The effect of aptitude and input on the grammatical proficiency of adult Greek-English bilinguals

Leonarda Prela¹, Miquel Llompart^{1,2} & Ewa Dąbrowska^{1,3} ¹ Friedrich Alexander University of Erlangen-Nuremberg, ² Universitat Pompeu Fabra, ³ University of Birmingham, Birmingham, United Kingdom <u>leonarda.prela@fau.de</u>

Keywords: language aptitude, grammatical proficiency, bilingualism, ultimate attainment, second language acquisition (SLA)

Ultimate attainment is a major area of interest within the field of second language acquisition. Although some second/foreign (L2) language speakers achieve nativelike proficiency in the L2, most individuals fall short of native mastery. Traditionally, researchers have investigated differences in L2 ultimate attainment in relation to age effects, often arguing that speakers learning a second/foreign language past a biologically determined period are unable to reach native(like) attainment (DeKeyser, 2000; Granena & Long, 2013; Johnson & Newport, 1989; Lenneberg, 1967). However, this explanation fails to account for speakers who succeed in spite of their late acquisition as well as those who are unable to reach nativelike proficiency despite their early onset. In addition to age, previous studies have shown that the varying degrees of L2 attainment can be partially explained by language aptitude (Abrahamsson & Hyltenstam, 2008; Li, 2015; Sparks et al., 2011) and the input received (Flege & Liu, 2001; Moyer, 2011). Crucially, recent research suggests that aptitude seems to also play a role in L1 acquisition (Dąbrowska, 2018) and effects of input have also been reported for native language development (Unsworth, 2013).

The aim of this study was to further explore the contributions of input and aptitude to language acquisition, and in particular, grammatical attainment, by assessing the potential effects of these two predictors on grammatical proficiency in the L1 and L2 of the same group of speakers. We recruited 75 participants, all native speakers of Greek who had learned English as a foreign language in Greece and immigrated to the United Kingdom in adulthood (mean age of arrival = 27.3, SD = 6.4). Grammatical proficiency was measured through a grammaticality judgment task administered in both the L1 and the L2. Aptitude was measured through Sentence Pairs, a task assessing grammatical sensitivity based on the Words In Sentences test from the MLAT battery. Finally, the amount of input was measured using a new cumulative measure that captured L1 and L2 exposure throughout the participants' lifespan.

Results revealed a strong relationship between exposure and grammatical proficiency in the L2, as expected, and, most interestingly, a relationship between aptitude and grammatical proficiency in both the participants' L1 and L2 that was stronger for the former. The effect of input fits in well with usage-based accounts of language acquisition (Bybee & Beckner, 2009; Tomasello, 2009). The findings regarding aptitude suggest that explicit aptitude is relevant for L1 acquisition and not only L2 learning, as previously believed, thus challenging the claim that L1 and L2 acquisition are fundamentally different.

References

Abrahamsson, N., & Hyltenstam, K. (2008). THE ROBUSTNESS OF APTITUDE EFFECTS IN NEAR-NATIVE SECOND LANGUAGE ACQUISITION. Studies in Second Language Acquisition, 30(4), 481–509. <u>https://doi.org/10.1017/S027226310808073X</u>

Bybee, J. L., & Beckner, C. (2009). Usage-based theory.

Dąbrowska, E. (2018). Experience, aptitude and individual differences in native language ultimate attainment. Cognition, 178, 222–235. <u>https://doi.org/10.1016/j.cognition.2018.05.018</u>

DeKeyser, R. M. (2000). THE ROBUSTNESS OF CRITICAL PERIOD EFFECTS IN SECOND LANGUAGE ACQUISITION. Studies in Second Language Acquisition, 22(4), 499–533. <u>https://doi.org/10.1017/S0272263100004022</u>

Flege, J. E., & Liu, S. (2001). THE EFFECT OF EXPERIENCE ON ADULTS' ACQUISITION OF A SECONDLANGUAGE. Studies in Second Language Acquisition, 23(4), 527–552. https://doi.org/10.1017/S0272263101004041

Granena, G., & Long, M. H. (2013). Age of onset, length of residence, language aptitude, and ultimate L2 attainment in three linguistic domains. Second Language Research, 29(3), 311–343. <u>https://doi.org/10.1177/0267658312461497</u>

Johnson, J. S., & Newport, E. L. (1989). Critical period effects in second language learning: The influence of maturational state on the acquisition of English as a second language. Cognitive Psychology, 21(1), 60–99. <u>https://doi.org/10.1016/0010-0285(89)90003-0</u>

Lenneberg, E. H. (1967). Biological foundations of language. Wiley.

Li, S. (2015). The Associations Between Language Aptitude and Second Language Grammar Acquisition: A Meta-Analytic Review of Five Decades of Research. Applied Linguistics, 36(3), 385–408. <u>https://doi.org/10.1093/applin/amu054</u>

Moyer, A. (2011). An Investigation of Experience in L2 Phonology: Does Quality Matter More than Quantity? Canadian Modern Language Review-Revue Canadienne Des Langues Vivantes - CAN MOD LANG REV, 67, 191–216. <u>https://doi.org/10.3138/cmlr.67.2.191</u>

Singleton, D., & Ryan, L. (2004). Language Acquisition: The Age Factor. In Language Acquisition. Multilingual Matters. <u>https://doi.org/10.21832/9781853597596</u>

Sparks, R. L., Humbach, N., Patton, J., & Ganschow, L. (2011). Subcomponents of Second-Language Aptitude and Second-Language Proficiency. The Modern Language Journal, 95(2), 253–273. <u>https://doi.org/10.1111/j.1540-4781.2011.01176.x</u>

Tomasello, M. (2009). The usage-based theory of language acquisition. In The Cambridge handbook of child language (pp. 69-87). Cambridge University Press.

Unsworth, S. (2013). Current Issues in Multilingual First Language Acquisition. Annual Review of Applied Linguistics, 33, 21–50. <u>https://doi.org/10.1017/S0267190513000044</u>