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Categorical Perception of a vowel contrast in native speakers and second language learners.

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The perceptual space of a speaker is shaped in infancy according to the phonological inventory of the L1. Phonological categories correlate with Categorical Perception (CP) and Perceptual Magnet (PM) effects, lowering the discrimination rate between the same category's sounds and increasing it at the Category Boundaries (Liberman et al., 1967; Kuhl et al., 1992).

Second Language (L2) learning in adulthood requires creating new categories, some overlapping with the existing ones. When L2 and L1 categories overlap, the PM and CP effects might block the creation of the target L2 sounds, linked to Foreign Accented speech.

In this study, I investigate with the CP paradigm, the categorization, and discrimination of two German words: ʃɔːn] ('already') vs. [ʃøːn] ('beautiful') distinguished by a vowel contrast existing in German but not in Italian. I tested: i) 20 L1 speakers of German (L1); 34 L2 learners of German, L1 speakers of Italian –ii) 14 exposed to native speech (Tandem); iii) 18 not exposed to it; iv) 20 L1 speakers of Italian (Naïve). The oddball discrimination task presented the stimuli in 6 orders: AAB, ABA, ABB, BAA, BAB, BBA. L2 learners performed the LEXTALE in German (Lemhöfer & Broersma, 2012).

Results show that the categorization and discrimination performance linearly increase with language proficiency. Categorization only correlates with LEXTALE. Exposure to native speech is relevant. The presence of CP - as classically reported in the literature - is affected by the order of presentation of the stimuli in the oddball paradigm, emerging with BAB, ABA, BBA orders.

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