QUESTIONS, COMMITMENTS
AND BIAS

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Outline

1. Questions in formal semantics
   1. Hamblin
   2. Karttunen
   3. Groenendijk & Stokhof
   4. Structured meaning

2. Types of questions
   1. Variation in forms
   2. Variation in meaning

3. Modeling questions and bias
   1. In Commitment Space Semantics (Krifka)
   2. With actual and projected commitments
   3. Our proposal
I. Questions in formal semantics

• Questions, contrarily to assertions, don’t directly map to truth values.
• An interrogative maps to a set of propositions which correspond to its answers.

(1) a. [[Who came?]] = {Karen came, Laura came, Mary came. . . .}
    b. [[Did John come?]] = {John came, John didn’t come}
I. Questions in formal semantics

At least four variants

1. Hamblin (1973)
   • A question denotes a set of statements which count as possible answers to that question.
   • Statements count as possible answers irrespective of whether they are true or false. The important thing is that they address the question (in an intuitive sense).
I. Questions in formal semantics

2. Karttunen (1977)
   • Extends Hamblin’s approach to embedded questions
     (2) Who comes depends on who is invited.

   • Observes that a class of embedded questions narrows down the set of propositions picked out by the question to just the true ones
     (3) I know what Pat bought?
     = I know just the true answers to the question ‘What did Pat buy?’
I. Questions in formal semantics

2. Karttunen (1977)

• A question denotes a set of statements which count as true answers to that question.

• Deals mainly with embedded interrogatives. For root interrogatives, he adopts some embedding approach.

(4) a. What did Pat buy?
   b. I ask/wonder what Pat bought.
I. Questions in formal semantics


- Assume the strong exhaustivity intuition:
  know who left = know for each person whether that person left
  know who left and who didn’t leave.

- An embedded question denotes the proposition which counts as the single complete answer (in the actual world).
I. Questions in formal semantics


*Yes-no question*

(5) ...whether John came.
\[ \lambda w[\text{came'}(j) \text{ in } w = \text{came'}(j) \text{ in } w_0] \]
In prose: The set of possible worlds at which the truth-value of ‘John came’ is identical to the truth-value of ‘John came’ in the actual world.

*Wh-question*

(6) ...who came.
\[ \lambda w[\lambda x[\text{came'}(x) \text{ in } w] = \lambda x[\text{came'}(x) \text{ in } w_0]] \]
In prose: The set of possible worlds at which the set of people that came is identical to the set of people that came in the actual world.
I. Questions in formal semantics

   • Strongly exhaustive answers
     G&S capture both what actually happened and what actually did not happen. Hence, the entailment in (7) comes out as true under G&S.

(7)  
   a. John believes that Bill and Suzy walk.
       b. Actually, only Bill walks.
       c. John doesn’t know who walks.

   • A root question denotes a partition of the set of possible worlds, which corresponds to the set of possible complete answers.
   • Yes-no questions divide the set of possible worlds into two partition cells.
I. Questions in formal semantics

4. Structured meaning (von Stechow, Krifka)

• An interrogative maps to a function from (short) answers to propositions.

\[(8)\]

a. \([\text{Who came?}] = \{\text{Karen, Laura, Mary}\}\]
b. \([\text{Did John come?}] = \{\text{yes, no}\}\]

Question meanings are functions that, when applied to the meaning of the [short/constituent] answer, yield a proposition. (from Krifka 2001: 288)

Both questions and answers are incomplete, and questions have functional interpretations.
I. Questions in formal semantics

Yes-no question

(9) Did John eat?
   \( \lambda f[f(\text{John ate})] \)  \( [[\text{yes}]] = \lambda p[p] \) ,  \( [[\text{no}]] = \lambda p[\neg p] \)

Wh-question

(10a) What did John have for dinner?
   \( \lambda x [\text{John had } x \text{ for dinner}] \)

(10b) What did John have for dinner? – Salad.
   \( \lambda x [\text{John had } x \text{ for dinner}] \) (s)
   which can be reduced in: ‘John had s for dinner’
I. Questions in formal semantics

Summary

• Propositional vs. functional approaches
• Structured meaning and information structure
• Question-answer pairs in dialogue
• Typology of answers:
  ✓ Partial vs. complete / weak vs. strong exhaustivity
  ✓ Congruent vs. non congruent
  ✓ Short, elliptical or not
II. Types of questions

• Yes-no questions, wh-questions (fronted or in situ), tag questions...
• Interrogative vs. declarative questions
• Root vs. embedded questions

➤ Variation in form
➤ Variation in meaning
2.1 Variation in forms

A) Interrogative questions

*Polar question*

(11) Do you speak English?

*Wh-questions*

(12) What happens?

In French

(13) a. Qui a-t-il vu ?  
     Fronted *wh-* + Inversion

   b. Qui il a vu ?  
     Fronted *wh-*

   c. Il a vu qui ?  
     *wh-* in situ

   ‘Who did he see?’
2.1 Variation in forms

B) Declarative questions

(14) Tu parles anglais ?

YOU SPEAK ENGLISH

(15) a. JEAN a vu Elisabeth hier ?
b. Jean a vu ELISABETH hier ?
c. Jean a vu Elisabeth HIER ?

JEAN HAS SEEN ELISABETH YESTERDAY

Very frequent in French. Nearly no constraints in informal language.
2.1 Variation in forms

C) Questions with tags

*In English*

**Matching question tags** (same polarity tags)

(16) Ed won the race, did he?

Ed didn’t win the race, didn’t he?

✓ Proposition put forward as a potential view of the addressee. Matching question tags are as voicing a likely opinion of the addressee.
2.1 Variation in forms

C) Questions with tags

*In English*

**Reverse question tags** (Reverse polartity tags)

(17) Ed won the race, didn’t he?
     Ed didn’t win the race, did he?

✓ The speaker offers her own opinion, and asks for agreement by the addressee.
2.1 Variation in forms

C) Questions with tags

In French, no grammatical construction, but particles. 
\textit{N'est-ce pas / hein}: not dependent on sentential polarity.

(18) \quad a. Ed a gagné la course, n'est-ce pas ?

a'. Ed n'a pas gagné la course, n'est-ce pas ?

‘Ed (won/didn’t win) the race, \textit{N’EST-CE PAS}?’

b. Ed a gagné la course, hein ?

b’. Ed n’a pas gagné la course, hein ?

‘Ed (won/didn’t win) the race, \textit{HEIN}?’
2.1 Variation in forms

C) Questions with tags

*Non / Si* : dependent on sentential polarity.

(19)  

a. *Ed a gagné la course, non ?*  

‘Ed won the race, *NON?’

b. *Ed n’a pas gagné la course, (#non / si) ?*  

‘Ed didn’t win the race, (#NON/ SI)’

French counterpart of matching tags: *c’est (bien) ça*

(20)  

a. *Ed a gagné la course, c’est (bien) ça ?*  

b. *Ed n’a pas gagné la course, c’est (bien) ça ?*
2.1 Variation in forms

D) Alternative questions
- Alternatives with ‘or not’ (NAQ)
  (21) Is it a success or not?
- Alternatives between complements (CAQ)
  (22) Is it a boy or a girl?
- Alternatives built with a wh-word
  (23) What did Mary eat, tomatoes or beans?
2.1 Variation in forms

E) Rhetorical questions

- Questions including NPI with an assertive force

(24) Who would ever eat there?
    ≈ Nobody would ever eat there.

- Rhetorical echo-questions

(25) A. We’re going to Afghanistan on vacation.
    B. You’re going WHERE on vacation?
    ≈ I can’t believe you’re going to Afghanistan

Cf. Lecture 5
2.2 Variation in meaning

Are there semantical or dialogical differences associated with the variation of form?

- Stylistic variation
- Written vs. spoken language/register...
- In terms of speaker’s commitment and call-on-addressee.
2.2 Variation in meaning

Frequency differences

• *In situ*: very frequent in spoken language.
• Fronted-wh + inversion: more frequent in texts than in spontaneous speech.

No systematic studies: a.o. Deprez, Hamlaoui, Wallner (phD. Constance) 60 to 80% in situ
2.2 Variation in meaning

• A question is biased when the possible answers are not equally probable, but one is preferred.

• They are different kinds of bias (a.o. Sudo):
  ✓ Evidential bias
    (26) Is it sunny outside? (# in a context providing negative evidence)
  ✓ Epistemic bias
    (27) Didn’t John go to the party? (# when the speaker is ignorant about who went or should have gone to the party)
2.2 Variation in meaning

✓ English declarative questions are associated with an evidential or epistemic bias (cf. Gunlogson).

“One property of all the situations in which declaratives work as questions (as well as some of the situations where they do not) is that the addressee is clearly better positioned than the speaker to render a verdict on the truth of the proposition, and both parties are aware of that.” (Gunlogson, 2008)

✓ No such constraints exist in French, where declarative questions are very frequent and nearly not constrained.
2.2 Variation in meaning

- Tag questions convey epistemic bias which can be analyzed as Speaker or Addressee commitments.
  - In matching tag questions, the proposition put forward as a potential view/commitment of the addressee. The speaker checks this commitment attribution.
  - In reverse tag questions, the proposition put forward by the speaker. The speaker checks whether this commitment is shared by the addressee.

- Both types of tags convey confirmation requests: confirmation of a commitment whose source varies.
2.2 Variation in meaning

• Rhetorical questions correspond to cases of a maximal bias. (see lecture 5)

• Alternative questions correspond to cases where the set of possible answers is finite and presented as presupposed. (see lecture 4)

Observation: no alternative wh-questions

(28) Est-ce que Jean est venu ou pas ?/ Did John come or not?

(28’) * Qui est venu ou pas ?/ *Who came or not?
2.2 Variation in meaning

Tags, particles, and prosody make explicit:

- A call-on-addressee
- Its content (p or not p)
- What the speaker is ready to commit to
- What the speaker thinks that the addressee thinks, knows, believes or desires.
2.2 Variation in meaning

Determine:
- the nature of bias
- the degree of the bias
- the source of the bias

How to model bias in dialogical framework?
- In commitment spaces à la Krifka
- Using tables à la Farkas and Bruce
- Our proposal
III Modeling questions and bias

1. In commitment Space Semantics (Krifka)
2. With a projected CG (Farkas & Bruce)
3. With projected commitment for each participants (Malamud & Stephenson)
4. Using commitments to non propositional contents (Beyssade & Marandin)
3.1. In commitment space semantics

• Krifka proposes a formal framework for illocutionary acts, which captures information shared by the interlocutors, and the projected continuations of the communicative exchange.

• Assertion: commitment for the truth of propositions

• Question: conversational moves that restrict the continuations.

➢ Account for the state of the conversation at time t, but also its licits future developments.
3.1. In commitment space semantics

The model includes

- **Commitment states**: sets of propositions
- **Commitment spaces**: sets of commitment states modeling an information state in discourse and its expected or possible continuations
- **Commitment space developments**: sequence of commitment spaces recording the conversational moves \(<C_0, C_1, C_2, ..., C_n>\)

+ indicates the update of commitment states, commitment spaces, and CSDs.
3.1. In commitment space semantics

• Speech act ≠ Proposition
  ✓ A proposition is true or false
  ✓ A speech act changes a commitment state

• **Commitment state**: set of propositions
  ✓ Update of commitment state $c$ with speech act $\mathcal{A}\phi$
    $$c + \mathcal{A}\phi = c \cup \{\phi\}.$$  

![Diagram showing the update of a commitment state](image)

**Figure 1:**
Update of commitment state
3.1. In commitment space semantics

Commitment space $C$ is a set of commitment states, such that $\cap C \neq \emptyset$ and $\cap C \subseteq C$

✓ $\cap C$, the root of $C$, is noted $\forall C$

✓ Update of a commitment space $C$ with an illocutionary act $A$: $C + A = \{c \in C \mid \forall C + A \subseteq c\}$.

Figure 2: Updates of commitment space
3.1. In commitment space semantics

Krifka defines various operations over speech acts in commitment spaces

Speech act denegation

(30) I don’t promise to come

(31) I promise not to come

Speech act conjunction

\[ C + [A \& B] = [C + A] \cap [C + B] \]

Speech act disjunction

\[ C + [A \lor B] = [C + A] \cup [C + B] \]
3.1. In commitment space semantics

Commitment space developments

• CSDs are used to indicate the actor of a speech act
  Update of a commitment space development with speech act $A$ by actor $S$:
  \[
  \langle \ldots, CS' \rangle \overset{S}{\rightarrow} A = \langle \ldots, C', [C + A]^S \rangle
  \]

• The rejection of the last speech act is expressed by an operator $R$, defined as below
  \[
  \langle \ldots, C^*, C'^* \rangle \overset{S}{\rightarrow} R = \langle \ldots, C^*, C'^*, C^S \rangle
  \]
  The star * stands for any discourse participant.
3.1. In commitment space semantics

Assertion

When asserting a proposition:

• the speaker undertakes responsibility for what is claimed, by publicly committing himself to the truth of that proposition: $S \vdash \phi$

• The speaker wants to make the addressee believe this proposition (see Bach & Harnish 1979). But this comes about as a secondary effect, cancelable, a conversational implicature.

(32) a. Believe it or not, I won the race.

    b. I don’t care whether you believe me, but I won the race.
3.1. In commitment space semantics

Reactions to an assertion

Figure 7:
Acknowledgement (okay), Confirmation (yes) and Contradiction (no) of an assertion
3.1. In commitment space semantics

Question

• Questions does not change the root of the commitment space, they restrict the possible continuations.

(33) Did I win the race?

(33) restricts the future developments of C in such a way that the only legal continuations are the commitments by the addressee S2 that S1 won the race or that S1 did not win the race. Other answers, such that I don’t know, require a prior retraction.
3.1. In commitment space semantics

**Question**

Bipolar questions (neutral) vs. monopolar questions (biased).

*Figure 8: Bipolar question*

*Figure 11: Monopolar (biased) question*
3.1. In commitment space semantics

Differences between assertions and questions
After an assertion, the root of the commitment space has changed.
After a question, the root of the commitment space remains the same. Questions are called meta-speech acts, since they don’t change the commitment states.
3.1. In commitment space semantics

Monopolar and bipolar questions in Chinese

a. *Nǐ chī bu chī píngguo?*
   you eat not eat apple
   ‘Do you eat apples?’

b. *Nǐ chī píngguo ma?*
   you eat apple QU
   ‘Do you eat apples?’, ‘You eat apples?’

- (a) is a **A-not-A question** and can be used as a **neutral information question**.
- (b), with the **final particle ma**, is inappropriate where the speaker sees the addressee eating an apple.
3.1. In commitment space semantics

Reaction to bipolar questions
They are assertions and change the root of the CSp.

Figure 9:
Answers yes and no to bipolar question
3.1. In commitment space semantics

Reactions to monopolar questions

Since the speaker proposes just one legal continuation to the addressee:

- the answer *yes* is straightforward
- the answer *no* requires
  a prior rejection.

Answer *yes* to a monopolar question
3.1. In commitment space semantics

• Positive and negative bipolar questions convey the same meaning.

• A monopolar question with a propositional negation has not the same reading that its non-negative counterpart.

• The bipolar interpretation is the result of a disjunction of monopolar questions:

\[(34)\quad \text{a. Did I win the race or not?} \]
\[\quad \text{b. J’ai gagné ou pas ?}\]
3.1. In commitment space semantics

• A monopolar question with a propositional negation has not the same reading as its non negative counterpart.

Negative monopolar question are biased toward a negative content.

(35) Did I not win the race?

   Expected answer : I did not win the race.

• The bipolar interpretation is the result of a disjunction of monopolar questions:

(34) a. Did I win the race or not?

   b. J’ai gagné ou pas ?
3.1. In commitment space semantics

Declarative questions

• Krifka analyses declarative questions in English as **monopolar questions**.

• He assumes that a syntactic structure in which the ? interpretation of the ActP is triggered by rising prosody of the intonational phrase that corresponds to the speech act.

  ➢ Rising prosody plays the same role as the syntactic marks.
3.1. In commitment space semantics

Reverse polarity tag questions
The speaker offers his or her own opinion, and asks for agreement by the addressee.

(36)  a. *I have won the race, haven’t I?*
      b. *I haven’t won the race, have I?*

A speech act disjunction:

✓ S1 puts forward a commitment to \( \varphi \)
✓ And she asks for S2 support.

Result:
if S2 commits to \( \varphi \), then S1 is committed to \( \varphi \) as well.
3.1. In commitment space semantics

Reverse polarity tag question

Result:
if S2 commits to $\varphi$, then S1 is committed to $\varphi$ as well. If S2 doesn’t provide this support, S1 is free either to stick $\varphi$, or to retract it, or even to assert non $\varphi$

Figure 16: Reverse question tag
3.1. In commitment space semantics

Same polarity tag questions

The assertion is put forward as a potential view of the addressee.

(37) You are tired, are you?

A speech act conjunction of an assertion and a monopolar question.

✓ S1 makes an assertion and
✓ S1 asks the addressee to make the same assertion.
3.1. In commitment space semantics

Same polarity tag questions

Result:
S1 proposes to S2 that both S1 and S2 are committed to the proposition $\varphi$.

Figure 15:
Matching question tag
3.1. In commitment space semantics

• A new notion: monopolar questions with only one continuation, used to model biased questions.
• New analyses of alternative questions and constituent questions as speech act disjunction (disjoined monopolar questions).
• New analyses of tag questions.

Distinguish between the instigator of a speech act and the committer of a proposition.

Limits of this approach:
- No degree in bias
- No indication of the source of the bias.
3.2. With projected CG, à la Farkas et Bruce

• Emphasizes the proposal nature of assertion by distinguishing actual and projected Common Ground.

  Assertion = proposing additions to the common ground, rather than actually changing it.

• Cannot account for bias in questions

• Cannot account for the source of a bias in question (speaker, addressee, external evidence...)
3.2. With projected CG, à la F&B

• A Table records syntactic objects paired with their denotations. Necessary to account for fragment answers and ellipsis.

• As long as there are items on the Table, there are issues that need to be dealt with. A conversation is in a stable state when its Table is empty.

• A conversational move that places an item on the Table simultaneously projects a set of future common grounds relative to which the issue on the Table is decided, called the projected set (ps).
3.2. With projected CG, à la F&B

- A polar question projects two possible answers.

(3) Is Sam home? (asked in a context where s1 is shared)

<table>
<thead>
<tr>
<th>A</th>
<th>Table</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;Sam is home[l]; {p, ¬p}&gt;</td>
<td></td>
</tr>
<tr>
<td>Com. Ground</td>
<td>s1</td>
<td>Projected Set</td>
</tr>
<tr>
<td></td>
<td></td>
<td>{ s1 ∪ {p}, s1 ∪ {¬p} }</td>
</tr>
</tbody>
</table>

Default polar questions are non-biasing: they do not commit their author to either proposition in their denotation and project an inquisitive context with respect to their sentence radical.
3.2. With projected CG, à la F&B

Nothing in Farkas & Bruce to account for bias in questions.

<table>
<thead>
<tr>
<th>A</th>
<th>Table</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;Sam is home[1]; {p, ¬p}&gt;</td>
<td></td>
</tr>
<tr>
<td>Com. Ground</td>
<td>s1</td>
<td>Projected Set</td>
</tr>
<tr>
<td></td>
<td>{ s1 ∪ {p}, s1 ∪ {¬p} }</td>
<td></td>
</tr>
</tbody>
</table>
3.2. With projected CG, à la F&B

How to account for the bias?
- One could add $p$ or $\neg p$ in A or B commitment sets.
- Farkas & Roelofsen propose to underline the preferred answer in the projected set.
- Another solution could be to order the elements of the projected set, i.e. to order the possible answers to any question.
### 3.3. With projected commitment sets, à la Malamud et Stephenson

**A asserts p**

<table>
<thead>
<tr>
<th>Current</th>
<th>Projected</th>
</tr>
</thead>
<tbody>
<tr>
<td>CG {…}</td>
<td>CG* {…,p, …, {…,p}}</td>
</tr>
<tr>
<td></td>
<td>Proposes to add p to the CG</td>
</tr>
<tr>
<td>DC(A) {…,p}</td>
<td>DC(A)* {…,p, …, {…,p}}</td>
</tr>
<tr>
<td></td>
<td>adds p to A’s current and projected commitments</td>
</tr>
<tr>
<td>DC(B) {…}</td>
<td>DC(B)* {…, …, {…}}</td>
</tr>
<tr>
<td>DC(C) {…}</td>
<td>DC(C)* {…, …, {…}}</td>
</tr>
<tr>
<td></td>
<td>No change to B or C’s commitments</td>
</tr>
<tr>
<td>Table &lt;p, …&gt;</td>
<td>Table* {&lt;…&gt;, …, &lt;…&gt;}</td>
</tr>
<tr>
<td></td>
<td>Adds p to the top of the table; proposes that it be resolved</td>
</tr>
</tbody>
</table>
### 3.3. With projected commitment sets, à la M&S

A utters p with a RP-tag

<table>
<thead>
<tr>
<th>Current</th>
<th>Projected</th>
</tr>
</thead>
<tbody>
<tr>
<td>CG {...}</td>
<td>CG* {{...}, ..., {...,p}}</td>
</tr>
<tr>
<td></td>
<td>Proposes to add p to the CG</td>
</tr>
<tr>
<td>DC(A) {...}</td>
<td>DC(A)* {{...}, ..., {...,p}}</td>
</tr>
<tr>
<td></td>
<td>adds p to A’s projected commitments</td>
</tr>
<tr>
<td>DC(B) {...}</td>
<td>DC(B)* {{...}, ..., {...}}</td>
</tr>
<tr>
<td>DC(C) {...}</td>
<td>DC(C)* {{...}, ..., {...}}</td>
</tr>
<tr>
<td></td>
<td>No change to B or C’s commitments</td>
</tr>
<tr>
<td>Table &lt;p, ...&gt;</td>
<td>Table* {&lt;...&gt;, ..., &lt;...&gt;}</td>
</tr>
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<td></td>
<td>Adds p to the top of the table; proposes that it be resolved</td>
</tr>
</tbody>
</table>
### 3.3. With projected commitment sets, à la M&S

A utters p with a SP-tag

<table>
<thead>
<tr>
<th>Current</th>
<th>Projected</th>
</tr>
</thead>
<tbody>
<tr>
<td>CG {...}</td>
<td>CG* {...}, {...}, {...}</td>
</tr>
<tr>
<td></td>
<td>No change to the CG</td>
</tr>
<tr>
<td>DC(A) {...}</td>
<td>DC(A)* {...}, {...}, {...}</td>
</tr>
<tr>
<td></td>
<td>no change to A’s commitments</td>
</tr>
<tr>
<td>DC(B) {...}</td>
<td>DC(B)* {...,p}, {..., ..., p}</td>
</tr>
<tr>
<td></td>
<td>Adds p to B’s projected commitments</td>
</tr>
<tr>
<td>Table &lt;p, ...&gt;</td>
<td>Table* &lt;..., &lt;..., ..., p}&gt;</td>
</tr>
<tr>
<td></td>
<td>No change to the Table</td>
</tr>
</tbody>
</table>
### 3.3. With projected commitment sets, à la M&S

A utters p with a rising intonation

<table>
<thead>
<tr>
<th>Current</th>
<th>Projected</th>
</tr>
</thead>
<tbody>
<tr>
<td>CG {...}</td>
<td>CG* {{...}, ..., {...}}</td>
</tr>
<tr>
<td></td>
<td>no change to the CG</td>
</tr>
<tr>
<td>DC(A) {...}</td>
<td>DC(A)* {{...,p}, ..., {...,p}}</td>
</tr>
<tr>
<td></td>
<td>adds p to A’s projected commitments</td>
</tr>
<tr>
<td>DC(B) {...}</td>
<td>DC(B)* {{...}, ..., {...}}</td>
</tr>
<tr>
<td></td>
<td>no change to B’s commitments</td>
</tr>
<tr>
<td>Table &lt;MLI(p), ...&gt;</td>
<td>Table* {&lt;p,...&gt;, ..., &lt;p,...&gt;}</td>
</tr>
<tr>
<td></td>
<td>adds p to the projected Table- p is expected to become an issue: adds a metalinguistic issue (MLI(p) to the Table</td>
</tr>
</tbody>
</table>
3.4. Our proposal

- Double impact of speech acts on context
  - The speaker takes a public stance: she shows something from her private mental state (Belief, Desire, Intention).
  - The speaker expects an Addressee reaction.

When uttering a question, the speaker shows:

1. that she’s interested in the answer of this question, and
2. that she expects that the Addressee takes in charge this question and answers it if he can.
3.4. Our proposal

Given the uttering of a question:

• What type of content does it commit the speaker to?
• What type of content does it call on addressee to get committed to?
• When does a bias arise?
  - When the speaker raises an issue but simultaneously updates projected commitments of one or several discourse participants.
3.4. Our proposal

Clause types, particles, tags and prosody contribute to specify these various updates.

- Division of labour between
  - syntax,
  - lexical semantics
  - and prosody.
3.4.1 Clause Type contribution

1-1 relation between clause type and the speaker’s commitment.

Speaker is committed to the content that is contributed by the clause type of her utterance.

• a clause type is characterized by a type of content.

• In root clauses, the clause type marks the type of speaker’s commitment (e.g. commitment to a proposition, to an issue, to a command...).
3.4.1 Clause Type contribution

Starting point: contrast between declaratives and interrogatives.

- by default, **declaratives** are associated with assertions and **Speaker’s commitment to a proposition** (p).
- by default, **interrogatives** are associated with questions and **Speaker’s commitment to a question** (?p).
3.4.1 Clause Type contribution

- 1-1 relation between clause type and type of commitment.
  - Declarative: commitment to p
  - Interrogative: commitment to ?p

- By default, no difference between the content of speaker’s commitment and the content of the call on Addressee.
  - Declarative: S expects that A commits to p
  - Interrogative: S expects that A commits to ?p
### 3.4.1 Clause Type contribution

<table>
<thead>
<tr>
<th>Sentence</th>
<th>Speech act</th>
<th>Speaker Commitment</th>
<th>Call-on Addressee</th>
</tr>
</thead>
</table>
3.4.2 Particles contribution

The content of the call-on-Addressee may be different from the content of the speaker’s commitment.

Various constructional devices (particles, tags...) specify the type of content that the speaker expects the addressee to get committed to.
3.4.2 Particles contribution

*N'est-ce pas* in French, like RP tags in English, indicates that the speaker calls for the addressee to confirm her belief.

- The speaker’s belief is associated with the update of the speaker’s projected commitments.
- The speaker has (provisional) commitment since there is no update of the projected CG.
- The speaker expects that the addressee gets committed to ?p and consequently resolves the raised issue.

A confirmation request with *n’est-ce pas* is a complex speech act, conveying

- a weak commitment to p from the speaker
- A call-on-Addressee to ?p
3.4.2 Particles contribution

‘p, n’est-ce pas ?’ / ‘p, RP-tag?’

<table>
<thead>
<tr>
<th></th>
<th>Current</th>
<th>Projected</th>
</tr>
</thead>
<tbody>
<tr>
<td>CG</td>
<td></td>
<td>No change</td>
</tr>
<tr>
<td>DC(A)</td>
<td></td>
<td>Adds p to A’s projected commitments</td>
</tr>
<tr>
<td>DC(B)</td>
<td></td>
<td>No change</td>
</tr>
<tr>
<td>DC(C)</td>
<td></td>
<td>No change</td>
</tr>
<tr>
<td>Add ?p QUD (A)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>QUD (B)</td>
<td></td>
<td>Adds ?p to QUD(B) (= call on addressee)</td>
</tr>
</tbody>
</table>
3.4.2 Particles contribution

C’est ça in French, like SP tags in English, indicates that the speaker calls for the addressee to confirm that the addressee herself believes that p.

✓ The addressee’s belief is associated with the update of the addressee’s projected commitments.

✓ This isn’t committed to p since there is no update of the speaker’s current or projected commitment.

✓ The speaker expects that the addressee get committed to ?p and consequently resolves the raised issue.

A confirmation request with c’est ça is a complex speech act, conveying

- A belief attribution from the speaker to the addressee
- A call-on-Addressee to ?p
### 3.4.2 Particles contribution

‘p, c’*est ça ?’ / ‘p, sP-tag?’

<table>
<thead>
<tr>
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</tr>
</tbody>
</table>

*Table* &lt;Jean est malade, c’est ça? &gt;
3.4.2 Particles contribution

- **Bias** conveyed by *n’est-ce pas*: Speaker has reasons to believe p rather non p.

- **Bias** conveyed by *c’est ça*: Speaker thinks that Addressee has reasons to believe p rather non p.

- The source of bias is lexically marked. Both particles indicates epistemic bias.
3.4.3 Prosody contribution

Declarative statements vs. declarative questions
(Gunlogson 2001, Beyssade et al. 2006)

*Pierre va accueillir Nicolas.* (ASSERT)
‘Peter will invite/accommodate Nicolas’

*Pierre va accueillir Nicolas ?* (QUEST)
‘Will Peter invite/accommodate Nicolas ?’
3.4.3 Prosody contribution

• In English, rising declaratives convey an evidential bias (a.o. Gunlogson 2001).

• In French, rising declaratives aren’t biased.

• The rising intonation doesn’t convey by itself an interrogative meaning: there are rising assertions, and falling questions (like default wh-questions).

• The rising intonation is used to indicate that the speech act realized by the utterance is not the canonical speech act associated with the syntactic type of the utterance.
  - Declarative questions are typically rising
  - Rhethorical (interrogative) questions are typically rising too.
3.4.3 Prosody contribution

Focus in questions
A rising tone (H) at the end of the focal domain indicates the focus of the question.

(9) BERNADETTE a vu Pierre à Paris hier ?
(10) Bernadette a vu PIERRE à Paris hier ?
(11) Bernadette a vu Pierre à PARIS hier?
(12) Bernadette a vu Pierre à Paris HIER?

Bernadette saw Pierre in Paris yesterday ?
3.4.3 Prosody contribution

(9’) Is it Bernadette who saw Pierre in Paris yesterday?

(10’) Is it Pierre that Bernadette saw in Paris yesterday?

(11’) Is it in Paris that Bernadette saw Peter yesterday?

(12’) Is it yesterday that Bernadette saw Peter in Paris?
3.4.3 Prosody contribution

In rising declarative, a rising contour is realized at the end of the focus element, but the rising contour also occurs at the end of the utterance (copy).

‘Jean-Marie is free Monday’
Paul viendra
Conclusions

• Use commitments to analyse speech acts.
• Current and projected commitments
• Assume commitments to non propositional contents
• Study the division of labour, between syntax (clause type), lexical semantics (particles), and prosody to these updates of dialogical context.
Conclusions

Disentangling syntactic, semantic, prosodic and lexical contributions to interpretation.

✓ The importance of **syntactic type** which determines the type of the speaker’s commitment.

✓ The interpretation of rising which indicates a complex moves, a difference between the content of the speaker’s commitment and the speaker’s call-on-addressee.
Conclusions

• Various types of bias in question:
  - Evidential bias
  - Epistemic bias

• Their realisation varies crosslinguistically:
  - Evidential bias of English declarative questions (Gunlogson 2008)
  - Epistemic bias associated with particles in French, in Japanese (Sudo 2010)
  - Epistemic bias associated with English tag questions.

• Are all questions biased? Probably not: see alternative questions.
Open questions

• What is the prosody of these particles?
  ➢ *c’est ça?* is incompatible with a falling intonation.
  ➢ Experiments on biased polar questions in English and German (cf. Domaneschi, Romero, Braun 2017).

• Is there one or several types of rising intonation?
  ➢ Rising intonation
  ➢ Incredulity intonation: contrast between $H^*H\%$ and $H^+ H^*H\%$ in French (Michelas et al. 2013), between $L^*HH\%$ and $L+H^* LH\%$ in Dutch (Crespo-Sendra et al., 2017)
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Jean-Marie will go to Germany, Norway or Ireland
References (en plus)

Delais-Roussarie & G. Turco 2016. Intonation of Alternative Constructions in French: which cues allow distinguishing questions from assertions ?. In Romance Languages and Linguistic Theory 2016. Selected papers from 'Going Romance' Frankfurt 2016, John Benjamins


