Effects of experience and native variety in non-native vowel perception

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Two groups of Spanish native speakers, from Spain and Cuba, each divided in monolinguals and advanced learners of English, were tested on how they perceived contrasts between English low and mid low vowels /æ, a, ʌ/. Low and especially back vowel contrasts are ambiguous (Lindblom, 1986) for native listeners and even more so for L2 learners (Escudero and Boersma, 2004). Previous studies with inexperienced Spanish learners of English (Guitart, 1988, 1996) found that /æ, ʌ, a/ are heard differently and, more importantly, that the learner’s native variety influences L2 perception. Specifically, L2 /ʌ/ tends to be perceived as /a/ by Peninsular learners, but as /o/ by Caribbean learners.

An AX discrimination task tested two hypotheses regarding the role of experience and native dialect in L2 vowel perception. The first hypothesis is that contrasts involving back adjacent vowels /ʌ - a/ are the most difficult to perceive whereas contrasts involving front non-adjacent vowels /æ - ʌ/ and /æ - a/ are easier. This confusion pattern remains the same across groups and error rates decrease with experience in L2 contrasts. The second hypothesis tests native variety effects in L2 perception. Dialectal preferences are evident in different confusion types and error rates with /æ, ʌ, a/ contrasts.

Results confirm the first hypothesis - the confusion pattern is similar in each group, with error rates as shown below:

<table>
<thead>
<tr>
<th></th>
<th>/ʌ - a/</th>
<th>/æ - ʌ/</th>
<th>/æ - a/</th>
</tr>
</thead>
<tbody>
<tr>
<td>monolinguals</td>
<td>0.41</td>
<td>0.38</td>
<td>0.1</td>
</tr>
<tr>
<td>advanced learners</td>
<td>0.27</td>
<td>0.12</td>
<td>0.025</td>
</tr>
</tbody>
</table>

Experience influences quantitatively learners’ perceptual behaviour, as the error rate is lower for advanced learners than for monolinguals. Qualitatively, perception improves too particularly with the /æ - a/ contrast. Results also point to dialectal effects in L2 perception, as there are significant differences between Cubans’ and Peninsulars’ performance with the /ʌ - a/ contrast (0.37 vs. 0.29). I conclude that perception improves with experience for some of the less confusable L2 contrasts and that L2 learners from different native dialects adopt different perceptual strategies for L2 vowel contrasts.

References

Escudero, Paola and Paul Boersma. (2004) “Bridging the gap between L2 speech perception research and phonological theory”. In SSLA 26: 551-585

