



Commentary: When the Easy Becomes Difficult: Factors Affecting the Acquisition of the English /i:/-/ɪ/ Contrast and On the Difficulty of Defining “Difficult” in Second-Language Vowel Acquisition

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When the Easy Becomes Difficult: Factors Affecting the Acquisition of the English /i:/-/ɪ/ Contrast

by Cebrian J., Gorba C., and Gavalda N. (2021). *Front. Commun.* 10:660917. doi: 10.3389/fcomm.2021.660917

On the Difficulty of Defining “Difficult” in Second-Language Vowel Acquisition

by Munro M. J. (2021). *Front. Commun.* 10:639398. doi: 10.3389/fcomm.2021.639398

INTRODUCTION

Investigating adult second language (L2) speech learning is difficult, and interpreting results is often a challenge. This is in part because a satisfactory method for measuring interactions between first language (L1) and L2 sound categories remains elusive (Flege and Bohn, 2021). Cebrian et al. (2021) and Munro's (2021) contributions to the Frontiers' Research Topic “L2 Phonology Meets L2 Pronunciation” evidence the effect of this persistent methodological concern. Both also reveal that generalizations based on group means are problematic, and that many complexities that emerge in L2 speech research are attributable to individual differences across learners, independent of their L1.

THEORETICAL AND APPLIED ORIENTATIONS

L2 phonologists, laboratory phoneticians and applied linguists too often work within sub-disciplinary silos. Cebrian et al. and Munro's studies model how to incorporate concepts from each sub-discipline, allowing for richer insights.

Cebrian et al.'s study is contextualized within the Speech Learning Model (SLM) (Flege, 1995), explicitly testing some of its claims. The study is also influenced by theoretical phonology, treating L2 speech categories as phonemic (e.g., Archibald, 1998) rather than phonetic (e.g., Kohler, 1981), in contradiction of the SLM. Borrowing from applied linguistics, Cebrian et al. use the notion of functional load (FL) to justify a

focus on the English /i:/-/ɪ/ contrast (Catford, 1987; Munro and Derwing, 2006; Sewell, 2021). Broadly speaking, FL refers to the communicative weight that a phonological contrast carries within a language, based upon its frequency of occurrence in minimal pairs.

While Munro does not explicitly follow a theoretical framework, his search for an implicational hierarchy of English vowel learning by Cantonese L1 speakers should interest L2 phonologists (e.g., Major, 1998). Further, Munro's attention to differences in the pronunciation of the same vowels in different phonetic environments (i.e., different rhymes) demonstrates a commitment to the SLM's claim that L2 speech learning occurs at the level of contextually sensitive allophones, rather than phonemic categories (Flege, 1995). Munro's primary concerns are applied. Like Cebrian et al., Munro couches his study in terms of FL, aiming to help learners develop intelligible speech rather than a native accent (Levis, 2005).

METHODOLOGICAL CONCERNS

Cebrian et al. and Munro's studies both recognize that the crosslinguistic similarity of L1 and L2 vowels is a primary determinant of successful L2 vowel acquisition. Yet, their findings do not clearly confirm this influence. While they offer alternative explanations for their mixed results, their operationalizations of crosslinguistic similarity are at least partially to blame. Cebrian et al. use a perceptual mapping task, which requires listeners to identify foreign language vowel tokens as members of their closest L1 target, and to indicate how well each token fits the selected L1 category. Guion et al. (2000) conclude that perceptual mapping may not be sensitive enough to accurately capture crosslinguistic similarity. Another concern is that Cebrian et al. had listeners evaluate the crosslinguistic similarity of English and Spanish vowels in one phonetic context (/bVt/) to predict the learning of the same L2 English vowels in different phonetic contexts (a range of/CVC/s). It is well-established that the acquisition of an L2 sound in one context rarely generalizes to other contexts (Thomson, 2016; Mitterer et al., 2018; Thomson, 2018; Flege and Bohn, 2021). While Munro took care to account for this fact, he relied upon Chan and Li's (2000) secondary description of English and Cantonese vowel similarity, the empirical basis for which is unknown.

Cebrian et al. report differential mismatches between their measures of crosslinguistic similarity and learners' perception versus learners' productions of the same English vowels. While this may well reflect real differences in the rate with which each skill develops, incommensurable techniques for evaluating each skill makes direct comparisons impossible (see Nagle and Baese-Berk, 2021; Thomson, 2021).

While unsatisfactory methods do not prove Cebrian et al. and Munro's conclusions are inaccurate, it is reasonable to conclude that imprecise methodology partially explains their confusing results.

THE IMPORTANCE OF INDIVIDUAL DIFFERENCES

Cebrian et al. and Munro's most important insight is the extent to which there exist between-subject differences among matched-L1 learners of L2 English vowels. Their results point to a need for

greater attention to individual differences, rather than assuming that all learners from the same L1 background will develop along the same path. Cebrian et al. found a weak relationship between the perceived crosslinguistic similarity of English-Spanish vowels and learners' ability to discriminate between those English vowels. Munro's study determined that there is no implicational hierarchy by which contextually-sensitive allophones of the same phoneme are learned. Individual learners acquired allophones of the same phoneme in no consistent order. While there is a growing recognition that individual differences play a substantial role in ultimate attainment for L2 pronunciation (Darcy et al., 2015; Suzukida, 2021), factors such as aptitude, motivation, and quality of experience with the target language have long played a subordinate role to L1 effects in L2 speech research.

DISCUSSION

Cebrian et al. and Munro's tentative conclusions concerning the role of crosslinguistic similarity in L2 speech learning reinforces the necessity to improve how we measure L2 speech perception and production across languages. Thomson et al. (2009) effectively demonstrate that a statistical pattern recognition model of crosslinguistic similarity, incorporating multiple sources of phonetic information, leads to more accurate predictions for both L2 perception and production. Unfortunately, its labor-intensive nature seems to present an obstacle to its wider adoption.

One gap in both Cebrian et al. and Munro's interpretation of their results is that neither considers the concept of markedness in determining what categories are most learnable (see Archibald, 2021). In both studies, some sounds with which learners had the most difficulty were, in fact, marked (e.g., lax vowels and vowels in checked syllables). While markedness has long been a prominent topic among L2 phonologists, the concept appears to be overlooked by most phoneticians. In the Revised SLM (SLM-r) Flege and Bohn (2021) hypothesize that more input is needed for learners to establish more complex sound categories, which they operationalize as how rare particular sounds are across languages. This new hypothesis suggests that they may have (re)discovered markedness.

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The author confirms being the sole contributor of this work and has approved it for publication.

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