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 articularatory programs [1, 5].

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].

1. Language interference

Questions (Q) [8, 9]

<table>
<thead>
<tr>
<th>(Northern Standard)</th>
<th>German</th>
<th>Lecce It.</th>
<th>Neapolitan</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>L* H- H%</td>
<td>L* L- H%</td>
<td>L*+H L-L%</td>
</tr>
</tbody>
</table>

○ Steep rise right after the f0 valley
○ Shallow rise, late rise onset
○ F0 Rise-fall

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:

<table>
<thead>
<tr>
<th>Immediate</th>
<th>Delayed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Penderiva la nave? Did she travel by ship?</td>
<td>Er tritt: ’ne Blume? Does he paint a flower?</td>
</tr>
<tr>
<td>Guardava il mare? Did she look at the sea?</td>
<td>Er trinkt: ’ne Limone? Does he drink a lemonade?</td>
</tr>
<tr>
<td>Stringeva la mano? Did she shake hands?</td>
<td>Sie ist: ’ne Mühle? Does she eat a carrot?</td>
</tr>
<tr>
<td>Spalava la neve? Did she shovel snow?</td>
<td>Er baut: ’ne Mühle? Does he build a mill?</td>
</tr>
<tr>
<td>Cresceva il legno? Did she burn wood?</td>
<td>Er mag Salami? Does he like pepperoni?</td>
</tr>
<tr>
<td>Cambiava la moglie? Did she change the wife?</td>
<td>Er spielt: Violino? Does he play violin?</td>
</tr>
<tr>
<td>Comprava il pane? Did she buy the bread?</td>
<td>Sie haten: ’ne Waage? Did they have a balance?</td>
</tr>
<tr>
<td>Comprava il latte? Did she get a new job?</td>
<td>Er sucht Maroni! Does he look for chestnuts?</td>
</tr>
</tbody>
</table>

○ 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
○ 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?

○ 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