Issues in cross-linguistic similarity research: Methodological factors, L2 experience and phonetic vs. phonological similarity

A principal question for researchers in the speech sciences is the degree to which different sounds resemble each other (Bohn, 2002; Ladefoged, 1990), particularly sounds from different languages. This is especially relevant for research in the field of second or foreign language (L2) speech learning, as the degree of similarity between native and target language sounds is a crucial factor for most theoretical models of L2 speech. These models often claim that target language sounds are perceived in terms of native language categories (i.e., assimilated to the perceptually closest L1 categories), at least at initial stages in the acquisition of the L2 (e.g., Best and Tyler, 2007). Under the assumption that L1 and L2 sounds coexist in the same phonological space (Flege and Bohn, 2021), the degree of cross-linguistic similarity between target and native sounds determines the extent to which learners will create target-like categories for L2 sounds (i.e., different from the native categories), and will ultimately perceive and produce L2 sounds accurately. Hence, defining phonetic similarity and establishing appropriate methods to measure it is a basic issue for L2 speech research and for the phonetic sciences in general.

This presentation discusses methodological issues and crucial factors at play in the study of cross-linguistic perceived similarity by reviewing the results of a series of studies examining the perceived similarity between (mostly) English and Catalan or Spanish vowels. The paper addresses several issues such as different approaches to measuring cross-linguistic similarity and methodological limitations, the effect individual differences such as the type and amount of L2 experience, and the value of examining L1 perception (i.e., baseline data) and of contrasting perceptual judgements from speakers of all languages involved (i.e., assessing reciprocity of perceptual judgements) when evaluating cross-language perception. The results of empirical studies suggest that while cross-linguistic similarity is a crucial factor in the development of the phonological system of a L2, degree of L1-L2 similarity alone does not always explain L2 performance. Other factors interfere with degree of perceived similarity such as cross-linguistic differences in the use of relevant acoustic cues to L1 contrasts, the roles of pronunciation instruction, metalinguistic knowledge and the orthography, and the difference between phonetic and phonological similarity (Chang, 2019).

Keywords: cross-linguistic similarity, perceptual tasks, individual factors, methodological issues, phonological similarity

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