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].

Intonation?

- Speeches 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>Steep rise right after the f0 valley</th>
</tr>
</thead>
<tbody>
<tr>
<td>German</td>
<td>L*</td>
<td>Shallow rise, late rise onset</td>
</tr>
<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

- **Shadowing:**
  - Penderiva la nave? Did she travel by ship? Er trinkt ‘ne Blume? Does he paint a flower?
  - Guarda il mare? Did she look at the sea? Er trinkt ‘ne Limone? Does he drink a lemonade?
  - Stringeva la mano? Did she shake hands? Ste ist ‘ne Môhre? Does she eat a carrot?
  - Splavala la neve? Did she shovel snow? Er baut ‘ne Möhre? Does he build a mill?
  - Breccava il legno? Did she burn wood? Er mag Salami? Does he like pepperoni?
  - Chiamava la moglie? Did she call the wife? Er spielt Violino? Does he play violin?
  - Compromu la luna? Did she buy the moon? Sie isst ‘ne Waafe? Do they have a balance?
  - Cambiava lavoro? Did she get a new job? Er sucht Maroni! Does he look for chestnuts?

- **Imitators with no knowledge of German**

- **“Memory” conditions:** Speaking onset at the end of Q (Immediate), after a silent pause of 4 s. (Delayed) or an answer of 4 s. to Q (Filled).

8 Qs * 2 Tasks * 3 Memory Conditions * 16 Imitators (8 Lecce + 8 Neap.) * 5 Repetitions = 3840 obs.

DISCUSSION

Language interference:

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

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

- **Increase cognitive load by increasing linguistic (i.e. syllabic) complexity (in progress)**

CONCLUSION

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

References