTSHELL

### What Happens Where: $SAP_{ASK}$

Co-ordinates for speaker and addressee (Speas and Tenny 2003) and a semantics for SAP in terms of discourse moves by discourse participants (Szabolcsi 1982, Krifka 2014 a.o.). The binding of PRO by the speaker co-ordinate of SAP delivers consistency between the NAI condition of possible ignorance and the speech act of asking:

27a.

$[SAP \text{ Speaker}_{c-i} [SA' \text{ Addressee}_c [SA' SA_{ASK}$   
 $[ForceP PRO_i [Force+CTR [CP C^0_{+WH} [TP]]]]]]]$

b.  $[[SA_{ASK}]] = \lambda Q_{\langle\langle s,t \rangle, t \rangle} \lambda x \lambda y. y \text{ puts } x \text{ under obligation to } ASSERT (Ans(Q))$

MQPs modify the speech act.

For example, *quick* modifies the illocutionary force:

$y \text{ puts } x \text{ under obligation to } \underline{quickly}(ASSERT) (Ans(Q))$

The restriction of MQPs to matrix questions/quotations is predicted if SAPs do not embed, except as quotations.

## II: THE PROPOSAL IN A NUTSHELL

### 2.2. Subordination & Shifty Responsives

#### The hybrid character of quasi-subordination: Pronouns in English

- 28a.** [<sub>SAP</sub> Speaker<sub>C</sub> Addressee<sub>C</sub> ASSERT] **Subordination**  
[<sub>CP</sub> Mary [<sub>VP</sub> asked  
[<sub>CP+WH</sub> who **she** should talk to]  
**I**  
**you** = Mary; Jane  
= Speaker<sub>C</sub>  
= Addressee<sub>C</sub>
- b.** [<sub>SAP</sub> Speaker<sub>C</sub> Addressee<sub>C</sub> ASSERT] **Quasi-subordination**  
[<sub>CP</sub> Mary [<sub>VP</sub> asked  
[<sub>ForceP+CTR</sub> who should **she** talk to ↑]  
**I**  
**you** = Mary/Jane  
= Speaker<sub>C</sub>  
= Addressee<sub>C</sub>
- b.** [<sub>SAP</sub> Speaker<sub>C</sub> Addressee<sub>C</sub> ASSERT] **Non-subordination**  
[<sub>CP</sub> Mary [<sub>VP</sub> asked  
[<sub>SAP</sub> “who should **she** talk to ↑”]  
**I**  
**you** ≠ Mary; = Jane  
≠ Speaker<sub>C</sub>; = Mary  
≠ Addressee<sub>C</sub>; = ?

## II: THE PROPOSAL IN A NUTSHELL

### The hybrid character of quasi-subordination: Bound variables in English

The hybrid character of quasi-subordination is reflected in the interpretation of pronouns (cf: 28)

- 29a.** Everyone wants to know [did **I** succeed in buying chocolate for Winifred]. 1<sup>st</sup> person = Sp<sub>C</sub>  
**b.** Every physicist wonders [will **they** be awarded the Nobel prize]. 3<sup>rd</sup> person =  $\forall$ Physicist

### The hybrid character of quasi-subordination: The rogative-responsive divide

Another important point is the rogative/responsive difference wrt to embedded inversion in English and PQP in Hindi-Urdu, which was explained by the condition on possible ignorance:

- 30a.** Everybody wants to know [did I succeed in buying chocolate for Winifred ↑]  
**b.** \* Everybody knows [did I succeed in buying chocolate for Winifred ↑].

- 31a** anu jaannaa caahatii hai [ki (kyaa) tum cai piyoge ↑]  
Anu to-know wants SUB PQP you tea will-drink  
“Anu wants to know whether you’ll drink tea.”  
**b.** \* anu jaantii hai [ki (kyaa) tum cai piyoge (↑)]  
Anu knows SUB PQP you tea will-drink  
Intended: “Anu knows whether you’ll drink tea.”

## II: THE PROPOSAL IN A NUTSHELL

### Shifty responsiveness

But the ban on responsive predicates is not absolute; when the matrix is negated or questioned the unacceptability goes away, and this seems to hold X-linguistically:

**32a.** \* I remember [was Henry a communist ↑]

**b.** ? I don't remember [was Henry a communist ↑]

**c.** Do you remember [was Henry a communist ↑]

McCloskey 2006: 112

**33a.** koi nahiiN jaantaa [ki kyaa Tito stalin-se mile the ↑]

Someone not knows SUB PQP Tito Stalin-with met

“Nobody knows whether Tito had met with Stalin.”

**b.** kisii-ko bhii maalum hai ↑ [ki (kyaa) Tito stalin-se mile the ↑]

someone-ACC at all know SUB PQP Tito Stalin-with met

Bhatt & Dayal 2020

McCloskey entertains a structural distinction in embedding of the kind I have presented but gives it up because of paradigms like (32), “the necessary discriminatory work is done by ultimately pragmatic conditions...we do not want to hardwire into the lexical entry of a resolutive [responsive] predicate a constraint which forbids it to combine with a complement of the higher type.” (McCloskey 2006: 116).

## II: THE PROPOSAL IN A NUTSHELL

### Shifty responsiveness

The proposed NAI condition on Q being potentially ACTIVE in composition with the AI assertion derives the shiftiness of responsiveness.

- 34a.** \* [Sue remember [was Henry a communist ↑]] *remember + inversion*  
 $\Rightarrow$  contradiction  
    ◇¬know(Sue, Ans(Q)); remember(Sue, Ans(Q))
- b.** [Sue doesn't remember [was Henry a communist ↑]]  $\neg$  *remember + inversion*  
 $\neq$  contradiction  
    ◇¬know (Sue, Ans(Q)); ¬remember(Sue, Ans(Q))
- c.** [Does Sue remember ↑ [was Henry a communist ↑]] *? remember + inversion*  
 $\neq$  contradiction  
    ◇¬know(Sue, Ans(Q));  $\left[ \begin{array}{l} \text{remember(Sue, Ans(Q))} \\ \neg \text{remember(Sue, Ans(Q))} \end{array} \right]$

The last case justifies the choice of potentially ACTIVE rather than ACTIVE simpliciter in the NAI condition

### III: EMBEDDING SAP (ALT-QUESTIONS)

#### Cancelation vs. Choice

Hirsh 2017, drawing on Groenendijk & Stokhov (1989), Krifka (2001), Szabolcsi (1997), Ciardelli et al (2015) and Szabolcsi (2016), distinguishes between two types of disjunction of clausal questions.

- 35a.** What is your name? **Or (rather)**, what is your SSN?  
**b.** What is your name **or** what is your SSN?

(35a): Cancelation type. The speaker, in effect, cancels the first question and moves to a more specific question or a question better suited to the current conversational goals.

(35b): Choice type. The two questions are equally efficient ways of serving the current conversational goals and the speaker leaves it up to the addressee to answer whichever question they want to answer.

### III: EMBEDDING SAP (ALT-QUESTIONS)

#### Cancelation vs. Choice

Can both types of disjunction be embedded?

- 36a.** Mary is asking what is your name or what is your SSN? *choice*  
**b.** Mary is asking what is your name or rather what is your SSN? *cancelation*

In (36a) Mary is said to give the addressee the choice of providing their name or their SSN (either will do) – embedded Choice Type disjunction.

In (36b) it isn't Mary who cancels the first question and replaces it with a better question; it is the speaker who does the cancellation. It has to be analyzed as (37a), not (37b). That is, its base form is (37c):

- 37a.** [<sub>SAP</sub> ~~Mary wants to know what is your name~~] or rather  
[<sub>SAP</sub> Mary wants to know what is your SSN]

- b.\*** [Mary wants to know[ [<sub>SAP</sub> ~~what is your name~~] or rather  
[<sub>SAP</sub> what is your SSN] ]]

- c.** Mary wants to know what is your name, or rather, she wants to know what is your SSN.

Cancellation Type disjunction occurs at SAP and cannot be (quasi-)subordinated.

### III: EMBEDDING SAP (ALT-QUESTIONS)

#### Cancelation vs. Choice

What about Choice Type disjunction? Where does that fit into this interrogative left periphery and how does it relate to the embedding verb?

Can one derive the choice reading of (36a) from the permissible structures in (36a') or (36a'') and with what type of an Ans operator? This is the challenge from Schwarz et al (2020):

**36a.** Mary is asking what is your name or what is your SSN?

**36a'.** Mary is asking [<sub>ForceP</sub> [<sub>ForceP+CTR</sub> what is your name] or [<sub>ForceP+CTR</sub> what is your name]]

**36a''.** [[<sub>SAP</sub> Mary is asking [<sub>ForceP+CTR</sub> what is your name] or

[<sub>SAP</sub> Mary is asking [<sub>ForceP+CTR</sub> what is your name]]

### III: EMBEDDING SAP (ALT-QUESTIONS)

#### The Prosody of Alt-Qs

The prosodic profile of alternative questions includes: pitch accent on the alternatives, prosodic break between alternatives, a final fall (Bartels 1997, a.o)

These three features are in evidence in direct questions as well as in embedded alternative questions, including those embedded under predicates like *depend on* identified as selecting CPs.

**38a.** Do they want [coffee]<sub>F</sub>, or do they want [tea]<sub>F</sub> ↓?

**b.** John wants to know/The question is,

[ForceP do they want [coffee]<sub>F</sub>, or do they want [tea]<sub>F</sub> ↓]

**c.** [CP Whether they will want [coffee]<sub>F</sub> or whether they will want [tea]<sub>F</sub> (↓)]  
will depend on when they get here.

While pitch accents and the prosodic break is determined within the nucleus proposition, the final fall comes at ForceP.

Does that make the final fall in (38c) a potential counterexample for a view of the interrogative left periphery where matrix intonation, ↓ in the case of Alt-Q, enters at ForceP?

### III: EMBEDDING SAP (ALT-QUESTIONS)

#### The Prosody of Alt-Qs

But not all alternative questions have a final fall (Roelofsen and van Gool 2010, Roelofsen and Farkas 2015, Hoeks 2020).

Open disjunctive questions show sensitivity in embeddability

**39a.** Do they want [coffee]<sub>F</sub>, or do they want [tea]<sub>F</sub> ↑?

**b.** John wants to know/The question is,

[<sub>ForceP</sub> do they want [coffee]<sub>F</sub>, or do they want [tea]<sub>F</sub> ↑]

**40a.** \* [<sub>CP</sub> Whether they will want [coffee]<sub>F</sub> or whether they will want [tea]<sub>F</sub> ↑ ]  
will depend on when they get here.

**b.** \* John wants to know/The question is,

[<sub>CP</sub> whether they want [coffee]<sub>F</sub>, or whether they want [tea]<sub>F</sub> ↑]

Final fall/rise does enter at ForceP and is possible with quasi-subordination but not with regular subordination.

Interrogative CPs in embedded position do not have final fall/rise, though the absence of a final prosodic feature may not be detectable as distinct from a final fall.

### III: EMBEDDING SAP (QUESTIONS WITH QUANTIFIERS)

#### Quantifying into Question Speech Acts

Questions with quantifiers on their pair-list readings are possible in direct and embedded position, with responsive and with rogative predicates:

- |  |                                   |
|--|-----------------------------------|
| <b>41a.</b> Which book did every student read?                         | <i>matrix</i>                     |
| <b>b.</b> Mary wondered [which book every student read]                | <i>rogative-subordinate</i>       |
| <b>c.</b> Mary wondered [which book did every student read]            | <i>rogative-quasi-subordinate</i> |
| <b>d.</b> Mary knew [which book every student read]                    | <i>responsive-subordinate</i>     |
| <b>e.</b> [Which book every student will read] depends on the teacher. | <i>rogative-subordinate</i>       |

This raises doubts about an analysis that involves questioning into speech acts (Krifka 2003).

Pair-list readings of questions with quantifiers in matrix and embedded contexts have different properties (Moltmann and Szabolcsi 1994, Szabolcsi 1997).

It is possible that quantifying into speech acts is reserved for matrix questions, and an alternative analysis accounts for embedded cases of questions with quantifiers.

## IV: FURTHER IMPLICATIONS

### S-selection

#### *Two notions of 'selection'*

- It is a lexically marked feature of predicates what complement type they can and cannot combine with.  
This suggests that a predicate P and a closely related predicate P' (in terms of lexical meaning) may select different types of complements.
- It is a matter of composition whether a particular predicate can combine with a particular complement type.  
This suggests that a predicate P and closely related predicate P' (in terms of lexical meaning) are likely to select similar types of complements.

Grimshaw (1979) argues for a two-dimensional selection system: c-selection (for category selection) and s-selection (for semantic selection), but do we need a theory of s-selection?

Grimshaw herself holds that s-selection should be derivable from the lexical semantics of the embedding predicate and the semantics of the complement clause.

## IV: FURTHER IMPLICATIONS

### S-selection

Grimshaw: rogative predicates require uncertainty and are therefore incompatible with exclamatives, which are factive.

- 42a.** John knows how very tall she is!  
**b.** \*John wonders how very tall she is!

### Believe and +WH

Even the basic +/- WH selection seems subject to shiftiness (Elliott 1974, Grimshaw 1979, Huddleston 1993):

- 43a.** \*I can believe who is going out with who.  
**b.** I can't believe who is going out with who.  
**c.** Can you believe who is going out with who?

One may argue whether the complements in (43b)-(43c) are interrogatives or exclamatives, but that is orthogonal to the issue of how the selectional properties of *believe* should be characterized.

Certainly, the shiftiness of responsive predicates wrt to embedded inversion and  $\uparrow_{\text{MATRIX}}$  suggests that compositional semantics/pragmatics may be the locus of selectional restrictions (though sadly *investigate* doesn't fit the picture)

## IV: FURTHER IMPLICATIONS

### S-selection

There is a small but significant literature on deriving s-selection from compositional semantics/pragmatics – early efforts in this direction include: D’Avis 2002, Abels 2007, Guerzoni 2007 (a.o). Much work in this direction has been done more recently.

While the idea that s-selection is derivable is only just beginning to move out of the programmatic level, the empirical imperative for it is clear.

“Current research makes it seem unlikely that s-selection is lexically specified once and for all for predicates. While we may continue to talk about a predicate selecting a particular type of complement, we need to be cautious about investing too much theoretical capital in this distinction. An adequate elaboration of the combinatorial possibilities, taking into account all aspects of meaning and conversational dynamics, may ultimately make a theory of s-selection redundant. Interestingly, Grimshaw herself anticipates this in her arguments for s-selection.” *Dayal 2016:147*

## IV: FURTHER IMPLICATIONS

### Further Effects in Shiftiness

There is a basic difference between rogative and responsive predicates wrt embedding  $\text{ForceP}_{+\text{CTR}}$

Modifying responsives with negation and questioning shifts the unacceptability.

There may be more to take into account.

The judgements for (44a)-(44b) can get flipped with a change in quantifiers (Carolyn Anderson p.c.):

**44a.** Everybody wants to know [did I succeed in buying chocolate for Winifred↑]

**b.** \* Everybody knows [did I succeed in buying chocolate for Winifred ↑].

**45a.** \* Nobody wants to know [did I succeed in buying chocolate for Winifred↑]

**b.** Nobody knows [did I succeed in buying chocolate for Winifred ↑]

## IV: FURTHER IMPLICATIONS

### Answering with embedded inversion

The lexical semantics of the embedding verb can also be an influencing factor, as is first person subject and present-tense in the matrix – factors leading to a de facto direct question interpretation.

46. I forget/have forgotten, [did Ann get As in her 1<sup>st</sup> year courses ↑]

Presupposition of *forget*: I used to know Ans(Q)

Contribution of ForceP<sub>CTR</sub>: I don't know Ans(Q) now.

**Consistent**

Can (46) be used to answer a question? It appears that it cannot be used in this way but why?

47. Speaker A: Did Ann get As in her 1<sup>st</sup> year courses?

Speaker B: I used to know but now I've forgotten [whether she did/got As in her 1<sup>st</sup> year courses]

\* [did she get As in her 1<sup>st</sup> year courses ↑]

When there are alternative ways of eliciting the same information, there seem to be additional pragmatic conditions on the use of non-canonical forms.

## IV: FURTHER IMPLICATIONS

### What about Free Indirect Discourse and Wh Slifting?

**48.** She wondered if she he was still asleep. How did she even fall asleep and on top of him?!  
Was he ... shirtless? Oh ... he was... cited by Maier 2012

**49.** How old is she, did you say? Haddican et al 2014

On FID: Sharvit 2008, Maier 2012, Eckhardt 2014, a.o.

On Wh Slifting: Ross 1973, Haddican et al 2014, a.o.

## IV: FURTHER IMPLICATIONS

### Quasi-subordination & Discourse-active Complements

50a. Everyone wants to know did I succeed in buying chocolate for Winifred.

b. Dept Secy: [The Chair wants to know [<sub>ForceP+CTR</sub> can you teach Semantics 1 next semester?]]  
[<sub>CP</sub> if you can teach Semantics 1 next semester.]]

Faculty Member: Yes, I can. \_\_\_\_\_ ↑

Embedded inversion:

Is not a necessary condition for an interrogative complement to be discourse-active.

Is not a sufficient condition for an interrogative complement to be discourse-active.

51. Everyone wants to know [ <sub>ForceP+CTR</sub> did I succeed in buying chocolate for Winifred? ]

On discourse-active complements: Simons 2007, Dayal and Grimshaw 2009

Centering tracks a middle path.

# CONCLUSION

[SAP SA<sub>ASK</sub> [ForceP Force<sub>+CTR</sub> [CP C<sup>0</sup><sub>+WH</sub> [TP... ] ] ] ]

Illocutionary Force

Matrix Intonation

Clause-Typing

# **THANK YOU!**

For helpful comments and suggestions,  
Rajesh Bhatt, Simon Charlow, Gennaro Chierchia, Jane Grimshaw  
students in Semantics 3 (Rutgers Fall 2017)  
audiences at UMass Amherst, NYU,  
Inquisitive BnB 3 (University of Amsterdam)  
3<sup>rd</sup> Referential Semantics Colloquium (UFSCar, Brazil)