

Mapping the Semantic Space of Mandarin Temporal Adverbs: Corpus-Based Correspondence Analysis

Mandarin adverbs constitute a complex lexical category, exhibiting substantial flexibility in both their semantic and syntactic distribution, which allows native speakers to use adverbs appropriately to express aspects such as degree, time, frequency, manner, scope, and mood. Many scholars have proposed distinct theoretical frameworks for the category of adverbs (e.g., Chao, 1968; Liu et al., 2003; Zhang, 2004). However, issues remain with adverbs of time, which lack clear membership criteria and exhibit semantic overlap with other adverb categories. For example, some studies classify repetitive and frequency adverbs as non-temporal adverbs (e.g., Zhang, 2000; Ma, 2002), whereas others maintain that they belong to the subcategory of temporal adverbs (e.g., Shao et al., 2002; Xing, 2003). This controversy remains unresolved to date. Therefore, building on a usage-based approach, we focus on the two core dimensions of semantic characteristics: temporality and subjectivity. Overall, ten sets of 24 frequently used near-synonymous temporal adverbs were selected, and we employed data from the 2019 Spoken Corpus of Contemporary Taiwanese Mandarin (COCT) to clarify these adverbs and develop a framework for them. Drawing on previous research, a set of semantic and pragmatic features was compiled, and a lexical item \times feature contingency table was analyzed using Correspondence Analysis in R, with scree plots used to determine the principal dimensions for mapping adverbs and features in a two-dimensional semantic space.

The results show: (1) The Correspondence Analysis reveals a robust opposition between concrete temporal anchoring and diffuse or extended temporality, with the “concrete” side clustering past/future, starting-point, and punctual verbs, etc., whereas the “diffuse” side aligns with atemporal or habitual reference, progressive aspect, and long-duration adverbs. (2) The classification of repetitive adverbs remains controversial: should they be grouped with non-temporal frequency adverbs or treated as temporal adverbs? The results show that repetitive adverbs such as *chongxin* ‘from the beginning’, *chongtou* ‘again; anew’, *zai* ‘again’, and *you* ‘again’ share semantic properties with definite temporal adverbs and frequently collocate with expressions marking present and past time. These items not only encode the repeated nature of an event but also its development over time, typically signaling a renewed onset following a prior endpoint and thus function as temporal markers of retrospection and cyclicity rather than purely as frequency or discourse markers. (3) Taking some cases as examples in the semantic map, fine-grained differences emerge. For example, *yizhi* ‘continuously’ patterns with more objective, fact-reporting contexts than *yixiang* ‘consistently’ and *zongshi* ‘always,’ and the *gang*-series (*gang*, *ganggang*, *gangcai*) separate along speech-time anchoring, completion, and achievement-verb features, corresponding to “just at speech time,” “just completed,” and “just previously.”

Overall, the current study shows that dimensions of temporality and subjectivity jointly shape Mandarin temporal adverbs, and that the semantic map refines the adverb taxonomy and informs L2 instruction on near-synonymous temporal adverbs.

Keywords: Mandarin temporal adverbs, semantic map, temporality, subjectivity, usage-based