L2 listeners’ perception of a familiar contrast in unfamiliar position
and an unfamiliar contrast in a familiar position

Nikola Anna Eger, Felicitas Kleber
Institute of Phonetics and Speech Processing, Ludwig-Maximilians-University Munich

The purpose of this study was to investigate whether German listeners perceive the English voicing contrast in word-final position more categorically than the unfamiliar /s-θ/ contrast. The motivation comes from Broersma’s (2005) study showing that Dutch listeners categorize the voicing contrast native-like although it is neutralized in Dutch just as in German. Secondly we tested whether the familiarity with the L2 affects perception, assuming that younger German listeners with more L2 contact distinguish the contrast better than older German listeners with less L2 contact, but not as categorically as L1 English speakers. Three English nonsense words containing /s, z, θ/ were produced by an L1 English speaker. We morphed two 9-step continuas /vis-viz/ and /vis-viθ/ using STRAIGHT and presented 10 repetitions of each stimuli in a 2-AFC perception experiment to 9 older and 12 younger German L2 English listeners and 8 L1 English speakers. They had to judge whether the word-final sound was like that in piece, peas or teeth.

The averaged response curves (Fig. 1), derived by fitting sigmoid functions using binary logistic regression, show that neither contrast was neutralized perceptually by German listeners and that the unfamiliar contrast was perceived less categorically than the familiar contrast ($\chi^2[1]=5.4$, $p<0.05$). There was a significant trend (Fig. 2) towards steeper slopes from older Germans to younger Germans to L1 English speakers, i.e. more categorical perception ($\chi^2[1]=7.9$, $p<0.01$). This trend appears to be more pronounced in the /s-θ/ continuum (i.e. the younger L2 learners perceived it more categorically), although the interaction between continuum and group was not significant. Our results support Broersma’s findings that, independent of L2 contact, familiar contrasts are perceived categorically in unfamiliar positions, possibly because the voicing contrast is incompletely neutralized in both languages (Kleber et al., 2010), while the perception of unfamiliar contrasts seems to depend on language contact.

References: