L1 intonational categories as "perceptual attractors" during L2 imitation
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INTRODUCTION

- In L2 learning, native (L1) phonological representations act as “perceptual attractors” to which similar non-native sounds are assimilated [1, 2];
- Competition with the inventory of the language/dialect of origin modulates segmental imitation by selective processes [3]
- Phonological properties of a speech sound replace its phonetic properties with the passing of time [4], e.g., by matching to exemplars or by rehearsal of articulatory programs [1, 5].

In this study, we addressed the intonational categories as “perceptual attractors” to which similar non-native sounds are assimilated during L2 imitation.

**Intonation?**

- Speakers reproduce the phonological form of an utterance, not its phonetic details [6];
- BUT: When imitating non-native dialects, the f0 contour is partly modified to approximate the target dialect [7].

**Questions (Q) [8, 9]**

<table>
<thead>
<tr>
<th>(Northern Standard)</th>
<th>L* H- H%</th>
<th>German</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecce Italian</td>
<td>L* L- H%</td>
<td>Shallow rise, late rise onset</td>
</tr>
<tr>
<td>Neapolitan</td>
<td>L*+H L-L%</td>
<td>f0 Rise-fall</td>
</tr>
</tbody>
</table>

**Hypotheses**

**H1**: Lecce speakers will be less accurate in imitation since they perceive German contours as variants of their native dialect contours

**H2**: Less accurate reproduction when imitation is delayed/rehearsal is reduced because of a decay of detailed f0 memories.

**CORPUS & METHODS**

- **Baseline Task**
  - Penderda la nave? Did she travel by ship?
  - Er trinkt ‘ne Blume? Does he paint a flower?
  - Guardava il mare? Did she look at the sea?
  - Er trinkt ‘ne Limon? Does he drink a lemonade?
  - Stringeva la mano? Did she shake hands?
  - Stie ist ‘ne Miihe? Does she eat a carrot?
  - Spalava la neve? Did she shovel snow?
  - Er baut ‘ne Miihe? Does she build a mill?
  - Ebreccia il legno? Did she burn wood?
  - Er mag Salami? Does he like pepperoni?
  - Chamava la moglie? Did she call the wife?
  - Er spielt Violinhe? Does she play violin?
  - Comprava il pane? Did she buy the bread?
  - Sie hattens ‘e Waage? Did they have a balance?
  - Cambiava lavoro? Did she get a new job?
  - Er suche Moroni! Does he look for chestnuts?

- **Main Task**

**Language interference**: Neapolitan: Imitation of German Qs not mediated by grammar -> + attention to acoustic details -> - Lecce it.: Phonological ambiguity -> Speakers rely on phonetic implementation rules of their own variety.

- **No memory effects**: - no rehearsal for continuous f0? - too simple task?

**DISCUSSION**

- **Wavelet-based functional mixed model [10]**

- **RESULTS**

**CONCLUSION**

- Similarly to the segmental level, intonation is anchored by native prosodic representations.
- Functional mixed models: New paradigm for exploring intonation.

**References**