

Edinburgh  
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Language as an instrument of  
thought **and** communication.  
Evidence from interactional language

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# Take home messages

## **Empirical:**

- Explore i-(nteractional) language
- Explore it like p-(ropositional) language

## **Analytical**

Introduce the Interactional Spine Hypothesis as a framework to explore i-lg

## **Theoretical**

If ISH is on the right track, it ends the long debate about whether the core function of language is thought or communication.

The distinction implodes as language integrates both.



# Take home messages



*Der Mensch spricht, sogar in Gedanken, nur mit einem Andern,  
oder mit sich, wie mit einem Andern*

W. von Humboldt

Humans speak, even in their mind, only to an other,  
or with oneself, as if they were an other.

# Overview of the talk

## Introducing interactional language

### The interactional spine hypothesis (ISH)

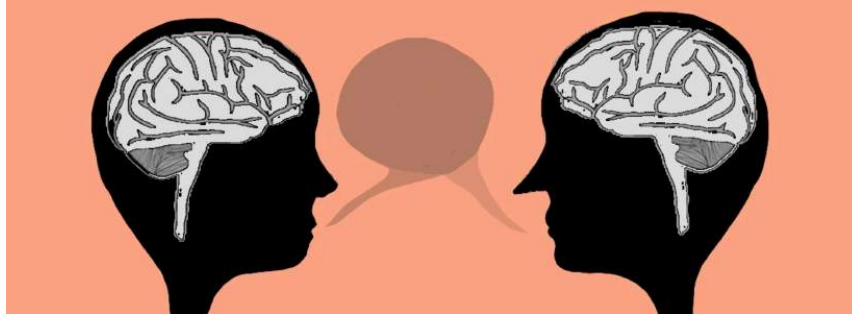
- A universal spine is part of the language faculty
- The spine regulates both p-language and i-language

### Two Case studies

- Confirmationals
- Response marker
- Both are regulated by the same underlying system (the interactional spine)

## Language is an instrument for thought AND communication





Introducing interactional language

(1) I Gal Gadot was amazing as Wonder Woman.  
R I know.



# i(nteractional) language

- (1) I Gal Gadot was amazing as Wonder Woman, **eh?**  
R **Yeah, I know, right?**



# p(ropositional)-language

- (1) I Gal Gadot was amazing as Wonder Woman.  
R I know.





# i-language

- (1) I Gal Gadot was amazing as Wonder Woman, **eh?**  
R **Yeah, I know, right?**

What do we do with  
interactional  
language?

# i-language

Request  
confirmation  
of agreement

(1) I Gal Gadot was amazing as Wonder Woman, **eh?**

R **Yeah,** I know, **right?**

Confirmation  
of agreement

Request  
confirmation  
of agreement  
of agreement

Emphasize  
agreement

# i-language

- Synchronize minds (**common ground**)
- Sequence moves (**turn taking**)

- (1) I Gal Gadot was amazing as Wonder Woman, **eh?**  
R **Yeah, I know, right?**

Explore i-(nteractional) language  
Explore it like p-(ropositional) language

## Distributional restrictions

I: Pedro quiere un perro.  
Peter want a dog.  
'Peter wants a dog.'

R1: Sí

R2: Sí sí!

R3: Claro que sí.  
Clear that yes  
'Of course.'

R4: \*Claro que sí sí.

# Interpretive restrictions

I: Da Peta hot si an fuas brochn.  
DET Peter has REFL INDEF foot broken  
'Peter broke his leg.'

R: Jo jo. → p = old information

“responding with doubled *ja* “indicates that the prior utterance contains already known information (...) and that therefore the current action should be stopped.”

Golato & Fagyal 2008: 249

# Response markers & intonation

I: Da Peta hot si an fuas brochn.  
'Peter broke his leg.'

R: i) Jo!  
Yes HL% → p = old information

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I: Da Peta hot si an fuas brochn.  
'Peter broke his leg.'

- R: i) Jo!  
Yes HL% → p = old information
- ii) Jo?  
Yes LH% → p = new information

# Response markers & intonation

I: Da Peta hot si an fuas brochn.  
'Peter broke his leg.'

R: i) Jo jo! → p = old information  
ii) Jo jo? → p = old information



# Interpretive restrictions

I: Da Peta hot si an fuas brochn.  
'Peter broke his leg.'

R: i) Jo? (Is des wirkli woa?)  
'Is this really true?'  
(Warum sogst ma den des?)  
'Why are you telling me that?'

ii) Jo jo? (\*Is des wirkli woa?)  
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### **Two Case studies**

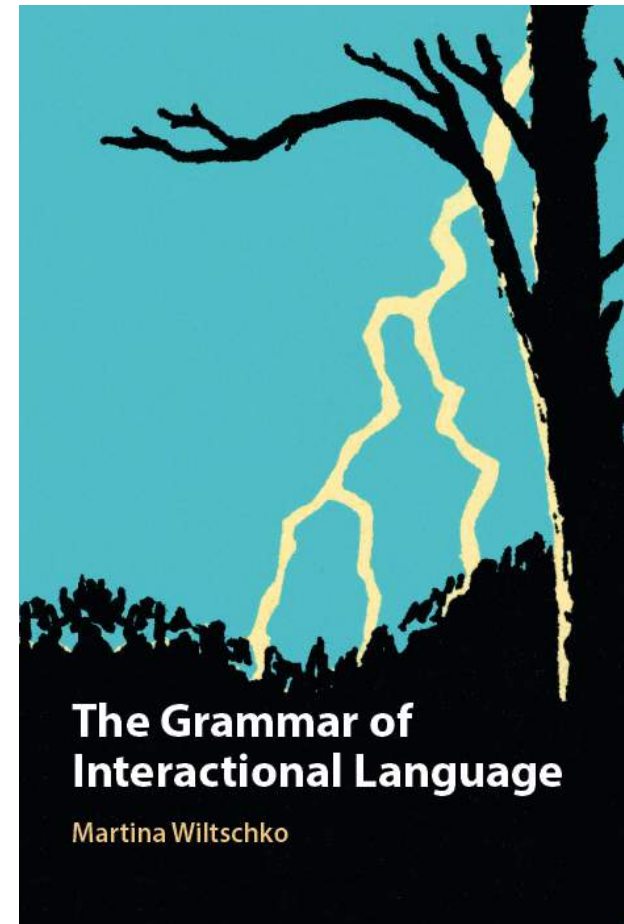
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**Language is an instrument for thought AND communication**

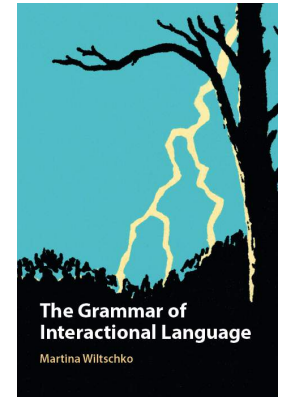
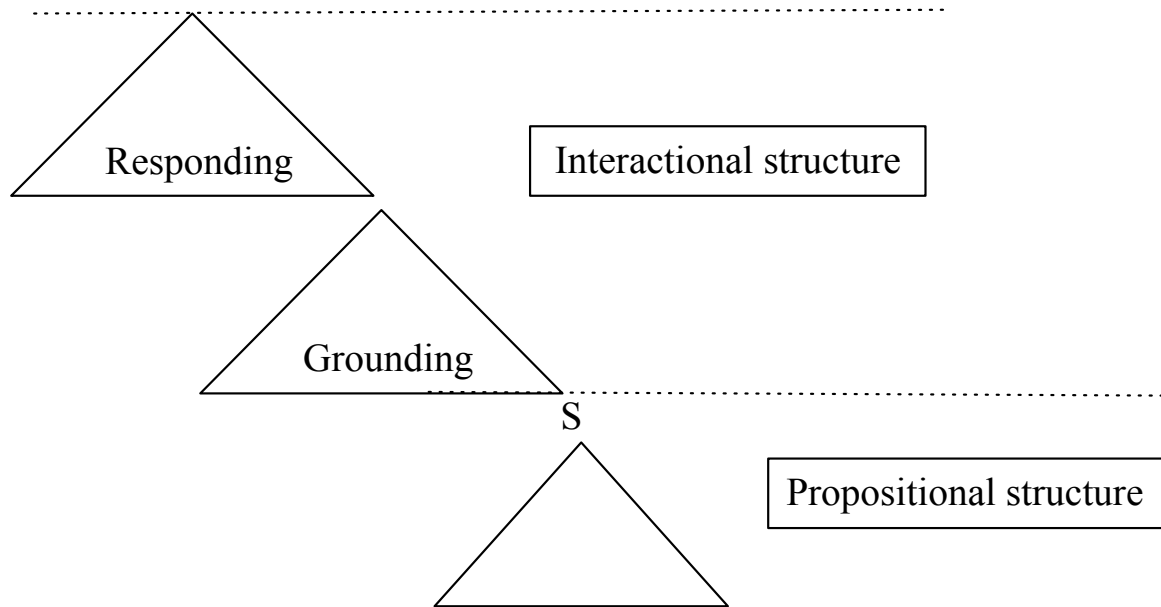


# The interactional spine hypothesis

Wiltschko, to appear

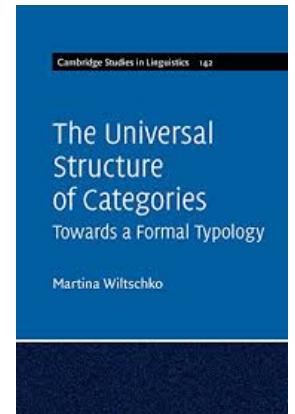
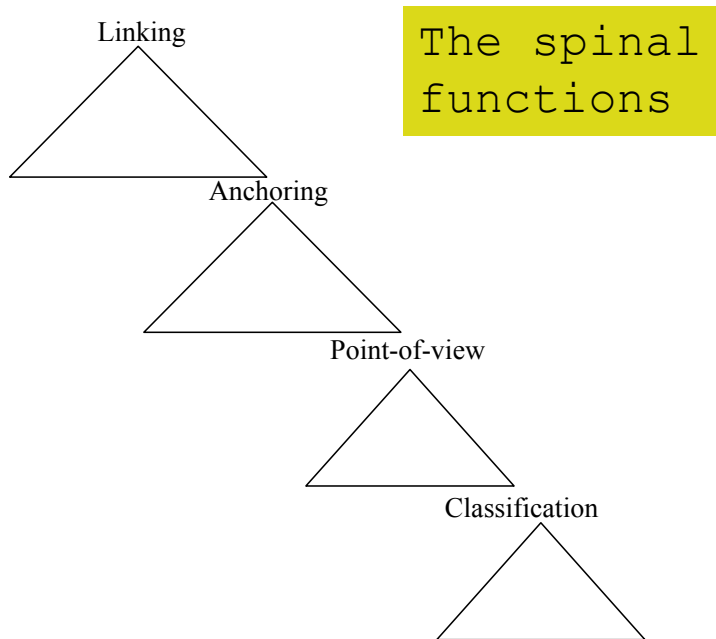


# The interactional spine hypothesis (ISH)



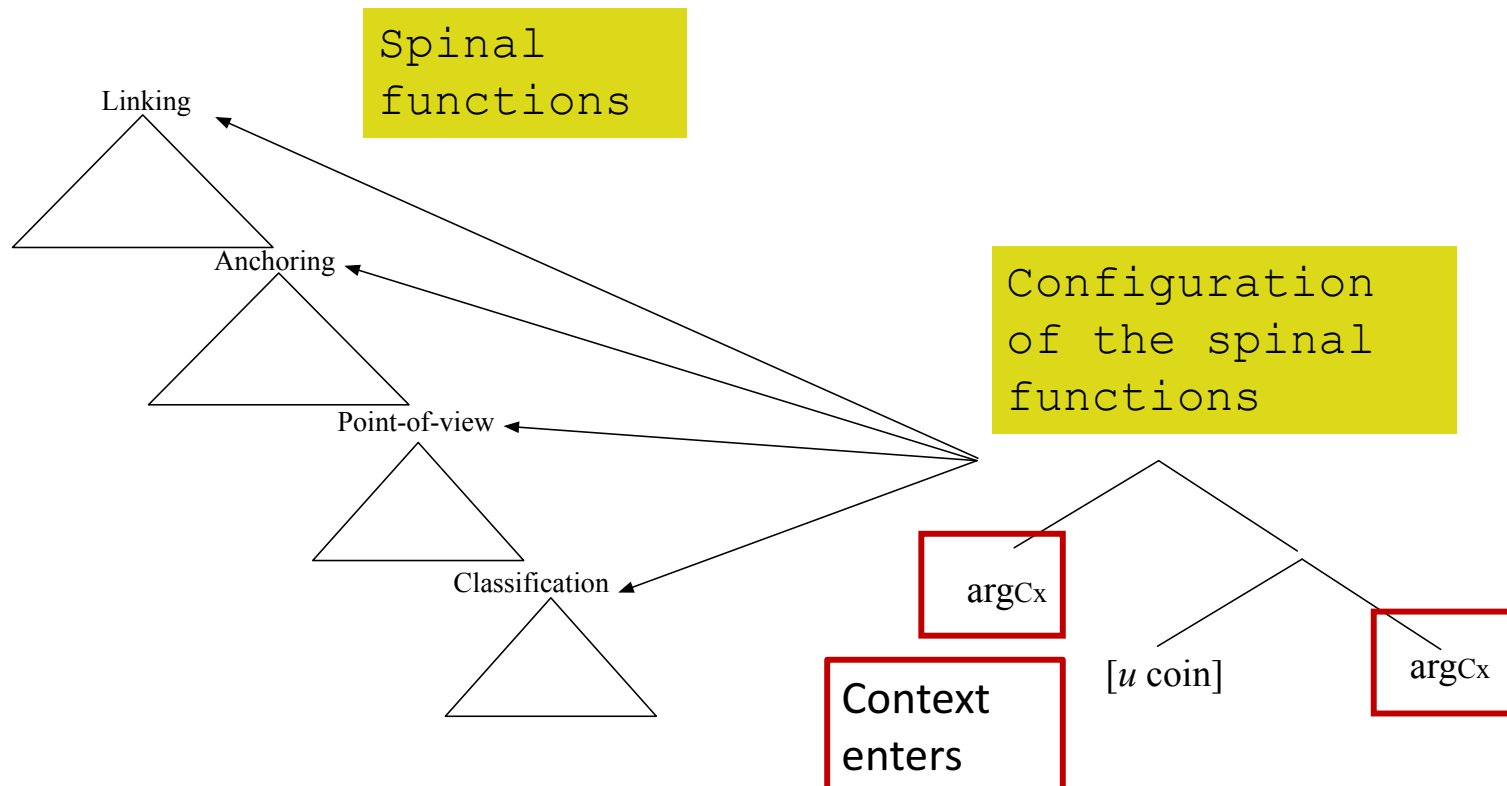
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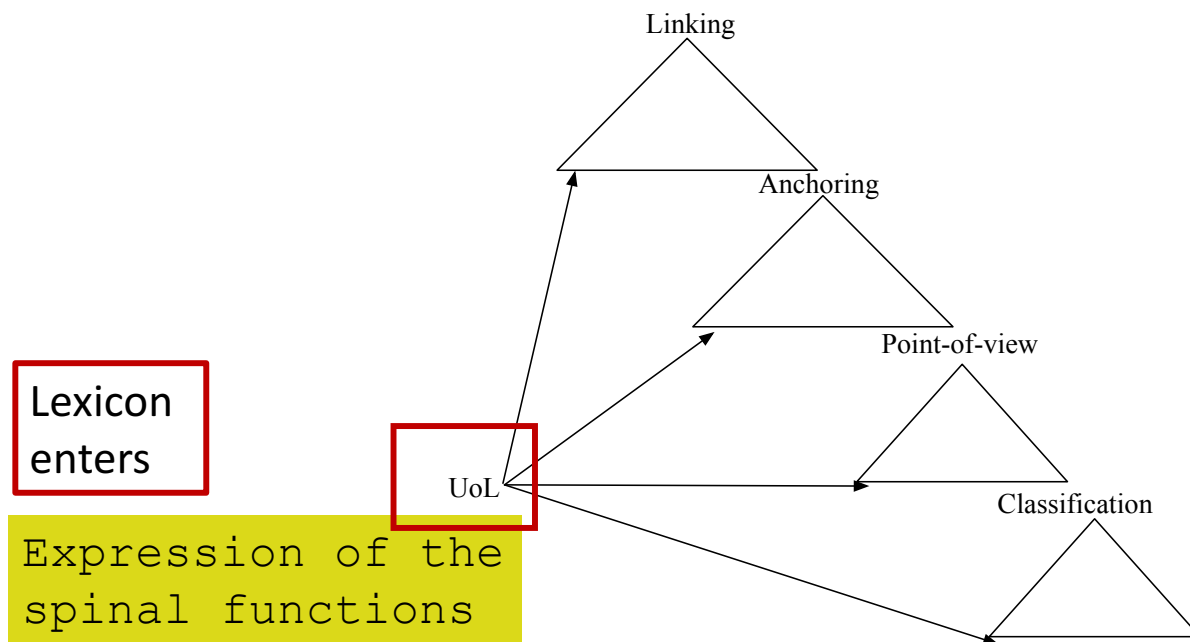


Wiltschko 2014

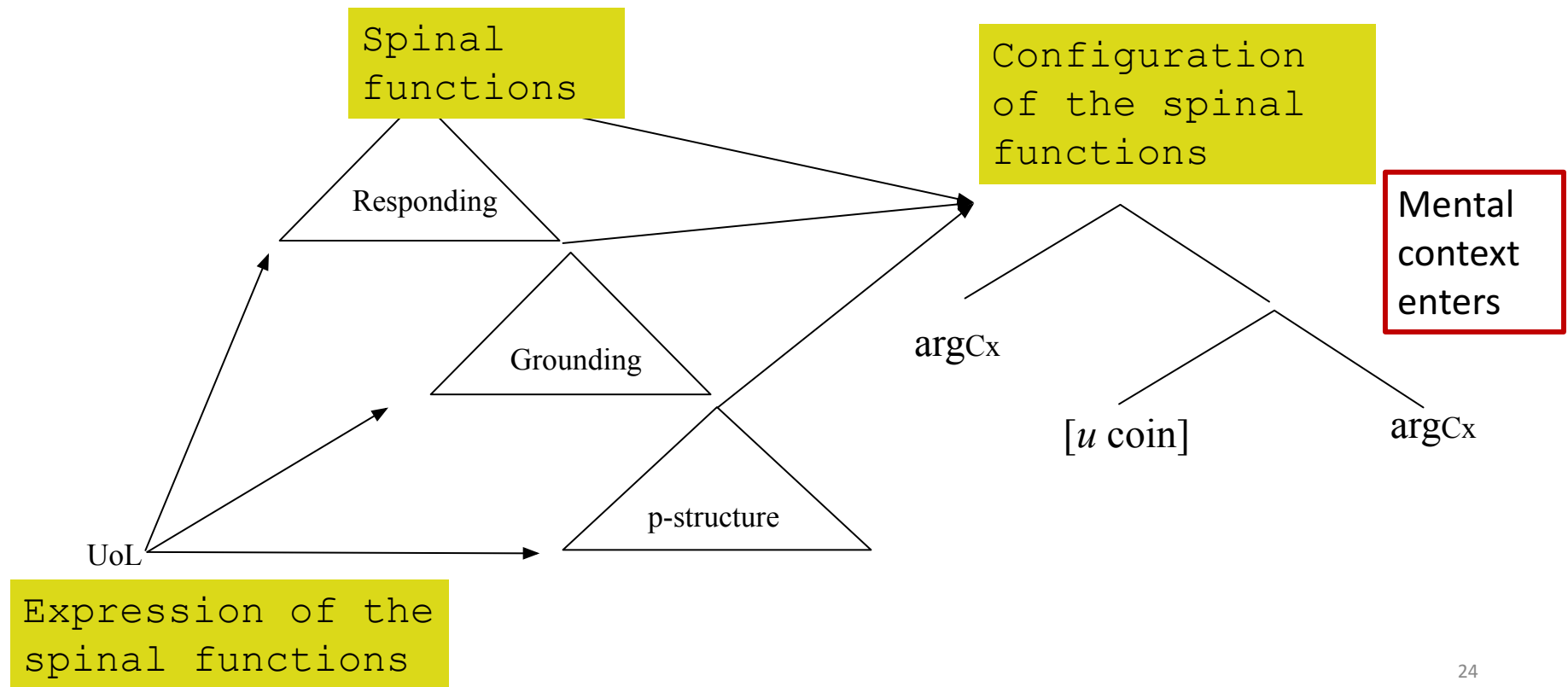
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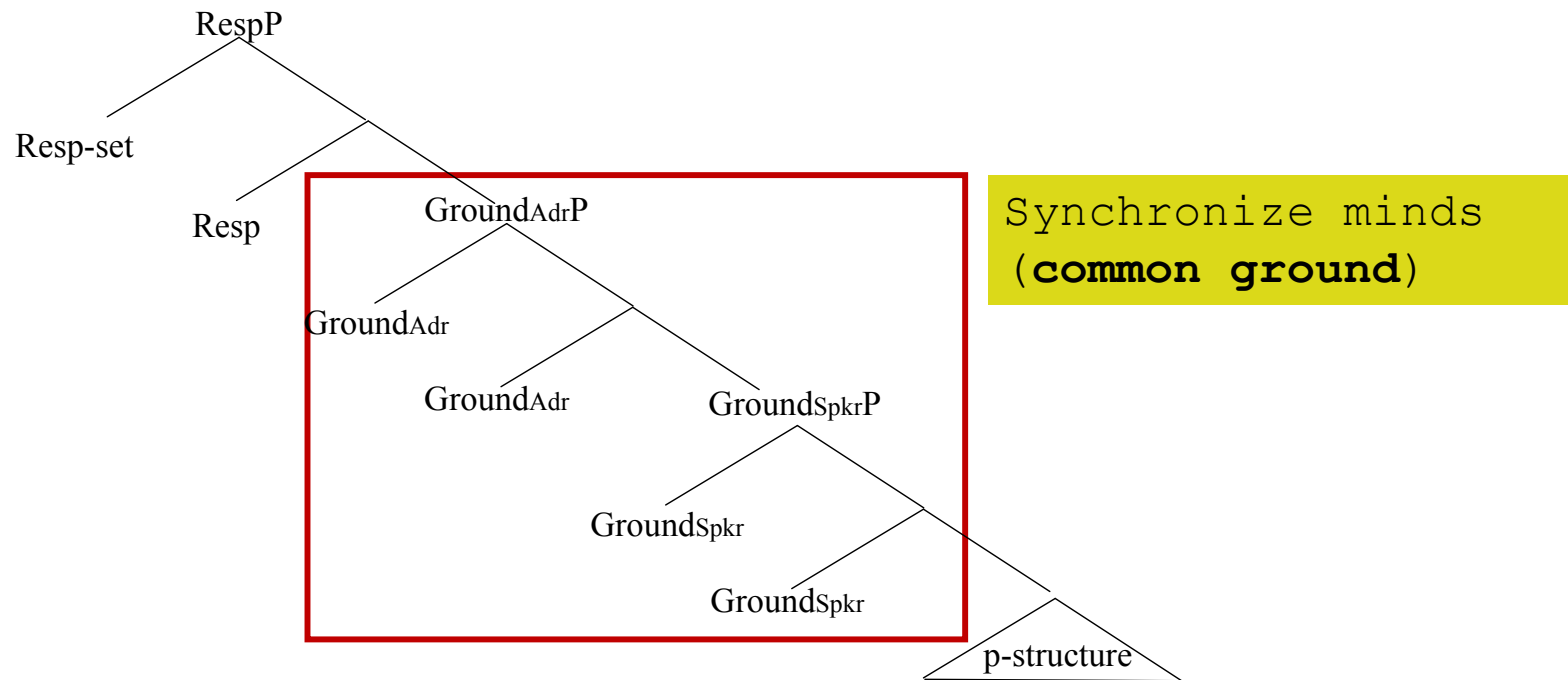


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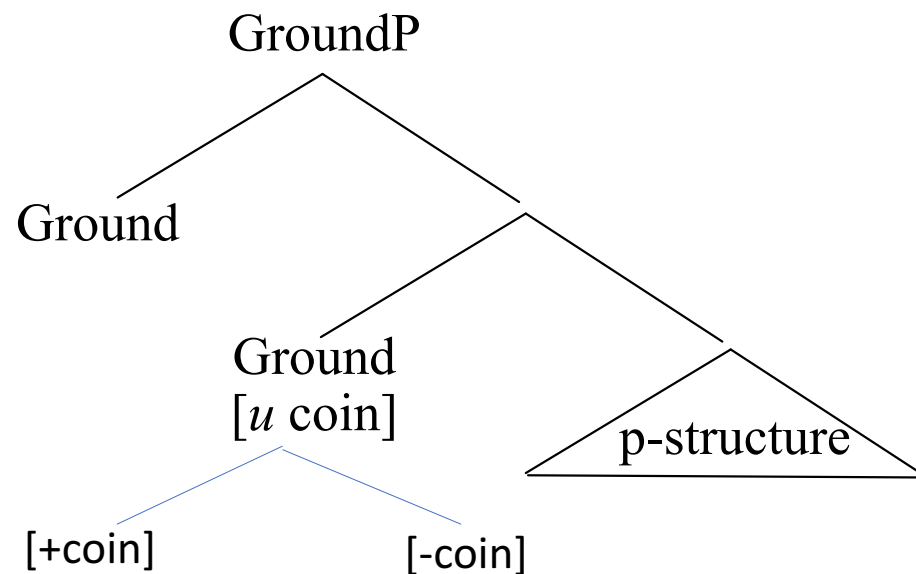




# The interactional spine hypothesis



# The interactional spine hypothesis

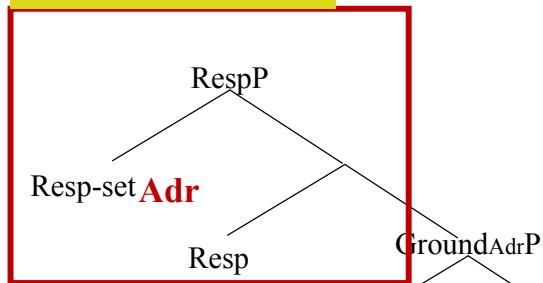


What I'm saying is  
in my/your ground

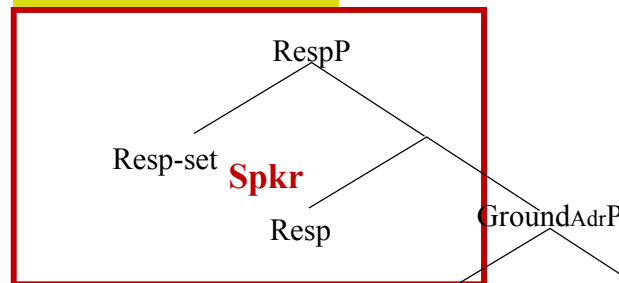
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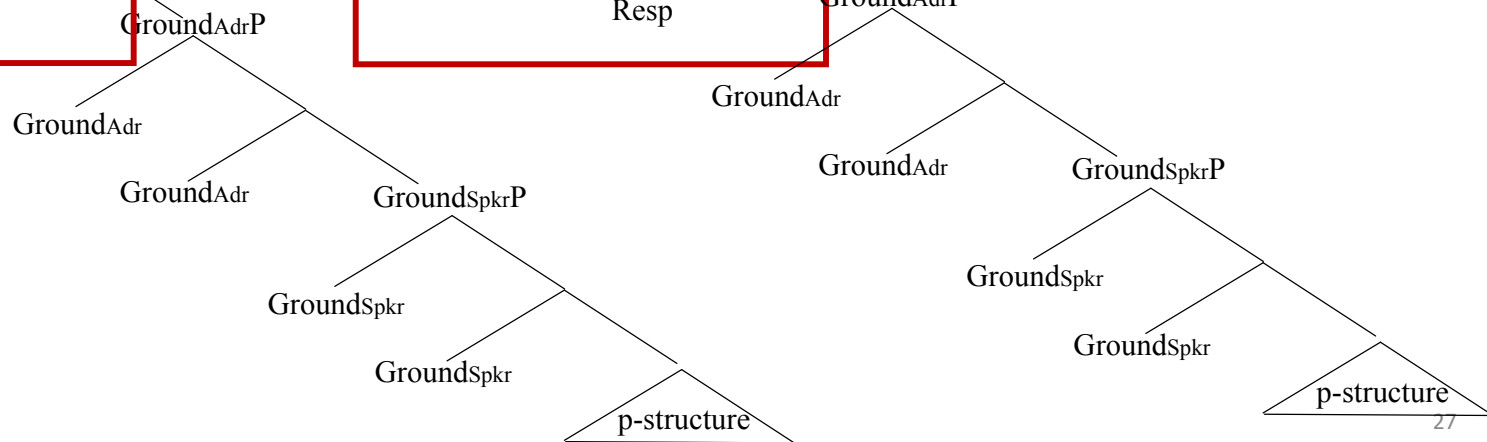
Initiating  
move



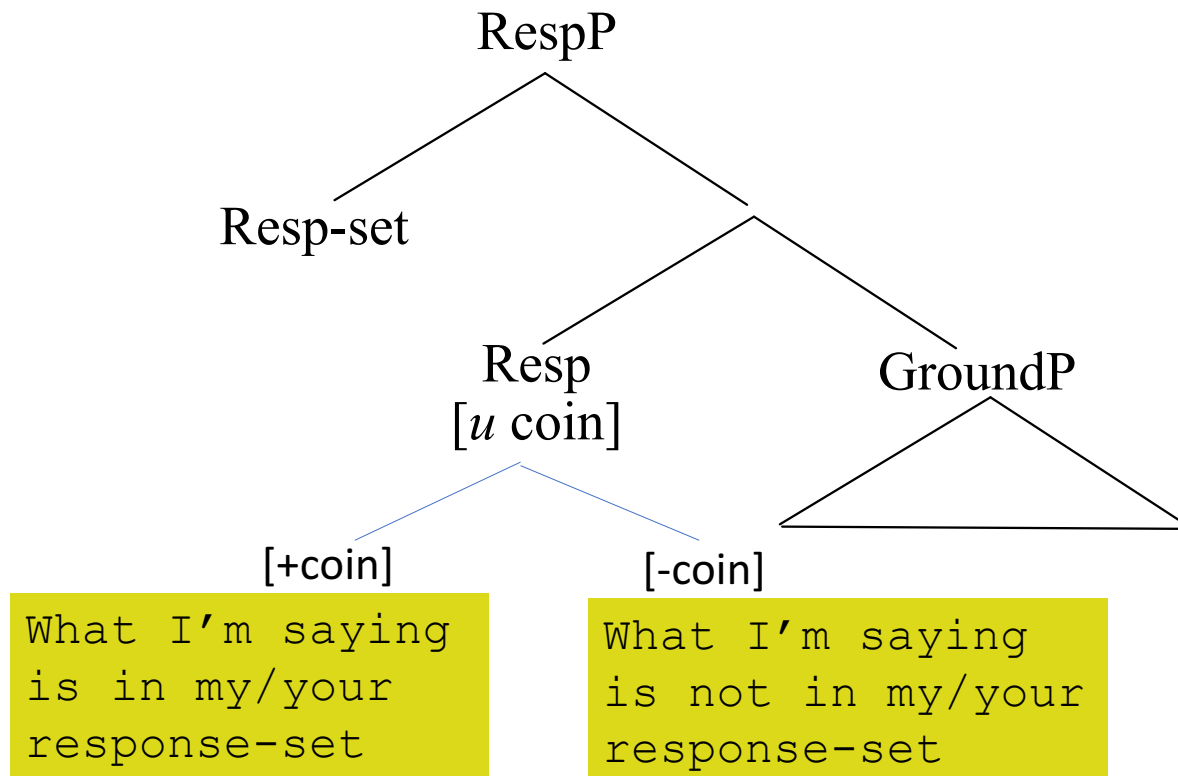
Reacting  
move



Sequence moves  
(**turn taking**)

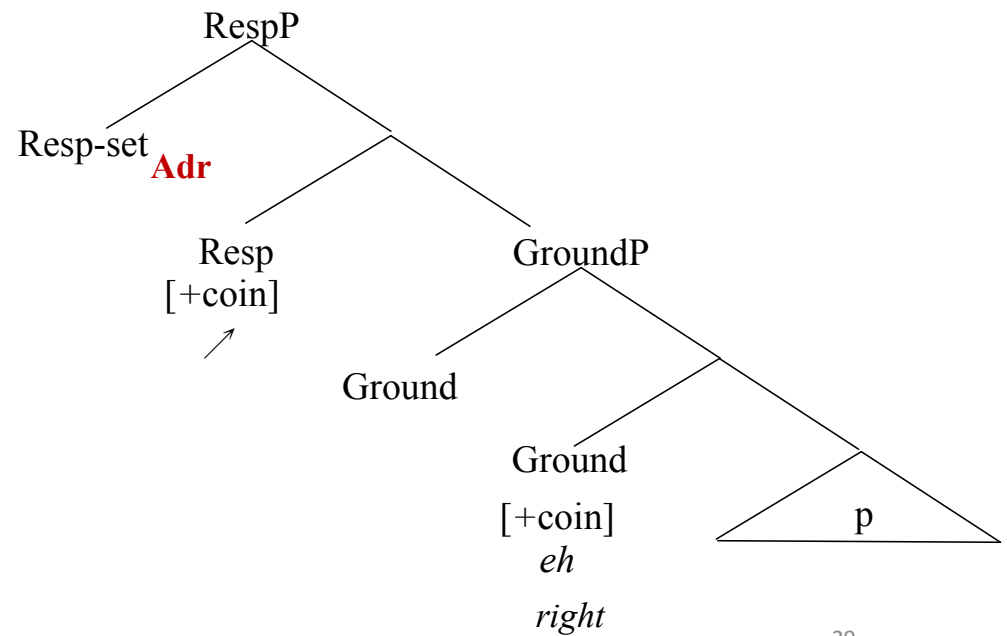


# The interactional spine hypothesis



# The interactional spine hypothesis

- (1) I Gal Gadot was amazing as Wonder Woman, **eh?**  
R **Yeah, I know, right?**



# Evidence for ISH

- i-lg is hierarchically organized
  - Hierarchical organization determines scope linear order
- i-lg. participates in patterns of
  - contrast and paradigmaticity
- i-lg and p-lg are prosodically integrated
- i-lg and p-lg have parallel nominal and clausal structure
- It's the null hypothesis:
  - There is a system that regulates i-language
  - The system is the same as the one that regulates p-language (i.e., the spine)

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Language is an instrument for thought AND communication

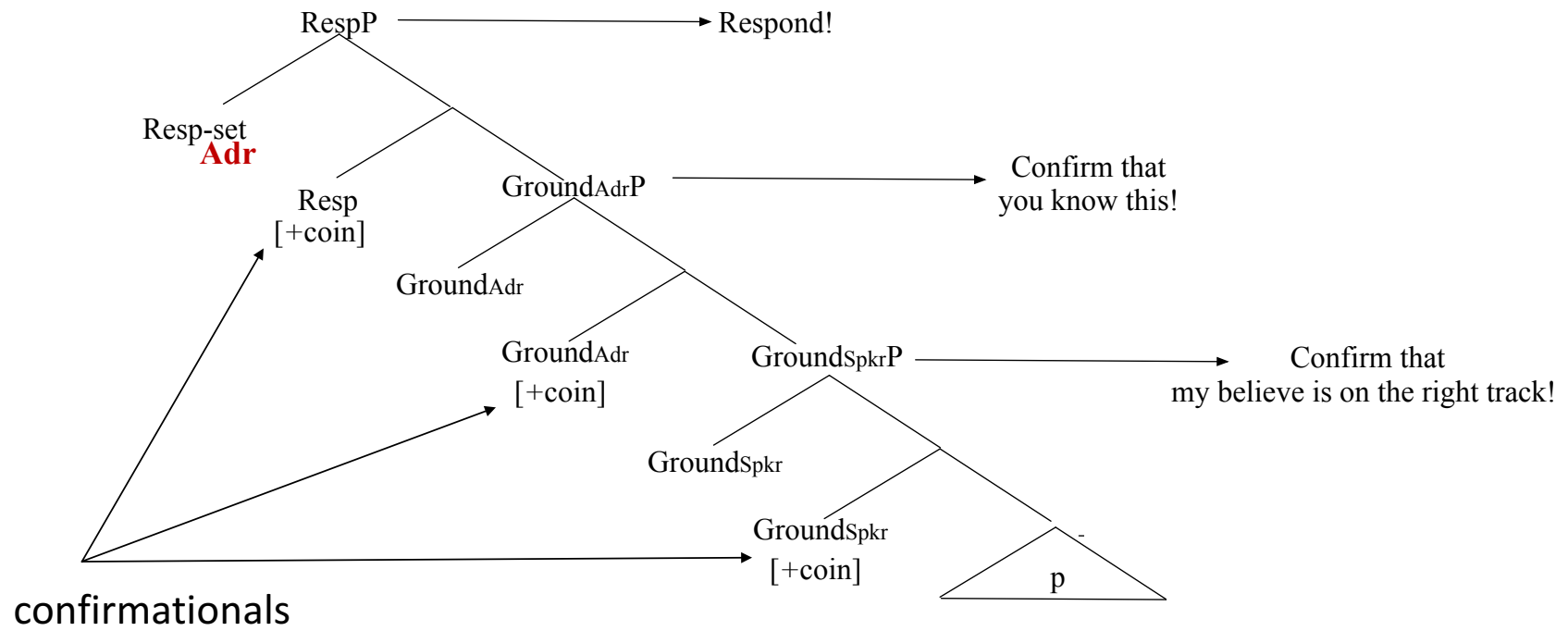


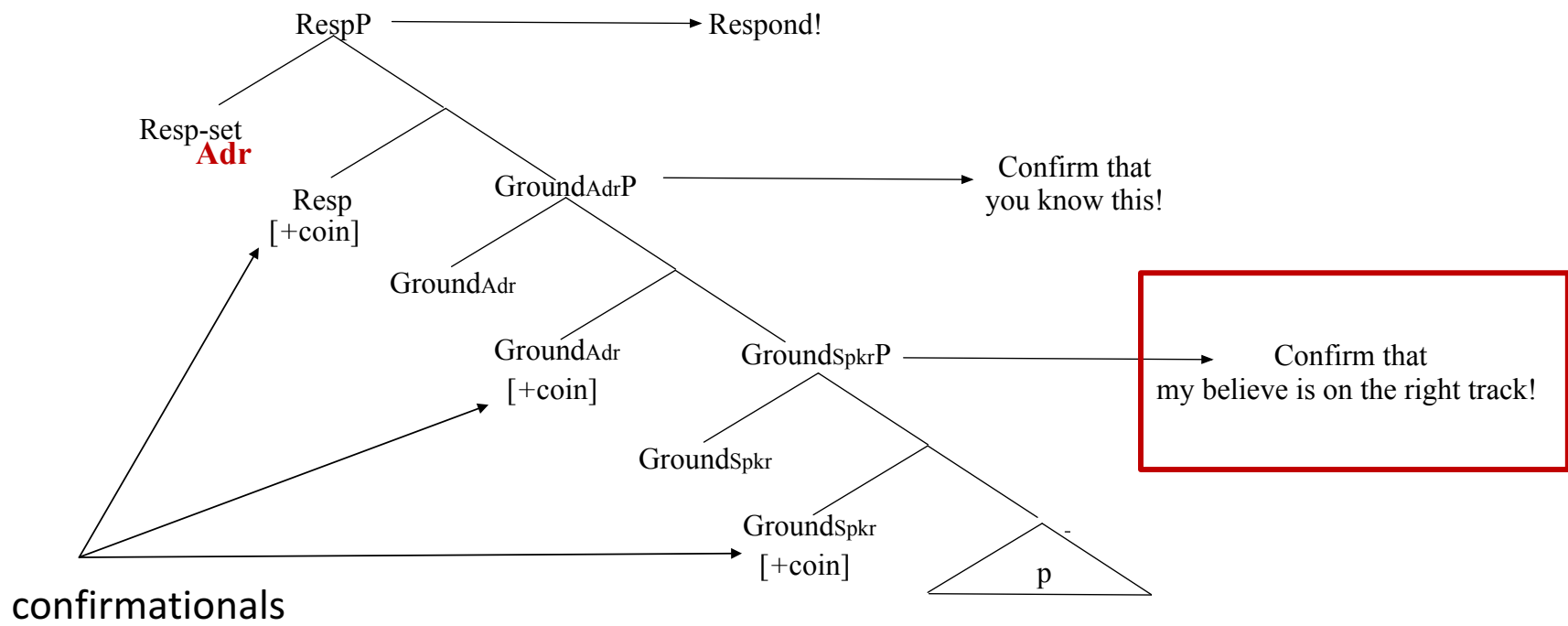


Confirmational on the spine



Initiating  
moves



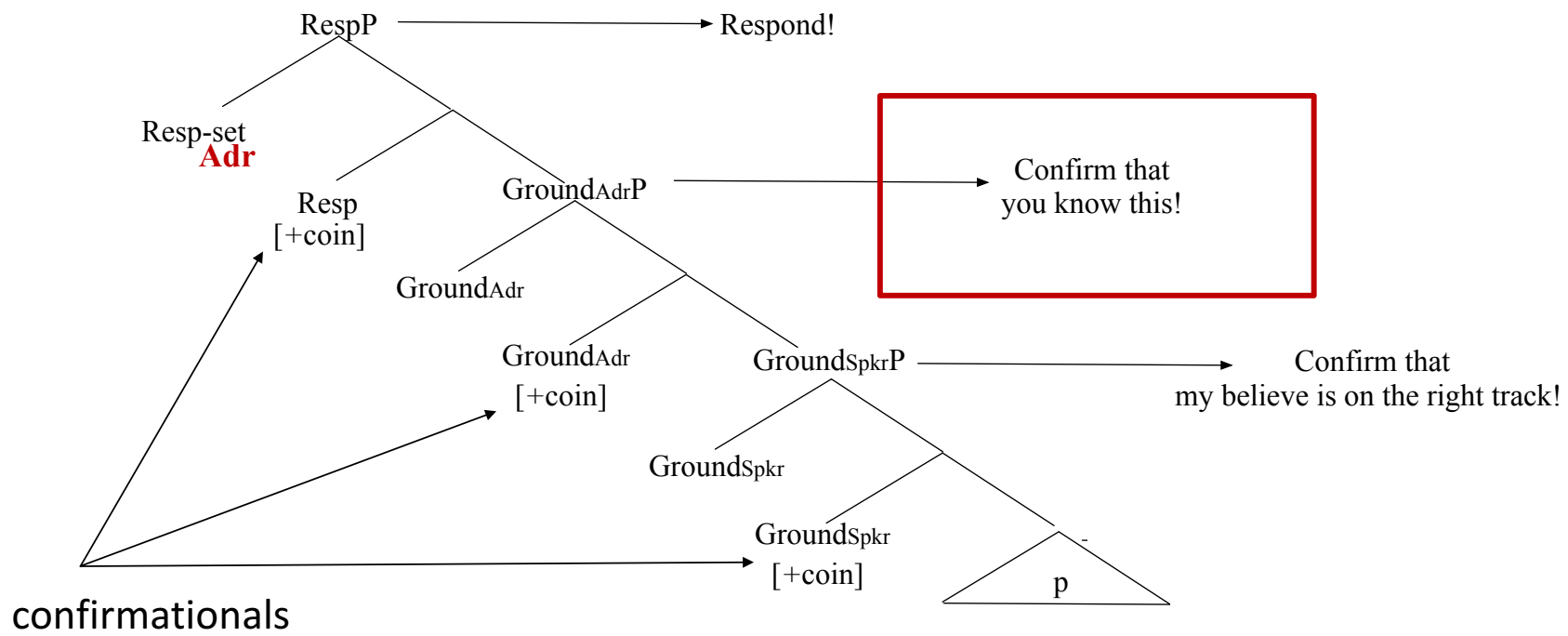




You have a new dog, **eh**?  
You have a new dog, **huh**?

→ Confirm that  
my believe is on the right track!

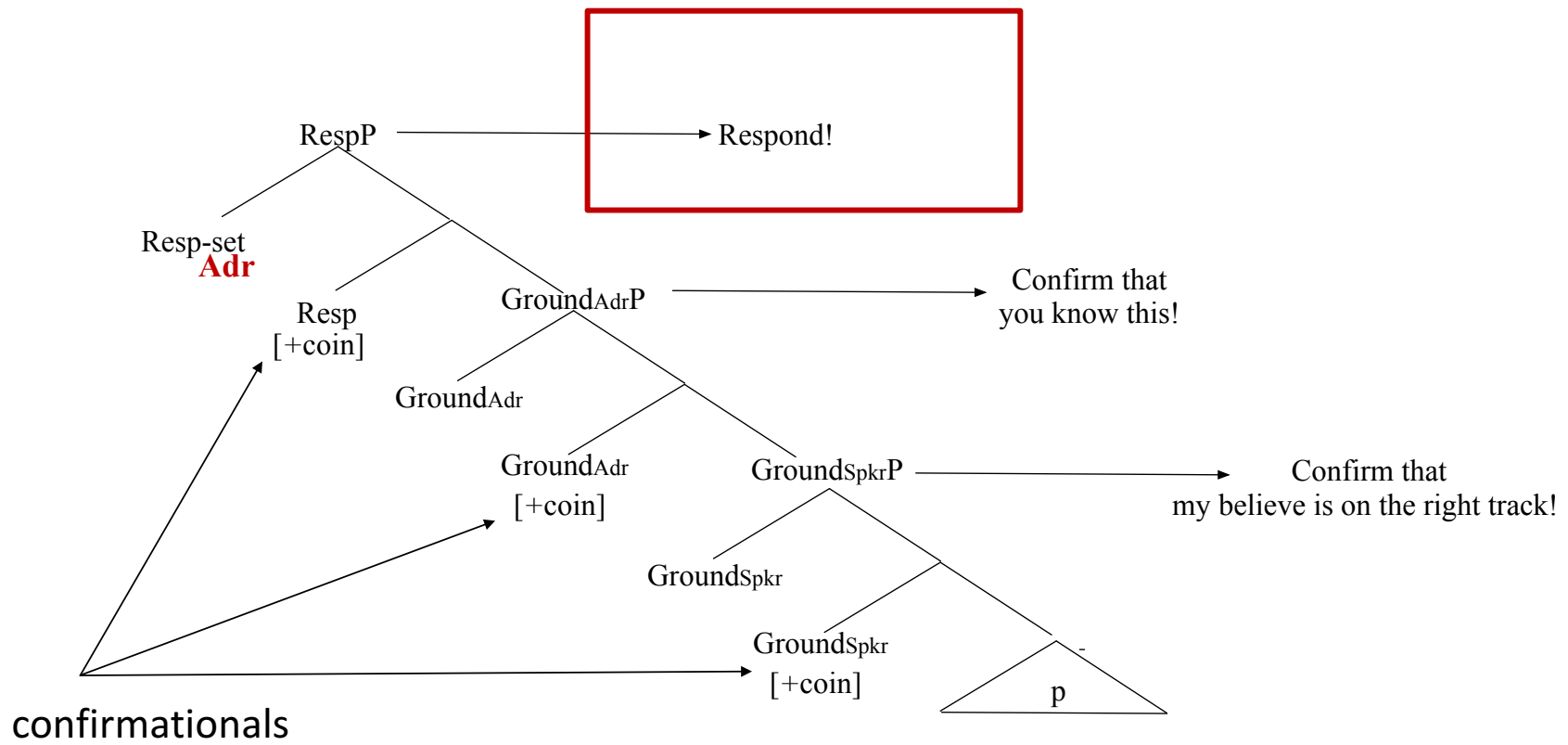
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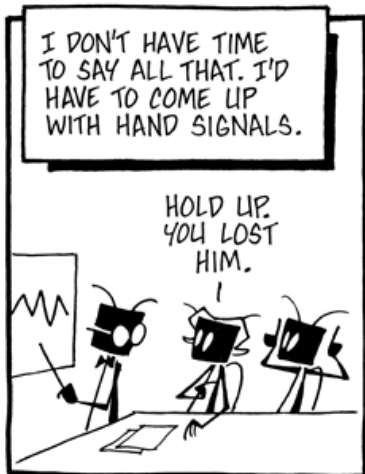
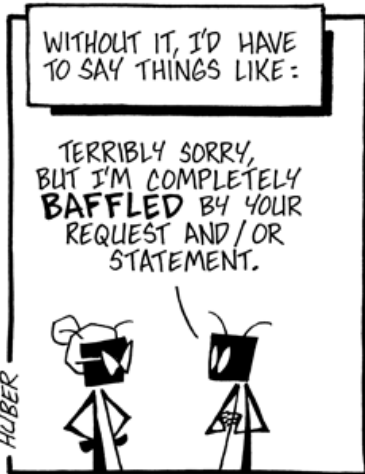
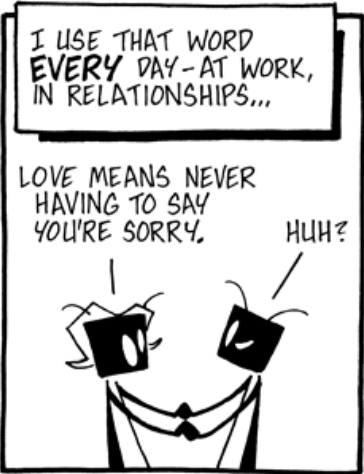
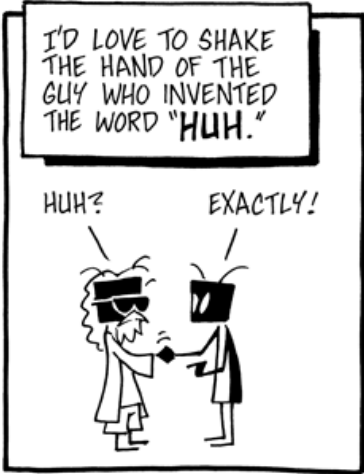


→ Confirm that you know this!

I have a new dog, **eh?**  
\*I have a new dog, **huh?**



→ Respond!



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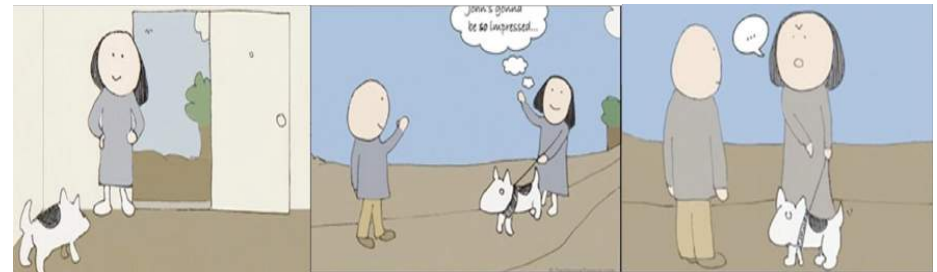
WWW.BUGMARTINI.COM

# Eh vs. huh

Confirmational  
differ in  
distribution



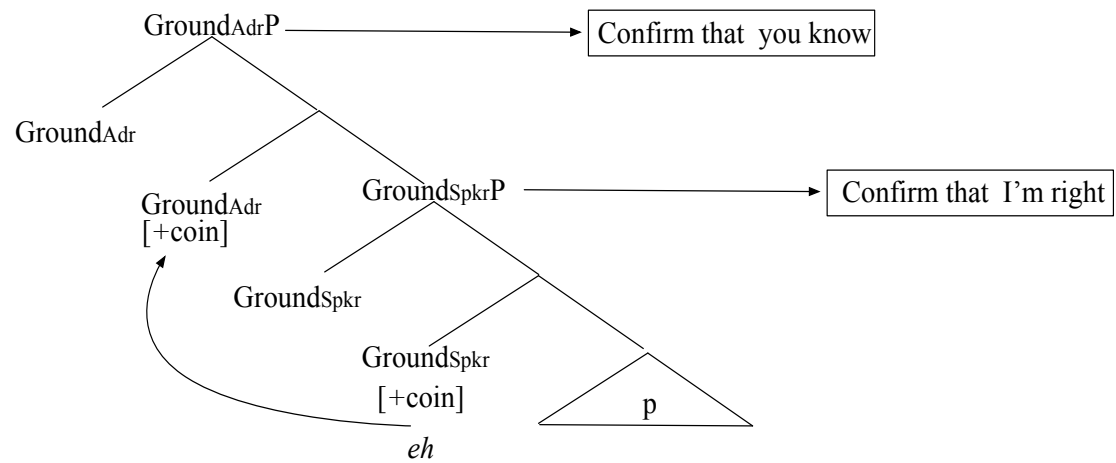
I You have a new dog, **eh/huh**?  
R Yeah, I just got him last week.



I I have a new dog, **eh/\*huh**?  
R No. I didn't know that.



*eh* can associate with both GroundPs



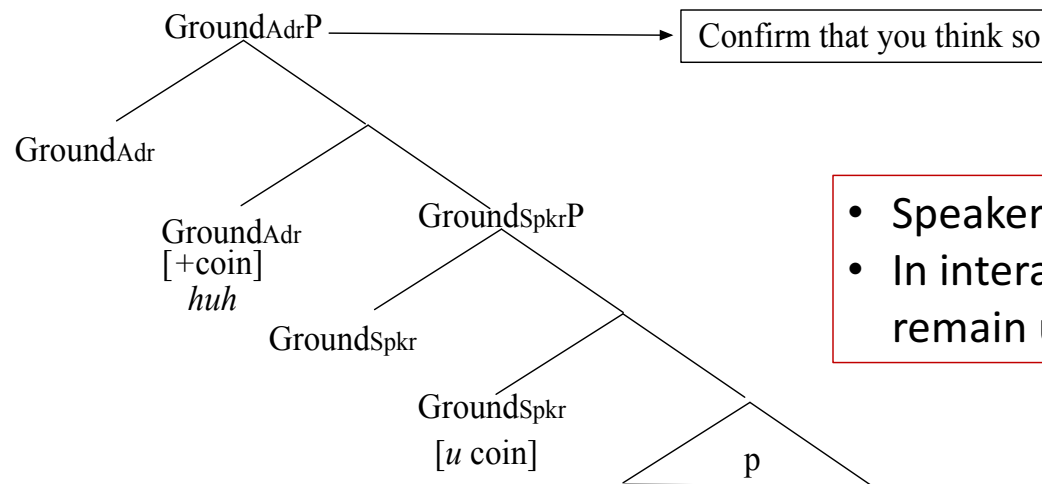


This was such a good movie, **eh/\*huh?**



This was a good movie, **eh/huh?**

*Huh* is restricted to  $\text{Ground}_{\text{Adr}}$  only

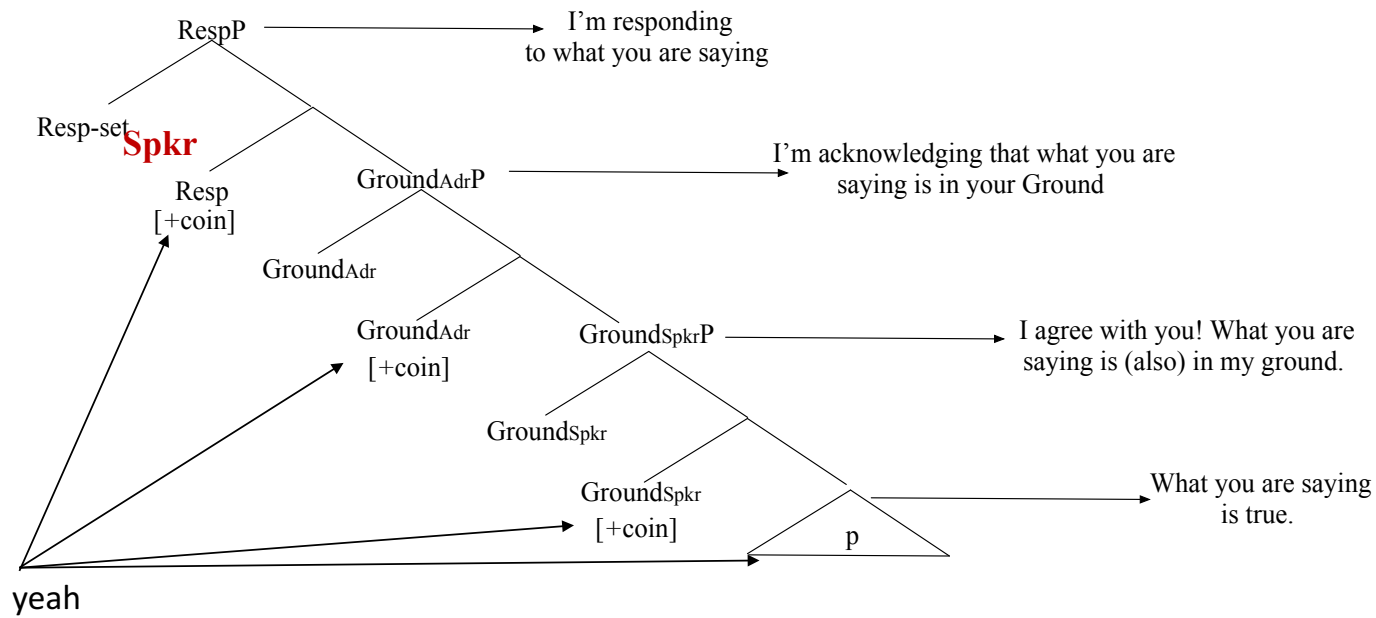


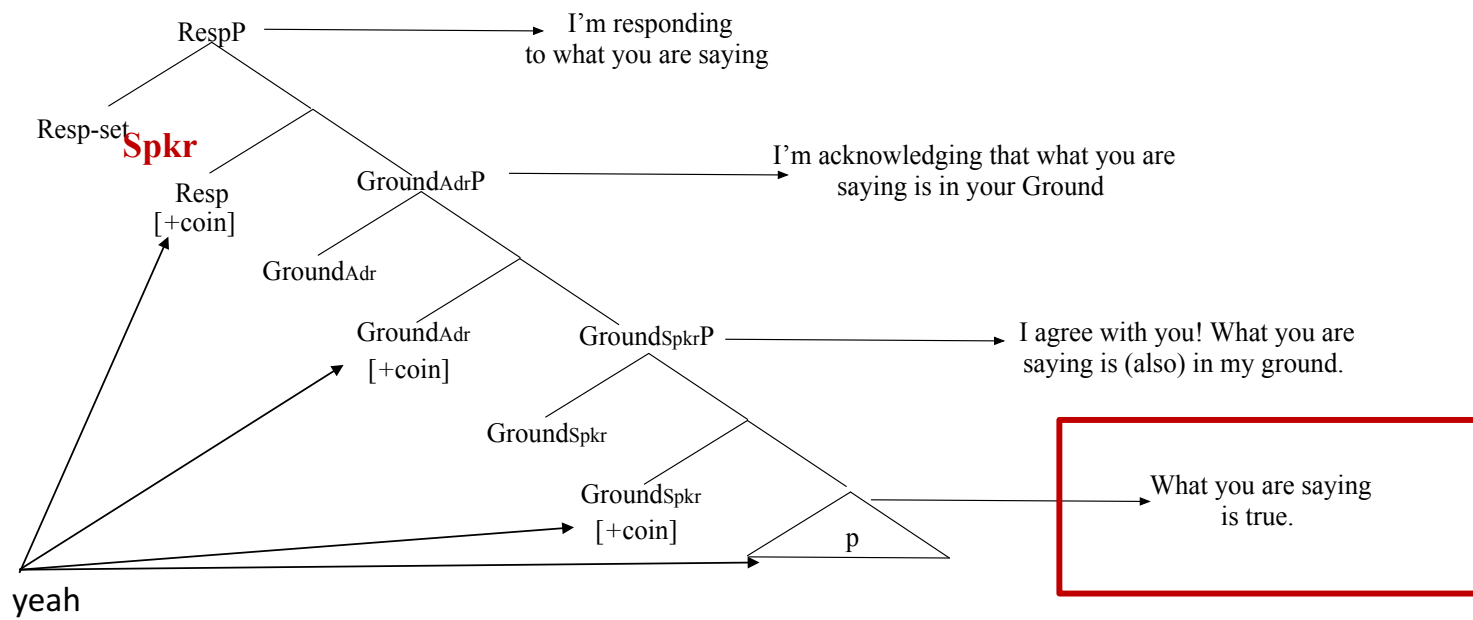
- Speaker is NOT committed to p
- In interactional structure, [ucoin] can remain unvalued



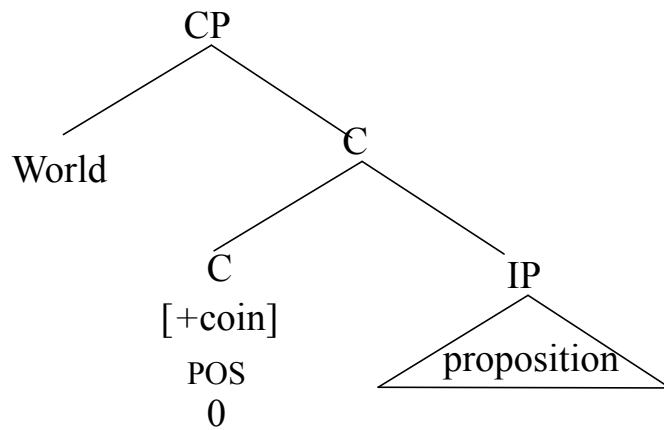
Response markers on the spine

# Reacting move

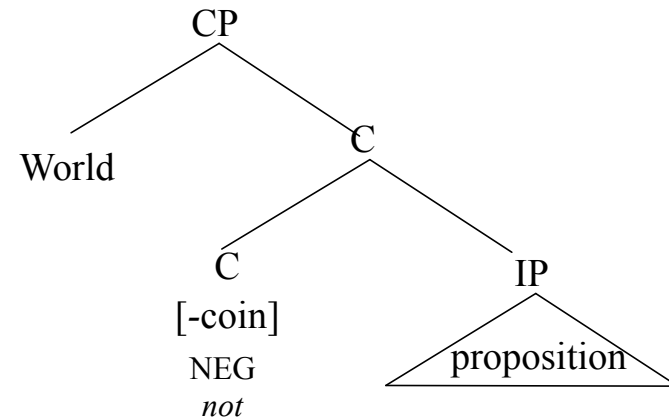




# The syntax of polarity



He left.  
He said **that** he left.



He did **not** leave.  
He said **that** he did **not** leave



# The syntax of polarity

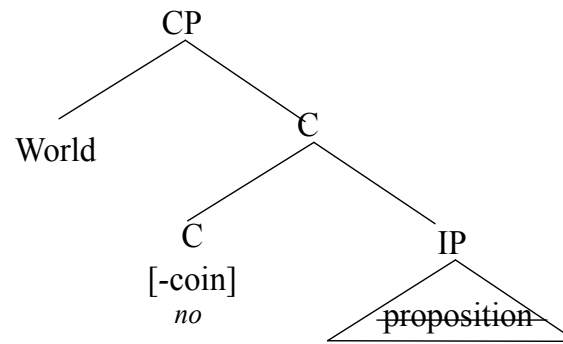
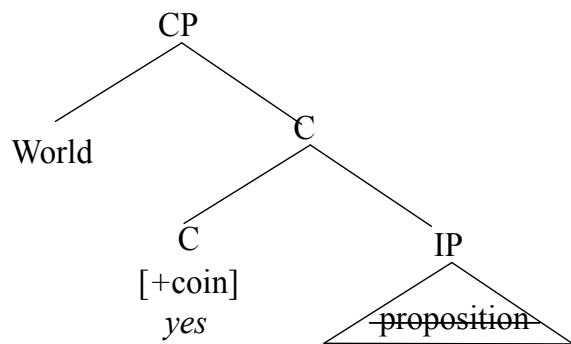
I:       Puedes ayudarme?  
          can-2sg. help-me  
          ‘Can you help me?’

R:       Claro **que si**.  
          Clear that yes  
          ‘Of course I can.’

**Si que** ha cantado la soprano  
yes that has sung the soprano  
‘The soprano has sung.’

Batlori & Hernanz 2011: 2 (7 )

# Response markers valuing polarity

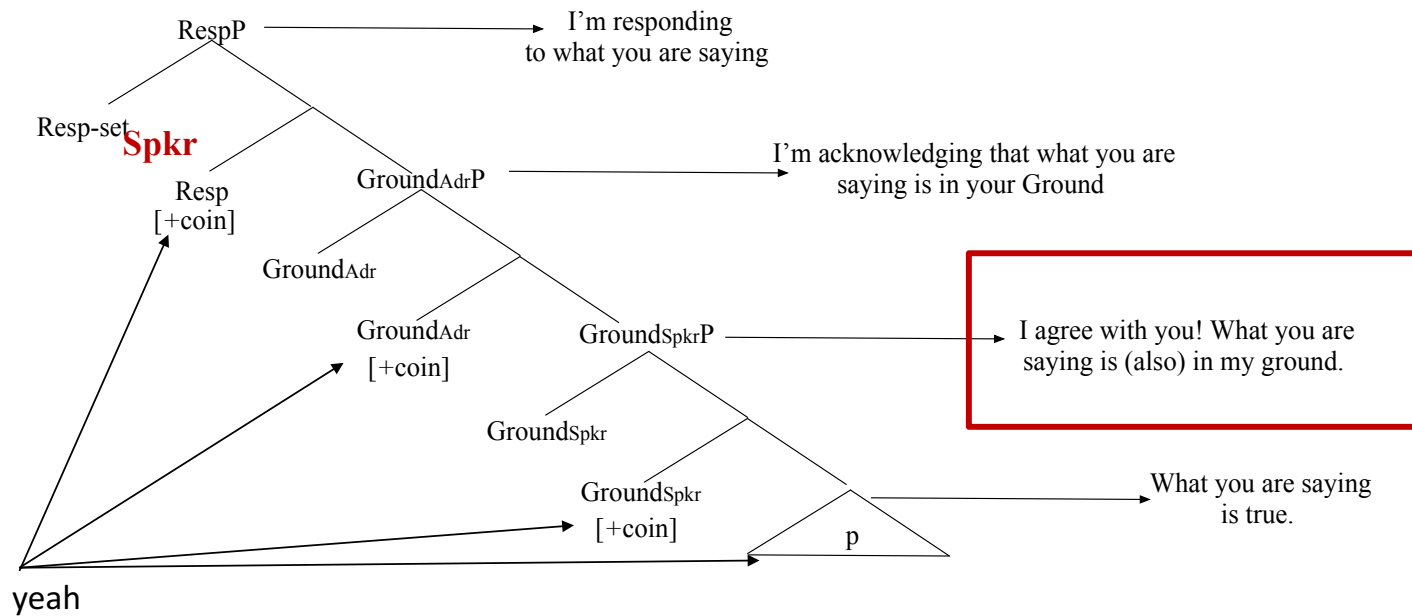


Lexicalization patterns for positive RMs

- demonstratives
- Forms of *be*
- Forms of *so*

- (1) He did **not** leave.
- (2) Q: Did he leave?  
A: **No**.
- (3) **No** puedo ayudarte.  
Q: Puedes ayudarme?  
A: **No**.

Response markers  
are not  
restricted to p-  
structure



## Response to wh-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

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

Steffy: Whoo-hoo .

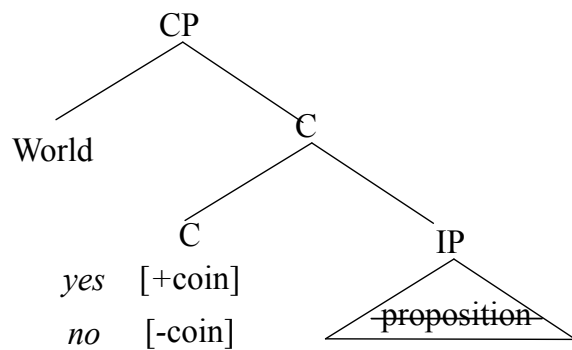
Liam: **Yes!** (BB-2012-05-03)

A: What a beautiful sunset.

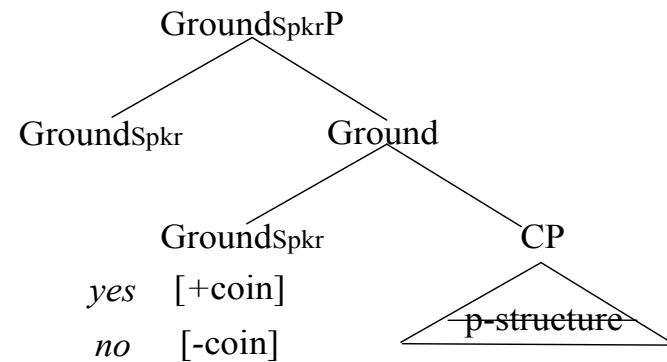
B: **Yes**, I know. Isn't it gorgeous.

Agreement  
with  
Exclamation

# Structural ambiguities

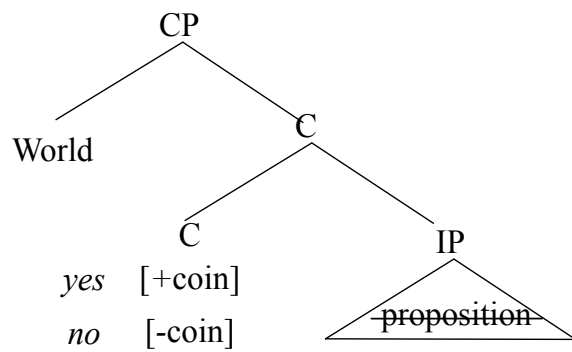


I: You have a new dog, eh?  
 R1: Yes I do.  
 R2: Yes you're right.  
 R3: \*Yes, I know



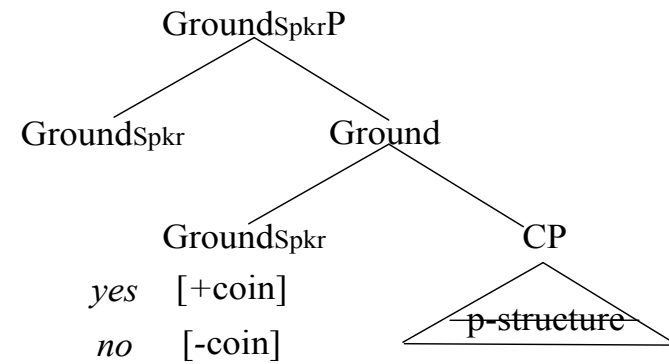
I: I have a new dog, eh?  
 R1: \*Yes, you do  
 R2: \*Yes you're right.  
 R3: Yes I know.

# Structural ambiguities



I: He went to Italy.

R1: No. I saw him yesterday.

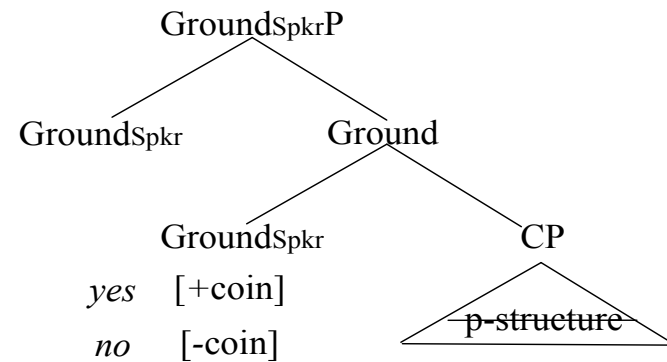
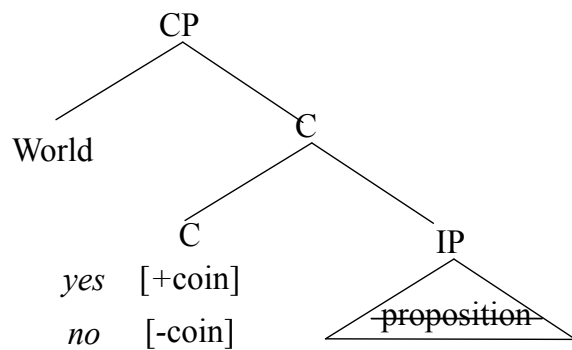


R2: No!!! That's great.

He always wanted to go.



# Understanding answers to negative questions



I: He didn't go to Italy.

**R1: Yes. He did.**

R2: No. He didn't.

R3: Yes. He didn't.

**R4: No. He did.**

# Understanding answers to negative questions

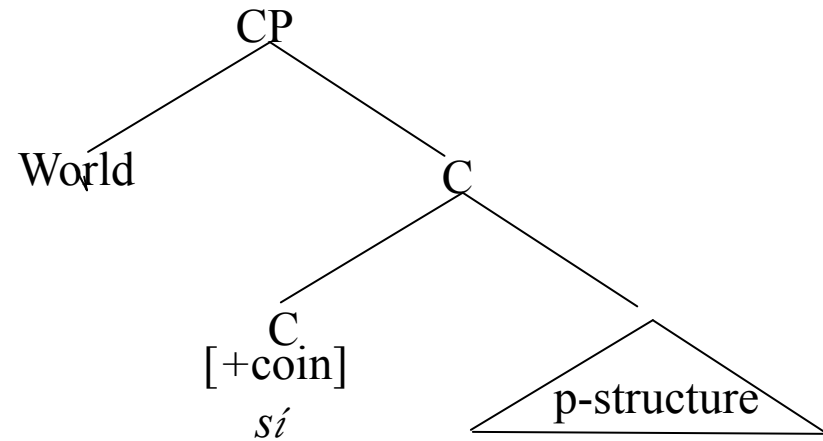
He didn't go to Italy

	<b>Target of response</b>	<b>Interpretation</b>	<b>Effect of response</b>
[CP yes	[IP he went to Italy]	p	disagreement
[CP no	[IP he went to Italy]	not p	agreement
[Ground yes	[CP He didn't go to Italy]	R believes, not p	agreement
[Ground no	[CP he didn't go to Italy]	R doesn't believe not p	disagreement

# Distributional restrictions

I: Pedro quiere un perro.  
Peter want a dog.  
'Peter wants a dog.'

R1: Sí

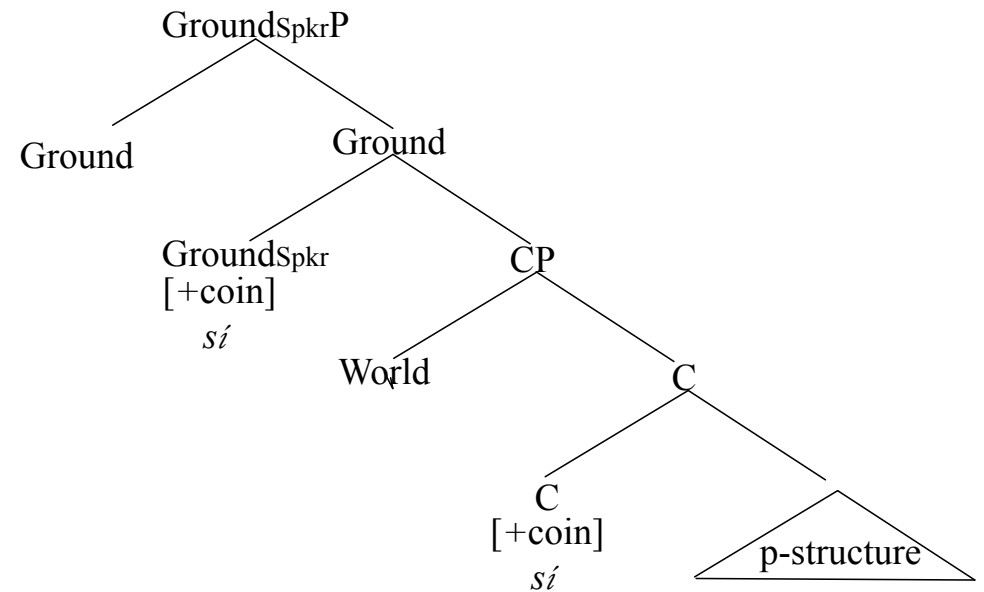


# Distributional restrictions

I: Pedro quiere un perro.  
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R1: Sí

R2: Sí sí!

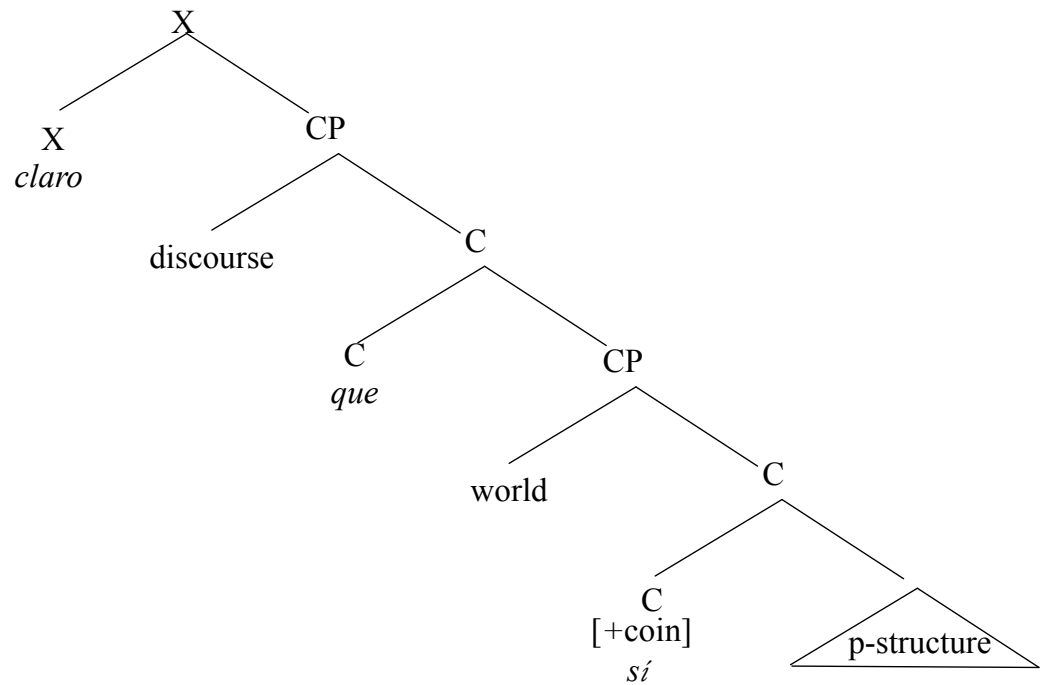


# Distributional restrictions

I: Pedro quiere un perro.  
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 'Peter wants a dog.'

R3: Claro que sí.  
 Clear that yes  
 'Of course.'

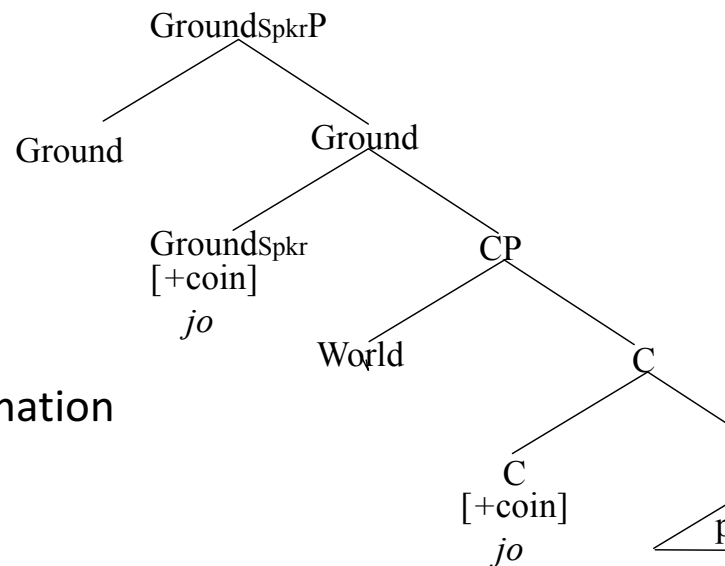
R4: \*Claro que sí sí.



# Interpretive restrictions

I: Da Peta hot si an fuas brochn.  
 DET Peter has REFL INDEF foot broken

R: Jo jo. → p = old information



responding with doubled *ja* “indicates that the prior utterance contains already known information (...) and that therefore the current action should be stopped.”

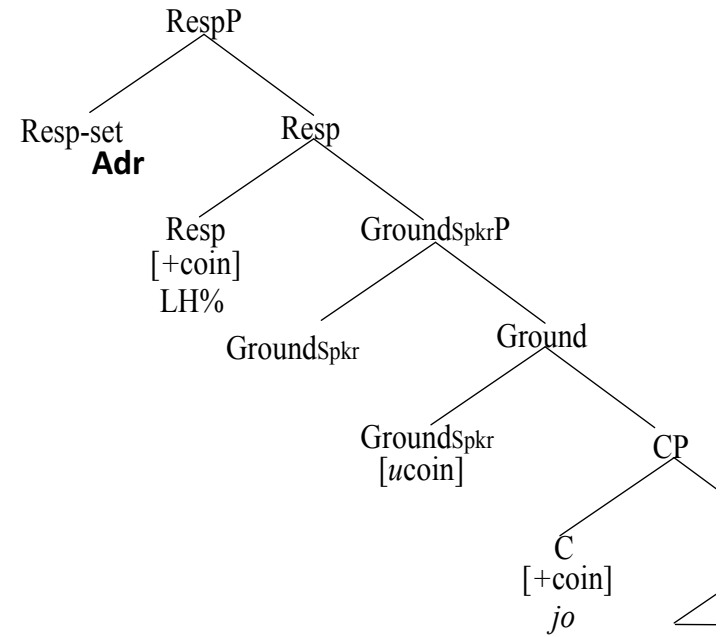
Golato & Fagyal 2008: 249

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# Interpretive restrictions

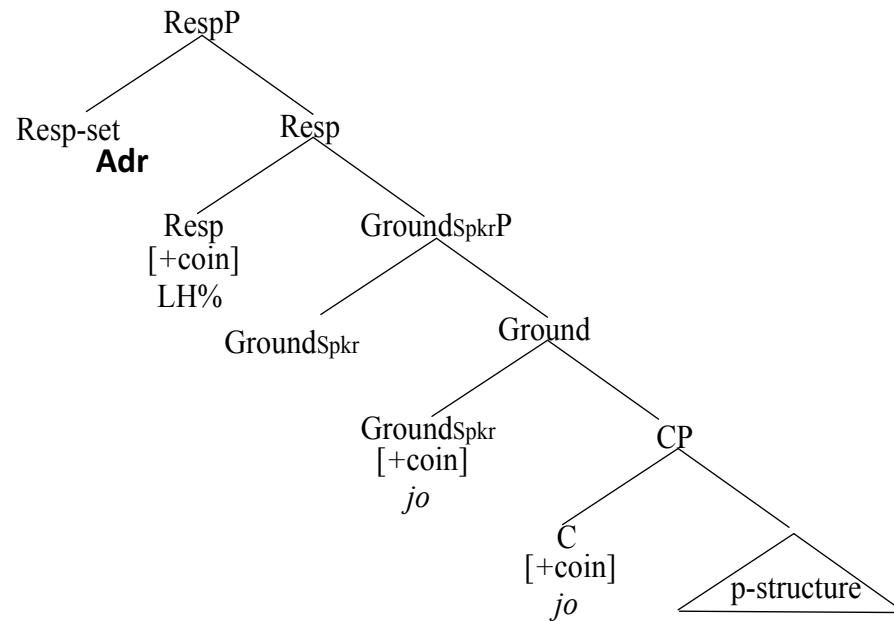
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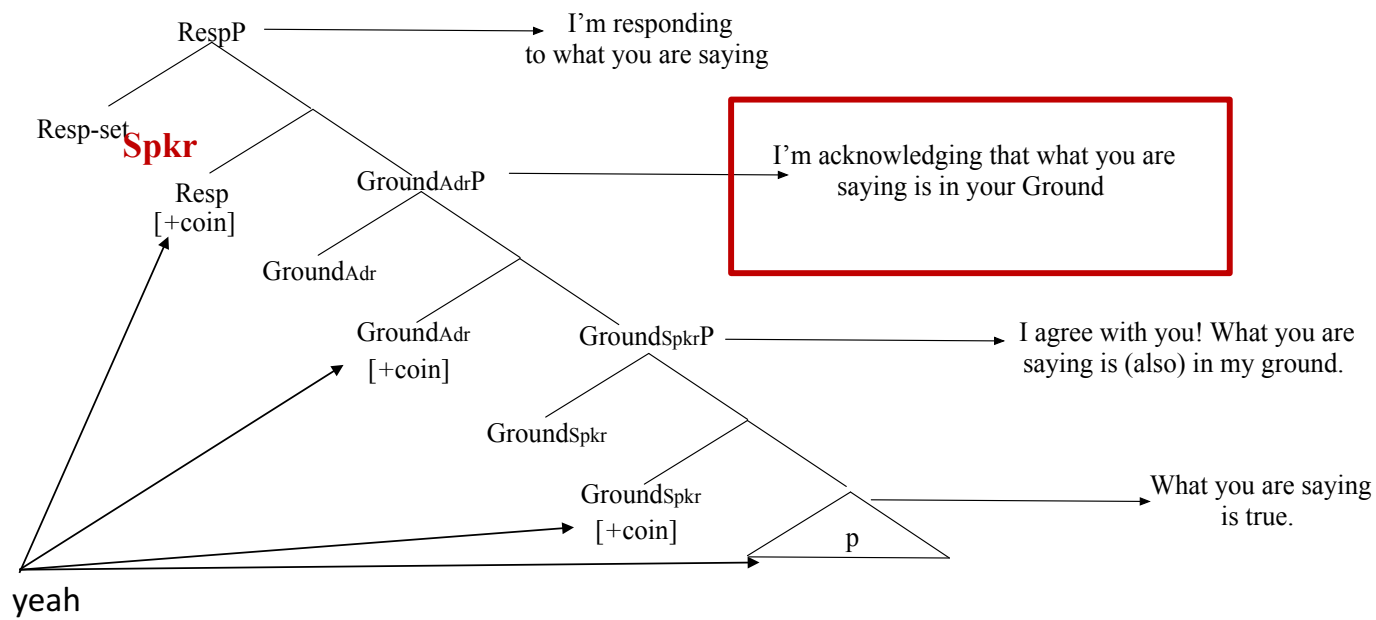
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'Why are you telling me that?'



# Response markers & intonation

- R:    i)     Jo jo!           → p = old information  
       ii)    Jo jo?           → p = old information



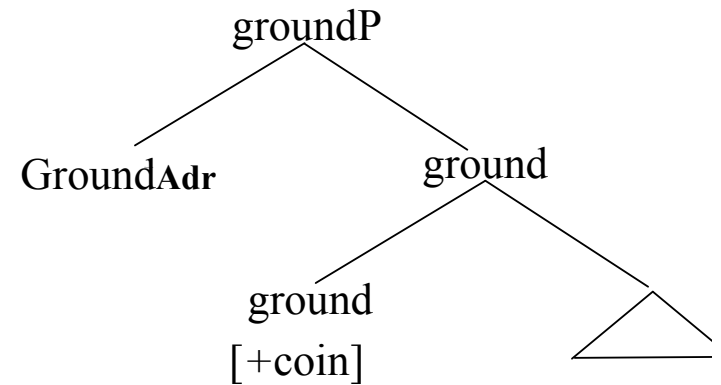


## Response to Addressee belief

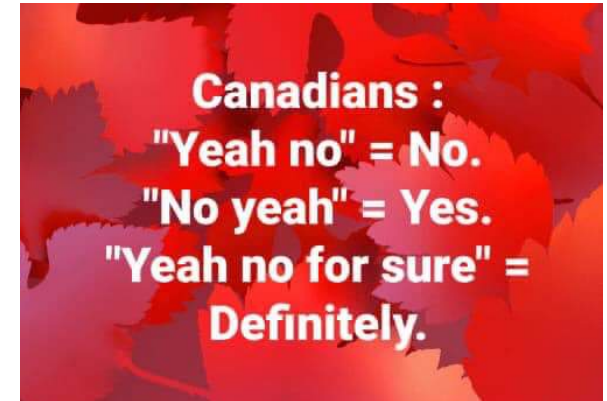
I: The Godfather is the best movie ever made.

R: **Yeah**, I think that honor goes to Casablanca.

Guntly 2016



## Response to Addressee belief



Dorothy: [We've got] to do this shopping Peter.

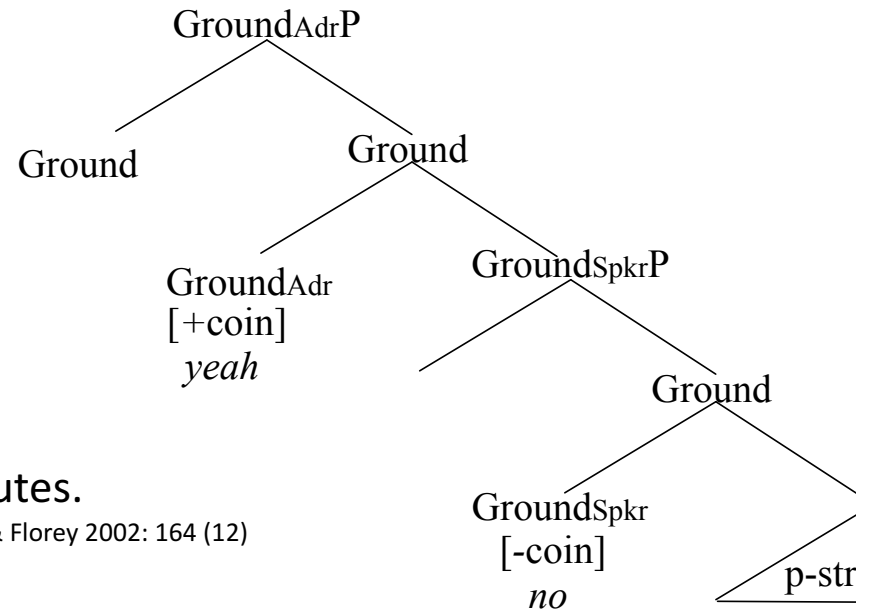
Peter: **Yeah, no** it's alright nanna, we've got 5 minutes.

Burridge & Florey 2002: 164 (12)

*“the speaker doesn't want to seem to contradict. Any contradiction, criticism or disagreement is potentially face-threatening or hurtful; so the speaker tries to minimize the effects by making a positive evaluation first, then following it with a negative one.[...] hedging yeah-no [...] has the function of reducing the force of a disagreement.”*

(Burridge & Florey 2002: 163f).

## Response to Addressee belief



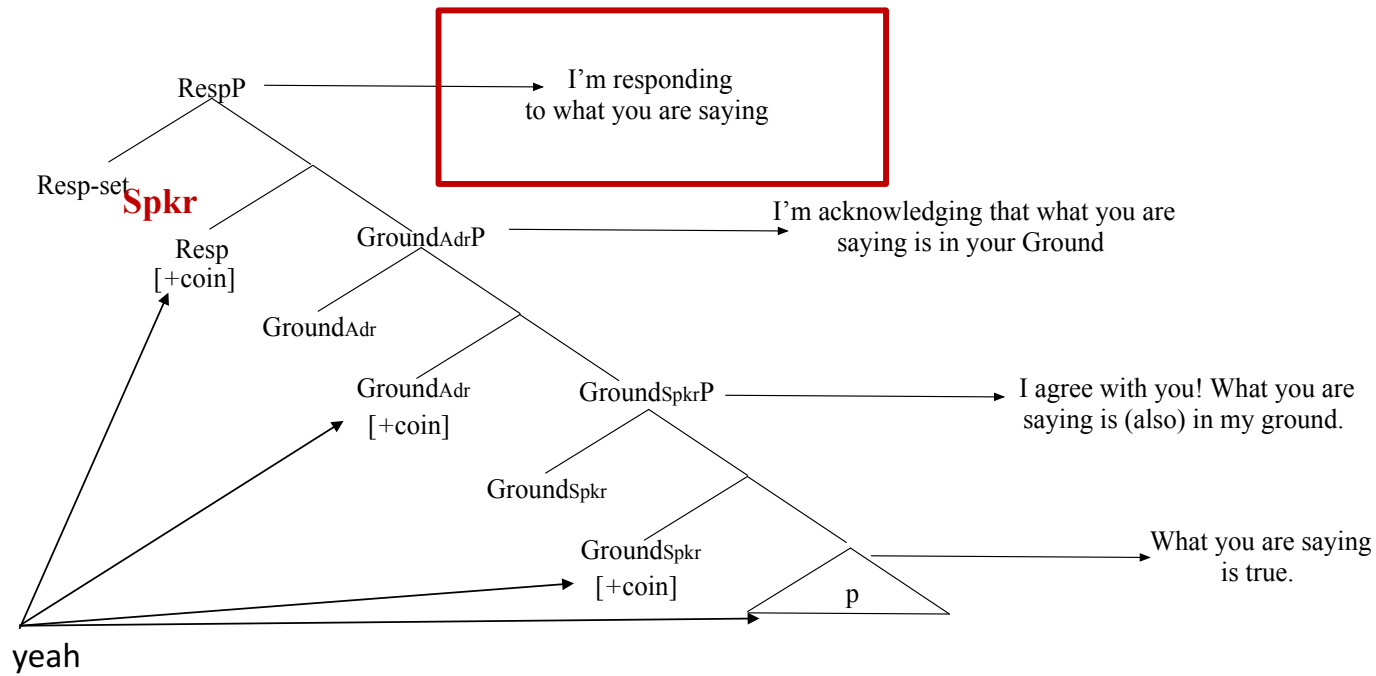
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(Burridge & Florey 2002: 163f).



# Marking the utterance as a response

**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?*

Go-2SG you today at 4 home.

‘Are you going home at 4 today?’

A:a. *Jo des was-st doch eh. I geh imma um 4 ham.*

YES that know-2SG PRT PRT I go always at 4 home.

‘But you know that. I always go home at 4.’

b. *Jo des was-st leicht net?*

YES that know-2SG PRT NEG

‘So you don’t know that?’

- Marking the response as a reaction move, serves an important purpose.
- The response deviates from the normal course of a conversation
- The expected response to a question is an answer.

# Marking the utterance as a response

**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:

- a. *?Wonn gehst denn du heit ham?*  
When go-2SG PRT you today home
- b. **Jo** *wonn gehst denn du heit ham?*  
JA when go-2SG PRT you today home

**Context.** A and B are co-workers. Their working hours are somewhat flexible. They are working away and in the middle of the day A asks B:

- a. *Wonn gehst denn du heit ham?*  
When go-2SG PRT you today home
- b. *\*Jo* *wonn gehst denn du heit ham?*  
JA when go-2SG PRT you today home



# Marking the utterance as a response

I: Gehst du heit um 4 ham?

Go-2SG you today at 4 home.

‘Are you going home at 4 today?’

R: a. \***Jo jo** des was-st doch eh. I geh imma um 4 ham.

YES YES that know-2SG PRT PRT I go always at 4 home.

‘But you know that. I always go home at 4.’

b. \***Jo jo** des was-st leicht net?

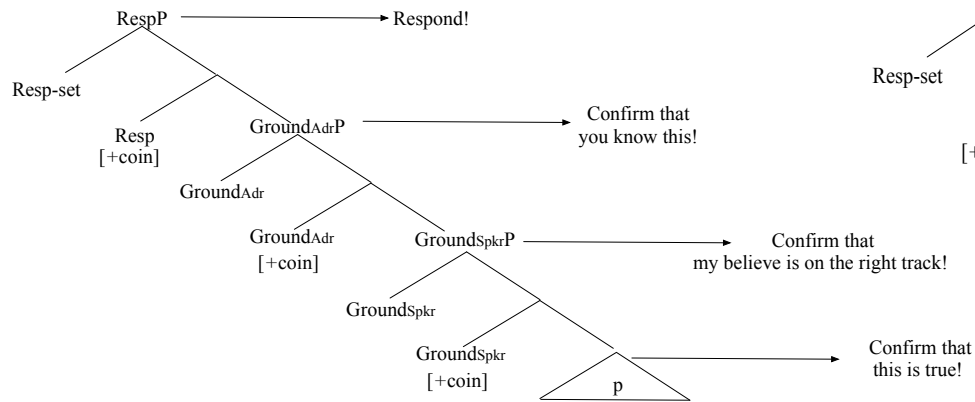
YES YES that know-2SG PRT NEG

‘So you don’t know that?’

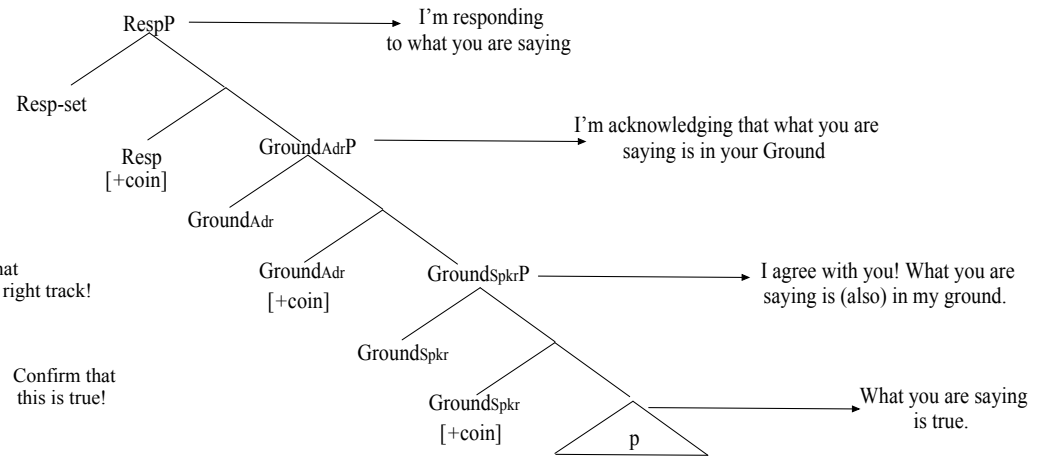


- there is a system that regulates i-lg
- The same system regulates the distribution of confirmational and response markers

## Initiating move



## Reacting move



# Overview of the talk

## Introducing interactional language

### The interactional spine hypothesis (ISH)

- A universal spine is part of the language faculty
- The spine regulates both p-language and i-language

### Two Case studies

- Confirmationalals
- Response marker
- Both are regulated by the same underlying system (the interactional spine)

**Language is an instrument for thought AND communication**



# Language, thought, and communication



**Language is primarily an instrument for thought**

“the modern doctrine that communication is somehow the “function” of language is mistaken... **the traditional conception of language as an instrument of thought is more nearly correct.**”

**“Language is fundamentally a system of thought”**

Chomsky 2017: 298

Frege saw the communicative function of language as “merely peripheral” and argued that the “expression of thought must figure centrally in explanations of syntactic and semantic facts”

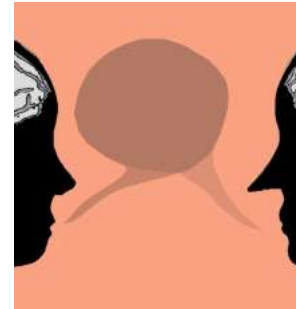
(Moravcsik 1981: 106, cited from Asoulin 2016: 2).

The fundamental property of language is the internal construction of indefinitely many expressions by a generative procedure that yields a uniquely human perspective (in the form of a conceptual structure) on the world. It is in this sense that **language** (not a particular natural language but rather its underlying computational mechanisms) **is an instrument of thought**; it provides us with a unique way of structuring the world around us, which we use for various purposes such as thinking and talking about the world.

Asoulin 2016: 17

# Language, thought, and communication

**Language is primarily an instrument for communication**



Language is “our unique and complex mode of communication” [...] “fact that **language is an unprecedented form of naturally evolved communication**”.

Deacon (1997: 11–12, 50)

“most members of the cognitive science community [endorse] the (purely) **communicative conception of language**”.

Carruthers (2002: 657–658)

“language arose primarily in the interests of **enhancing communication**, and only secondarily in the interests of enhancing thought.”

Jackendoff (2002: 123)

humans are endowed with a special interactive ability. It is this ability that underlies most of our species’ great achievements: our language, our ability to cooperate, and hence our capacity as a culture-bearing species. In particular, I argue that it is not language that makes human communication possible, but rather a **special underlying communicative ability that makes language possible**.

Levinson 2019

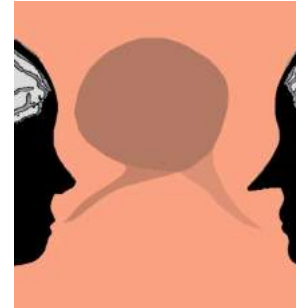
“a **primary function of the human language faculty** is to support linguistic conventions, and that these have an essentially **communicative function**.”

Millikan (2005: 25)

“[m]uch modern linguistic theory is based on the assumption that the **primary and fundamental function of language is communication**.”

Williams (1993: 91)<sup>78</sup>

# Language, thought, and communication



## Language is primarily an instrument for communication

“the obvious fact that the entire nature, structure, and development of language is a vehicle for communication or meaning transmission”

Ellis (1999: 53).

“[t]radition and the contemporary majority hold that language serves communication by allowing speakers to reveal to hearers the conceptual contents of underlying thoughts”.

Gauker (2002: 687)

“[...] linguistic constructions are meaningful linguistic symbols. They are nothing other than the patterns in which meaningful linguistic symbols are used in communication”.

Tomasello (2006: 258)

the structure of language shows evidence of a complex design for the communication of propositional structures

Pinker & Bloom (1990)

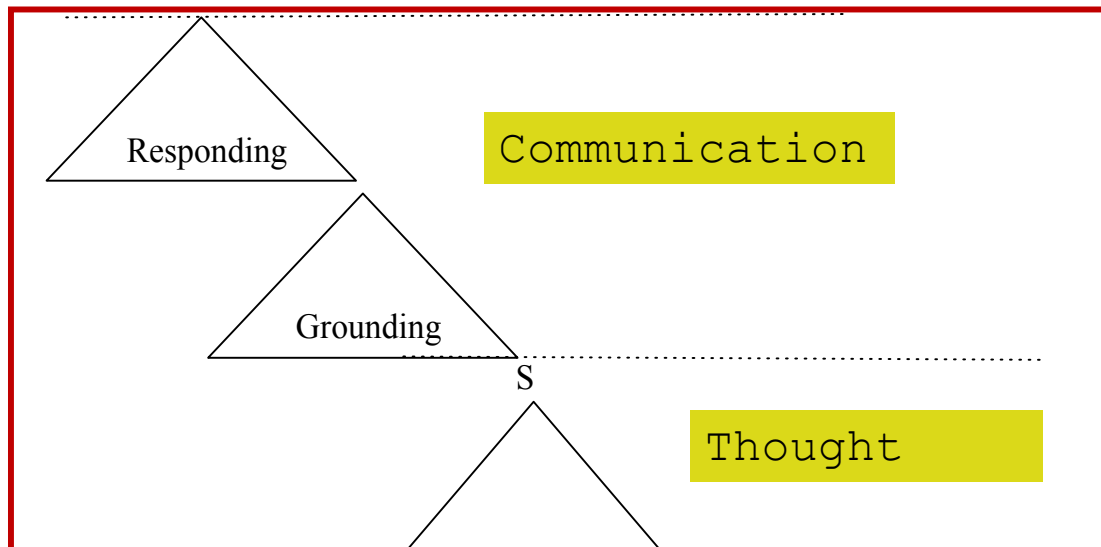
the functional attribution that best fits the explanatory purposes of generative linguistics is that of language being an instrument of thought, and this linguistic theory is unswayed by the claim that within evolutionary theory the function of language is communication

Asoulin<sup>79</sup> 2016: 7



# Language, thought, and communication

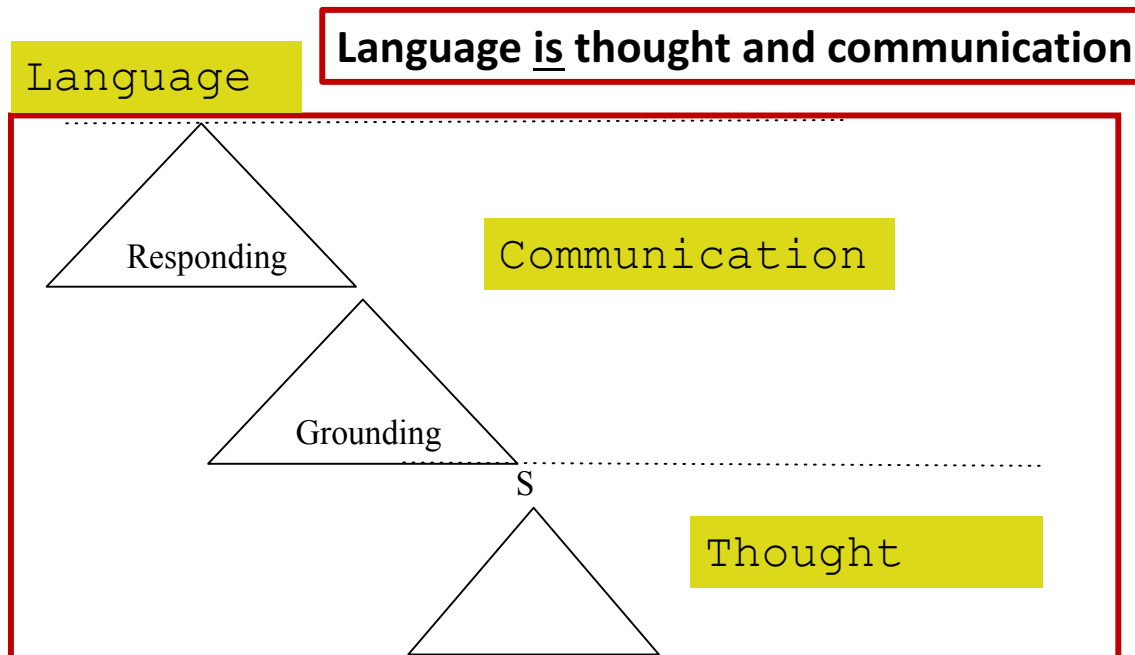
**Language is an instrument for thought and communication**







# Language, thought, and communication



# Language, thought, and communication

**Language is thought and communication**

- Language is necessary for (human-specific) thought
- Language is necessary for (human-specific) communication
- The same medium (language) regulates thinking and communicating

*Der Mensch spricht, sogar in Gedanken, nur mit einem Andern,  
oder mit sich, wie mit einem Andern*

W. von Humboldt

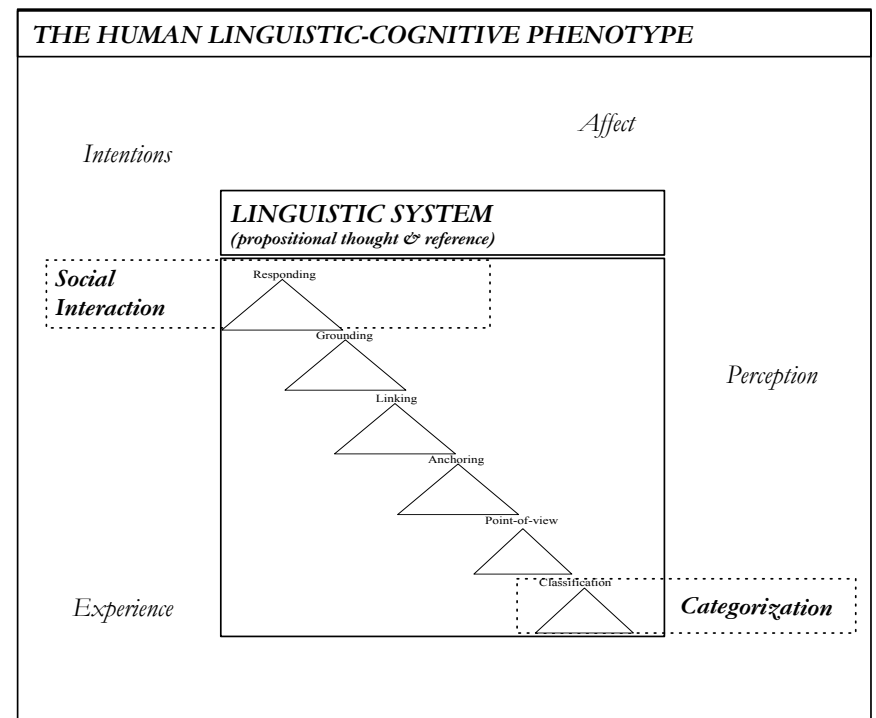
Humans speak, even in their mind, only to an other,  
or with oneself, as if they were an other.

# Language, thought, and communication

Human language

- ... functions as a bridge between language-independent cognitive functions
- ... makes these cognitive functions special
- ... makes available new cognitive functions (e.g., Theory of Mind)

**Language is a window into the human mind**

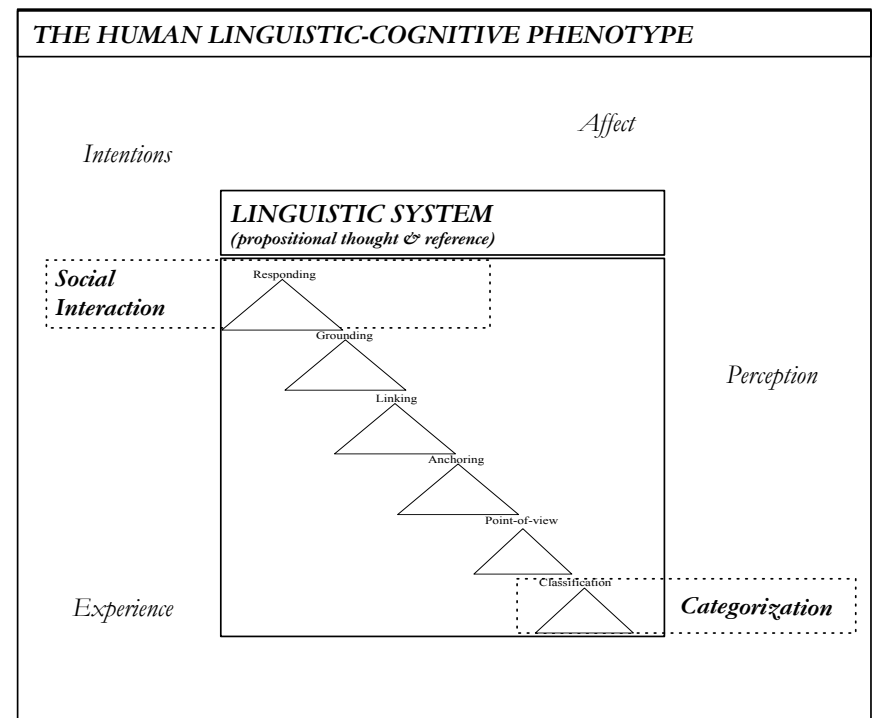


# Language, thought, and communication

Human language

- ... functions as a bridge between language-independent cognitive functions
- ... makes these cognitive functions special
- ... makes available new cognitive functions (e.g., Theory of Mind)

**i-language is a special window  
It bypasses semantic conceptual  
memory**



# Language, thought, and communication

- (1) I Gal Gadot was amazing as Wonder Woman, **eh?**  
R **Yeah, I know, right?**

**i-language is a special window  
It bypasses semantic conceptual  
memory**

eh 

An interjection popular in Canadian speech. According to linguists, a "politeness marker."

Adding "eh" to a sentence can indicate **the speaker's** willingness to accept dissent or to invite further discussion. Has been referred to as an "articulated question mark."

The interpretation of "eh" as carrying meaning beyond other routine **interjections** (huh?) is supposed to be uniquely Canadian. "Ascertaining the comprehension, continued interest, agreement, etc., of the person or persons addressed" is how the Canadian **Oxford Dictionary** puts it.

*"Let's do something, eh?" -- where 'eh' is 'do you agree?'*

*"We could get a pizza, eh?" -- where 'eh' is 'if you would like to'*

*"I don't know about that, eh?" -- where 'eh' is 'but perhaps I might be convinced if you explained further'*

*"What's that, eh?" -- where 'eh' is 'I would appreciate, **friend of mine**, hearing your interpretation'*

*"The **beer's** cheap here, eh?" -- where 'eh' is 'so what would you like to do about that'*

*"It's after **last call**, eh?" -- where 'eh' is 'were you aware'*

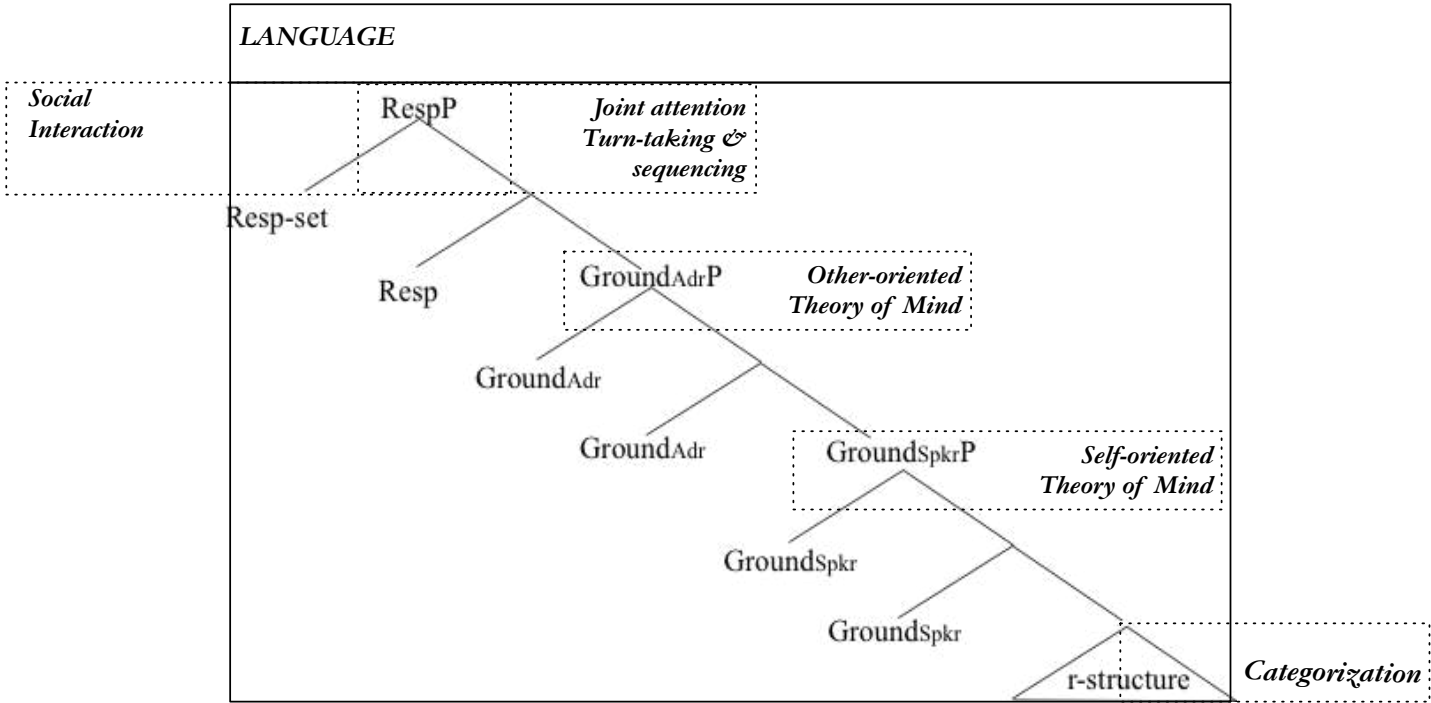
**i-language is a special window  
It bypasses semantic conceptual  
memory**

- <https://www.urbandictionary.com/define.php?term=eh>

by **K.M. Mennie** August 22, 2006

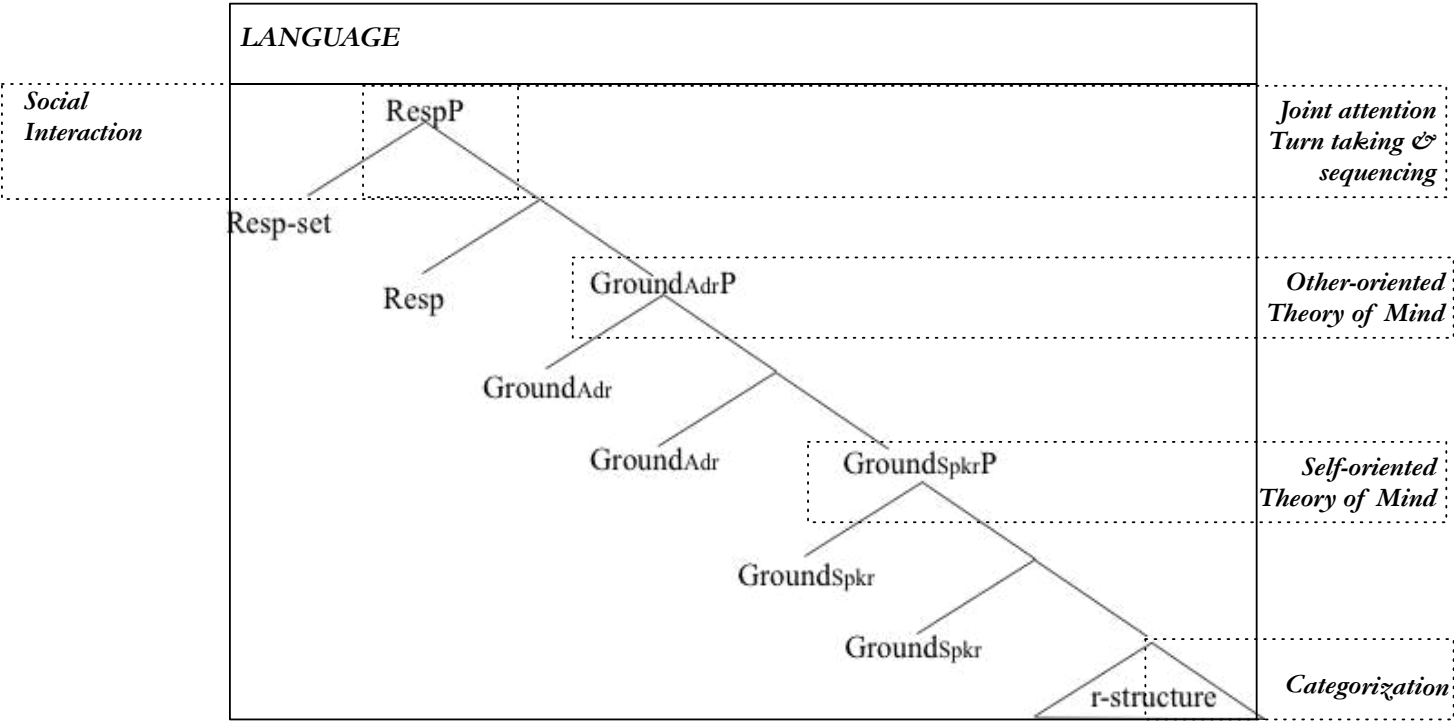
# i-language and the mind

How do these capacities relate to language?



# i-language and the mind

How do these capacities relate to language?





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## Language is an instrument for thought AND communication



# Take home messages

## Empirical:

Explore i- language

Explore it like you explore p-language

## Analytical

Introduce the Interactional Spine Hypothesis as a framework to explore i-lg

## Theoretical

- If ISH is on the right track, it ends the long debate about whether the core function of language is thought or communication. The distinction implodes.
- ISH can serve as a foundation for a model of human cognition
- I-language is a better window into cognition than p-language because meaning is procedural and hence we bypass encyclopedic knowledge



# Take home messages



*Der Mensch spricht, sogar in Gedanken, nur mit einem Andern,  
oder mit sich, wie mit einem Andern*

W. von Humboldt

Humans speak, even in their mind, only to an other,  
or with oneself, as if they were an other.

It's not the language but the speaker  
that we want to understand.

Veda, Upanishads

