

# The interaction of clausal syntax, discourse roles, and information structure in questions

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## 1. Introduction

### Overview

This paper argues that the (grammatical) nature of questions can be understood in an interesting way through explicit reference to Speaker and Addressee, in syntax, morphology, and semantics. The paper also illustrates the efficacy of a bipartite treatment of sentience in grammar, with a division of labor between the *Speaker* and the *Knower*.

### Theoretical cast of characters

#### Discourse

Sentience roles (Speas and Tenny 2003)

#### Syntax of the left periphery

Two projections for sentience (Speas and Tenny 2003, Tenny 2003)

#### Morphology

Pronominal feature systems (Harley and Ritter 2002)

#### Information Structure

Identifiability (Lambrecht 1994)

#### Semantics

File Change Semantics (Heim 2002)

## 2. Sentience Roles

*Sentience Roles (Speas and Tenny 2003). These are like thematic roles, but they refer to necessarily sentient entities, and serve as point of view anchors for predicates that make implicit reference to some individual's point of view.*

### 2.1 Typologies of Sentience Roles

(1)

<i>Sells 1987, Kamp 1984</i>	<i>Speas and Tenny 2003</i>	<i>A working typology</i>
'Discourse Roles'	'Sentience roles'	
(primitives)	(structurally defined)	(not primitives)

SOURCE -----	SPEAKER -----	Speaker
	HEARER -----	Hearer
SELF -----	Generalized sentience role -----	Evidential Experiencer
PIVOT -----		Perceiver

*Also: Cantrall 1974, Banfield 1982, Zribi-Hertz 1989, Minkhoff 1994 ('logophoric roles')*

### 2.2 Examples of Point of View anchoring to Sentience Roles:

#### Anchoring to Speaker

*Evaluatives (adjectives, adverbs, NPs) are speaker-oriented predicates.*

*subscript s => speaker's point of view*

*subscript k => not speaker or hearer's point of view.*

- (2) a. **Unfortunately**<sub>s</sub>, Marco won the lottery.  
 b. Marco met Jill's<sub>k</sub> **damn**<sub>s</sub> cousin. (c.f., Marco met Jill's<sub>k</sub> **beloved**<sub>k</sub> cousin.)  
 c. Marco got run over by his neighbor. Marco should sue **the bastard**<sub>s</sub>.

#### Anchoring to Seat of Knowledge

*Finite sentences also invoke an evaluator of propositional truth, or the sentient individual who is responsible for the truth of a proposition. Evidential verbs (appears, seems) and adverbs (evidently, apparently), refer to this sentient entity. We call this the Seat of Knowledge, an evidential argument.*

- (3) a. The bicyclist has **evidently<sub>s</sub>/apparently<sub>s</sub>** escaped injury in the crash.  
 b. The bicyclist **appears<sub>s</sub>/seems<sub>s</sub>** to have escaped injury in the crash.

### Anchoring to Experiencer

*The experiencer of an internal state is associated with psychological predicates, which assign an experiencer role to one of their arguments.*

- (4) a. Marco met Sarah's<sub>k</sub> **beloved<sub>k/s\*</sub>** cousin.  
 b. Marco met Sarah's<sub>k</sub> **damn<sub>k\*/s</sub>** cousin.

### Anchoring to Perceiver

*The perceiver of spatiotemporal orientation is referred to through deictics like here and there, or locative and directional PPs like behind them (Cantrall 1974, p 46, #2):*

- (5) The adults in the picture are facing away from us, with the children hidden behind them.

*We will focus on Speaker, Addressee, and Seat of Knowledge*

## 3. The Interrogative Flip

*When the sentence is switched from declarative to interrogative, evidentials, in a reading where they maintain their strictly evidential sense, shift from being speaker-anchored to being addressee-anchored (indicated by the subscript *h*) (6a-b), but evaluatives do not (6c). In the interrogatives the addressee – not the speaker – is able to tell what 'appears to have happened' to the bicyclist; and it is the addressee who is granted that responsibility.*

- (6) a. Has the bicyclist **evidently<sub>h</sub>/apparently<sub>h</sub>** escaped injury in the crash?  
 b. Does the bicyclist **appear<sub>h</sub>/seem<sub>h</sub>** to have escaped injury in the crash?  
 c. Did Marco meet his **damn<sub>s</sub>** cousin?

*Similarly, certain discourse-related adverbs in a question express attitudes of the HEARER rather than of the SPEAKER.*

- (7) a. Mary evidently knew the victim. (must be evident to SPEAKER)  
 b. Who evidently knew the victim? (must be evident to HEARER)
- (8) a. Honestly, Mary knew the victim. (SPEAKER claims to be honest)  
 b. Honestly, who knew the victim? (request that HEARER be honest)

*The declarative and interrogative may be characterized (grammatically) as mediating between the discourse participants of Speaker and Addressee, and the Seat of Knowledge. Switching a declarative sentence to an interrogative sentence involves a simple flip of the Seat of Knowledge (SOK) with respect to the discourse participants of Speaker and Addressee.*

- (9)            *Declarative:*  
                  [ Speaker, Addressee ]  
                  |  
                  SOK
- Interrogative:*  
                  [ Speaker, Addressee ]  
                  |  
                  SOK

#### **4. A syntactic account of the interrogative flip (Speas and Tenny 2003)**

##### **4.1 Some syntax of the left periphery (Speas and Tenny 2003)**

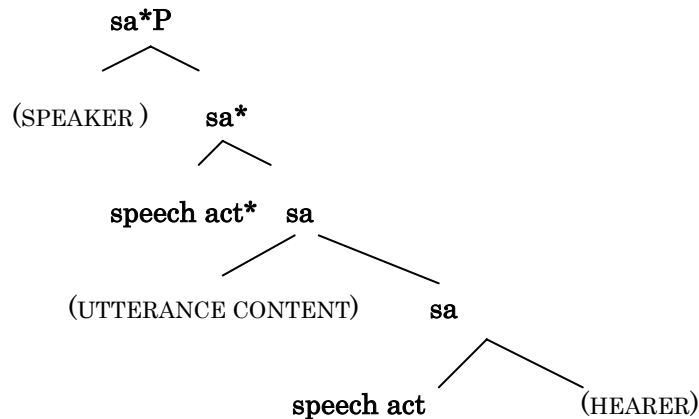
*In Speas and Tenny (2003) two functional projections represent sentience in grammar:*

- A Speech Act (or Force) Projection at the outermost left (or right) periphery (or top) of the clause. This is associated with the discourse sentience roles of SPEAKER and HEARER, which occupy syntactic argument positions in the projection. The Speech Act Phrase is the domain which handles reference to Speaker and Addressee—or to first and second person features.
- A Sentience Projection below (or inside of) the Speech Act Projection, associated with a non-specific generic sentience role. In a declarative sentence the SPEAKER c-commands the generic role.
- Both functional projections are optional at the left (or right) periphery.

#### 4.2 The two projections for sentience in more detail (Speas and Tenny 2003)

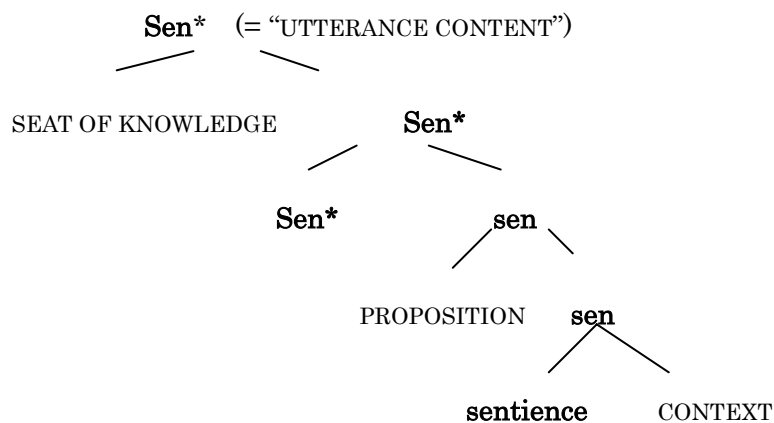
- ★ There is a representation of “sentience”
- ★ These syntactic representations have arguments.
- ★ These representations are restricted by basic principles of syntax.

(10) The Speech Act Projection:



*The highest argument of the Speech Act projection, the SPEAKER, is the “agent” of the speech act. The “theme” of the speech act is the information conveyed, which we represent above as “UTTERANCE CONTENT”. The “goal” of the speech act head is the HEARER.*

(11) The Sentience Projection:



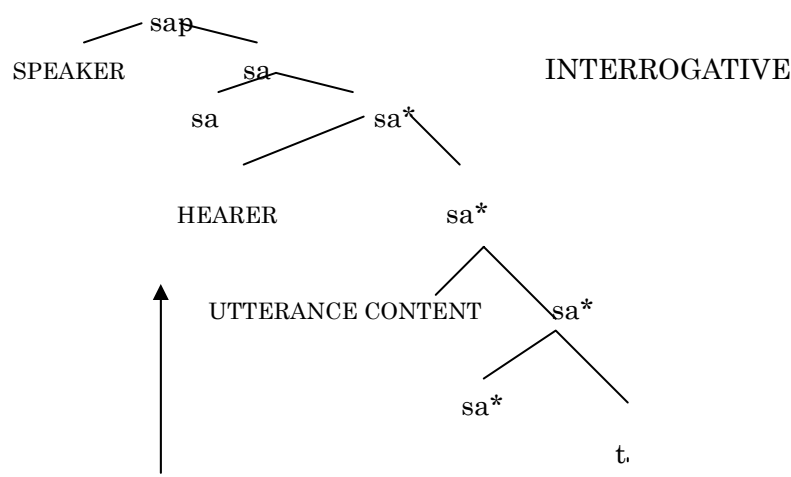
*The Sentience Projection occurs below the Speech Act Projection. The Seat of Knowledge argument occurs within the “UTTERANCE CONTENT” of the Speech Act Phrase, as the specifier of a projection of what we call “sentience”.*

*Also: Pica and Rooryck (1999)*

## 4.2 A syntactic account of the interrogative flip

*Our claim is that interrogative sentences have structures that result from a dative-shift-type movement, in which the complement of the lower head moves to the specifier position, and the former specifier of this head is demoted to an adjoined position. This structure ... is exactly like the structure that (Larson 1988) gives for "John gave Mary a book," assuming that the "agent" of the speech act projection is the SPEAKER, the "goal" is the HEARER and the "theme" is the UTTERANCE CONTENT. (Speas and Tenny 2003)*

(12) Interrogative: Larsonian Dative-shift

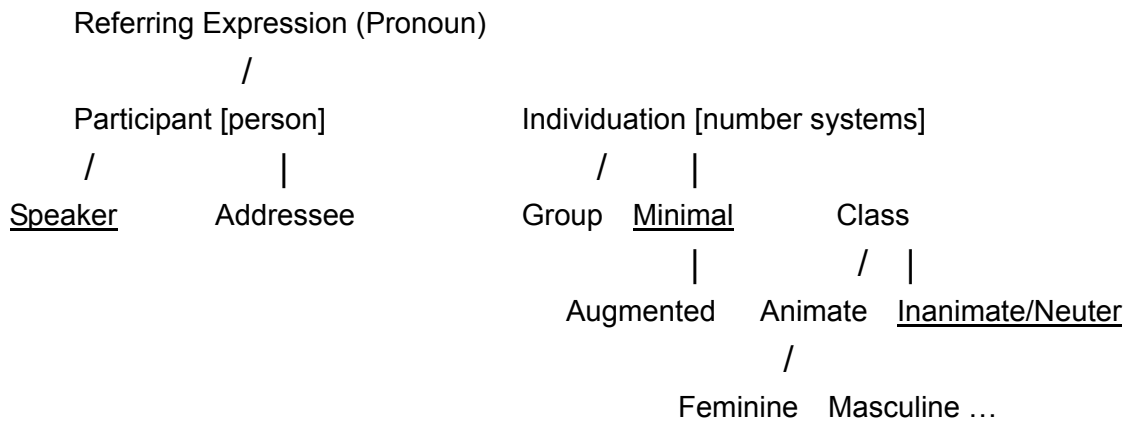


*We claim that this is the structure of sentence with the interrogative form. The structure represents the grammaticized elements, regardless of what speech act the sentence happens to be used to perform. In this structure, the HEARER is now the closest c-commander of the UTTERANCE CONTENT. Thus, it is the HEARER that will control the Seat of Knowledge in an interrogative. The hearer is the one who has the information relevant to determining the truth of the utterance content in a question. (Speas and Tenny 2003)*

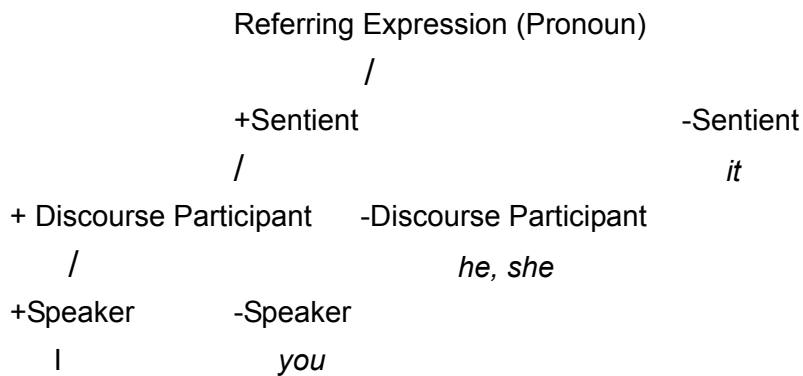
## 5. Some Morphology

### 5.1 Features for sentience in morphology

(13) *Harley and Ritter (2002)*



(14) *Adaptation of Harley and Ritter (left branch only)*



*Notes on the adaptation:*

- *A general feature for sentience has been added.*
- *Harley and Ritter's participant [person] = discourse participant.*
- *Harley and Ritter argue that you need a feature for Addressee specified independently in the feature system for some configurations in some languages. Our adaptation is not meant to argue against this, but to simply cast these ideas in the simplest form.*

*Proposal: Referring expressions (including variables and operators) can be specified with the features +/-sentient, +/-discourse participant, +/-speaker.*

- Tsoulas and Kural (1999) argue that indexical pronouns are variables. They argue on semantic grounds that first and second person pronouns are variables, bound by operators "located above the CP node" (Tsoulas and Kural 1999:8).

## 5.2 A feature-based account of Subject-Aux inversion in questions.

Subject-aux inversion takes place because the INFL (AUX) bears a feature for Addressee because it is a question. Addressee feature has to move to SAP.

A feature for matrix Speaker is globally available – so it doesn't have to move (Fong, Tenny, Macwhinney, "The Computation of Point of View", in progress).

## 6. Information Structure and Identifiability. Lambrecht

**Information structure** *is concerned with such things as:*

*Topic*

*Focus*

*Old or given information versus new information*

*Presuppositions versus assertions*

*Common ground*

### **Identifiability (Lambrecht 1994)**

*In the sentences below, a Swedish doctor and an 18<sup>th</sup> century artist are **identifiable** to the speaker but not to the addressee.*

(15) Dudley wants to marry a Swedish doctor.

Marisa wants to study an 18<sup>th</sup> century artist.

*The indefinite NPs are ambiguous between:*

*(a) a reading where there is one particular individual (doctor or artist) referred to (specific reading)*

*(b) a reading in which the NP is not referential (non-specific reading)*

"...the relevant property of an identifiable referent is not that it is presupposed to exist, but that the speaker assumes that it has a certain representation in the mind of the

addressee which can be evoked in a given discourse.” Lambrecht 1994 p. 78

(identifiability) “is not that the addressee know or be familiar with the referent in question...but that he be able to pick it out from among all those which can be designated with a particular linguistic expression and identify it as the one which the speaker has in mind.” Lambrecht 1994 p. 77.

### **Specificity**

“One way of describing the specific /non-specific distinction in pragmatic terms is to say that a ‘specific indefinite NP’ is one whose referent is identifiable to the speaker but not to the addressee, while a ‘non-specific indefinite NP’ is one whose referent neither the speaker nor the addressee can identify at the time of utterance.” Lambrecht 1994 p. 80.

### **Rewritten with morphological features**

*Specific indefinite NP:*

identifiable to speaker (+S), who guesses that it is not identifiable to addressee (-S)

*Specific definite NP:*

identifiable to speaker (+S), who guesses it is also identifiable to addressee (-S)

(16) Identifiability of a specific DP ⇔ the relevant discourse participant can identify its referent uniquely among all possible referents (in some domain X?).

### **A qualification about the definiteness/indefiniteness distinction**

“..the correlation between the cognitive category of identifiability and the grammatical category of definiteness is at best an imperfect one. There is no one-to-one correlation between identifiability or non-identifiability of a referent and grammatical definiteness or indefiniteness of the noun phrase designating that referent. Obvious evidence for this lack of correspondence is found in the fact that the use of the definite and the indefinite article varies widely from language to language, in idiosyncratic and sometimes quite subtle ways, while the mental ability to identify referents is presumably the same for speakers of all languages.” Lambrecht 1994, p. 80

### The interrogative flip once more

*Compare declarative sentences above with interrogatives below. The indefinite NPs are no longer ambiguous. Only the non-specific reading is available. The specific indefinite NP is no longer identifiable to the speaker.*

- (17) Does Dudley want to marry a Swedish doctor?  
Does Marisa want to study an 18<sup>th</sup> century artist?

*The specific reading would be expressed as:*

- (18) Is the woman Dudley wants to marry a Swedish doctor?

*Proposal: Identifiability is keyed to the Seat of Knowledge*

- (19) Identifiability of a specific DP  $\Leftrightarrow$  the *Seat of Knowledge* can identify its referent uniquely among all possible referents (in some domain X?)

## 7. File Change Semantics and Definiteness (Heim 2002)

*Proposal: Expand File Change Semantics to include another relative context: Speaker or Addressee.*

### Familiarity Theory of Definiteness

- (20) For every indefinite, start a new card. For every definite, update an old card.  
(Heim 2002, p. 227)

### Familiarity Theory of Definiteness Revised

- (21) For every indefinite, the ADDRESSEE starts a new card. For every definite, the ADDRESSEE updates an old card.

*Proposal: Definiteness keyed to Speaker/Addressee.*

- (22) Indefinite: not identifiable to (-S)  
Definite: identifiable to (-S)

### The Interrogative Flip once more

(23) *Declarative:*

Indefinite specific NP:

Specific = identifiable to Seat of Knowledge (+S)

Indefinite: not identifiable to (-S)

→ identifiable to speaker (+S)

(24) *Interrogative*

Indefinite specific:

Specific = identifiable to Seat of Knowledge (-S)

Indefinite: not identifiable to (-S)

→ not identifiable to speaker or hearer

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