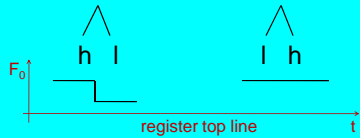




1 Introduction

Pitch register has been modeled in terms of metrical structure (Ladd 1990).

(1) Effect of metrical relation on the register



(2) Register top line = Range top line

2 Assumptions (Ladd 1990)

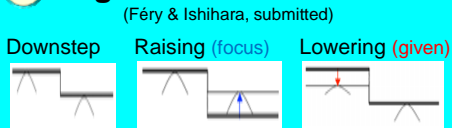
Pitch range: speaker-specific parameter; baseline & default initial register setting.

Pitch register: F0 values relative to which local tonal targets are fixed.

Effects on pitch range: e.g. emotional state of the speaker

Effects on pitch register: prominence, downstep

3 Register & Prominence (Féry & Ishihara, submitted)



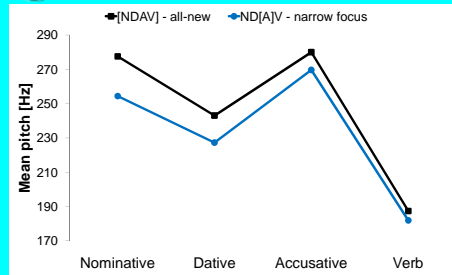
4 German & Hindi

Differences in prenuclear pitch register in German are not in line with Ladd (1990).

Differences in postnuclear pitch register between Hindi and German are not in line with Féry & Ishihara (submitted).

Proposal: Pitch register is modeled in terms of information structure and tonal structure.

5 German



Weil der Hammel dem Hummer den Rammler vorgestellt hat.
[weil Nom Dat Acc Verb hat.]
Because the sheep introduced the buck to the lobster.

(Féry & Kügler, to appear)

Materials: 18 speakers, 5 repetitions, all-new and narrow focus sentences;

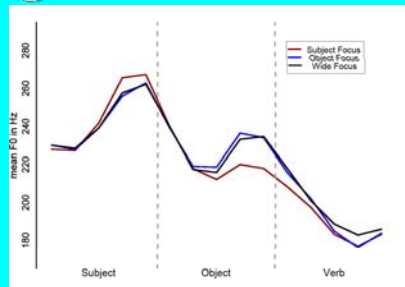
Results:
All-new sentences: Downstep pattern ~ 50 % and upstep of an argument ~ 50 %

Focus: H tone raising

Pre-focal givenness: Lowering of the register compared to downstep

Post-focal givenness: Deaccentuation of accents

6 Hindi



[graahak ne]_F davaaii ko khariidaa
customer ERG medicine ACC buy.PAST
The customer bought the medicine.

(Patil et al., submitted)

Materials: 20 speakers, 10 items, 3 information structure conditions

Results:
Dominant downstep pattern;
Post-focal compression (red line);
Object focus = all-new sentence (blue and black line);

7 Proposed OT constraints

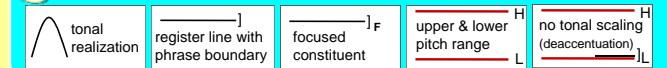
REALIZE TONE: Associate the tones with every minimal prosodic domain of tone realization and be identical to your input representation (ASSOC & IDENT in the sense of Gussenhoven 2004).

H-RAISING: Raise a high tone before a low tone (tonal dissimilation).

DOWNSTEP: Realize a downstep pattern over the whole intonation phrase.

COMPRESS GIVEN: Compress the pitch range on given constituents (pre- and/or post-focally).

8 How to read the pitch register illustrations



9	German	COMP GIVEN	REALIZE TONE	H-RAISING	DOWNSTEP
(a)	[(L*H) (L*H) (H*L) _F ()]				*
(b)		! **			*
(c)		! **	*	*	
(d)			! *	*	
(e)				! *	
All-new				*	

10	Hindi	REALIZE TONE	DOWNSTEP	COMP GIVEN (POST-F)	H-RAISING	COMP GIVEN (PRE-F)
(a)	[(L*H _p) (L*H _p) (L*H _p) _F (H*L)]				*	**
(b)		! *	*			
(c)			! *			**
(d)				! *	*	**
All-new					*	

References

- Féry, C. & Ishihara, S. (submitted) Interpreting Second Occurrence Focus.
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 Gussenhoven, C. (2004) *The Phonology of Tone and Intonation*. Cambridge: CUP.
 Ladd, D. R. (1990) Metrical Representation of Pitch Register. In J. Kingston & M. Beckman (eds.) *Papers in Laboratory Phonology I*, Cambridge: CUP, 35-57.
 Patil, U., Kentner G., Gollrad, A., Kügler, F., Féry, C., & Vasishth, S. (submitted) Focus, word order, and intonation in Hindi.

Acknowledgements This research has been funded by grants from the DFG (SPP 1234, Project "Prosody in Parsing", and SFB 632 Information structure, Project D5. Many thanks to Caroline Féry, Susanne Genzel, Anja Gollrad, Gerrit Kentner, and Shrayan Vasishth).

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To be continued ...

Extend the proposal to tone languages (Yucatec Maya) and to pitch accent languages (Japanese).
 Include lower register line (e.g. Hindi L* accent).