

Temporal Meaning of *-le* in Chinese

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The paper investigates the temporal reference of the Chinese perfective viewpoint morpheme *-le* and provides an explanation for the distribution of *-le* in the future context. I argue against Lin (2006) that *-le* has a component of semantic past tense as part of its meaning. I defend the earlier proposal of *-le* that it expresses completion of a situation (Chao 1968, Lü 1980, Smith 1991) and the view that the pastness associated with *-le* is a pragmatic inference (Smith and Erbaugh 2005). I provide evidence showing that the (un)availability of the past interpretation contributes to the (in)compatibility of *-le* with the future context.

1. Introduction

Chinese sentences marked with the perfective viewpoint morpheme *-le* often have a past time interpretation in out of blue context, as shown in (1) and (2) from Lin (2006).

- (1) Lisi he *-le* jiu. (Activity)
Lisi drink PERF wine
Lisi drank wine.

The verb constellation in (1) expresses an activity. Marked with *-le*, the sentence is interpreted to present a past situation. *-le* in sentences denoting states, achievements and accomplishments involves a change of state that also happens in the past, even though the resulting state still holds at the speech time when there is no overt time phrase in the sentence.

- (2) a. Quan xiao de ren dou zhidao-*le* zhe jian shi. (State)
All school DE person all know PERF this CL matter
All the people in the school have been aware of this matter.
- b. Lisi die-duan *-le* zuo tui. (Achievement)
Lisi fall broken PERF left leg
Lisi has broken his left leg (and the leg is still broken)
- c. Lisi zuo *-le* yi-ge qishi dangao. (Accomplishment)
Lisi make PERF one CL cheese cake
Lisi has made a cheese cake.

The *-le* in (2a) has an inchoative reading, indicating a change of state from not knowing to knowing, and the result state is that the matter is currently known. In (2b), the instantaneous event of breaking the left leg is understood to be in the past while the result that the leg is broke is true in the present. In (2c), the event of making a cake occurred before the speech time although the cake still exists at the time of speech. In all three sentences, the relevant state changing event took place in the past.

It has also been observed that *-le* is incompatible with future-oriented morphemes. In (3), all the sentences containing future-oriented forms become ill-formed once *-le* suffixes to the verb in their complements.

- (3) a. ta **hui** qu (**-le*) Beijing.
 He will go (*PERF) Beijing.
 He will go to Beijing.
- b. ta **xiang** qu kan (**-le*) dianying.
 He want go see (*PERF) movie
 He wants to go see movies.
- c. ta **zhun** wo qing (**-le*) yi tian jia.
 He allow I take (*PERF) a day off
 He allowed me to take one day off.

-le can appear in future contexts when it is in the non-final event clause of a sequence of event clauses. In (4), the future forms take a bi-clausal complement. The temporal order of the two event clauses can be overtly marked by *zai* or *jiu* ‘(and) then’, as in (a) and (b), but it does not have to be marked. In both sentences, *-le* can only attach to the first verb of the unrealized complements but not to the second verb.

- (4) a. Lisi **hui** ci *-le* xing zai dongshen (**-le*).
 Lisi will take PERF leave then depart (*PERF)
 Lisi will to depart after having taken leave.
- b. ni **keyi** chi *-le* fan jiu qu (**-le*).
 you may eat PERF meal then go (*PERF)
 You may go after eating meal.

In this paper, I investigate the temporal reference of *-le* and offer an explanation for the distribution of *-le* in the future context. I argue in line with Smith and Erbaugh (2005) that the past interpretation associated with *-le* is pragmatic. I provide evidence showing that the past time reading is unavailable in sentences of (4), which makes the appearance of *-le* in the future situation possible.

The paper is organized as follows. Section 1 is the introduction; section 2 reviews two recent analyses of the temporal reference of *-le* in the literature; section 3 provides an account for the distribution pattern of *-le* in the future context; section 4 concludes.

2. Previous Analyses

In this section, I will review Smith and Erbaugh (2005) and Lin (2006). The former proposes that *-le* has a temporal inference governed by pragmatic principles while the latter claims that *-le* encodes semantic past tense.

2.1. A Pragmatic Account

Smith and Erbaugh (2005) argue that in the lack of tense morphemes, the deictic pattern of temporal interpretation in Chinese is determined by the semantic meanings of the relevant forms such as aspectual morphemes, verb phrases and types of future forms, and by the following three pragmatic principles.

1) The Bounded Event Constraint

A bounded event locates in the past by default.

2) Simplicity Principle of Interpretation

Choose the interpretation that requires the least additional information.

3) The Temporal Schema Principle

In a zero-marked clause, interpret a verb constellation according to the temporal schema of its situation type, unless there is explicit or contextual information to the contrary.

According to them, bounded/telic situations are located in the past by default and unbounded/atelic situations are located in the present by default. The default interpretation can be overridden by explicit or contextual information. This explains why isolated sentences without any aspectual and temporal marking are in the present when expressing state; they are in the past when expressing telic events (5). This default interpretation can be overridden with the presence of overt temporal expressions (6).

(5) a. ta shi ge xuesheng.

He be CL student

He is a student.

b. ta da-po yi ge huaping.

He break one CL vase

He broke one vase.

(6) a. ta **yiqian** shi ge xuesheng.

He before be CL student

He was a student before.

- b. ta **xiang** da-po yi ge huaping.
 He want to break one CL vase
 He wants to break one vase.

Since the perfective morpheme *-le* presents a situation as terminated (or completed) and thus bounded (Li and Thompson 1981, Smith 1991 among others), it has past as its default interpretation. This explains why sentences with *-le* in non-future contexts are interpreted to be in the past. With this analysis, the appearance of *-le* in the future context of (4) is no longer a problem, as the aspectual meaning of *-le* is not incompatible with future contexts. However, it is a puzzle why the past interpretation of *-le*, if it is a pragmatic inference, cannot be overridden by overt future modals in simplex sentences under (3).

2.2. A Semantic Account

Lin (2006) takes it with Klein (1994) that the meaning of tense encodes the temporal relationship between Topic Time (TT) and Evaluation Time which is Utterance Time (UT) by default. He terms this relationship ‘semantic tense’ and argues that perfective aspect in Mandarin conveys the precedence relationship between TT and UT. The perfective morpheme *-le* is not a pure aspectual marker but incorporates both semantic tense and aspect. This proposal can easily explain why eventualities expressed by sentences in (1) and (2) are located in the past and why *-le* is incompatible with future forms in (3). As for *-le* compatible with future modals in sentences of (4), Lin briefly mentioned that it expresses relative past in such a context (cf. Ross 1994, Pan and Lee 2004).

Lin’s analysis of *-le*, although able to handle all the data presented, is undesirable on conceptual and empirical grounds. Conceptually, the idea that an aspect marker semantically encodes the temporal relationship between TT and UT disagrees with the well-accepted view that aspect concerns the internal temporal property of a situation denoted by verb phrases (Comrie 1976, Fleischman 1982, Smith 1991 and others) and encodes the temporal relationship between TT and Situation Time (SitT) only (Klein 1994). Although it is not impossible that Chinese perfective morphemes can bundle the aspect and semantic tense information together, an analysis is preferable if it can account for all of the above data without appealing to the notion of semantic tense.

Empirically, there is evidence disfavoring considering *-le* to be marking relative past in the future context. First, *-le* does not encode anteriority in some future contexts.

- (7) deng qiche dao *-le* zhan, ta kending hai zai shui.
 wait bus arrive PERF station he definitely still PROG sleep
 When the bus arrives at the station, he definitely will still be sleeping.

(7) with the epistemic adverbial *kending* ‘definitely’ presents the speaker’s judgment of a future situation. The first clause expresses an instantaneous event occurring after the utterance time; the second clause with the progressive morpheme *zai* expresses a state which is ongoing at the utterance time and is predicted to extend into the future. In other words, the state of his sleeping must still hold at the point in the future when the bus arrives at the station. Thus, the telic event marked with *-le* is interpreted to overlap or be included in the state of his sleeping instead of preceding it.

Second, *-le* cannot always appear in the first event clause of a bi-clausal sentence. If *-le* appearing in the first event clause of a sequence of event clauses conveys relative past, then it is unexpected that it cannot appear in the first event clause of (8).

(8) wo xiang zai Beijing zhu (*-le) liangtian jiu qu Shanghai.

I want to in Beijing stay (PERF) two day then go Shanghai

I want to stay in Beijing for two days, then I will go to Shanghai.

Third, Lin’s analysis cannot explain why *-le* is not allowed in the second clause of (9a).

(9) a. wo hui ci *-le* xing zai dongshen (*-le).

I will take PERF leave then depart

After having taken leave, (and only then) I will depart.

b. *wo hui ci xing zai dongshen.

I will take leave then depart

After having taken leave, (and only then) I will depart.

In (9a) the future modal *hui* takes a clausal complement expressing two consecutive events in the future. It becomes ill-formed when the perfective *-le* is added to the second verb *dongshen* ‘depart’. Following Lin’s analysis, we may say *-le* in the first clause of the modal complement (*-le*) denotes ‘relative past’, while *-le* in the second clause (*-le2*) denotes ‘absolute past’. This is why *-le1* is allowed in the sentence but *-le2* is not. If so, *-le* in the first clause encoding pastness relative to the second clause should also obtain the ‘absolute past’ interpretation, clashing with the future context. Contrary to our expectation, *-le1* cannot be removed from the sentence, as (9b) shows.

(7) and (9) are no longer problems if *-le* in the sentences is seen as a pure aspect marker signaling completion as Chao (1968), Lü (1980) and Smith (1991) proposed. The problem with (8) seems to remain on this traditional view since *-le* as a perfective marker is expected to be able to appear in the first clause of (8), just as *-le* in the first clause of (7) and (9) does. I will show later that (8) is in fact not real counterevidence to this view.

I have shown that both analyses of the temporal reference of *-le* can explain its distribution in the future context to some extent. Yet, Smith and Erbaugh’s (2005) proposal is preferable on theoretical and empirical grounds.

3. Proposal

If it is true that the past reading associated with *-le* is a pragmatic inference, then how to explain the distributive pattern of *-le* in future environment? Let me start with the question why *-le* is permissible in the first event clause of (4). I posit that the first event clause of (4) expressing a sequence of events is such a context where the default past interpretation of *-le* is unavailable. The evidence is that in a sequence of clauses, the temporal interpretation of the non-final clauses with *-le* relies on that of the final clause when out of contexts. Take (10) and (11) with two event clauses in succession for example. The temporal location of the first clause with *-le* is decided by that of the second clause, regardless of the situation types the first clause expresses.

- (10) a. ta dao *-le* Beijing, *hui* gei wo da dianhua. (C1: future; C2: future)
 he arrive PERF Beijing will to me make call
 After arriving at Beijing, He will call me.
- b. ta dao *-le* Beijing, gei wo da *-le* ge dianhua. (C1: past; C2 past)
 he arrive PERF Beijing to me make PERF CL call
 After arriving at Beijing, he called me.
- (11) a. chi *-le* fan wo *xiang* kan *hui* danshi. (C1: future; C2: future)
 eat PERF meal I want to watch a while TV
 After eating the meal, I want to watch TV for a while.
- b. chi *-le* fan wo kan *-le* *hui* danshi. (C1: past; C2: past)
 eat PERF meal I watch PERF a while TV
 After eating the meal, I watched TV for a while.

In (10), the first clauses (C1) in (a) and (b) are identical. The second clauses (C2) in the two sentences are different only in the temporal location. In (10a) the future modal *hui* ‘will’ locates C2 in the future, while in (10b) the perfective morpheme *-le* with the default past interpretation locates C2 in the past. Accordingly, C1 in (10a) and (10b) temporally preceding C2 is interpreted to be located in the future and past respectively. The same is true of C1 in (11), i.e., the temporal interpretation of C2 conditions the interpretation of C1 with *-le*. Sentences with more than two event clauses in sequence display the same pattern. (12) exemplifies.

- (12) a. ta qi *-le* chuang, chi *-le* zaocan, jiu *hui* zou.
 He get up PERF bed eat PERF breakfast then AUX leave
 He will get up, have breakfast and then leave.
- b. ta qi *-le* chuang, chi *-le* zaocan, jiu zou *-le*.
 he getup PERF bed eat PERF breakfast then leave PERF
 He got up, had breakfast and then left.

(a) and (b) in (12) consist of three clauses with the first two containing *-le*. While *hui* ‘will’ in C3 of (12a) marks a future event, *-le* in C3 of (12b) expresses a bounded event with past interpretation. In correspondence to the temporal location of C3, C1 and C2 in (12a) are both in the future, whereas those in (12b) are in the past. (12) shows once again that without further contextual information, the non-final clauses with *-le* in a sequence of clauses are not locally interpreted but obtain their temporal interpretations on the basis of the location of the final clause. The temporal location of the final clause, however, is determined by the temporal and aspectual information conveyed in the clause. In the case of (10)-(12), it is the future modals *hui* ‘will’ and *xiang* ‘want’ and the perfective morpheme *-le* that decide the location of the final clause. While *-le* in the final clause is interpreted as in isolation, *-le* in the non-final clauses does not have any temporal interpretation. It is a pure aspect marker, marking the completion of the situation so that the Reference Time in the short discourse can be updated as the discourse progresses.

Since *-le* in the final clause of a sequence of clauses has past time interpretation, it is incompatible with the future forms scoping over it. As a result, both (13a) and (13b) are ill-formed when *-le* appears in the second clause.

- (13) a. wo *hui* ci *-le* xing zai dong (**-le*) shen.
 I will take PERF leave then depart (*PERF)
 After having taken leave, (and only then) I will depart.
- b. wo ci *-le* xing *hui* dong (**-le*) shen.
 I take PERF leave will depart (*PERF)
 After having taken leave, (and only then) I will depart.
- c. *wo *hui* dong *-le* shen.
 I will depart PERF
 I will depart.

In (13a), the future form is higher scoping over both clauses, while that in (13b) is lower scoping over only the second clause. (13c) is a single event clause containing both the future form and *-le*. (13c) can be seen as either the second clause of (13b) or as the second clause of (13a) with an empty first clause. In either way, the incompatibility of the future form and *-le* in the sentence can be successfully accounted for.

There are several possible objections to the analysis. One might argue that the pattern shown in (10)-(12) does not preclude the possibility that *-le* in the non-final event clauses expresses past with respect to the final event clause. Take (10) for example. In (10a), the second event (E2) expressed by C2 with the future modal *hui* is located in the future, so it could be that the first event (E1) is located in the past of E2 because *-le* in C1 signals that E1 is prior to E2. In the same way, E1 in (10b) is in the absolute past because again, *-le* signals that E1 is before E2 which is interpreted to be in the absolute past itself. However, this account has more problems. It cannot explain why E1 in (10a) does not

have the absolute past reading, given that *-le* encodes the precedence relationship between E1 and E2. In addition, the account cannot prove that *-le* is solely responsible for the temporal order of E1 and E2. On the contrary, there are three pieces of evidence showing the sequential reading of sentences in (10)-(12) is a pragmatic inference of sequence of telic events. First, a bi-clausal sentence may not have a sequential reading when the second clause is stative. In (14) the event of bus arriving at the station expressed by C1 is included in or overlaps the stative situation of sleeping expressed by C2.

- (14) qiche dao *-le* zhan, ta hai zai shui. (C2: stative)
 bus arrive PERF station he still PROG sleep
 When the bus arrived at the station, he was still sleeping.

Second, in the absence of *-le* in the first clause and time connectives such as *zai* ‘and then’ and *jiu* ‘and then’, a bi-clause sentence still has the sequential reading when C1 expresses a telic/bounded event and C2 expresses an event, see (15)

- (15) a. ta dao Beijing, hui gei wo da dianhua. (C1: achievement)
 he arrive Beijing will to me make call
 After arriving at Beijing, He will call me.
 b. chi -wan fan wo xiang kan huir danshi. (C1: accomplishment)
 eat RVC meal I want to watch a while TV
 After finish eating the meal, I want to watch TV for a while.

Third, when C1 of a bi-clause sentence denotes an unbounded event, the sentence is either ill-formed or does not have the sequential reading without *-le* or a RVC, e.g. *wan* ‘finish’, suffixing to V1, even though the meaning of the two clauses does not preclude the sequential interpretation.

- (16) a. chi *(-le) fan wo xiang kan huir danshi. (C1: activity)
 eat PERF meal I want to watch a while TV
 After eating the meal, I want to watch TV for a while.
 b. zuo *(-wan) gongke wo qu shuijiao. (C1: activity)
 do RVC homework I go sleep
 I will go to sleep after finishing the homework.
 c. ta chang-ger xie xin. (C1: activity)
 he sing-song write letter
 He sings songs and writer letters.

(14)-(16) demonstrate two crucial points. One, the first clause of a bi-clausal sentence with sequential reading has to express a bounded/telic event. Thus, the function of *-le* in the first clause is to mark the boundedness and closure of the first event rather than denoting semantic past tense. *-le* is optional in C1 expressing achievements and accomplishments, as in (15), since such events are already telic/bounded and do not need to be marked again. Two, the narrative sequence interpretation of (10)-(12) is imposed not by the temporal meaning of *-le* but by pragmatic knowledge which leads us to think the second event will naturally take place after the completion of the first.

The second objection to my proposal might be the question why *-le* cannot appear in C1 of (8) repeated and renumbered as (17) if it simply conveys the completion of E1.

(17) *wo zai Beijing zhu (*-le) liang tian jiu qu Shanghai.*

I in Beijing stay (PERF) two day then go Shanghai

I will stay in Beijing for two days, then I will go to Shanghai.

(17) is not real counterevidence. V1 *zhu* 'live' in C1 expresses an atelic event. With the numeral object *liang tian* 'two days', the verb constellation in C1 conveys an accomplishment. In Mandarin, an accomplishment with a numeral object is interpreted to be completed when appearing with the perfective *-le* (Sybesma 1997, Soh and Kuo 2005).

(18) a. *wo zai Beijing zhu -le liang tian. # Qishi wo zhi zhu -le yitian.*

I at Beijing stay PERF two day # in fact I only stay PERF one day

I stayed in Beijing for two days. In fact, I stayed only one day.

b. *wo xie -le yi feng xin. # Qishi wo meiyou xie.*

I write PERF one CL letter in fact I not write

I wrote a letter. # In fact I didn't write any.

As (18) shows, the perfective accomplishment with a numeral object in non-future context expresses that the event has occurred and completed, and therefore cannot be cancelled. This interpretation of the perfective accomplishment remains in (17). That is to say, *-le* cannot appear in C1 of (17) because with *-le*, C1 has the absolute past reading, conflicting with the future context. This past time interpretation of C1 is not caused by the temporal semantics of *-le* but by the strong temporal reading of the particular type of accomplishment. (17) once more shows that *-le* in C1 of a sequence of future event clause does not necessarily express 'relative past' and that E1 in such a sentence has to be telic/bounded. If the verb constellation in C1 does not contain the numeral object *liang tian* 'two days', then *-le* is necessary in order to change the atelic event *zhu* 'live' into a telic event.

The proposal I offered also seems to be directly opposed by the behavior of *-le* suffixing to certain verbs such as *wang* ‘forget’ and *sha* ‘kill’, as sentences in (19) exemplifies.

- (19) a. ta kending *hui* chu *-le* guo, jiu *wang -le* ni.
 He definitely will exit PERF country then forget PERF you
 He definitely will forget you after going abroad.
- b. ta chu *-le* guo, kending *hui wang -le* ni.
 He exit PERF country definitely will forget PERF you
 He definitely will forget you after going abroad.
- c. ta kending *hui wang -le* ni.
 He definitely will forget PERF you.
 He definitely will forget you.

In all three sentences of (19), *-le* suffixing to the verb *wang* ‘forget’ is under the scope of the future modal *hui* ‘will’. The well-formedness of all the sentences suggests that *-le* after the verb *wang* ‘forget’ does not have the past interpretation, which seems to contradict my proposal. However, the contradiction is only apparent. The perfective *-le* after *wang* ‘forget’ resembles a resultative verb complement (RVC) that can appear in the future context without any restriction. The likeness of RVCs and *-le* suffixing to verbs like *wang* ‘forget’ has been recognized by Lü (1980), Shi (1990), Sybesma (1997) and Lin (2003a) among others, although only Shi (1990) provides a piece of evidence in support of the argument.

- (20) a. wo *xiang* mingtian mai-diao (**-le*) nei liang che.
 I want to tomorrow sell RVC (-LE) that CL car
 I want to sell that car tomorrow.
- b. wo *xiang* mingtian mai *-le* nei liang che.
 I want to tomorrow sell -LE that CL car
 I want to sell that car tomorrow.

Shi shows that (20a) is unacceptable when both *-diao* ‘off, away’ and *-le* are present in the future context. This, according to Shi, is because *-le* as well as *-diao* is a resultative complement and usually only one complement is allowed in the resultative construction. Unfortunately the evidence is inadequate. The disagreement of *-le* with (20a) may as well be explained by the proposal that *-le* has a past interpretation that clashes with the future meaning of the modal verb *xiang* ‘want to’. In fact, this is a better explanation given the fact that it is not uncommon for *-le* to appear after a RVC in non-future environments, as shown in (21).

(21) wo mai-diao *-le* neiliang che.

I sell RVC -LE that car

I sold that car.

(21) will force Shi to claim that *-le* after the RVC *diao* ‘off’ is not a RVC in the non-future context but is a RVC in the future context. This claim is not plausible.

The connection between RVC and *-le* that can co-occur with the future forms when attaching to certain verbs (e.g., *mai* ‘sell’ and *wang* ‘forget’) can be demonstrated by the following two pieces of evidence. First, the perfective *-le* does not appear with the negative morphemes *mei*(you) or *bu*, but RVCs and *-le* attaching to *mai* ‘sell’ or *wang* ‘forget’ can. Compare (22a) and (22bandc).

(22) a. ta **meiyou/bu** qu *-le* xuexiao.

He not go PERF school.

He didn’t go to school.

b. ni weishenme **bu** mai *-le /-diao* zhaxie shu?

You why not sell -LE/RVC these book.

Why don’t you sell those books?

c. ni **meiyou** wang *-le/-ji* wo ba?

You not forget -LE/RVC I SFP

You haven’t forgotten me, right?

The other is the dialectal evidence. Chao (1968) reports that in the dialects of Central China, RVCs like *-diao* ‘off, away’ is used to replace *-le* suffixing to some verbs like *wang* ‘forget’ and *sha* ‘kill’.

In sum, *-le* is a perfective morpheme encoding completion (or termination). It often has a past time interpretation which is pragmatically inferred. The presence or absence of this interpretation decides whether it can appear within the scope of a future form.

4. Conclusion

The perfective morpheme *-le* has a past interpretation which is in conflict with the temporal meaning of future expressions, and therefore does not appear within their scope in general. However, this temporal interpretation of *-le* is only pragmatic and is not available when *-le* occurs in the non-final clause of a sequence of event clauses. In such a context, *-le* is just an aspectual marker encoding completion. The advantage of the proposal is that on the one hand, it successfully accounts for the distribution of *-le* in future situations; on the other hand, it is consistent with the standard characterization of *-le* in non-future situations that they express completion and has to do only with the relation between Reference Time and Situation Time.

I suspect that the strong past time reading associated with *-le* is a result of ‘pragmatic strengthening’ (Hopper and Traugott 1993) which enhances the temporal interpretation of the perfective marker but not yet to the point of making it part of its semantics.

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