

Predictors of foreign accentedness in L3

Ratings of perceived global foreign accent have been widely applied in second language acquisition (SLA) research, (e.g., Flege 1988; Piske et al. 2001); however, this phenomenon has been less frequently explored from the multilingual acquisition perspective (but see Wrembel 2015). Further, the most recent L3 studies focus mostly on heritage speakers (Lloyd-Smith, Gyllstad, Kupisch 2017; Lloyd-Smith 2021). Previous research on factors contributing to a perception of accentedness has identified the amount of L1 use, the age of arrival in an L2-speaking country and the presence of non-native segmental features in rated samples as the most significant predictors.

The present study forms one part of a large project investigating L3 development longitudinally. It aimed to explore to what extent a holistic assessment of global accent in the third language is correlated with the learners' general proficiency level, oral fluency and fine-grained phonetic performance. The participants were 24 speakers of L1 Polish, L2 English, L3 Norwegian, aged 21, after 8 weeks of intense initial exposure to the L3 in a formal academic setting. They performed a Norwegian placement test as a measure of proficiency and completed the Language History Questionnaire (Li et al. 2006). The language material used in the rating study was the participants reading a Norwegian version of *The North Wind and the Sun* text. Oral reading fluency was expressed as the number of words per minute (wpm). Fine-grained phonetic performance was assessed based on the reading of a word list in L3 including /p, t, k/ stop tokens in stressed onset positions where Norwegian, but not Polish, displays long VOTs.

In the rating study, approximately 20-second-long samples were extracted from the recordings of the read text and normalised for loudness. Twenty-three raters, half of whom were Norwegian native speakers and the remaining half were highly proficient in Norwegian, rated the samples for the degree of foreign accentedness and comprehensibility on a 9-point scale, using a Qualtrics online survey. The survey included 30 randomised samples, featuring the 24 L3 learners and 6 Norwegian controls. The raters had moderate to considerable amount of previous experience with foreign accented speech in Norwegian.

A preliminary analysis shows inverse correlations between Accentedness and Proficiency level (Pearson's $r = -0.16$); Accentedness and Length (i.e. the slower the speech rate, the stronger the perceived accent) ($r = -0.24$), and Comprehensibility vs. Length ($r = -0.17$). There were positive correlations between Comprehensibility and Proficiency ($r = 0.11$); and the two rating parameters of Accentedness and Comprehensibility ($r = 0.185$). We also fit linear mixed effects models (via Rbrul, see Johnson 2009) with Norwegian proficiency and the length of utterance as fixed effects, and by-speaker and by-rater random intercepts. For Accentedness, the best model only included Length as a significant factor ($t=2.72$, $p=0.1$), while for Comprehensibility, it was VOT value for /t/ ($t=-3.196$, $p<0.05$). The findings indicate that overall spoken fluency is the best predictor of the perceived global accent in L3 speech. Ongoing analyses will further verify the hierarchy of variables as proposed by NGTA (Dziubalska-Kořaczyk and Wrembel 2022).

References:

Dziubalska-Kořaczyk, K. & Wrembel, M. (2022 forthcoming) Natural Growth Theory of Acquisition (NGTA): Evidence from (mor)phonotactics. In Sardegna, V. and A. Jarosz (eds): *Theoretical and Practical Perspectives on English Pronunciation Teaching and Research*. Springer.

- Flege, J. E. 1988. Factors affecting degree of perceived foreign accent in English sentences. *Journal of the Acoustical Society of America* 84. 70–79.
- Johnson, D.E. 2009. Getting off the GoldVarb standard: Introducing Rbrul for mixed-effects variable rule analysis. *Language and Linguistics Compass* 3/1.
- Li, P., Sepanski, S. and Zhao, X. 2006. Language history questionnaires: A web-based interface for bilingual research. *Behavior Research Methods* 38(2): 202–210.
- Lloyd-Smith, A. (2021). Perceived foreign accent in L3 English. The effects of heritage language use. *International Journal of Multilingualism*. <https://doi.org/10.1080/14790718.2021.1957899>
- Lloyd-Smith A, Gyllstad H, and Kupisch T. 2017. Transfer into L3 English: Global accent in German-dominant heritage speakers of Turkish. *Linguistic Approaches to Bilingualism* 7: 131–62.
- Piske, T., I. R. A. MacKay & J. E. Flege. 2001. Factors affecting degree of foreign accent in an L2: A review. *Journal of Phonetics* 29. 191–215.
- Wrembel, M. 2015b. *In search of a new perspective: Cross-linguistic influence in the acquisition of third language phonology*. Poznań: Wydawnictwo Naukowe UAM.