The Reference Time of Tense and the Chinese Sentence-Final LE

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1. Introduction

This squib analyzes the Chinese sentence-final temporal particle *le*, and discusses its theoretical implications to the tense-aspect theory proposed by Demirdache and Eribe-Etxebarria (2000, D&E hence). I will argue that if T encodes a relational value of the assertion time with respect to a reference time, as claimed by D&E, there is no conceptual reason for the reference time to be the utterance-time (UT-T) only. Empirically, the contrast in Chinese between *le* and the other two sentence-final temporal particles *laizhe* and *ne* indicates that the reference time of *le* can be a time which is contextually explicit, but not UT-T.\(^1\) The analysis of this squib not only accounts for the mysterious function of *le* in the tense-aspect system, but also removes from the syntax of temporal relations the constraint that a reference time must be UT-T.

D&E propose the following phrase structure of Tense and Aspect (p.162):

\[(1) \text{Both Tense and Aspect are dyadic spatiotemporal ordering predicates taking time-denoting phrases as arguments. The external argument of Aspect (Asp\(^0\)) is an assertion time (the AST-T); its internal argument is the time of the event denoted by the VP (EV-T). The external argument of Tense (T\(^0\)) is a reference time (UT-T); its internal argument is the AST-T.}\]

\[(2) \text{[TP UT-T [T-T\(^0\)] [AspP AST-T [Asp - Asp\(^0\)] [VP EV-T [VP]]]}\]

They illustrate that in the English present progressive sentences such as *Henry is building a house* the feature of T is [within] and the feature of Asp is also [within]; in the past progressive sentences such as *Henry was building a house* the feature of T is [after] and the feature of Asp is [within]; in the past perfect sentences such as *Henry had built a house* the feature of T is [after] and the feature of Asp is also [after]; and in the present perfect sentences such as Henry has built a house the feature of T is [within] and the feature of Asp is [after].

In Chinese, -*le*, -*zhe*, and -*guo* are aspect suffixes of verbs. They encode perfect, progressive, and experiential aspect respectively. Using D&E’s theory, we claim that –*le* and –*guo* have the feature of [after], encoding that the AST-T is after the EV-T, while –*zhe* has the feature of [within], encoding that the AST-T is within the EV-T.

\(^1\) In contrast to the sentence-final particle *le*, the verbal suffix *le* is immediately adjacent to a verb. In this paper I use *le* to represent the former, and –*le* to represent the latter.
(3)  

a. Akiu xi-le na jian dayi.
Akiu wash-prf that cl coat
‘Akiu washed that coat.’

b. Akiu xi-zhe na jian dayi.
Akiu wash-prg that cl coat
‘Akiu is/was washing that coat.’

c. Akiu xi-guo na jian dayi.
Akiu wash-exp that cl coat
‘Akiu (at least once) washed that coat.’

In (3a) and (3c), -le and –guo express that AST-T is after the time of the washing event, while in (3b), -zhe expresses that the AST-T is within the washing event.

There are also two sentence-final temporal particles, laizhe and ne, in Chinese. (4a) shows that ne is not compatible with past and future temporal adverbials. It is thus a present tense marker. (4b) shows that laizhe is not compatible with present and future temporal adverbials. It is thus a past tense marker. Using D&E’s theory, we claim that laizhe has the feature of [after], encoding that the UT-T is after the AST-T, while ne has the feature of [within], encoding that the UT-T is within the AST-T.

(4)  

a. (xianzai/*gangcai/*mingtian) Akiu xi na jian dayi ne.
now/just-now/tomorrow Akiu wash that cl coat prst
‘Akiu is washing that coat (now).’

b. (*xianzai/gangcai/*mingtian) Akiu xi na jian dayi laizhe.
now/just-now/tomorrow Akiu wash that cl coat past
‘Akiu was washing that coat (just now).’

In addition to these aspect suffixes and sentence-final tense particles, Chinese also has the sentence-final temporal particle le, as shown in (5). This le can co-occur with the aspect suffix –le, as in (5b).

(5)  

a. Akiu xi na jian dayi le.
Akiu wash that cl coat le

i. ‘Akiu has washed that coat.’

ii. ‘Akiu has started to wash that coat.’

b. Akiu xi-le na jian dayi le.
Akiu wash-prf that cl coat le
‘Akiu has washed that coat.’

In section 2 I argue that le is at T. In section 3 I show that le is compatible with various temporal expressions. In section 4 I propose that the reference time of le can be a time different from UT-T. Then in section 5 I show that le does not have an aspect feature. Section 6 concludes the squib.
2. The syntactic position of le

It is generally assumed that tense markers are base-generated at T. So laizhe and ne should be base-generated at T. The following three facts show that le patterns with laizhe and ne syntactically, suggesting that le is also base-generated at T.

First, laizhe, ne, and le, can all occur in the shi-bu-shi yes-no question construction, as shown in (6), as well as in a declarative sentence, as in (4) and (5). This fact indicates that they do not have a force feature, and thus they are unlikely to be base-generated at C.

(6) a. Akiu shi-bu-shi xi na jian dayi laizhe?
   Akiu be-not-be wash that cl coat past
   ‘Did Akiu wash that coat?’

b. Akiu shi-bu-shi xi na jian dayi ne?
   Akiu be-not-be wash that cl coat prst
   ‘Is Akiu washing that coat?’

c. Akiu shi-bu-shi xi na jian dayi le?
   Akiu be-not-be wash that cl coat le
   ‘Has Akiu washed that coat?’

Second, as shown in (7), both laizhe and le can be followed by the yes-no question particle ma, which has been generally assumed to occur at C. Since a sentence does not allow two complementizers in a row, the fact that le and laizhe can co-occur with ma means that they are not base-generated at C.

(7) a. ni shuo, Akiu gangcai xie xin laizhe ma?
   you say Akiu just-now write letter past Q
   ‘Tell me, was Akiu writing a letter just now?’

b. Akiu xi na jian dayi le ma?
   Akiu wash that cl coat le Q
   ‘Has Akiu washed that coat?’

Third, the three particles, laizhe, ne, and le, behave the same also in their absence in an A-not-A yes-not question.  

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2 Ne cannot be followed by ma. The constraint may be accounted for independently, since ne can also be an emphatic interrogative particle, as in (i). The presence of zuotian ‘yesterday’ in (i) indicates that the Q particle ne is not a present tense marker. It is possible that some phonological constraint rules out the case where ne, which can be either a present tense marker or an interrogative marker, to occur and be adjacent with the interrogative particle ma.

(i) Zuoqian shui lai wo jia le ne?
   Yesterday who come I house le Q
   ‘Who the hell came to my house yesterday?’

3 In Chinese, A-not-A yes-no questions are formed by reduplication of the first syllable or the complete form of the questioned element and an infixation of the negation element bu or mei between the reduplicant and the base.
In contrast, aspect suffixes do not have this constraint, as shown in (9).

(9) a. Akiu xi-meixi-guo na jian dayi laizhe?
   Akiu wash-not-wash-exp that cl coat past
   ‘Did Akiu ever wash that coat?’

b. Akiu xi-meixi-zhe na jian dayi le?
   Akiu wash-not-wash-prg that cl coat
   ‘Is/Was Akiu washing that coat?’

The contrast between (8) and (9) shows that le patterns with the tense markers *laizhe* and *ne*, rather than aspect suffixes with respect to the A-not-A construction. Assume that the C features of the A-not-A construction are different from that of other yes-no question constructions. The above data show that the three sentence-final particles have the same interaction with the C of the A-not-A construction, while the aspect suffixes do not have the interaction. An interaction between T and C is widely found in languages. Thus the interaction between the tense markers *ne* and *laizhe* and a certain type of C is expected. What is important here is that le patterns with *ne* and *laizhe* in this respect.

Based on the above three facts, I conclude that like *ne* and *laizhe*, le is base generated at T.

3. The compatibility of le with various temporal expressions

Unlike *ne* and *laizhe*, le is compatible with various temporal expressions. Specifically, le can be used with past, present, and future expressions.

(10) a. Akiu (xianzai) chi fan le.
   Akiu now eat meal le
   ‘Akiu has started eating the meal.’

b. zuotian san dianzhong de shihou, Akiu yijing xi-guo na jian dayi le.
   yesterday 3 o’clock de time Akiu already wash-exp that cl coat le
   ‘By three o’clock yesterday, Akiu had already washed that coat.’

c. mingtian san dianzhong de shihou, Akiu jiu yijing jian-guo Li Laoshi le.
   tomorrow 3 o’clock de time A. then already meet-exp L. teacher le
   ‘By three o’clock tomorrow, Akiu will already have met Teacher Li.’

If le is compatible with *xianzai* ‘now’, *zuotian* ‘yesterday’ and *mingtian* ‘tomorrow’, i.e., elements expressing a time within, before, and after the UT-T, it cannot be a tense marker in the traditional sense.
Li & Thompson (1981: 240) claim that le encodes Currently Related State (CRS). It is hard to see from the above (10b) and (10c) that this CRS can be descriptively right, unless we shift the view point of ‘currently’ to the time denoted by the temporal expressions zuotian san dianzhong de shihou ‘three o’clock yesterday’ in (10b) and mingtian san dianzhong de shihou ‘three o’clock tomorrow’ in (10c).

4. The choice of a reference time

In section 2 I concluded that like ne and laizhe, le is base-generated at T. In section 3, however, we see that le is not specified to denote any of the three relations, [after], [within], and [before], between UT-T and AST-T.

Recall that ne encodes a relation that the UT-T is within the AST-T, while laizhe encodes a relation that the UT-T is after the AST-T. I assume from data like (10) that the feature of le is [within], and the external argument of le depends on the context. Specifically, when there is no contextual explicit temporal expression, or when words like xianzai ‘now’ show up, as in (10a), the external argument of le is UT-T. In other words, le in this case encodes that UT-T is within the AST-T. In (10a), the initial time of the eating event is asserted (see 5.2), and UT-T is within this AST-T.

However, when there is a contextual explicit temporal expression, the external argument of le is the temporal expression. In other words, le in this case encodes that the time denoted by the temporal expression is within the AST-T. In (10b), the temporal expression is zuotian san dianzhong de shihou ‘three o’clock yesterday’, and the aspect suffix –guo tells us that the AST-T is after the EV-T of the washing event. In this case, le denotes that the time three o’clock yesterday is within the AST-T, i.e., the time after the washing. In (10c), the temporal expression is mingtian san dianzhong de shihou ‘three o’clock tomorrow’, and the aspect suffix –guo tells us that the AST-T is after the EV-T of the meeting event. In this case, le denotes that the time three o’clock tomorrow is within the AST-T, i.e., the time after the meeting.

If the external argument of T is a reference time, there is no reason for the reference time to be UT-T only in the temporal structures of languages. The above discussion reaches the point that what le differs from other tense markers is its external argument. Other tense markers take UT-T as their external argument, while le can take a contextually explicit temporal expression as its external argument.

4 This sentence is acceptable if ne is interpreted as an emphatic interrogative rather than a temporal particle.
5. **Le and aspect**

5.1 *The compatibility of le with various aspects*

When *le* occurs, the aspect can be perfect, experiential, and progressive. The data in (11) show that *le* is compatible with *[–guo]* and *[–le]*, which have the [after] feature of Asp. On the other hand, the data in (12) show that *le* is compatible with *[–zhe]*, which has the [within] feature of Asp.

(11) a. zuotian san dianzhong de shihou, Akiu yijing xi-{guo/le} na jian dayi le. yesterday 3 o’clock de time Akiu already wash-exp/prf that cl coat le ‘By three o’clock yesterday, Akiu had already washed that coat.’

b. mingtian san dianzhong de shihou, Akiu jiu yijing jian-{guo/le} Li Laoshi le. tomorrow 3 o’clock de time A. then already meet-exp/prf L. teacher le ‘By three o’clock tomorrow, Akiu will already have met Teacher Li.’

(12) a. zuotian san dianzhong de shihou, Akiu yijing xi-zhe na jian dayi le. yesterday 3 o’clock de time Akiu already wash-prg that cl coat le ‘By three o’clock yesterday, Akiu had already been washing that coat.’

b. mingtian san dianzhong de shihou, Akiu jiu zai xi-zhe na jian dayi le. tomorrow 3 o’clock de time Akiu then at wash-prg that cl coat le ‘By three o’clock tomorrow, Akiu will already have been washing that coat.’

If *le* is compatible with various aspects, it cannot have any selectional restriction on the feature of Asp. This makes *le* different from *ne* and *laizhe*. In (13), the eventuality expressed by *da-sui* ‘break’ is not a durative one. The disallowance of *ne* and *laizhe* suggests that the two tense particles select [within] Asp only, and thus cannot be used in a sentence which expresses instantaneous eventuality.

(13) a. Akiu da-sui      beizi le. Akiu hit-broken cup le ‘Akiu has broken a cup.’

b. *Akiu da-sui beizi ne.

c. *Akiu da-sui beizi laizhe.

5.2 *Le and inchoative aspect*

*Le*-sentences can express an inchoative aspect (Chao 1968: 798) in the absence of any aspect marker, as shown in (14-i).

(14) Akiu chi fan  le.

Akiu eat meal le

i. ‘Akiu has started eating the meal.’

ii. ‘Akiu has eaten the meal.’
This fact poses the question whether *le* has any default inchoative aspect feature. There is at least one argument against this possibility. If *le* had a default inchoative aspect feature, it would not occur in a sentence which expresses instantaneous eventuality, since an inchoative aspect can only occur in a sentence expressing a durative eventuality. However, *le* can indeed occur in a sentence which expresses instantaneous eventuality, as shown in (13a).

Notice that when a *le*-sentence has an inchoative reading, the verb does not allow any aspect suffix. In other words, whenever there is an aspect suffix attached to the verb, the inchoative reading is absent. This can be seen in the above data such as (11) and (12). Based on this fact, I assume that the inchoative reading of a *le*-sentence comes from an inchoative suffix which has a null phonological form, rather than from *le* itself. Therefore, *le* does not have an aspect feature.

6. Concluding remarks

Based on the key assumption that T denotes a relation between a reference time and AST-T, the present study seeks to remove from the computation the constraint that a reference time must be UT-T. The properties of the Chinese *le* provide evidence for such a removal.

In this squib, I have argued that *le* is at T, however, it is not specified with a feature to denote a relation between UT-T and AST-T. Instead, it is specified with a [within] feature to denote the relation between a contextually explicit temporal point and AST-T. Moreover, I have showed that *le* does not have any aspect feature.

References

