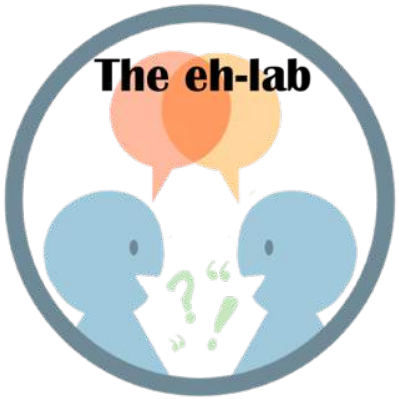
Vitoria Gasteiz, May 2017



The syntax of interaction

Towards a formal typology of discourse markers

Martina Wiltschko, UBC

Lecture IV

Confirmationals (and Response markers)

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

Overview

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

Today

Day 4	**More on confirmationals**
9.00-9.30	A case study of confirmationals in Atayal
9.30-10.00	How does valuation happen Valuation by lexical content Valuation by sound (including intonation)
10.00-10.30	The syntactic integration of intonation
10.30-11.00	Break
11.00-11.30	Intonational properties of speech acts in your language
11.30-12.00	More parameters of variation: source and strength of belief
12.00-12.30	Which parameters are your particles sensitive to?
12.30-1.00	Questions and discussions

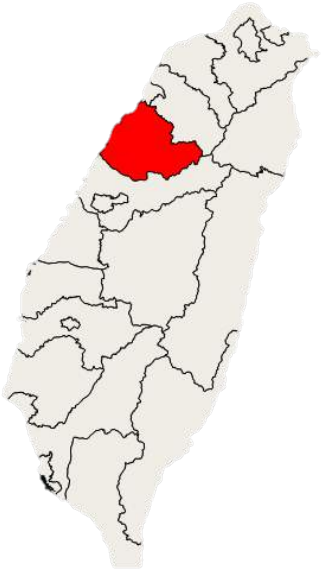
More confirmationals: Atayal

[+/-coin] in RespA

Atayal

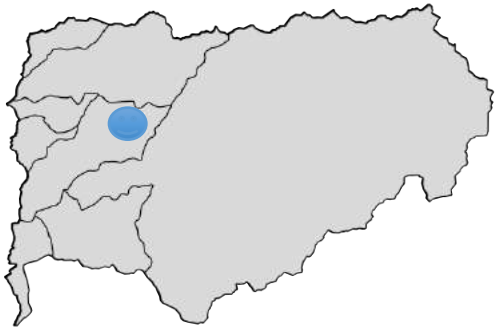
Atayal (Ataylic, Austronesian)
The targeted dialect: Maibgah tribe, Mayrinax/Cu'li' dialect

Miaoli County, Taiwan



Tai'an Township

Zhongxing Village



Previous work on Atayal SFPs

- Analyses of aspectual, temporal, and evidential SFPs
  - Egerod 1993
  - Holmer 2005 (on Seediq)
  - Yu 2015
  - Kao 2010 (on epistemic ‘ki’ and ‘pi’)

- No work on “confirmationals”

Asking questions in Atayal

Assertion: falling intonation (↘)

(1) *(b)lay ni'-un* ↘
good eat-pv
'It tastes good.'

Question: rising intonation (↗)

(2) *(b)lay ni'un* ↗
'Does it taste good?

Asking questions in Atayal

Yes-no questions in Formosan languages may be formed by means of contour modification, […]

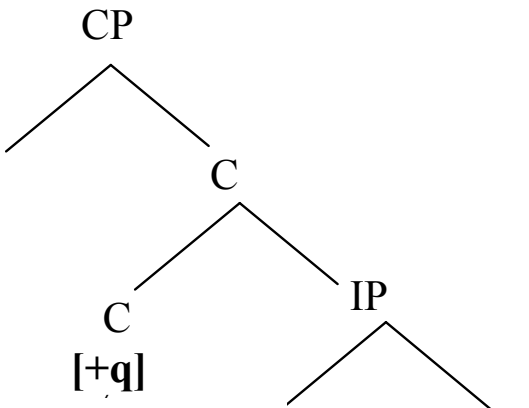
Shi 2008: 46

POLAR QUESTION FORMATION ACROSS LANGUAGES

question particles	585
interrogative verb morphology	164
mixture of previous types	15
interrogative word order	13
absence of declarative morpheme	4
interrogative intonation only	173
no interrogative-declarative distinction	1

Dryer. 2013. http://wals.info/chapter/116

The manifestation of $C_{[+q]}$



English: SAI

(1) *Does this ~~does~~ taste good?*

Mandarin: SFP

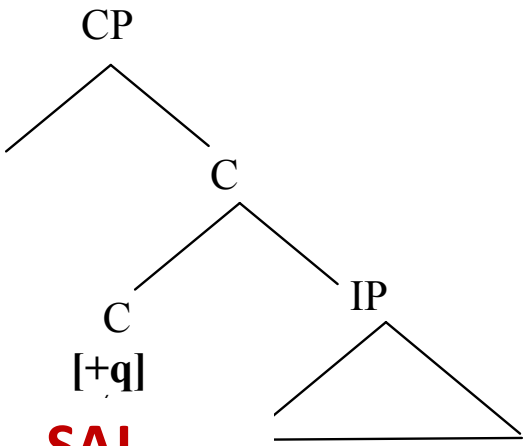
(2) *Zhege haochi* ***ma***

This tasty SFP

'Does it taste good?'

Cheng 1991/1997

The manifestation of $C_{[+q]}$



SAI

Particle

↗

English: **SAI**

(1) *Does this ~~does~~ taste good?*

Mandarin: **SFP**

(2) *Zhege haochi* ***ma***

This tasty SFP

'Does it taste good?'

Atayal: ↗

(3) *(b)lay ni'un* ↗

'Does it taste good?

But…

How does ↗ differ from SFP?

How do SFPs differ from each other?

Atayal also has SFPs to form questions

(1) (*b*)*lay ni'un* ***pi****?*
'Does it taste good?

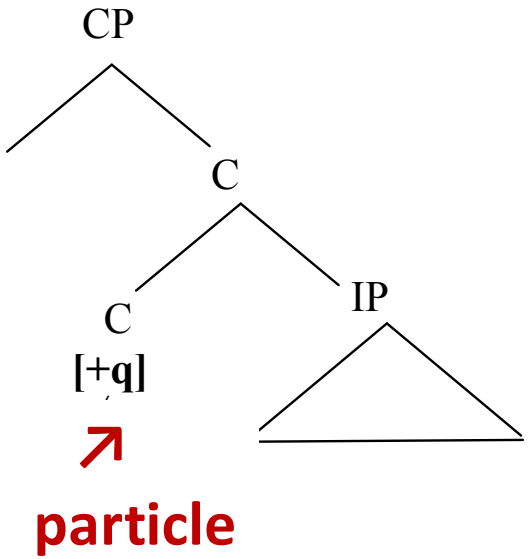
(2) *(b)lay ni'un,* ***ra****?*
'Does it taste good?

(3) *(b)lay ni'un,* ***hu****?*
'Does it taste good?

And…

Atayal SFPs can co-occur with ↗

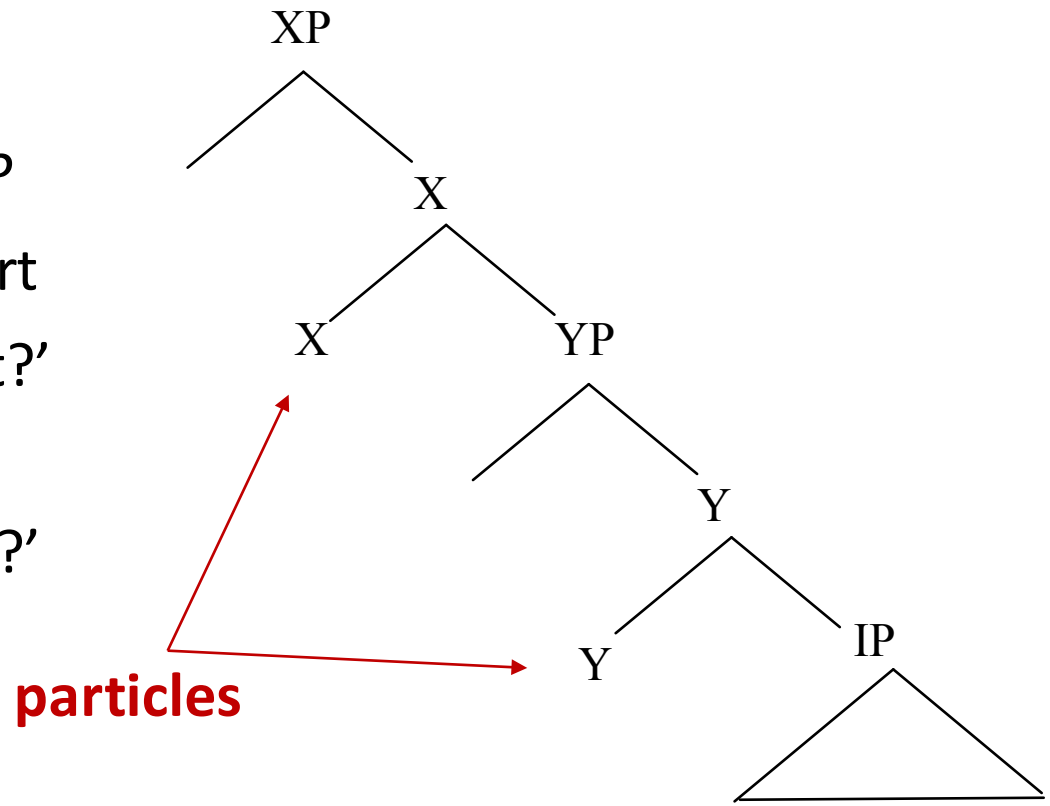
(1) *(b)lay ni'un, hu ↗?*
'Does it taste good?



Articulating the left periphery

Atayal SFPs can co-occur

(1) *huzing=su kani,* ***hu ra****?*
dog=2s.gen this, prt prt
'This is your dog, right?'
or
'Is this your dog, right?'



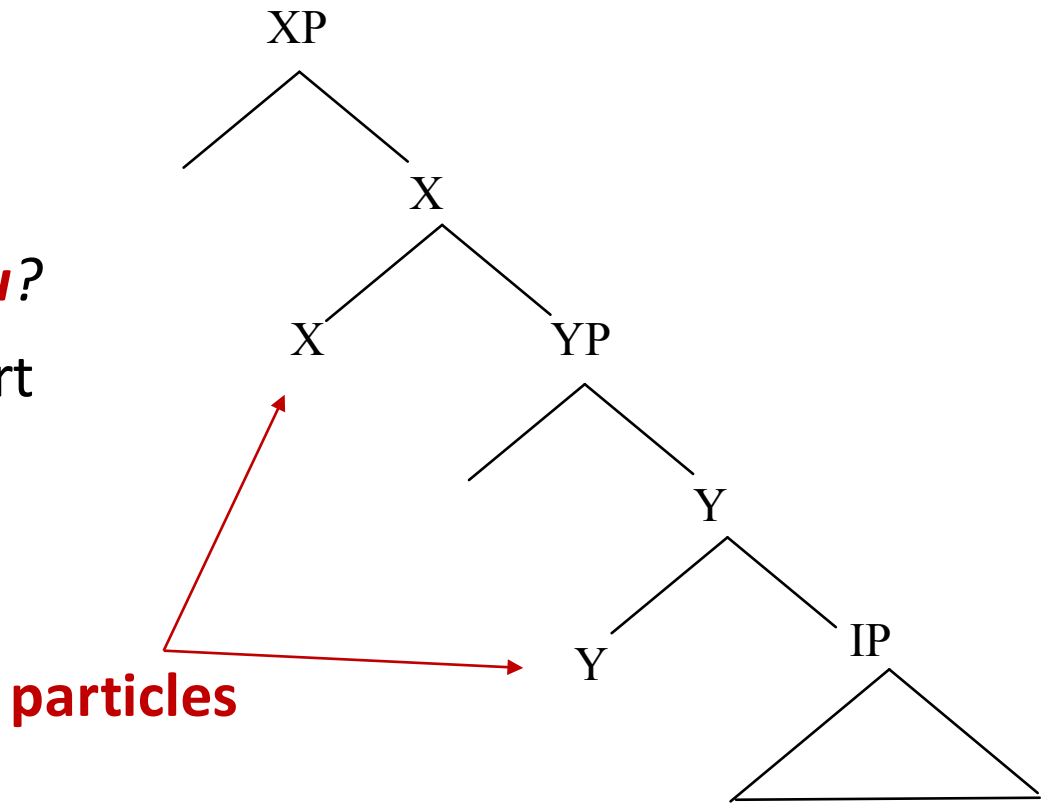
Articulating the left periphery

Atayal SFPs can co-occur

…with fixed linear order

(1) **huzing=su kani, **ra hu**?*

dog=2s.gen this, prt prt



Atayal ↗ vs. SFP

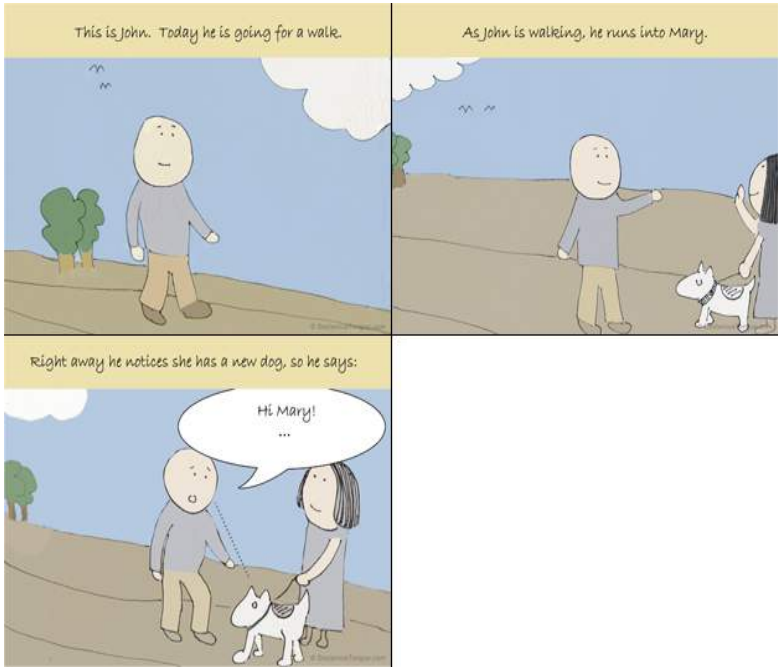
What's the difference?

Rising intonation

(1) *huzing=su kani* ↗
dog=2s.gen this
'Is this your dog?'

SFP

*(2) huzing=su kani, **hu**?*
dog=2s.gen this, prt
'This is your dog, right?'



Atayal ↗ vs. SFP

(1) **Rising intonation**

lay tax-an yiga' hani ↗
good watch-lv movie this
'Was this a good movie?'

(2) **SFP (hu)**

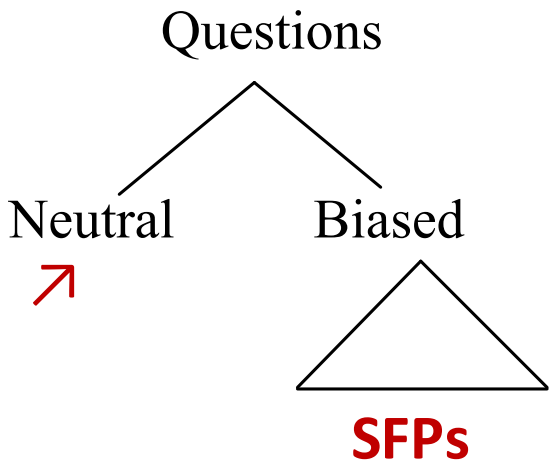
lay tax-an yiga' hani* ***hu*
good watch-lv movie this prt

(3) **SFP (ra)**

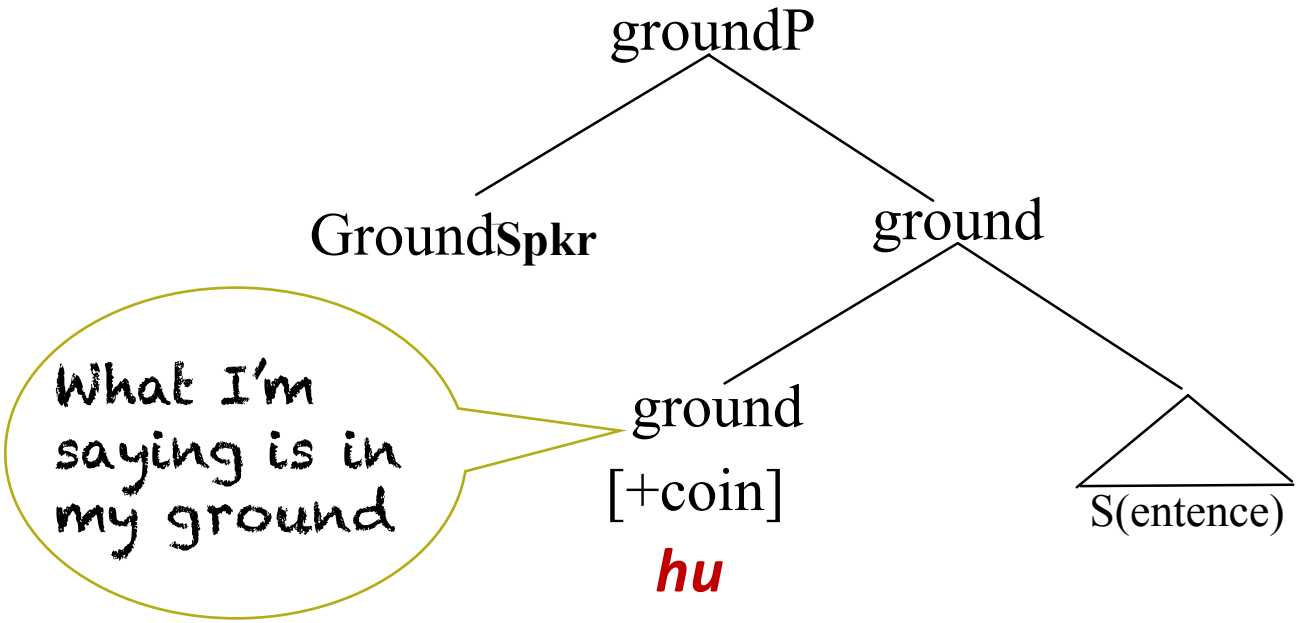
lay tax-an yiga' hani ***ra***
good watch-lv movie this prt

Atayal ↗ vs. SFP

How is the bias encoded?



Bias can be encoded in GroundP



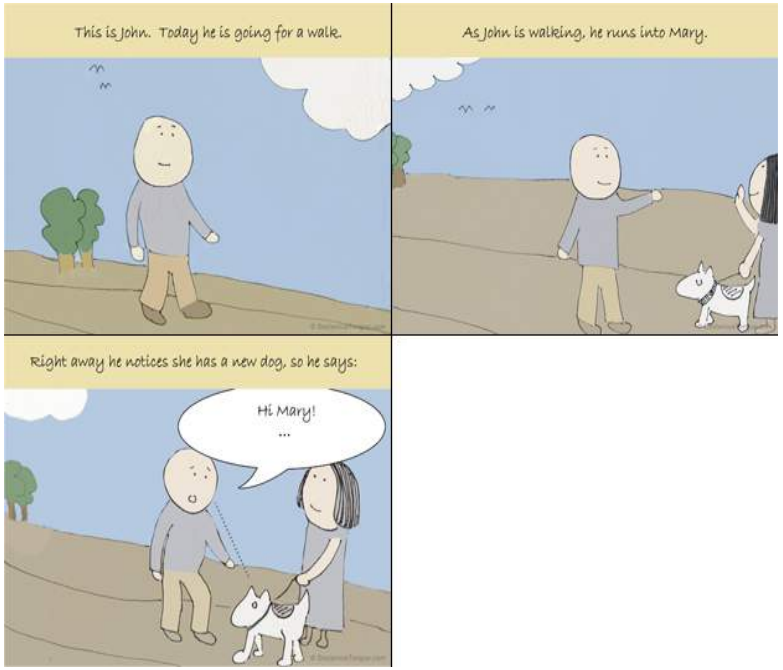
Atayal ↗ vs. SFP

Rising intonation

(1) *huzing=su kani* ↗
dog=2s.gen this
'Is this your dog?'

SFP

(2) huzing=su kani, ***hu****?*
dog=2s.gen this, prt
'This is your dog, right?'



Atayal ↗ vs. SFP

(1) **Rising intonation**

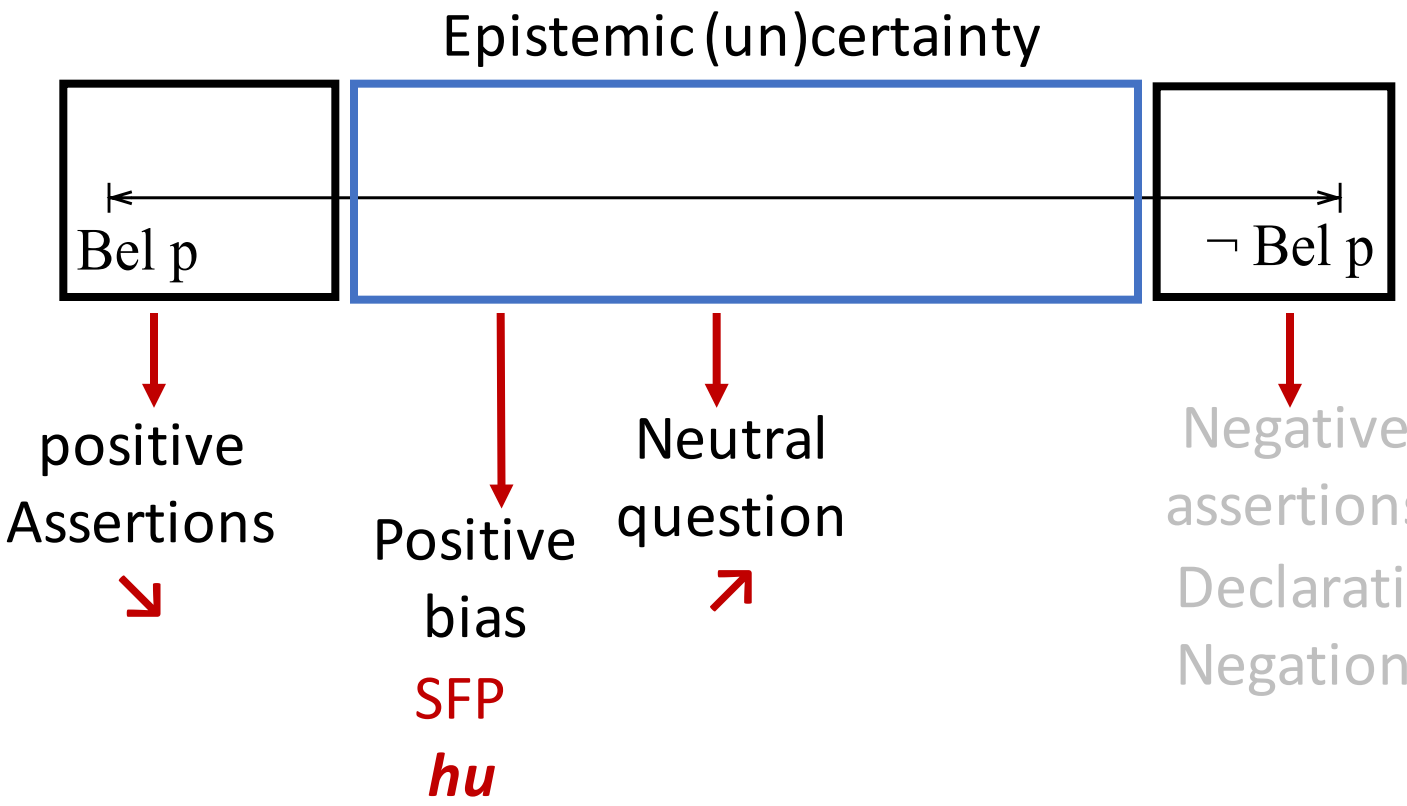
lay tax-an yiga' hani ↗

'Was this a good movie?'

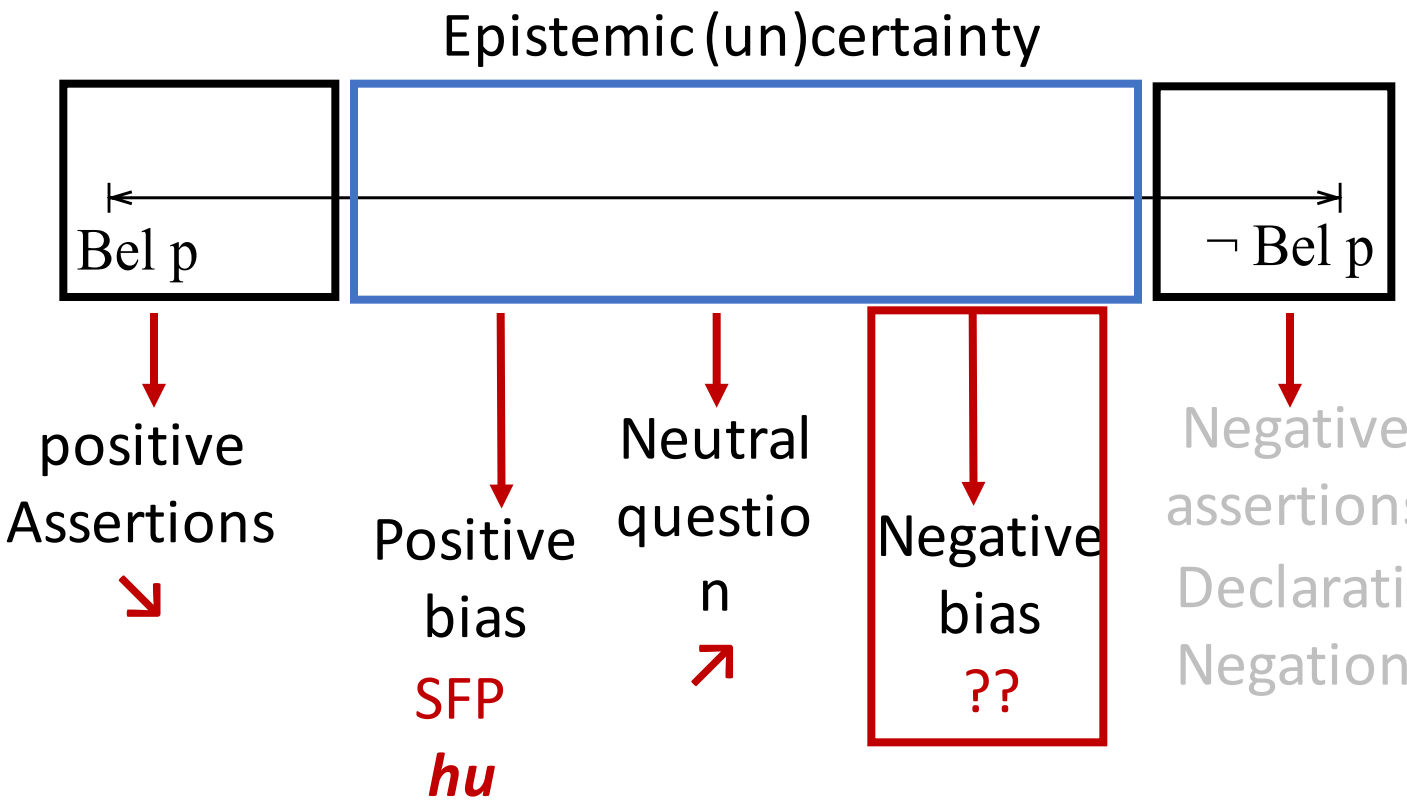
(2) **SFP (hu)**

******lay tax-an yiga' hani* ***hu***

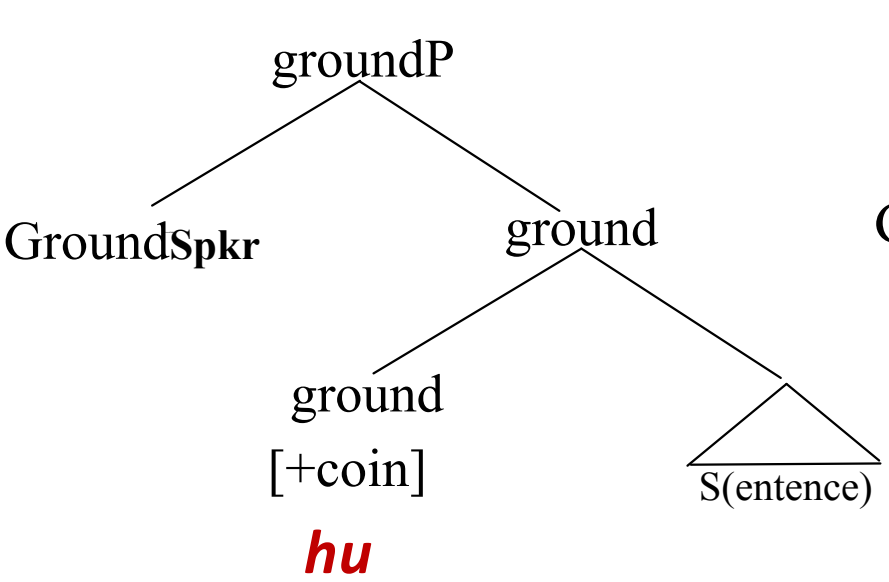
Bias in Atayal

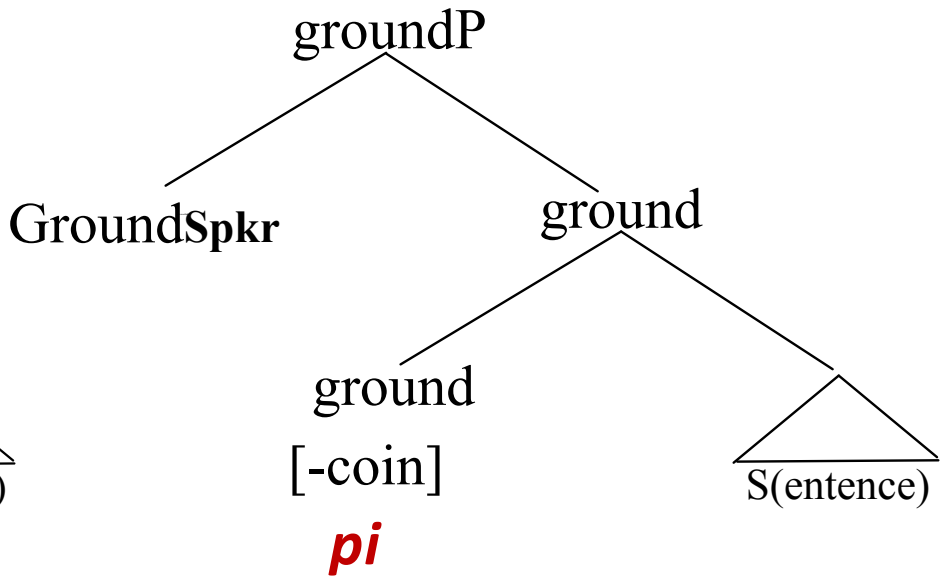


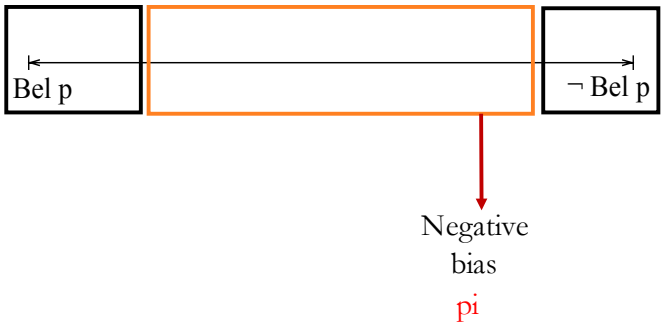
Bias in Atayal



The structure of grounding

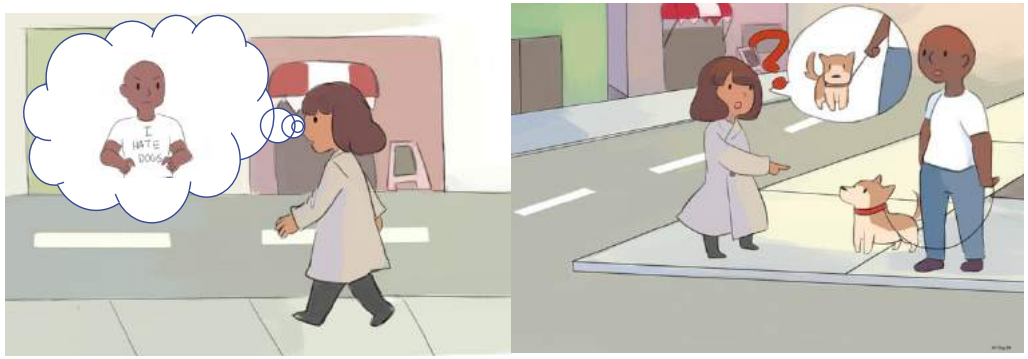






Negative bias in Atayal

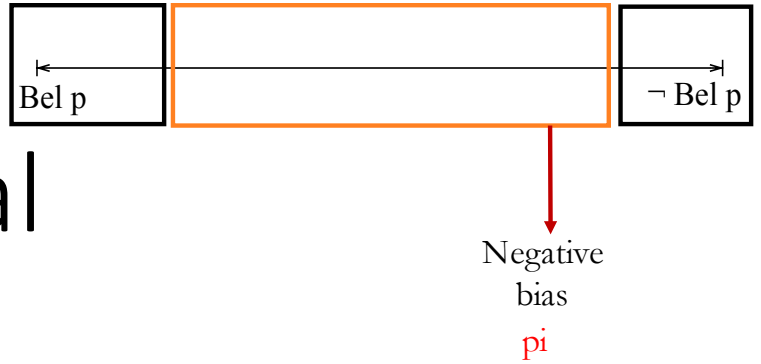
NEGATIVE BIAS



*kyang huzing=su **pi**?*

‘Do you have a dog?’

Comment: you doubt it



Negative bias in Atayal

(1) *min-nisan=su kaha'ang huzing hani'* ↗

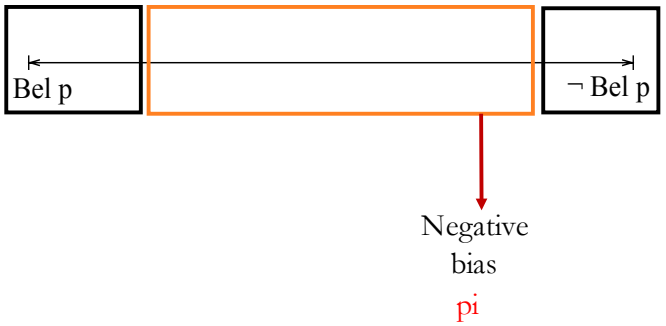
pst-just.now=2s.erg take.care dog this

'You recently raised this dog?'

(2) *min-nisan=su i kaha'ang huzing hani'* ***hu***?

(3) **min-nisan=su kaha'ang huzing hani'* ***pi***?

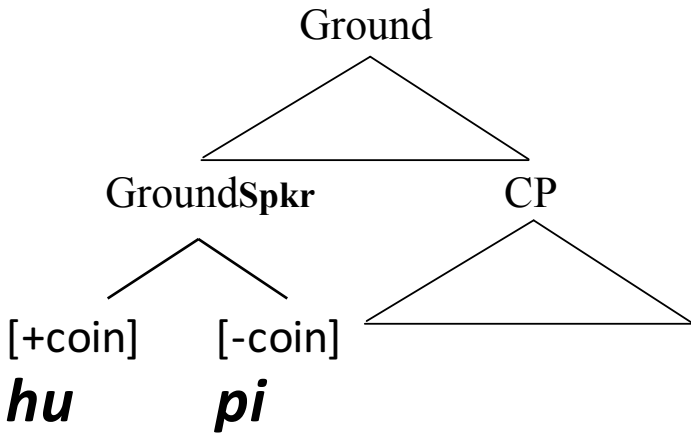
Negative bias in Atayal

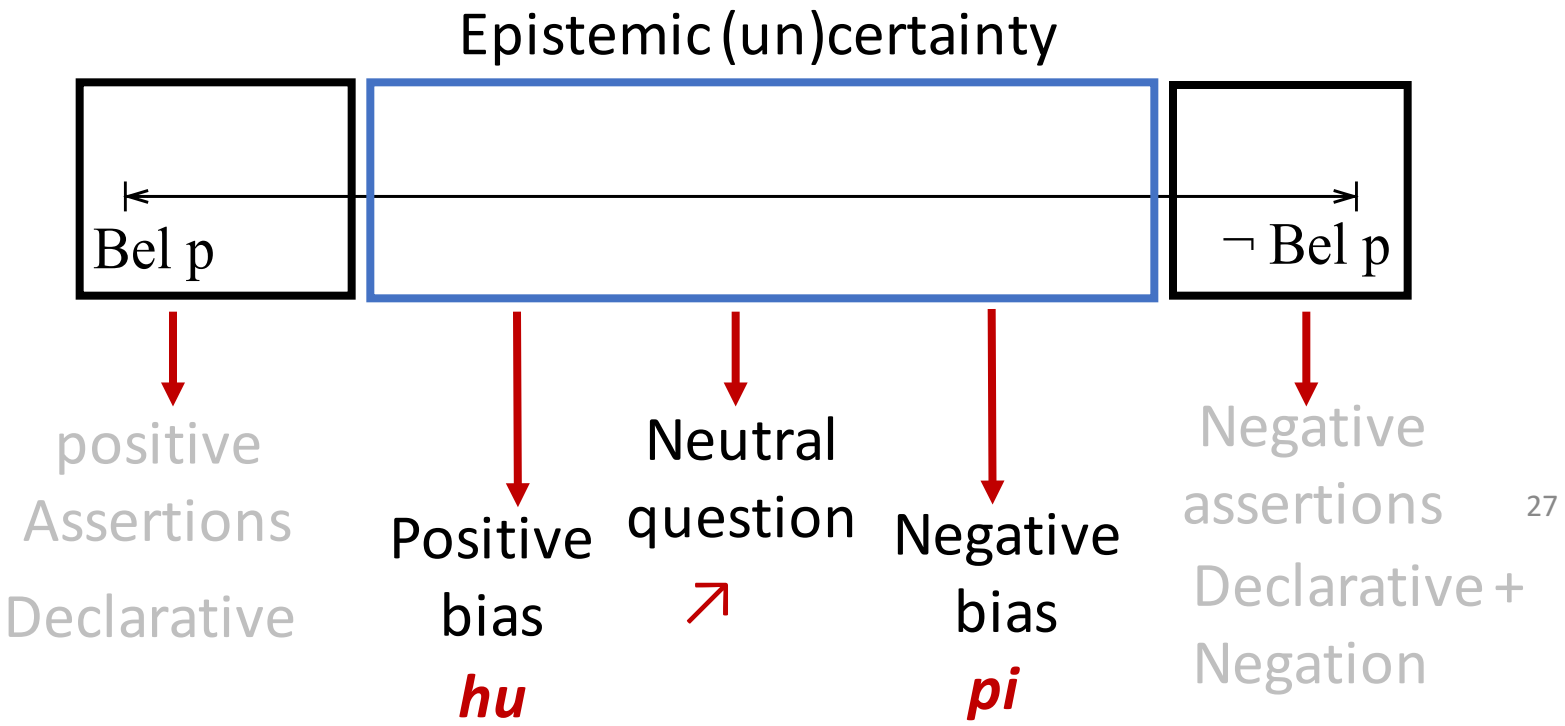


(1) *kyang huzing=su* ↗
exist dog=2s.gen
'Do you have a dog?'

(2) **kyang huzing su **pi**?*

Bias in Atayal





Addressee bias

(1) **Rising intonation**

lay tax-an yiga' hani ↗

'Was this a good movie?'

(2) **SFP (hu)**

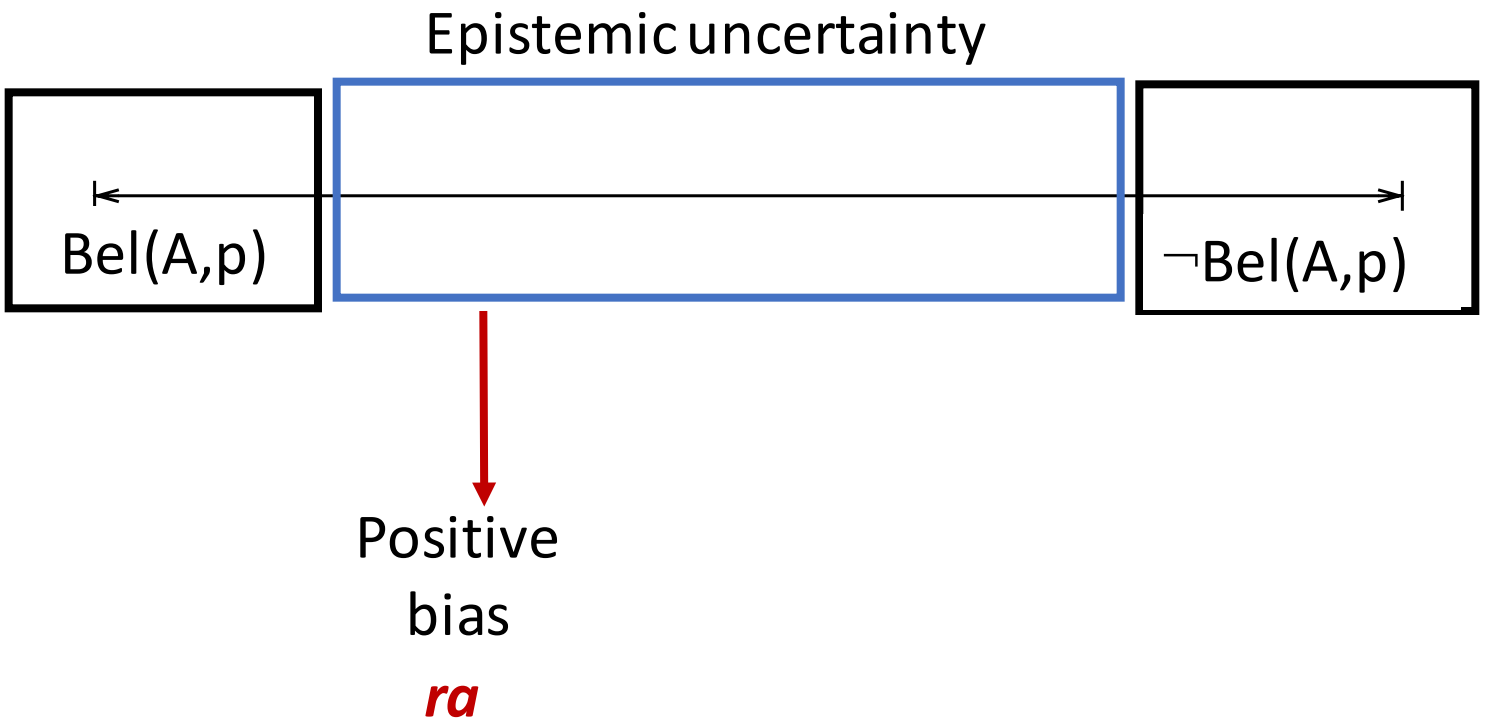
lay tax-an yiga' hani **hu*

(3) **SFP (ra)**

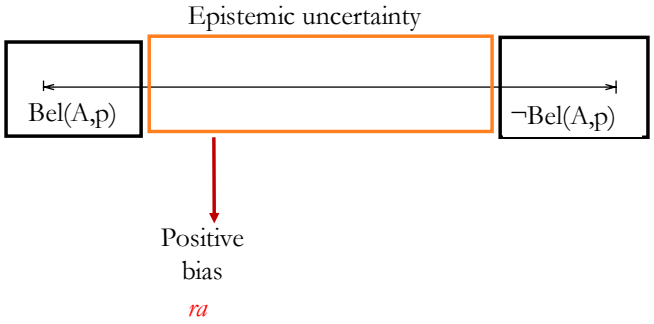
*lay tax-an yiga' hani **ra***

'Was this a good movie?'

Addressee bias in Atayal



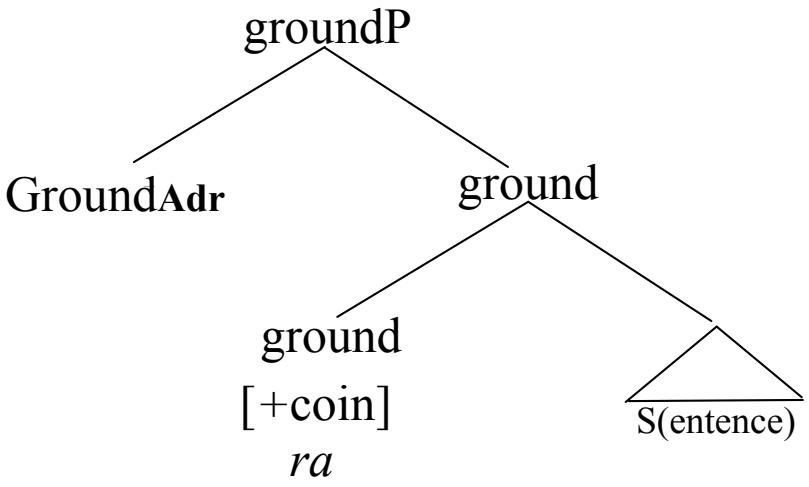
Addressee bias



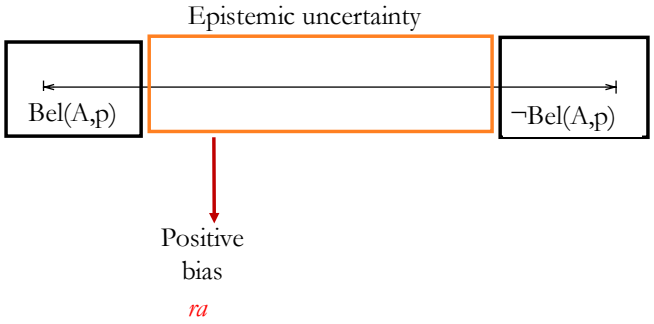
(3) **SFP (ra)**

lay tax-an yiga' hani ***ra***

'Was this a good movie?'



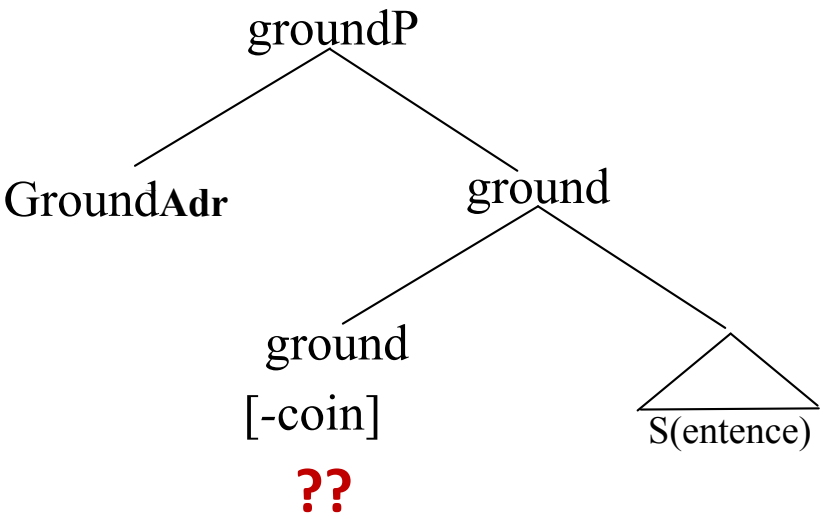
Addressee bias

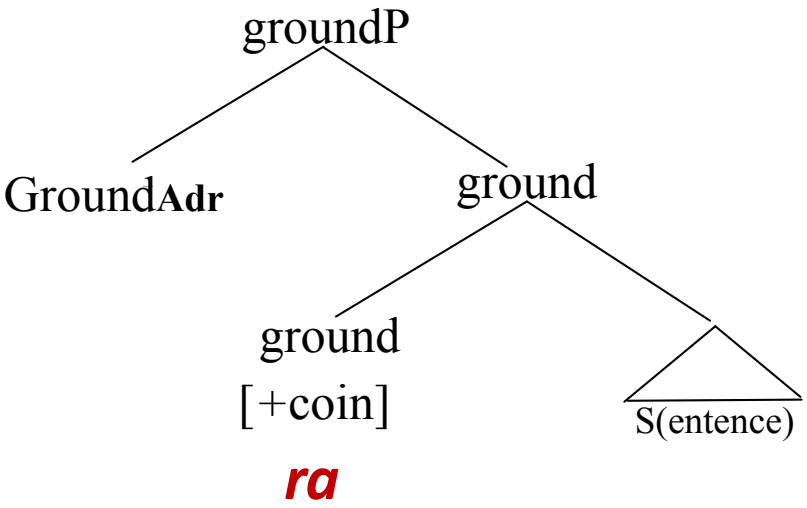


(1) *lay tax-an yiga' hani* ***ra***?
'This movie was good, right?'

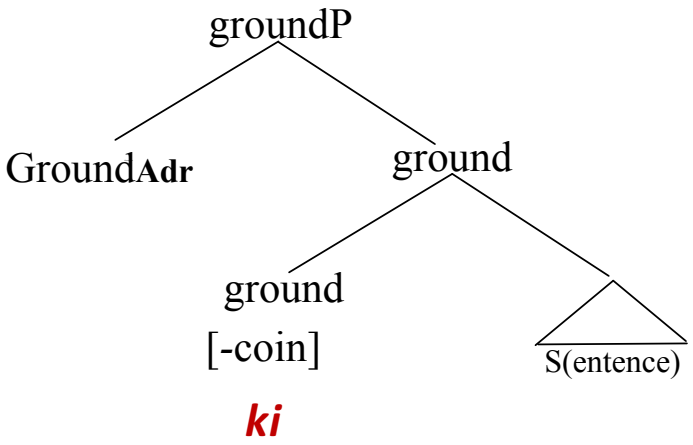
Comment: You didn't give your own evaluation.

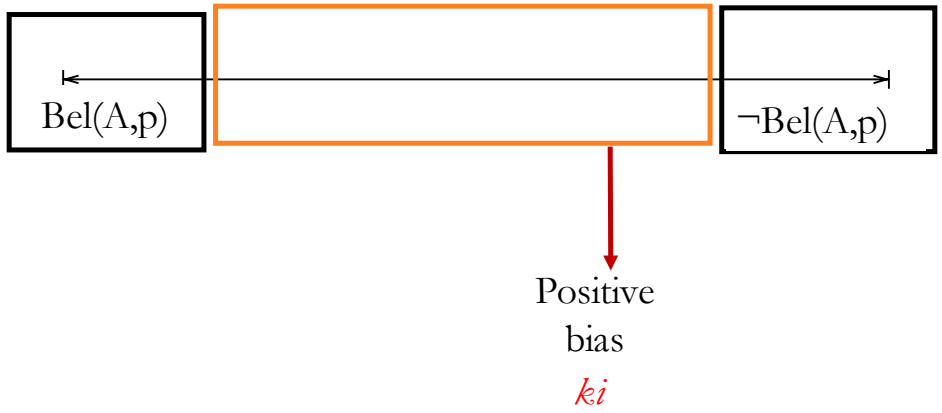
Addressee bias





Addressee bias (negative)

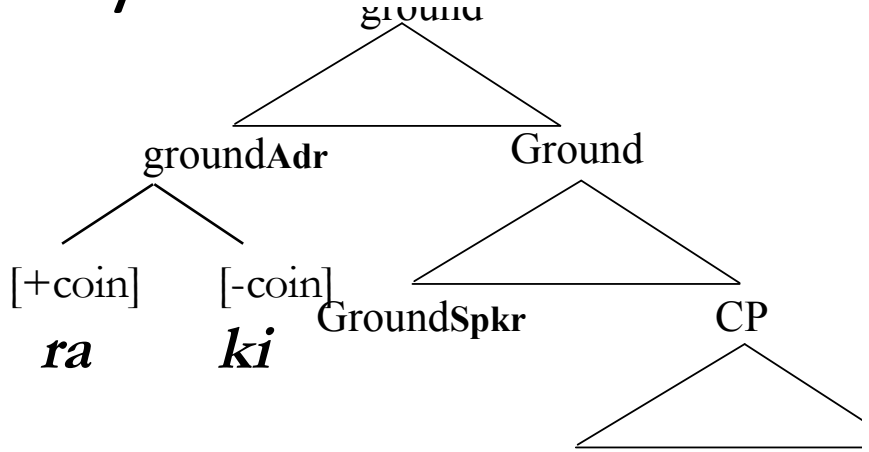


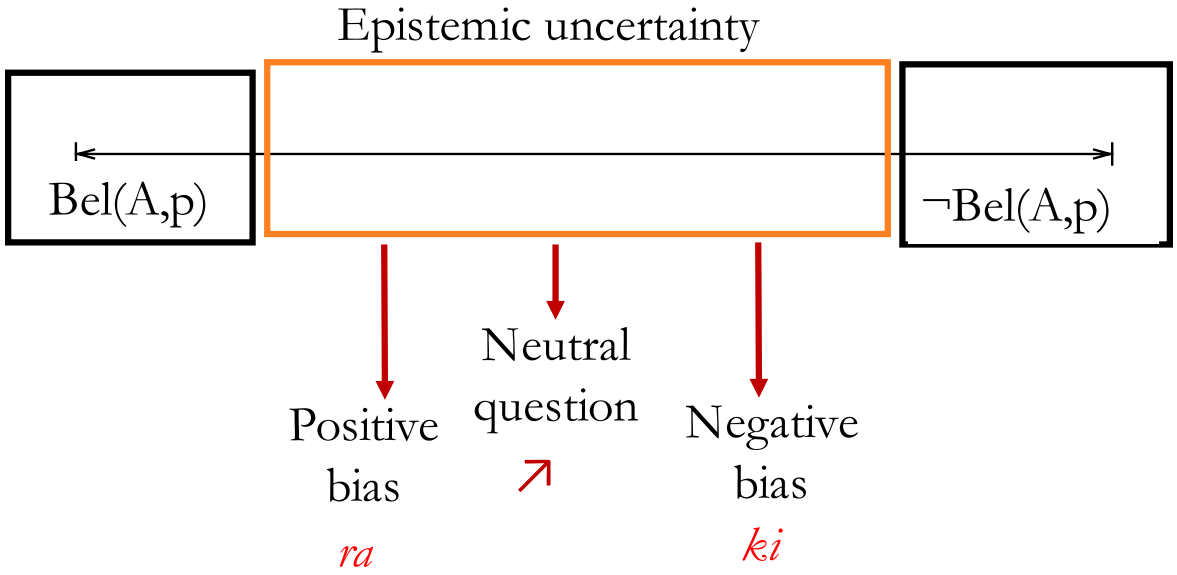


(1) *kyang huzing mu la* ***ki***
exist dog=1s.gen prt
'I have a dog.'

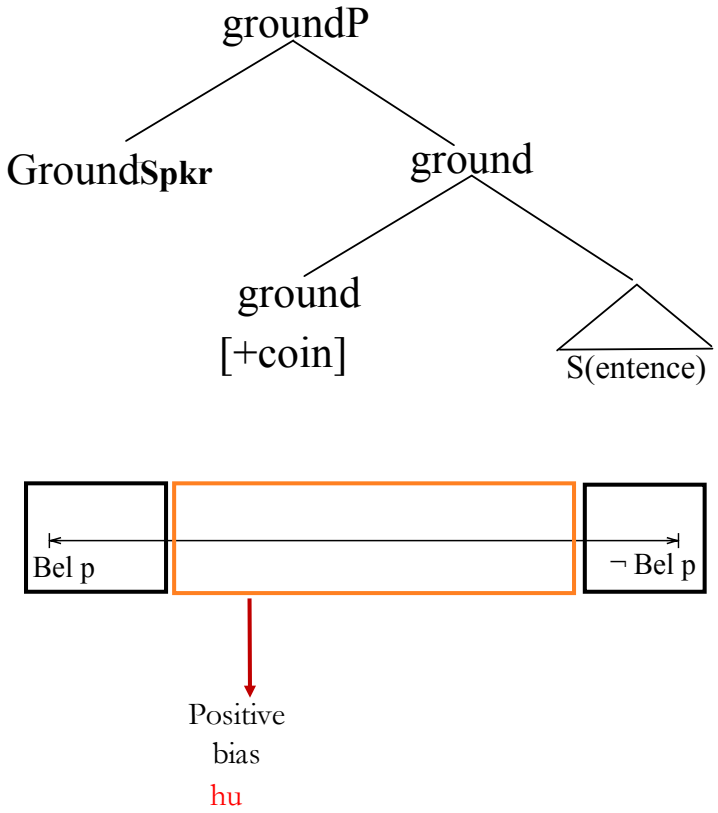
Volunteered context:
People don't believe you have a dog, and you refute: I have a dog!

Addressee bias in Atayal





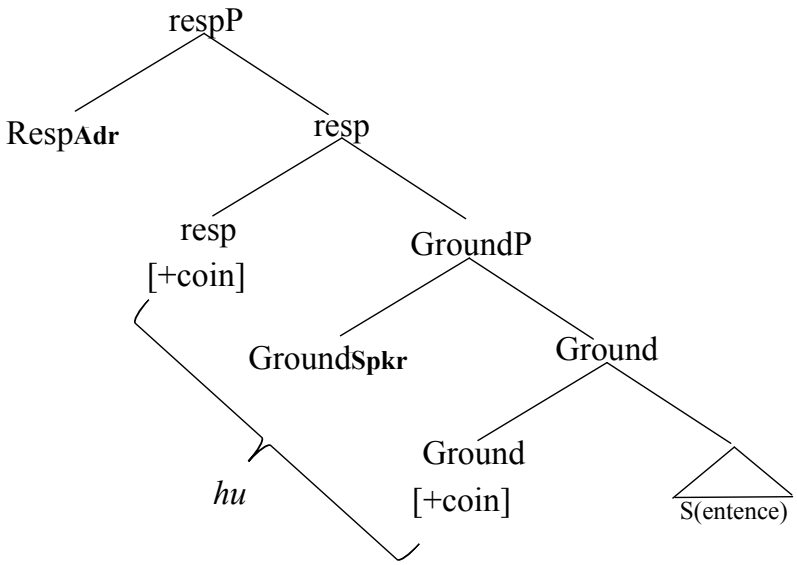
SFP more than epistemic stance

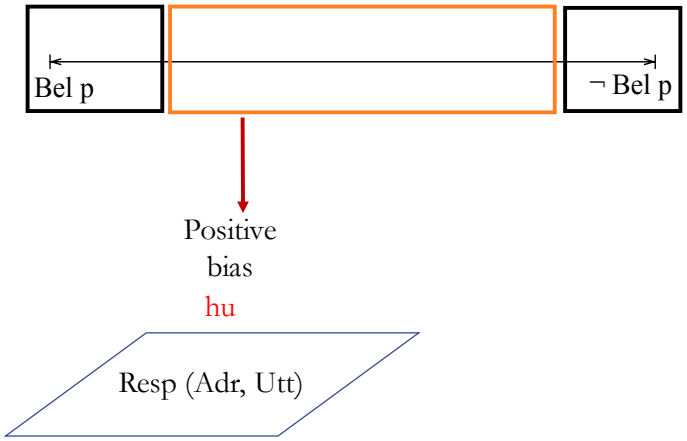


(1) *min-nisan=su i kaha'ang huzing hani'* ***hu****?*

'You recently raised this dog?'

Requesting a response





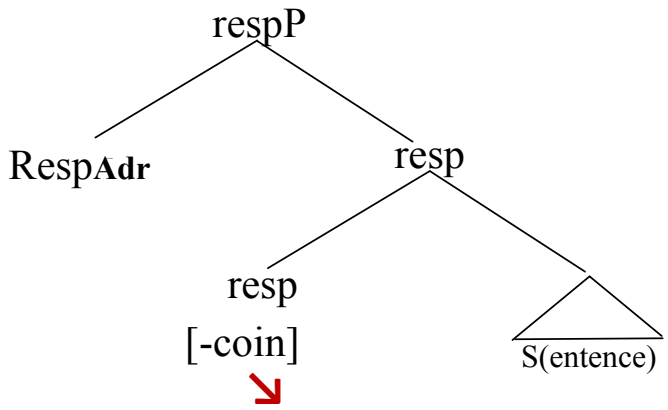
(1) *min-nisan=su i kaha'ang huzing hani'* ***hu****?*

'You recently raised this dog?'

Asking questions in Atayal

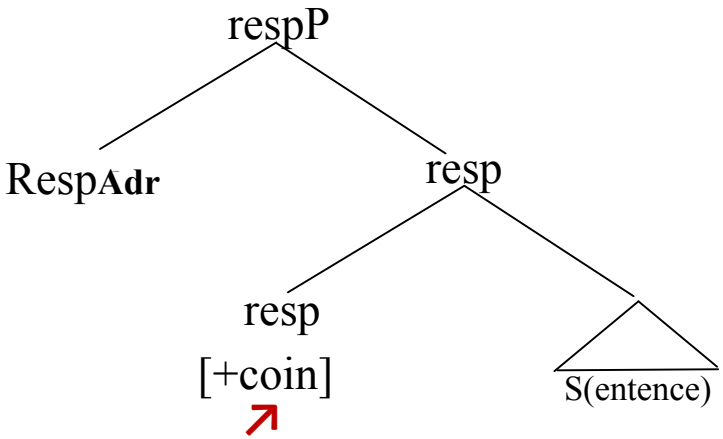
Assertion: falling intonation (↘)

(1) *(b)lay ni'-un* ↘
good eat-pv
'It tastes good.'

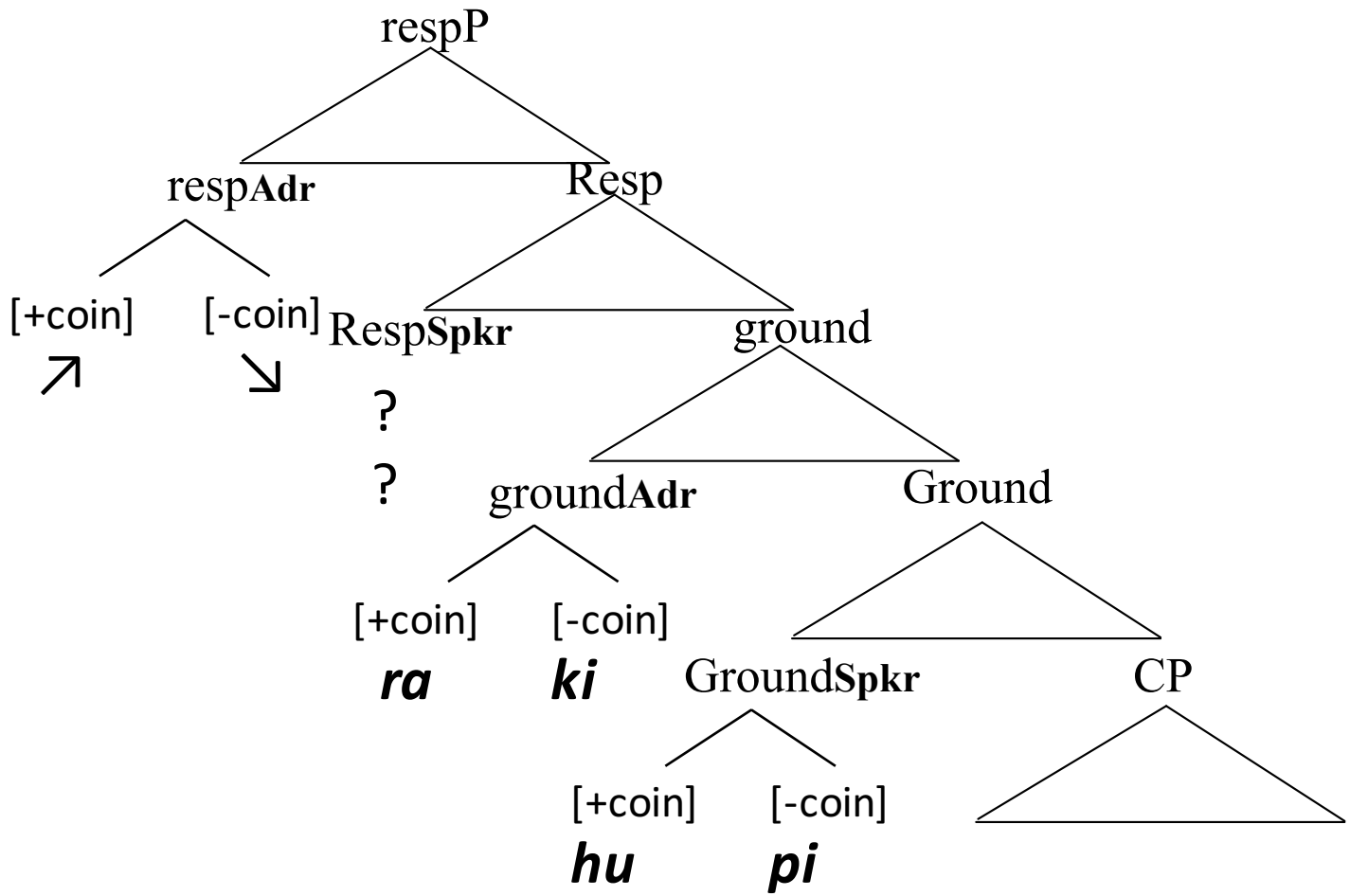


Question: rising intonation (↗)

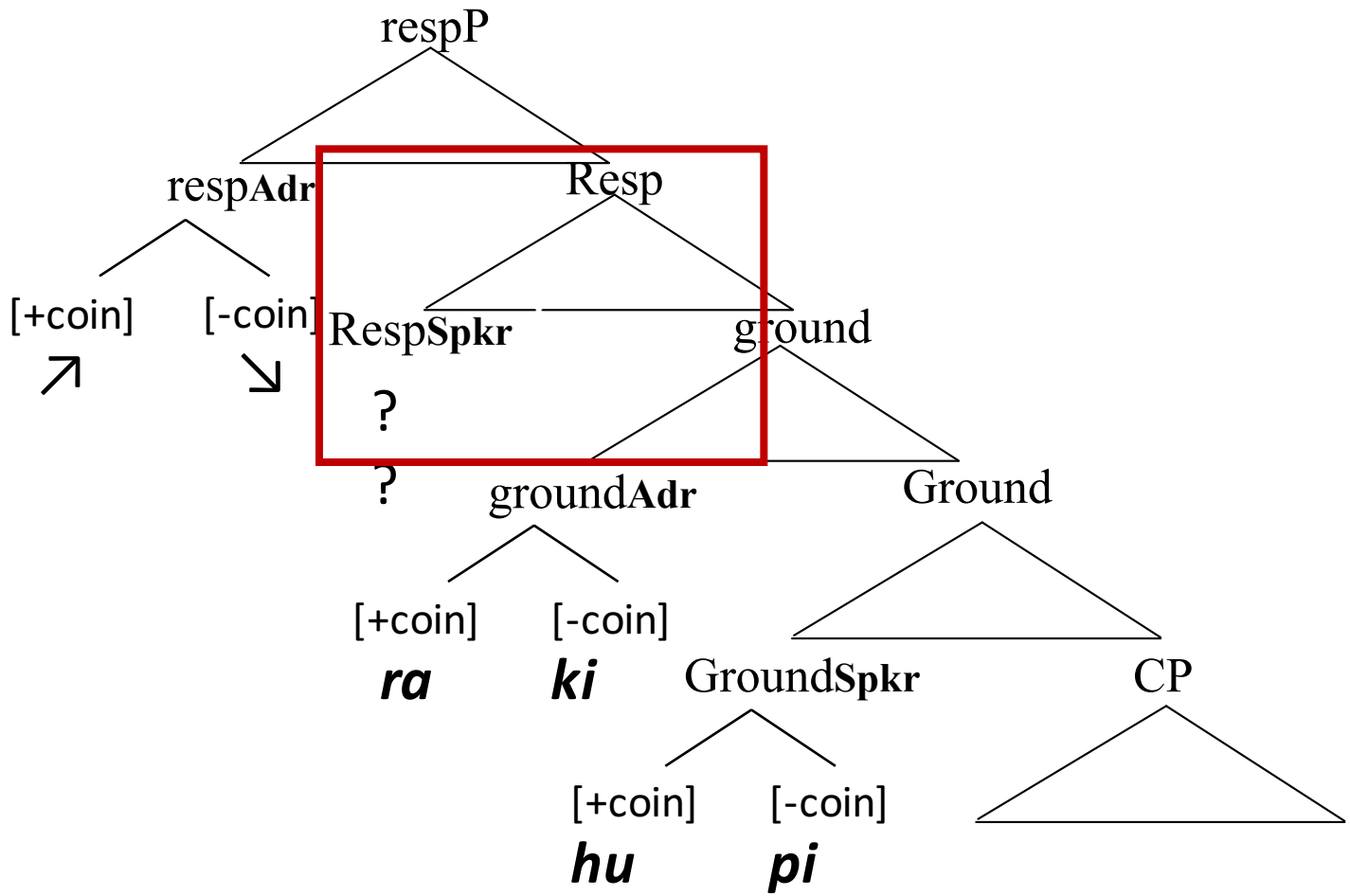
(2) *(b)lay ni'un* ↗
'Does it taste good?



The articulated far left in Atayal



Summary


respP
respAdr
Resp
[+coin]
[-coin]
RespSpkr
ground
?
?
groundAdr
Ground
[+coin]
[-coin]
ra
ki
GroundSpkr
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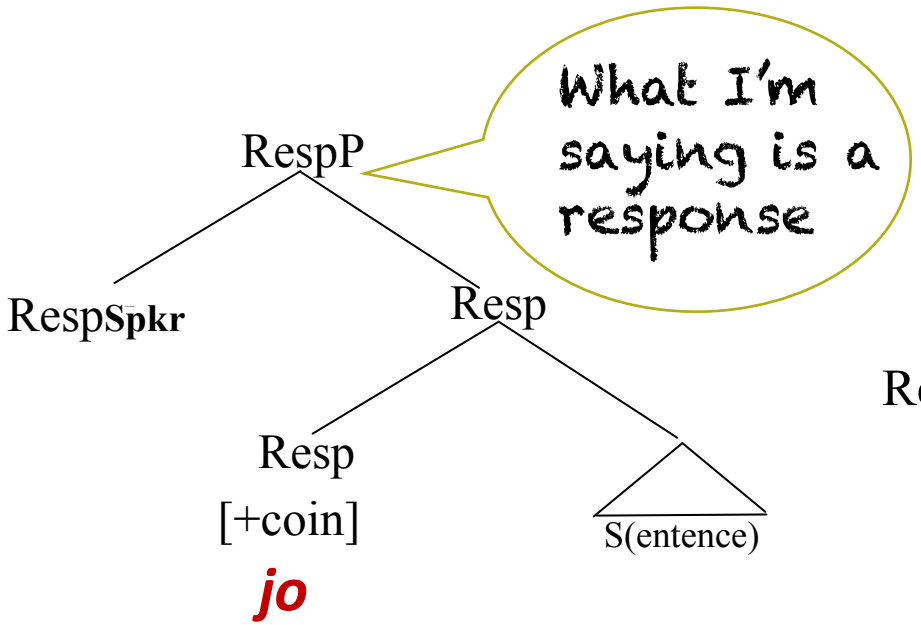
[+coin]
[-coin]
hu
pi

Completing the typology

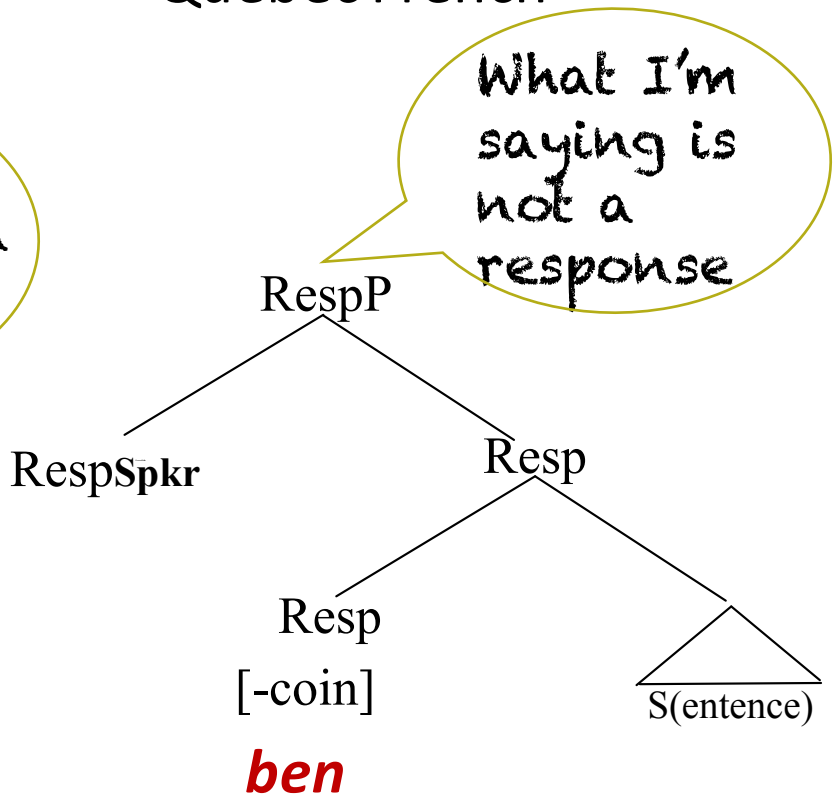
[+/-coin] in RespSpkr

Completing the typology: beyond Atayal

Upper Austrian German



Quebec French



What I'm saying is a response

Upper Austrian German

Context. A and B are co-workers. Their working hours are fixed and they always go home at 4.30. Typically, they get ready to leave at 4.25 so they can be out the door by 4.30. Today B is not showing any signs of getting ready even at 4.25. A comments:

Jo *wonn gehst denn du heit ham?*

'So when are you leaving today?'

What I'm saying is a response

Upper Austrian German

Context. A and B work in the same cubicle. A usually leaves work at 4, but sometimes his schedule is a bit off. B wants to know if A is indeed planning to leave at 4 today.

B: *Gehst du heit um 4 ham?*
'Are you going home at 4 today?'

A: ***Jo*** *des was-st doch eh. I geh imma um 4 ham.*
'But you know that. I always go home at 4.'

What I'm saying is not a response

Quebec French

A: Qu'est-ce qu'on mange pour souper?
'What are we having for dinner?'

B : Ben (on mange) de lasagne.
'*Ben* (we're having) lasagne.'
→'You should know that we are having lasagna.'

…suspends A's conversational move
… marks that p should already be in the common ground

What I'm saying is not a response

Quebec French

A: Est-ce que la session est terminée?
'Is the semester over?'

B: *Ben* Jean a remis son dernier travail.
'ben Jean has handed in his last paper.'

… signals a shift in the conversational move

… signals that there is more to say

How is [*u*coin] valued?

What are particles?

- **Particles cannot be inflected**

  → they lack grammatical features to be spelled out

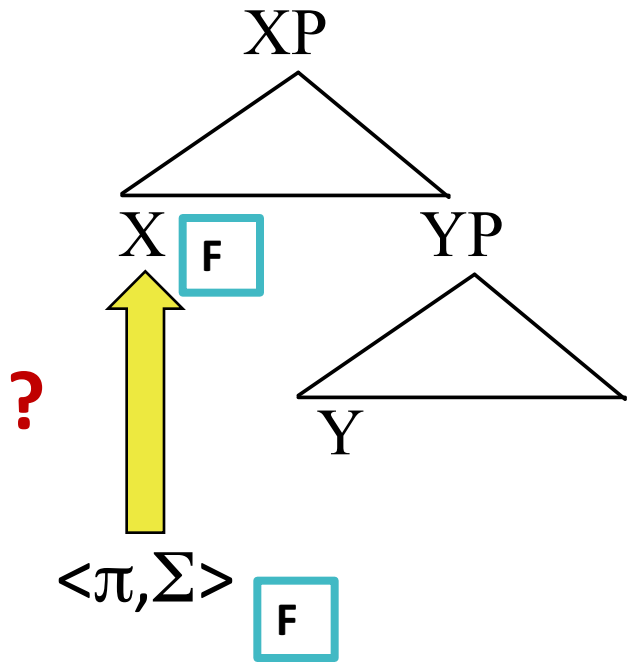
- **Particles are multi-functional**

  → they lack grammatical features to be interpreted

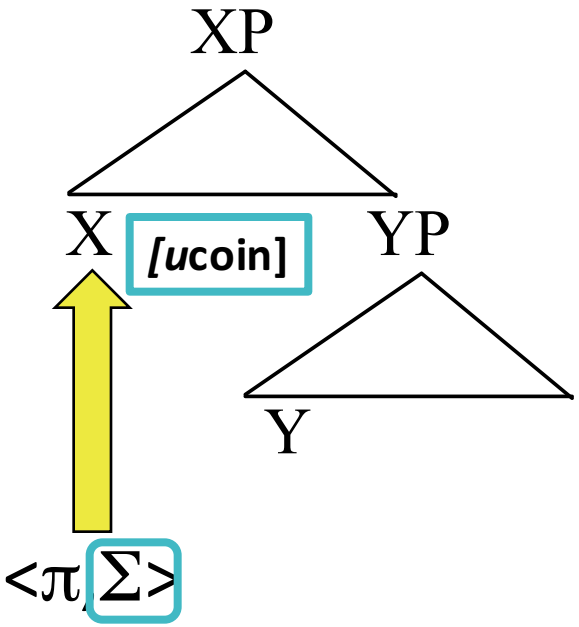
- **Particles are minimal lexical entries**

  $<\pi,\Sigma>$

How do particles interact with syntax?



Meaning values F



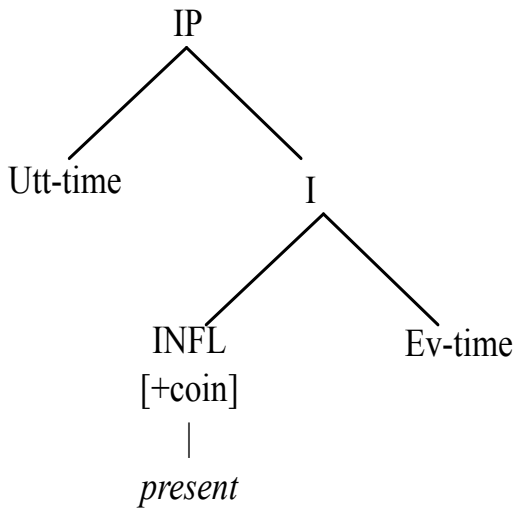
Predictions

- **multi-functionality** of <π,Σ>
- Modification affects **form** and **interpretation**
- **Sound** can value [*u*coin]

M-valuation

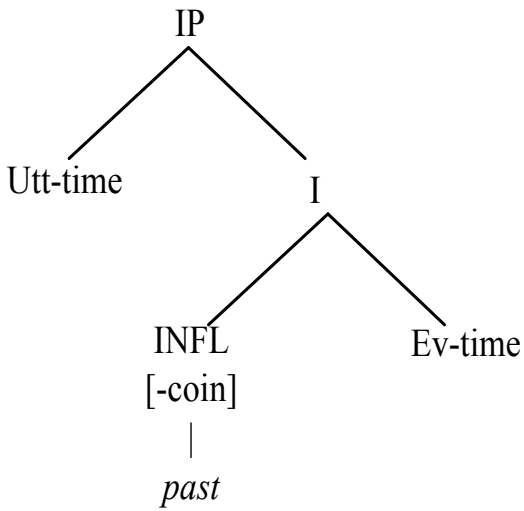
- Present

(1) Yoshi likes his ball.



- past

(2) Yoshi lik-ed his ball.



TENSE orders the event time relative to the utterance time

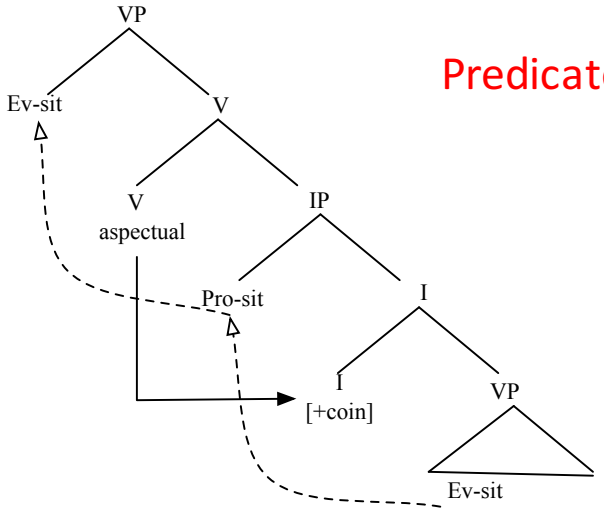
Demirdache & Uribe Etxebarria 1997
Ritter & Wiltschko 2009, 2012

Predicate valuation

The meaning of the embedding predicates serves to value [ucoin]

Simultaneous infinitives

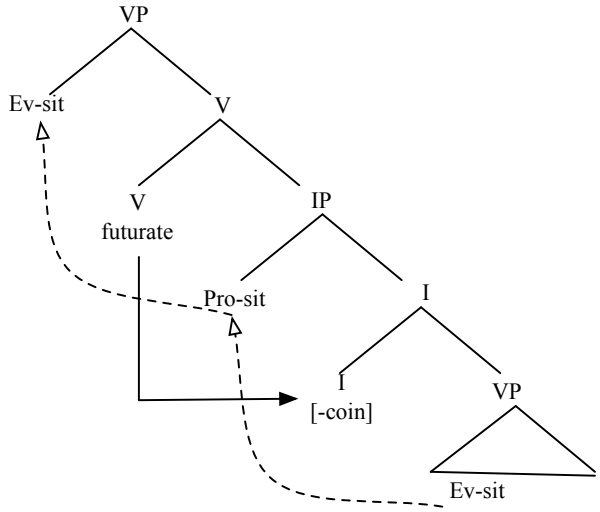
(1)*Yoshi is starting to play*



Predicate valuation

Future irrealis infinitives

(2) *Yoshi wants to play.*



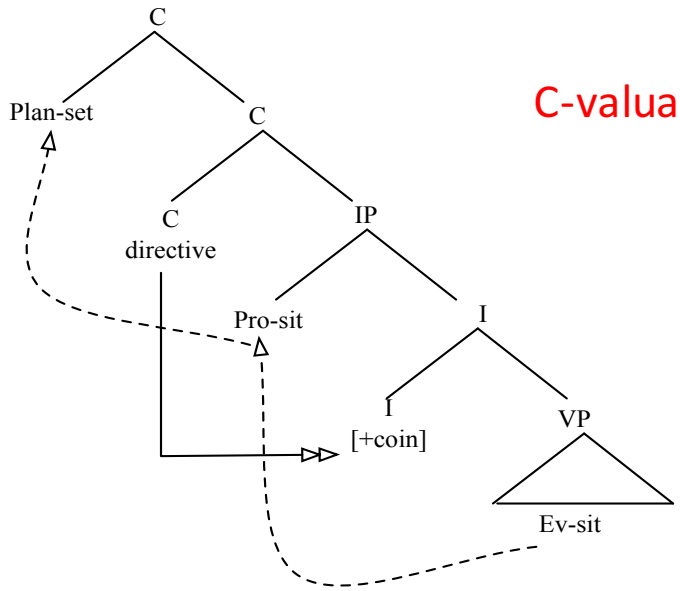
[*u* coin] in INFL is valued by the matrix predicate

C-valuation

Higher value values [ucoin]

Imperative

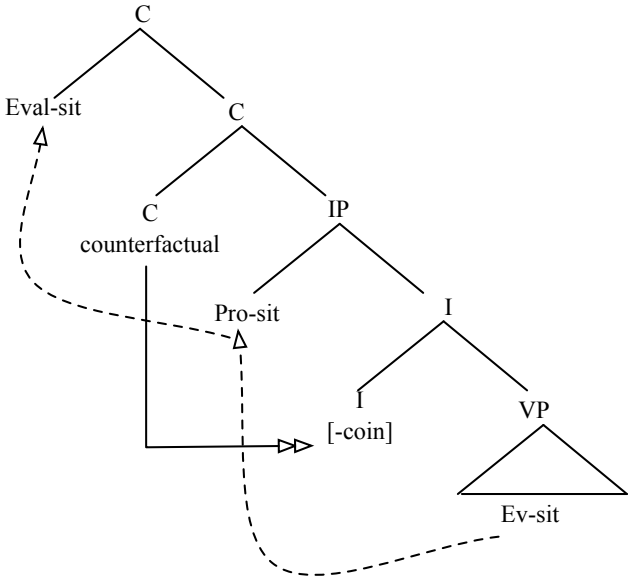
(1) *(You) be quiet!*



C-valuation

Counterfactual

(2) *If I had a car right now, I would drive*



[*u* coin] in INFL is valued by the higher functional head

Valuation by meaning of particle

Forms used as confirmationals

English:

eh (? = aye) -

hey

huh

no

right

don’t you…

yes

Forms used as confirmationals

German:

Ja	-	*yes*
Nein	-	*no*
oder	-	*or*
nicht wahr	-	*not true*
Geu = gelt	-	*'it holds'*

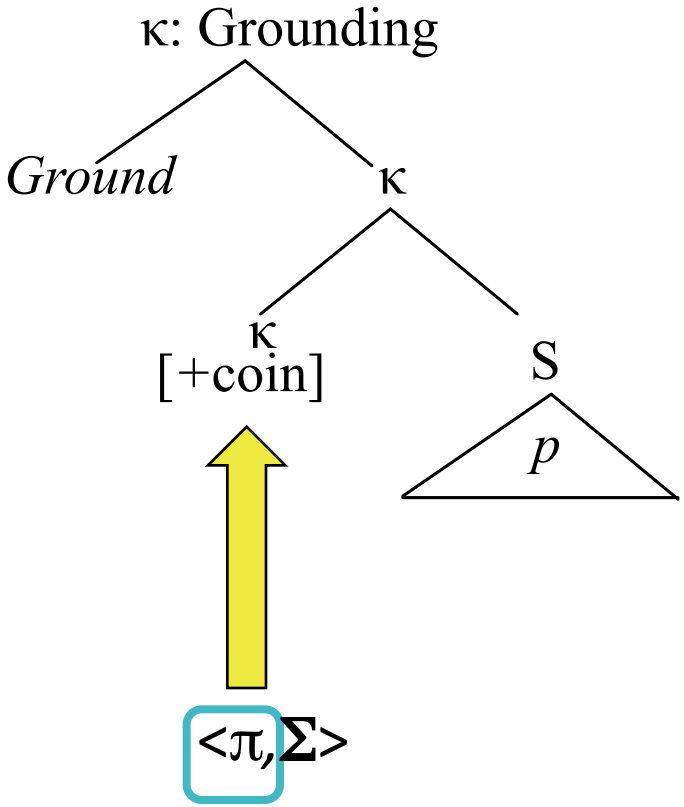
Valuation by sound

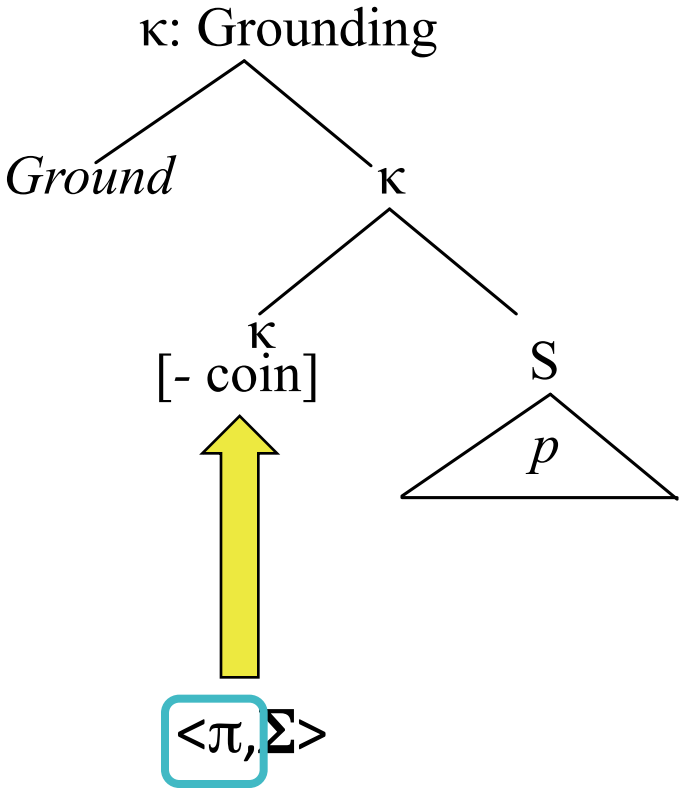
Telicity marking in Japanese

Based on Fujimori 2011
https://circle.ubc.ca/bitstream/handle/2429/36951/ubc_2011_fall_fujimori_atsushi.pdf

Prediction

Sound can value [ucoin]





Sound can value [*u*coin]

Telicity marking by vowels in Japanese:

Monosyllabic verbs

Vowel quality	Verbal telicity
/e, u/	telic
/i, o/	atelic
/a/	telic or atelic

Bisyllabic verbs

First vowel	Verbal telicity	Second vowel	Verbal telicity
/e, u/	telic or atelic	/e, u/	telic
/i, o/	telic or atelic	/i, o/	atelic
/a/	telic or atelic	/a/	telic or atelic

Non-concatenative and apparently non-compositional

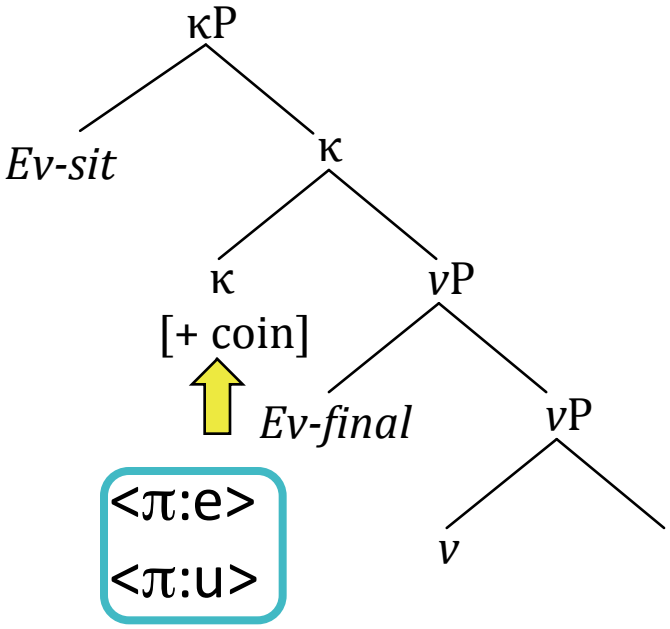
Consonantal parts and verbal meanings

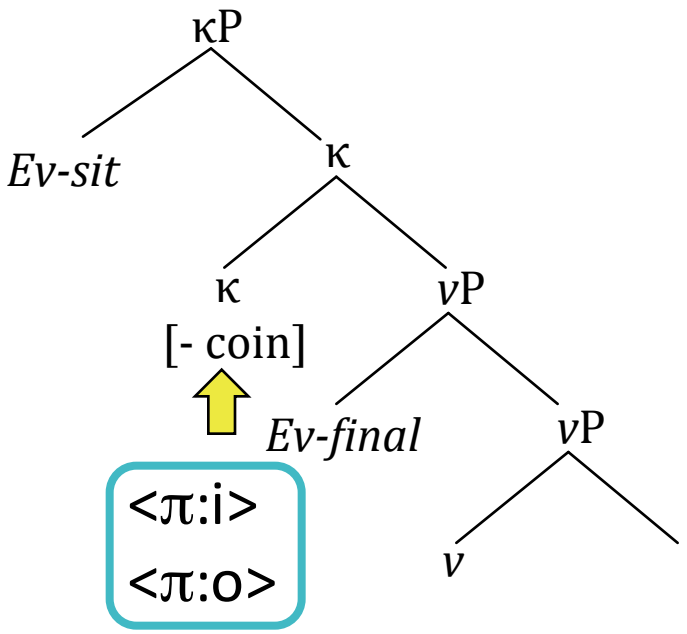
Telicity	Vowel	/kVt-/	/sVt-/	/hVt-/
[+telic]	/e/	ket- ‘kick’	set- ‘bid’	het- ‘decrease’
	/u/	kut- ‘devour’	sut- ‘strike’	hut- ‘swing’
[-telic]	/i/	kit- ‘*cut’	sit- ‘know’	hit- ‘fart’
	/o/	kot-	sot- ‘shave’	hot- ‘dig’

Adapted from Fujimori 2011: 143

Sound can value [*u*coin]

Central vs. peripheral vowels





Vowel quality	Verbal telicity
/e, u/	telic
/i, o/	atelic
/a/	telic or atelic

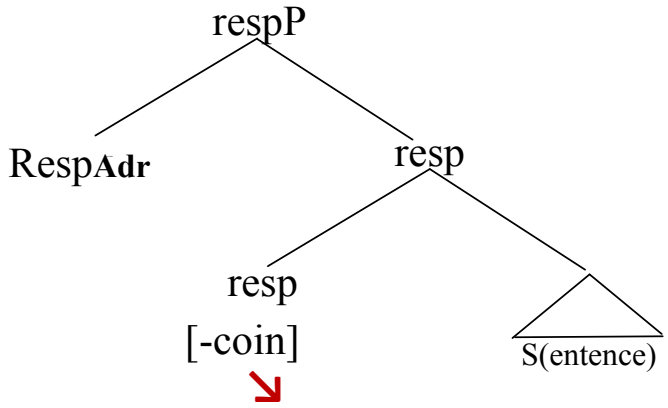
Valuation by intonation

Questions in Atayal

Is this conventional or iconic?

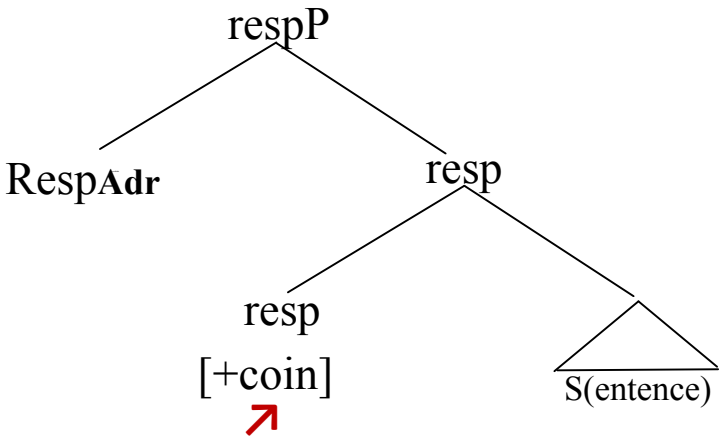
Assertion: falling intonation (↘)

(1) *(b)lay ni'-un* ↘
good eat-pv
'It tastes good.'



Question: rising intonation (↗)

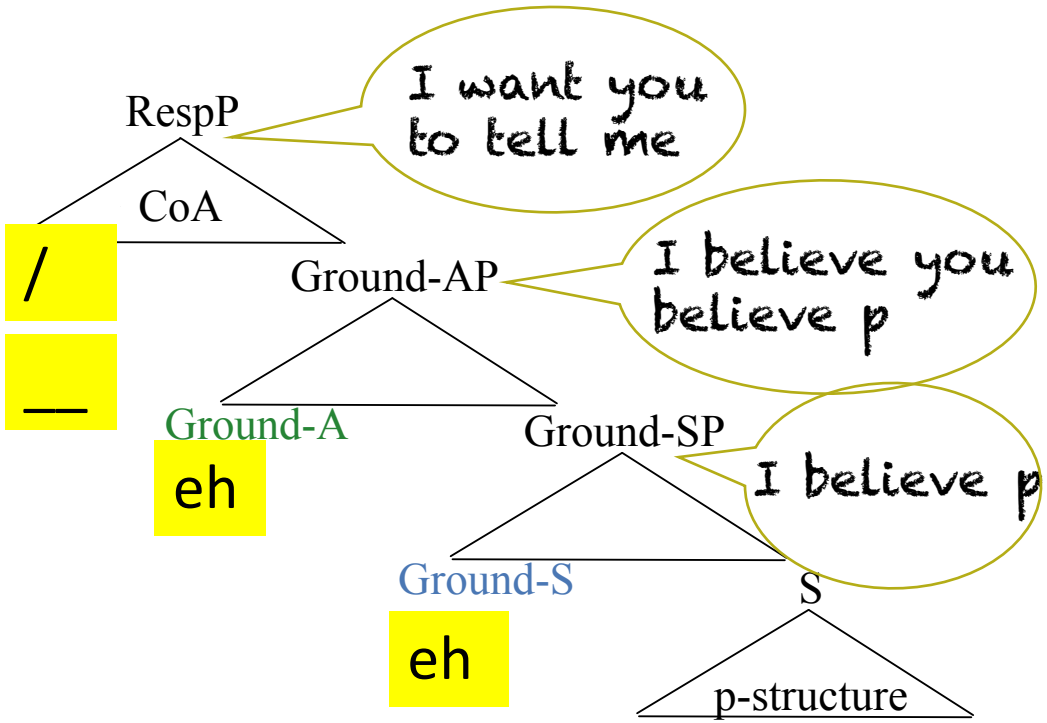
(2) *(b)lay ni'un* ↗
'Does it taste good?



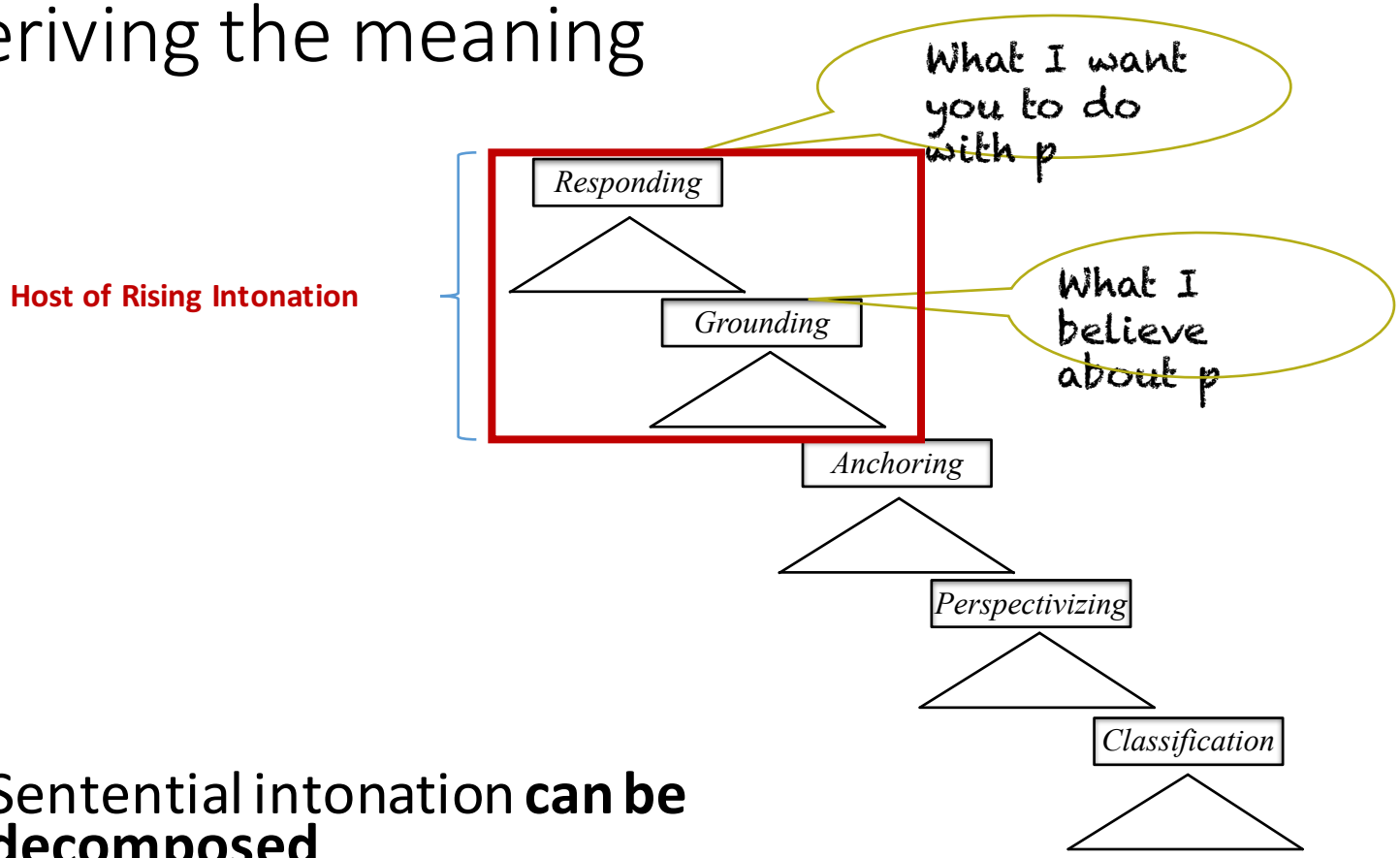
English

Confirm

"hold on"



Deriving the meaning



- Sentential intonation **can be decomposed**
- Differences in interpretation are **syntactically conditioned**

The meaning of rising intonation

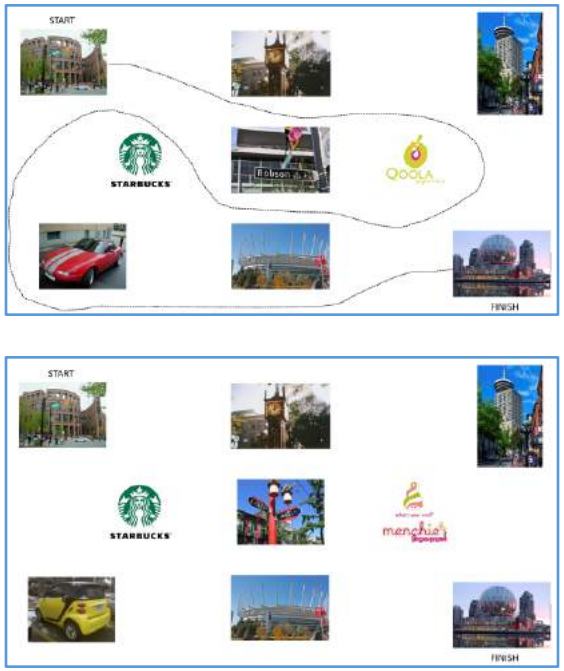
Intonational tunes are multi-functional

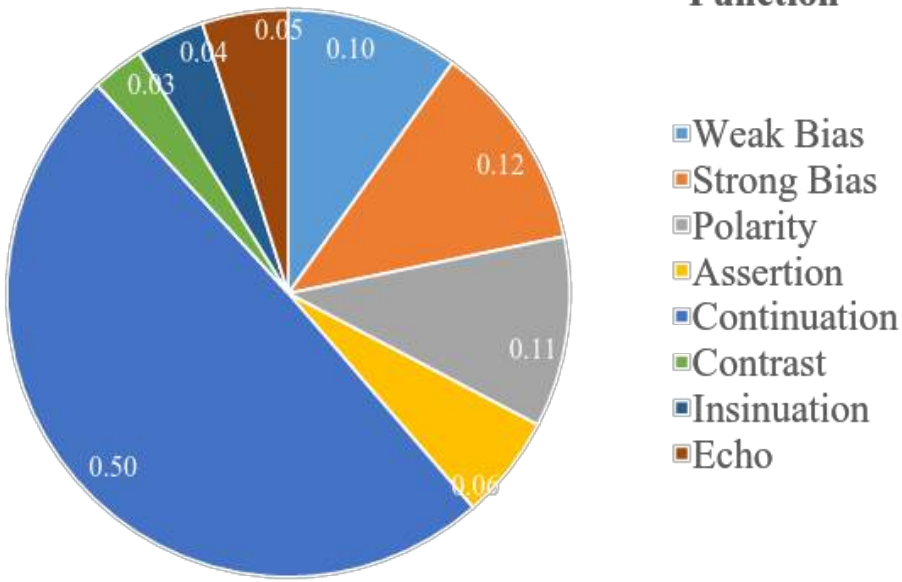
Proposed Meaning	Proponent
“Forward-looking”	Pierrehumbert and Hirschberg 1990
“Continuation dependence”	Bartels 1997
“Committing the Addressee”	Gunlogson 2001, 2008
“Uncertainty”	Šáfářová 2006
“Call on Addressee”	Beyssade and Marandin 2006
“Elicit information”	Truckenbrodt 2012
“Revision anticipated”	Portes et al 2014
“Attention, maxim violation!”	Westera 2013, 2017

The meaning of rising intonation

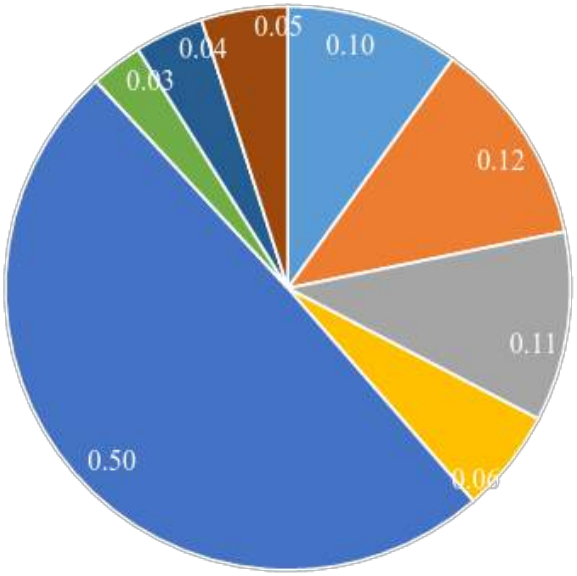
Intonational tunes are multi-functional

Map task with 20 speakers:





Pitch = Hearer engagment

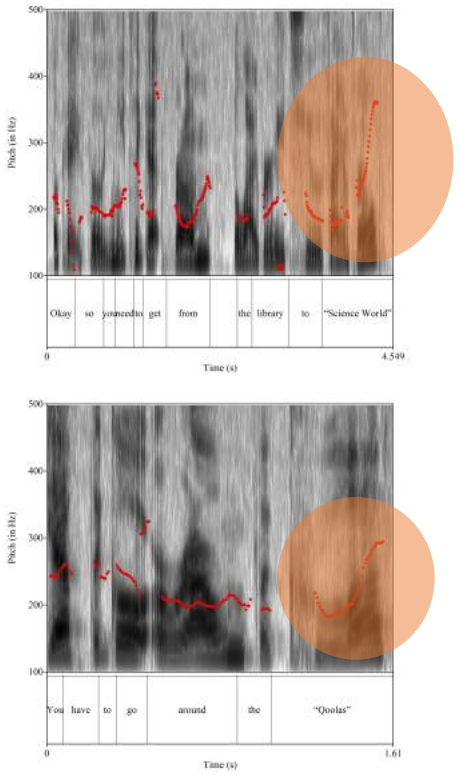


Function

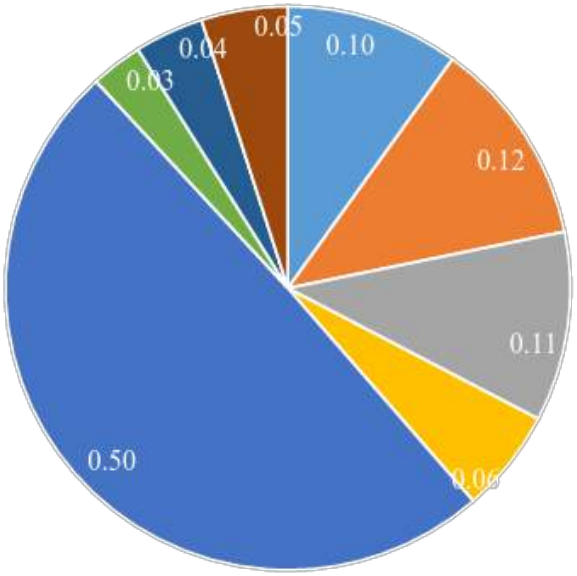
- Weak Bias
- Strong Bias
- Polarity
- Assertion
- Continuation
- Contrast
- Insinuation
- Echo

High Rise
(higher pitch range)

Low Rise
(smaller pitch range)



Pitch = Hearer engagment



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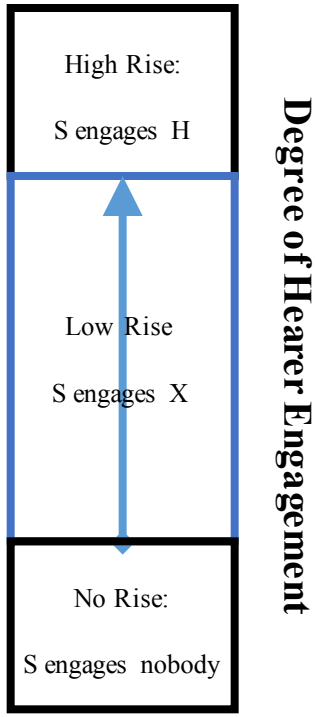
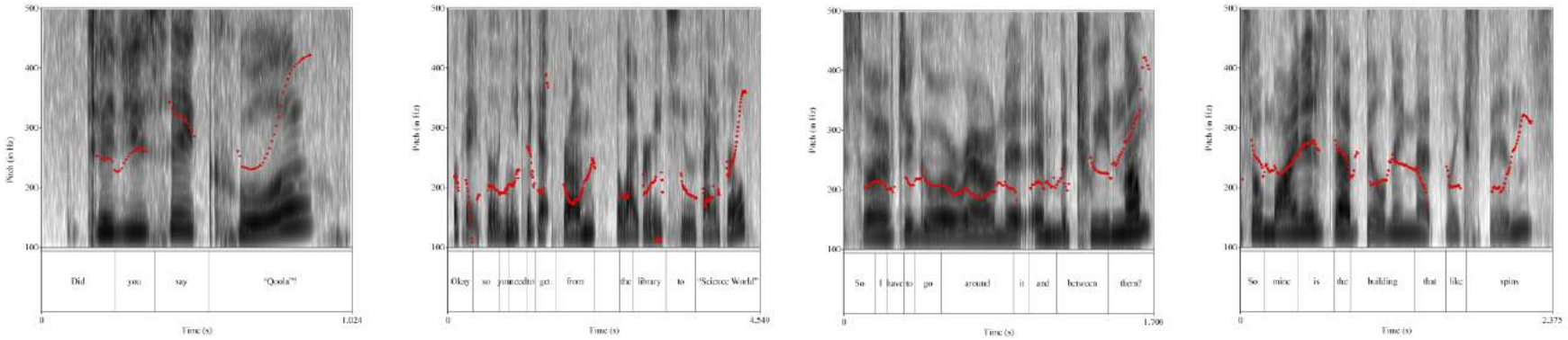


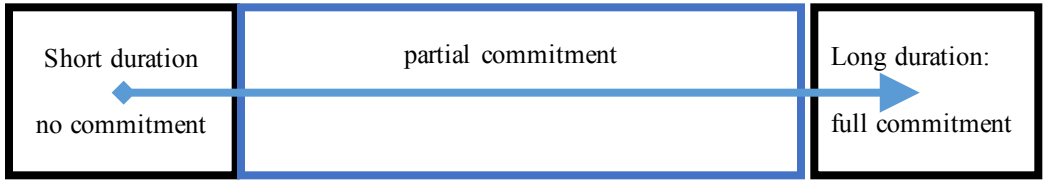
to be confirmed

Duration = Speaker commitment

Tomlinson & Fox Tree (2011) find a **correlation** between **Speaker Knowledge** and **duration** of sentence-final contour

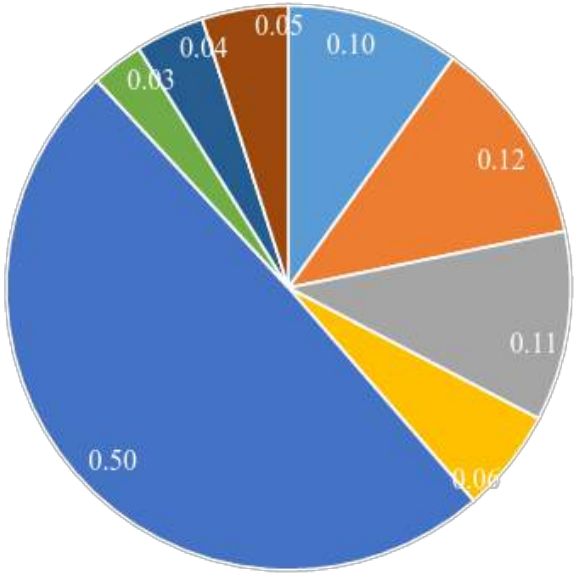


Polar Question | Weak Bias | Strong Bias | Assertion



Degree of Speaker Commitment

Duration = Speaker commitment



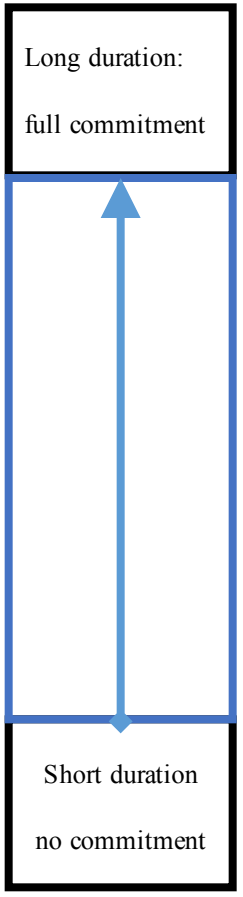
Function

- Weak Bias
- Strong Bias
- Polarity
- Assertion
- Continuation
- Contrast
- Insinuation
- Echo

High Rise
(higher pitch range)

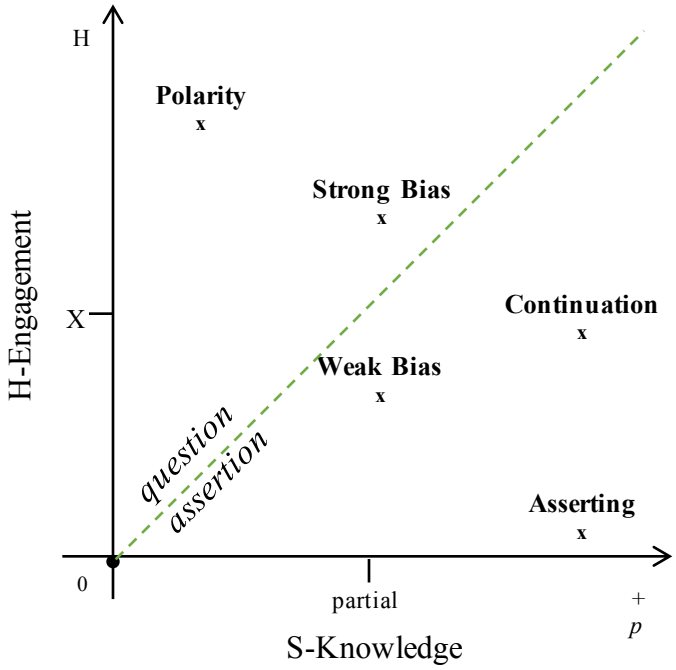
Low Rise
(smaller pitch range)

Duration



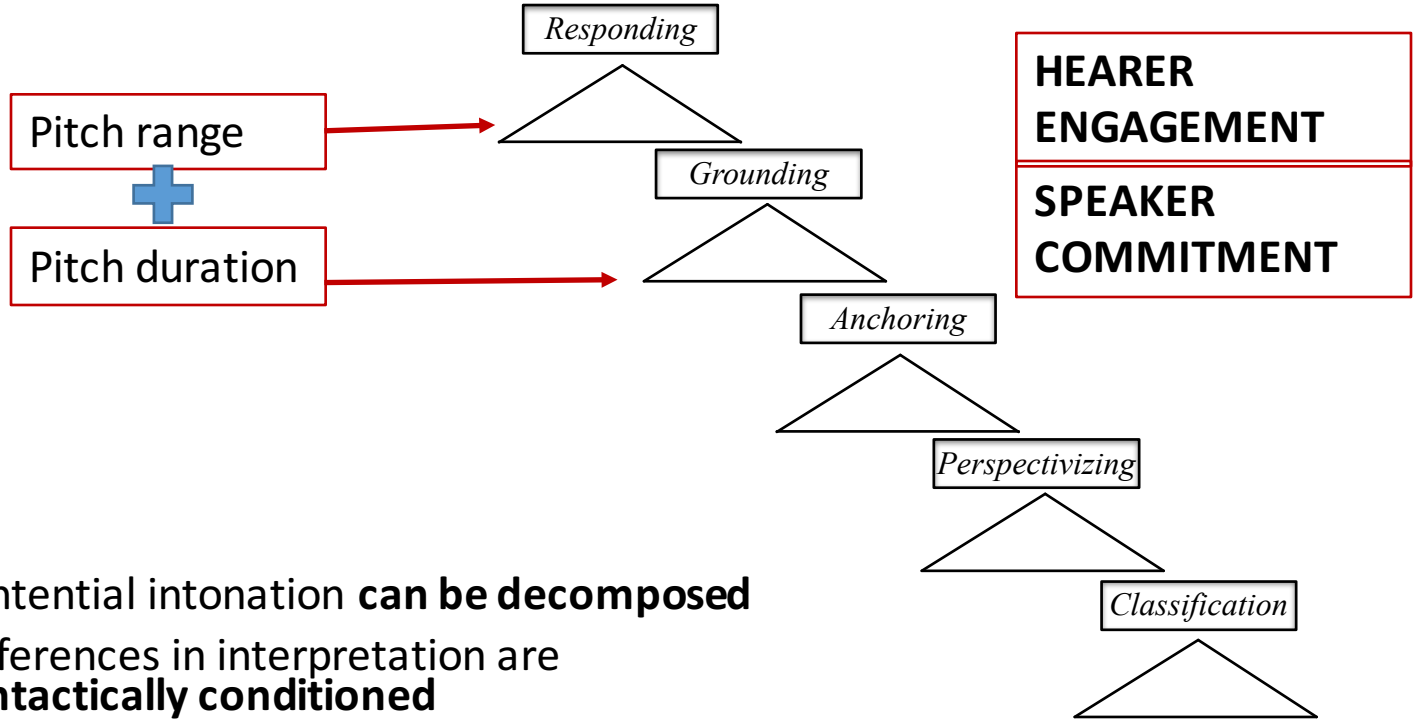
Degree of Speaker Commitment

Decomposing the meaning of rising intonation



Mapping rises onto HE & SC can derive Speech Act interpretations

Deriving meaning



- Sentential intonation **can be decomposed**
- Differences in interpretation are **syntactically conditioned**

Evidence for the syntactic integration of intonation

The problem

How does ↗ compose with this utterance

Am Samschdich wird hier d'Kehrwoch gmacht, ***gell****?*

'On Saturdays, you do the sweep-cleaning here, PRT'

[Am Samschdich wird hier d'Kehrwoch gmacht**]$_S$ gell ↗**

[[S] gell↗]

The problem

Hypothesis 1:
Final rise has to be utterance final

Am Samschdich wird hier d'Kehrwoch gmacht, ***gell****?*

'On Saturdays, you do the sweep-cleaning here, PRT'

[Am Samschdich wird hier d'Kehrwoch gmacht**]$_S$ gell**?

[[S] gell↗]

Testing Hypothesis 1
Rising declaratives

Hypothesis 1:
Final rise has to be utterance final

Am Samschdich wird hier d'Kehrwoch gmacht?

'On Saturdays, you do the sweep-cleaning here, PRT'

[Am Samschdich wird hier d'Kehrwoch gmacht**]**$_{S}$ ↗?

[[S] ↗]

Testing hypothesis 1 rising declarative + rising particle

Hypothesis 1:
Final rise has to be utterance final

Am Samschdich wird hier d'Kehrwoch gmacht, ***gell****?*

'On Saturdays, you do the sweep-cleaning here, PRT'

***[**Am Samschdich wird hier d'Kehrwoch gmacht ↗**]$_S$ gell** ↗

***[[S↗] gell↗]**

Hypothesis 1:
Final rise has to be utterance final

Testing hypothesis 1 rising declarative + particle

Am Samschdich wird hier d'Kehrwoch gmacht, ***gell****?*

'On Saturdays, you do the sweep-cleaning here, PRT'

***[**Am Samschdich wird hier d'Kehrwoch gmacht ↗**]$_S$ gell**

***[[S↗] gell]**

Testing Hypothesis 1

Hypothesis 1:
Final rise has to be utterance final

It works!

1. [[S] gell↗]
2. [[S] ↗]
3. *[[S↗] gell↗]
4. *[[S↗] gell]

The problem continued

Hypothesis 1:
Final rise has to be utterance final

Wrong!!!

***Gell**, Samschdich wird hier d'Kehrwoch gmacht?*

'PRT on Saturdays, you do the sweep-cleaning here'

gell ↗ [Am Samschdich wird hier d'Kehrwoch gmacht**]$_S$**

[gell↗[S]]

The problem continued

Hypothesis 1:
Final rise has to be utterance final

Wrong!!!

***Gell**, Samschdich wird hier d'Kehrwoch gmacht?*

'PRT on Saturdays, you do the sweep-cleaning here'

***[gell [**Am Samschdich wird hier d'Kehrwoch gmacht ↗**]$_S$]**

***[gell [S ↗]]**

The problem continued

Hypothesis 1:
Final rise has to be utterance final

Wrong!!!

***Gell**, Samschdich wird hier d'Kehrwoch gmacht?*

'PRT on Saturdays, you do the sweep-cleaning here'

***[gell ↗ [**Am Samschdich wird hier d'Kehrwoch gmacht ↗**]$_S$]**

***[gell↗[S ↗]]**

The problem continued

1. [[S] gell↗]
2. [S ↗]
3. *[[S↗] gell↗]
4. *[[S↗] gell]

5. [gell↗[S]]
6. *[gell [S↗]]
7. *[gell↗[S↗]]

Hypothesis 1:
Final rise has to be utterance final

It doesn't work for sentence initial particle

The problem continued

What accounts for the distributional pattern of the final rise

1. [[S] gell↗]
2. [S ↗]
3. *[[S↗] gell↗]
4. *[[S↗] gell]

5. [gell↗[S]]
6. *[gell [S↗]]
7. *[gell↗[S↗]]

The problem continued

1. [[S] gell↗]
2. [S ↗]
3. *[[S↗] gell↗]
4. *[[S↗] gell]

5. [gell↗[S]]
6. *[gell [S↗]]
7. *[gell↗[S↗]]

Hypothesis 2:
Final rise has to associate with intonational phrase (iP)

Testing hypothesis 2

S = iP

Am Samschdich wird hier d'Kehrwoch gmacht.

'On Saturdays, you do the sweep-cleaning here, PRT'

Am Samschdich wird hier d'Kehrwoch gmacht ↗

'On Saturdays, you do the sweep-cleaning here, PRT'

Testing hypothesis 2

gell = iP

Frau Schwabe: *Am Samschdich wird hier d'Kehrwoch gmacht.*

'On Saturdays, you do the sweep-cleaning here, PRT'

Peter: [clueless look]

Frau Schwabe: *gell?*

'confirm?

Testing hypothesis 2

Hypothesis 2:
Final rise has to associate with intonational phrase (iP)

Wrong!!!

1. [[S] gell↗]
2. [S ↗]
3. *[[S↗] gell↗]
4. *[[S↗] gell]
5. [gell↗[S]]
6. *[gell [S↗]]
7. *[gell↗[S↗]]

The problem

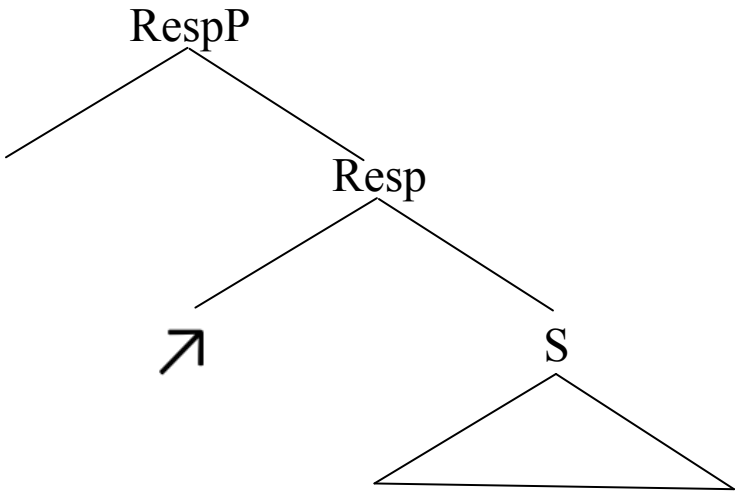
What accounts for the distributional pattern of the final rise

1. [[S] gell↗]
2. [S ↗]
3. *[[S↗] gell↗]
4. *[[S↗] gell]
5. [gell↗[S]]
6. *[gell [S↗]]
7. *[gell↗[S↗]]

The distribution of ↗ is syntactically conditioned

A proposal

The syntax of ↗



The syntacticization of prosody

Intonational tunes/countours = tonal **morphemes**

Liberman & Sag 1974; Trager and Smith 1951

… function as grammatical units

… have entries in the lexicon

Haggo 1997: 32

The syntacticization of prosody

Let English have the intonational morphemes <H*, new_j> and <H-, $question_j$>, where j is an index of type proposition. Let these morphemes right-adjoin to a syntactic constituent α. Then (ignoring the phonology in the semantic interpretation):

a. $[\![[\alpha\ \langle new_j \rangle]]\!]^{g,S,A}$ is defined as $[\![\alpha]\!]^{g,S,A}$ iff S is adding g(j) to the common ground of S and A.

b. $[\![[\alpha\ \langle question_j \rangle]]\!]^{g,S,A}$ is defined as $[\![\alpha]\!]^{g,S,A}$ iff S is putting up g(j) for question.

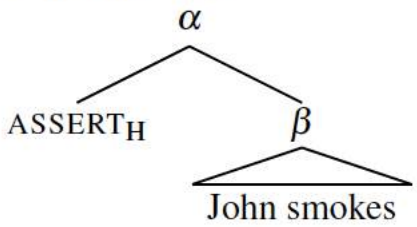
Truckenbrodt 2011: 2051

The syntacticization of prosody

Rising declaratives

a. John smokes ↑

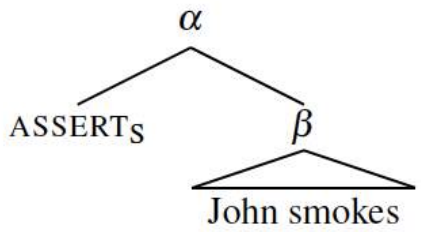
b.



Falling declaratives

a. John smokes ↓

b.



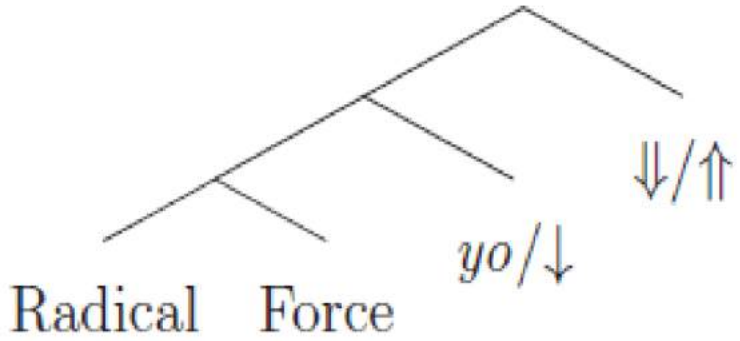
…we propose that ASSERT can inflect for person and that this inflection is reflected in the intonation of the sentence.

…rising intonation indicates that ASSERT has a second person feature

…falling intonation indicates that the assertor is the first person, i.e. the speaker.

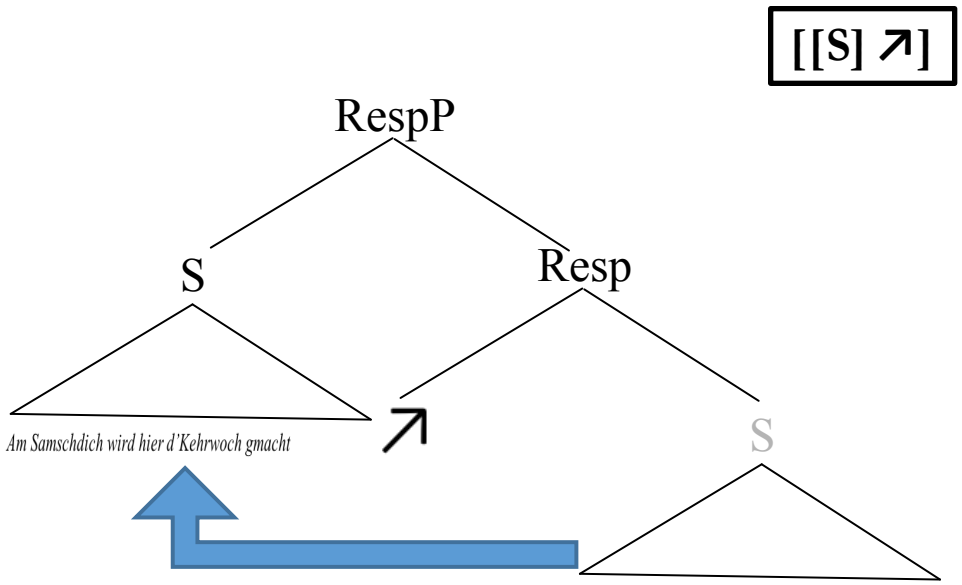
Trinh & Crnič 2011: 10

The syntacticization of prosody

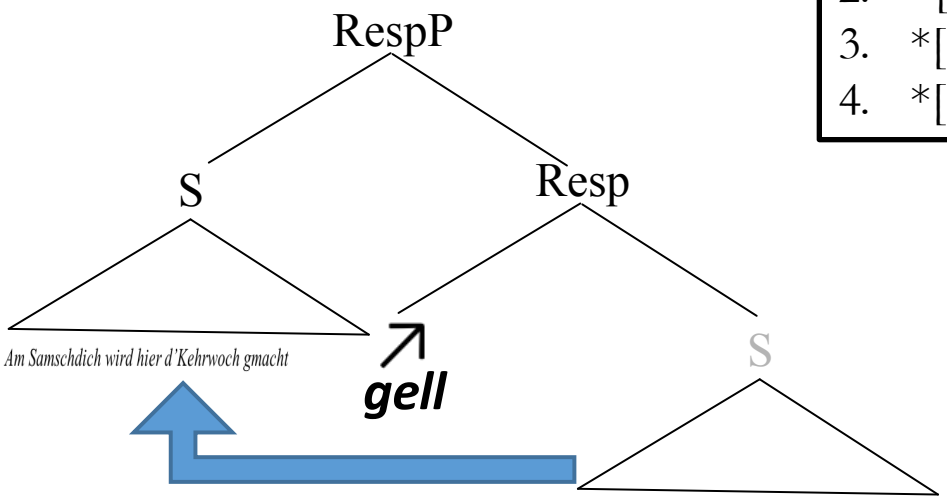


Davis 2011

The syntax of rising declaratives

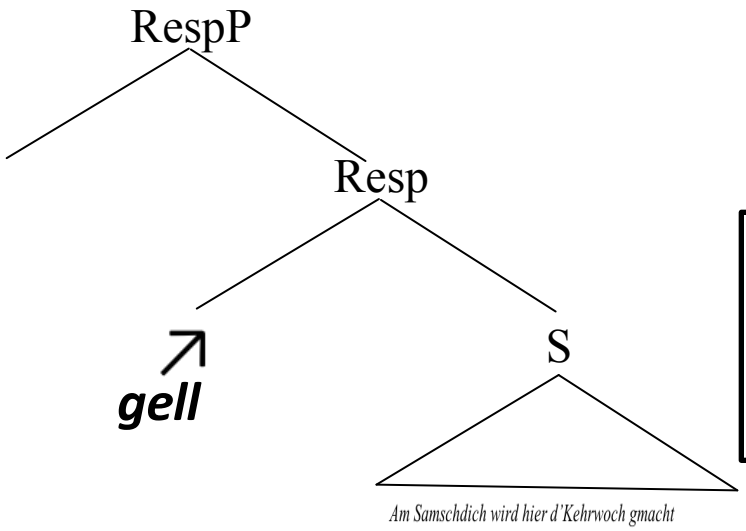


The syntax of sentence final *gell*



1. [[S] gell↗]
2. [S ↗]
3. *[[S↗] gell↗]
4. *[[S↗] gell]

The syntax of sentence initial *gell*



5. [gell↗[S]]
6. *[gell [S↗]]
7. *[gell↗[S↗]]

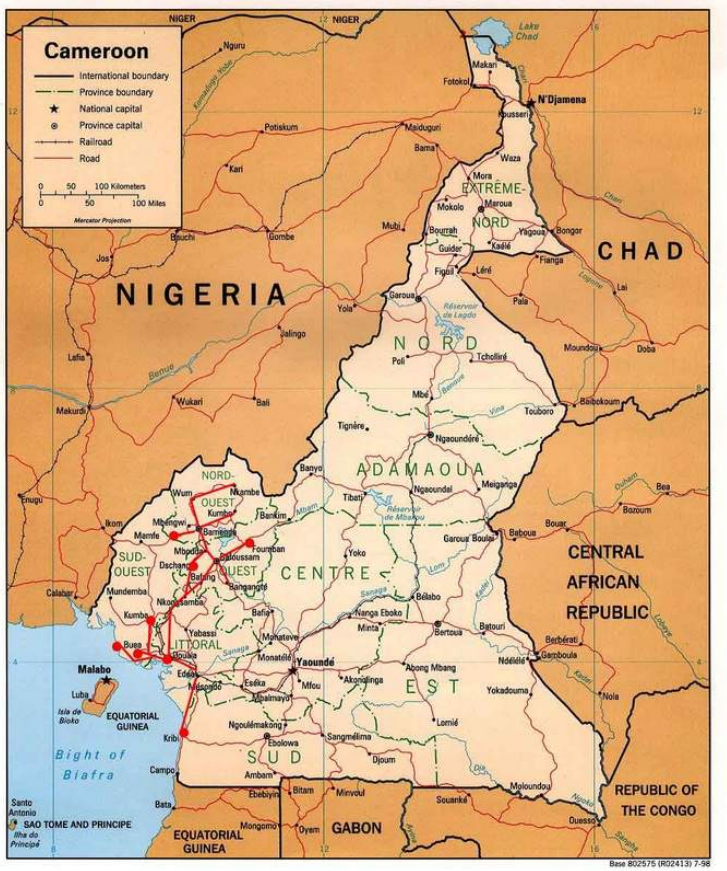
Strength and source of belief

Evidence from Medumba

Based on Keupdjio and Wiltschko 2016

Confirmationals in Medumba

(1) [*Nùmí* *yùú* *mb*^{h}*ú*]$_S$
Numi have dog
"Numi has a dog."



7 ways to ask a yes no question

(2) *ú* *yùú* *mbhú* ***kí*** […]$_S$-kí
2SG.S have dog Prt
"Do you have a dog?"

(3) *ú* *yùú* *mbhú* ***áá*** […]$_S$-áá
2SG.S have dog Prt
"Do you have a dog?"

(4) ***kù*** *ú* *yùú* *mbhú* ***á*** kù […]$_S$ -á
Prt 2SG.S have dog Prt
"Do you have a dog?"

(5) *ú* *yùú* *mbhú* ***á*** […]$_S$ -á
2SG.S have dog Prt
"Do you have a dog?"

(6) *kùlá* *ú* *yùú* *mbhú* ***á*** kùlá […]$_S$ -á
Prt 2SG.S have dog Prt
"Do you have a dog?"

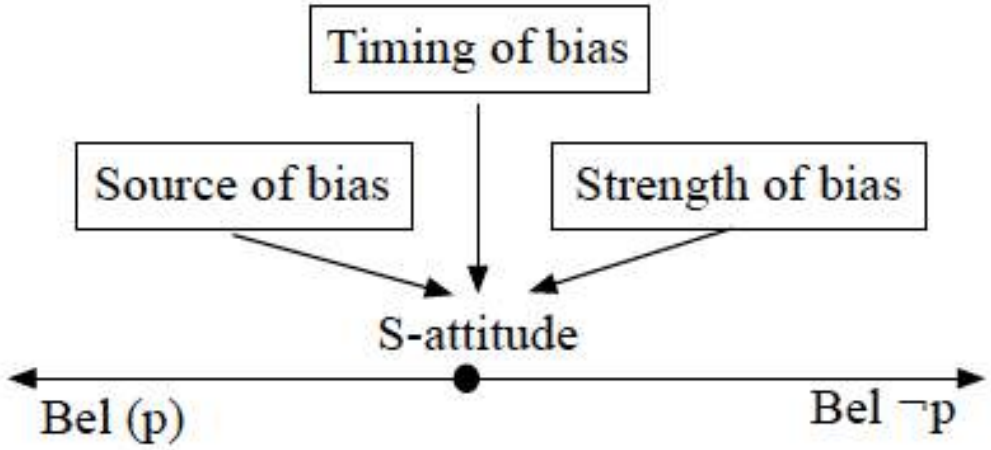
(7) ***kùlá*** *ú* *yùú* *mbhú* kùlá […]$_S$
Prt 2SG.S have dog
"Do you have a dog?"

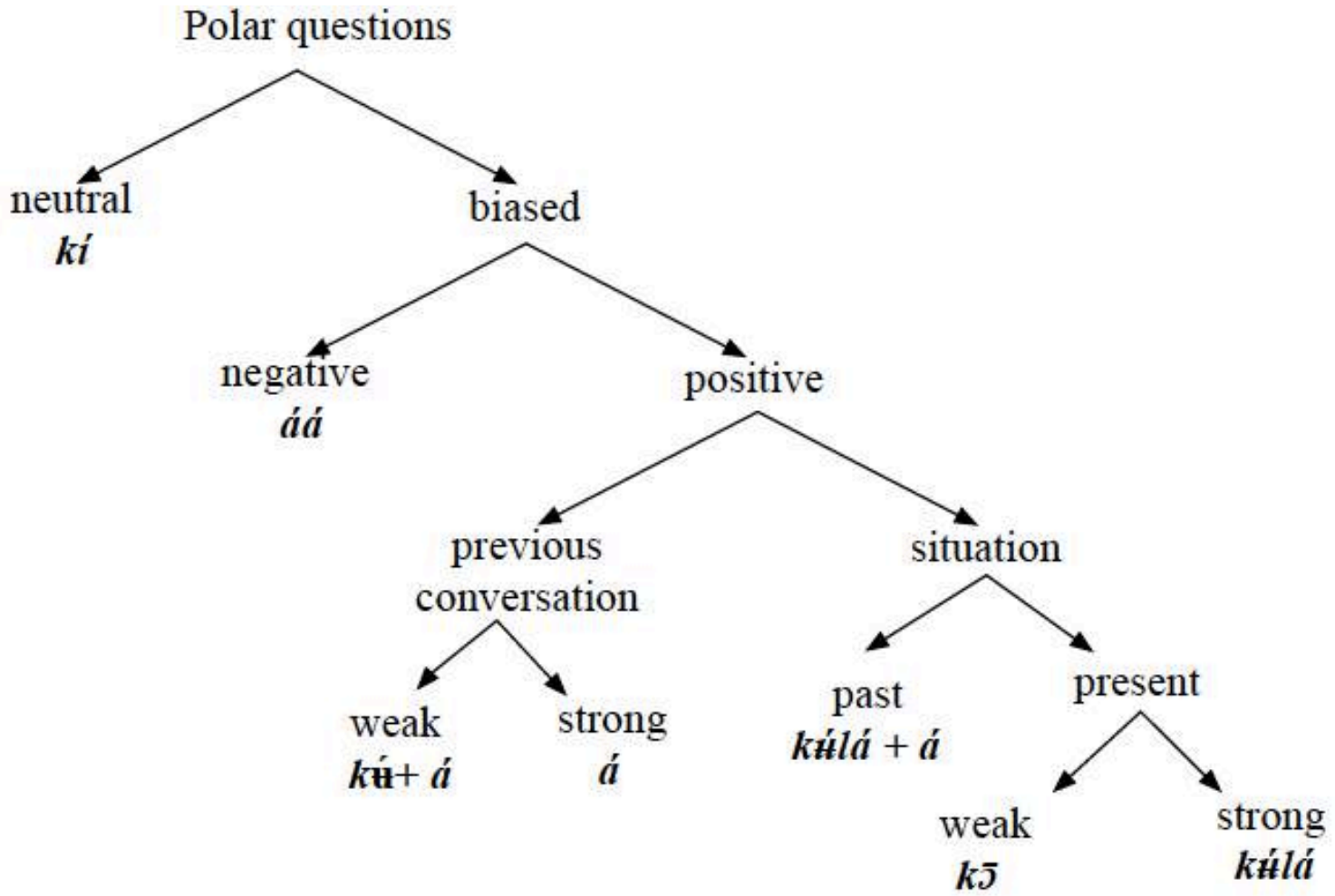
(8) *ú* *yùú* *mbhú* ***kɔ̄*** […]$_S$ -kɔ̄
2SG.S have dog Prt
"Do you have a dog?"

7 ways to ask a yes no question

(9)

a.		$[\ldots]_S$**-kí**
b.		$[\ldots]_S$**-áá**
c.	**kʉ̀**	$[\ldots]_S$**-á**
d.		$[\ldots]_S$**-á**
e.	**kʉ̀lá**	$[\ldots]_S$**-á**
f.	**kʉ̀lá**	$[\ldots]_S$
g.		$[\ldots]_S$***-kɔ̄***




Polar questions
neutral
kí
biased
negative
áá
positive
previous
conversation
weak
kɯ́+ á
strong
á
situation
past
kɯ́lá + á
present
weak
kɔ̄
strong
kɯ́lá

Confirmationals vs. evidentials

Context: John asks Mary whether their common friend Greg has a dog. Mary says she has no idea. The next day Mary runs into Greg on the street. **Greg is with a dog**. So Mary asks

kɨ̀lá	***ú***	***ɣɨ̀ɨ́***	***mb^{h}ɨ́***
Prt	2SG.S	have	dog

"Do you have a dog?"

Context: John asks Mary whether their common friend Greg has a dog. Mary says she has no idea. The next day Mary runs into Greg on the street. **Greg is carrying a leash**. So Mary asks:

ú	***ɣɨ̀ɨ́***	***mb^{h}ɨ́***	***kɔ̄***
2SG.S	have	dog	Prt

"Do you have a dog?"

Confirmationals vs. evidentials

"**Indirect evidentials** are used when the speaker was not a witness to the event but learned of it after the fact. There are two broad sub-categories, inference and quotative. **Inferential evidentials** are used when the speaker draws an inference on the basis of available physical evidence."

(WALS; http://wals.info/chapter/77)

(26)	*ter*	*irsen*	*biz*	Khalkha (Mongolian)
	he	come	infer	
	"He must have come."			Street 1963: 129

"Direct evidentials are used when the speaker has some sort of sensory evidence for the action or event he/she is describing. Normally, a direct evidential denotes visual evidence."

(WALS; http://wals.info/chapter/77)

(27)	*a-pe-re*	Fasu (Trans-New Guinea)
	vis-come-vis	
	"(I see) it coming."	Loeweke and May 1980: 71)

Confirmationals vs. evidentials

typical evidentials are used in assertions (see (26),(27))
the Medumba strategies for marking direct/indirect evidence never result in assertions but always produce questions:

a. ***kɨ̀lá*** ***ú*** ***ɣɨ̀ɨ́*** ***mbʰɨ́***
Prt 2SG.S have dog
*"You have a dog. And I have evidence for that."

b. ***ú*** ***ɣɨ̀ɨ́*** ***mbʰɨ́*** ***kɔ̄***
2SG.S have dog Prt
*"You must have a dog."

Confirmationals vs. evidentials

ii) **typical evidentials display *origo-shifts*** depending on the clause type they are used in

- in assertions it's about the evidence relevant for Spkr
- in questions it's about the evidence relevant for Adr

Nuu-chah-nulth

(29) a. [[*m̓iƛ-aa* $_{IP}$]-***waʔiš*** $_{CP}$]
rain-cont-3C.quote
"It's raining, according to what I've been told.'

b. [[*m̓iƛ-aa* $_{IP}$]-***ḥač*** $_{CP}$]
rain-cont-3C.Indir.Inter
'Is it raining, according to what you've been told.'

Déchaine et al. 2014: 3 (2)

Confirmationals vs. evidentials

ii) **typical evidentials display *origo-shifts*** depending on the clause type they are used in

- in assertions it's about the evidence relevant for Spkr
- in questions it's about the evidence relevant for Adr

Cheyenne

(30)

a. Direct evidential
É-néméne-ø
3-sing-DIR
"He sang, I'm sure"

a'. Direct evidential in a question
Mo=é-néméne-ø?
y/n=3-sing-DIR
"Given what you know, did he sing?"

b. Reportative evidential
*É-néméne-**sèstse***
3-sing-RPT-3SG
"He sang, I hear"

b'. Reportative evidential in a question
***Mo**=é-néméne-**sèstse**?*
y/n=3-sing-RPT-3SG
"Given what you heard, did he sing?"

Murray 2010: 2(1)

Confirmationals vs. evidentials

(31) Evidentials vs. Medumba question marking strategies

	Typical evidentials	Medumba Q-strategies
Encodes direct vs. indirect evidence	yes	yes
Compatible with assertions	yes	no
Compatible with questions	yes	no
Displays origo-shift	yes	no

Strength of bias in Northern Mandarin

Based on Yang & Wiltschko 2016

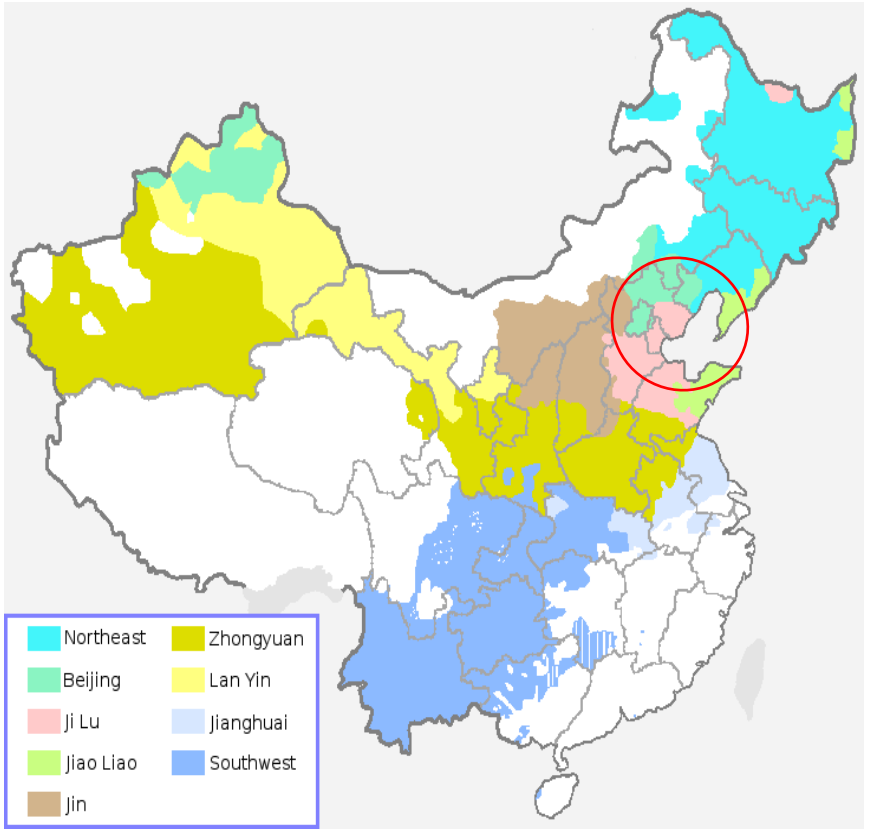
ha in Northern Mandarin

- Used in Northern Mandarin
  Beijing Dialect
  Tianjin Dialect
  Northeast dialects

- Spoken by more than 200 million people.

- A pervasive particle:
  57.3% of the native speakers of Beijing use *ha* in their daily conversation;

  79% of the *ha* users are younger than 55 years old.



He 1994

3 different confirmation strategies

(1) *ha*-confirmation

Nimen shi jiu dianzhong kai men de ***ha***?
You:PL be nine o'clock open door NOM PRT
'You opened at nine o'clock, right?'

(2) *ba*-confirmation

Nimen shi jiu dianzhong kai men de ***ba***?
You:PL be nine o'clock open door NOM PRT
'You opened at nine o'clock, right?'

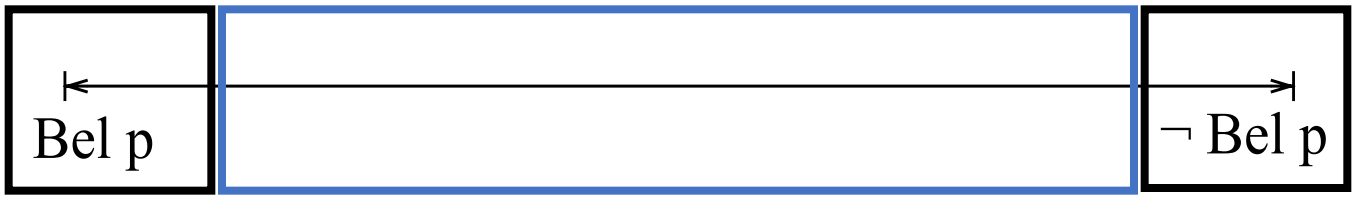
(3) A-Not-A tag confirmation

Nimen shi jiu dianzhong kai men de, ***dui bu dui*** *?*
You.PL be nine o'clock open door NOM right not right
'You opened at nine o'clock, right?'

How do confirmational strategies differ?

Confirmationals are sensitive to the

degree of the Speaker' s epistemic certainty



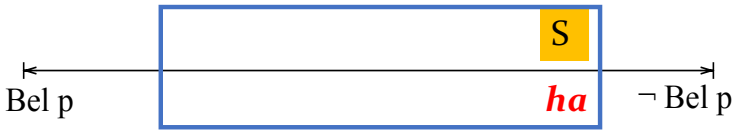
Epistemic (un)certainty

Epistemic certainty

i) Epistemic certainty (neg)

ii) ignorance

ha: Strong negative bias



Context: *All fruit stores open at 10:00 in John's city. One day John hears a rumor that all fruit stores will open at 9:00 starting next week. He checks the city's website but finds nothing about this. When he passes by a fruit store, he says to the shop owner:*

Xia zhou kaishi, nimen meitian jiu dianzhong kai men…

Next week begin you:PL every.day nine o'clock open door

ha/*dui bu dui/* ba

PRT/right not right/PRT

'You will open at nine o'clock every day from next week, right?'

dui bu dui: “50/50”

Context: *John is visiting town. He thinks that fruit stores here open at 9:00. But Mary says that that was true ten years ago but now they open at 10:00. They happen to pass by a fruit store. John talks to the shop owner:*

Nimen meitian jiu dianzhong kaimen

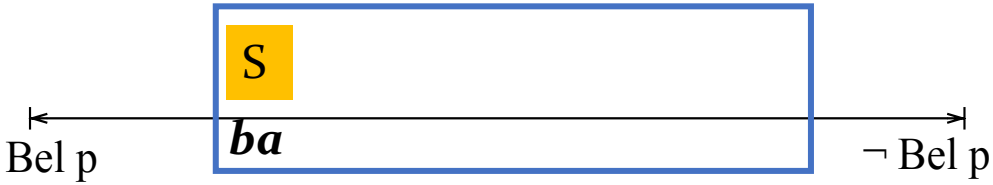
you:PL every.day nine o’clock open door,

****ha/dui bu dui /*ba***

PRT/*right not right*/PRT

‘You open at nine o’clock every day, right?’

ba: strong positive bias



Context: *John sees people buying fresh fruit every morning at around 9:00 when he jogs by a fruit store. One day he goes to the store to buy some fruit at 9:30. When he gets there the shop keeper tells him that the store won't open for another half hour. John responds with:*

Nimen meitian jiu dianzhong kaimen

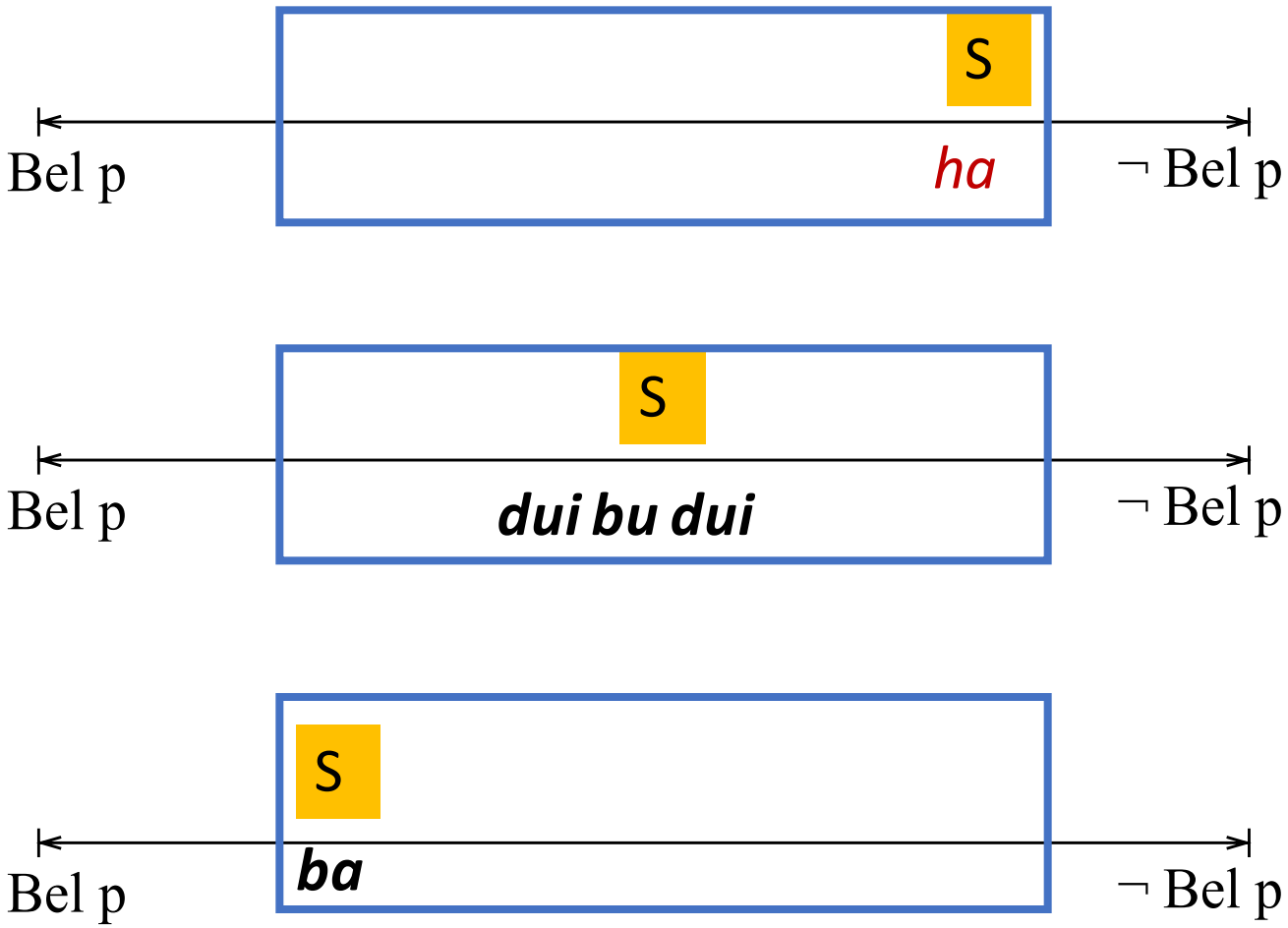
you:PL every.day nine o'clock open door

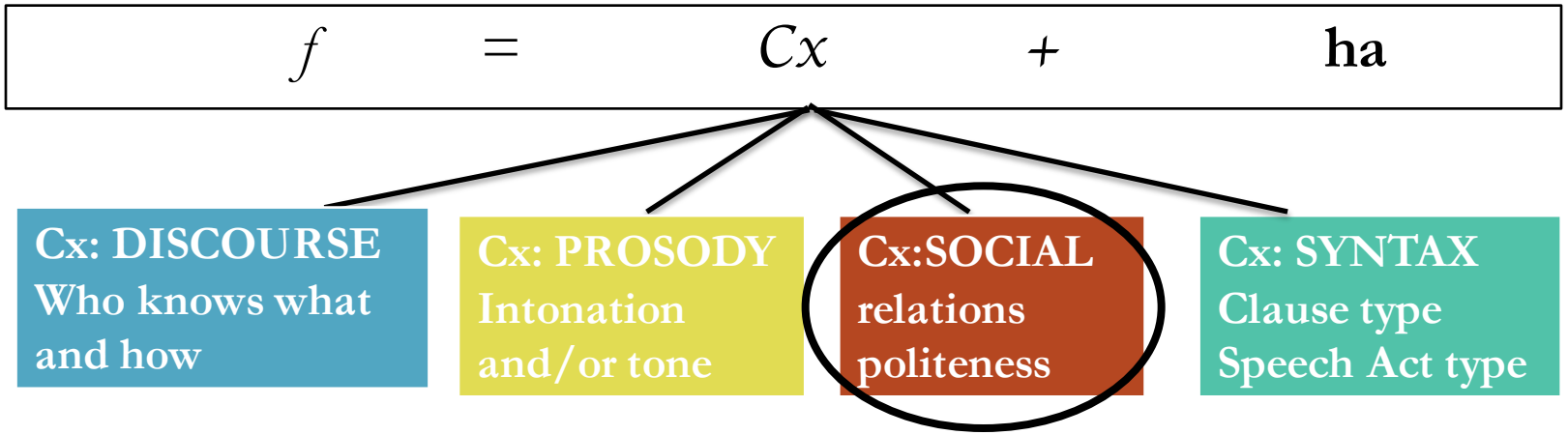
****ha /* dui bu dui / ba*** *?*

PRT/*right not right*/PRT

'You open at nine o'clock every day, right?'

The degree of epistemic certainty





Effects of politeness

The effects of politeness

Why is the confirmational used if S is certain?

Zhe hua ***GAI*** *shuo* ***ma****?*

These words should speak PRT

'Shouldn't you not say that?

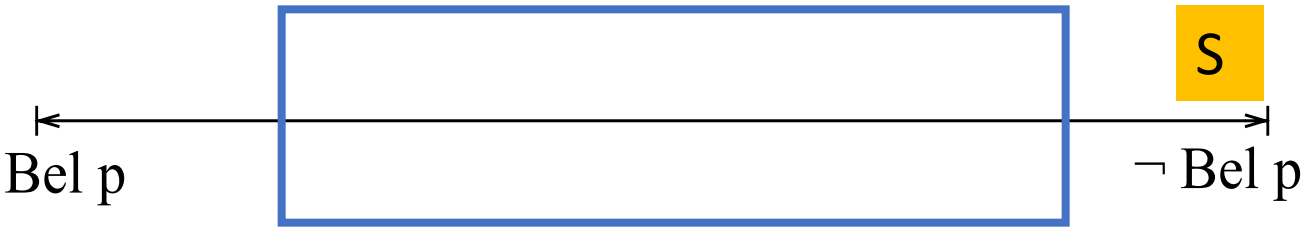
= Rhetorical question

Zhe hua ***GAI*** *shuo* ***ha****?*

These words should speak PRT

'You shouldn't say that, should you?

= Request for confirmation



The effects of politeness

Zhe hua ***GAI*** *shuo* ***ma****?*

These words should speak PRT

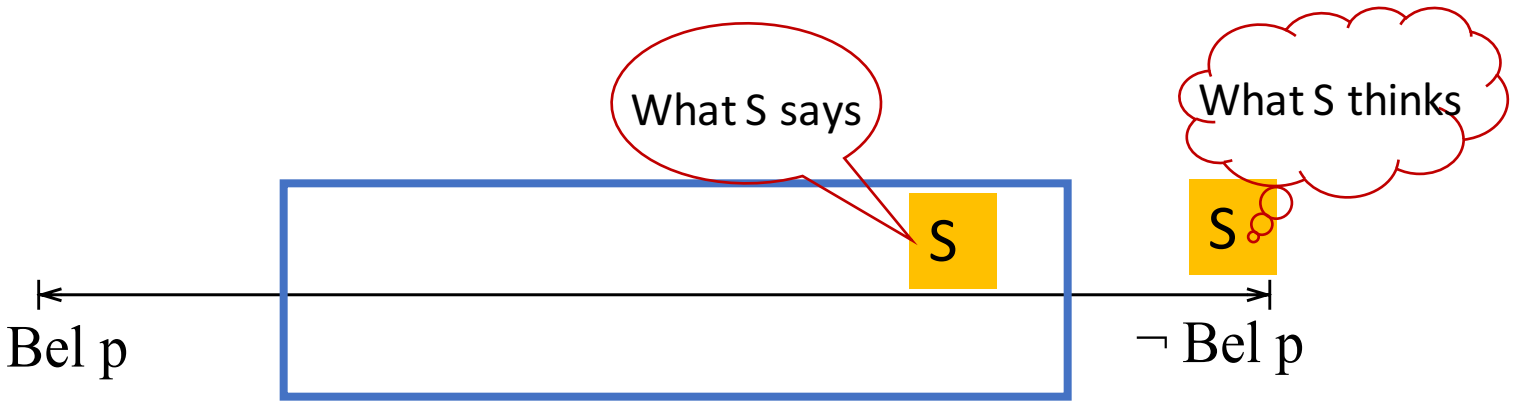
'Shouldn't you not say that?

Zhe hua ***GAI*** *shuo* ***ha****?*

These words should speak PRT

'You shouldn't say that, should you?

The use of ha is more polite!



Summary

Goal

Develop a typology of discourse markers.

A **methodological challenge:**
It is hard to investigate *discourse markers* (DM) across languages

What do we compare?

What do we compare?

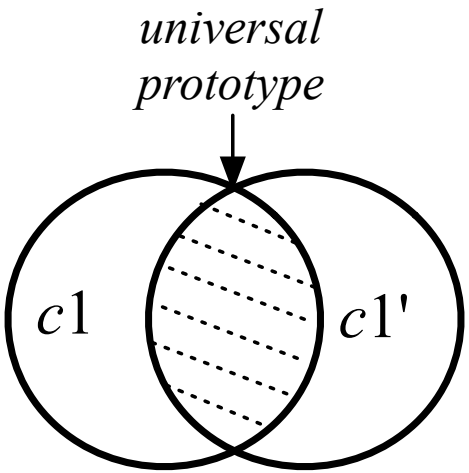
Do we compare …

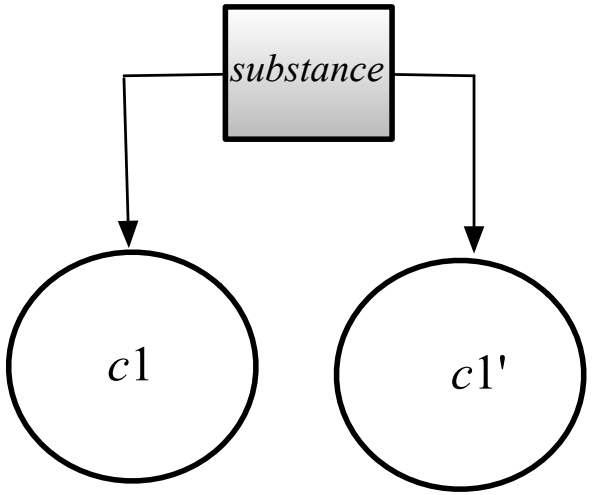
i) … based on **meaning**?

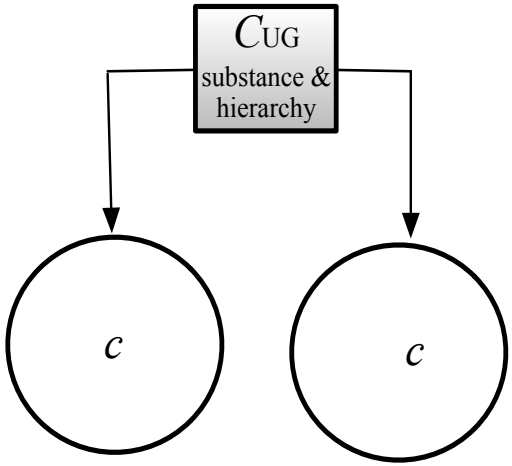
ii) … based on **form**?

iii) … based on **[form-meaning]** bundles?

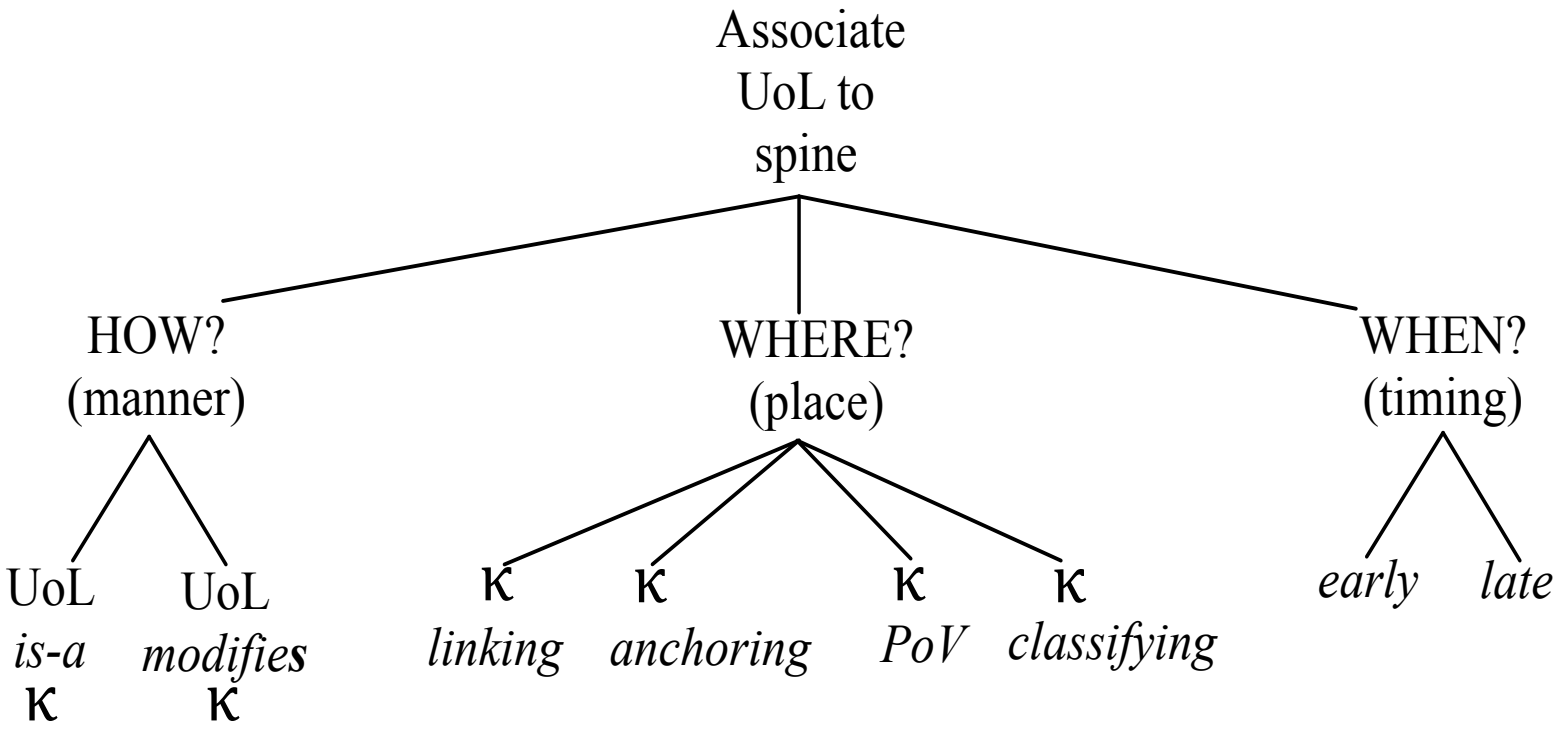
Comparing categories



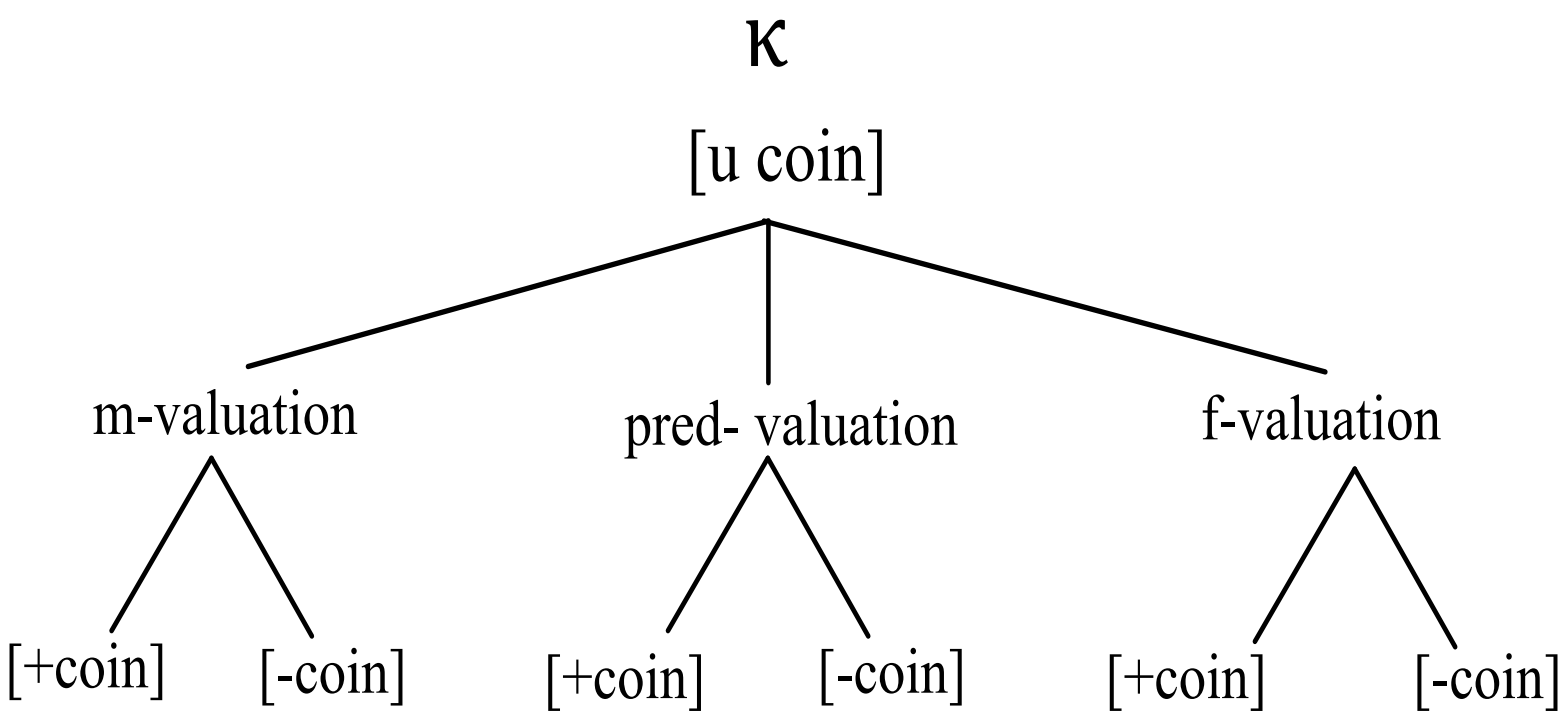




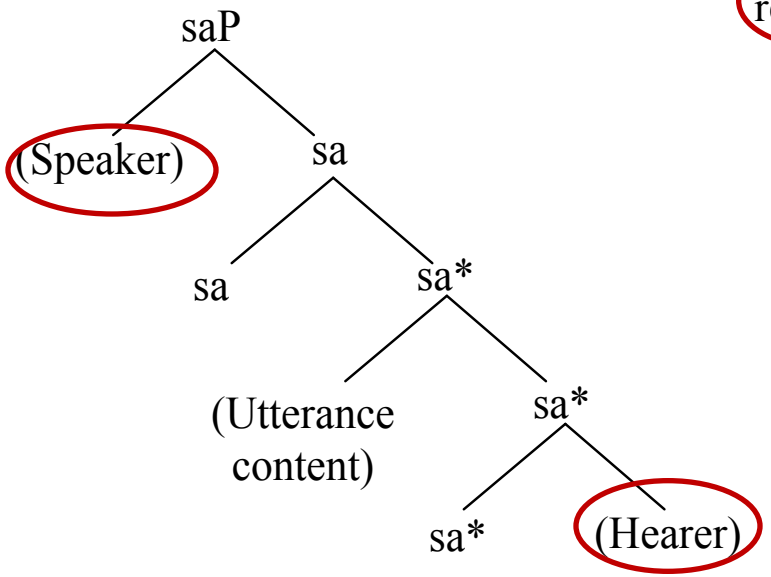
Association typology

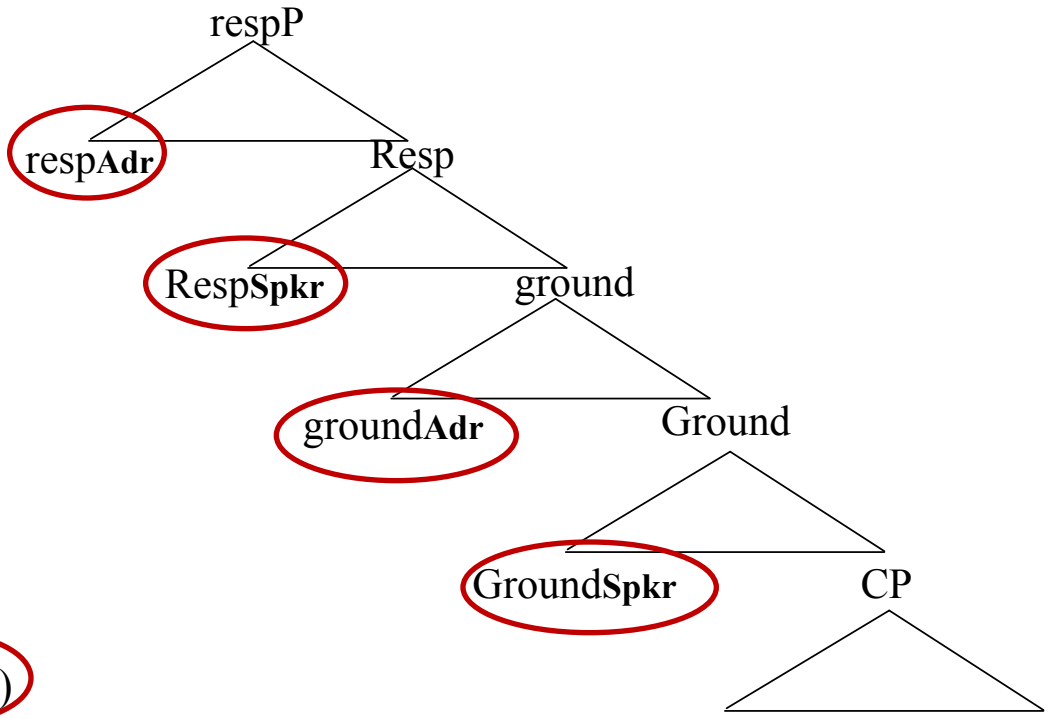


Valuation typology

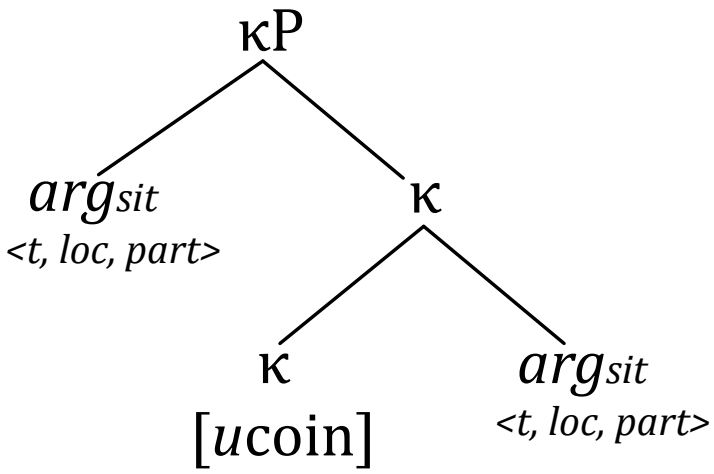


Why participant's Ground and Response-set instead of participants?





The structure of categories



Parameters of variation associated with confirmationals and response markers identified thus far:

- **Timing of grounding**
- **Strength of belief (degree)**
- **Source of belief (location??)**

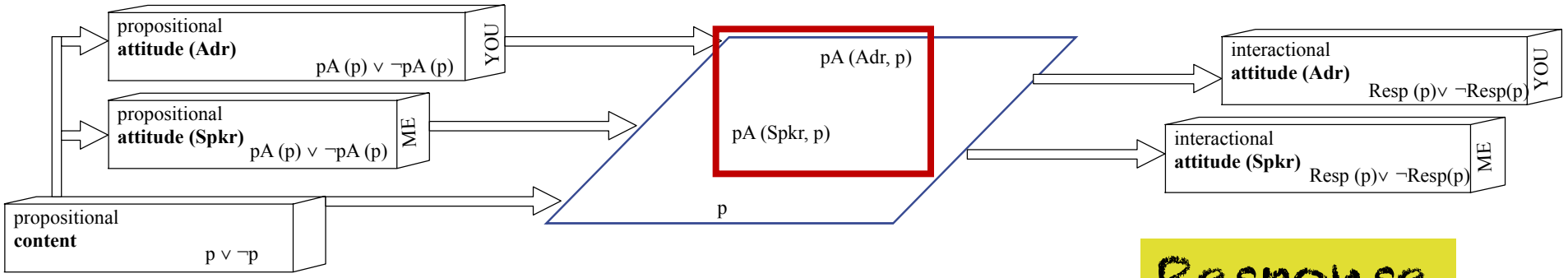
The structure of conversations

A: ***Now*** *that was a gorgeous sunset,* ***eh****?*

B: ***Yah****, I know,* ***right****?*

A: *I'm presenting at AFLA*

B: ***Yah****, I know,* ***right****?*



Confirmational

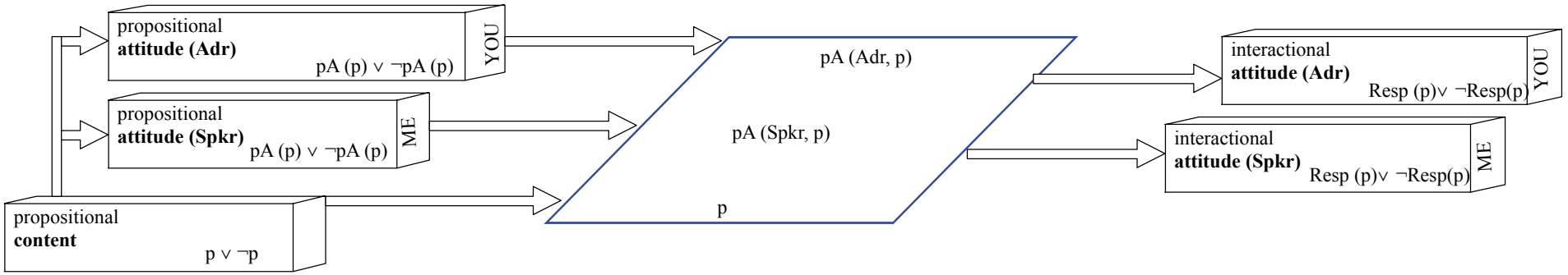
Response marker

The structure of conversations

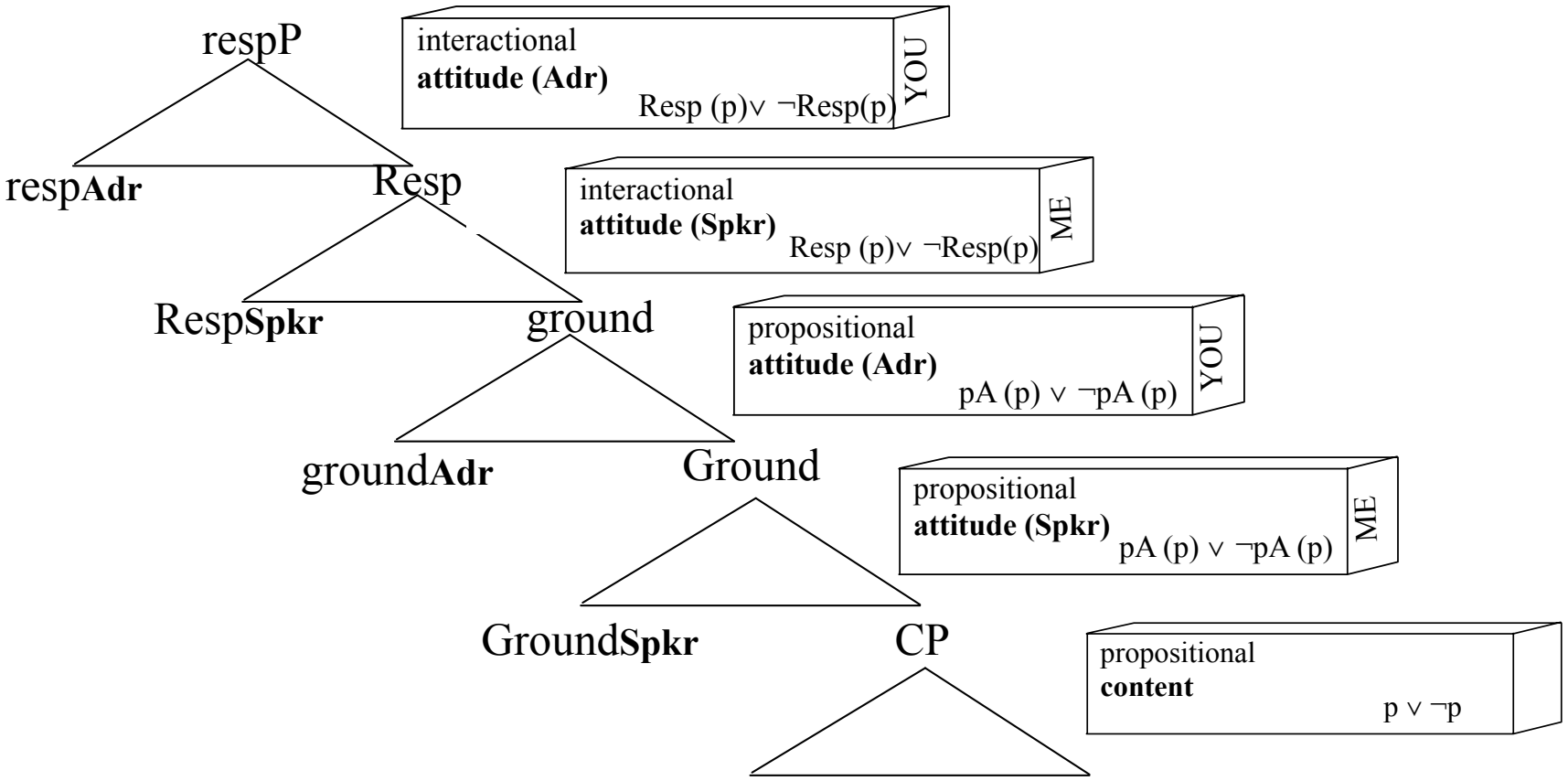
- SFPs are used to

i) Relate p to pA

ii) Relate p and/or pA to Table



The structure of conversations



Lam 2014, Wiltschko & Heim 2016, Wiltschko 2016, Thoma 2016, Lam et al. 2016

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

B: Acceptance:
[***yes***$_{\textbf{Resp}}$[*I do*]$_{\text{Utt}}$]

Response markers

Response particles

Q: *Did you like the movie?*

A: i) ***Yes*** *(I did)*

ii) ***No*** *(I didn't)*

p is (not) in my ground

Q: *Did you like the movie?*

Bel (p) ∨ Bel (¬p)

A: i) ***Yes*** *(I did)*

Bel(p)

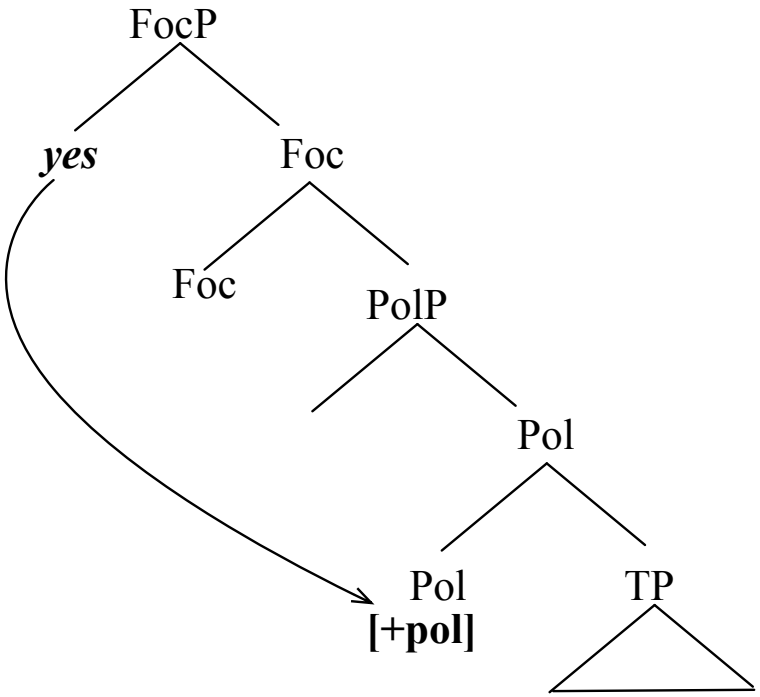
ii) ***No*** *(I didn't)*

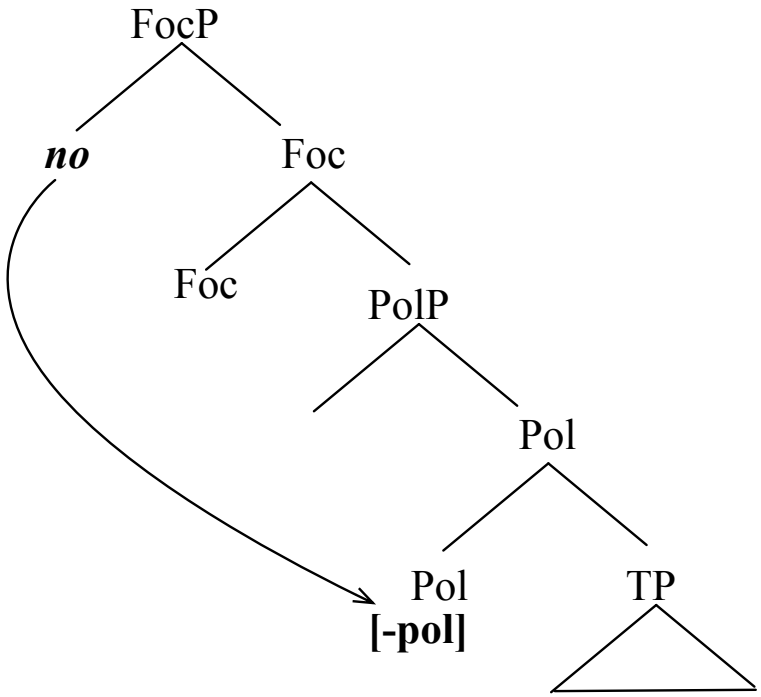
¬Bel(p)

The syntax of response particles

(Holmberg 2016)

Why a syntactic analysis?





Evidence for a syntactic treatment

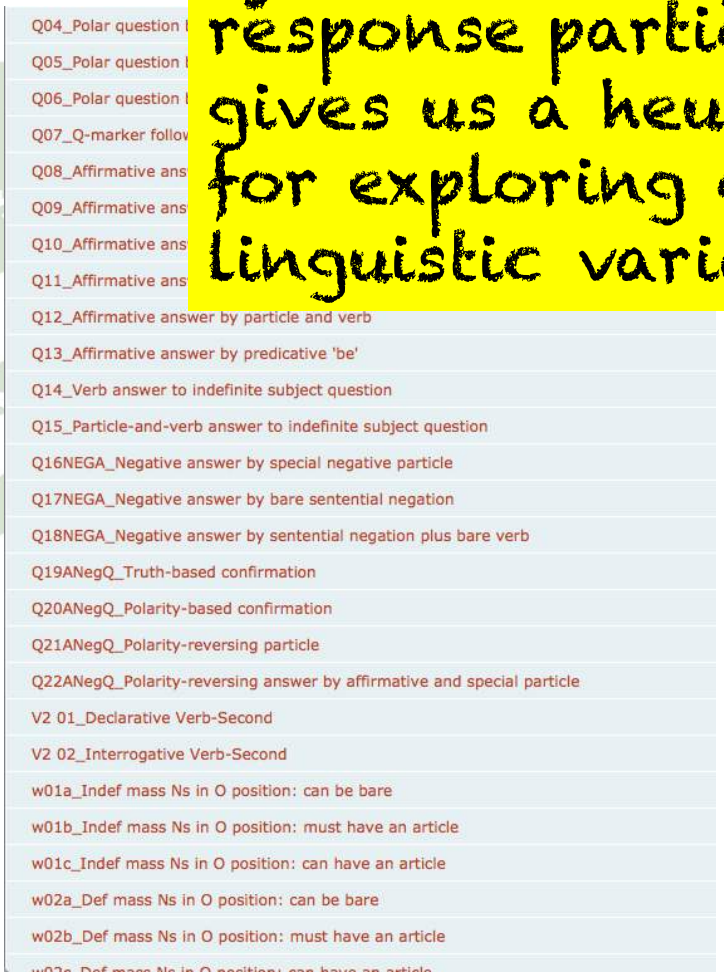
Q: *Tul-i-vat-ko lapset kotiin?* FINNISH
come-PST-3PL-Q children home
'Did the children come home?'

A: *Tul-i-vat.*
come-PST-3PL
'Yes.'

Holmberg 2016 ex 5

Evidence for a syntactic treatment of response

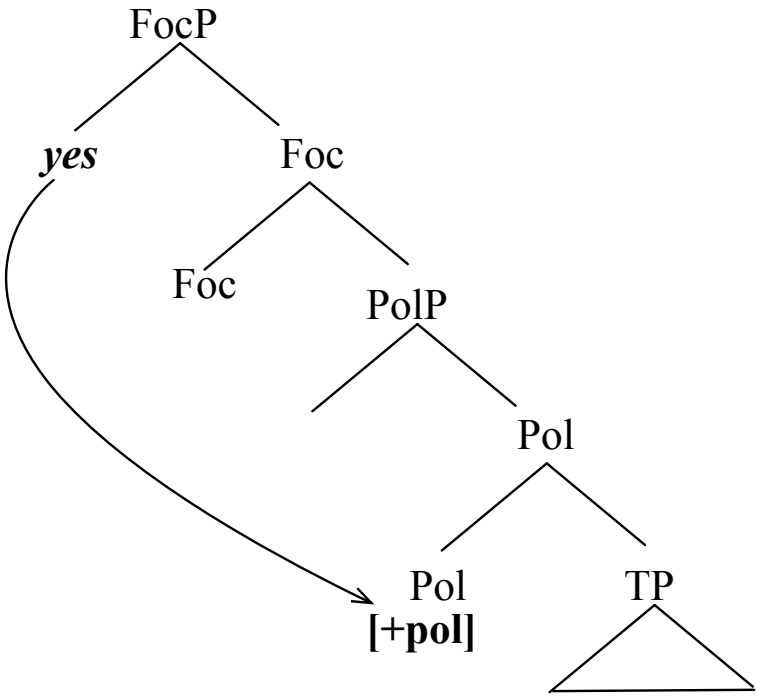
Syntactic analysis of response particles gives us a heuristic for exploring cross-linguistic variation

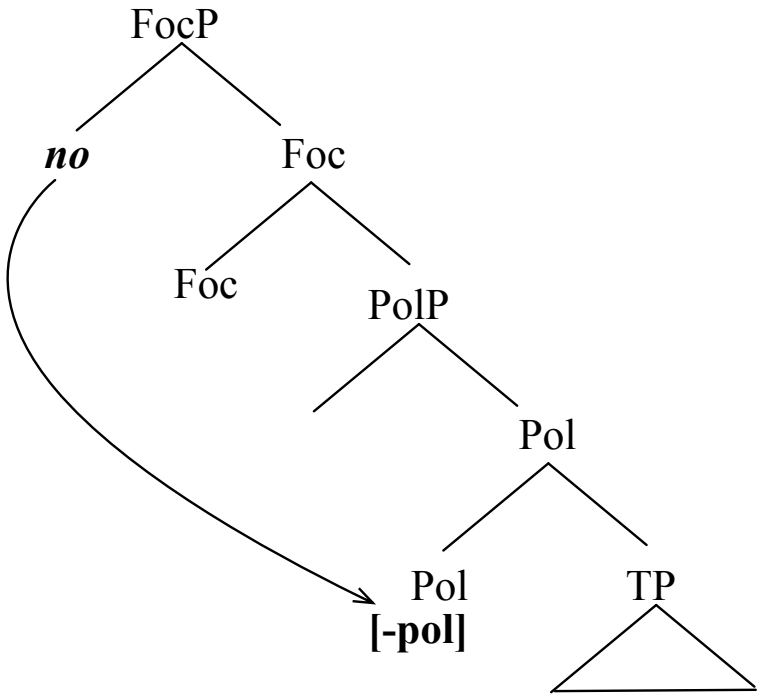


The syntax of response particles

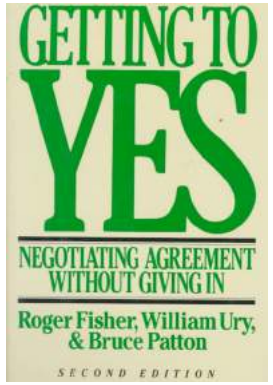
(Holmberg 2016)

How does the response particle interact with syntax?





The core meaning of response particles



Q: *Did you like the movie?*

A: i) ***Yes*** *(I did)* ii) ***No*** *(I didn't)*

*Sie hat die Frage be-**ja**-ht.* *Sie hat die Frage ver-**nein**-t.*

She has the question yes.part She has the question no.part

'She answered with yes.' 'She answered with no.'

The core meaning of response particles

The meaning goes beyond answering

Yes

'**positive** attitude towards X

*das Leben **bejahen**.*

'affirming life'

Upon receive e-mail with good news

Yes!

No

'**negative** attitude towards X

*Ein Atheist **verneint** die Existenz Gottes.*

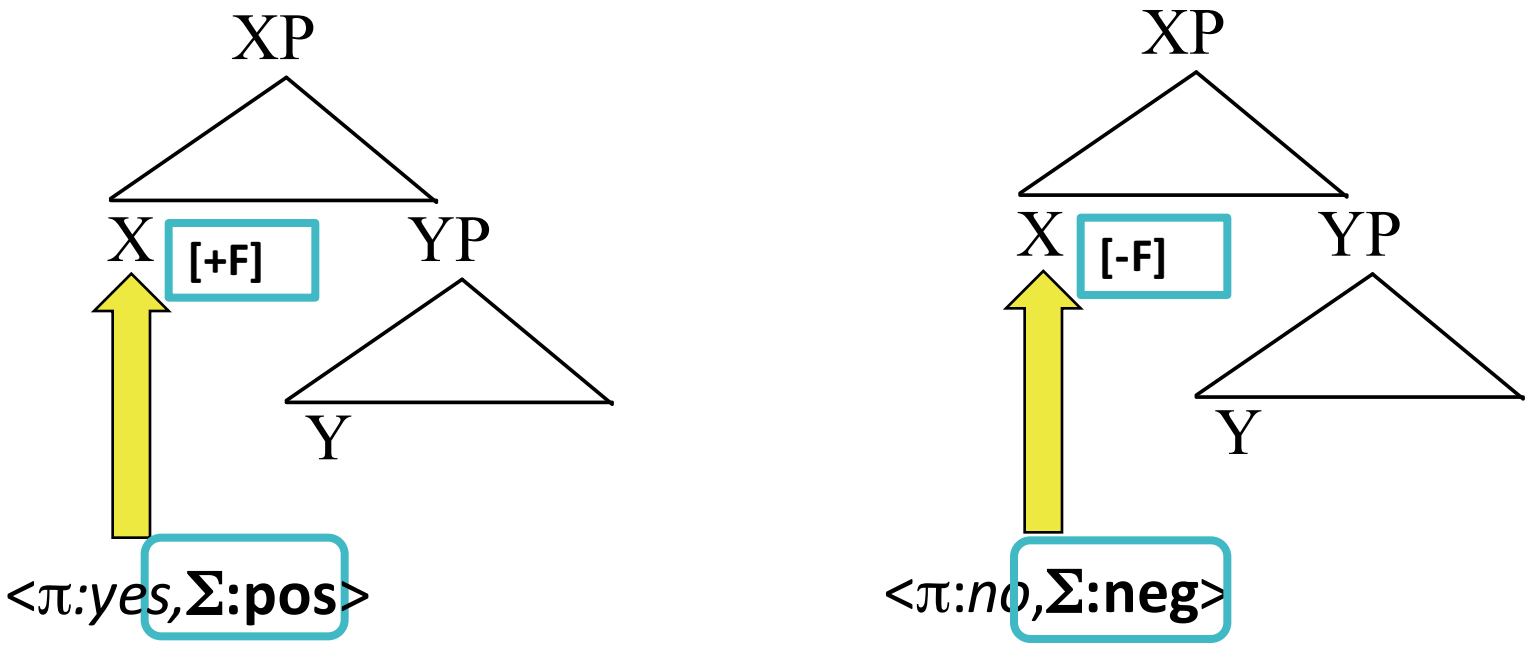
'An atheist denies god's existence.'

Upon receiving e-mail with bad news

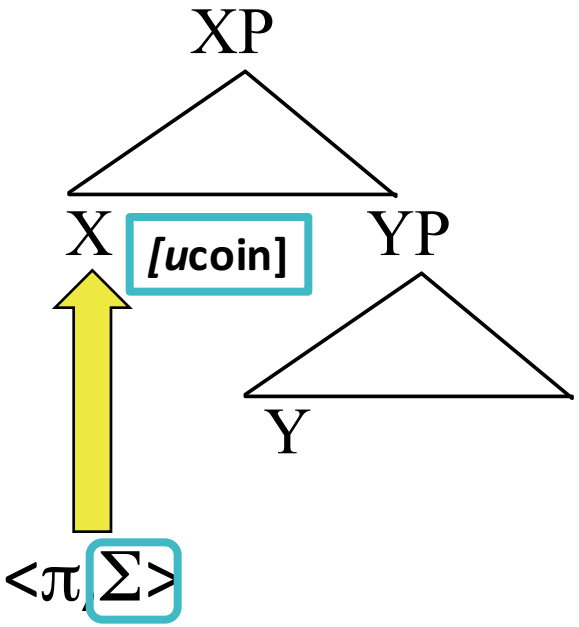
No!

The proposal

What is [F]?



Meaning values F

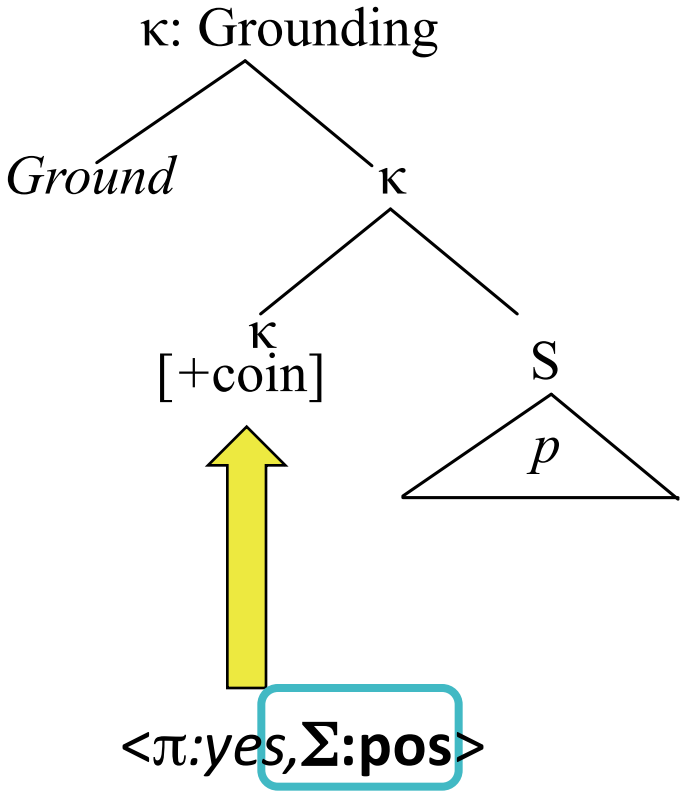


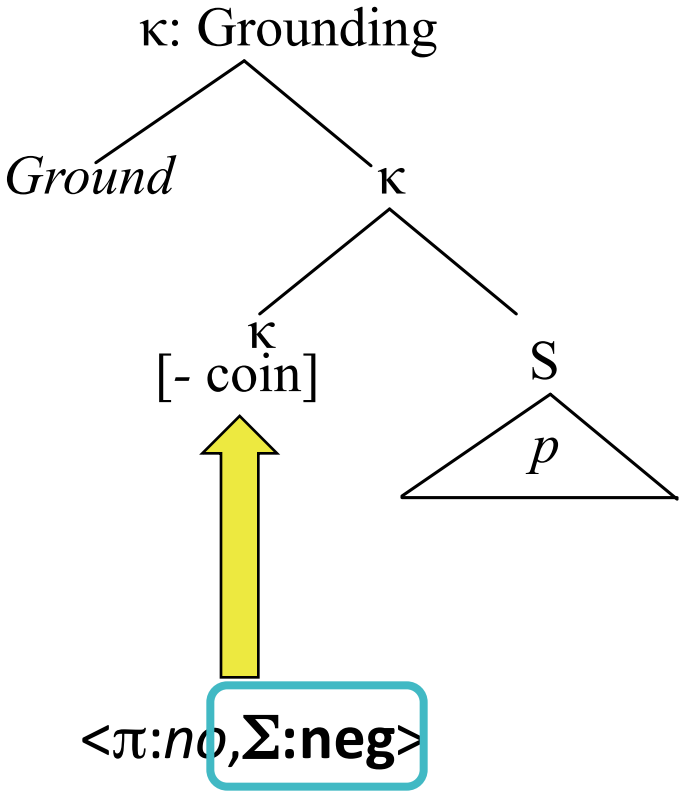
Predictions

- **multi-functionality** of <π,Σ>
- Modification affects **form** and **interpretation**
- **Sound** can value [*u*coin]

The proposal

F = [ucoin] in the grounding layer





The multi-functionality of response particles

Beyond answering

Response to y/n Question

ANSWER

Q: *Did you like the movie?*

A: i) ***Yes*** *(I did)*

ii) ***No*** *(I didn't)*

Response to assertion

A: *John speaks French really well*

B: *Yes* . (= p)

No . (=¬p)

Response to wh-question

AGREEMENT WITH QUESTION

Katie: *Why would he do something like that?*

Brooke: ***Yes**, I know. That is the question.* BB-2012-05-23

Avery: *How did that happen?*

Lauren: (Chuckles) ***yes***.

Michael: *It happened because your amazing nephew convinced daisy to move out of the building.* YR-2012-05-17

Response to command

COMPLIANCE

Alison: *So go back to the farmhouse and wait for us*.

Deacon: ***Yes**, Ma'am.* BB-2012-06-20

Steffy: *Treat me like one of your patients..*

Taylor: ***Yes**, I will.* BB-2012-06-29

Michael: *Breathe!*

Starr: ***Yes**.* GH-2012-03-29

Response to exclamation

AGREEMENT WITH EXCLAMATION

Steffy: *Whoo-hoo .*

Liam: ***Yes****!* BB-2012-05-03)

A: *What a beautiful sunset*.

B: ***Yes****, I know. Isn't it gorgeous*.

Response to Address

M: *Roberta?*

R: *Yes!*

Response to a situation

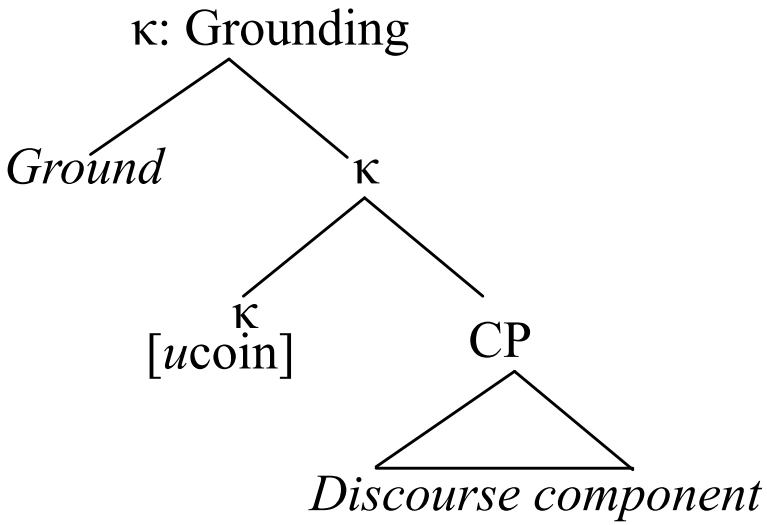
Mary has been impatiently waiting for the delivery of a book she has ordered. One day she opens her mailbox and there is indeed a package.

Mary: *Yessss!*

Response particles are multi-functional

Trigger:	Y/N Q	Wh-question	imperative	exclamative	vocative	Non-linguistic event
yes	✓	✓	✓	✓	✓	✓
no	✓	✓	✓	✓	✓	✓

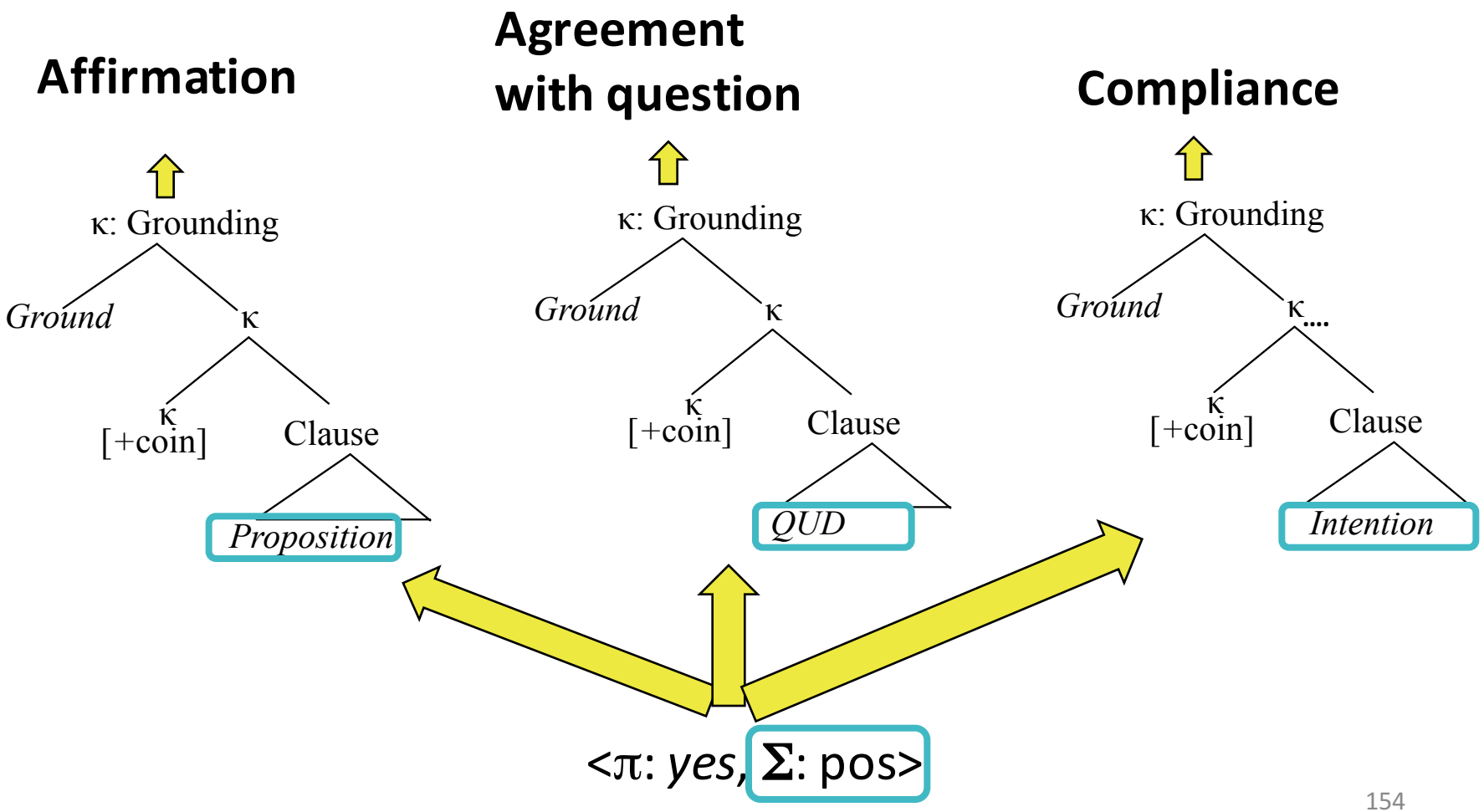
Towards an analysis



Decl: p
Interr: QUD
Imper: To-do-list
…

Multi-functionality

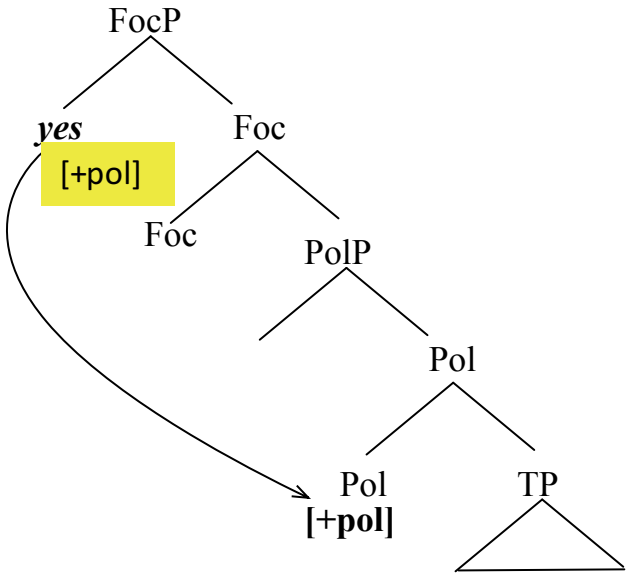
The complement affects the interpretation of the UoL

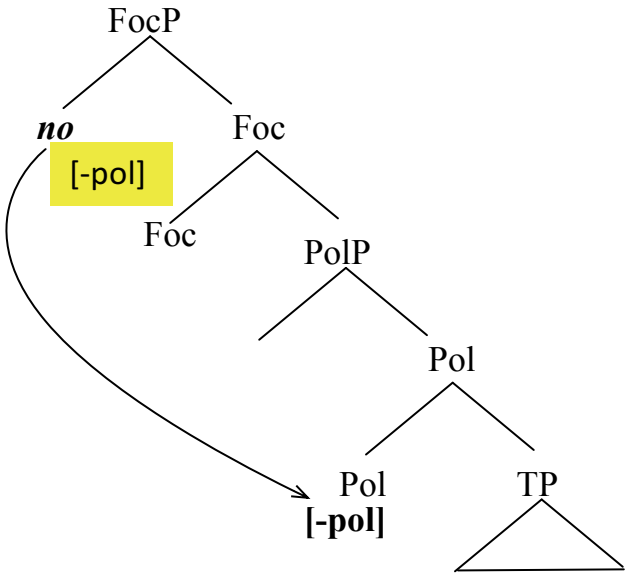


Formal feature [+/-pol]

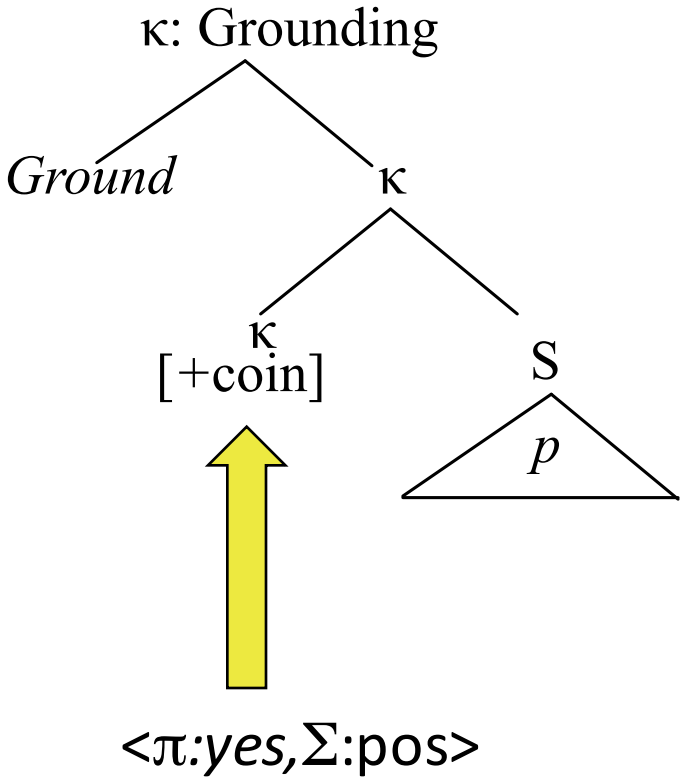
This analysis doesn't capture the multi-functionality of response particles

Trigger:	Y/N Q	Wh-question	imperative	exclamative	vocative	Non-linguistic event
yes	✓	✓	✓	✓	✓	✓
no	✓	✓	✓	✓	✓	✓





Predictions

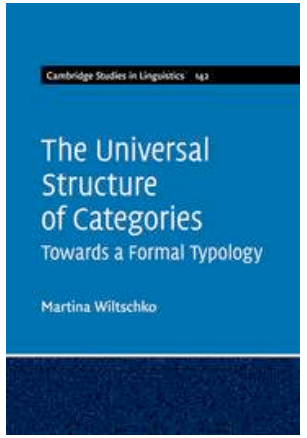


- **Multi-functionality**
- Modification affects **form** and **interpretation**
- **Sound** can value [*u*coin]
- **Other UoLs** in GroundP

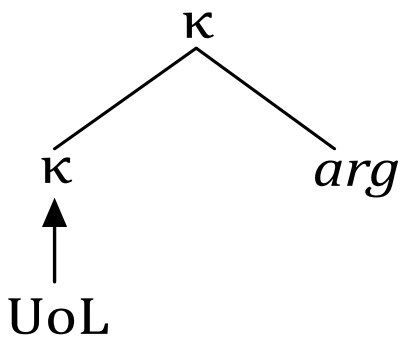
Response particles can be modified

1. Prediction based on USH
2. This rules out an underspecification/late insertion appraoch

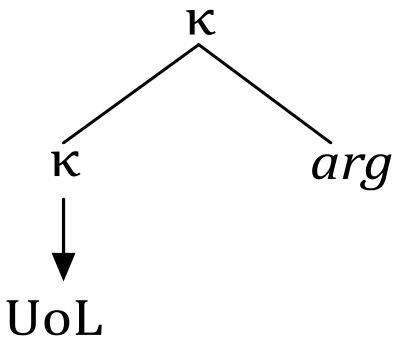
USH
and the timing of association



Early association

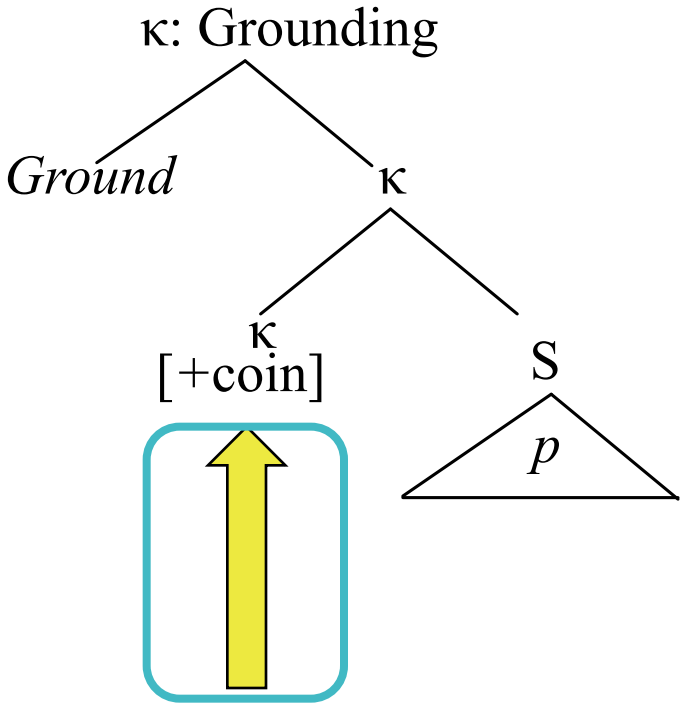


Late association

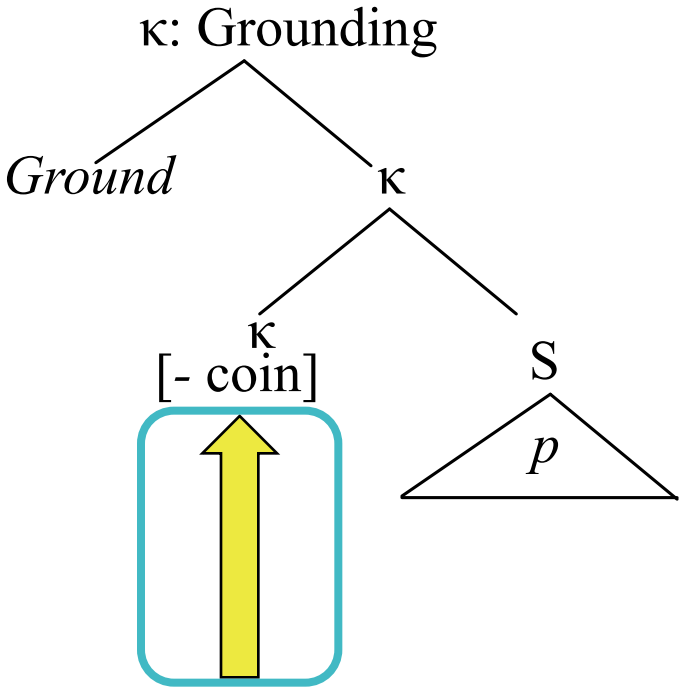


The proposal

This is an early insertion analysis



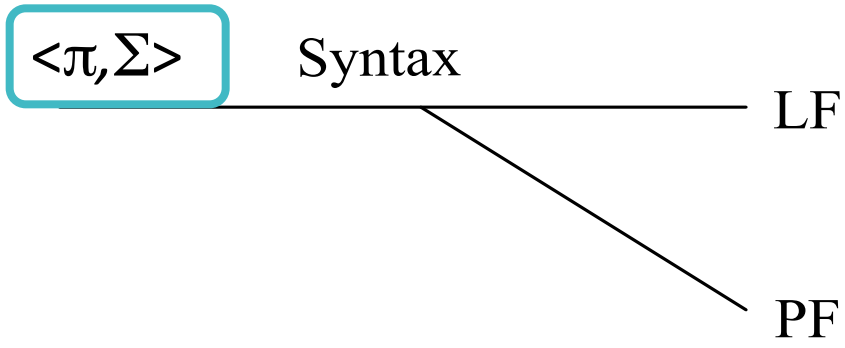
<π:*yes*,**Σ:pos**>



<π:*no*,**Σ:neg**>

Early insertion UoLs

Particle modification will affect sound and meaning



Beyond *yes* and *no*

This is a paradigm

Positive particle	Negative particle
yes	*no*
yeah	*nah*
yup	*nope*
yessss	*noooooo*
yeah yeah	*no no*
yeah yeah yeah yeah yeah	*no no no no no*
oh yes	*oh no*
uhuh	*u'uh*
mhm	*m'm*

Beyond *yes* and *no*

π-Modification affects meaning of the particle

Positive particle	Negative particle	Modification of sound
yes	*no*	Base form
yeah	*nah*	Vowel weakening
yup	*nope*	Final shortening
yessss	*nooooooo*	Final lengthening
yeah yeah	*no no*	reduplication
yeah yeah yeah yeah yeah	*no no no no no*	Requintuplication
oh yes	*oh no*	Oh-prefixation

Beyond *yes* and *no*

Q: *Did you like the movie?*

Positive particle	Negative particle	Modification of sound	Modification of meaning
yes	*no*	Base form	Basic
yeah	*nah*	Vowel weakening	Weakened
yup	*nope*	Final shortening	Determined
yessss	*noooooo*	Final lengthening	Emphatic
**yeah yeah*	**no no*	reduplication	--
**yeah yeah yeah yeah yeah*	**no no no no no*	Requintuplication	--
oh yes	**oh no*	Oh-prefixation	Strong affirmation

Beyond answering

Mary has been impatiently waiting for the delivery of a book she has ordered. One day she opens her mailbox and there is indeed a package.

Positive particle	Modification of sound	Modification of meaning
??yes	Base form	Basic
??yeah	Vowel weakening	Weakened
**yup*	Final shortening	Determined
yessss	Final lengthening	Emphatic answer
**yeah yeah*	reduplication	--
**yeah yeah yeah yeah yeah*	Requintuplication	--
**oh yes*	Oh-prefixation	Strong affirmation

Beyond answering

Mary opens the package an realizes it's the wrong book.

Negative particle	Modification of sound	Modification of meaning
??no	Base form	Basic
**nah*	Vowel weakening	Weakened
**nope*	Final shortening	Determined
noooooo	Final lengthening	Emphatic
**no no*	reduplication	--
**no no no no no*	Requintuplication	--
oh no	Oh-prefixation	Strong affirmation

Modification of form affects interpretation

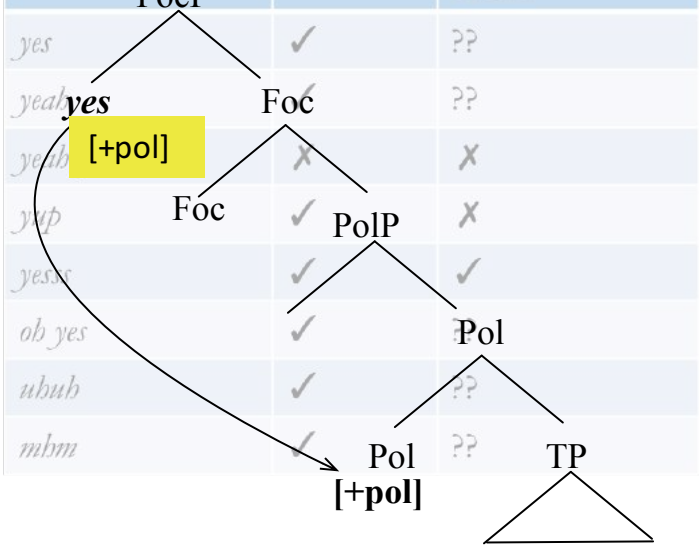
Trigger:	Y/N Q	Non-linguistic event
yes	✓	??
yeah	✓	??
yeah yeah	✗	✗
yup	✓	✗
yesss	✓	✓
oh yes	✓	??
uhuh	✓	??
mhm	✓	??

Trigger:	Y/N Q	Non-linguistic event
no	✓	✗
naaah	✓	✗
no no	??	✗
nope	✓	✗
nooooo	✓	✓
oh no	??	✓
u'uh	✓	✗
m'm	✓	✗

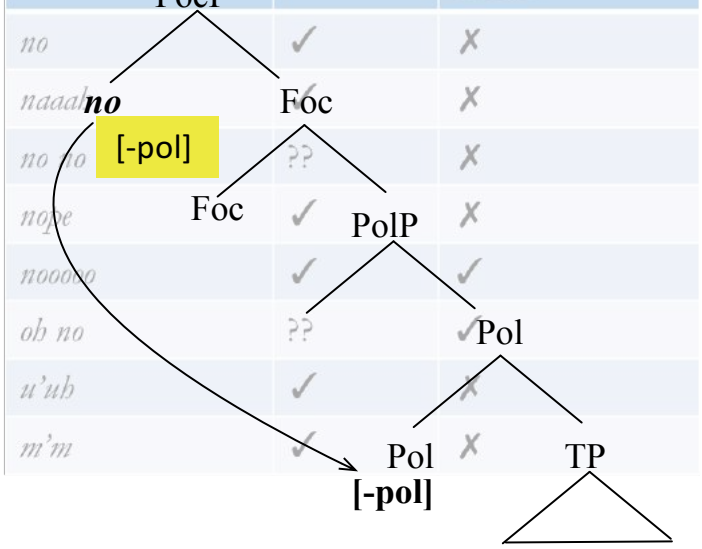
Beyond *yes* and *no*

This analysis doesn't capture the multi-formality of response particles

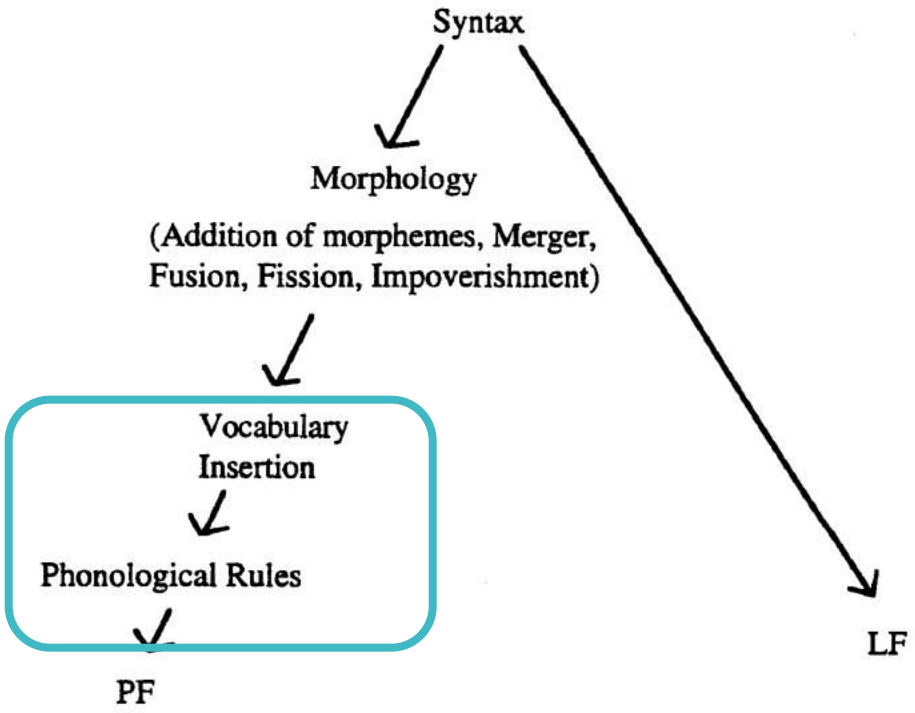
Trigger:	Y/N Q	Non-linguistic event
yes	✓	??
yeah	✓	??
yuh	✗	✗
yup	✓	✗
yesss	✓	✓
oh yes	✓	??
uhuh	✓	??
mhm	✓	??



Trigger:	Y/N Q	Non-linguistic event
no	✓	✗
naaah	✓	✗
no no	??	✗
nope	✓	✗
noooo	✓	✓
oh no	??	✓
u'uh	✓	✗
m'm	✓	✗



Underspecification/late insertion



Phonological rules have an effect on the interpretation of the particle