

## Grammatical aspect in Heritage Greek: Does cross-linguistic influence play a role?

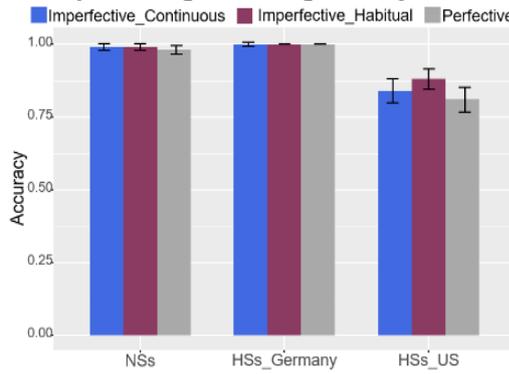
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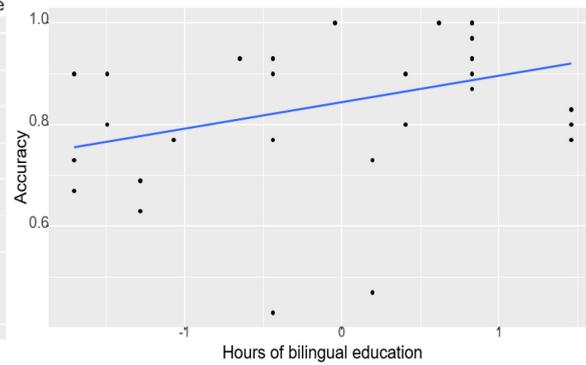
Child acquisition of verbal aspect in Greek has been extensively investigated in various bilingual groups (see [1] and references therein). This is the first study to test verbal aspect in adult (second generation) heritage speakers of Greek, born and raised in Germany (HSs-Germany) and the US (HSs-US), in production [2] and comprehension. **Goal:** The main goals are to investigate a) cross-linguistic influence and b) the overgeneralizing aspectual patterns (if any). **Experiment 1:** In an elicited production task, 90 participants were recruited: 26 HSs-Germany, 33 HSs-US, and 31 Native Speakers (NSs) in Greece (age range=18-36, mean age of onset to the dominant language= 2;0, range=0-8). Participants had to orally produce the target form (*imperfective continuous*, *imperfective habitual*, *perfective*) in obligatory contexts, such as in (1), created by using adverbials (10 items by condition). **Experiment 2:** In an online speeded grammaticality judgement task, which forms a global measure of sentence processing and has been employed successfully with similar groups of bilinguals [3], 96 participants were recruited: 32 HSs-Germany, 24 HSs-US, and 40 NSs (age range=18-36, mean age of onset to the dominant language= 2;0, range=0-6). They had to make a grammaticality judgement under a response deadline (2,000 milliseconds) in a 2x2 within-subjects (*GrammaticalityxAspect*) design (6 items by condition), such as in (2), where half of the imperfective items denoted a habitual interpretation and the rest half a continuous interpretation. **Results:** The statistical analyses were conducted in R. For accuracy data logistic mixed models were fit and for response times linear mixed-effects models were fit using treatment contrasts with releveling of the reference level(s). In Experiment 1, HSs-US were significantly less accurate (Figure 1) across all three conditions. In Experiment 2, HSs were overall below chance levels in both ungrammatical conditions (Figure 3). However, HSs-Germany performed similarly to NSs (as in Experiment 1) in all grammatical conditions (and no difference between perfective-imperfective). HSs-US performed less accurately a) in the grammatical perfective condition (significantly) and in the grammatical imperfective condition (marginally), and b) in both the habitual and continuous interpretation of imperfective (Figure 5) compared to both NSs and HSs-Germany (as in Experiment 1). The response time analysis also revealed a processing penalty in all vulnerable (in accuracy) conditions (Figure 4). Previous bilingual education was also a reliable predictor in both production (Figure 2) and comprehension (Figure 6). **Discussion:** The current findings do not support cross-linguistic influence of verbal aspect in adult Greek HSs. Crucially, HSs-Germany (even those without/with low education in Greek) pattern like NSs in most of the conditions, although their dominant language does not encode aspect morphologically. The results also fail to find an overall advantage towards the perfective form (+marked morphologically). Furthermore, both tasks reflect that, numerically (not statistically), habitual is more accurate than continuous [6, 7]. This may be related to the optionality in the use of Greek perfective *vs.* continuous, when an event can be seen either in its unfolding duration (with continuous imperfective) or as complete (with perfective) [4]. On the other hand, habitual is not involved in such optionality. Thus, we argue that Greek verbal aspect of HSs in the US is vulnerable. This is in line with Russian verbal aspect of HSs in the US [5]. However, Greek HSs-US performed at chance only in ungrammatical conditions. In grammatical ones as well as in production, they do (still) retain aspectual distinctions (above chance), although to a much lower extent compared to HSs-Germany (and NSs). When inaccurate, the overgeneralizing form varies [5, 6, 7], perhaps because of certain idiosyncratic properties of the verbs [5].

- (1) Otan itan neos, \_\_\_\_\_ sto spiti arga. (girizo)  
Correct form (orally produced): *girize*-3SG-PAST-IMP (*imperfective habitual*)  
“When he was younger, he used to return home late.”
- (2a) Persi o nonos mas mono mia fora mas *edose*/\**edine* dora.  
Last year our godfather only once give.3SG-PAST-PERF/\*IMP us presents.  
“Last year our godfather gave us presents only once.”
- (2b) Persi o nonos mas kathe mera mas \**edose*/*edine* dora.  
Last year our godfather every day give.3SG-PAST-\*PERF/IMP us presents.

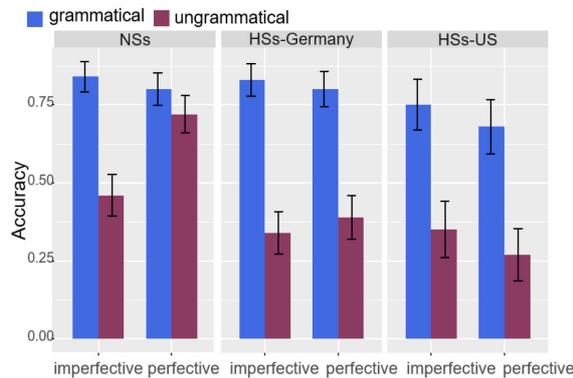
“Last year our godfather gave us presents every day.”



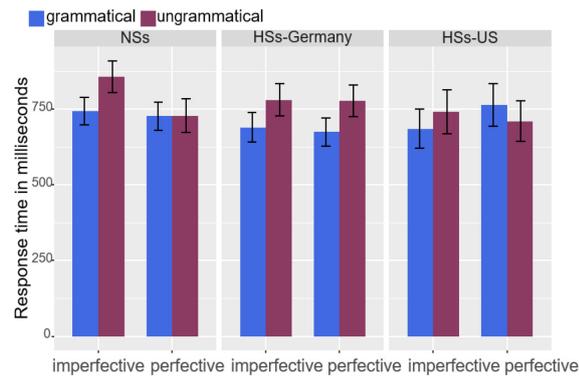
**Figure 1.** Accuracy in Experiment 1.



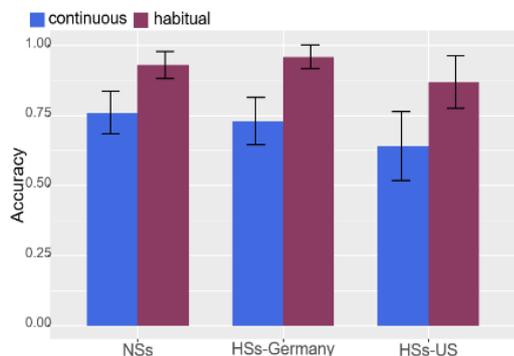
**Figure 2.** Significant correlation in Experiment 1 for HSs\_US.



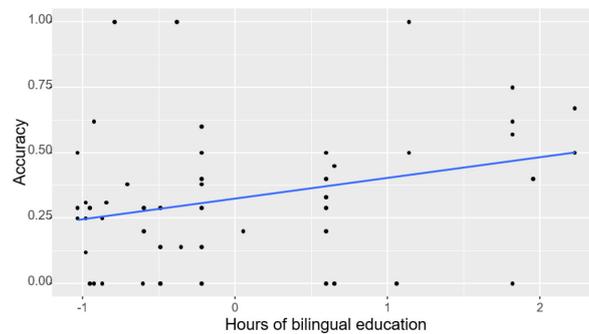
**Figure 3.** Accuracy in Experiment 2.



**Figure 4.** Response times in Experiment 2.



**Figure 5.** Accuracy within imperfective in Experiment 2.



**Figure 6.** Significant correlation in Experiment 2 for the heritage groups in ungrammatical perfective condition.

## References

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