**Conflicting grapheme-phoneme mappings lead to the production of hybrid L1/L2 sounds by immersed bilinguals**

Adults living in a country where their second language (L2) is spoken are surrounded by both aural and visual information in their L2. Interactions between the phonetic systems of a bilingual´s first language (L1) and L2 are well researched [1], but the influence of grapheme-phoneme mappings (GPMs) on speech production across languages is not well studied outside the language classroom, despite indications that inconsistencies in GPMs across languages impact L2 production for learners in immersion [2].

In this study, 21 native French speakers immersed in Spain for several years named and read Spanish words containing the /b/ sound in initial position. In Spanish, this sound is associated with the graphemes <b> and <v>, letters that are associated with the sounds /b/ and /v/ respectively in French. 19 control Spanish speakers naïve in French were tested on the same tasks.

We expected that bilingual production of the plosive /b/ in Spanish would be influenced by the French phoneme /v/, a fricative, when written with the grapheme <v>. Tokens were analyzed using the plosion index [3], an automatic measurement used to quantify the energy of a plosive burst in relation to the closure phase of the same plosive. Results indicate that /b/ was produced less energetically in the /b/-<v> condition than in the /b/-<b> condition, but only for the bilinguals. To determine whether this result was due to a direct intrusion of the sound /v/, tokens produced without a clear plosive burst where manually discarded, but the result stayed the same.

These data demonstrate that GPMs across languages have an impact on the L2 production of even highly proficient immersed bilinguals. This impact can manifest itself through the fusion of two sounds, one from each language. Such a fusion had been reported before between fricatives [4] and for beginners, but is shown here for the first time for immersed bilinguals and for sounds with different manners of articulation.

**References:**

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