

Verb aspect processing in monolingual and bilingual heritage speakers of Turkish

Introduction Little is known about the incremental nature of sub-word level processing. In two recent eye-tracking studies, Minor et al. (2022, 2023) have shown that monolingual speakers of English, Russian, and Spanish process aspectual information on the sub-word level incrementally. Participants in their studies showed preferential looking to pictures of completed events in the perfective condition and to incomplete events in the imperfective condition.

We examine the processing of aspect in Turkish, focusing on both monolingual speakers in Turkey and bilingual Turkish heritage speakers in Germany. The primary objective of the study is to explore whether Turkish speakers show distinct preferences for aspectual representations too. In addition, we ask whether this distinction will be recognized by heritage speakers of Turkish who have shown reduced sensitivity to TAM-morphology in previous studies (Arslan et al., 2017; Coşkun Kunduz, 2018). To answer these questions, we conducted a picture selection task and Visual World eye-tracking using the same design as Minor et al. (2022, 2023). We additionally included language proficiency using C-tests and self-rating assessment and measured processing speed as predictors for the underlying individual variation that we expect to see in incremental aspect processing.

Hypotheses We expect a substantial difference in how aspect is processed in Turkish. Participants will favor perfective aspect for completed events whereas imperfective aspect will be preferred for ongoing events. Additionally, we anticipate that Turkish heritage speakers will show a reduced effect in comparison to monolinguals. We also predict that processing speed and proficiency levels will be able to predict whether or not participants process aspectual information on the sub-word level incrementally.

Methods During the study, participants see images of completed events and ongoing events side by side. There are 24 critical stimuli sentences in two conditions (Perfective and Imperfective, in total 48 items), and 20 unrelated fillers. Each participant hears 44 items across different lists. After listening to a stimuli sentence, participants were asked to select the image that corresponds to the sentence (based on imperfective or perfective aspect). We tested 25 bilingual heritage speakers and 28 monolingual speakers.

Results We report VWP eye-tracking results for heritage speakers, and behavioral picture selection results for the heritage as well as the monolingual groups. Figure 1 illustrates the looks to the pictures displaying the ongoing and completed events by aspect condition. Visual inspection suggests that looking preferences diverge around 500ms after verb offset which points to successful incremental processing in the heritage speaker group.

The mean accuracy for the picture selection task in monolinguals is 95.5% (SD=1.8%) and for heritage speakers it is heritage speakers: 89.9% (SD=3.2%). As for the behavioral picture selection results of monolingual speakers, it can be stated that they show a higher accuracy rate towards imperfective marked verbs

compared to the perfective ones.

Discussion This study has the potential to broaden our understanding of sub-word level sentence processing beyond the Indo-European language context, especially focusing on an underresearched population like bilingual heritage speakers.

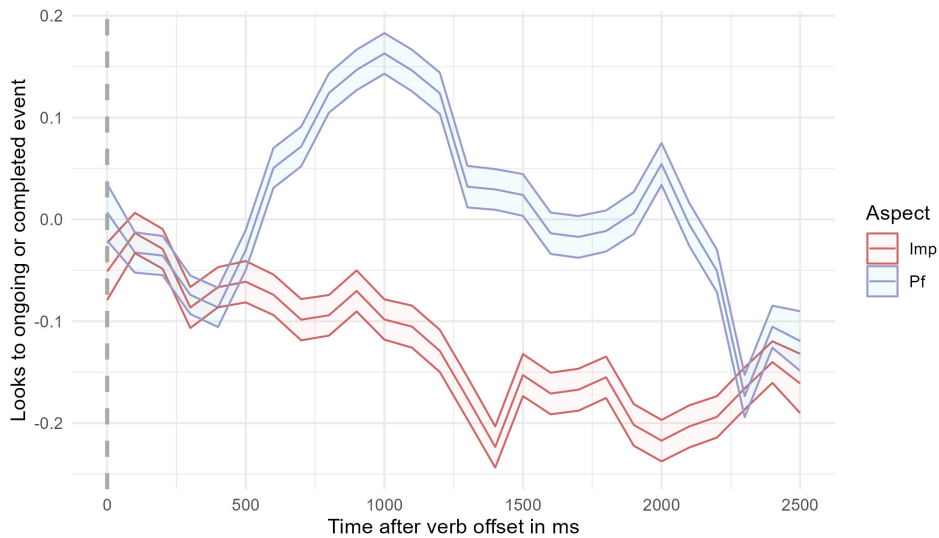


Figure 1: This figure shows the time-course graph for mean looks to the picture with an imcompleted event and completed event on a logit scale.

References

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