The Vowel Quality of Non-Lexical Hesitation Particles in German and English L1 and L2 Speech

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Non-lexical hesitation particles occur frequently in spontaneous speech over a wide variety of languages, if not even in all languages. In German and English, they occur in similar forms, namely vocalic fillers (*uh, äh*), nasal fillers (*mh, hm*) and a combined form consisting of a vowel followed by a bilabial nasal (*um, ähm*). The quality for the German vowels has been reported to range from an open [ɒ] to a central [ə] (Künzel, 1987) or even take the form of the front vowel [ɛ] (Belz et al., 2017). Shriberg describes the vowel quality of fillers for English as "typically close to Schwa" (1994, p. 175) while Lickley (2015) adds the possible back vowel variant [ʌ]. Considering the wide variety of vowel qualities for the non-lexical hesitation particles mentioned in the literature it seems reasonable to further inspect the vowel qualities of English and German fillers. Furthermore, the question if speakers of a second language can adapt a native-like vowel quality in their L2-hesitation particles is addressed.

For this purpose, L1 and L2 (either English or German) spontaneous speech of 12 native speakers of English and 12 native speakers of German has been recorded. Additionally, the subjects were asked to read a list of English and German words (n = 26), all of which included a vowel of the vowel inventory of both languages. After extracting the formant values of the first three formants (F1-F3) of the vowels in the hesitation particles (n = 2068) as well as the reference words, measurements of the Euclidean distance are used to determine which vowel matches the vowel of non-lexical hesitation particles best. In a second step, native and non-native fillers are compared using the same method. The results suggest that the hesitation vowels are best represented by a central vowel in German and the back vowel [ʌ] in English.

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