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Chapter 1 Introduction

This thesis presents a study of the temporal interpretation of bare predicates (BPs) in Mandarin. By “bare predicates”, we refer to predicates without any overt aspectual marker or particle that might contribute to the temporal interpretation of the sentence. It also aims to contribute to the study of sentences with BPs in general.

1.1 The motivations of this study

Mandarin is traditionally considered as a “tenseless” language (Li & Thompson 1981, Gōng 1991, Klein, Li & Hendriks 2000, Mei 2002, Lin 2006 among others), since it lacks the morphologically expressed tense that we find in “tensed” languages, such as English.¹

¹ Here is a nice sample of an overview of “tenseless” statements for Mandarin from Sybesma (2007:580):
“... *there is no inflectional morphology to express tense ...*” (Klein, Li, and Hendriks 2000:723); “*Mandarin has no markers for tense*” (Li and Thompson 1981:13); “*The temporal status of an event in Chinese is mainly indicated by time words or expressions*” (Tiee 1986:90); “*Tense is not a feature of Chinese grammar. An act or event is located in time by time words or context, not by the form of the verb*” (Ramsey 1989:76); “*The position of TT [topic time] on the time line ... must be marked by adverbials or left to the context*” (Klein, Li, and Hendriks 2000:753); “*[Mandarin] Chinese has no grammaticalized means to restrict TT [topic time] to some particular time span in relation to TU [time of utterance]*” (Klein 1994:124); “*Chinese belongs to the type of languages that show “no formal distinction of the tenses in their verbs”*” (Mei 2002:46); “*Chinese is a nontensed language*” for several reasons, one being that “*the verbal system of Chinese [has] no obligatory morphological marking of a past/non-past distinction*” (Hu, Pan, and Xu 2001:1120); “*Modern Chinese ... does not have the grammatical category of tense*” (Gōng 1991:252); “*Chinese ... is an aspect and not a tense language. ... The plotting of action along some sort of time axis ... is not a feature of Chinese*” (Norman 1988:163); “*[Chinese] utilizes various factors such as the information provided by*

The *tensed / tenseless* contrast is exemplified with (1) and (2). (1a), which is a present-tensed sentence in English, describes a *present* eventuality²; that is, it states that Lily’s happiness holds at the moment of the utterance. In contrast, (1b), which is past-tensed, describes a *past* eventuality, that is, Lily’s happiness holds at a time (the day before the day of the utterance) prior to the utterance time (UT).

- (1) a. Lily *is* very happy.
 b. Lily *was* very happy yesterday.

The difference in morphological tense between (1a) and (1b) is lost in Mandarin, where both the present ((2a)) and the past ((2b)) eventualities of Lily’s happiness are expressed by the sentence with *no* morphological tense marking, *Lili hěn gāoxìng* ‘Lili very happy’.

- (2) a. Lili hěn gāoxìng.
 Lili very happy
 ‘Lili is very happy.’
 b. Zuótiān Lili hěn gāoxìng.
 yesterday Lili very happy
 ‘Lili was very happy yesterday.’

In contrast with the absence of morphological tense, Mandarin grammatical system has a variety of aspectual markers, which provide information on the perspective on the eventuality described by a predicate or a sentence.

Take (3) for instance. (3a) and (3b) have the same VP *kàn zhèi-běn xiǎoshuō* “read this novel”, which is modified by different aspectual markers, resulting in different aspectual interpretations. With the perfective marker *le*, (3a) describes a reading event prior to the UT, whereas with the progressive marker *zhèngzài*, (3b) describes an ongoing reading event at the UT. The English counterparts of (3) are given in (4). Notice that the Mandarin sentence in (3a) has overt

default aspect, the tense-aspect particles, and pragmatic reasoning to determine the temporal interpretation of sentences” (Lin, 2006:1).”

² We use the term “eventuality” to cover both states and events (Bach 1981).

aspect, but lacks overt tense; whereas its English counterpart (4a) has overt tense, but lacks overt aspect.

(3) a. Wǒ shàng-zhōu kàn *le* zhèi-běn xiǎoshuō.
 1SG last-week look PERF this-CL novel
 ‘I read this novel last week.’

b. Wǒ shàng-zhōu *zhèngzài* kàn zhèi-běn xiǎoshuō.
 1SG last-week PROG look this-CL novel
 ‘I was reading this novel last week.’

(4) a. I read this novel last week.

b. I was reading this novel last week.

The distribution of aspectual markers such as the perfective *le*, the sentence final *le*, the experiential marker *guo*, the progressive (*zhèng*)*zài* and the durative *zhe*, have been studied by many scholars: Chao (1968), Li & Thompson (1981), Smith (1991), Klein, Li, & Hendriks (2000) and Lin (2006), among others. However, predicates in their bare forms, that is, without any aspectual marking, are to our knowledge comparatively less studied (Smith & Erbaugh (2005), Lin (2006) and Klein & Li (2002)).

The reason why previous studies attach great importance to aspectual markers (compared to bare predicates) lies probably in their predominant presence in Mandarin sentences and the important role they play in the temporal/aspectual interpretation of these sentences. Tang & Lee (2000) notes an incompleteness effects in sentences with no aspectual marking. Tsai (2008) further points out that the incompleteness effects can be eradicated by a conjunction, as exemplified by (5a-b), and the same effects are observed in some aspectually marked sentences, such as (6a). With the durative marker *zhe*, (6a) is ill-formed and the conjunction can save it from illformedness, as shown in (6b).

(5) a. *Akiù ná shū.
 Akiu take book

b. Akiù ná shū, wǒ ná qīkān
 Akiu take book 1SG take journal
 ‘Akiu takes books, and I journals.’

- (6) a. *Akiù kàn-zhe diànshì.
 Akiu watch-DUR TV
- b. Akiù yìbiān kàn-zhe diànshì,
 Akiu on.the.one.hand watch-dur TV
 yìbiān xiě-zhe bàogào.
 on.the.other write-DUR report
 ‘Akiu is watching TV and writing the report at the same time.’

In Chapter 3 of this thesis, we show that Mandarin root clauses with eventive predicates yielding episodic readings *must be overtly marked for aspect*.

That episodic readings of eventive predicates are licensed by overt aspect concerns Mandarin *root clauses*.³ In embedded clauses, however, episodic readings *can* be obtained with *no* aspectual marking. In particular, Sun (2015) points out that aspectually unmarked relative clauses allow episodic readings, as exemplified by (7). The relativized NP containing a *bare* eventive predicate *tiào bālěiwǔ* ‘dance ballet’ can receive temporally free episodic readings; that is, it could be used to refer to a *particular* past, present or future dancing event, contrary to (8), the root clause with the same bare predicate. Uttered out of the blue, (8) only allows a generic reading, according to which the girl in question is a ballet dancer.⁴

³ This generalization can probably carry to *finite* complement clauses. Since the finite/non-finite distinction and the properties of BPs in embedded clauses are well beyond the scope of this thesis, we leave this issue for further research.

⁴ The future reading is acceptable in a scenario where (8) is a part of a conversation about a planned future event, such as the case in (i). (*Imagine that A and B are backstage, talking about a show that is starting in an hour.*)

(i) A: Nǐ zhī-bu-zhīdào yíhuì shéi tiào bālěiwǔ?
 2SG know-NEG-know in.a.moment who dance ballet
 ‘Do you know who will dance ballet in a moment?’
 B: Nà-ge nǚhái tiào bālěiwǔ.
 that-CL girl dance ballet.
 ‘That girl will dance ballet.’

- (7) Mǎlì pāishè-guó [NP tiào bālěiwǔ de nǚhái].
 Mali film-EXP dance ballet DE⁵ girl.
 ‘Mali filmed a / the girl who dances ballet.’
 ‘Mali filmed a / the girl who is dancing / danced / will dance ballet.’
- (8) Nà-ge nǚhái tiào bālěiwǔ.
 that-CL girl dance ballet.
 ‘That girl dances ballet.’
 * ‘That girl is dancing / danced ballet.’
 ?? ‘That girl will dance ballet.’

Sun (2015:76)

This thesis focuses on bare predicates in root clauses. We set aside here the temporal interpretation of bare predicates in subordinate clauses (complement clauses, relative clauses, adjunct clauses, etc.). The reader is invited to consult Sun (2015) for discussion of the temporal construals of bare predicates in relative clauses, and Lin (2003, 2006) for discussion of temporal reference in subordinate clauses.⁶

In both A and B’s utterance above, the bare predicate *tiào bālěiwǔ* ‘dance ballet’ allows a future reading. This seems to challenge the hypothesis that episodic construals of eventive predicates are allowed by overt aspect. We discuss future construals of bare predicates in Chapter 5, where we argue that the apparently “episodic” future readings of bare sentences involve a modal component, and these bare sentences assert a present or past *plan* for a future event, rather than a future event. (See Copley 2008b)

⁵ “De” is a particle of modification. It could be a genitive or an associative marker.

⁶ In particular, Sun (2015) investigates the correlations between temporal readings of relative clauses (RCs) and the interpretation of their embedding Noun Phrases (NPs) in Mandarin. It is pointed out there that while eventive BPs only allow generic readings in root clauses, they *also allow episodic readings* in RCs. Evidence is provided against a “scope analysis” (Ladusaw, 1977; Ogihara, 1996; Stowell, 1993 & 2007, Abusch 1988), which has been proposed to account for temporally independent interpretations of relative clauses in English. Sun (2015) argues that the interpretations of sentences with

Note that it is not a characteristic of all morphologically tenseless languages to overtly mark aspect in licensing episodic readings for eventive predicates. Bare eventive predicates allow *episodic past* readings in both Capeverdean ((9a)) and Haitian Creole ((9b)), and they yield either *episodic present* or *past* readings in St'át'imcets ((10a)) and Skwxwú7mesh ((10b)).

- (9) a. Djon kanta.
Djon sing
'Djon sang.'

Capeverdean (Pratas & Hyams 2010:379)

- b. Pyè vann bèf yo.
Pyè sell cattle DET
'Pyè sold the cattle.'

Haitian Creole (Déchaine 1991:37)

- (10) a. sáy'sez'-lhkan.
play-1SG.SUBJ
'I played.' / 'I am playing.'

St'át'imcets (Matthewson 2006:676)

- b. chen xay-m.
1SUBJ.SG laugh-INTR
'I laughed.' / 'I am laughing.'

Skwxwú7mesh (Bar-el 2005:123)

What is special in the languages cited in (9) and (10) is that they have a system that permits the bare form of eventive predicates to form felicitous sentences yielding episodic events. There are debates in the

“independently” temporally construed RCs in Mandarin suggest that the embedding NP does not scope out of the matrix VP, but rather remains *in-situ*. Consequently, a non-scope analysis better accounts for temporal construals of Mandarin RCs.

A careful analysis of the temporal interpretation across subordinate clauses in Mandarin, however, remains beyond the scope of this thesis. Given the widespread variation in the properties of bare predicates across embedded clauses (as compared to root clauses), we leave these issues open here for future investigation.

literature on the temporal interpretations of BPs in these morphologically tenseless languages, where BPs yield episodic readings.

In contrast, the temporal interpretation of BPs in Mandarin is less discussed, probably due to the ill-formedness of many sentences like (11a) and (11b) in the absence of aspectual marking. The bare eventive predicates *dǎo* ‘fall’ and *huà yì-fú huà* ‘draw a picture’ cannot have their temporal reference fixed by a temporal adverbial alone. An overt aspect is required.

- (11) a. Shàngzhōu nèi-kē shù dǎo *(le).
 last.week that-CL tree fall PERF
 ‘That tree fell down last week.’
- b. Wǒ jiàndào Lìchuān de shíhou, tā
 1SG see Lichuan DE moment 3SG
 *(zhèngzài) huà yì-fú huà.
 PROG draw one-CL drawing.
 ‘When I saw Lichuan, she was drawing a picture.’

Notice that (11a) and (11b) are ill-formed in the absence of overt aspect, in contrast to (2a) and (2b), which are perfectly grammatical without aspect. Although the illformedness of sentences like (11a, b) has been observed and studied by reserchers such as Tang & Lee (2000) et Tsai (2008), the contrast between these ill-formed bare sentences and the well-formed bare sentences like (2a, b) has never been the focus of the previous studies to our knowledge. However, an analysis of temporal interpretation in Mandarin should be able to explain the contrast between (11) and (2); in other words, the illformedness of the bare form of (11) and the derivation of the temporal interpretation of sentences like (2).

The current study contributes to filling this gap by systematically examining sentences containing BPs. We would like to emphasize that the properties of *bare predicates*, that is, aspectually unmarked predicates, are important for our understanding of the contrast between (11) and (2), of how the meaning of a sentence *without* overt aspect is derived and of how aspectual markers contribute to the meaning of a sentence *with* overt aspect.

Concretely, this thesis investigates the temporal interpretation of *root clauses* with BPs. We show that:

- i) Root clauses with stative BPs describe states and those with eventive BPs yield generic construals.
- ii) All stative predicates can appear without aspect.
- iii) Eventive predicates that appear without overt aspect cannot have their temporal reference fixed by an adverb alone.

These observations, which have been made before by scholars such as Tang & Lee (2000), Tsai (2008), Klein et al. (2000) among others, follow from the hypotheses that:

H1. Stative and eventive BPs are of different semantic types (Katz 1995, 2003; Kratzer 1998). Stative BPs, which are properties of times, can combine directly with a time, while eventive BPs, which are predicates of events, combine with a time through the mediation of an aspect or a Q operator.

H2. Aspect must be overtly marked in Mandarin.

It is important to mention that the issue of how to derive the temporal interpretation of aspectually unmarked sentences in Mandarin has been addressed by scholars like Smith & Erbaugh (2005), Smith (2008), Lin (2006). They attribute the different temporal interpretations of bare sentences to different “Vendlerian classes” (Vendler 1967) and the “*telic / atelic* split” of the predicates, thus predicting *states* and *activities* to have the same default ongoing interpretation, *accomplishments* and *achievements* to yield past readings⁷. Their proposals are inspired by the analysis of Bohnemeyer & Swift (2004), which is very popular in the literature on temporal interpretation of aspectually unmarked sentences. However, there are empirical problems with their arguments, which will be discussed in Chapter 3.

⁷ Based on the lexical aspect of the predicate, Vendler (1967) distinguishes four classes: *states*, *activities*, *accomplishments* and *achievements*. Chapter 2 (Section 2.2.1) will discuss lexical aspect in more detail.

1.2 Tense vs. tenselessness

It is a hotly debated issue whether a language that lacks overt tense morphology can also have “tense”. One of the main sources of the disagreement among scholars lies in the definition of “tense”.

The most classic criterion for judging whether a language is morphologically tensed or not is to see whether its grammatical system does or does not have a phonologically realized “tense” morpheme, which temporally locates the Reference Time (RT)⁸ of an eventuality with respect to the UT. This is the view that we just presented in Section 1.1. The phonologically realized tense is commonly referred to as *morphological tense*.

Languages like English appear to have a past tense morpheme *-ed*, while languages like Korean appear to have a present tense morpheme *-nun*. Under this definition, Korean and Indo-European languages such as English and French are “tensed” languages, in contrast to Capeverdean, Haitian Creole, St’át’imcets and Mandarin, which are considered as “tenseless languages”.

Aside from defining tense based on the phonologically realized tense morpheme, there are other ways to define it, e.g. *syntactic tense* and *semantic tense*. These two definitions are closely related to but very different from *morphological tense* discussed so far. A brief explanation of these two definitions are stated below, and a more detailed discussion can be found in Chapter 5:

Syntactic tense: A language has syntactic tense, if it has a TP projection in the syntax that serves to temporally locate events with respect to UT. Consequently, a language is syntactically tenseless if it has no TP projection.

Semantic tense: A language has semantic tense, if it has a head introducing an element that semantically relates the RT of eventualities to the UT. Therefore, a language is semantically tenseless if this element, which is subject to indexical conditions, is absent (cf. Deal 2010:1).

⁸ “Reference time” refers to a time span about which a sentence makes assertion. See Chapter 2, Section 2.2.3 for more discussion.

Clarifying different definitions of “tense” is important for the current study for the following reasons: firstly, an analysis that aims to capture the temporal interpretation of bare sentences in Mandarin, a language with no morphological tense, would probably have to make assumptions about whether or not it has *syntactic* and/or *semantic tense*; secondly, it helps us to understand the (*tensed* or *tenseless*) analyses of temporal construals in morphologically tenseless languages.

Given these different definitions of tense, whether or not there is tense in a language might depend on the definition one has in mind. Whether or not it makes sense to adopt a *syntactically* tensed or tenseless analysis for morphologically tenseless languages is a hotly debated issue cross-linguistically. Both Shaer (2003) and Bittner (2005) defend a syntactic tenseless treatment of West Greenlandic, arguing that it lacks a tense node encoding the relations between reference time and utterance time. Tonhauser (2011) adopts a tenseless treatment for Paraguayan Guarani. Lin (2006) argues against having an empty inflectional node in Mandarin. For him, there is no syntactic TP projection in Mandarin and the temporal interpretation is derived from default viewpoint aspect, the overt aspect and pragmatics. Researchers like Matthewson (2006) and Sybesma (2007) on the other hand defend a tensed analysis for St’át’imcets and Mandarin. According to Matthewson (2006), St’át’imcets has a covert tense, TENSE, which restricts the reference time of an eventuality to non-future times. Sybesma (2007) claims that Mandarin has a syntactic T projection. He argues (following Matthewson (2002)) that the temporal interpretation of a Mandarin sentence can only be manipulated using linguistic means, not on the basis of pragmatics or other non-linguistic information.

We return to the discussion on tense *vs.* tenselessness in Chapter 5 with more detailed illustration of the different proposals mentioned above. With respect to the “future” construals of sentences with BPs, we further argue there that Mandarin has a morphologically null tense, NONFUT, which restricts the temporal reference of bare root clauses to non-future times. The “future” construals of bare sentences are derived from a covert modal component involving a *non-future plan* for the eventuality described by the proposition (Copley 2008b).

1.3 Overview of this thesis

The remainder of the thesis is organized as follows:

Chapter 2 introduces the theoretical background on tense and aspect underlying the proposals developed in this thesis by briefly reviewing two approaches to tense semantics -*tense logic* semantics and the *referential* approach to tense-, highlighting issues such as the notion of lexical *vs.* grammatical aspect, or tense/aspect interactions. We present the event semantics framework of Katz (2003) and Kratzer (1998), based on which one of the core hypotheses of this thesis is built.

Chapter 3 begins the investigation of temporal construals of Mandarin bare sentences by examining predicates of different Vendlerian classes, yielding to a contrast between *stative* and *eventive* predicates: all stative predicates can appear without aspect, yielding stative readings; whereas eventive predicates require overt aspect to allow episodic readings; and bare eventive predicates only yield generic readings. This contrast is then explained by the hypothesis about the different argument structures of *stative vs. eventive* predicates. This chapter then provides evidence against some alternative analyses of temporal interpretation of bare predicates in Mandarin and discusses some apparent counterexamples to the argument structure analysis.

Chapter 4 looks at sentences with bare eventive predicates yielding *generic* construals. After an overview of theoretical accounts of genericity -*quantificational, aspectual* and *modal* approaches-, this chapter argues for a quantificational treatment of generic sentences, which attributes the generic construals of sentences with bare eventive predicates to overt quantificational adverbs or the covert Q-operator.

Chapter 5 deals with the “future” construals of bare sentences by investigating the interaction of bare predicates and time adverbs, which shows that future time adverbs, unlike past and present time adverbs, cannot fix the temporal reference of bare sentences by themselves, an observation that challenges the initial analysis. This chapter then argues for a tensed treatment of Mandarin (a covert tense NONFUT restricting the temporal reference of bare sentences to non-future times), supported by empirical evidence. The striking similarity

between Mandarin bare future sentences and *futurate* sentences in English and French leads to the conclusion that the future construals in both morphologically tensed and tenseless languages result from the same semantic component, a modal ingredient involving a *plan*. Mandarin differs from English/French in that Mandarin bare future sentences asserts not a *present*, but a *non-future* plan.

Chapter 6 concludes the thesis by recapitulating the generalizations uncovered on the basis of the data presented in the previous chapters. It shows how these generalizations are captured by the set of hypotheses put forward. We then propose new perspectives for future research by drawing particular attention to variation in temporal interpretation across tenseless languages, as well as across *embedded* clauses in Mandarin itself. These insights extend beyond Mandarin to other tenseless languages, and crucially also to tensed languages, raising new empirical generalizations, puzzles and questions for future theoretical and typological research to empirically assess and answer.