Adaptation to Italian-accented English speech by native English, Italian, and Dutch listeners

Anna Maria Di Betta*, Andrea Webera, & James M. McQueena,b
*University of Sheffield, UK  a MPI for Psycholinguistics and b Radboud University, Nijmegen, The Netherlands

Introduction

• Foreign-accented speech often deviates from native (L1) pronunciation norms

• Italian second-language (L2) learners of English lengthen the lax English vowel /l/, making it sound more like the tense vowel /i/ (Flege et al., 1999)

• This blurs distinctions between e.g. bean and bin and makes e.g. trick sound like treek

• Both L1 and L2 listeners need to adapt to this kind of pronunciation variance in order to interpret Italian-accented English speech correctly (e.g., /bin/ could mean either bean or bin)

Research questions

• Does Italian-accented English interfere with on-line word recognition for native English listeners and for L2 listeners whose L1 matches (Italian listeners) or mismatches (Dutch listeners) that of the speaker?

• Does perceptual adaptation to the Italian-accented speech occur during the experiment in each of the 3 listener groups?

Methods

Speaker: native Italian, fluent in English; Listeners: 23 native English, 12 Italian and 24 Dutch university students
Paradigm: cross-modal priming experiment where participants hear a spoken prime and then make lexical decisions to printed targets
Conditions:

1) Identity condition treat-TREAT
   - Related pairs N=40
either treat-TREAT or sign-TREAT

2) Mispronunciation condition treek-TRICK
   - Unrelated pairs N=40
   - store-TRICK

Results

1) Identity condition treat-TREAT
   • All three groups show identity priming, overall and in each half of experiment
   • Italians show stronger overall mispronunciation priming than English (p=.09) and Dutch (p=.03)
   • In the first half, Italians show mispronunciation priming, unlike English and Dutch, who do not differ from each other (p=.22)
   • In the second half, all 3 groups show mispronunciation priming and do not differ from each other (all p>.1)

2) Mispronunciation condition treek-TRICK

Conclusions

• Italians have learned to deal with Italian-accented English prior to the experiment and are therefore able to interpret words with mispronounced vowels easily

• Native English and L2 Dutch listeners, who are less familiar with the Italian-accented English, do not initially treat treek as trick, but quickly adapt to this foreign-accented speech (within 20 mins)