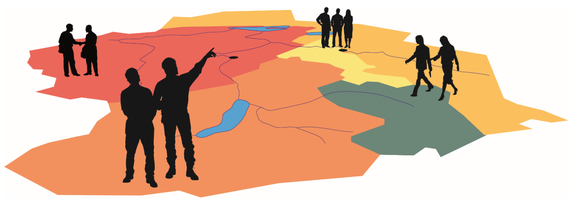
University of Zurich[UZH]

Rhythmic accommodation in a dialect contact situation
Acoustic and perception studies in Grison and Zurich German



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INTRODUCTION

ACCOMMODATION IN SOCIAL INTERACTIONS

- Speakers may become more similar (convergence)
- Speakers may accentuate individual differences (divergence)

EVIDENCE OF ACCOMMODATION

- Lexicon, morpho-syntax
- Pronunciation (e.g. vowel quality, VOT, rate, f0, intensity)
- Facial expressions and body movements

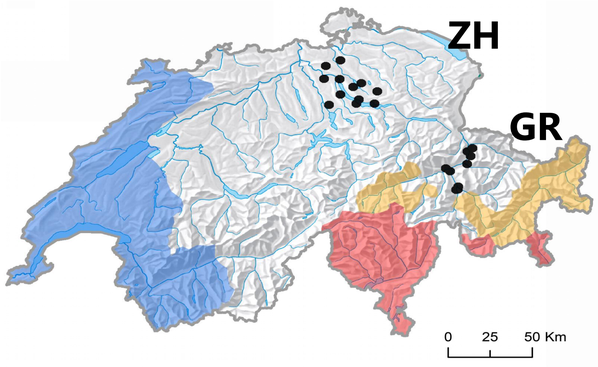
MECHANIMS AND FUNCTIONS OF ACCOMMODATION

- Automatic link between perception and production
- Social factors (e.g. mutual liking, social distance, perceived competence of interlocutors)
- Interplay of both

THE PROJECT

WHY RHYTHMIC ACCOMOODATION?

- Rhythmic variability depending on
  - Languages
  - Speakers
  - Speakers' age and health conditions
  - Interlocutors' age



GENERAL HYPOTHESIS

Speakers of mutually intelligible dialects, showing noticeable rhythmic differences, adapt their rhythmic features over the course of a conversation and after increased exposure to the dialogue partners

CROSS-DIALECTAL RHYTHMIC DIFFERENCES

Dialectal feature	Example with transl.	GR realization	ZH realization
ISG	Sonne 'sun'	nn ['sunnɐ] n [sunɐ]	n ['sunə]
OSL	Sohle 'sole'	V: ['so:lɐ] V ['solɐ]	V ['solə]
Red Vow	Suppe 'soup'	ɐ ['suppɐ]	ə ['suppə]

CORPUS

Pre-dialogue

Picture naming task
Comic description

Dialogue

2 Diapix tasks
18 speakers pairs

Post-dialogue

Picture naming task
Comic description

RHYTHMIC MEASURES

- **Ratio ISG**: ratio between duration of intervocalic sonorants in CCe words and in -Ce words
- **Ratio OSL:** ratio between the duration of stressed vowels in CV syll. and unstressed vowels within the same item
- **Ratio RedVow**: ratio between duration of stressed vowel and word-final vowel within the same item

AIMS

- **AIM 1:** Understand how rhythmic features change for speakers of ZH and GR after the interaction
- **AIM 2:** Understand social, linguistic and conversational factors accounting for rhythmic accommodation
- **AIM 3**: Understand the contribution of acoustic accommodation to perceived convergence

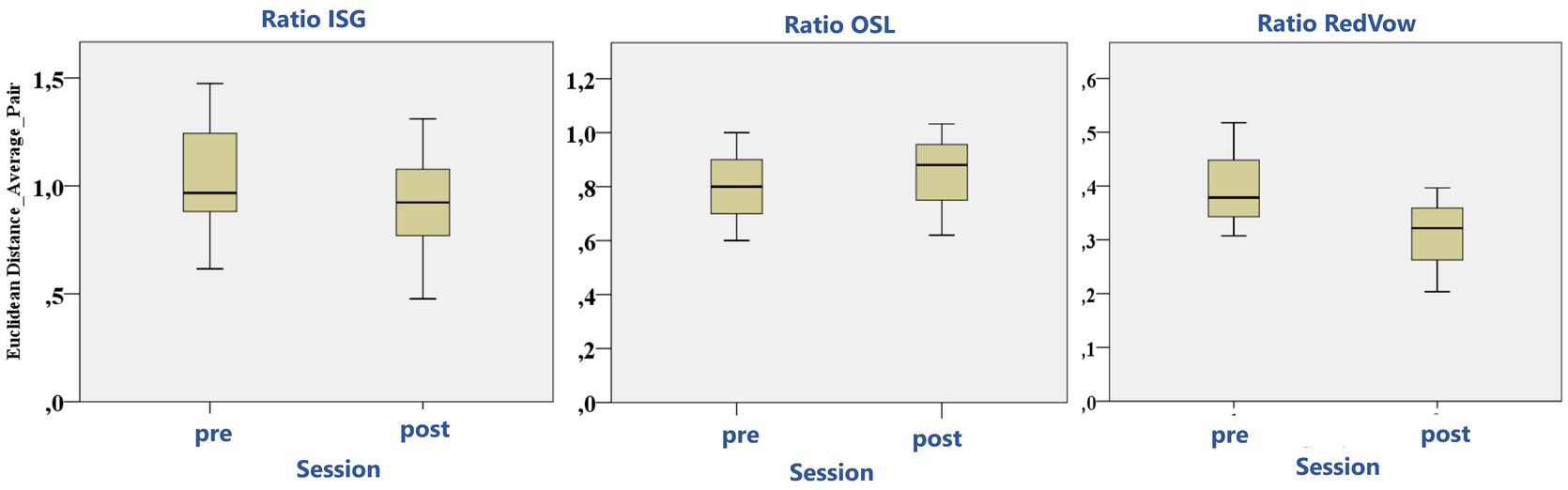
METHOD

- **Selection** of pairs whose dyads members differ in their rhythmic features before the dialogue
- **Euclidean distance** within a pair in pre- and post-dialogue recordings **(**Ratio ISG, OSL and RedVow)
- **Difference in distance** between post- and pre-dialogue recordings (B-A)

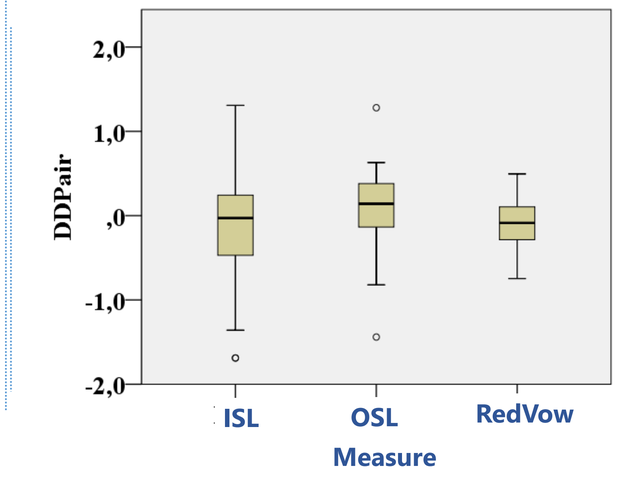
ddpair = B (post) – A(pre)
if B-A > 0 divergence; if B-A< 0 convergence;
if B = A no changes

RESULTS

Do rhythmic features change for speakers of ZH and GR after the interaction?



Do linguistic factors explain convergence?



CONCLUSIONS

- The overall results confirm the great complexity of vocal accommodation. Dyads members, who show significant rhythmic differences before the interaction, do not shift noticeably the production of ratio ISG, ratio OSL and ratio RedVow after being exposed to the interlocutors' dialect, although a trend toward convergence in ratio ISG and ratio RedVow is observed.
- Interpretations of accommodation based on phonetic distance or degree of dialect markedness do not seem tenable. RedVow, that is the only acoustic feature that crucially distinguishes the two dialects, and it is perceived as a strong dialect marker, was neither more nor less prone to accommodation than ratio OSL and ratio ISG.
- In light of the assumption that differences must be perceptible in order to be imitated, it seems plausible that cross-dialectal rhythmic differences, captured by the three ratio measures, are probably too subtle to be perceived or retained after the interaction. This is also in line with evidence from dialect recognition studies showing that segmental rather than prosodic cues mostly contribute to dialect identification, and this holds also in the case of Swiss German dialects

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