

Vitoria Gasteiz, May 2017



The syntax of interaction

Towards a formal typology of discourse markers

Martina Wiltschko, UBC

Lecture III

**They syntacticization of interaction:
A case study of confirmational**

<https://blogs.ubc.ca/syntaxofinteraction/>

Overview

	Topic
Day 1 Introduction	<i>From Speech acts to Interaction</i>
	<i>The syntacticization of speech acts</i>
Day 2 Introducing an idea	<i>The syntacticization of interaction</i>
	<i>Framework: The extended Universal spine</i>
	<i>Methodology: storyboards</i>
Day 3 Case study I	<i>Confirmational</i>
Day 4 Case study II	<i>Response markers</i>
Day 5 Conclusions	<i>Other discourse markers</i>
	<i>Towards a typology of discourse markers</i>

Today

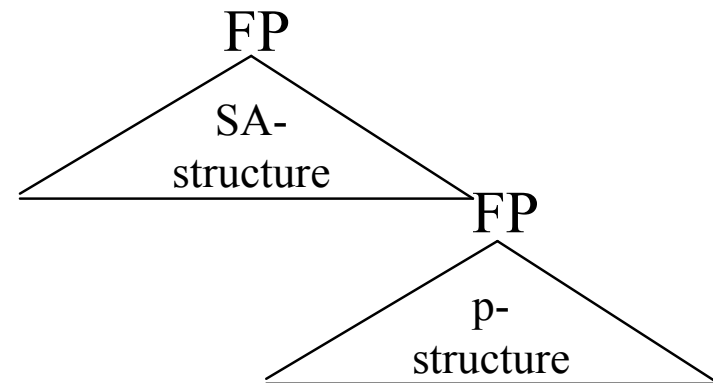
Day 3	Confirmational
9-9.30	From speech acts to interaction Syntacticizing interaction
9.30-10.00	Methodologies to explore interaction Constructing a story=board for your discourse marker
10.00-10.30	Exploring confirmational
10.30-11.00	Break
11.00-11.30	Exploring confirmational: What properties do they have in your language
11.30-12.00	Developing a more complete typology of confirmational
12.30-1.00	Questions, discussion

Syntacticization of speech acts – pragmaticization of syntax

Speech act structure is part of the **functional architecture** of the clause.

= interface between the utterance and the discourse

What is the function of the speech act structure?



From speech acts to interaction

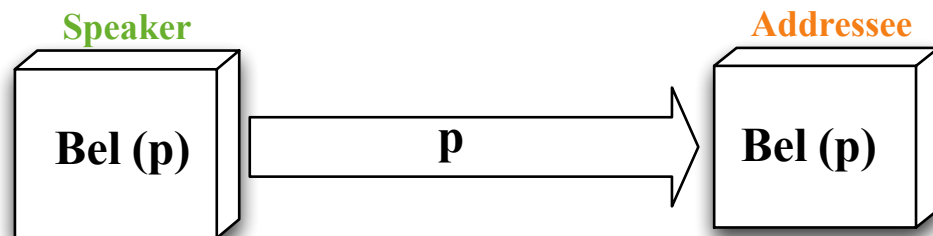
Discourse conditions for assertions (the classic view)

S asserts p if

- i) S believes p
- ii) S wants A to believe p

Bach & Harnish 1979

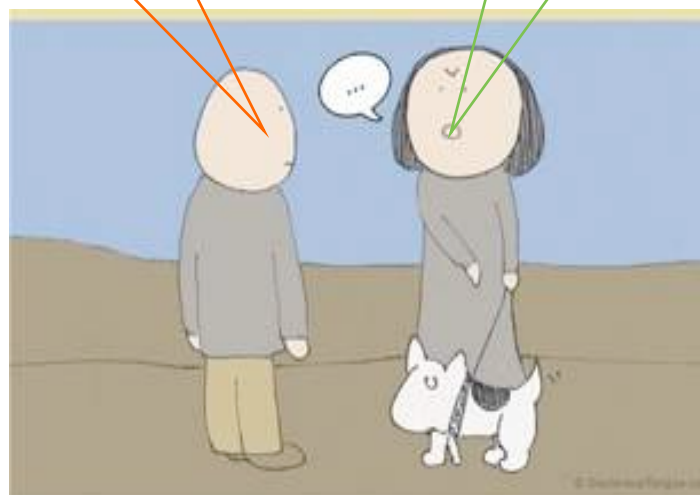
Explains the ACTION
of assertion.
But not its
INTERACTIVE aspect



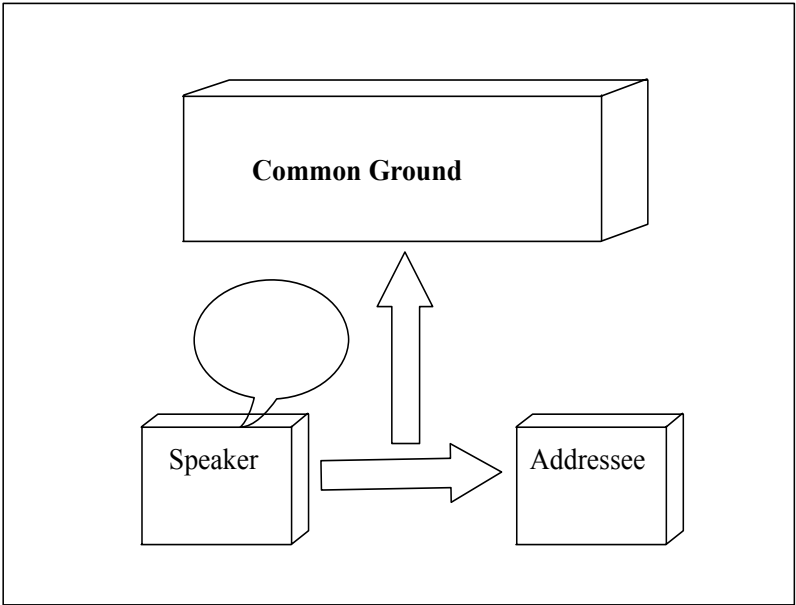
The syntax of interaction

*Oh, really!
That's great.*

I have a new dog.

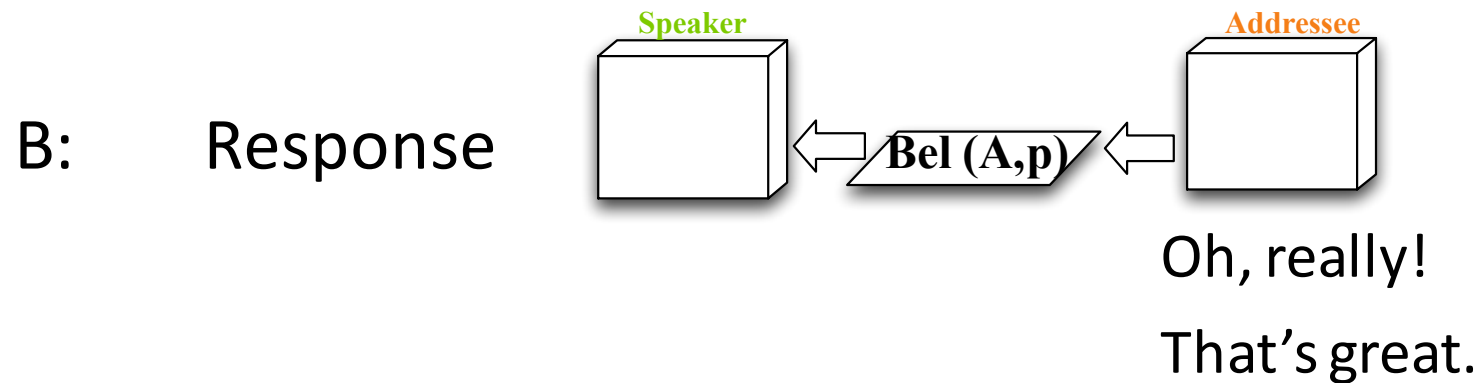
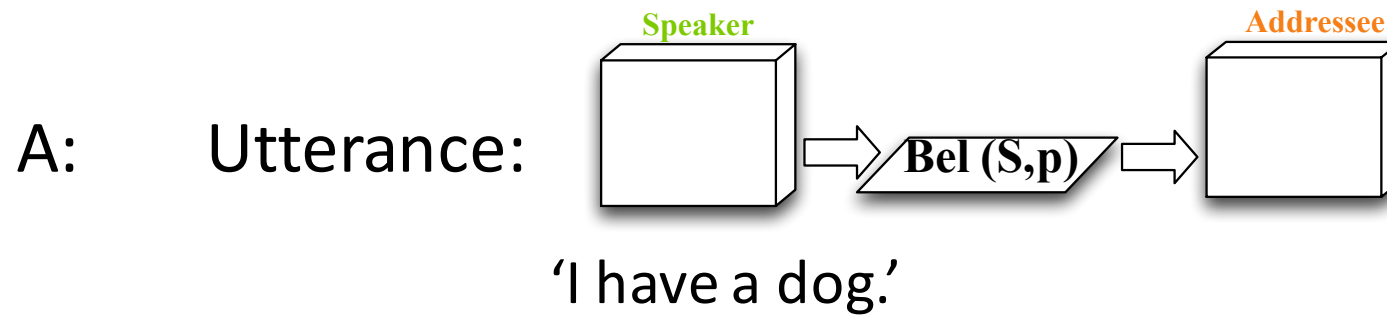


The syntax of interaction



The speech act model of interaction

Minimal conversational units



Grounding theory

The common ground (= the mutually shared beliefs of the interlocutors) cannot be properly updated without the process of *grounding*

Grounding:

involves speaker and hearer.

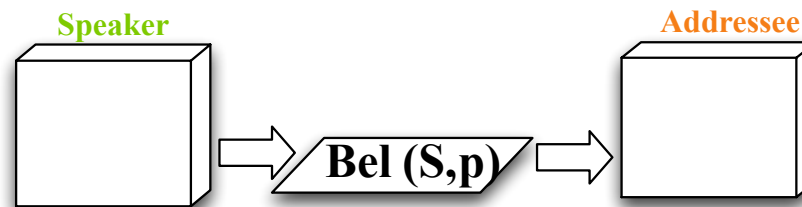
involves the coordination of communicative content and its process.



H. Clark
(Stanford University)

Presentation phase (= Utterance)

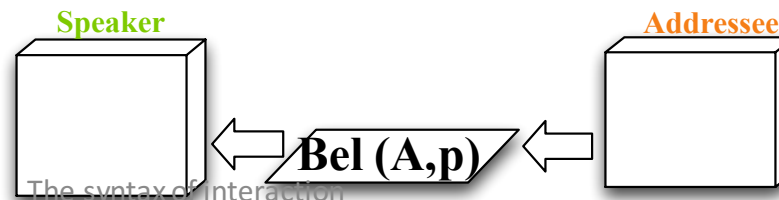
A presents utterance u for B to consider. He does so on the assumption that, if B gives evidence e or stronger, he can believe that she understands what he means by u .



Acceptance phase (= Response)

B accepts utterance u by giving evidence e that she believes she understands what A means by u . She does so on the assumption that, once A registers the evidence, he will also believe that she understands.

Clark & Schaefer 1989: 265



Grounding theory

Acceptance

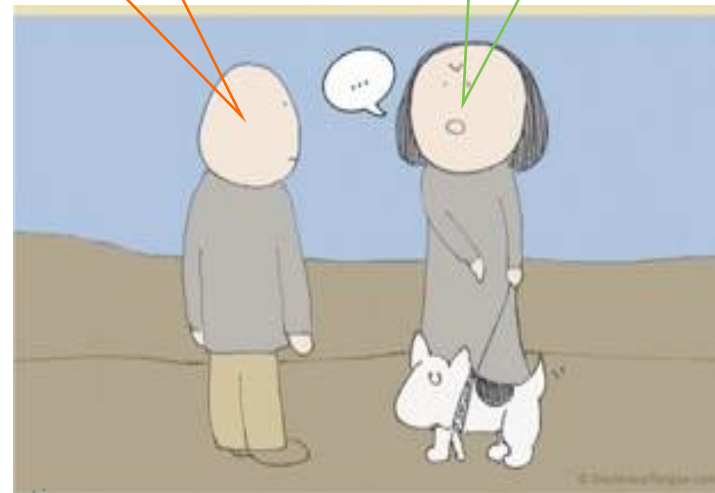
*Oh, really!
That's great.*

Presentation

I have a new dog.

Assertion:

- S presents p for H to accept as true.
- Once accepted by H, p enters CG.
- p is grounded

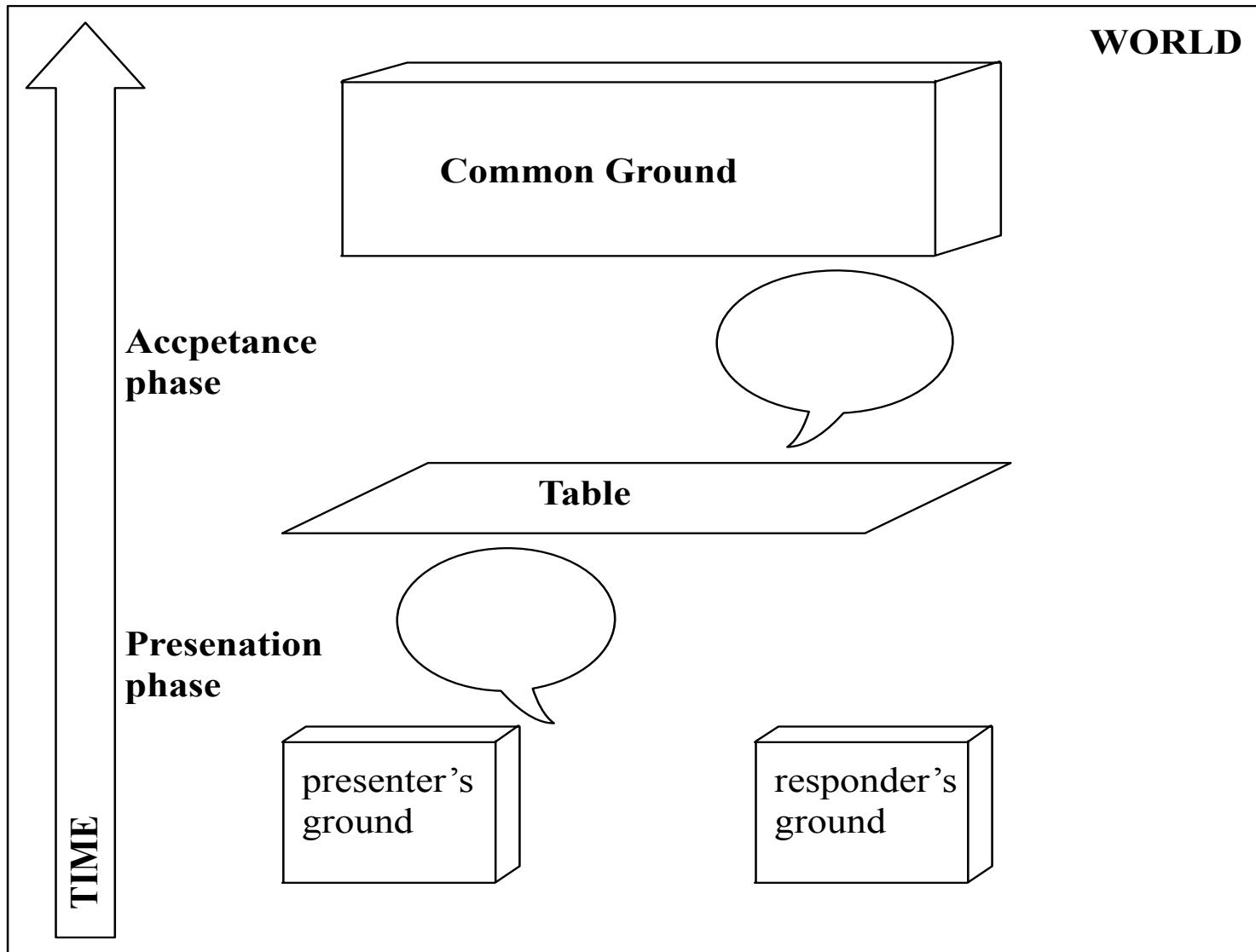


How do we explore conversational competence?

Minimal conversational units

A: Presentation:
[[*You have a dog*]_{Utt} *eh*_{conf}]

B: Acceptance:
[*yes*_{Resp} [*I do*]_{Utt}]

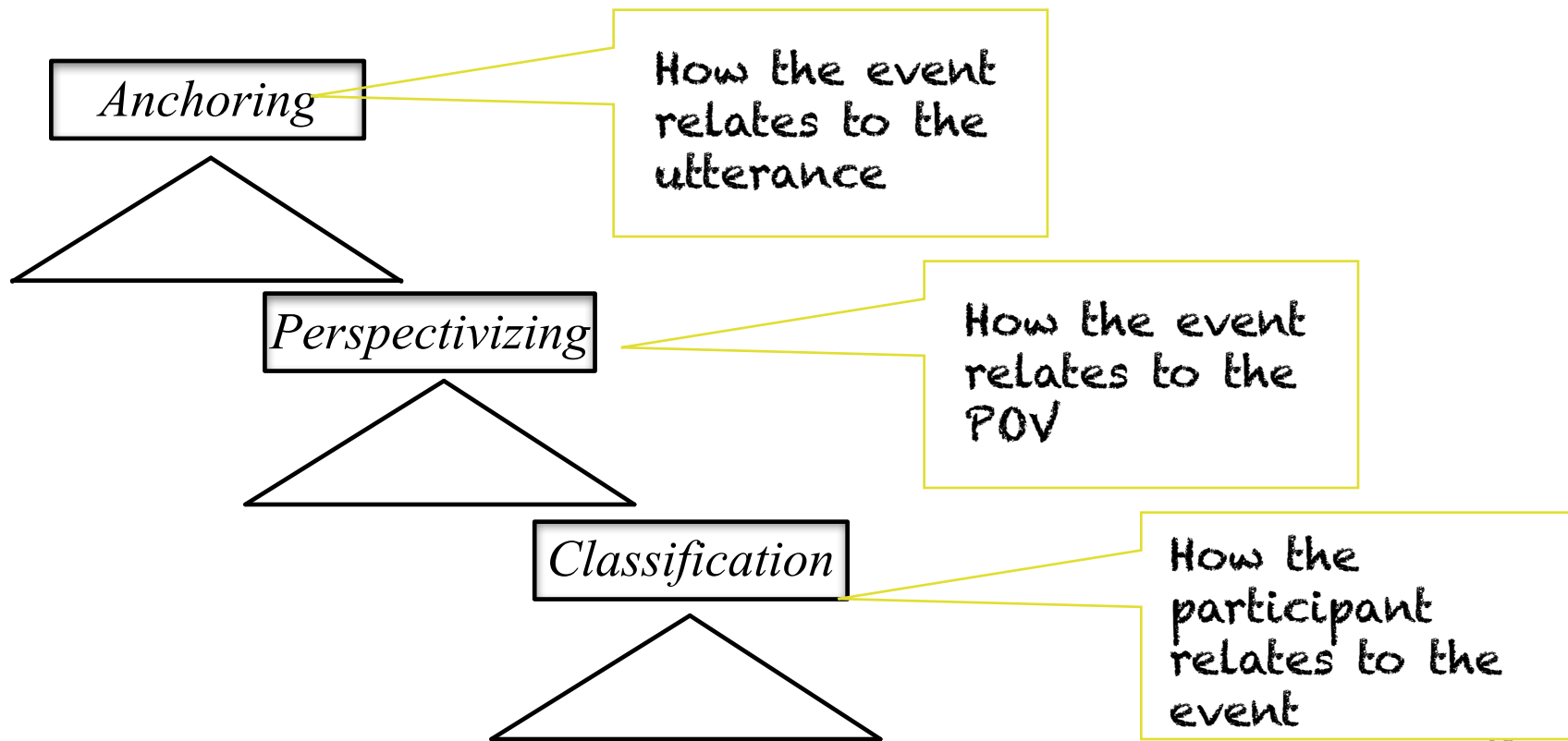


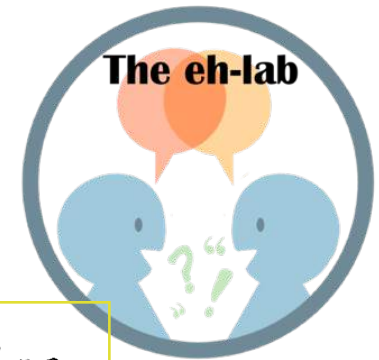
The syntacticization of interaction

Grounding (= active)

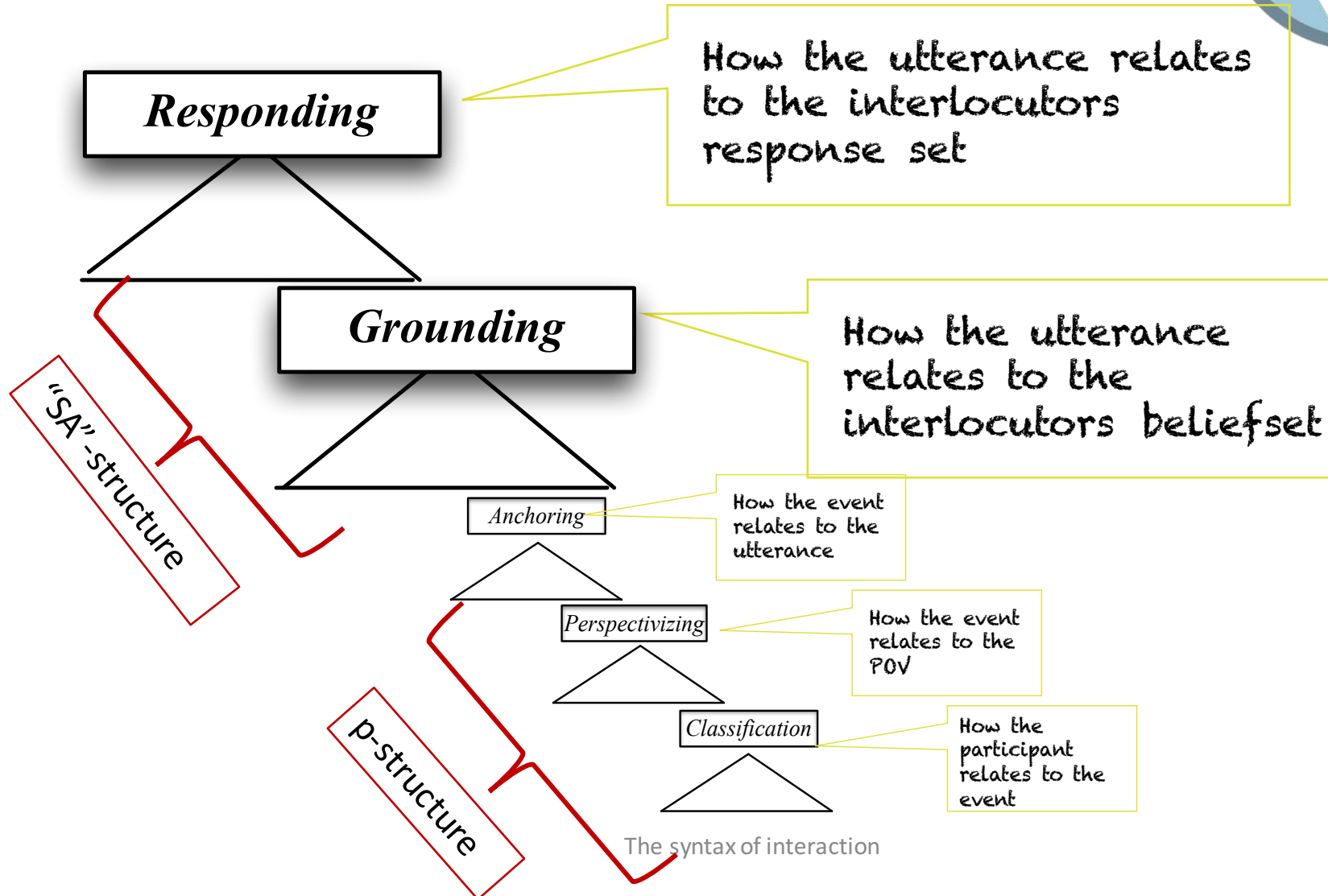
Responding (=interactive)

The universal spine hypothesis



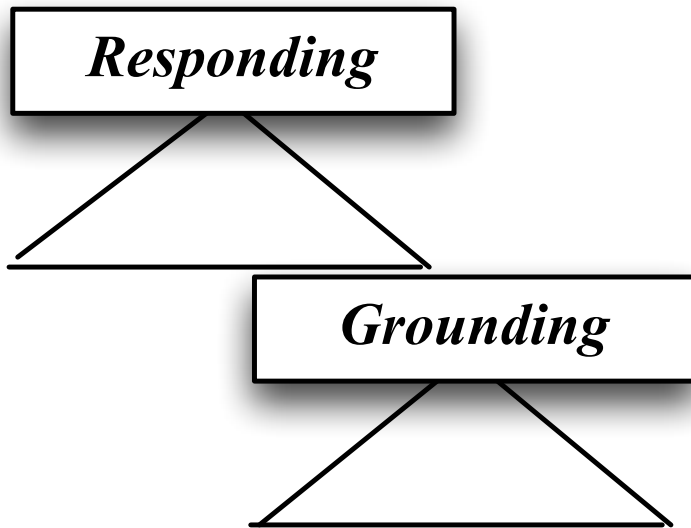


The syntax of interaction



The syntax of interaction

"Speech act structure" is complex!

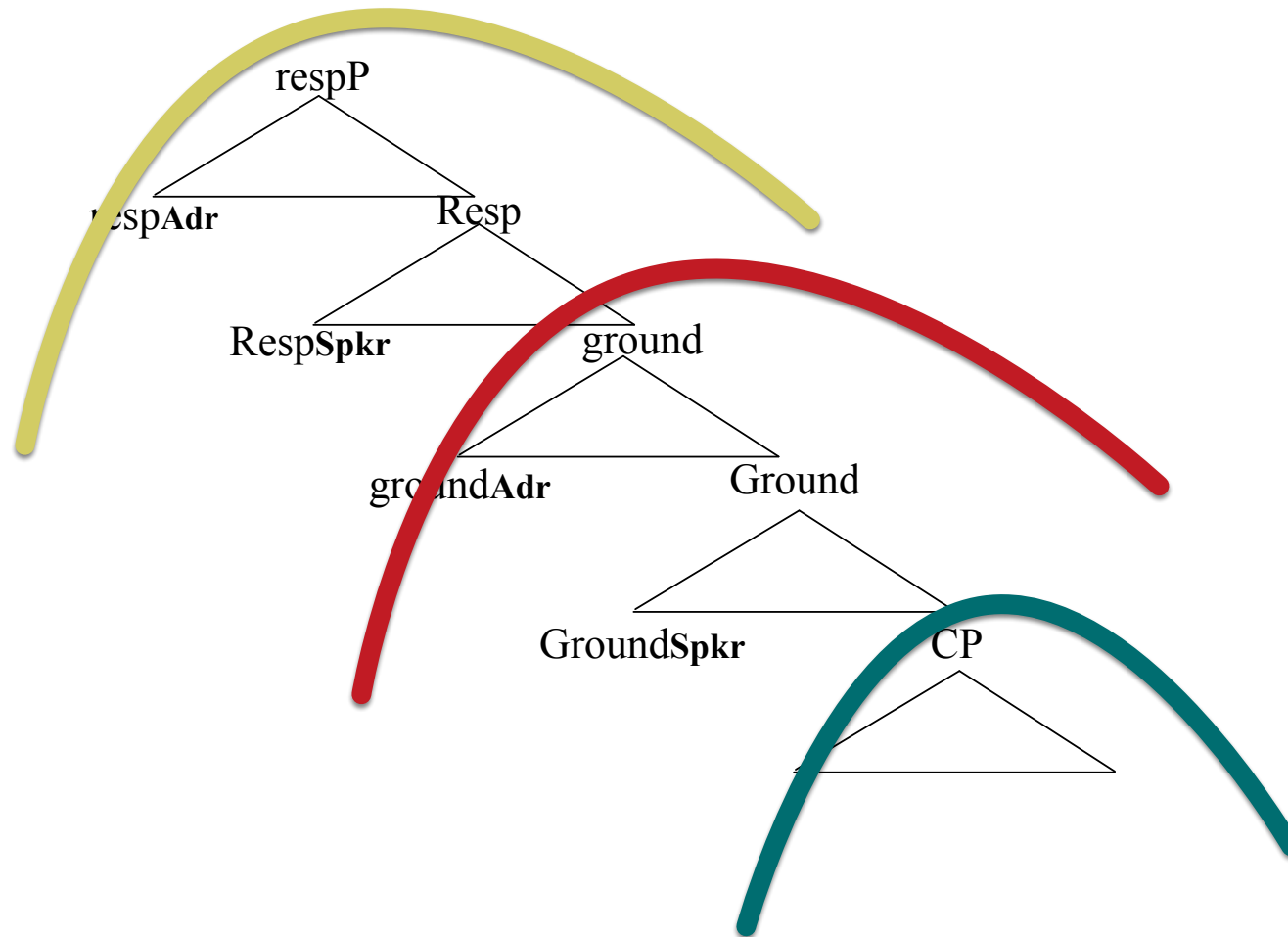


We claim that utterances impact dialogue in two ways that we describe in terms of update. On the one hand, **Speaker commits** herself to some content: uttering amounts to update Speaker's commitments. On the other hand, **Speaker calls on Addressee** for him to change his own commitments.

Beysade & Marandin 2006

The syntax of interaction

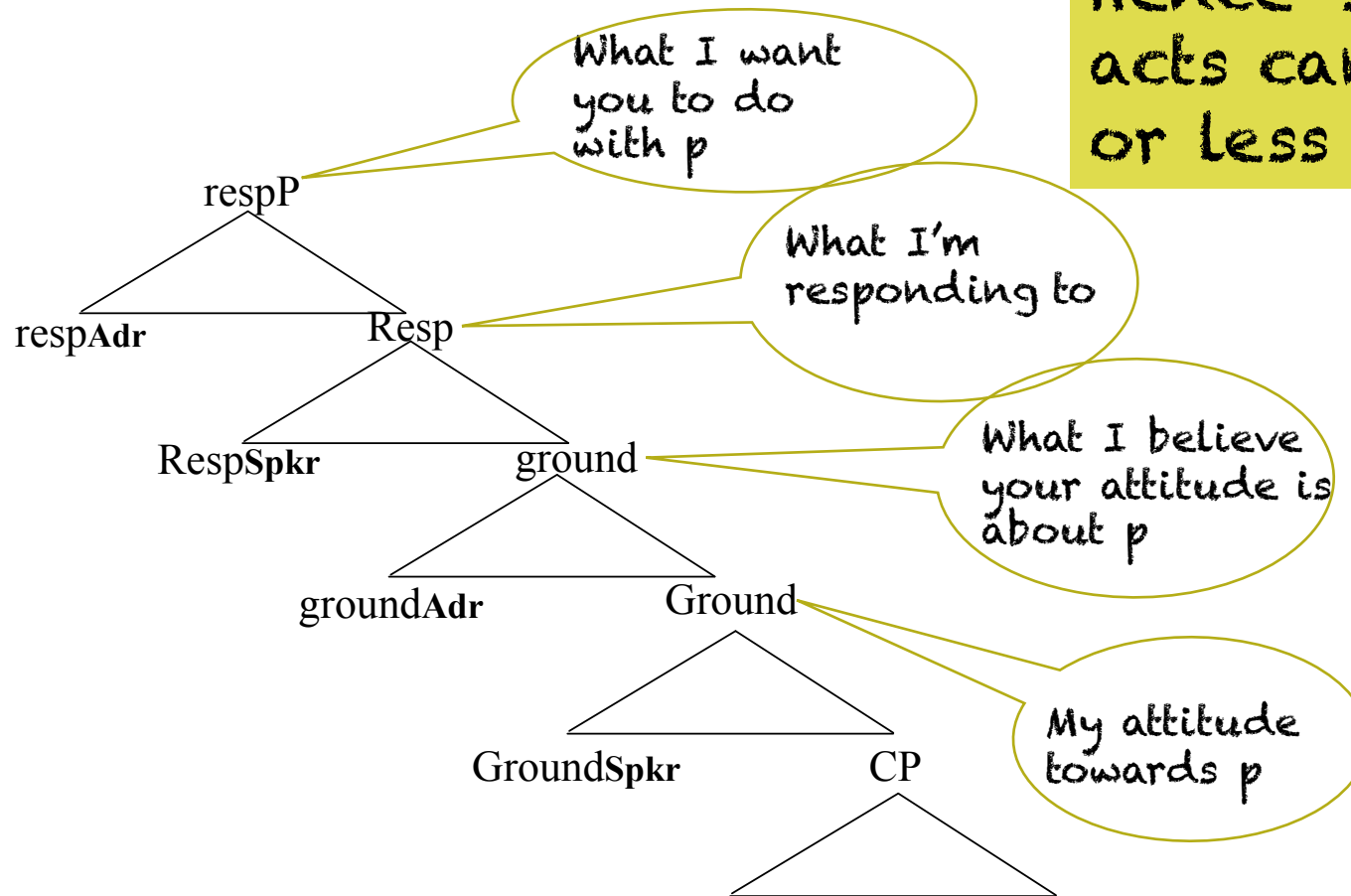
Hence "speech acts can be more or less complex"

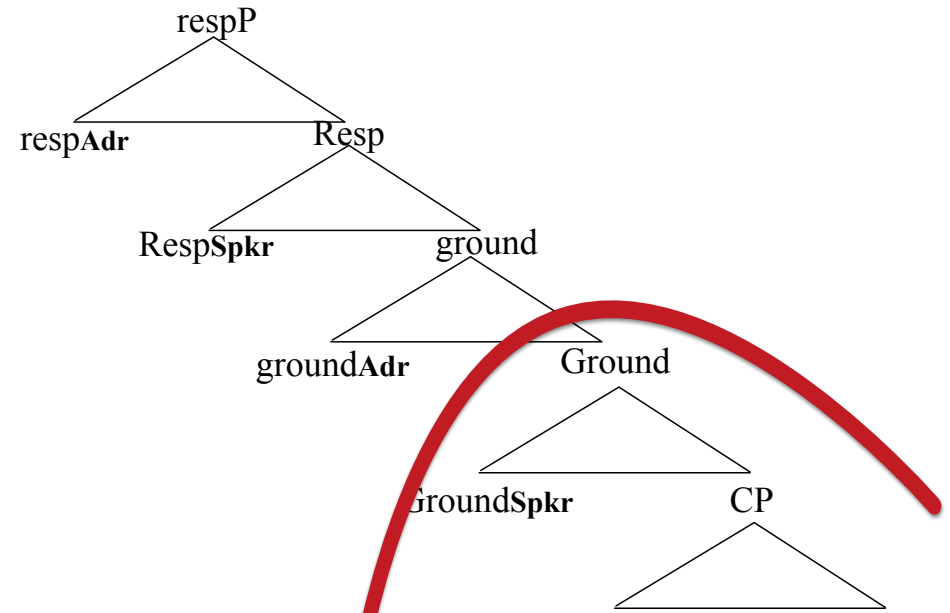


The syntax of interaction

"Speech act structure" is complex!

Hence "speech acts can be more or less complex"





Speech act types derived by grounding structure

Wiltschko 2016 *Ergative constellations in the structure of speech acts.*

Response structure need not project

John runs into Mary and notices that she is walking a young puppy. He knows that she had wanted to get a new dog for a while. He exclaims:

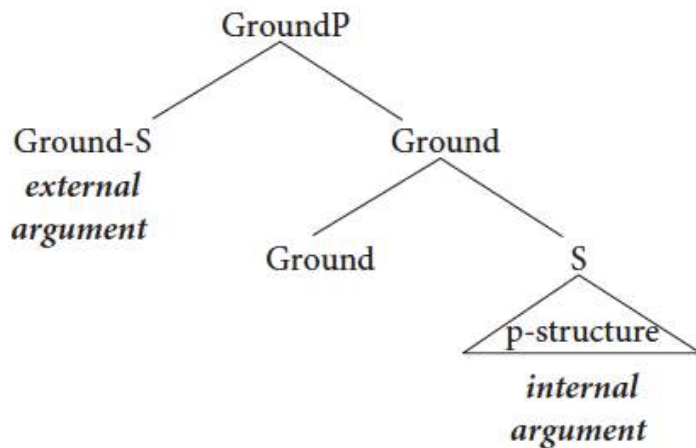
(1) *You have a new dog!*

→ Not “informative”

→ no response necessary

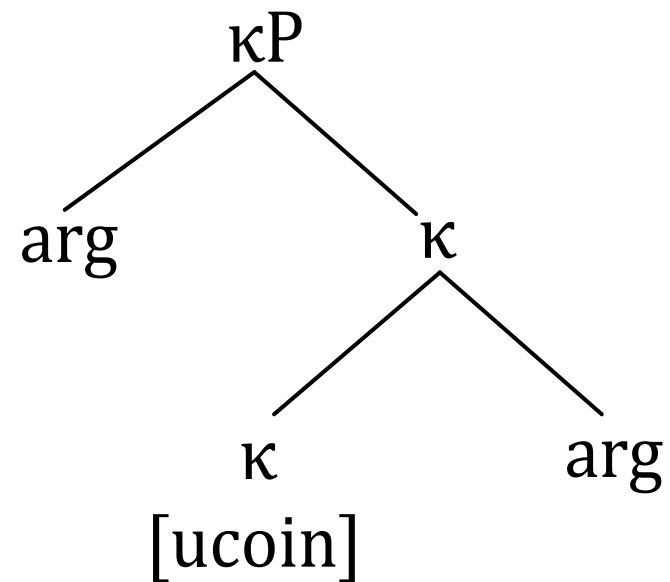
Grounding structure

Argument-structure	Speech act structure
Transitive predicates	Declarative assertion
Unergatives predicates (qua concealed transitive)	Imperative
Unaccusative (ergative) predicates	Presentation

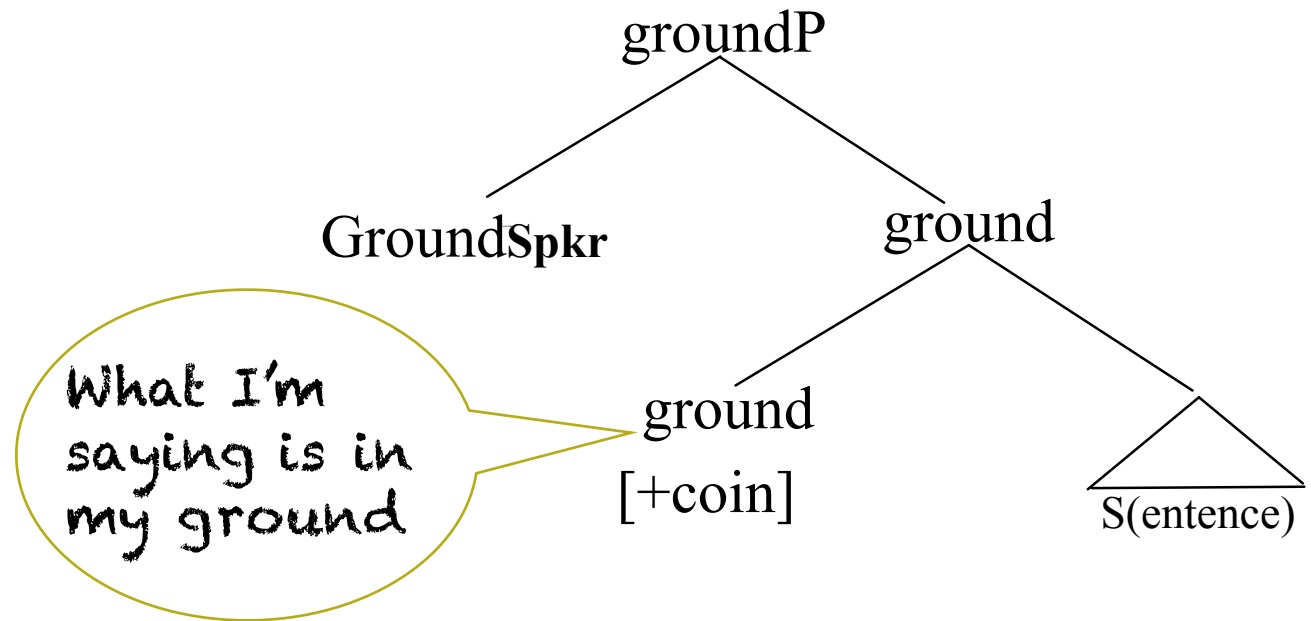


Another instance of κ

- Transitive
- Relational
- Possibility for substantiation



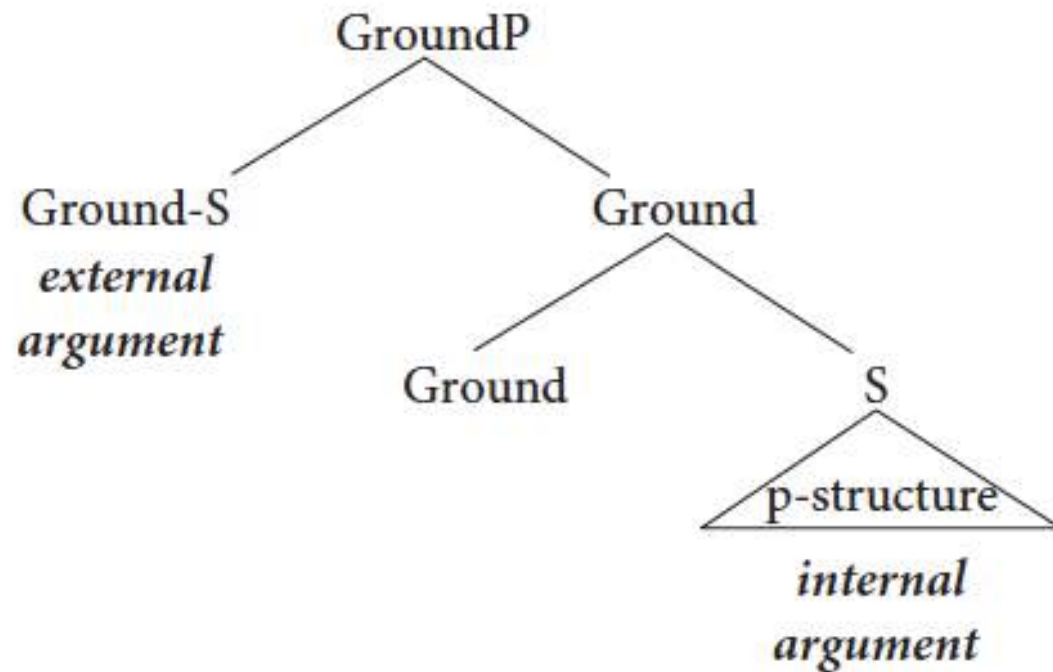
Another instance of **K**



Grounding structure

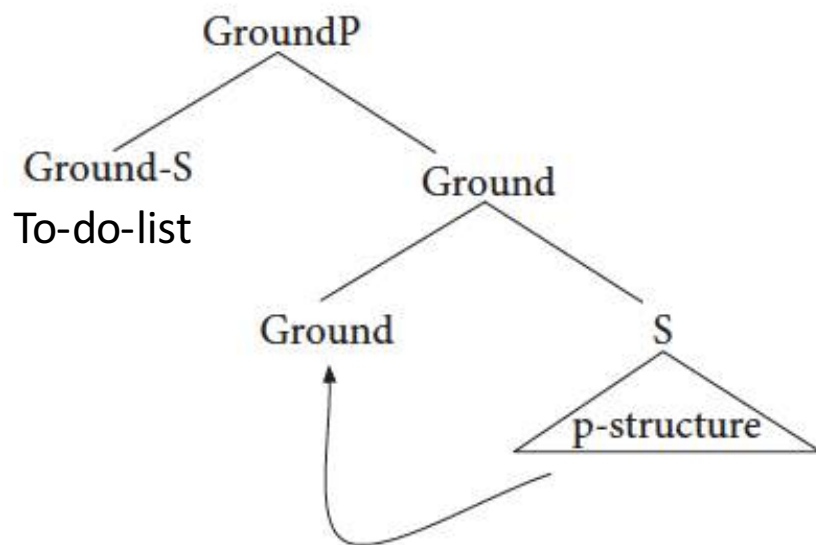
Declarative = transitive

Proposition is in speaker's ground



Unergative intransitives

Imperatives as unergatives.

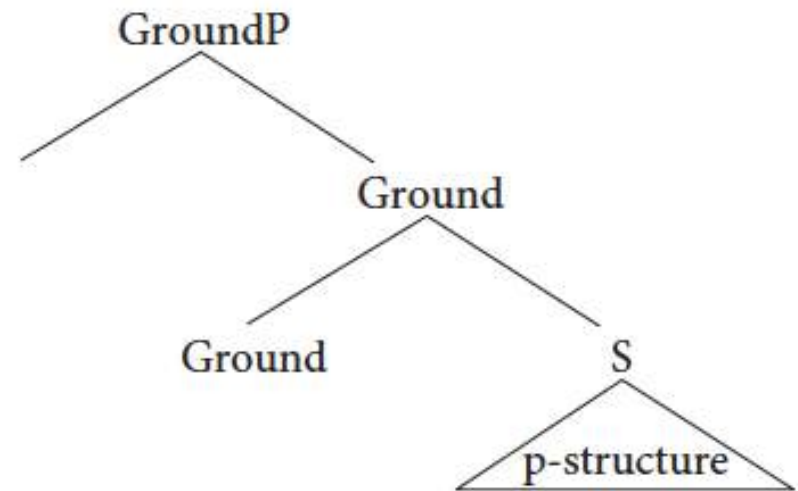


- imperative clause-type denotes a **property**
(Portner 2004)

Unaccusative

- (1) Para-sha-n-si
rain-prog-3-si
p= 'It is raining"
ILL = PRESENT (p)

Faller 2002: 199 (165)



- Sentences with evidentials have presentative force
- Presentatives “present propositions”
- S puts forth p without committing to the truth of p

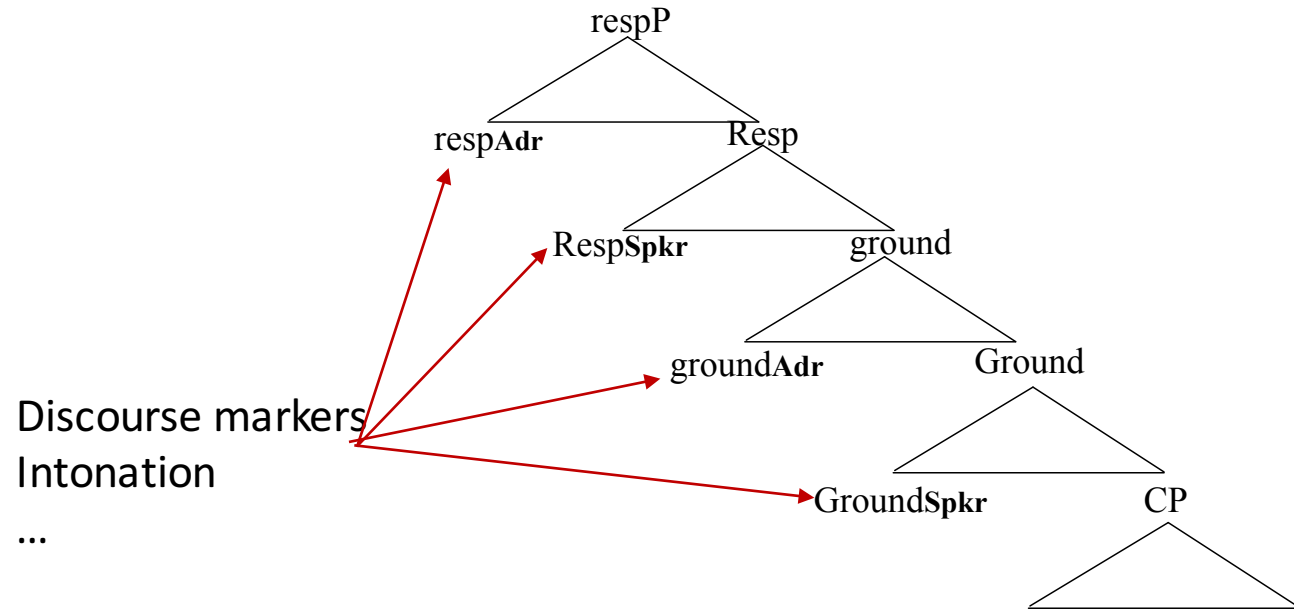
Unaccusative

the speaker brings the embedded proposition into the conversation for consideration. That is the current speaker's speech act is one of presentation of another speaker's assertion. [...] There is no condition that the speaker believes p, and the illocutionary act is that of present

(Faller 2002: 198f.).

Presentatives are the most basic speech acts:

- contain the least amount of structure
- most basic kind of update (Portner 2004)



Constructing more speech acts

The role of discourse markers and intonation:

Eh vs. huh

Speech act modifiers

Conditions of use for declarative assertions

- (i) S believes the proposition (p) conveyed by her utterance.
- (ii) S wants A to adopt p into her set of beliefs

Bach and Harnish 1979

But declaratives can be modified:

- i) Modifying the commitment (e.g. via **evidentials**)
- ii) Modifying the Call on Addressee (e.g. via **intonation**)



*So, you have a new dog, **eh?***
*So, you have a new dog, **huh?***

Speech act modifiers

(1) You are leaving.

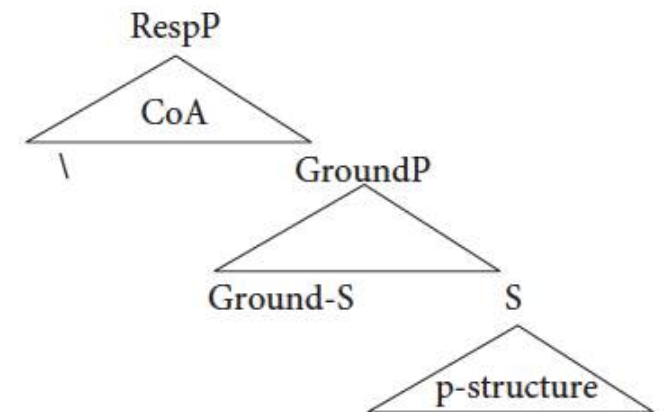
Conditions of use for declaratives

- (i) $Bel(S,p)$
- (ii) CoA: $Bel(A,p)$

(2) You are leaving, eh?

Conditions of use

- (i) **$Bel(S,p) \vee Bel(S,\neg p)$**
- (ii) CoA: $Confirm(Bel(A,p))$



English has discourse particles



discourse particles =_{def}

a subclass of discourse markers that « help to organize a discourse by conveying information concerning the epistemic states of the speaker, or her interlocutors, or both, with respect to the descriptive, or propositional content of an utterance. »

Zimmerman 2011: 2012

« English is a good example of a language without a lexical inventory of discourse particles. In the absence of particles, English resorts to other grammatical means for expressing speaker and/or hearer attitudes towards a proposition »

Zimmerman, 2011: 2034

Methodology to investigate interaction

Corpus data

Storyboards

Sarge: **Well**, you're the one keeping the secret. I'm just obliging.

Jack: **Oh**, then it's gonna be a talk about that.

Sarge: You didn't actually think I'd come over here without bringing it up, **did you? I mean**, you never answered my question before.

Jack: I have an appointment scheduled for tomorrow.

Sarge: **And?**

Jack: **And what?**

Sarge: Are you going to keep it or not?

Jack: **Well**, I have every intention of going.

Sarge: **Yeah**. Intentions, **eh...**

Jack: **Okay, okay, okay, yeah, yeah, yeah**, I'm definitely going in. They can run tests to their hearts' content.

Nikki: Tests? What, you're having tests?

Jack: **Yeah**, just routine, **uh**, you know the hospital.

Sarge: Doctors love to be thorough.

Nikki: **Oh. Well**, in that case, I'm all for it.

Problems with corpus data

- no negative data
- limited context
(who knows what?)
- not always sound files available
- hard to find minimal pairs
- hard to use for cross-linguistic investigations

Sarge: **Well**, you're the one keeping the secret. I'm just obliging.

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Nikki: **Oh. Well**, in that case, I'm all for it.

How do we explore grammatical competence in understudied languages

- Grammars and dictionaries

Grammars
typically do NOT
contain
conversational
materials

- Native speaker judgments

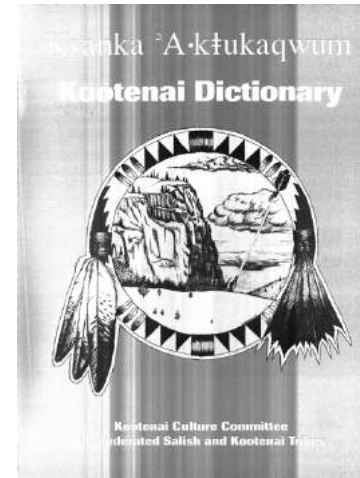
How do you say:

I have a new dog, eh?

This doesn't
(always)
work

How do we explore grammatical competence?

- Grammars and dictionaries
- Native speaker judgments



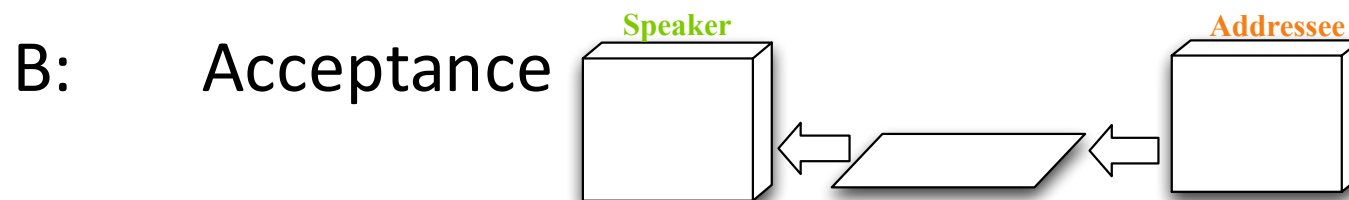
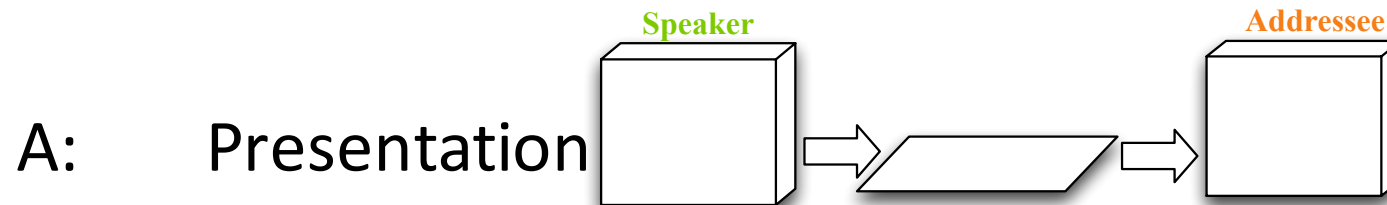
This doesn't work

So what should we elicit and how?

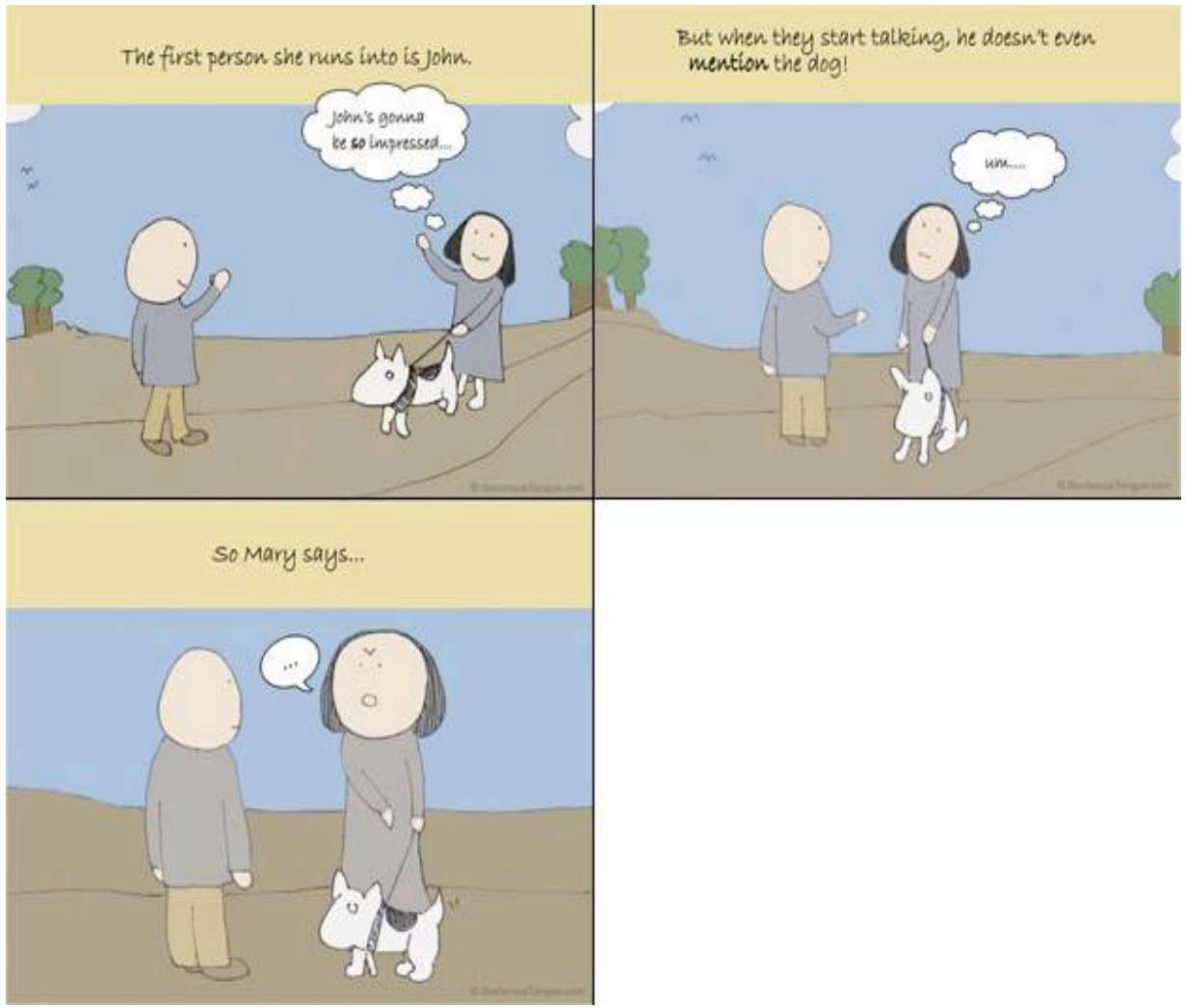


What should we elicit?

Minimal conversational units



How do we explore conversational competence?

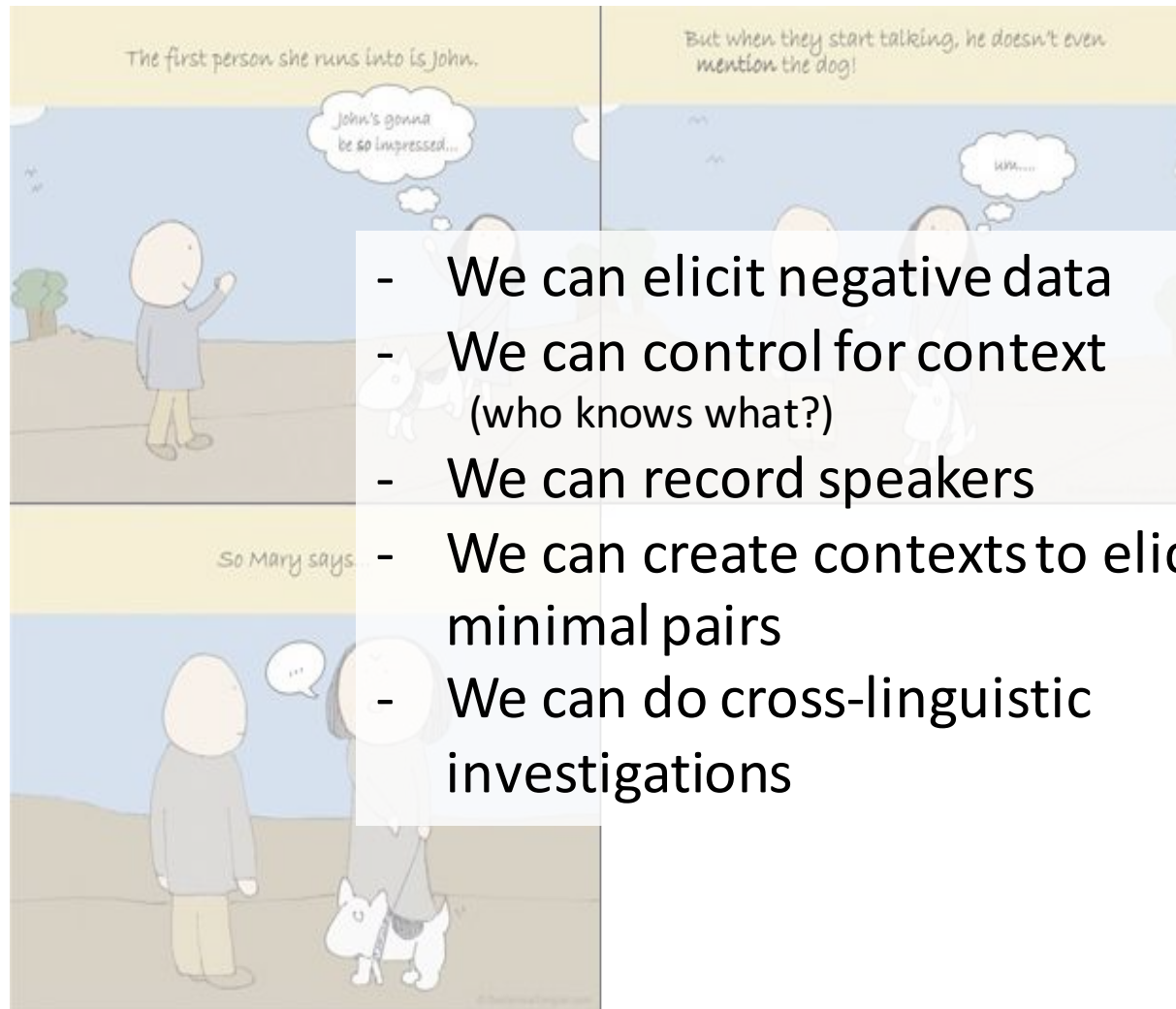


Story board elicitation

Burton & Matthewson 2014

Story board elicitation

(Burton & Matthewson 2014)



How do we explore conversational competence?

- Native speaker judgments
- Minimal conversational units
- Elicited via story-boards

Introducing confirmationalals

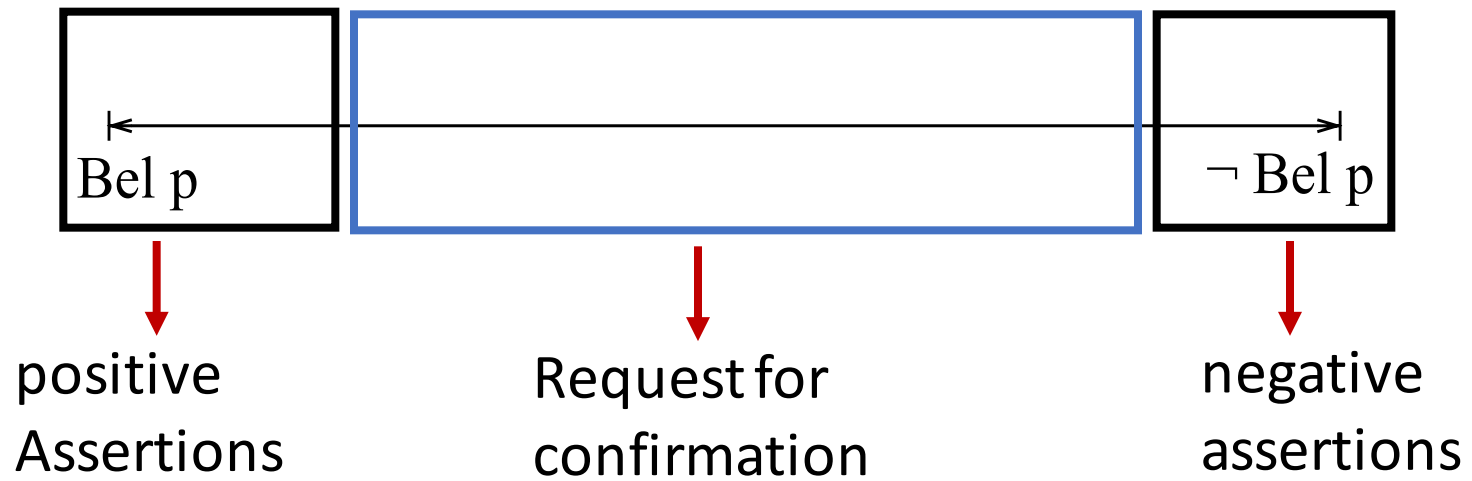
Presentation phase: `[[....] conf]`



- (1) You have a new dog, **eh**?
- (2) You have a new dog, **right**?
- (3) You have a new dog, **huh**?
- (4) You have a new dog, **hey**?
- ...

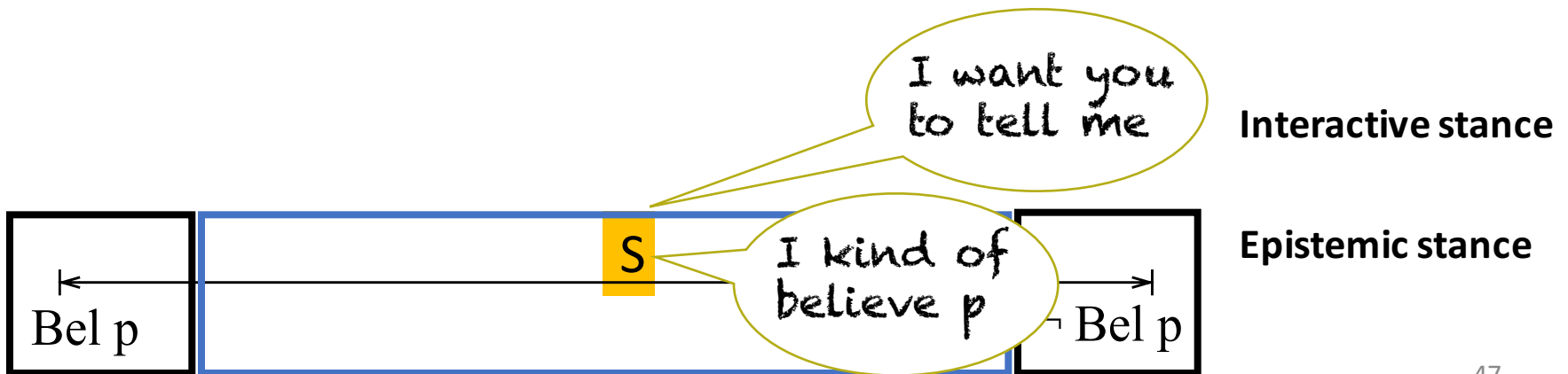
Request
confirmation that
p is true
=
"Confirmational"

Epistemic (un)certainty





(1) *You have a new dog, eh?*

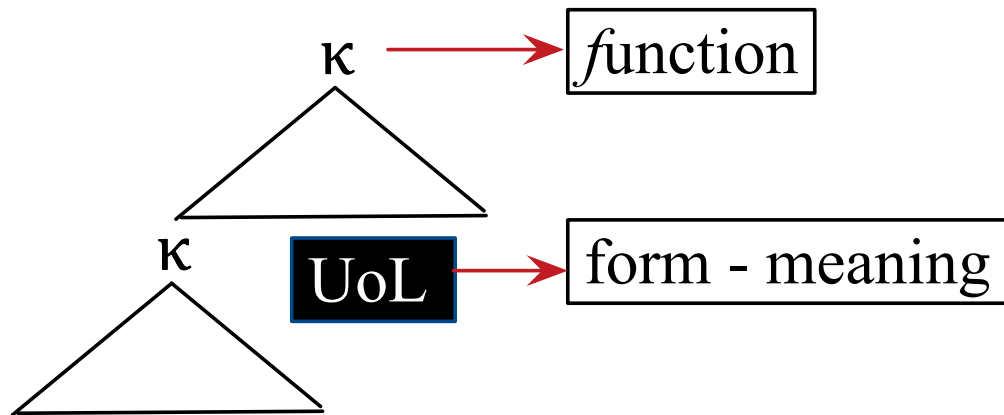


Meaning	Invariant Tag <i>yeah</i>			<i>eh</i>			<i>no no na</i>			Totals
	Ind E	NZ E	Br E	Ind E	NZ E	Br E	IndE	NZ E	Ind E	
Affirmation/Confirmation of Previous Statement	3	1	4		47				11	66
Affirmation: Emphatic					7					7
Post-Opinion/Statement	9	4	8		116	2	56		18	213
Comment on Previous Statement	3	2	5	1	53		3		10	77
Checking Question	1	8	3		21		24	1	9	67
Confirmation Check	2	10	13	1	75	2	112	2	35	252
Really?/Check Question		20								20
Emphatic	5	7	8	2	105	3	31		28	189
Empathetic			1		11					12
Offer/Suggestion		1	3		15		5		6	30
Prod/Encouragement		18								18
Prod/TUE					9	2				11
Softener					15					15
Narrative	18	20	27	1	81	1	62		59	269
New Topic				2	4					6
Sarcasm/Humour	2	2	3		14		2		5	28
Pardon					22	4				26
Uh				1		2				3
Unclear							3			3

Columbus 2010

Meaning	Invariant Tag			<i>yeah</i>			<i>eh</i>			<i>no no na</i>			Totals
	Ind E	NZ E	Br E	Ind E	NZ E	Br E	IndE	NZ E	Ind E				
Affirmation/Confirmation of Previous Statement	3	1	4		47				11		66		
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New Topic				2	4						6		
Sarcasm/Humour	2	2	3		14		2		5		28		
Pardon					22	4					26		
Uh				1		2					3		
Unclear							3				3		

We need a way to systematically investigate confirmational

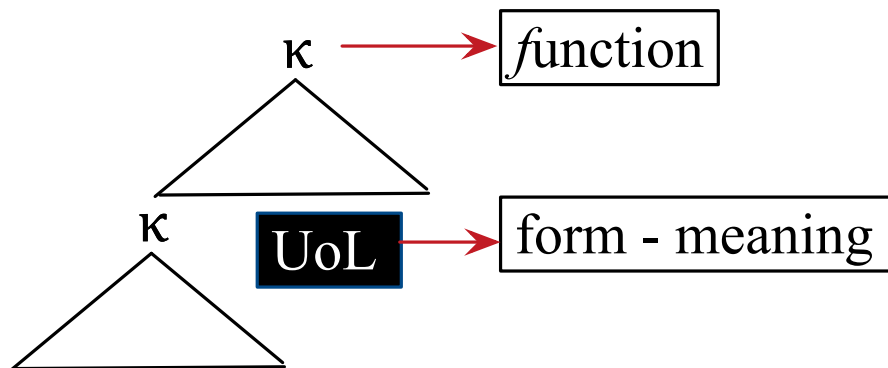


A syntactician's approach
to multi-functionality

A syntactician's approach to multi-functionality

Unit of Language + Context = function

Form	Syntactic context	Function
<i>clear</i>	Put it on the <i>clear_A</i> table.	state
<i>clear</i>	He <i>clear_V</i> -ed the table.	event



The interpretive function varies with the syntactic context!

A syntactician's approach to functionality

What do we mean by
"principal function"?

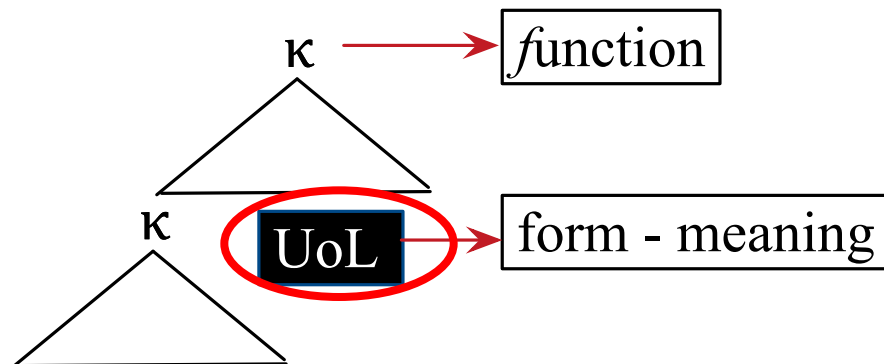
$$UoL + Cx = f$$

I will argue in this paper that although in certain situations the forms may have a single principal function (for example, in conversations between friends they may well be mainly used to mark intersubjectivity and shared knowledge and experience), **it does not help us to understand the nature of the general extenders (nor of pragmatic particles in general) to prioritise one function over another. To generalise about their function on the basis of their use in one specific discourse genre overlooks the flexibility and multifunctionality that is the most salient characteristic of these linguistic forms.**

A syntactician's approach to principal function

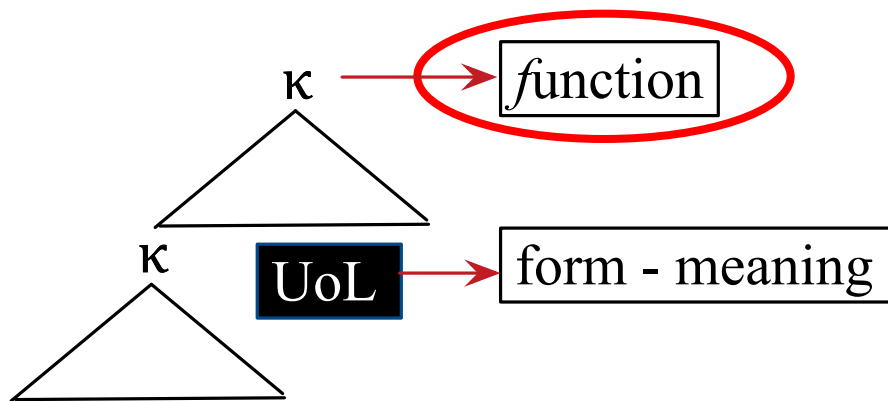
Principal function of UoL
= the concept of clearness

UoL	+	Cx	= f
<i>clear</i>		Put it on the <i>clear_A</i> table.	state
<i>clear</i>		He <i>clear_V</i> -ed the table.	event

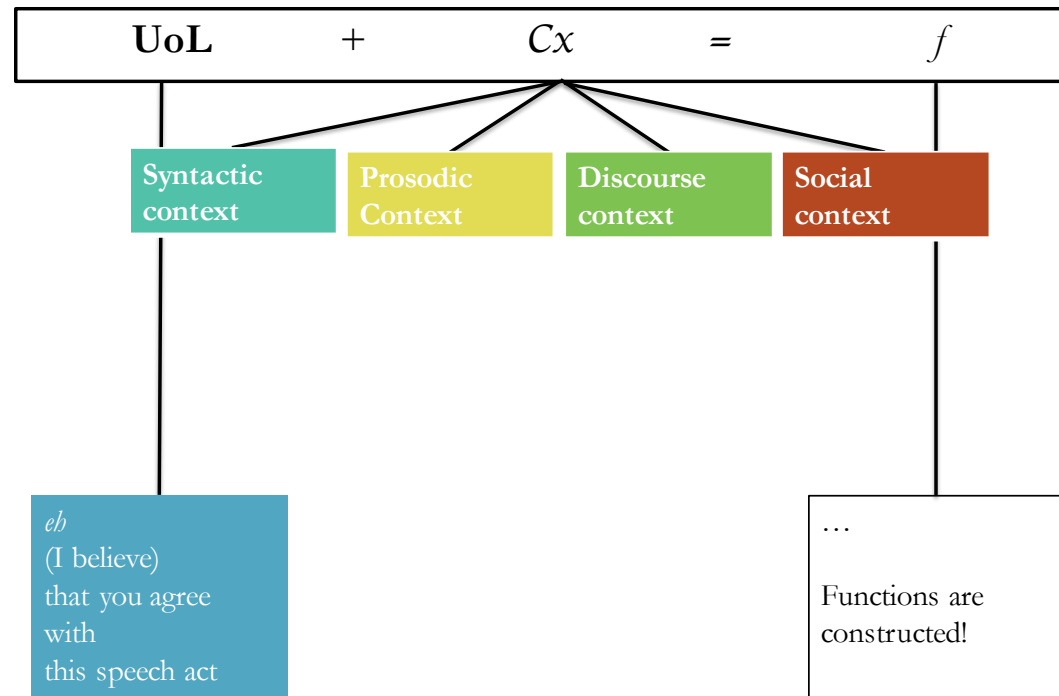


A syntactician's approach to principal function

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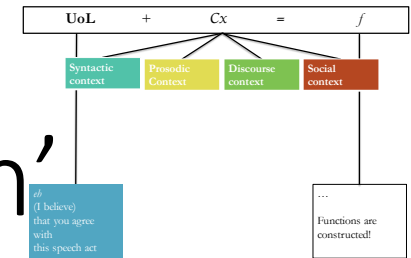


There is no "principal context". Hence there is no principal function of UoL in context



Deriving The Multi-functionality of 'eh'

The multi-functionality of 'eh'

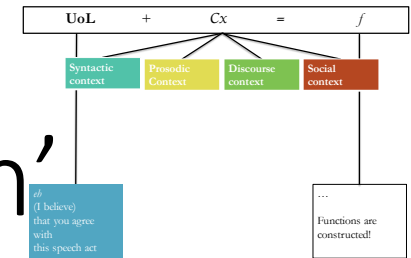


Function	Example
Statement of opinion	<i>Nice day, eh?</i>
Statement of fact	<i>It goes over here, eh?</i>
Command	<i>Think about it, eh?</i>
Exclamation	<i>What a game, eh?</i>
Question	<i>What are they trying to do, eh?</i>
Request for repetition	Eh? <i>What did you say?</i>
Fixed expression	<i>Thank you, eh?/ I know, eh?</i>
Insults	<i>You're a real snob, eh?</i>
Accusations	<i>You took the last piece, eh?</i>
Narrative	<i>This guy is on the 27th floor, eh, then he gets out on the ledge, eh...</i>

These are not functions of 'eh' but functions of the context alone.

Tremblay & Gold 2006

The multi-functionality of 'eh'



Function	Example	Example w/out eh
Statement of opinion	<i>Nice day, eh?</i>	<i>Nice day</i>
Statement of fact	<i>It goes over here, eh?</i>	<i>It goes over here</i>
Command	<i>Think about it, eh?</i>	<i>Think about it</i>
Exclamation	<i>What a game, eh?</i>	<i>What a game</i>
Question	<i>What are they trying to do, eh?</i>	<i>What are they trying to do</i>
Request for repetition	<i>Eh? What did you say?</i>	<i>What did you say?</i>
	<i>Thank you, eh?/ I know, eh?</i>	<i>Thank you?/ I know</i>
	<i>You're a real snob, eh?</i>	<i>You're a real snob</i>
	<i>You took the last piece, eh?</i>	<i>You took the last piece</i>
	<i>This guy is on the 27th floor, eh, then he gets out on the ledge,</i>	<i>This guy is on the 27th floor, then he gets out on the ledge...</i>

To determine the core function of 'eh' one has to look at what changes by adding 'eh'

Exclamations



- 1 a. *What a surprise!*
b. * *What a surprise, eh*

Exclamations



- 2 a. **What a surprise!*
b. *What a surprise, **et***

The contribution of 'eh?'

"Real"
exclamation!



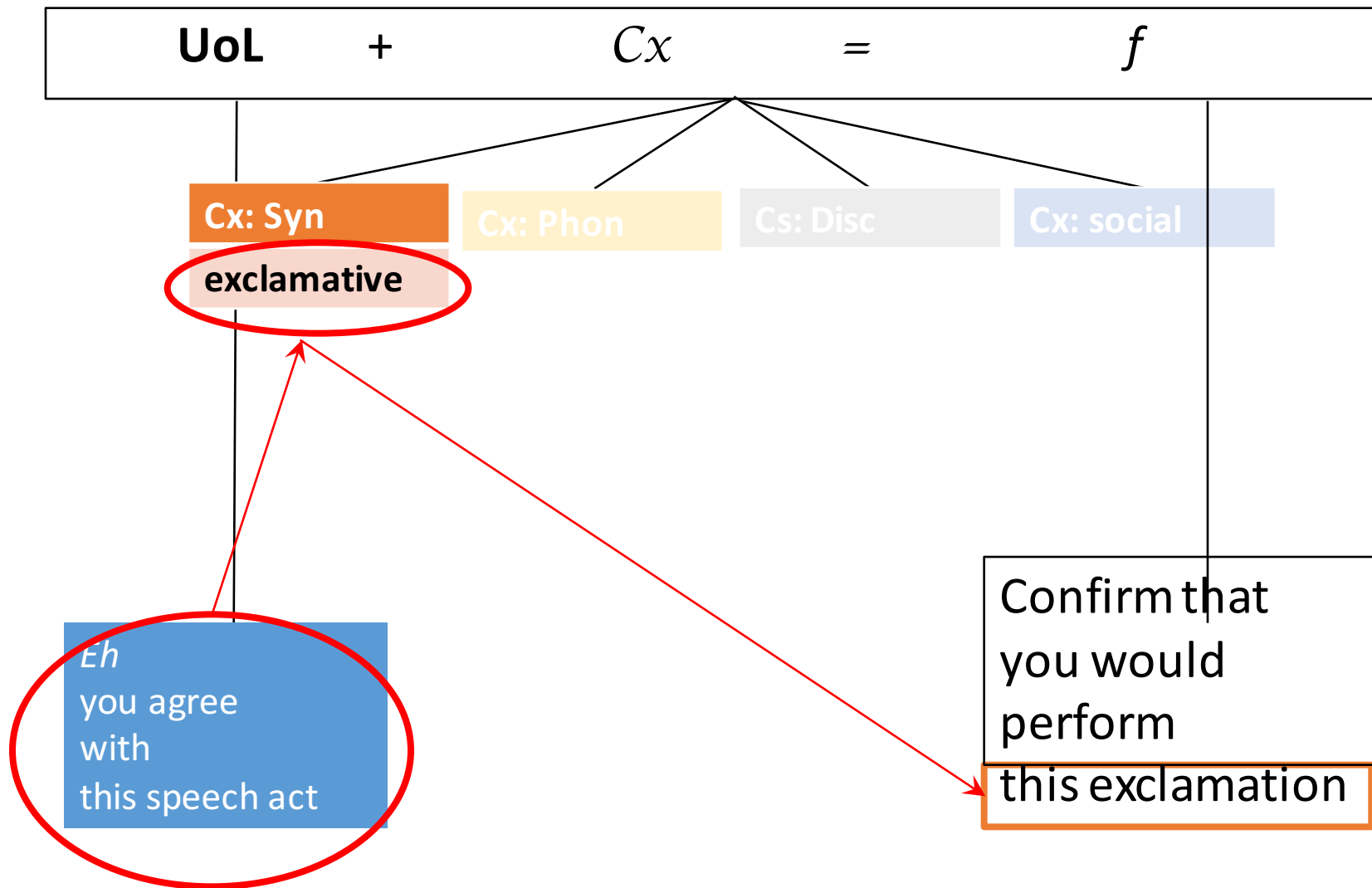
- 1 a. *What a surprise!*
- b. **What a surprise eh?*

Confirm that you
would perform
this exclamation

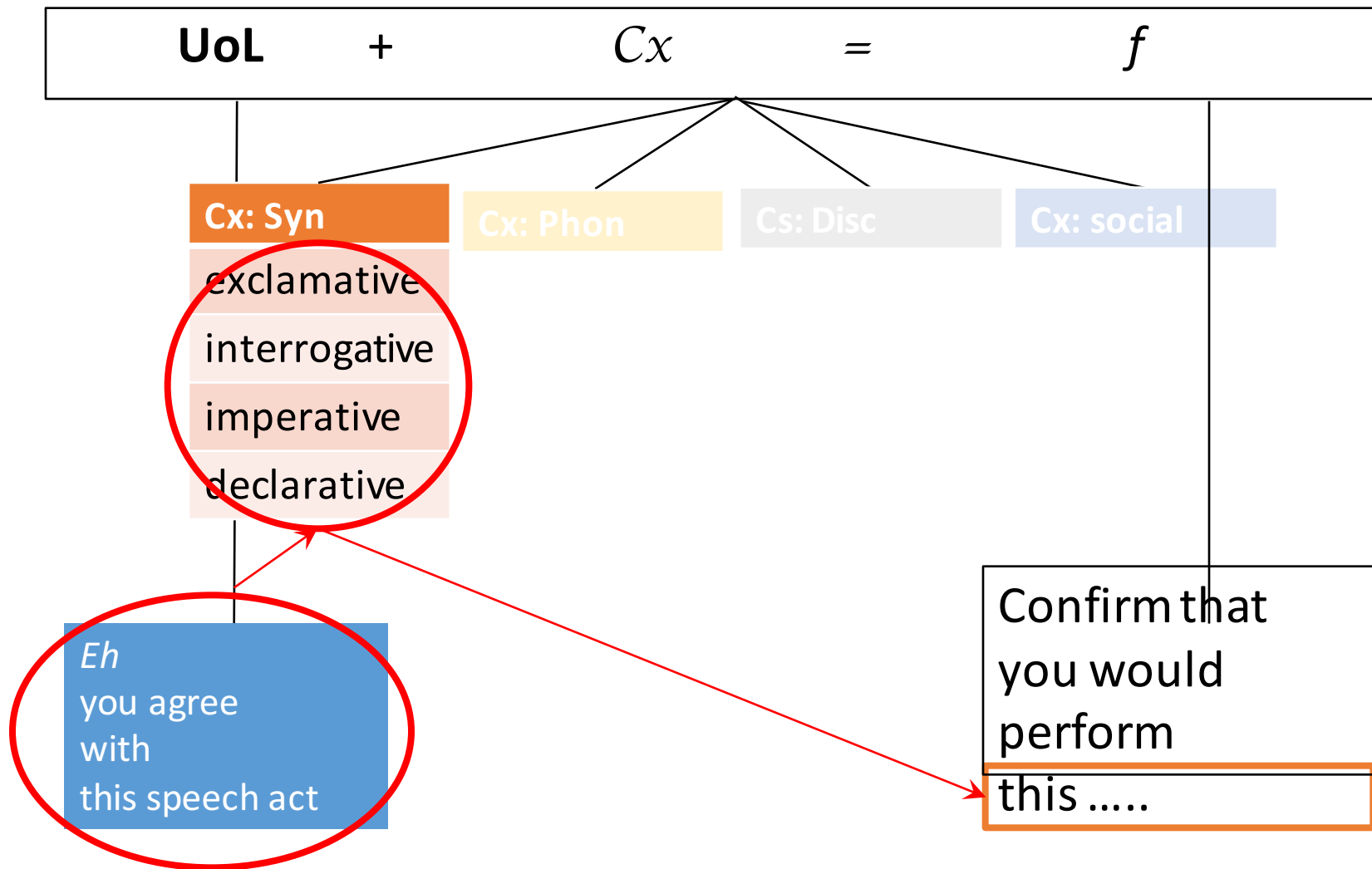


- 2 a. **What a surprise!*
- b. *What a surprise, eh?*

Deriving the exclamative function of *eh*



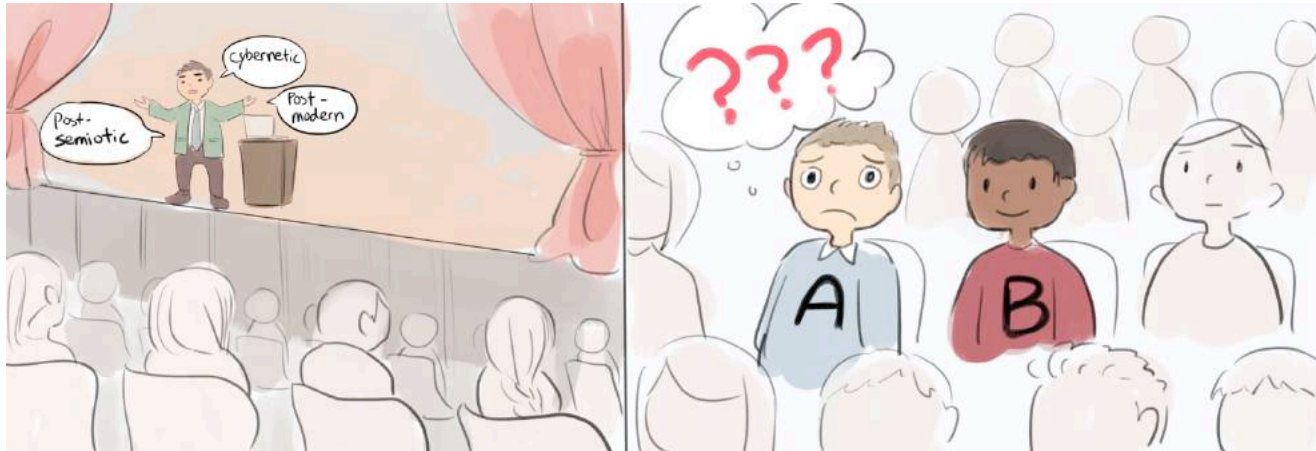
The contribution of syntactic context



Clause-type :: Speech Act mappings

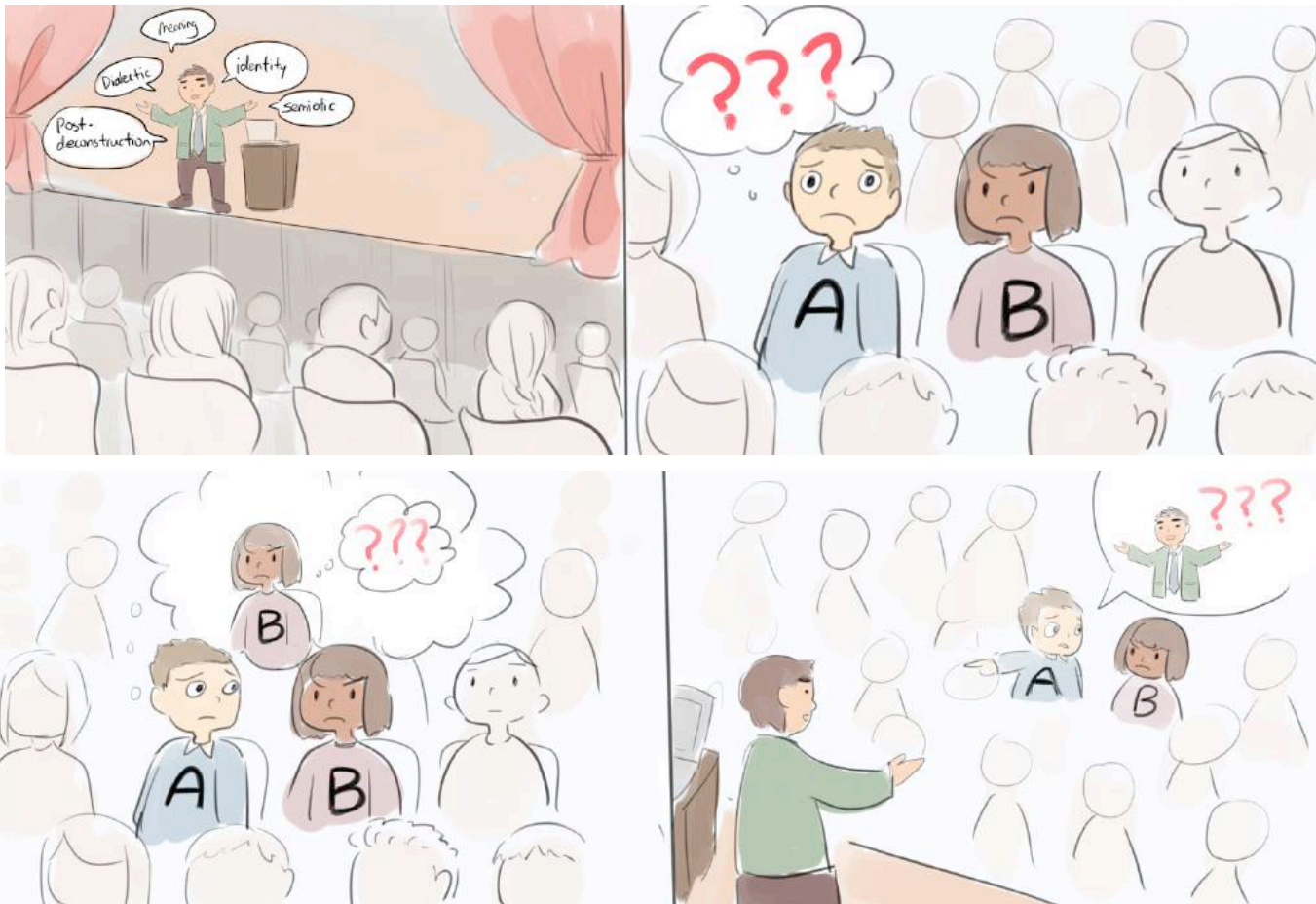
Clause-type	Speech-act type	Result of eh-modification
exclamative	Exclamation	Confirm that you agree with this Speech act
interrogative	Question	
imperative	Command	
declarative	Assertion	

Questions



- 3 a. * *What's he talking about, eh?*
b. *What's he talking about?*

Questions



- 4.a. *What's he talking about, eh?*
b. *?? What's he talking about?*

The contribution of 'eh?'

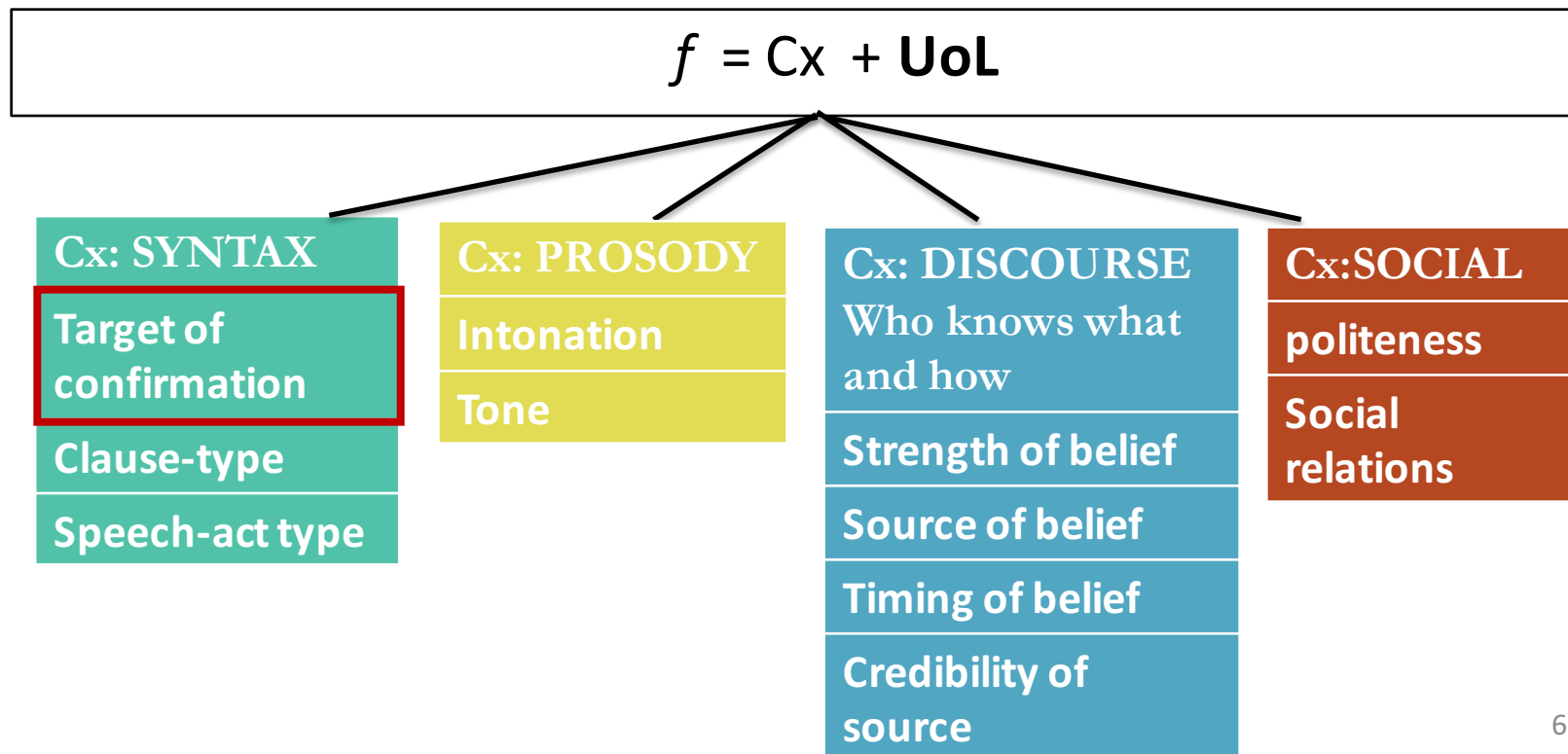


- 3 a. * *What's he talking about, eh?*
b. *What's he talking about?*

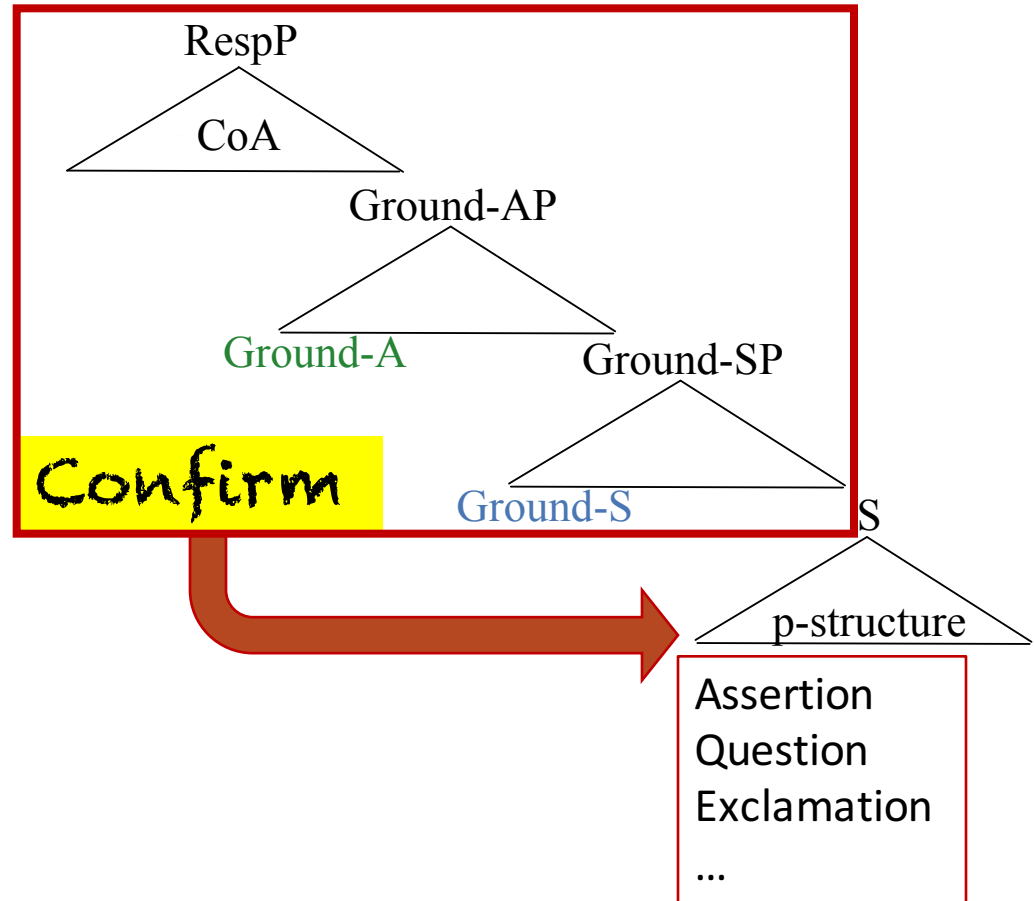


- 4.a. *What's he talking about, eh?*
b. ?? *What's he talking about?*

Target of confirmation correlates with clause-type



Target of confirmation correlates with clause-type



Target of confirmation correlates

Same clause-type,
different target
of confirmation



(1) *You have a new dog, eh?*

Confirm that
p is true



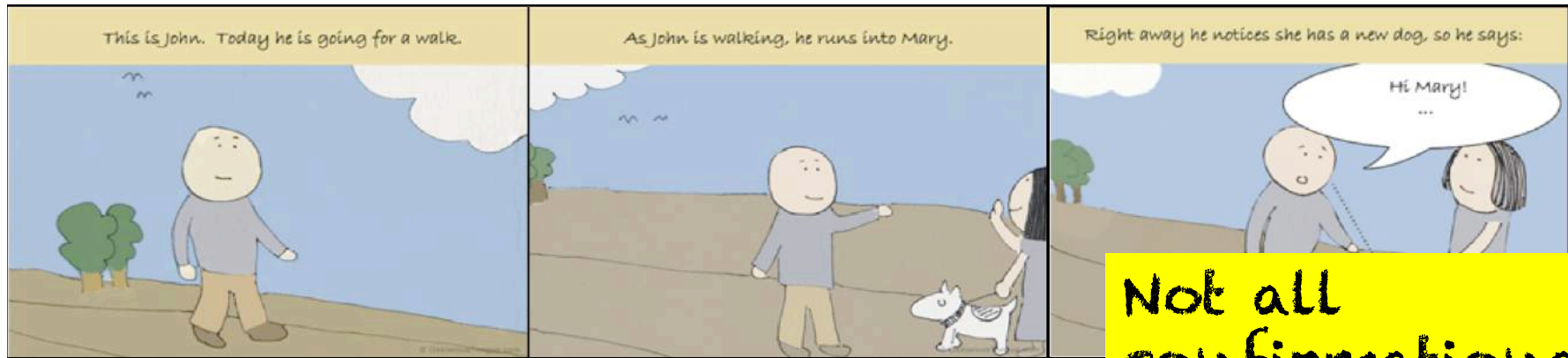
(2) *I have a new dog, eh?*

Confirm that
you know p

Syntacticizing the target of confirmation

Function	Syntactic context	Form (UoL)
Confirm that p is true	You have a new dog, eh_{conf} <p>A syntactic tree diagram for the sentence 'You have a new dog, eh_{conf}'. The root node is 'Ground-Spkr', which branches into 'eh' and 'S'. The 'S' node branches into a triangle representing the sentence 'You have a new dog'.</p>	eh
Confirm that you know p	I have a new dog, eh_{conf} <p>A syntactic tree diagram for the sentence 'I have a new dog, eh_{conf}'. The root node is 'Ground-Adr', which branches into 'eh' and 'Ground-Spkr'. The 'Ground-Spkr' node branches into a triangle representing the sentence 'I have a new dog'.</p>	eh

Ktunaxa



(1) *Hin ha'ti xa'txin, qaqa*
 'You have a dog, eh.'

Not all confirmational allow the "confirm that you know" use



(2) *hu ha'ti xa'txin (*qaqa)*
 I have a dog (*eh)

Northern Mandarin



(1) *Ni xin yang le tiao gou, ha₁?*
you new grow ASP CL dog prt

Tone: H-L



(2) *Wo xin yang le tiao gou, ha₂?*
I new grow Asp Cl dog, prt

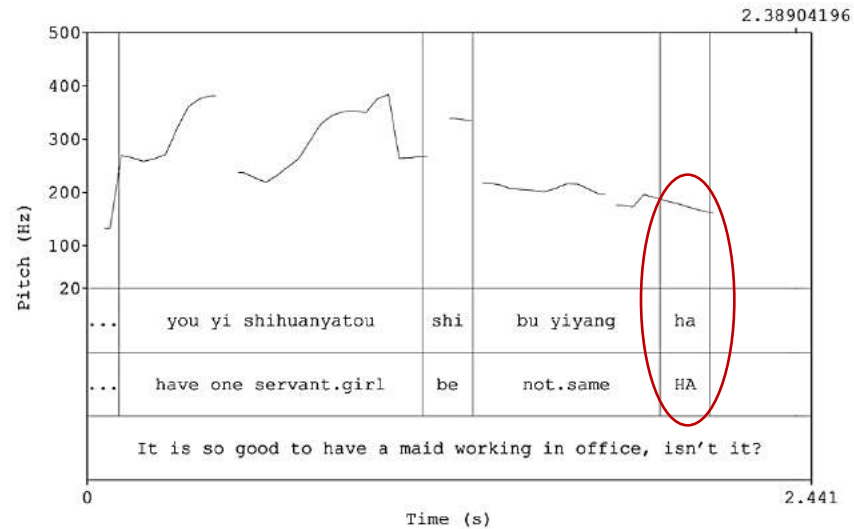
Tone: H-H

The Prosody of *ha*₁: H-L

Ms. G: *you yi shihuanyatou shi buyiyang ha*₁?

Have one maid is not.the.same PRT

'It is so good to have a maid working in office, isn't it?'

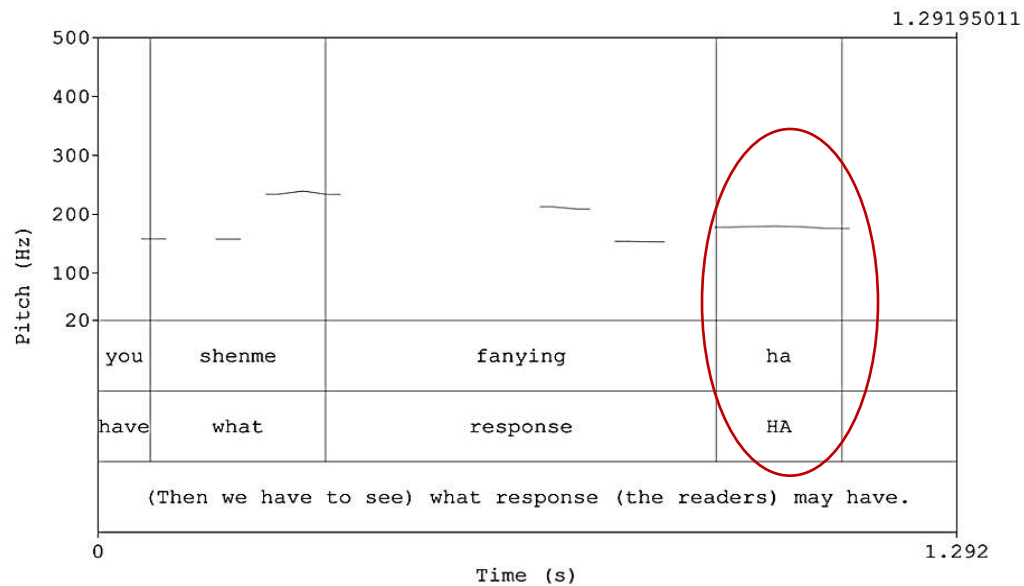


The Prosody of *ha*₂: H-H

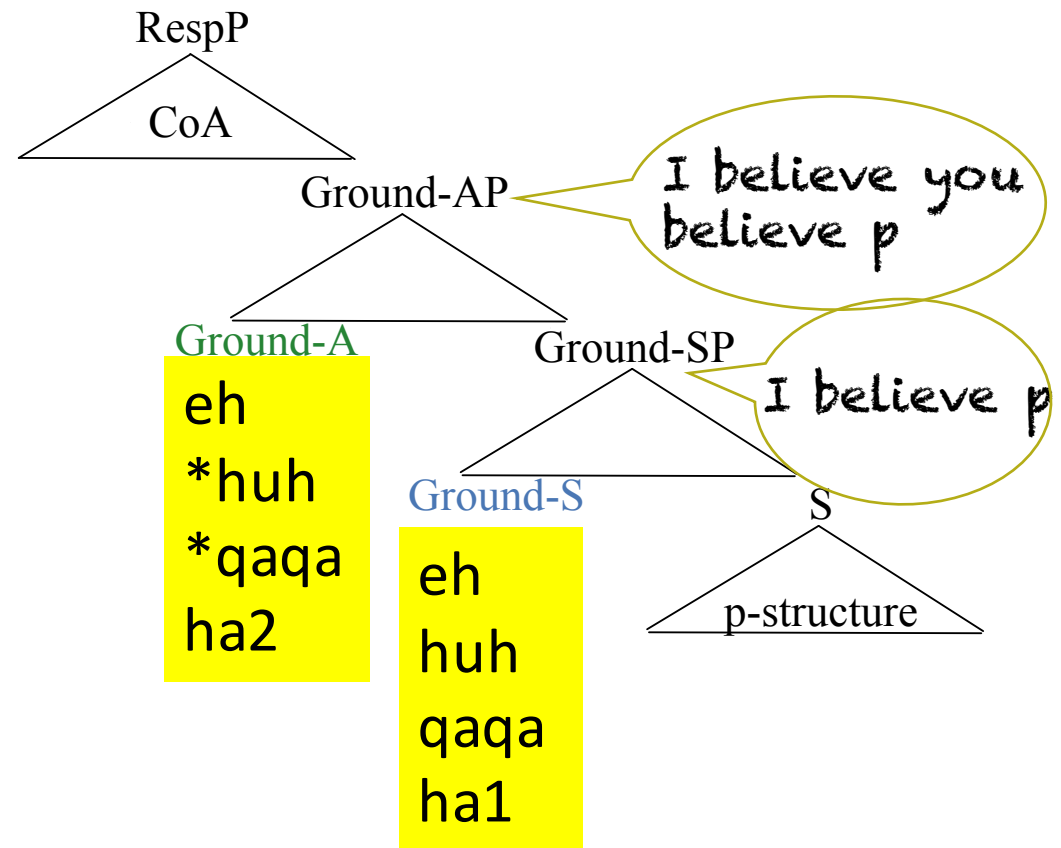
*Hai dei kankan duzhe you shenme fanying ha*₂?

Yet have.to see reader have what response PRT

‘(You know) we have to see how the readers respond to it, right?’



Where does UoL associate?



Evidence from response

Context: *On Monday, John and Mary arranged to go to Starbucks on Friday.*

On Friday afternoon:

John: Women jintian xiawu yiqi qu Xingbake ha₁?
We today afternoon together go Starbucks PRT
'We'll go to the Starbucks this afternoon, right?'

Mary: a. *Shi-a, xiawu yiqi qu.* [p is true]
Yes.PRT, afternoon together go.
'Yeah, let's go together this afternoon.'

b. **En, wo jizhe ne.* [I know p]
Yes I remember PRT .
'Yeah, that's what I had in mind.'

Evidence from response

Context: *On Monday, John and Mary arranged to go to Starbucks on Friday.*

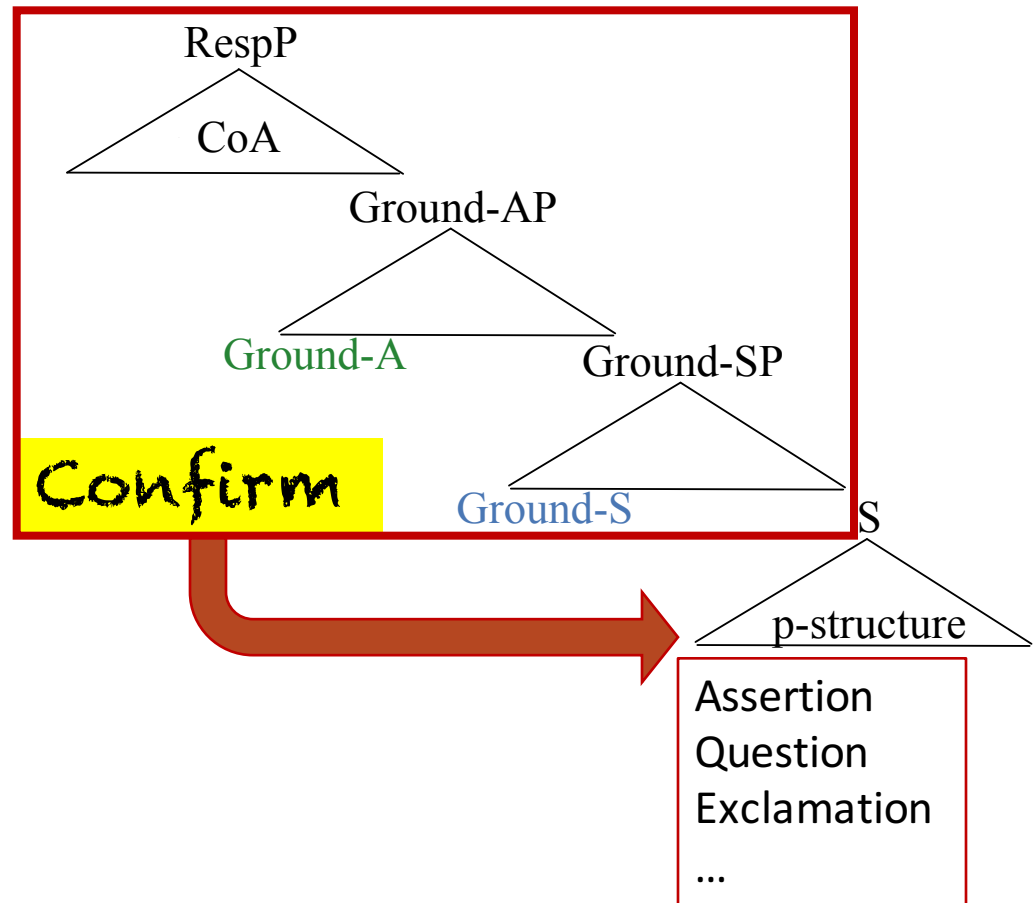
On Friday afternoon:

John: Women jintian xiawu yiqi qu Xingbake ha₂?
We today afternoon together go Starbucks PRT
'We'll go to the Starbucks this afternoon, right?'

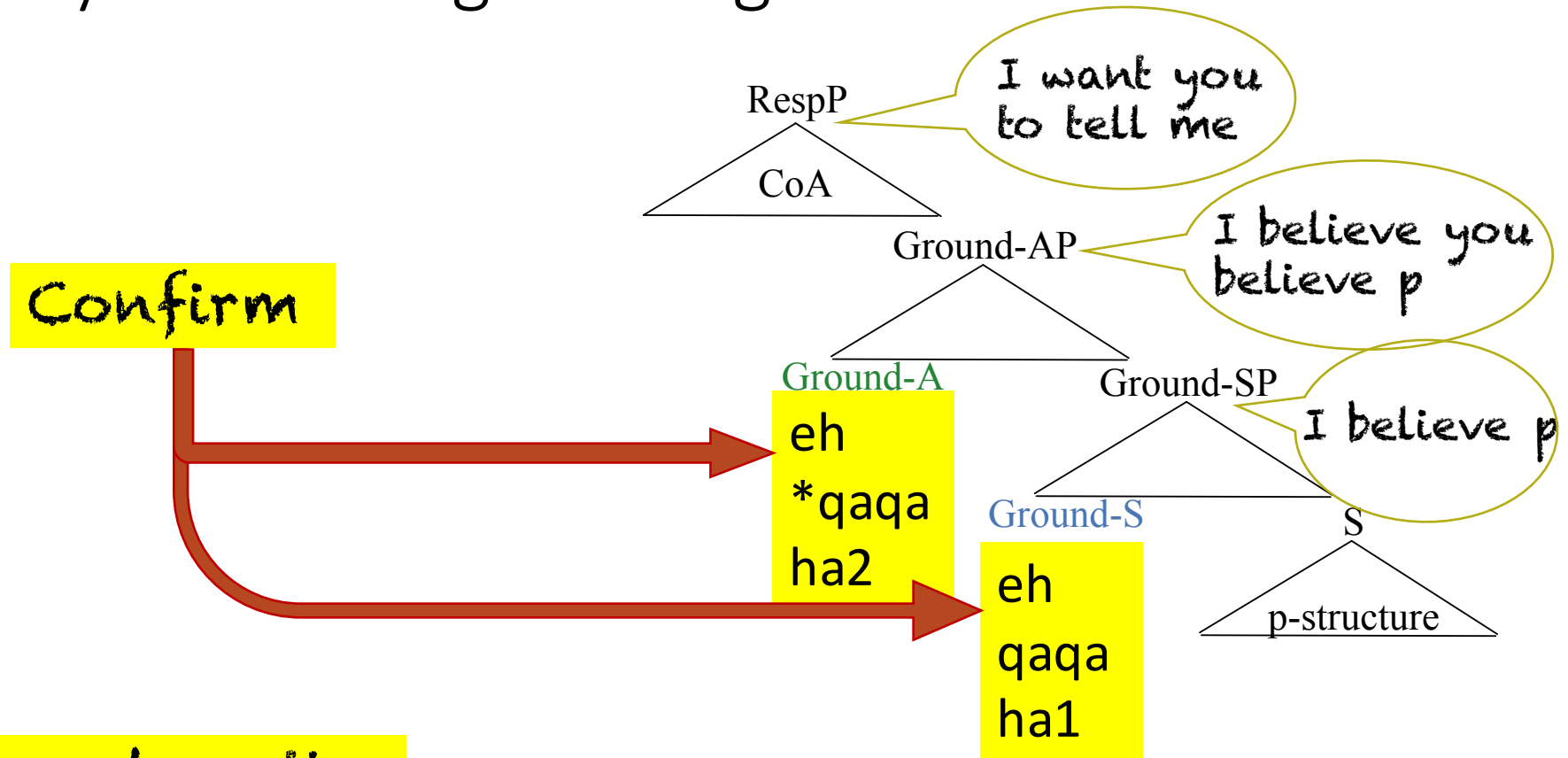
Mary: a. **Shi-a, xiawu yiqi qu.* [p is true]
Yes.PRT, afternoon together go.
'Yeah, let's go together this afternoon.'

b. *En, wo jizhe ne.* [I know p]
Yes, I remember PRT .
'Yeah, that's what I had in mind.'

Syntacticizing the target of confirmation

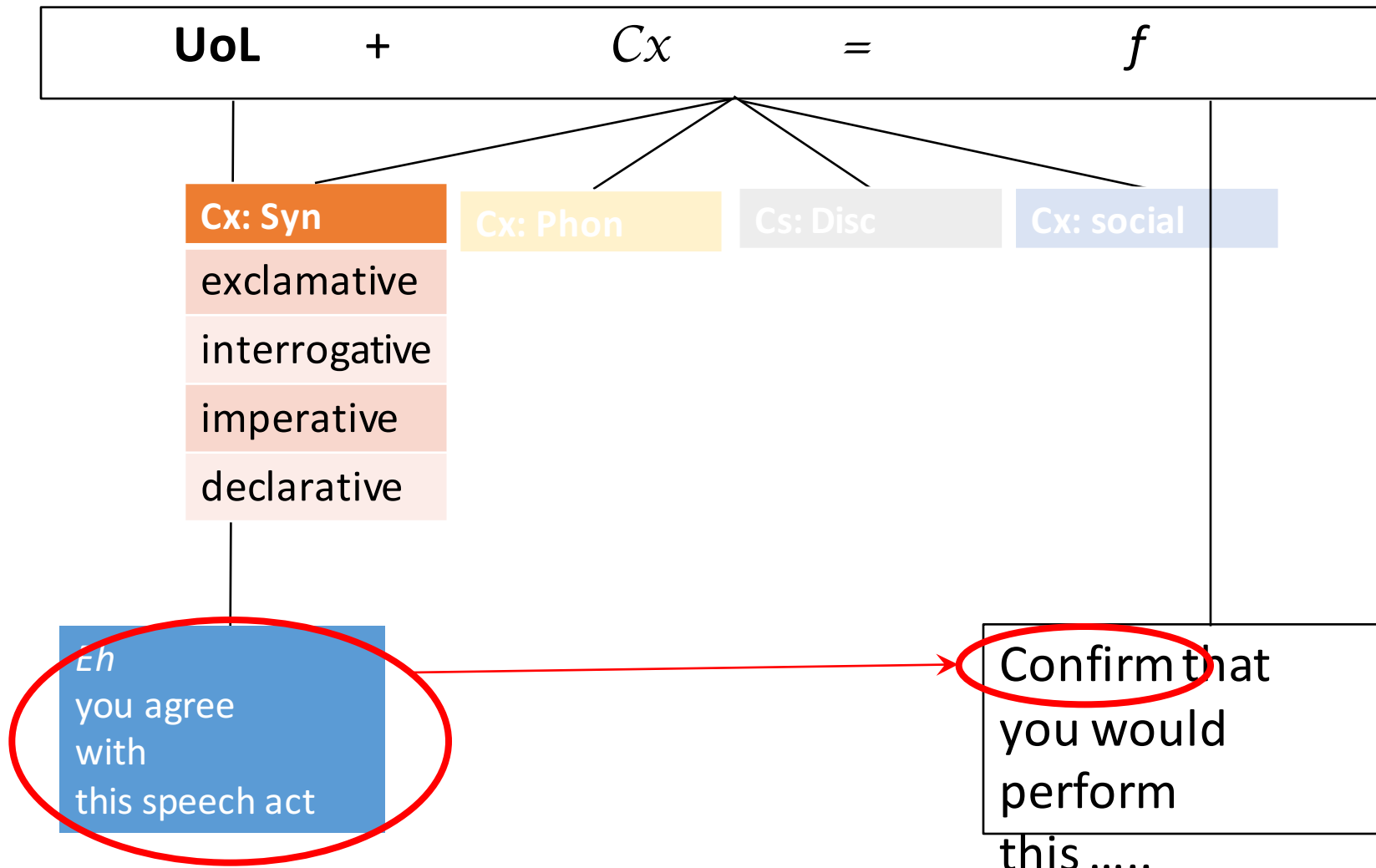


Syntacticizing the target of confirmation

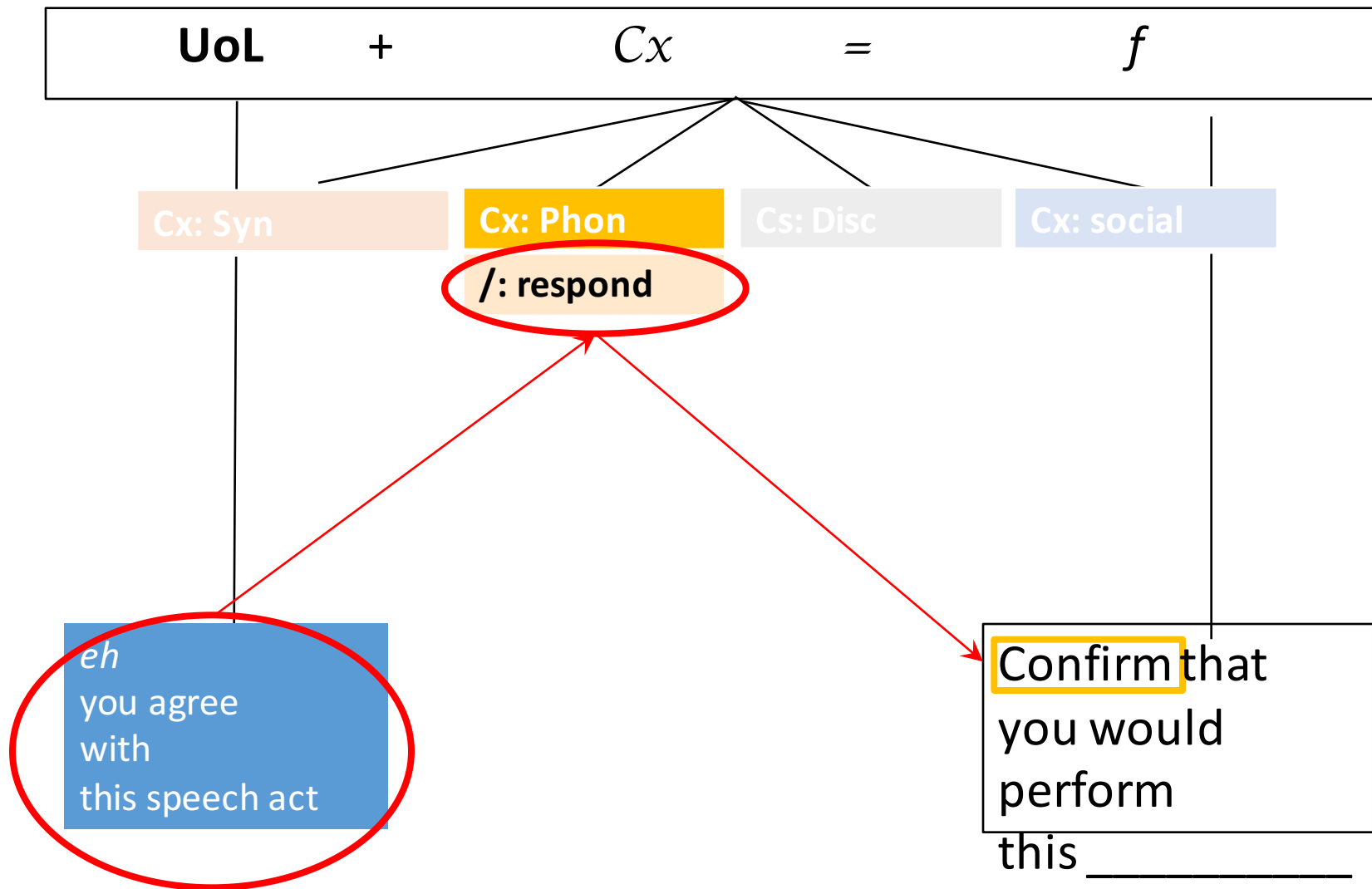


How does the request for confirmation come about?

How does confirmation come about?



The contribution of the prosodic context



The contribution of the prosodic context

Clause-type	Intonation	Speech-act type	Example
declarative	falling	assertion	<i>It's raining.</i>
	rising	question	<i>It's raining?</i>
	surprise	exclamation	<i>It's raining!</i>

Intonational tunes are types of “morphemes”

Gussenhoven 1984

Rising intonation operates on speech acts.

Trinh & Crnić 2011: 1

The contribution of the prosodic context

Some Canadians extend these uses of *eh* so liberally in their narrative style, that **virtually every sentence in a story is treated as if it were shared information** and the addressee need only keep up with the logical development of the piece. An example of such a description: *“He’s holding on to a firehose, eh? The think is jumping all over the place, eh, and he can hardly hold onto it, eh? Well he finally loses control of it, eh and the water knocks down half a dozen bystanders.”* (quoted by Avis 1972 103; source not given. As Avis points out, **in this context, *eh* frequently has a level rather than rising intonation**). This narrative technique provides at least one example of the hyperdefensive use of *eh*, because the speaker here seems to be anticipating at every turn a challenge to the accuracy of plausibility of his story, even from people who are not in a position to do so with much authority.

Johnson 1976: 157

The contribution of the prosodic context

Confirmational 'eh?'

Turn-final

A: *Oh, sparkly and fun, eh?*

G: *Mm-hmm. You got it.*

A: *... so why don't we make a toast --
to our beautiful women, eh?*

Z: *Done.*

D: *Not this time, eh?*

M: *No.*

<http://corpus.byu.edu/soap/>

Narrative 'eh'

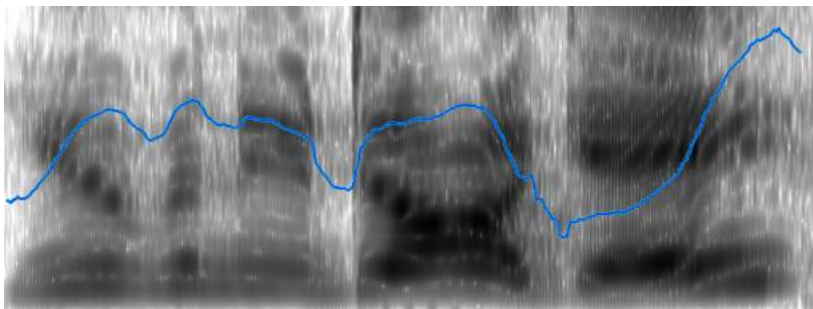
Turn-medial

"So I go to this shrink, eh, and he goes like I don't have no confidence, eh. I go, 'No way, man.' He goes I should take assertiveness training. Weird, eh? Like I'm always supposed to be seeking approval, eh, from, you know, other people? I felt like he could kiss my Royal Canadian, eh? But, sayin' it would a been too pushy. Dyuh think?"

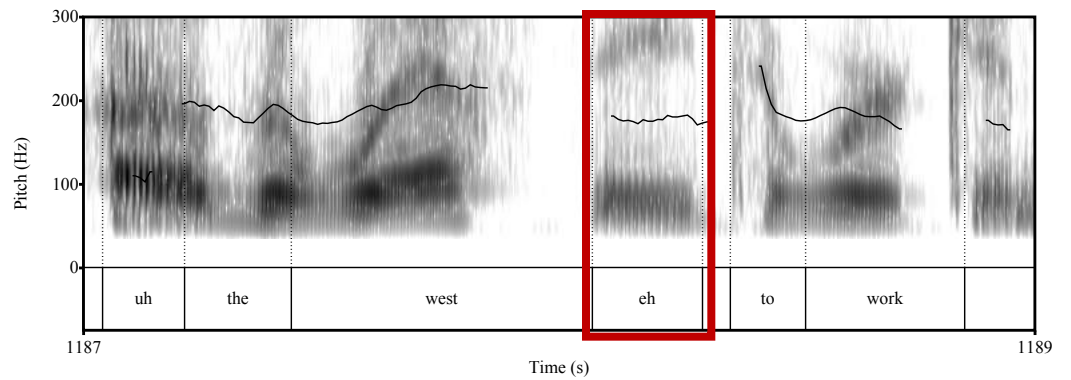
http://www.billcasselmann.com/casselmania/maniamania_eh.htm

The role of intonation

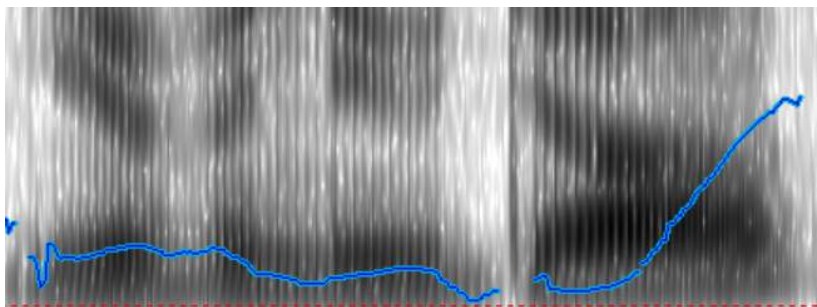
Confirmational eh



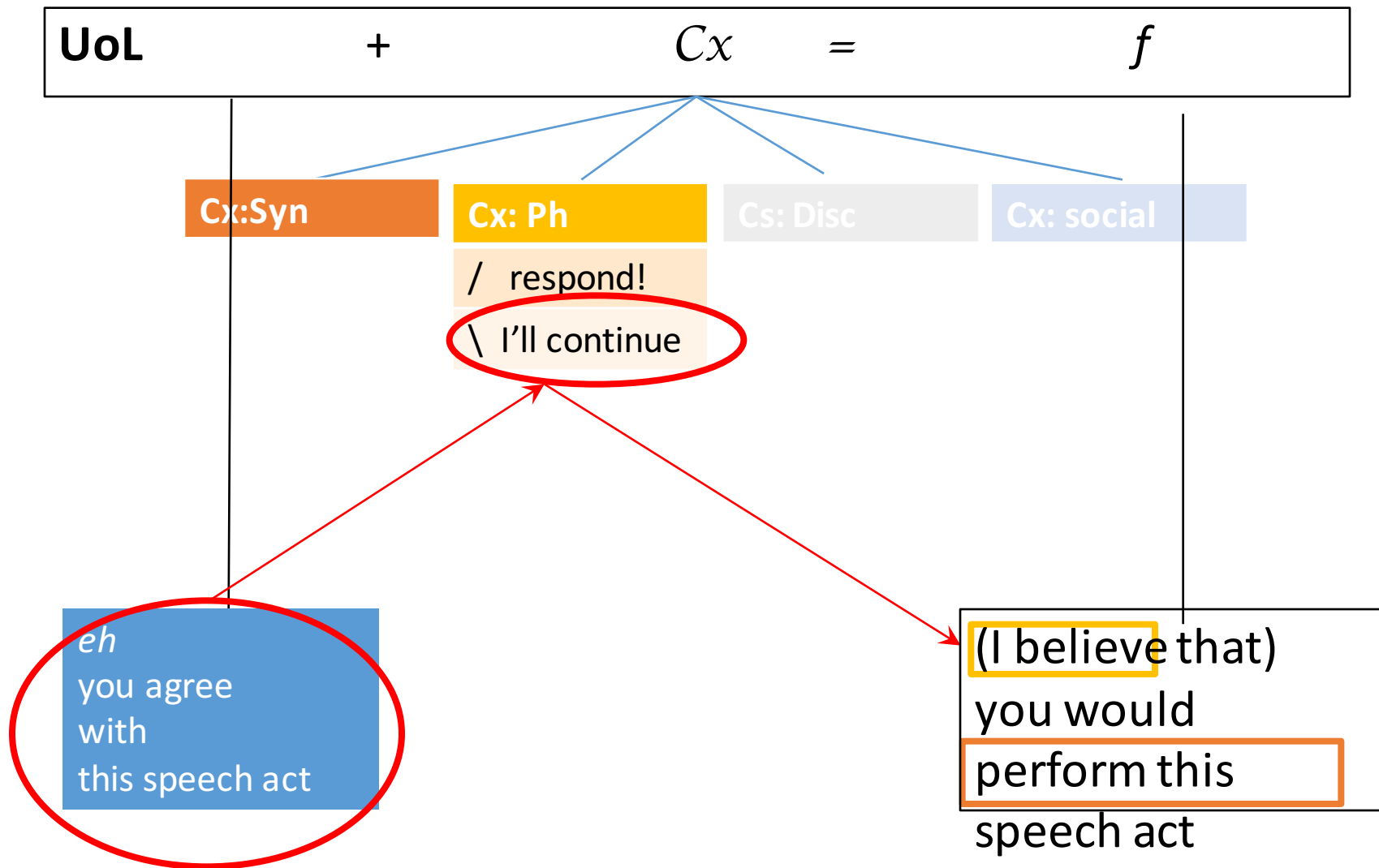
Narrative eh



Rising declarative

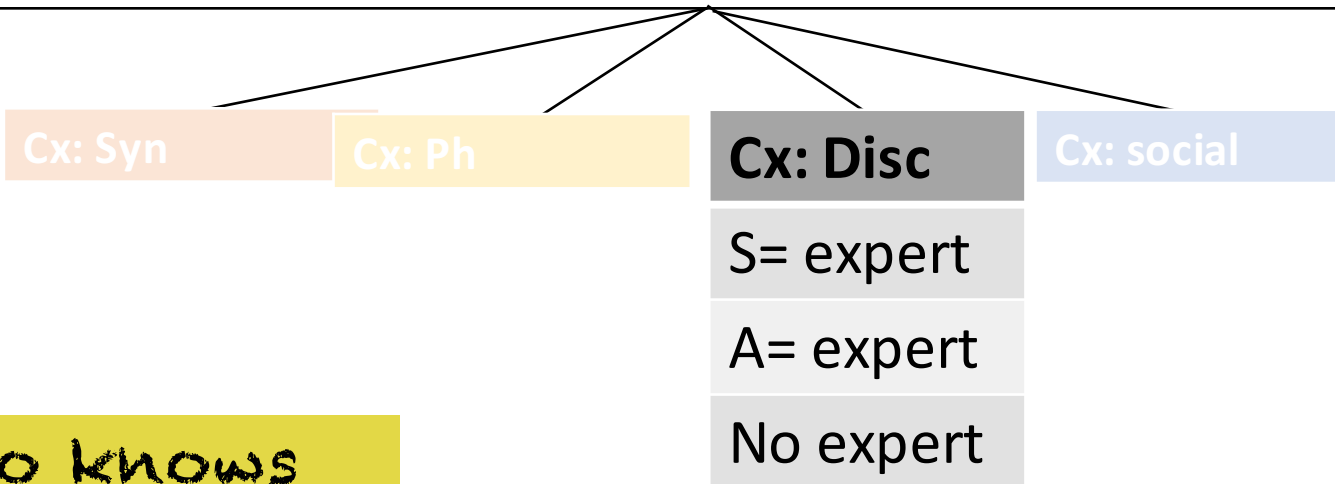


The contribution of the prosodic context



The contribution of the discourse context

$$\text{UoL} + C_x = f$$



Who knows what contributes to the function of 'eh?'

The contribution of the discourse context



The contribution of the discourse context



Effect:
Confirm that you know this

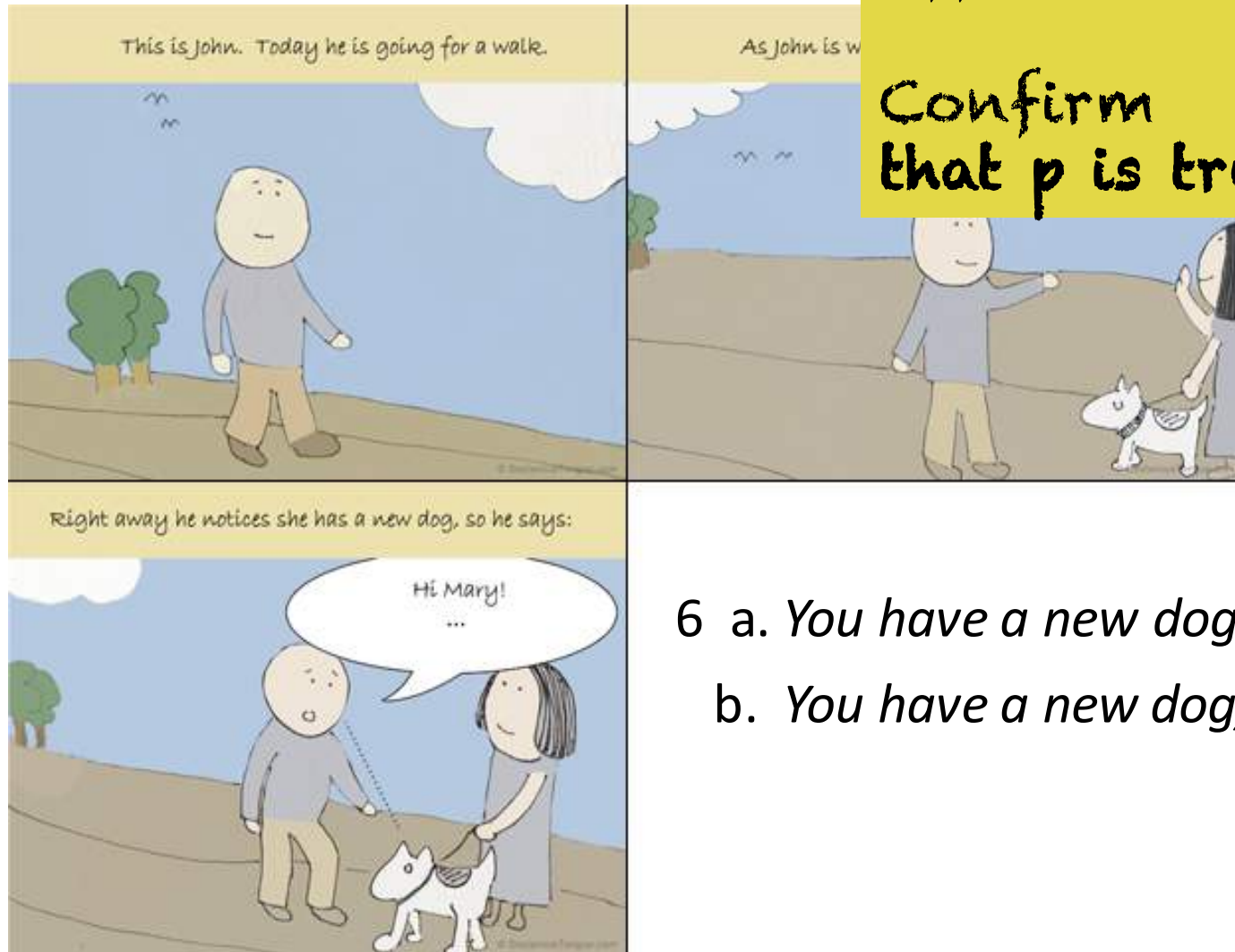


5 a. *I have a new dog.*

b. *I have a new dog, eh?*

<http://dexteroustongue.com/talk-like-a-canadian-1-hardcore-eh/>

The contribution of the discourse context



Effect:

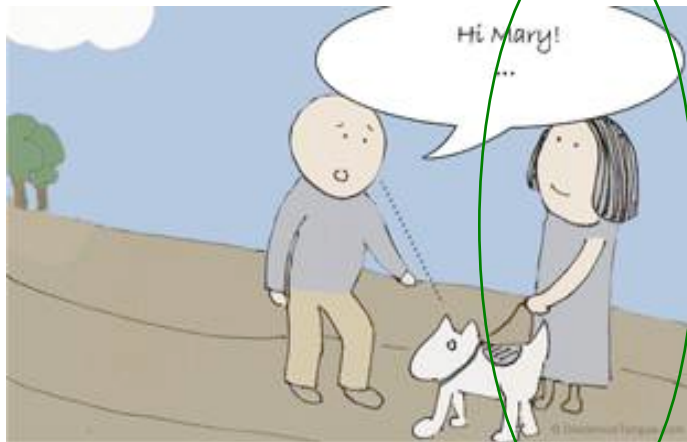
Confirm
that p is true

- 6 a. *You have a new dog.*
b. *You have a new dog, eh?*

The contribution of the discourse context

Confirm
that this is
true

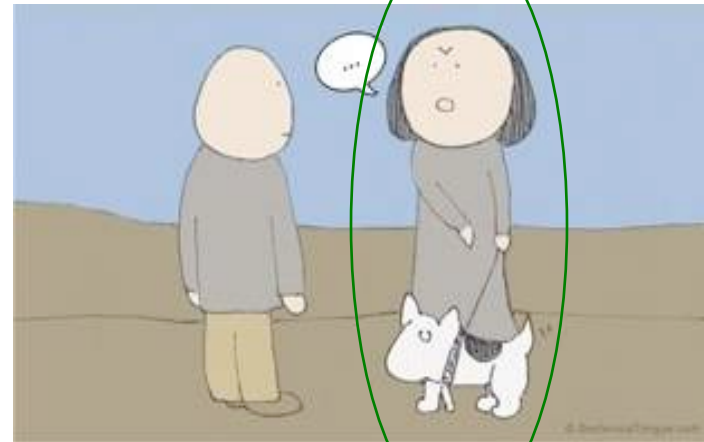
Addressee = expert



5 b. *You got a new dog, eh?*

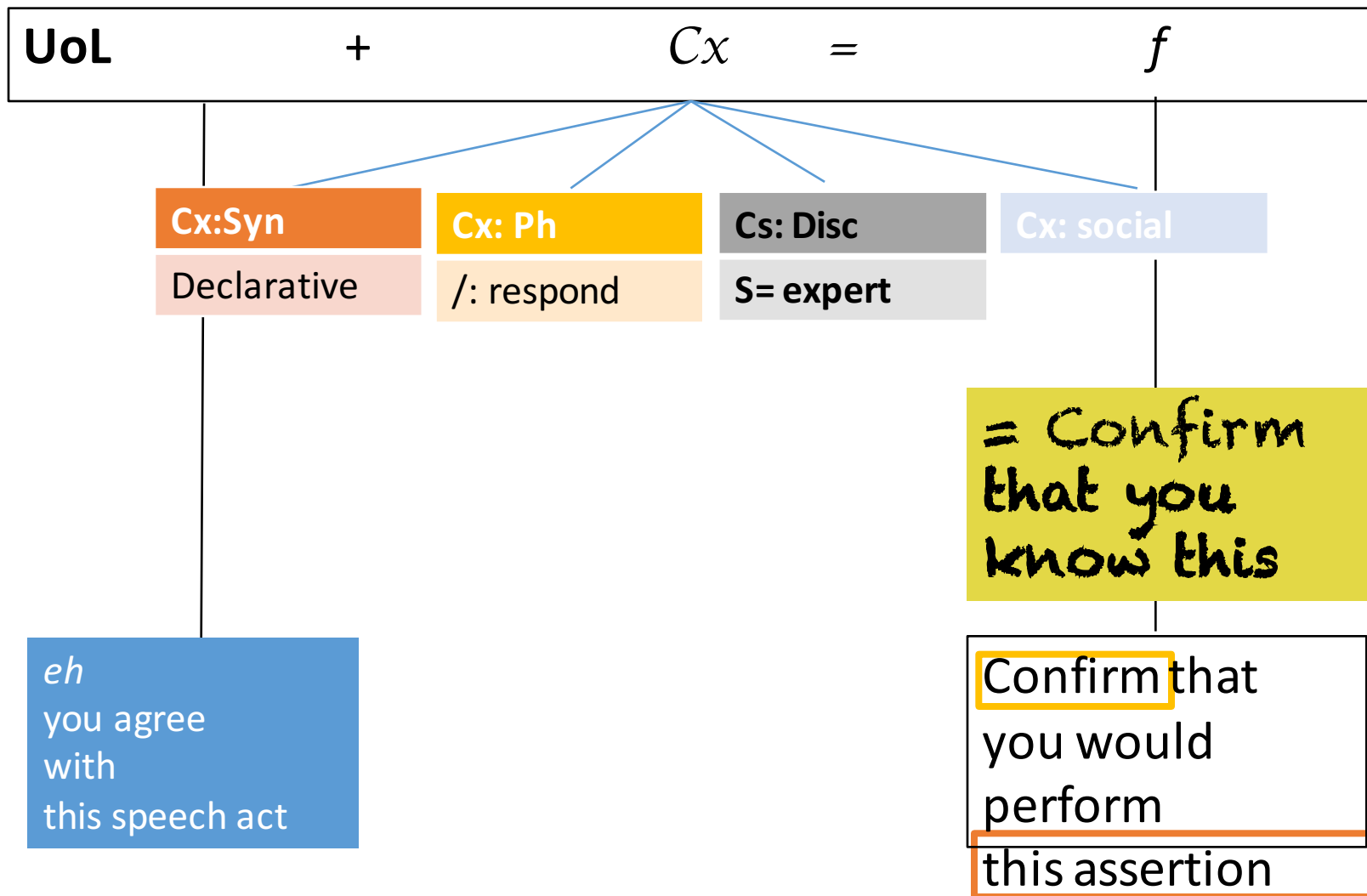
Confirm
that you
know this

Speaker = expert

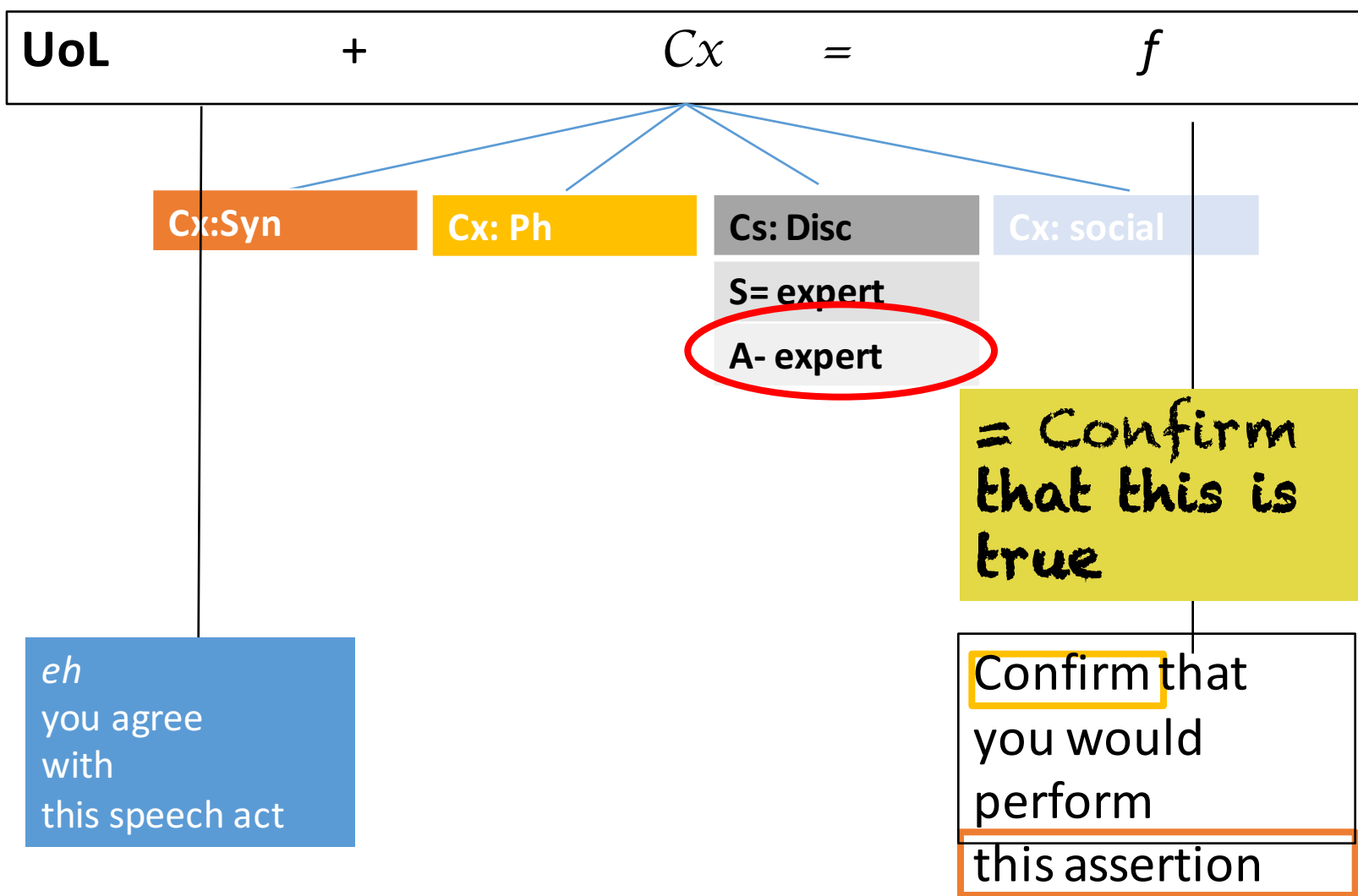


6 b. *I got a new dog, eh?*

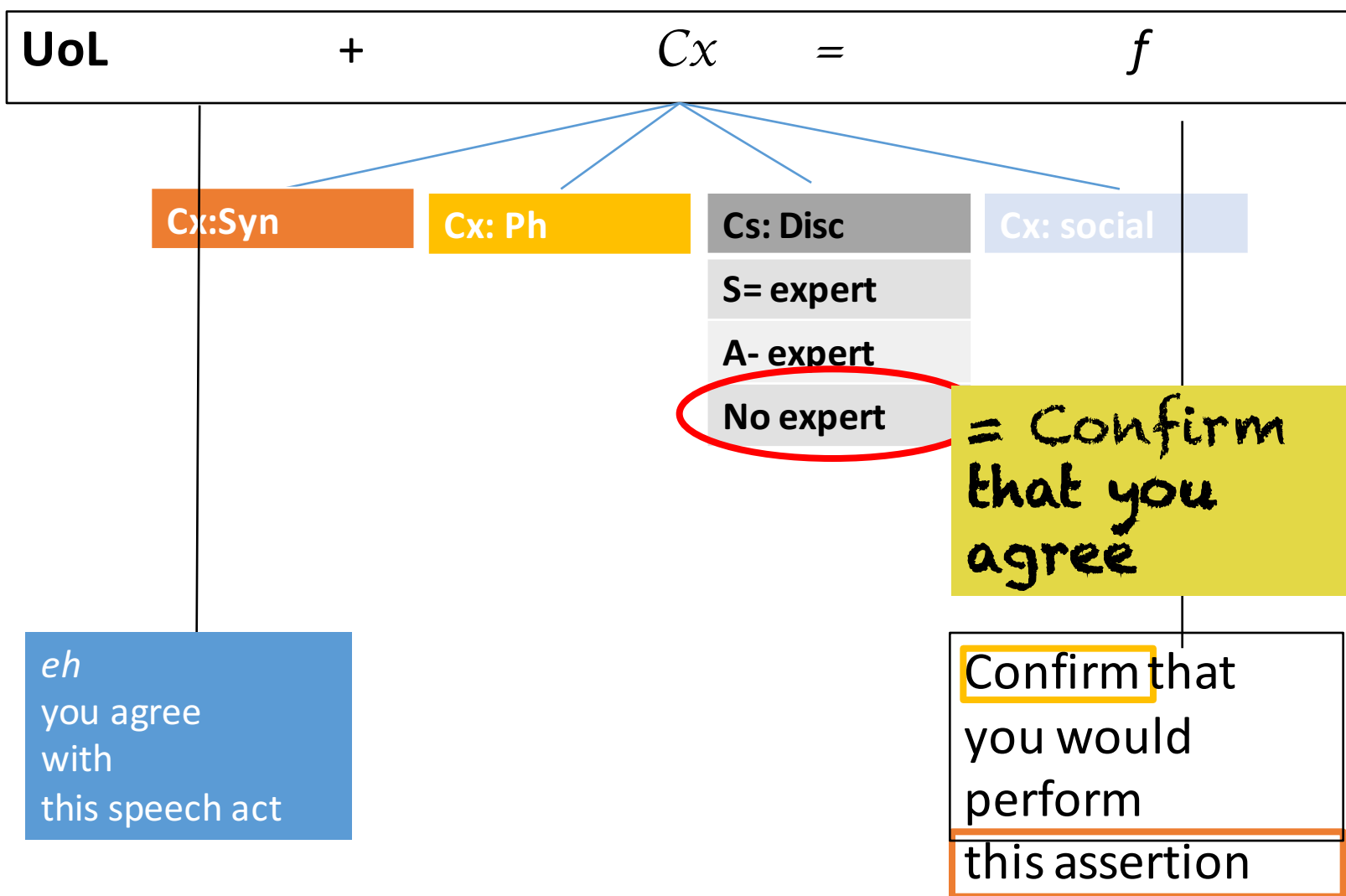
The contribution of the discourse context



The contribution of the discourse context



The contribution of the discourse context



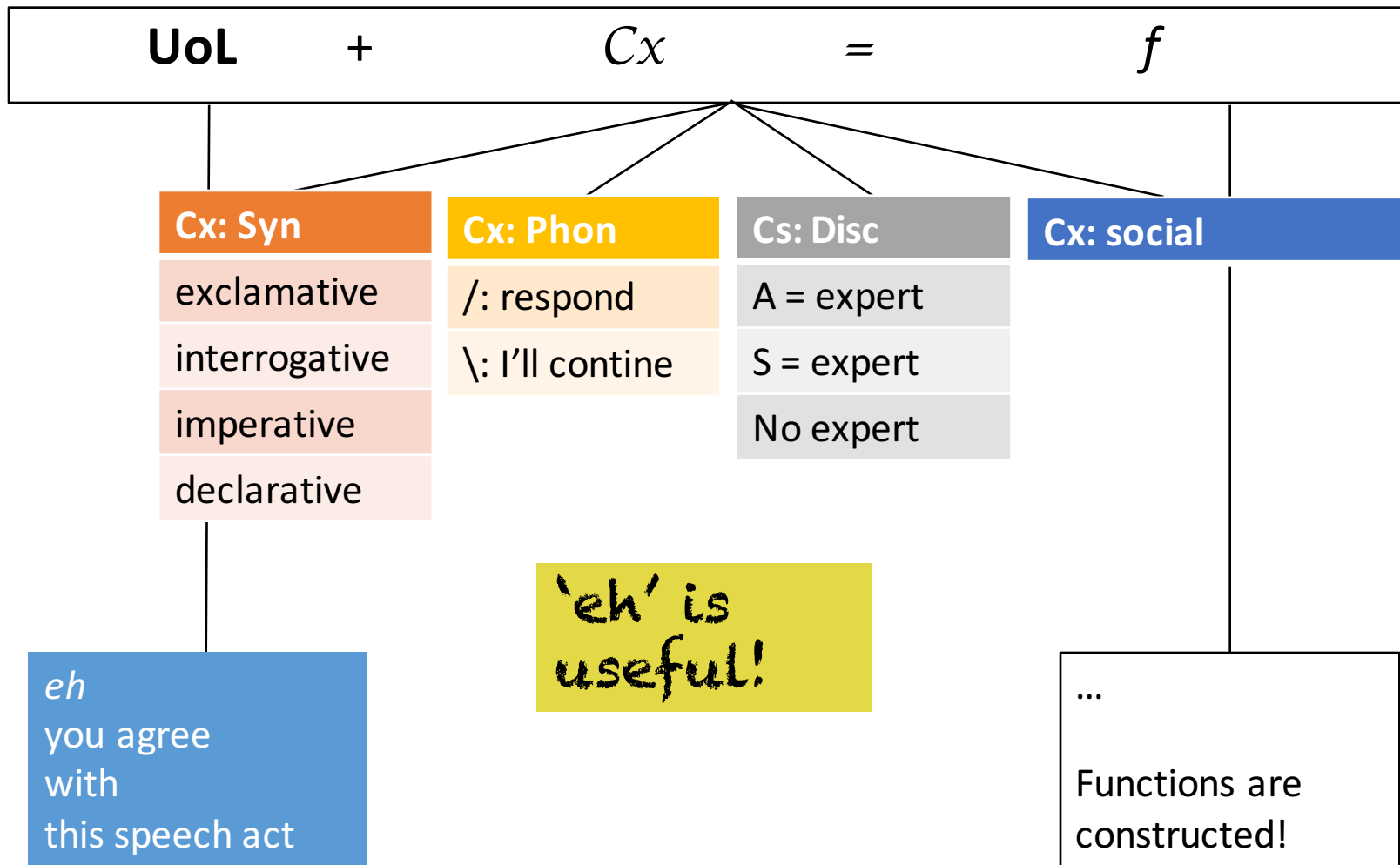
Subjective judgment

= Confirm
that you
agree



- 7 a. *That was a good movie, eh?*
b. *That was a good movie.*

Summary: the functional profile of *eh*?



Why is the use of eh so limited?

Table 3 *Frequency of UFT variants by three broad age groups*

	<i>right</i>		<i>you know</i>		<i>yeah</i>		<i>eh</i>		<i>other</i>		TOTAL
	%	N	%	N	%	N	%	N	%	N	N
>60	2.2	11	66.2	325	26.5	130	2.4	12	2.7	13	491
30-59	49.8	319	31.2	200	11.7	75	5.9	38	1.4	9	641
<30	60.4	487	22.5	181	12.0	97	1.4	11	3.7	30	806
TOTAL	42.2	817	36.4	706	15.6	302	3.1	61	2.7	52	1938

With respect to attitude, Canadian English speakers show a wide range of responses to the different constructions, from very positive for *eh* with opinions to overwhelmingly negative for narrative *eh*?

Gold & Tremblay 2006

The contribution of the Social context

$$\text{UoL} + Cx = f$$



'eh?' is stigmatized



Northern Mandarin



(1) *Ni xin yang le tiao gou, ha₁?*
you new grow ASP CL dog prt

Tone: H-L



(2) *Wo xin yang le tiao gou, ha₂?*
I new grow Asp Cl dog, prt

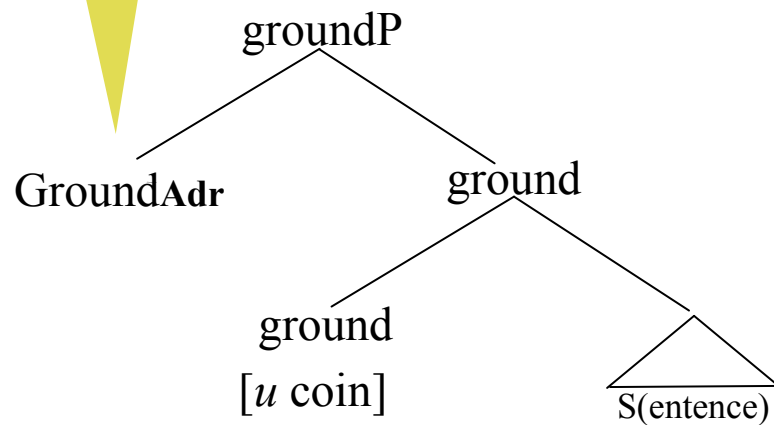
Tone: H-H

[+/-coin] Ground

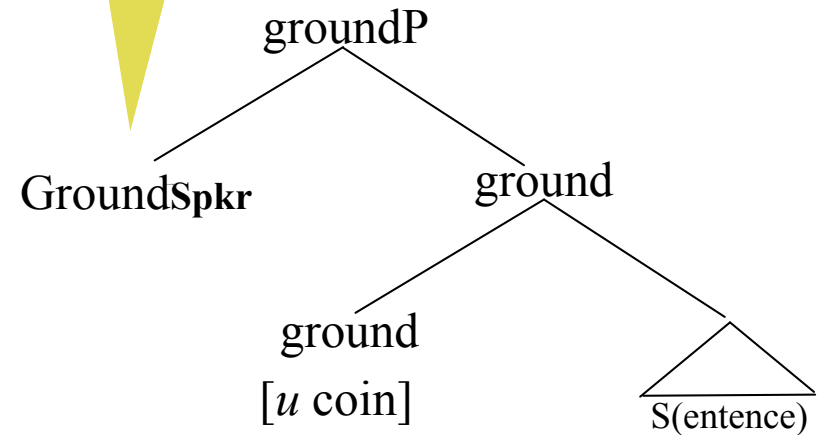
A more complete typology: Mandarin

Coincidence on the extended spine

What I'm saying
{is/is not} in
your ground

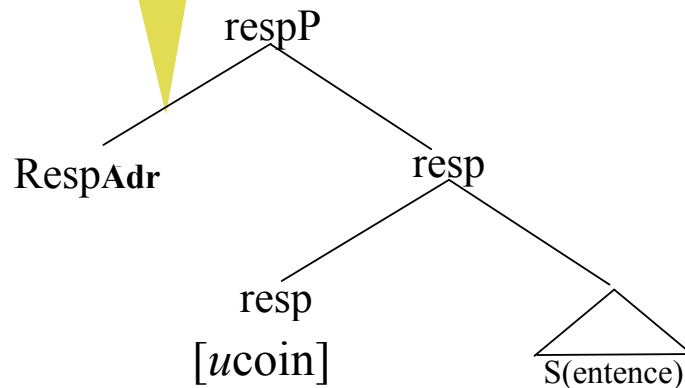


What I'm saying
{is/is not} in
my ground

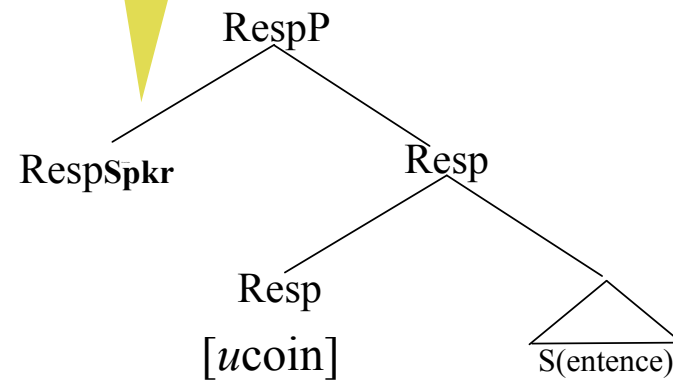


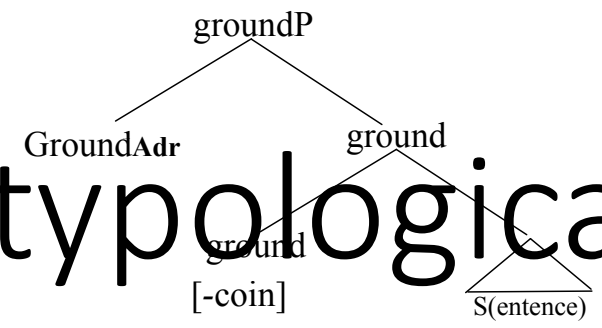
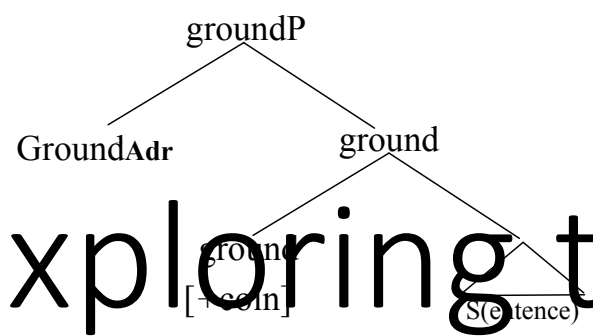
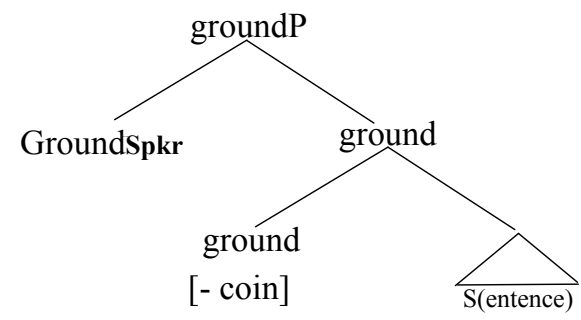
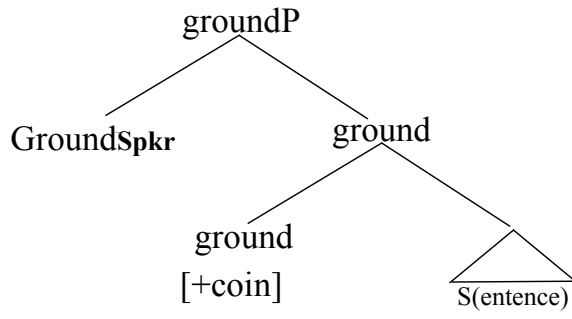
Coincidence on the extended spine

What I'm saying
{is/is not} in your
response-set



What I'm saying
{is/is not} in
my response-set





Exploring the typological range

Evidence from Mandarin

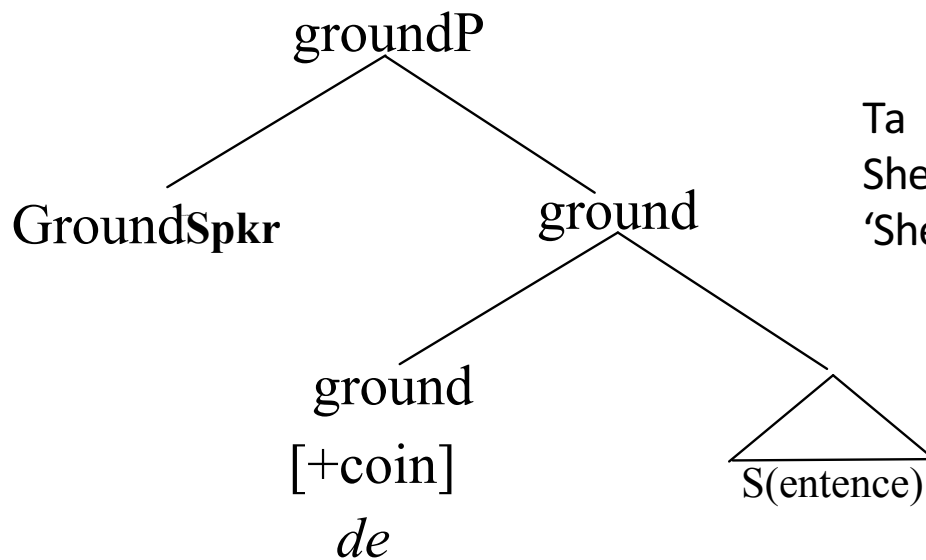
Mandarin: *de* (Bel,(S,p))

Context: John was told that Mary drives to work. He wonders whether he can take a ride each morning. But he is not sure whether Mary drives every morning. He runs into Bob, Mary's husband, and wants to know whether it is true. Bob says:

Ta meitian zaoshang kaiche shangban **de**.
She every.day morning drive work PRT
'She (really) drives to work every morning.'

Ta meitian zaoshang kaiche shangban.
She every.day morning drive work
She drive to work every morning.

Mandarin: *de* (Bel,(S,p))



Ta meitian zaoshang kaiche shangban **de**.
She every.day morning drive work PRT
'She (really) drives to work every morning.'

Speaker comment:

de indicates that S is 100% sure about p.

Without *de* the utterance is simply a statement of p, ... the speaker's stance cannot be directly identified.

Mandarin: $a (\neg\text{Bel}, (S, p))$

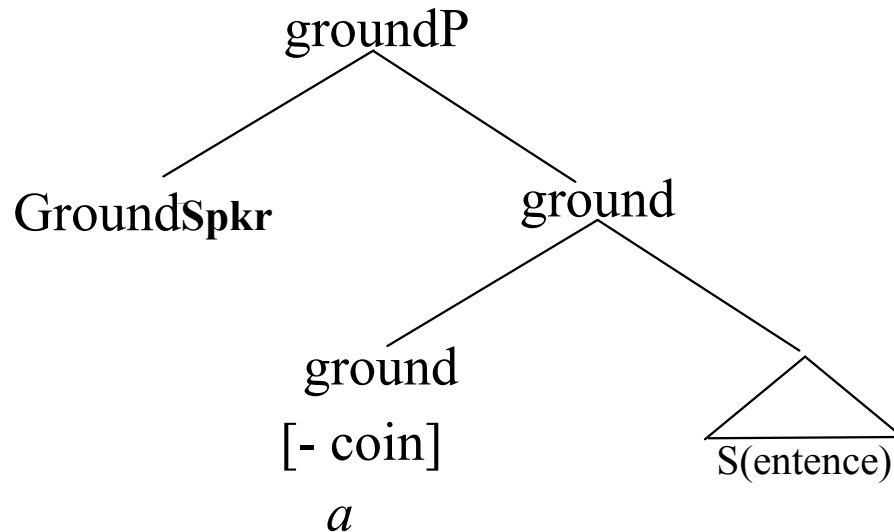
Context: John is talking with his advisor Mary for his graduation. He thinks he has already done what are required for graduation. But Mary thinks he needs to publish another article before his graduation.

John: Dou wancheng le. Wo xianzai dengzhe biye le.
All finish asp. I now wait asp graduate asp.
Everything is done. Now I am waiting for my graduation.

Mary: Buguo ni hai xuyao fabiao yi pian lunwen.
But you still need publish one cl paper
But you need to publish one more paper (before you graduate).

John: Shenme? Wo hai dei xie yi pian lunwen **a**
What? I still must write one CL thesis PRT
What? I still have a thesis to write (which is out of my expectation).

Mandarin: a (\neg Bel,(S,p))



John: Shenme? Wo hai dei xie yi pian lunwen **a**

What? I still must write one CL thesis PRT

What? I still have a thesis to write (which is out of my expectation).

Mandarin particles: *ma* (Bel, (A, p))

Context: Mary sent John a puppy to keep. After a month, John calls Mary to ask which kind of dog's food is better for his dog. He says to Mary:

Ni shangci gei wo le tiao gou **ma** ...
You last.time give me asp cl dog prt

...wo xiang wen ni nage paizi de gouliang hao.

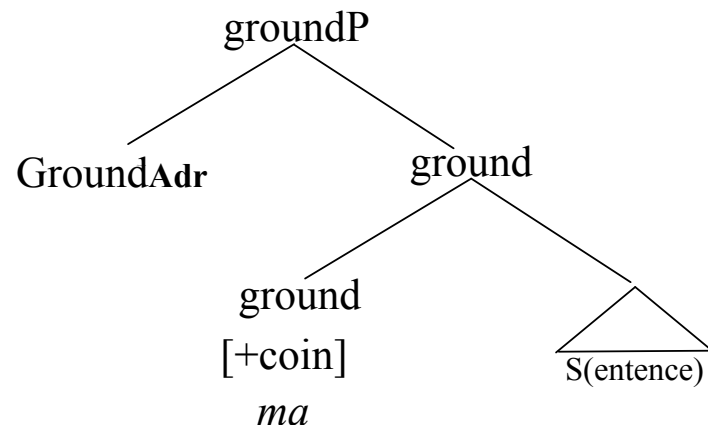
I want ask you which brand poss. Dog.food good.

'Remember you gave me a dog last time.

Now I want to ask which food is good for him.'

Mandarin particles: *ma* (Bel,(A,p))

In literature, final *ma* is considered to express that the utterance is natural and right. (Chao 1968, Iy 1999:375, etc.).
... S has sufficient reason to believe that the utterance should be known by A.
The utterance could be a natural law, or something known by both S and A.



Ni shangci gei wo le tiao gou **ma** ...
You last.time give me asp cl dog prt

Mandarin particles: bei

(\neg Bel, (A,p))

Context: Mary knows that John doesn't like cats. But one day when they are in the supermarket, she finds that John is looking at cat toys.

Mary: Ni zenme kan mao de dongxi?

You why look cat poss. things

Why are you looking at the cat stuff?

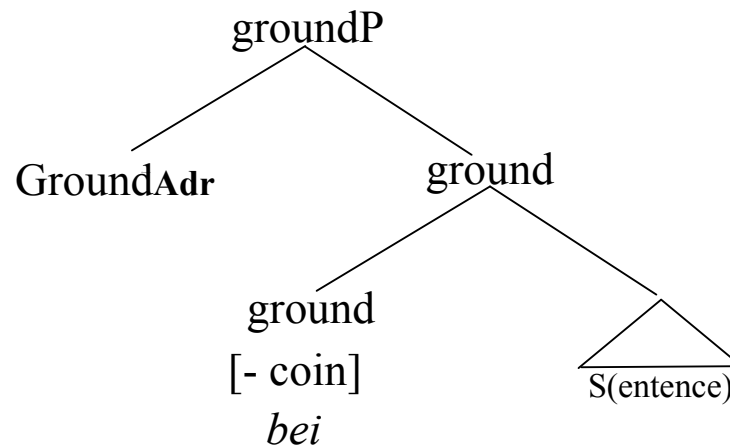
John: Wo erzi jian huilaiyi zhi mao bei yiding yao yang.

My son pick back one cl cat prt, certainly want keep

(You haven't known that) my son picked up a cat somewhere and wants to keep it anyway.

Mandarin particles: bei

(\neg Bel, (A,p))



John: Wo erzi jian huilaiyi zhi mao **bei** yiding yao yang.
 My son pick back one cl cat prt, certainly want keep
*(You haven't known that) my son picked up a cat
 somewhere and wants to keep it anyway.*

Mandarin: ma vs. bei

Context: John is going to school after breakfast. His mom asks him to take an umbrella.

Mom: Take your umbrella.

John: Why do I need to take umbrella?

Mom: Waimian xiayu le **ma/*bei**.

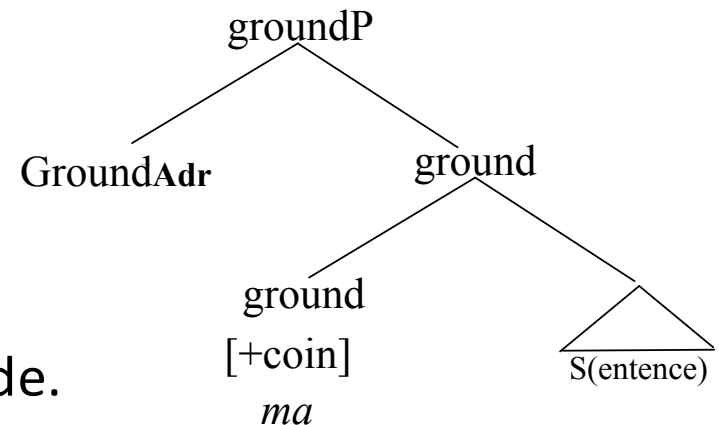
Outside rain asp prt

(You know that) it's raining outside.

John: Yu you bu da, bu dai le.

Rain at.all not heavy, not take asp

It's not heavy rain so I don't take it.



Mandarin: ma vs. bei

Context: John is going to school after breakfast. His mom asks him to take an umbrella.

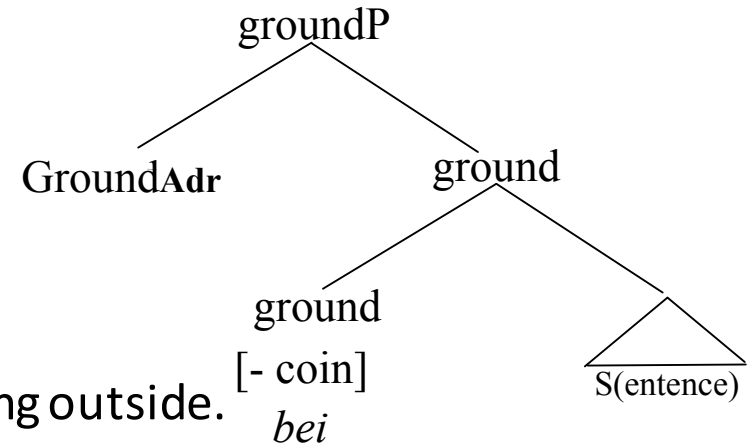
Mom: Take your umbrella.

John: Why do I need to take umbrella?

Mom: Waimian xiayu le **bei/*ma**.

Outside rain asp prt

(You haven't known that) it's raining outside.

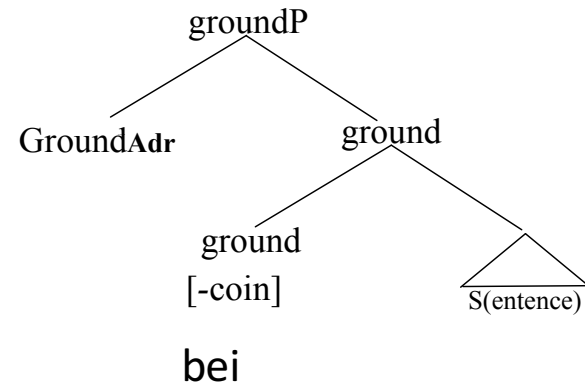
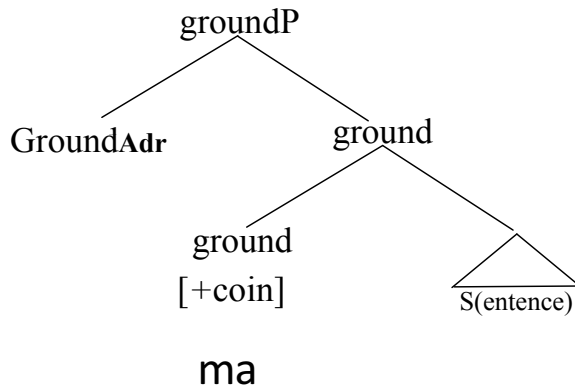
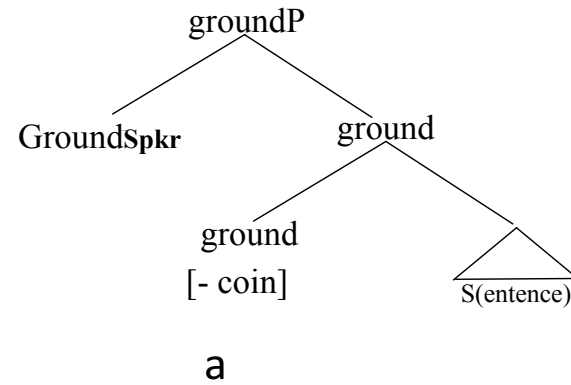
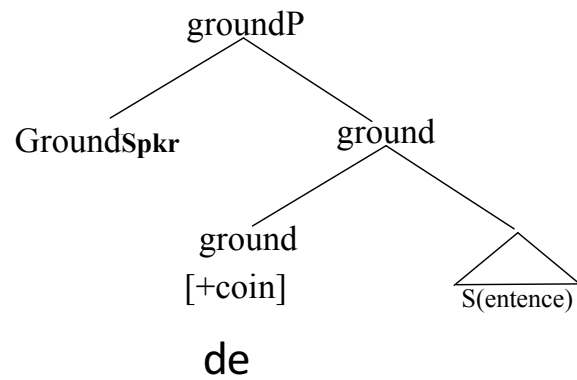


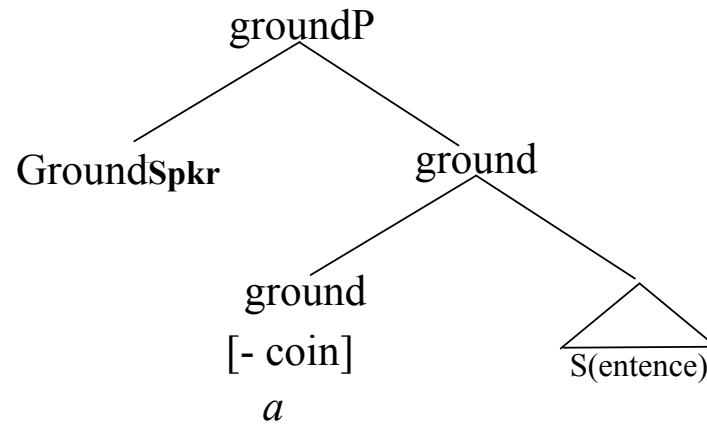
John: You xiayu le. Zenme zong xiayu ne?

Again rain asp. Why always rain prt

It's raining again! Why does it always rain?

All possibilities are attested in Mandarin



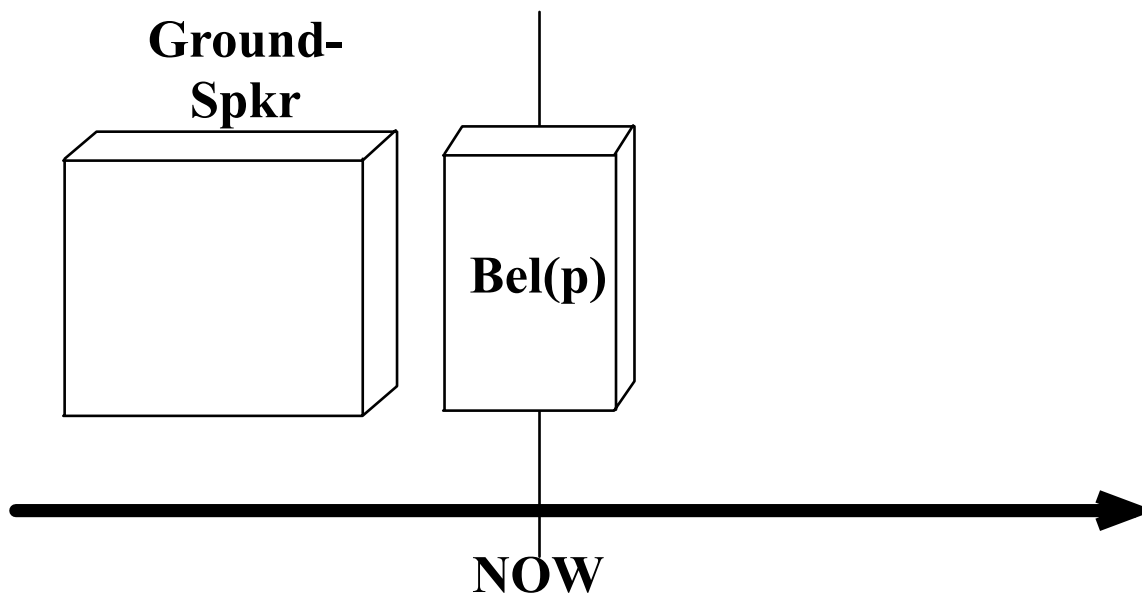


How can we say something we don't know

Does English have [-coin] particles?

$(\neg \text{Bel}, (S, p))$

holds **before** time of conversation



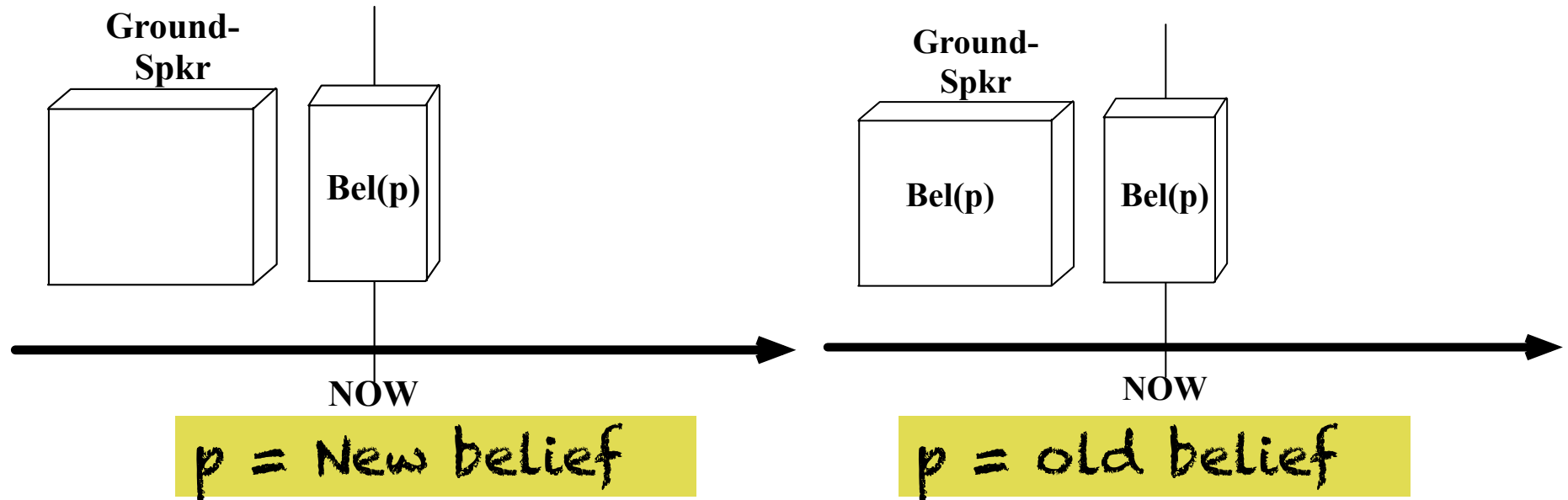
*p is NEW
information
for Speaker*

John: Shenme? Wo hai dei xie yi pian lunwen *a*

What? I still must write one CL thesis PRT

What? I still have a thesis to write (which is out of my expectation).

More on the timing of grounding: Canadian *eh*



Timing of grounding



You have a new dog **eh?**

Intonation



In German, the timing of grounding is encoded by different particles

*Du host **leicht** an neichn Hund?*

You have part a new dog?

Du host an neichn Hund, **geu?*

You have a new dog, conf

Du host **leicht an neichn Hund?*

You have part a new dog?

*Du host an neichn Hund, **geu**?*

You have a new dog, conf

Intonation



Hin ha't-i xa'txin, qáqá
You have a dog eh?

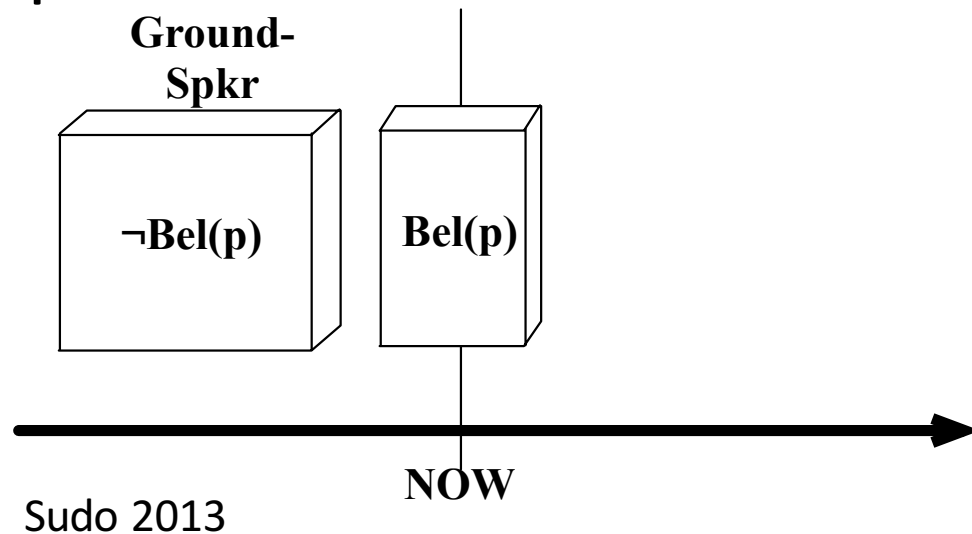


Hin ha't-i xa'txin, qáqá
You have a dog eh?



In Ktunaxa,
intonation encodes
the timing of
grounding

Does English have [-coin] particles?



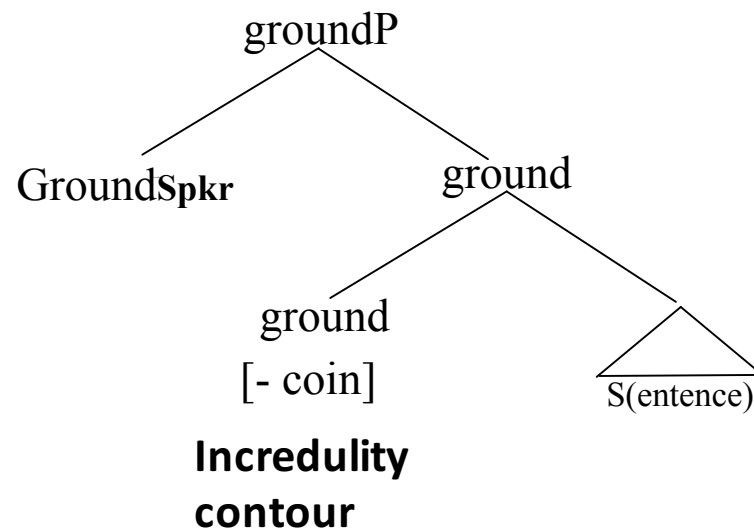
Incredulity
contour

Hirschberg & Ward, 1992

Context: John is not a 'dog person' and has always claimed that he will never get a dog. One day, he changed his mind and decided to buy a dog. Then he has to inform his friend Mary. He runs into her and tells her that he has a new dog. Mary responds:

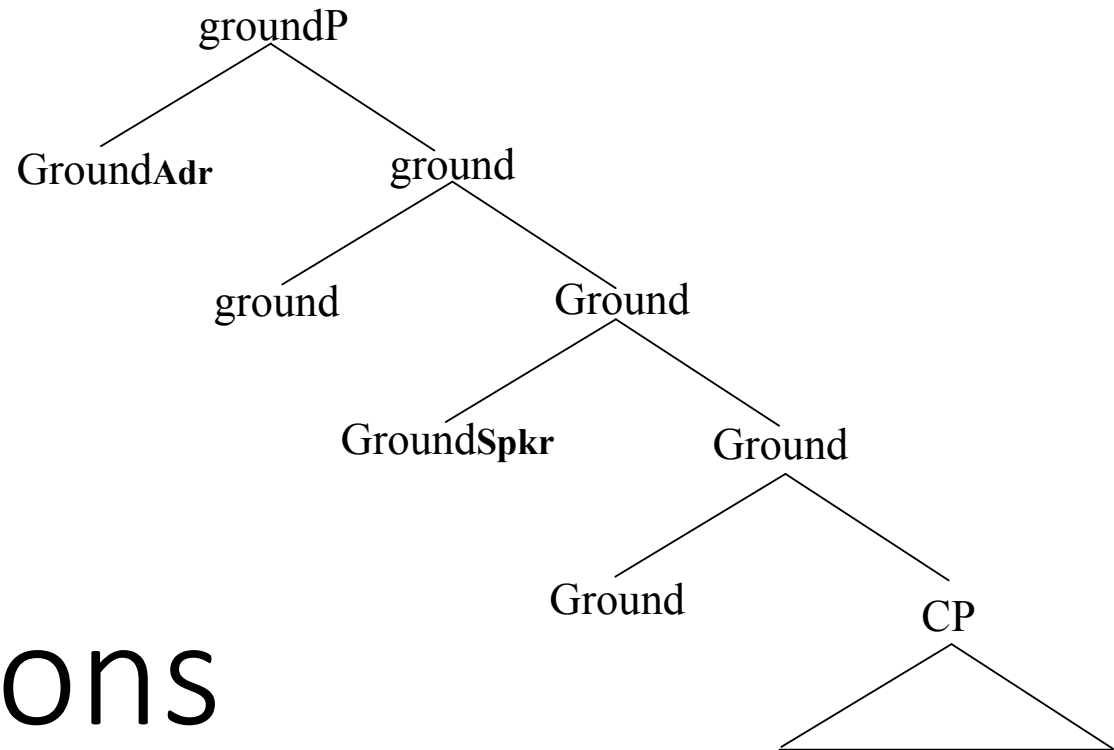
- #Do you have a dog?*
- #You have a dog, eh?*
- You have a dog/?

Does English have [-coin] particles?



Intonation instead of a particle?

Wakefield 2014
Heim et al. 2016



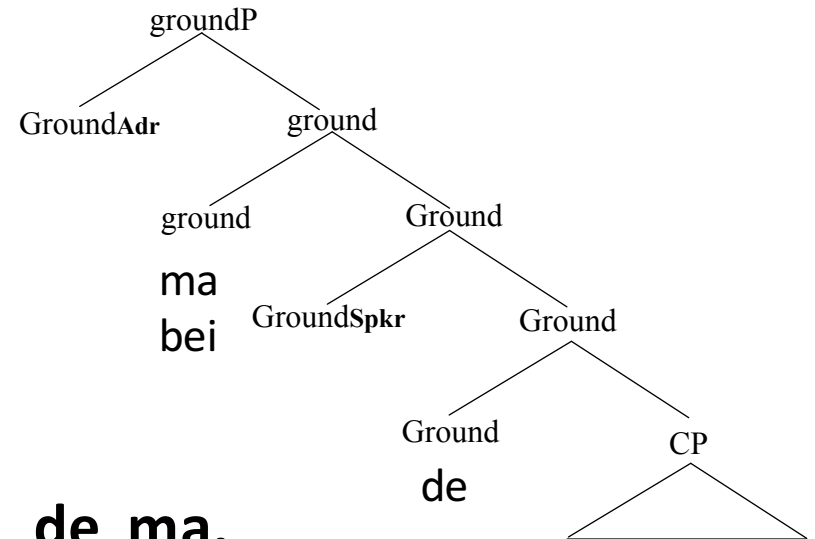
Predictions

Co-occurrence

Ordering restrictions

Selectional restrictions

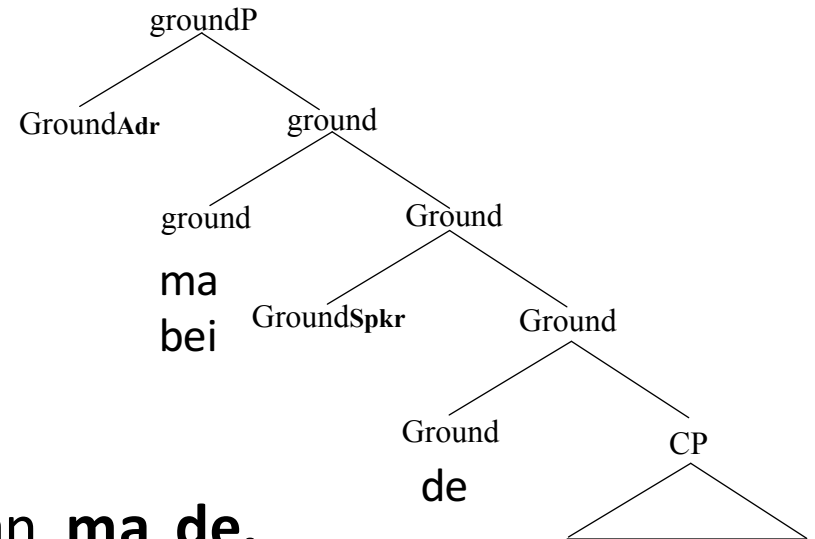
Co-occurrence



(1) Ta jia kai shuiguodian **de ma**.
 His family open fruit shop prt prt
 his family runs a fruit shop (you know that)

(2) Ta jia kai shuiguodian **de bei**.
 His family open fruit shop prt prt
 his family runs a fruit shop (you didn't know that)

Ordering



(1) *Ta jia kai shuiguodian **ma de**.
 His family open fruit shop prt prt
 his family runs a fruit shop (you know that)

(2) *Ta jia kai shuiguodian **bei de**.
 His family open fruit shop prt prt
 his family runs a fruit shop (you didn't know that)

Cantonese A>S

Evidence from Cantonese sentence-peripheral discourse markers

daai6 seng1 zau6 dak1 laa3 me1 ho2?

big voice then okay change.of.state me1 ho2

'Can one get by just by being loud? I don't think so!

You'd agree I'm asking a valid question, right?'

**daai6 seng1 zau6 dak1 laa3 ho2 me1*

me1: Bel (S, \neg p),

ho2: Bel (S (Bel (A,p)))

Lam 2014

Selection: evidence from Cantonese

Input	<i>me1</i>	<i>ho2</i>
declarative	✓ output=interrogative	✓ output=interrogative
interrogative	*	✓ output=interrogative
imperative	*	✓ output=interrogative
exclamative	*	✓ output=interrogative

Lam 2014