

The temporal constraints of the aspectual marker *le*₁ revisited

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Time reference as a cognitive perception of time is encoded in languages with numerous devices. Since Comrie (1976), a clear difference is made between the semantic categories of tense and aspect. Tense is defined as the “localization of a situation in time”, while viewpoint aspect focuses on the internal constituency of the situation. While the link between time reference and tense seems straightforward, an interesting challenge emerges for tenseless languages: some primary use time adverbial to anchor a situation in time, with aspectual distinctions (perfect(ive), imperfective) not restricted to any particular time reference. On the other hand, the use of aspectual markers is temporally constrained in some other languages. For example, the perfective *-le*₁ in Mandarin is restricted to past time reference in simplex sentences, or to a relative past meaning in complex sentences (adding a future time adverbial in (1) is not acceptable with a simplex sentence).

(1) Wo chi-le nei dun fan (jiu hui zhao ni).

1SG eat-LE this CL meal then FUT seek 2SG

‘I ate this meal. (simplex)’ / ‘I will meet you after eating my meal. (complex)’

Scholars have long been arguing to provide formal characteristics of such a restriction. Among them, Lin (2006) gives three components to the meaning of *-le*₁: (i) time of the situation contained in a topic (or reference) time, (ii) anaphoric assertion of the result state, and (iii) relative past tense. Under this view, *-le*₁ is not a pure aspect marker, but a “mixture between tense and aspect”.

We aim to argue that there is no need for a relative past tense component to *-le*₁, in that this meaning can be derived from its aspectual semantics. To do so, we add a new relation to Lin’s (2006) algorithm, stating that the time of the situation strictly precedes the time of the result. This gives the formula in (2) (based on Lin (2006)).

(2) $\lambda P_{\langle i, t \rangle} \lambda t_{\text{Top}} \exists t [P(t) \wedge \text{IStage}(t, P) \subseteq t_{\text{Top}} \wedge t_{\text{ana}} \subseteq \text{RState}(t, P) \wedge \text{IStage}(t, P) < \text{RState}(t, P)]$

Out of context, the anaphoric time of the result is anchored at the time of speech, such that the time of the situation is strictly placed before the time of speech. In complex sentences, the anaphoric time takes the other event as its referent, hence placing the situation marked by *-le*₁ before the other situation. In a simplex sentence with a future adverbial, the situation is placed in the future. The anaphoric time of the result cannot take the exact time as its reference, due to the anteriority between the situation and the result state, such that the only available time is the time of speech. Hence, by taking the time of speech as its reference, the anteriority relation is violated.

The formula in (2) can also explain the acceptability of *-le*₁ in future simplex sentences with verbs of planning, as in (3). The verb ‘anpai’ projects two times: (i) the time of preparation, and (ii) the time of realization. The anteriority relation required by *-le*₁ is fulfilled: the two times (situation and result) are given by the lexical verb, hence the genuine use of the future adverbial.

(3) Jiaoshou mingnian anpai-le yantaohui.

professor next.year plan-LE conference

‘The professor planned a conference for next year.’

Finally, neuroimaging data showed that the anteriority relation for *-le*₁ stated in (2) differs from other aspectual markers, in that it elicits data associated with the scrambling of situations.

Selected references

Comrie, B. (1976). *Aspect: An introduction to the study of verbal aspect and related problems* (Vol. 2). Cambridge university press.

Lin, J.-W. (2006). Time in a language without tense: The case of Chinese. *Journal of Semantics*, 23(1), 1–53.