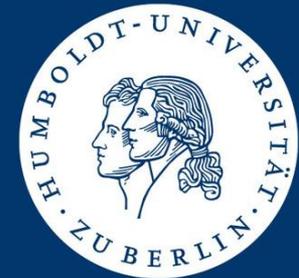
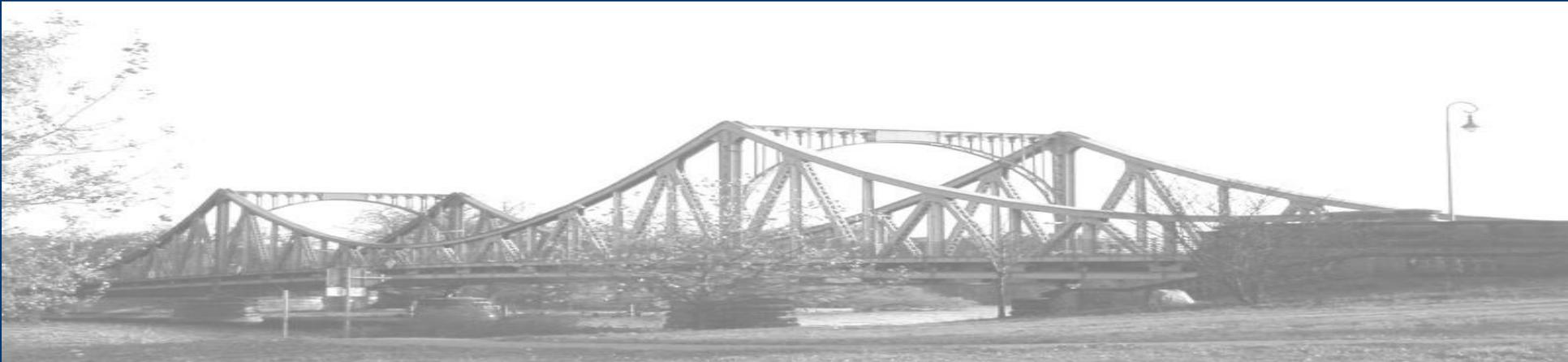


Exhaustive inferences and additive presuppositions: Interplay of focus operators and contrastive intonation

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Focus and inferences

- Interplay of focus and inferences (Rooth, 1992)

Context: Judith wants to go hiking and discusses with Michael whether to go to Konstanz or Tübingen.

1. M: Well, I always enjoy hiking in [Tübingen]_F

± > He does not enjoy hiking in Konstanz

2. M: Well,  [I]_F always enjoy hiking in Tübingen

± > Judith does not enjoy hiking in Tübingen

→ **How does focus intonation affect inferences?**

→ **Comparison to overt focus operator *only* and *also***

Outline

- Theoretical comparison of inferences triggered by intonational focus and focus particles
- Previous research on focus intonation and inferences
- Experiment: Rating + Truth value judgment

Exhaustive implicatures

Michael enjoys hiking in [Tübingen]_F

± > He enjoys hiking in Tübingen but not Konstanz

- **Implicature**: pragmatic inference based on speaker's communicative intentions (Grice, 1975)
- Cancellability:
In fact, he also enjoys hiking in Konstanz
- Implicatures are based on silent *only* operators (Groenendijk & Stokhof, 1984; Schulz & van Rooij, 2004)
- Ambiguity: decision whether or not to apply *only* operator (see Chemla & Singh, 2014 for an overview)

Overt focus operators: Inferences

*Michael **only** enjoys hiking in Tübingen*

→ **He does not enjoy hiking in Konstanz**

- **Assertion:** *only* forces negation of alternatives grammatically (no pragmatic inference is required)

	<i>overt only</i>	<i>silent only</i>	Possible consequences
cancellability	--	+	Difference in likelihood of inference to occur
ambiguity	--	+	and/or automaticity (e.g., in terms of processing speed)

Presupposition of *also*

Michael *also* enjoys hiking in Tübingen

→ He enjoys hiking in Konstanz (presupposed)

- **Presupposition:** *also* presupposes the truth of alternative propositions (e.g., König, 1991)
- hard presupposition trigger, resists accomodation (e.g., Abusch, 2002)

	<i>overt only</i>	<i>silent only</i>	<i>also</i>
cancellability	--	+	--
ambiguity	--	+	--
status	assertion	implicature	presupposition
meaning	exclusive	exclusive	inclusive

Inferences triggered by contrastive prosody

Fraundorf et al. (2010): Impact of contrastive accents (without lexical trigger) on long-term memory

The French and the British scientist went on an excursion

The British/BRITISH scientist spotted the monkeys



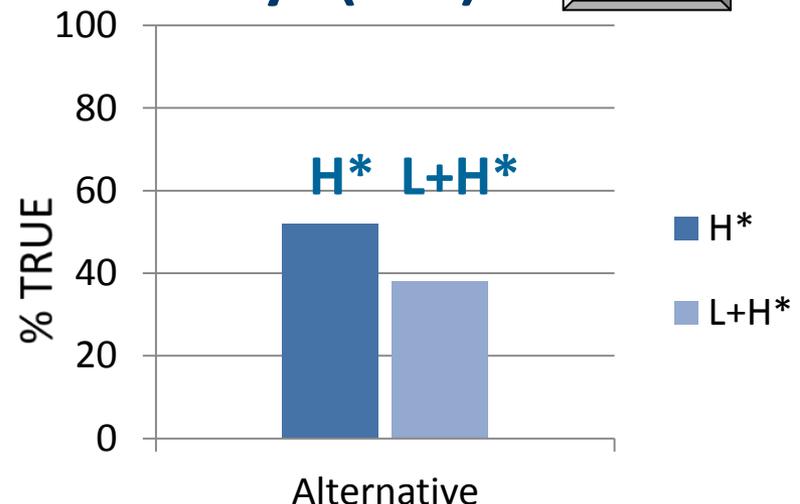
Task: Truth value judgment (1 day later)

The French scientist spotted the monkeys (ALT)

FALSE

→ L+H* increases likelihood of exhaustive inference

reduces processing speed
(Tomlinson et al., 2013)



Lexical scales + contrastive intonation

*There is an A **or** a B*

TABLE

± > but not both (A and B)

TRUE: inclusive FALSE: exclusive

- Chevallier, et al. (2008): Contrastive stress (rising accent) of **or** reinforces exclusive reading
- Impact of QuD on implicatures (Zondervan, 2010; Degen & Goodman, 2014)

Presupposed vs. asserted content

- Listeners rapidly integrate the exhaustive assertion of *only* and the additive presupposition triggered by *also* (Schwarz, 2014; Kim, 2012, 2014)
- Presupposition integration might occur earlier than verification of assertions (Schwarz, 2014; Kim, 2012, 2014)
- processing/memory differences across hard and soft presupposition triggers (Domaneschi et al., 2013)

Specific research questions

- How do the inferences triggered by contrastive accents compare to those of overt focus operators?
- What is the effect of combining contrastive accents with overt focus operators?
 - More exhaustive inferences (additive effects) or same amount?
 - Interaction across types of focus particles?

Methods

Acceptability rating: What accent type do focus particles most naturally combine with?

+ Truth value judgment task: Inferences

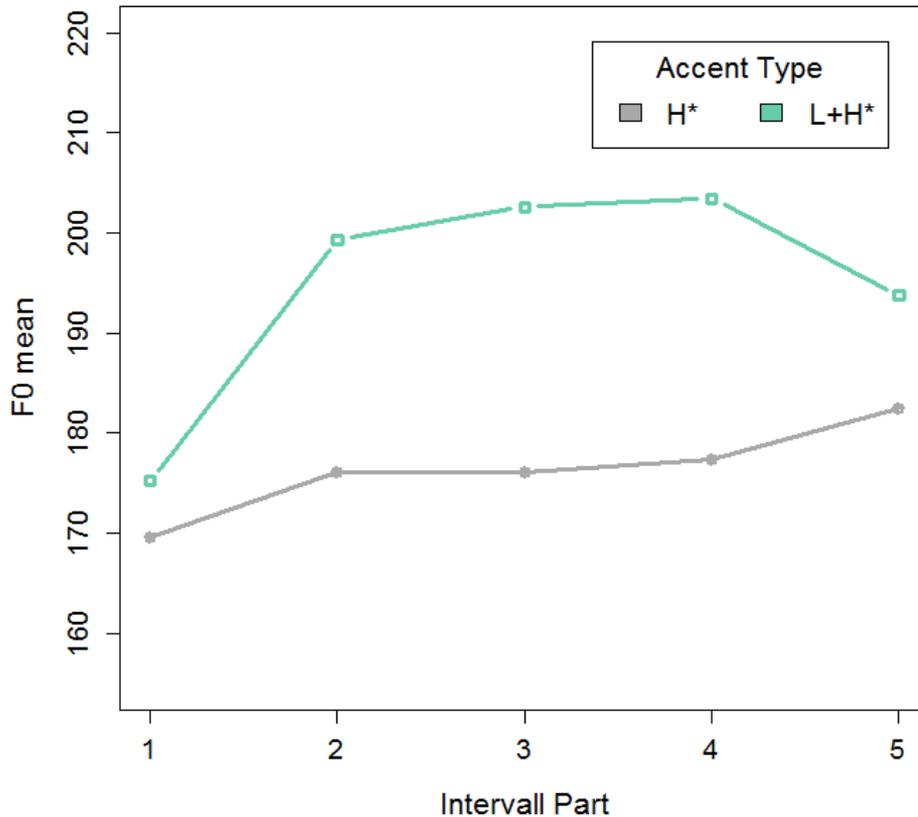
24 participants (18 female, 25.5 years)

60 items, 60 fillers (40 with mild pragmatic violations)

3 particle conditions * 2 accent conditions:

	Accent/ Particle	only	no particle	also
	H*	only-H*	H* (bare)	also-H*
	L+H*	only-L+H*	L+H* (bare)	also-L+H*

Accented Syllable: H* vs. L+H*



Parameter	H	L+H*	
<i>Duration (s)</i>	0.17 (0.01)	0.23 (0.01)	***
<i>Maxi.Pitch (Hz)</i>	195.1 (4.5)	226.9 (6.2)	***
<i>Pitch diff. (Hz)</i>	33.6 (4.5)	56.3 (6.2)	***
<i>Intensity (dB)</i>	69.1 (1.9)	73.3 (2.2)	***

👉 L+H* more prominent than H* (gradual difference)

Materials (Approximate translation)

The judge and the witness followed the argument

The judge believed the defendant

The JUDGE believed the defendant

Only the JUDGE believed the defendant

Also¹ the JUDGE believed the defendant

Only the judge believed the defendant

Also the judge believed the defendant

He announced the verdict

Task 1: How natural/acceptable is the discourse?

...

Task 2: **The witness believed the defendant**

TRUE or FALSE?

¹ Sentence-initial *also* is felicitous in *German*

Candidate Inferences

(Only) the judge believed the defendant $\pm >$

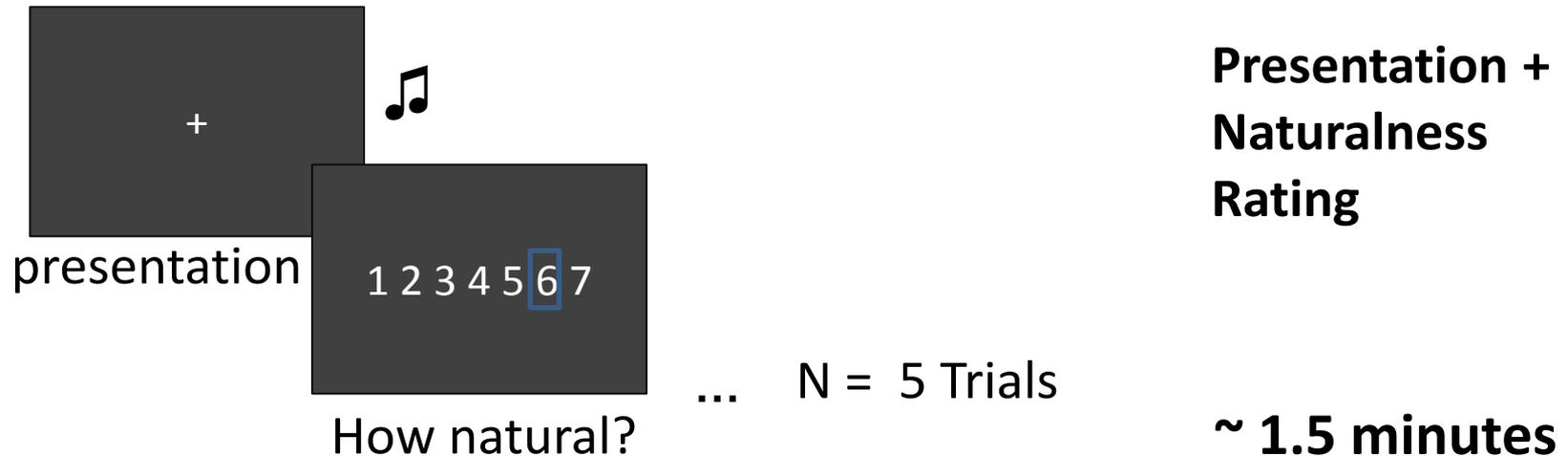
→ The witness believed the defendant

➤ statement **The witness believed the defendant**
judged **FALSE** on exclusive/exhaustive interpretation

The judge also believed the defendant presupposes that
somebody else (the witness) believed the defendant

➤ statement **The witness believed the defendant**
judged **TRUE** on inclusive interpretation

Procedure



RESULT I: Ratings

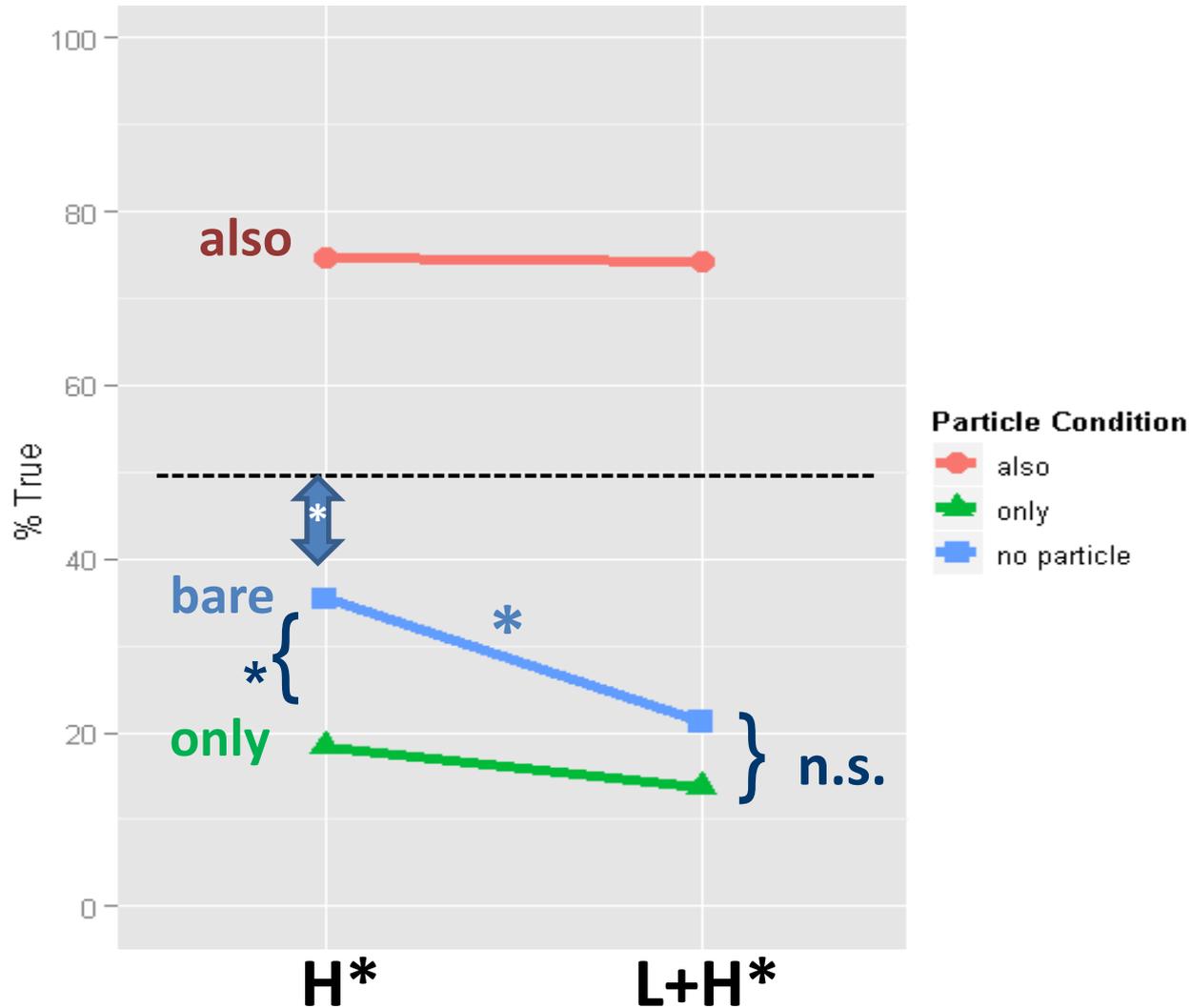
Accent/ Particle	only	bare	also	filler
H*	5.6	5.8	5.7	2.6
L+H*	5.9	5.9	5.7	

No significant differences across conditions

→ focus particles are perceived as equally natural with L+H* and H* accents (see also Sudhoff, 2010)

→ *also* in subject position is felicitous even though presupposition is not explicitly introduced

RESULT II: Inferences



Conclusions

- L+H* accent reinforces exhaustive interpretation
- Listeners are equally able to derive an exhaustive inference with an L+H* accent and an overt *only*
- No evidence for additivity of contrastive accenting and focus particles
- Listeners infer the truth of alternative propositions from utterances with *also*

Implicature vs. assertion

- Our task does not tap into the processing of the inferences
- It might be that listeners arrive at the exhaustive interpretation via different paths comparing *only* and L+H*
- But the end result (i.e., whether they pursue the exhaustive reading) appears to be the same

Presupposition accomodation

- Presupposition of *also* was not explicitly introduced:

The judge and the witness followed the argument

[The judge]_F ALSO believed the defendant

P: Somebody else (the witness) believed the defendant

vs. The judge also believed [the defendant]_F

- In line with Krifka (1998): in contrastive topic position an implicit question can be accomodated (*Who believed the defendant?*)

Everyday examples



Final conclusions

- L+H* accent acts like an *only* operator
- If explicit focus operator is present, L+H* accent does not contribute any further information
- Listeners are willing to accommodate the presupposition of *also* in subject position



Thank you for your attention...

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