Planning or not planning: Interplay between future time adverb and aspect markers/modal construction in (Taiwan) Mandarin

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The occurrence of the Mandarin aspect morphemes -le and -guo as well as the existential construction 'you (to have) + VP' in Taiwan Mandarin with deictic time adverbs is discussed in this paper. These markers exhibit certain temporal constraints: their use with deictic past time adverb (e.g., zuotian 'yesterday') is grammatical, as exemplified in the sentences in (1).

(1) Zhangsan zuotian qie-le / qie-guo / you qie bale. Zhangsan yesterday cut-LE / cut-GUO / YOU cut guava 'Zhangsan cut the guava (into slices) yesterday.'

By contrast, these sentences are ungrammatical when a deictic future time adverb (e.g., *mingtian* 'tomorrow') is found instead, as illustrated in (2).

(2) *Zhangsan mingtian qie-le / qie-guo / you qie bale.
Zhangsan tomorrow cut-LE / cut-GUO / YOU cut guava
*'Zhangsan cut the guava (into slices) tomorrow.'

Several analyses have been proposed to account for the ungrammaticality of the sentences in (2), such as the "default deictic pattern" by Smith & Erbaugh (2005). Such analyses can be characterized as 'global', i.e., the same explanation holds regardless of whether *-le*, *-guo* or '*you* + VP' is involved.

The 'global analyses' may suggest that -le, -guo and 'you + VP' exhibit the same behavior when occurring with deictic future time adverbs. However, an asymmetric pattern between these three markers can be observed. As the sentences in (3a-c) show, -le and 'you + VP' are grammatical with future time adverbs when the verb has the meaning of planning (e.g., *anpai*, *jihua*, *guihua* 'to plan', *zhunbei* 'to prepare', etc.), but not -*guo*.

(3)	a.	Zhangsan	mingtian	anpai-le	yixie	huodong.			
		Zhangsan	tomorrow	plan-LE	some	activity			
		'Zhangsan h	as planned s	ome activities	(for) to	norrow.'			
(3)	b.	Zhangsan	mingtian	• I	•	huodong.			
				YOU plan					
		'Zhangsan has planned some activities (for) tomorrow.'							
(3)	c.	*Zhangsan	mingtian	anpai-guo	yixie	huodong.			
		Zhangsan	tomorrow	plan-GUO	some	activity			

Another asymmetry can be found when the situation depicted in the sentence is predictable or very likely to happen in the future. In this case, 'you + VP' is grammatical with a future time adverb, but not *-le* and *-guo*. See the sentences in (4a-c).

(4)	a.	Zaocandian restaurant	laoban owner	mingtian tomorrow	you YOU	mai sell	luobogao. radish.cake
			the break		t will sell	radish cake	(I know it for a fact)'.
(4)	b.	*Zaocandian restaurant	laoban owner	mingtian tomorrow	mai-le sell-LE		luobogao. radish.cake

(4)	c.	*Zaocandian	laoban	mingtian	mai-guo	luobogao.
		restaurant	owner	tomorrow	sell-GUO	radish.cake

We propose to explain this asymmetry based on (a) the aspectual/time-relational characteristics of *-le* and *-guo* and (b) the assertive modal meaning of 'you + VP'.

The aspect morpheme *-le* is taken as expressing an ordering function (Woo 2018), meaning that it asserts two time intervals: the time of the event and the time of the result state of the event (Lin 2006). In (2), the order of these two time intervals is contradictory, such that the sentence is ungrammatical (Woo 2018, pp. 148–149). The same explanation can be given for the ungrammatical sentence in (4b). As for (3a), we argue that its grammaticality comes from a subtle interaction between the meaning of the verb of planning (*anpai* 'to plan') and the time-relational definition of *-le*. Verbs of planning denote two time spans in their meaning: the time at which the event is planned, and the time at which the planned event occurs. These two time spans map with the time-relational meaning of *-le* and are successfully ordered, even when a deictic future time adverb is used as in (3a). The first time span corresponds to the planning of the event, which happens before (therefore in the past) the actual occurrence of the plan event. In (3a), the time of the result, corresponding to when the planned event happens, maps with the time of the deictic future time adverb, *mingtian* 'tomorrow'. Therefore, there is no temporal contradiction, and the sentence is grammatical.

'*You* + VP' is analyzed as expressing assertive modality, i.e., that an event exists in time subjectively (Collart & Su 2022). In terms of possible world semantics, deictic past time adverbs generally indicate factual events and future time adverbs non-factual/non-existential events. This can explain the ungrammaticality of (2). As for (3b), the event can be considered as 'mentally existing' in the speaker's mind since it is already planned. The sentence in (4a) describes a situation which is supposed to happen, based on one's world knowledge and the meaning of the verbs and its arguments: it is anticipated, presupposed and therefore very likely that the owner of the restaurant will sell radish cakes. In other words, the events in (3b) and (4a) will happen according to the speaker, unless unexpected circumstances. This judgment ascribed by the speaker can be based on syntactic clues (e.g., aspect and other modal markers found in the sentence), semantic clues (e.g., the meaning of the verb), as well as pragmatic/contextual clues, as suggested by (5).

(5)	Zhangsan	meitian	you	qie	bale,			
	Zhangsan	every.day	YOU	cut	guava			
	jintian	you	qie,	mingtian	ye	you	qie.	
	today	YOU	cut	tomorrow	also	YOU	cut	
	'Zhangsan cuts guava (into slices) everyday (for dessert), he has prepared guava today and he will (surely) prepare guava tomorrow as well.'							

In (5), the first sentence is used to set the context that Zhangsan has the habit to prepare guava every day. Based on this contextual knowledge, it is expected that the same event will occur after the time of speech (e.g., tomorrow). Therefore, the use of '*you* + VP' with the deictic future time adverb in the last sentence is congruent and grammatical.

Finally, *-guo* is defined as a temporal quantifier, expressing that an event occurred at least once before the time of reference (Iljic 2010). For the sentences in (2), (3c) and (4c), the time of reference is set in the future by *mingtian* 'tomorrow', but not additional clues are

given regarding whether the event had already happened at least once before (in contrast to the deictic past time adverb in (1)), thus leading to ungrammaticality.

The data in (3a-c) and (4a-c) have deeper theoretical implications. While they represent a challenge to the 'global' accounts of the temporal constraints of *-le*, *-guo* and '*you* + VP', they also provide arguments for a tenseless analysis of these markers, as the temporal constraints they exhibit can be explained based on their aspectual/modal characteristics.

Selected references

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