# Assertions and Polar Questions: Default and non-default cases*

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## 1 Introduction

Default assertion – default declarative sentence:

(1) A: *Amy left.*
B: Yes, she did./No, she didn't./Aha/Oh, I had no idea.

Default polar question – default polar interrogative:

(2) A: *Did Amy leave?*
B: Yes, she did./No, she didn't./#Aha/#Oh, I had no idea.

Non-default cases:

(3) a. Amy left, didn't she?↑ [reverse rising tag question]
b. Amy left, didn't she.↓ [reverse falling tag question]
c. Amy left, did she?↑ [same tag question]

(4) Amy left? [rising declarative]

(5) Didn't Amy leave? [high negation polar question]

Common discourse effect across all these cases:

- induce a choice between two mutually exclusive and jointly exhaustive alternatives (the one in which Amy left and the one in which she didn't)
- the discourse moves a Speaker performs when uttering such sentences: *polar initiatives*

General goal of our project:

- characterize the speech acts of making a *default assertion* and asking a *default polar question* so as to capture similarities/differences between them
- connect the contextual effect of declarative sentences/polar interrogatives with their semantics
- expand the characterization of these two default speech acts so as to be able to account for non-default cases

*This talk presents material from a paper available at https://sites.google.com/site/inquisitivesemantics/papers-1/in-progress. The full paper contains a detailed account of polarity particles used in responses which is skipped entirely in this talk.

Empirical difference between default and non-default cases

- default cases embed

(6) a. Bill knows that the door is open. [falling declarative]
b. Bill knows whether the door is open. [polar interrogative]
c. Bill knows whether the door is open or not. [polar alternative interrogative]

- non-default cases don't embed

(7) a. *Bill knows whether not the door is open. [high negation polar interrogative]
b. *Bill knows that the door was open, wasn't it. [tag interrogative]
c. #Bill knows that the door is open? [rising declarative][1]

Plan for today:

- basic assumptions about context structure and semantics
- summary of account of default cases
- discuss some of the non-default cases: one type of tags

# 2 Assumptions about context structure and semantics

## 2.1 Assumptions about context structure

Minimum context components needed for default cases (Farkas and Bruce (2010) resting on much earlier work)

- list of *discourse commitments* $\mathrm{DC}_X$ for each participant X in the conversation
  - each discourse commitment: a set of possible worlds
  - X presents herself in the conversation as taking $w_a$ to be in each of her discourse commitments
- the Table: space where raised issues are registered; if an issue is raised – placed on the Table – the conversation is steered toward a state where the issue is settled

Question that arises: what additions, if any, need to be made for non-default cases
Our partial answer: more structure added to $\mathrm{DC}_X$

## 2.2 Semantic assumptions: proposals as sets of possibilities

*Inquisitive semantics* framework (see Groenendijk and Roelofsen (2009); Ciardelli and Roelofsen (2011); AnderBois (2011) among others)

Basic assumptions:

- Proposition expressed by a sentence $\varphi$ ($[\![\varphi]\!]$): set of **possibilities**.

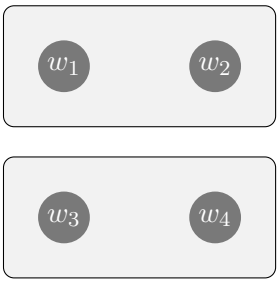
[1] This example is fine if interpreted as a rising declarative root clause; it cannot be interpreted as claiming that Bill is in the *knowing* relation with the content of the rising declarative *The door is open?*

- Each possibility in $[\![\varphi]\!]$: set of **possible worlds**.
- Each possibility represents a potential update of the common ground.

Example:

The propositions expressed by *Amy left* and *Did Amy leave?* given in (a) and (b)

(a) [Amy left]




(b) [Did Amy leave?]

$w_1$ and $w_2$: worlds where Amy left
$w_3$ and $w_4$: worlds where Amy did not leave

## 3 Default initiatives

**Common core** In uttering *Amy left*/*Did Amy leave?*, the speaker:

1. **commits** to the actual world being contained in at least one of the possibilities in $[\![\varphi]\!]$, and at the same time
2. **requests** a response from other participants that provides enough information to locate $w_a$ in a specific possibility in $[\![\varphi]\!]$

(8) **The contextual effect of default polar initiatives**

When a participant $X$ uses a default declarative or a default interrogative $\varphi$, the discourse context is affected as follows:

a. The proposition expressed by $\varphi$, $[\![\varphi]\!]$, is entered as the head of the stack on the Table.
b. The union of all the possibilities for $\varphi$, $\bigcup[\![\varphi]\!]$, is added to $DC_X$. This means that $X$ publicly commits herself to $w_0$ being located in $\bigcup[\![\varphi]\!]$.

**Differences between default declaratives and default polar interrogatives**

- default assertions commit Speaker to a typically non-trivial possibility and steer conversation towards a state where the other participants commit to it as well
- default polar questions: trivial commitment; conversation steered towards either agreeing on Amy having left or agreeing on her not having left
- both default assertions and default polar questions raise an issue: whether Amy left or not
  - issue is settled once participants agree on her having left or on her not having left
- default assertion: agreeing on Amy having left is unproblematic; agreeing on her not having left is problematic

- default polar question: either resolution is in principle fine

Raising and resolving an issue:

- issue raised: status of $w_a$ relative to the possibilities placed on the Table by the utterance in question
- issue resolved: agreement on status of $w_a$ relative to these possibilities

**Result achieved so far**

- semantics of declarative and polar interrogatives is connected to the way they affect context in the default case
- we generalize over assertions and polar questions deriving their different contextual effects from the difference in their semantics

# 4 Beyond the default cases: Biased questions and tentative assertions

## 4.1 Preview

Common to default assertions and polar questions:

- $[\![\varphi]\!]$ is placed on the Table
- the Speaker commits to the informative content of the sentence (the union of the possibilities in $[\![\varphi]\!]$
  - this commitment is typically non-trivial in the case of default declaratives
  - this commitment is typically trivial in the case of polar interrogatives and in this case Speaker presents herself as epistemically neutral relative to the two alternatives in $[\![\varphi]\!]$

Non-default assertions/polar questions:

- Non-default assertions: weaken commitment associated with default declaratives
- Non-default polar questions: non-trivial commitment

Empirical focus:

- Questions that commit (Tag questions):

(9) a. Suzanna is joining us, isn't she?
b. Suzanna isn't joining us, is she?
c. Suzanna is joining us, is she?

- Assertions that fail to commit (Rising Declaratives):

(10) This is a persimon?

Theoretical distinctions (following and elaborating on Gunlogson (2008) and Malamud and Stephenson (2011)):

- Speaker commitment as *source* vs. speaker commitment as *dependent*
- Actual commitments vs. conditional commitments

Refinement at the discourse structure level:

- $\mathrm{DC}_X$: structured into actual ($\mathrm{DC}_X^a$) and conditional commitments ( $\mathrm{DC}_X^c$)
- Each of these, further divided into commitments with X as *source* ($\mathrm{DC}_X^{a,s}$ and $\mathrm{DC}_X^{c,s}$) and commitments with X as *dependent* ($\mathrm{DC}_X^{a,d}$ and $\mathrm{DC}_X^{c,d}$)

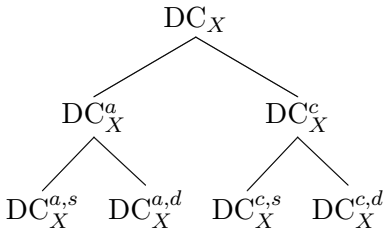



Figure 1: The structure of discourse commitment lists.

### 4.2 Sources and dependents

Puzzle from Gunlogson (2008):

(11) A: Stuart is in town.
B: Yes, I saw him yesterday. / #Yes, I had no idea.

Main ideas in Gunlogson (2008):

- operative notion: nature of evidence X has concerning the possibility $\alpha$ that she commits to

Sources and dependents:

(12) a. X is *source* for $\alpha$ if she presents herself as having evidence for $\alpha$ that is independent of her interlocutor's commitment to $\alpha$ in the current conversation.
b. X is *dependent* relative to $\alpha$ if her commitment to $\alpha$ is based on an interlocutor's prior commitment to $\alpha$.

- If X is *source* for $\alpha$ she has epistemic authority over $\alpha$.
- If X is *dependent* relative to $\alpha$, her commitment to $\alpha$ is based on another participant's prior commitment to $\alpha$ as *source*.

Epistemic authority is gradient: (recall Northrop's 2011 CUSP presentation)

(13) You had a haircut.

- Speaker has some epistemic authority over the information expressed
- Addressee has more authority

Source/Dependent is a binary distinction based on the gradient notion of epistemic authority.

In the case of a default assertive initiative:

- Speaker is source for her commitment
- Addressee, when he reacts, may be co-source or dependent

Reactions flanked by *yes* and *no* register Speaker as source; *aha/oh* register Speaker as dependent, in which case an interlocutor must be source.

(14) A: Stuart is in town.
B: Aha / Oh, I had no idea. / #Aha / #Oh, I knew that already.

### 4.3 Conditional commitments

(15) *Conditional Commitment*
A participant $X$'s commitment to a possibility $\alpha$ is conditional if she expresses willingness to commit to $\alpha$ under the condition that one of her interlocutors commits to $\alpha$ as well.

If Speaker commits to $\alpha$ conditionally:

- Addressee should be a possible future source for $\alpha$
- Speaker can be either source or dependent relative to $\alpha$
  - If source, Speaker is ready to commit to $\alpha$ as source once the Addressee ratifies it.
  - If dependent, Speaker is ready to commit to $\alpha$ as dependent once Addressee commits to it as source.
- In either case, a conditional commitment is weaker than an actual commitment.

Adding to conditional commitments rather than to actual ones is done via marked discourse moves.

### 4.4 Questions that commit: Tag questions

(16) a. Susan is joining us, isn't she?
b. Susan isn't joining us, is she?
c. Susan is joining us, is she?

Terminology:

- Sentence form: *tag interrogatives*
- Speech act performed: *tag questions*
- The adjoined interrogative clause: the *tag*
- The initial declarative clause: the *anchor*
- The unique possibility in the semantic value of the anchor: *anchor possibility*
- Examples, (16a) and (16b): reverse tag questions (RTQs), which may be rising (↑RTQs) or falling (↓RTQs)

- Example (16c): same polarity tag questions (STQs); always positive, always rising

Hybrid nature of tags:

- commit Speaker to anchor in a way that is similar to assertions – Speaker bias for anchor
- function as questions in that Addressee is normally supposed to respond; commitment is not categorical

**Rising reverse tag questions (↑RTQs)**

(17) Suzanna is joining us, isn't she↑?

Intuition:

- ↑RTQ signals that the Sp is epistemically biased in favor of $\alpha$, the anchor possibility
- ↑RTQ signals that the Sp is ready to accept its reverse on the authority of the Ad

Contextual effects:

- like polar questions in that both $\alpha$ and $\overline{\alpha}$ are possibilities to be considered
- unlike polar questions and like assertions in that Sp is biased toward $\alpha$
- unlike assertions in that Sp signals readiness to go against her bias on the authority of the Ad

(18) **The discourse effect of a rising reverse tag question**
A rising reverse tag question with anchor possibility $\alpha$, uttered by a participant $X$, has the following effects on the discourse context:

1. The proposition $\{\alpha, \overline{\alpha}\}$ is placed on the Table
2. $\alpha$ is added to $\mathrm{DC}_X^{c,s}$
3. $\overline{\alpha}$ is added to $\mathrm{DC}_X^{c,d}$

↑RTQs are non-default because conditional commitments are involved.

Consequences:

- Addressee should be in a position to source either $\alpha$ or $\overline{\alpha}$ and therefore should be in a position to have epistemic authority over $\alpha$.
- Speaker's epistemic authority over $\alpha$ should be lower than the Addressee's given that she signals readiness to go against her bias on the authority of the Addressee.
- Context should be consistent with Speaker's epistemic bias for $\alpha$.

Testing the account:

- follow Malamud and Stephenson (2011) in using predicates of personal taste
- 'judge' (participant whose direct experience is involved) has high epistemic authority and may act as source

- participants with no direct experience: lower epistemic authority than that of the 'judge'

*Context 1: Addressee is possible source and Speaker is not*

- Addressee is eating ice cream, and therefore Addressee possible *source* for (19):
- Speaker is not eating ice cream, and therefore not possible *source* for (19)

(19) This is tasty.

Predictions for Context 1:

(20) a. Is it tasty?
b. #It's tasty, isn't it↑?

*Explanation*
↑RTQ requires Speaker as conditional *source* but Context 1 does not allow it.

*Context 2: Speaker is possible source and Addressee is not*

- Sp is eating ice cream and therefore Sp is possible *source* for (19)
- Ad is not eating ice cream and therefore not good *source* for (19)

Prediction for Context 2:

(21) a. #Is it tasty?
b. #It's tasty, isn't it↑?

*Explanation*
Both polar question and ↑RTQ are out because both require Ad to be possible source for (19).

*Context 3: Both Speaker and Addressee are possible sources*

- Both Sp and Ad are eating ice cream from the same container: both possible as *source* for (19).

Prediction for Context 3:

(22) It's tasty, isn't it↑?

*Explanation*
Both participants can be *sources*; Speaker is ready to defer to Addressee.

Additional prediction: response to ↑RTQs can be either *yes* or *no* but not *aha*, under the assumption that *yes* and *no* register the speaker as *source* and *aha* register her as *dependent*.

**Falling reverse tag questions (↓RTQs)**

(23) Suzanna is joining us, isn't she↓?

Intuition:

- stronger Speaker bias for $\alpha$; Addressee should still be possible source

(24) **The discourse effect of a falling reverse tag question**
A falling reverse tag question with anchor possibility $\alpha$, uttered by a participant $X$, has the following effects on the discourse context:

1. The proposition $\{\alpha, \overline{\alpha}\}$ is placed on the Table
2. $\alpha$ is added to $\mathrm{DC}_X^{c,s}$

Same as ↑RTQs in that

- signal conditional commitment

Different from ↑RTQs in that

- no conditional commitment to $\overline{\alpha}$ is involved

Different from default assertions in that

- commitment signaled is conditional
- interrogative in form and therefore both $\alpha$ and $\overline{\alpha}$ are added to the Table

Different from polar questions in that

- conditional commitment is involved

Correctly predicted to be bad in contexts where Addressee cannot be source for $\alpha$, i.e., Context 2.

Common to RTQs:

- contribution to the Table – dictated by interrogative form
- involve Sp conditional commitment to anchor as source – bias effect connected to declarative form of anchor

Contribution of intonation contour

- ↑: Sp readiness to go against own bias on the authority of the Ad
- ↓: stronger Sp commitment to anchor; no overt signal of willingness to go against own bias

**Same tag questions (STQs)**

(25) It's tasty, is it?

Intuition:

- Speaker bias in favor of the Addressee being committed to $\alpha$ as source
- Speaker skepticism toward $\alpha$

(26) **The discourse effect of a same tag question**
A same tag question with anchor possibility $\alpha$, uttered by a participant $X$, has the following effects on the discourse context:

1. The proposition $\{\alpha, \overline{\alpha}\}$ is placed on the Table
2. $\alpha$ is added to $\mathrm{DC}_X^{c,d}$

STQs are tag questions because

- they place both $\alpha$ and $\overline{\alpha}$ on the Table, like all the other interrogative-form sentences discussed
- Speaker bias towards $\alpha$ just like the other tag interrogatives discussed

Special to STQs:

- Speaker bias for anchor is rooted in Addressee's authority over it

Prediction:

- STQs should be good only in contexts where Sp is not a good source but the Ad is good source and where Sp has reason to believe Ad will commit to anchor

(25) should be fine in Context 1, where Ad is eating ice cream with gusto and Sp hasn't tasted it yet.

### 4.5 Assertions that don't commit: Rising declaratives (RDs)

(Gunlogson (2001), Gunlogson (2008))

(27) That's a persimmon?

Intuition:

- Assertion-like in that some type of commitment to $\alpha$ is expressed
- Question-like in that commitment is contingent on Addressee's ratification

(28) **The discourse effect of a tentative assertion**
A tentative assertion, which involves the utterance of a rising declarative expressing the proposition $\{\alpha\}$ by a participant $X$, has the following effects on the discourse context:

1. The proposition $\{\alpha\}$ is placed on the Table
2. $\alpha$ is added to $\mathrm{DC}_X^{c,s}$

RDs: require both Speaker and Addressee to be possible sources but given the conditional commitment expressed, the Speaker presents herself as having less epistemic authority over $p$ than the Addressee since she requires Addressee ratification in order to commit to $p$ even though she has some independent reason to do so.

Open issues:

- role of negation; why STQs are always positive
- role of nuclear vs. post nuclear distinction
- possibility of neutral negative ↑RTQs
- other biased questions: HNQs

## 5 Conclusion

Aims:

- balance the semantic and discourse facets of our analysis of various types of declarative and polar interrogatives in such a way as to separate default cases from more complex ones
- account for all the default cases in a uniform way
- extend the account to non-default cases

Results:

- Commonalities across all the cases we considered:
  - semantic core of all cases: express sets of possibilities
  - raise the issue of locating the actual world within one of the possibilities the sentence expresses
  - commit the Speaker (conditionally or unconditionally) to the informative content of their utterance – $w_a$ within the union of the possibilities in the proposition expressed
- Differences:
  - singleton vs. non-singleton set of possibilities
  - trivial vs. non-trivial commitment
  - actual vs. conditional commitments
  - commitment as source or as dependent

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