

The aim of this study

- analyze the interaction of intonation and information status (Krifka 2007)
- explore the prosodic variation that correlates with information status
- provide corpus-based data as input for an information structural informed speech synthesis (Kügler et al. 2012, 2013)

What does this study illustrate?

- pitch accent distribution with respect to information status and contrast, topology, prosodic phrases, finality and continuation in a corpus of non-scripted speech
- combination of different factors constrains pitch accent distribution
→ information status alone does not constitute a single prosodic pattern

Corpus Study

Material = Non-scripted spoken German

- consists of seven advisory monologues in the context of mobile phones with different topics, e.g. multimedia
- average duration of the individual recordings is about five minutes spoken by a professional salesman
- two mobile phones were compared to each other

Example of a monologue with all annotations

^{L*+H}
 [[Ich]_{ACC-SIT}]_{VF} [möchte]_{ISKI} [[Ihnen]_{ACC-SIT} hier [das Lumia 920
^{L*+H*} ^{L*+H} ^{DR}
 #P1#+C von der Firma Nokia]_{NEW, CF-PART} #P1#+C und [das
^{L*+H} ^{DR}
iPhone 5 aus dem Hause Apple]_{NEW, CF-PART}]_{MF} [vorstellen.]_{rSKI}
^{L*+H} ^{L*+H}
 #P1# [[Beide]_{GIV-ACTIVE}]_{VF} [verfügen]_{ISKI} [über [eine Kamera]]_{ACC-}
^{L*+H*} ^{DR}
INF und [Autofokus]]_{ACC-INF}]_{MF} #P1#+C. [Sowohl [das Nokia]]_{GIV-}
^{H*}
ACTIVE als auch [das iPhone 5]]_{GIV-ACTIVE}]_{VF} #P1#+C [verfügen]_{ISKI}
^{L*+H*}
 [auch über [eine Zweitkamera]]_{ACC-INF}]_{MF} #P1#+C [die]_{ISKI} [für
^{H+IH*}
[Videotelefonate]]_{NEW}]_{MF} [genutzt werden kann.]_{rSKI} #P1#+F
^{L*+H*}
 [Interessant für [die Fotos]]_{NEW}]_{VF} #P1#+C [ist]_{ISKI} [natürlich
^{L*+H*}
 auch [das Display]]_{ACC-INF}]_{MF} #P1#+C

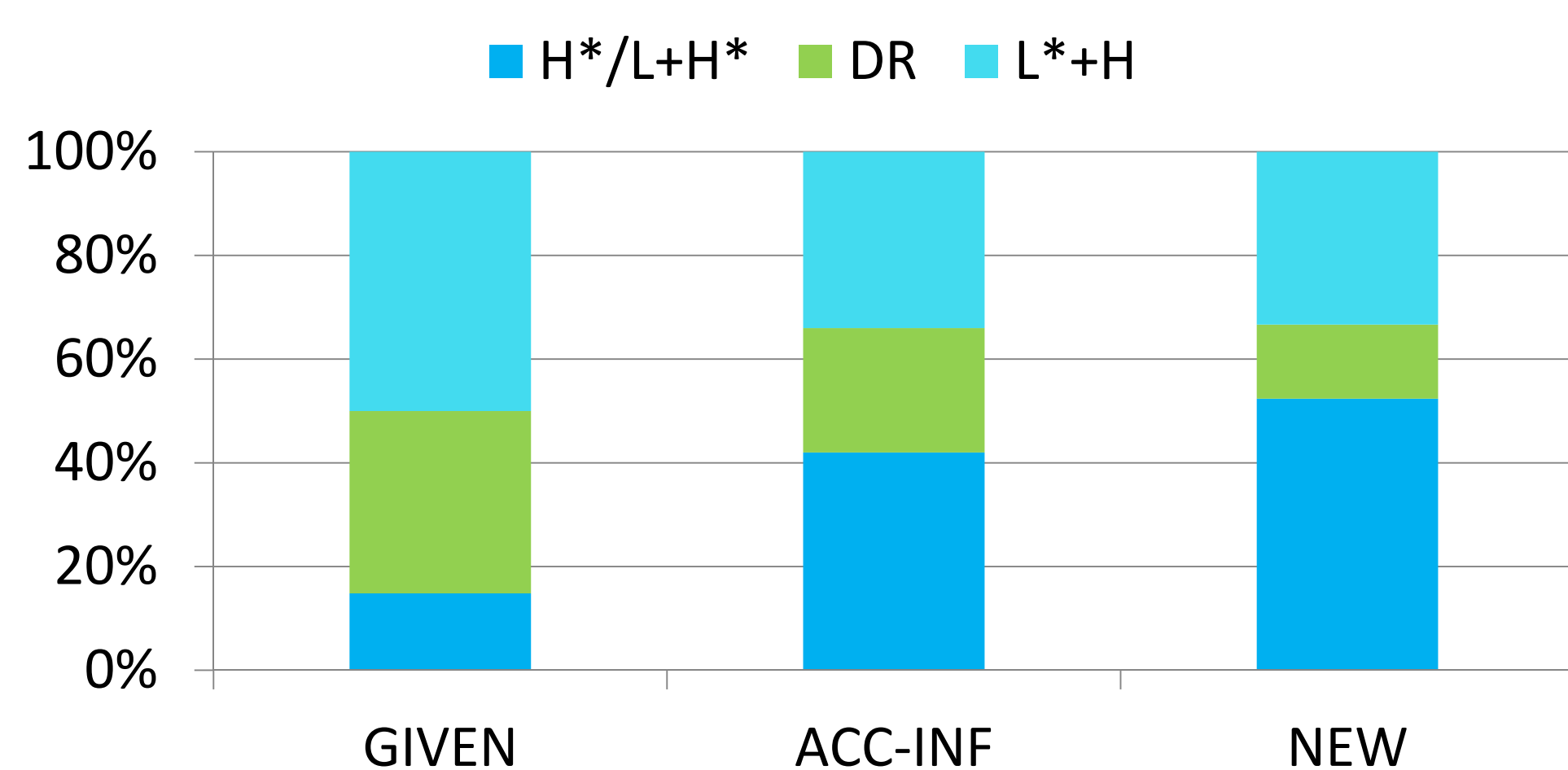
Annotation Layers

- Prosody → accent type, accent position, phrases (#P1#), boundary tones (GToBI, Grice et al. 2005)
- Information Status and Contrast (SFB-Guidelines, Dipper et al. 2010, annotator agreement of two annotators for information status: Cohen's κ of 0.75)
- Discourse function (Finality and Continuation, cf. von Essen 1964)
- Topology (**Vor**Feld, **Mittel**Feld, **Nach**Feld)

Results and Conclusion

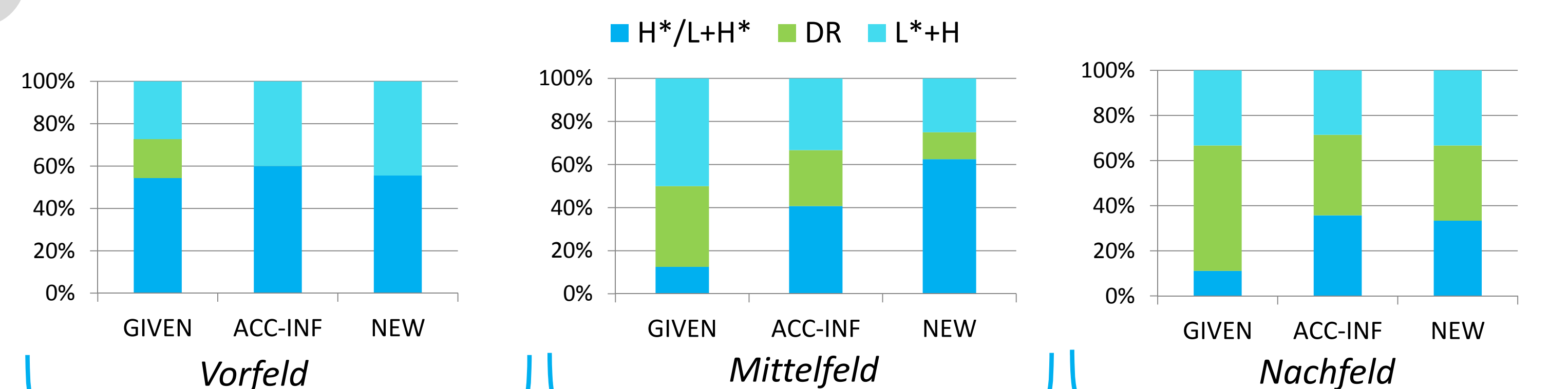
1 Pitch accent distribution wrt information status

GIVEN (n=55), ACC-INF (50), NEW (n = 21)



- similar distribution for all information status categories
- further factors have to be considered

2 Does topology play any role for the accent typ distribution?



In general, the number of DR accents increases, rising and high accents decrease.

- data mirror results of Féry & Kügler (2008) → prominences decrease to the end of a sentence
- But: topology cannot disentangle the choice of pitch accents alone
- closer analysis of the individual accents types necessary

3 What about prosodic boundaries?

	GIVEN	ACC-INF	NEW
has boundary/total discourse referents	11/57 (19,3%)	28/50 (56%)	11/21 (52,3%)

- ACC-INF and NEW are realized more often with a boundary after the discourse referent
- although discourse referents are annotated ACC-INF, they seem to be new in the discourse, and thus receive more prominence
- boundary (pause) is an additional factor to express *new information*

4 What about contrast?

	GIVEN	ACC-INF	NEW
has contrast/total discourse referents	16/57 (28%)	49/50 (98%)	18/21 (85%)

- ACC-INF and NEW were annotated frequently with *contrast* (specifically for this text type)
- textually based accessible annotation in combination with contrast receives higher prominence than textually and prosodically accessible referents (cf. Baumann & Grice 2006)
- accents are more prominent for the ACC-INF and NEW categories, possibly due to the contrast attribute

5 Conclusion

- no 1:1 mapping of information status and prosody
- combination of different factors is important
- both accent type and their prominence relation need to be considered as well

