

# **Processing temporal concord and modality: A self-paced reading study on *you* and *hui* in Taiwan Mandarin**

Aymeric Collart  
Academia Sinica

Understanding a sentence involves comprehending when the event takes place, but few is known about how humans compute the concord between time adverbs and tense/aspect/modality/mood marking in real time. Previous self-paced reading studies on Indo-European languages indicate that processing past and future tense require different cognitive resources. Here, we report a self-paced reading experiment in a typologically different language, Taiwan Mandarin, which grammaticalized two modal auxiliary verbs: 'you' ('to have', expressing assertive/factual modality, ungrammatical with future time adverbs) and 'hui' (expressing the non-factuality of a posterior situation, ungrammatical with past time adverbs). We placed these auxiliary verbs in a temporal concord configuration to investigate whether processing the temporal concord violation of a past-time related marker ('you') differs from future-time related marker ('hui'). The temporal concord violation of 'hui' elicited longer reading times than its grammatical counterpart starting from the presentation of 'hui' until the last word. Marginally longer reading times were found for the ungrammatical 'you' at the verb, and significantly longer at the last word, even longer than 'hui'. These results show that different processes are at stake, and they suggest that processing past/factual 'you' involves representing the situation at the discourse/contextual level, while future/non-factual 'hui' is locally processed.

## **Selected references**

- Biondo, N. (2017). *The syntactic side of time: Processing adverb-verb temporal agreement*. University of Trento Unitn-eprints-PhD.
- Collart, A., & Su, H.-K. (2022). Expressing the existence of an event with 'you (to have) + VP' in Taiwan Mandarin: A corpus-based investigation. *Concentric: Studies in Linguistics*, 48(2), 249–284.
- He, Y. (2020). *Time in Mandarin: The fingerprints of tense and finiteness*. Harvard University ProQuest Dissertations Publishing.
- Mao, T., Biondo, N., & Zheng, Z. (2022). Adult Chinese Spanish L2ers' acquisition of phi-agreement and temporal concord: The role of morphosyntactic features and adverb/subject-verb distance. *Frontiers in Psychology*, 13, Article 1007828.