Exploring the Effects of Bilingualism on Filled Pauses: An Acoustic-Phonetic Perspective *Justin Jing Hoi Lo*

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Researchers have long taken an interest in the hesitation phenomena of filled pauses (FPs, sounds like "uh" and "um" in English). Existing literature has provided insights into not only the usage and distribution of FPs but also their phonetic forms. The present study focuses on the latter aspect and in particular centres around bilingual speakers, as the phonetics of FPs to date have mostly been considered in the context of monolingual speakers. The issue of how knowledge of multiple languages may influence the bilingual speakers' realisation of FPs has received little attention and warrants empirical investigation.

Thus far, crosslinguistic analyses have found language-specific patterns in the vocalic quality of FPs (Candea et al, 2005). Meanwhile, speakers have been remarked to adopt their own personal, speaker-specific variants of these sounds (Künzel, 1997). By examining the production of FPs by bilinguals from an acoustic-phonetic perspective, this paper explores how these notions of language-specificity and speaker-specificity are intertwined for speakers who have to hesitate in more than one language. Specifically, it addresses two questions: (1) whether bilinguals differentiate FPs in the languages they speak, and (2) whether FPs by bilinguals and monolinguals speaking in the same language are acoustically distinct.

In order to minimise potential effects of L1 interference documented in sequential bilinguals, data for bilingual speakers were derived from 15 female German–French simultaneous bilinguals who acquired both languages at the same time from birth (HABLA corpus: Kupisch, 2011; Kupisch et al, 2012). Each speaker provided separate recordings of spontaneous speech in German and French. Instances of UH ("euh" in French, "äh" in German) were identified in all available samples. Midpoint frequencies of the first three formants and duration were extracted from each vocalic segment. The same procedure was followed to extract data from 20 female French monolinguals for comparison (NCCFr corpus: Torreira et al, 2010).

Results show that simultaneous bilinguals differentiated their FPs by language: FPs in German were significantly shorter and had lower F1–F3 than those in French. Further, FPs in French differed only in duration between the bilinguals and monolinguals. These findings suggest that language-specificity of FPs holds for simultaneous bilinguals as it does for monolinguals. Variation within and between individual speakers will also be closely examined to provide a picture of the extent of speaker-specificity.

References

Candea, M., I. Vasilescu and M. Adda-Decker (2005). Inter- and intra-language acoustic analysis of autonomous fillers. *Proceedings of the 5th Workshop on Disfluency in Spontaneous Speech*, pp. 47–52. Künzel, H.J. (1997). Some general phonetic and forensic aspects of speaking tempo. *International Journal of Speech, Language and the Law*, 4(1), 48–83.

Kupisch, T. (2011). *Hamburg Adult Bilingual LAnguage*. Archived in Hamburger Zentrum für Sprachkorpora. Version 0.2. URL: http://hdl.handle.net/11022/0000-0000-5C64-9.

Kupisch, T., D. Barton, G. Bianchi and I. Stangen (2012). The HABLA-Corpus (German-French and German-Italian). In T. Schmidt and K. Wörner (Ed.). *Multilingual Corpora and Multilingual Corpus Analysis*. Amsterdam: John Benjamins, pp. 163–179.

Torreira, F., M. Adda-Decker and M. Ernestus (2010). The Nijmegen Corpus of Casual French. *Speech Communication*, 52(3), 201–212.