Interactions of Sentence Final Particles and Verb Movement[*]

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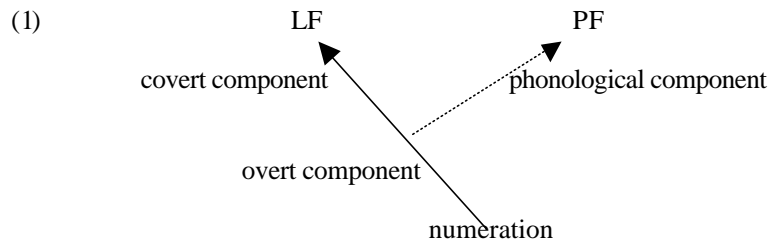The Hong Kong Polytechnic University

1 Introduction

It has been argued that verbs move out of vP overtly in English (Johnson 1991, Koizumi 1995, Kural 1998, among others). The landing site of the verbs in English is T. On the contrary, Chinese lacks V-to-T movement. Chinese verbs never move out of vP to T overly (Cheng 1989, Gu 1995, Huang 1997a, among many others). The path of verb movement in Chinese is 'shorter' than that in English (Huang 1997b, Fukui and Takano 1998, Tang 1998).

A question arises: Why does Chinese differ from English that V-to-T movement is missing in Chinese? Can the lack of V-to-T movement in Chinese be derived from some general properties of this language?

Before proceeding, let me spell out some theoretical assumptions in section 2.

2 Some Theoretical Assumptions

First of all, let us take the model of the language faculty proposed by Chomsky (1995), as represented by (1), to be our working hypothesis.

(1)   LF   PF

  covert component   phonological component

            overt component

                            numeration

   Movement in the covert component is called 'covert movement'. I assume that covert movement is prohibited (Groat and O'Neil 1996, Kayne 1998). Movement should take place overtly, i.e. either in the overt component or in the phonological component.
   Let us keep these assumptions in mind. We will discuss why V-to-T movement takes place only in English but not in Chinese in the next section.

3 Verb Movement in Chinese and English

3.1 Morphological requirement of the tense feature

In his feature system, Chomsky (1970, 1981) points out that the distinction between the two primitive categorial features [+N] and [+V] is that [+N] is substantive whereas [+V] is predicative. Under this system, I assume that an element must have the categorial feature [+V] in order to be interpreted as predicative.
   Stowell (1996) argues that tense is predicative. Let us assume that the feature that is responsible for tense is the 'tense feature'. In terms of the classification of features, the tense feature should be treated as a semantic feature.
   Semantic features do not have any categorial or morphological information. Given that tense is predicative and predicative elements must have the categorial feature [+V], morphologically the tense feature must be 'attached' to a predicative host in order to be interpreted as a predicative entity in the clausal structure at LF.[1] I claim that (2) is a bare output condition imposed by semantics.

(2)   The tense feature must be realized as an affix morphologically and associated with a verbal element at the LF interface level in order to be interpreted as predicative.

Let us assume that (2) is a universal requirement. If the tense feature cannot be attached to a predicative host, the derivation crashes at the LF interface level.

How to satisfy (2) is subject to parametric variation. In what follows, I will illustrate two different strategies to satisfy such a requirement manipulated by natural languages. It will be shown that economy principles play a role.

3.2 The (non)exi stence of the temporal sentence final particles

Lasnik (1995) convincingly argues that English verbs are morphologically 'impoverished' when they are introduced into the derivation. According to him, inflectional elements are attached to English verbs in syntax.

Let us assume that in English the tense feature is assigned to T and could be overtly realized as suffixes such as -*ed* and -*s*. Recall that the tense feature must be associated with a verbal element at LF. A strategy to satisfy such a requirement in English is to move the verb to T overtly. Hence, V-to-T movement in English is necessary, which is mainly for LF convergence.

The situation in Chinese is different. I propose that the lack of V-to-T movement in Chinese is due to the existence of temporal sentence final particles.

Sentence final particles in Chinese can be classified into at least two types: temporal particles and mood particles (Zhu 1982, among others). The former includes *le* (=(3)) and *laizhe* (=(4)) and the latter includes the interrogative particles *ma* (=(5)) and *ne* (=(6)).

Temporal particles
(3)   Ta chu qu mai dongxi le.
        she exit go buy thing   Part
        'She' s gone shopping.'
(4)   Xia yu laizhe.
        fall rain Part
        'It just rained.'

Mood particles
(5)   Ni kai   che ma?
        you drive car Q
        'Do you drive?'
(6)   Tamen shi -bu-shi wo de   xuesheng ne?
        they   be-not-be I Mod student   Q
        'Are they my students?'

Sentences with the temporal particle *le* denote a 'current relevant state' (Li and Thompson 1981). In Reichenbachian terms, sentences with *le* convey the meaning that the event time precedes the reference time. For example, Li and Thompson (1981) point out that (3) says that her having gone shopping is 'current with respect to some particular situation, and …it is assumed that her having gone shopping is relevant to the present'. In other words, the event of her having gone shopping occurred at a time before the reference time and the reference time is the same as the speech time.

The reference time could be before the speech time. Let us compare (3) with (7). We may notice that the state of her having gone shopping was relevant to the situation of 'that day' in the past. Using Reichenbachian terms, her having gone shopping is the event time and 'that day' is the reference time.

(7)   Nei tian ta   chu qu mai dongxi le.
        that day she exit go buy thing   Part
        'That day she went out shopping.'

Sentences with the temporal particle *le* could refer to the time in the future. For example, the state of being in California will be current in the situation specified by 'next month' in (8).

(8)   Xia-ge yue   wo jiu   zai Jiazhou   le.
        next -Cl month I   then at California Part
        'Next month I'll be in California.'

As we can see, the reference time signaled by sentences with *le* could refer to the speech time, some time prior to the speech time, or some time after the speech time. The way to signal the so-called 'current relevant state' is relational. Such a relational characteristic could be regarded as the 'Perfect', which is a relative tense, on a par with the auxiliary *have* in English.

Sentences with the temporal particle *laizhe* refer to an event in the 'recent past' (Chao 1968), i.e. that both the event time and the reference time precede the speech time. For example, the event of raining in (4) should have happened prior to the speech time. The particle *laizhe* could be treated as a past tense marker.

As noted by Chao (1968) and Li (1997), the so-called 'recent past' is more psychological than factual. Sentences with *laizhe* could refer to an event, which occurred long before the speech time. Consider (9).

(9)   Wo hai jide   xiao shihou women zai neige hu-li   youyong laizhe.
        I   still remember small time   we   at that lake-in swim   Part
        'I still remember that we used to swim in that lake when we were
        children.'
        (Li 1997:120)

  Historically, the temporal sentence final particles *le* and *laizhe* were verbs in
Chinese. The particle *le* was derived from the verb *liao* 'finish' whereas *laizhe*
was derived from the verb *lai* 'come'. Cao (1995) observes that *le* was first used
as a temporal final particle since the late Tang dynasty. The earliest usage of *lai*
as being a temporal marker can be found in the colloquial speech spoken in the
Tang dynasty and it was used productively in the Song and Yuan dynasties. *Lai*
became *laizhe* in the Qing dynasty. Sun (1999) suspects that *zhe* in *laizhe* was
originally a mood particle. In other words, *laizhe* was derived from *lai + zhe*.
Along these lines, we may explain why mood particles never follow *laizhe*. The
ungrammaticality of (10) is due to the fact that both *zhe* and *ma* are mood
particles and there is only one room for either one of them.

(10)   *Xia yu   laizhe ma?
         fall rain Past   Q
        'Did it rain?'

  The monosyllabic form is still preserved in some modern Chinese dialects,
such as *lei* in Cantonese, as in (11).

(11)   Zingwaa lok-gwo jyu lei.
        just now fall-Exp rain Past
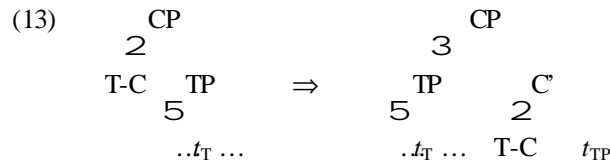   'It just rained a moment ago.'

  Given that *lei* is monosyllabic and the counterpart of *zhe* is missing in
Cantonese, we predict that mood particles can cooccur with the temporal particle
lei in Cantonese. The prediction is in fact borne out. For example, (12) is
acceptable in Cantonese, in which *me* is an interrogative particle in Cantonese.

(12)   Zingwaa lok-gwo jyu lei   me?
        just now fall-Exp rain Past Q
        'Did it rain a moment ago?'

  By virtue of the verbal origin of *le* and *laizhe*, it is natural to assume that they
are still verbal in modern Chinese.[2] Assuming that the tense feature is assigned

to T in Chinese, the temporal sentence final particles can be regarded as the host of the tense feature of T. The tense feature is attached to the temporal sentence final particles when they are introduced into the derivation. Consequently, V-to-T movement is not required by semantics and thus is unnecessary in Chinese.

Assuming that 'specifier-head-complement' is the universal word order of human languages (Kayne 1994), I assume that the temporal particles move to C followed by TP remnant movement to the specifier of C to derive the right word order in Chinese. The derivation can be represented as in (13).

(13)

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            CP                              CP
          2                               3
      T-C     TP        ⇒            TP          C'
            5                      5          2
          ..t_T …                .t_T …   T-C      t_TP
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Suppose that mood particles are associated with C in Chinese. The derivation in (13) explains why the temporal particles must precede the mood particles. For example, in Mandarin the mood particle *ma* always follows the temporal particle *le*. The linear order is fixed, as shown in (14a) and (14b).

(14) a. Ni chi-le   fan le ma?
          you eat-Perf rice Part Q
          'Have you eaten?'
      b. *Ni chi-le   fan ma le?
           you eat-Perf rice Q Part

If the analysis in this paper is on the right track, Chinese should not be regarded as a language that does not have overt tense markers. Both Chinese and English have some morphology to indicate tense, contrary to the views held by many linguists. The major difference between the temporal particles in Chinese and the tense suffixes in English is that the latter triggers verb movement whereas the former doesn't. In the next section, it will be shown that such a linguistic variation reflects the economy property of human languages.

4 MOM: Economy Considerations

Notice that the choice of the verbal element that can serve as the host of the tense feature in natural languages is arbitrary. It happens that the tense feature is attached to the temporal sentence final particles in Chinese and verbs in English.

Whether the temporal sentence final particles are present is a language-particular factor.

Though UG can't tell us whether the temporal sentence final particles should exist in a particular language, what UG can do seems to select an optimal strategy from the given numeration.

From economy considerations, if the operation Merge alone is able to satisfy the morphological requirement of the tense feature in a language, a more complex operation, such as Move (=Copy + Merge + Delete + Form Chain), should be banned. The idea is that (i) Merge is cheaper than Move and (ii) at any point in a derivation where both Merge and Move are applicable, the cheaper operation is chosen. Such an idea is also known as 'Merge over Move ' or 'MOM'.

Consider the case in Chinese. If the temporal sentence final particles exist and they can be the host of the tense feature, V-to-T movement should not be an optimal strategy. In other words, verb movement is a 'last resort' option to satisfy the morphological requirement of the tense feature. The above discussion is summarized as the following conjecture.

(15)   The availability of the temporal sentence final particles correlates with the lack of V-to-T movement in the overt component.

Informally speaking, we may say that Chinese employs a more 'economical' strategy to satisfy the morphological requirement of the tense feature. As English does not have sentence final particles, it can only choose a more 'costly' strategy to satisfy the requirement.

The conjecture in (15) should not be isolated. It seems to be reminiscent of the correlation between the existence of question particles and overt *wh*-movement and the correlation between the existence of classifiers and overt noun movement. It is a well-known fact that Chinese lacks overt *wh*-movement that English has. Cheng (1991) points out that if question particles are available to type a clause as a *wh*-question, overt *wh*-movement should be banned because the relevant features have already been checked off by the particles. I have argued elsewhere that the existence of classifiers blocks noun movement in Chinese and some southeast Asian languages (Tang 1999). Perhaps Chinese is a typical 'MOM language'.

In any event, it turns out that the fundamental difference between Chinese and English with respect to V-to-T movement is related to the existence of the temporal sentence final particles. Though it is very difficult to explain why Chinese has the temporal sentence final particles that English lacks, the

conjecture in (15) could tell us something about the deep properties of the nature of natural languages. Falsifying (15) awaits future research.

5 Concluding remarks

In this paper, I have argued that parametric variation of verb movement in Chinese and English is determined by the (non)existence of certain categorial features. Consequently, V-to-T movement should not be formulated as a 'parameter'. Whether verbs move to T has nothing to do with the 'strength' of features. So-called strong vs. weak distinction of features can be eliminated entirely.

I have claimed that the tense feature is assigned to T in the course of the derivation in Chinese and English. The tense feature triggers V-to-T movement before Spell-Out in English. As the temporal sentence final particles exist in Chinese, they can be the host of the tense feature and V-to-T movement is not required. Let me summarize the discussion in table (16), in which 'SFP' stands for the temporal sentence final particles.

(16)   *Variations of the assignment of the tense feature and verb movement*

	Chinese	English
host of the tense feature	SFP	V
V-to-T movement	*	OK

Due to limitation of space, I cannot provide an extensive analysis of all linguistic variations between Chinese and English in this paper. Many interesting consequences should await future research.[3] I hope that my proposal outlined here may open up a new way of looking at the typological differences of verb movement in natural languages in terms of the principles-and-parameters approach.

Notes

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[1] Can attaching the tense feature to T satisfy (2), assuming that T is a verbal [+V] category? I suspect that the categorial features of functional categories are somehow 'defective'. For example, the verbal categorial feature of T is 'defective' and thus it cannot be interpreted as predicative at LF. Thanks to Naomi Harada (personal communication) for raising this question.

[2] For differences between *laizhe* in Mandarin and *lei* in Cantonese, see Tang 1998 and Lee and Yiu 1999.

[3] See Huang 1997b and Tang 1998 for discussion of parametric variations between Chinese and English along these lines.

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