Natural Growth Theory of Acquisition: New data support for a revised theory of multilingual acquisition of speech

Katarzyna Dziubalska-Kołaczyk, Magdalena Wrembel
Adam Mickiewicz University, Poznań

In this talk we want to provide new evidence for our revised version of the earlier proposed Natural Growth Theory of Acquisition (Dziubalska-Kołaczyk & Wrembel 2017, forthcoming). One of NGTA's main assumptions is gradual dynamic emergence of Ln phonology, shaped by input from L1 and other Ls, and influenced by typology, universal preferences and context. Viewing bilingual and multilingual acquisition as a vibrant, dynamic and diversified process is compatible with newest research outcomes across such disciplines as neuroscience, sociolinguistics or psychology (e.g. Kroll 2020, Sorace 2020). In its epistemological stance NGTA follows a logically determined set of principles and is firmly grounded in the theory of natural linguistics and enhanced by a dynamic perspective of complexity theory. It takes into account both linguistic and extralinguistic variables as potential sources of influence and modulating factors. Crucially, the extralinguistic variables receive an umbrella term 'the acquisition situation', which embraces all aspects of a given acquisition case.

Based on our revised NGTA model (Dziubalska-Kołaczyk & Wrembel, forthcoming) we reinterpreted the results generated in Multi-Phon project, in which speech perception and production of two groups of young sequential multilinguals (L1/L3 Polish, L2 English, L3/L1 German) was investigated over the first year of L3 learning. Methods employed delayed repetition, accent mimicry, ABX and FC goodness task. Investigated phonetic features included vowels, rhotic sounds and final obstruent devoicing. The results demonstrated non-linear (feature-dependent) development of foreign language phonologies; transitory stages reflected in intermediate realisations; dynamic cross-linguistic interactions; effects of L1 background, language proficiency and differential learnability of phonetic features (Kopečková et al. 2021, Wrembel et al. 2019, Wrembel et al. 2022). Further, the perception-production link was modulated by phonological system stability, i.e. with both modalities aligning in L2, while dissociating in L3 (Wrembel et al. 2020). Attested patterns are explained with reference to the tenets of NGTA.

References

Dziubalska-Kołaczyk, K., & Wrembel, M. (2017). Natural Growth Model: Explaining third language phonological acquisition. Paper presented at Societas Linguistica Europaea SLE 2017 Zürich.

Dziubalska-Kołaczyk, K. & Wrembel, M. (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.

Kopečková, R, Wrembel, M., Gut, U., Balas, A. (2021). Differences in phonological awareness of young L3 learners: An accent mimicry study' International Journal of Multilingualism

Kroll, J. F. (2020). Bilingualism as a lens to the mind, the brain, and society. A plenary ppt presentation at Bilingualism Matters Research Symposium, 22 September 2020.

Sorace, A. (2020). L1 attrition in a wider perspective. *Second Language Research* 36(2): 203–206.

Wrembel, M., Gut, U., Krzysik, I., Lewandowska, H. & Balas, A. (2019). Acquisition of Rhotics by Multilingual Children. In S. Calhoun, P. Escudero, M. Tabain & P. Warren (eds.) *Proceedings of the 19th International Congress of Phonetic Sciences,* Melbourne, Australia 2019 (pp. 954-958).

Wrembel, M., Gut, U., Kopečková, R., Balas, A. (2020). Cross-Linguistic Interactions in Third Language Acquisition: Evidence from Multi-Feature Analysis of Speech Perception. *Languages*, 5, 52; doi:10.3390/languages5040052

Wrembel, M, Gut, U., Kopečková, R., Balas, A. (2022). The relationship between the perception and production of L2 and L3 rhotics in young multilinguals; an exploratory cross-linguistic study. *International Journal of Multilingualism.*