

And that's the T: the tenseless analysis of
Mandarin Chinese and the universality of T

James Lin

Advisor: Hadas Kotek



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0.2 List of abbreviations

Here I include a key for abbreviations in the glosses, as well as some common abbreviations I use throughout the paper.

1	1st person
2	2nd person
3	3rd person
AI	animate intransitive
AUX	auxiliary
CL	classifier
COMP	complementizer
COP	copula
DEM	demonstrative
FUT	future
IMPERF	imperfective
MC	Mandarin Chinese
PERF	perfective
PL	plural
PRES	present tense
PRN	pronoun
PROG	progressive
PROX	proximate
PST	past
Q	question particle
SG	singular

AND THAT'S THE T!

The tenseless analysis of Mandarin Chinese and the universality of T

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Abstract

One of the goals of generative grammar is to devise a model of syntax which is able to capture both the similarities and differences we see across languages. We commonly assert that every clause can be characterized as a TP. In light of data from so-called “tenseless” languages, a growing body of literature disputes this claim. In this essay, I discuss the literature on tenselessness in Mandarin Chinese and more broadly, applying insights from Wiltschko (2014)’s Universal Spine Hypothesis to attempt to identify a T-like category in MC.

1 Introduction

Within generative grammar, we often consider the TP to be a crosslinguistic universal. This idea is not without its opponents, however. While tense marking tends to be a morphologically prominent feature of Indo-European languages, not all languages behave this way. One such language is Mandarin Chinese (MC), which does not mark tense morphologically; instead, temporal interpretation arises from a combination of linguistic and contextual factors. The more conservative view is that tense in MC behaves like in English, except its content is never pronounced. A number of alternative views have been proposed, which revisit the fundamental syntactic role of the TP and what the possibilities for this region of the clause are. In light of data from languages like MC, there has been spirited debate in the literature over the last few decades on the idea of “tenselessness” and the degree to which we can consider T to be universal.

In this essay, I present the debate within the MC literature on tenselessness and the kinds of arguments that have been made for and against tense in MC. T is so named because of its association with tense, but according to current generative assumptions, it does more than encode temporal interpretation. It is also said to be involved with case, agreement, and finiteness. I discuss the work that various linguists

“I am eating.” (Spanish)

- b. Estaba comiendo.
 PROG-AUX.IMPERF.1SG eating

“I was eating.” (Spanish)

Jesús Yáñez, p.c.

However, many other languages do not have morphological tense at all¹.

- (3) wǒ xǐhuān dú shū
 1SG.PRN like read book
 “I like to read books.” OR “I liked to read books.” (MC, Sino-Tibetan)

- (4) ann-wa Mai'stoow-wa isttso'kini-wa
 DEM-PROX Raven-PROX hungry.AI-PROX
 “Mai'stoow is hungry.” OR “Mai'stoow was hungry.” (Blackfoot, Algic)
Wiltschko (2014): 21

- (5) aggir-puq
 come.IND-3SG
 “He is coming.” OR “He was coming.” (West Greenlandic, Eskimo-Aleut)
Shaer (2003): 146, originally from Fortescue (1984): 272

The sentences in the above examples are compatible with either a present or past interpretation; temporal interpretation derives from context. In light of data like (3)-(5), there has been ongoing debate among syntacticians as to whether or not T is a universal category.

The T head wears many syntactic hats. In addition to encoding temporal information, T is also commonly assumed to play a critical role in case assignment, agreement, and movement. It is also related to finiteness; English infinitival “to” is commonly analyzed as the instantiation of a non-finite T head.

- (6) T has been hypothesized to be involved in the regulation of:
- a. Tense
 - b. Case
 - c. Agreement
 - d. Finiteness

¹MC romanization in this paper will follow the conventions of Hànyǔ Pīnyīn, the standard romanization system for MC in the People's Republic of China.

Interestingly, MC lacks morphological manifestation of any of the above properties. In what follows, I will present arguments from the MC literature which discuss these T-related phenomena in relation to MC.

2.1 Tense

In MC, tense is not morphologically marked. The same sentence can have a past or present interpretation with the right context.

- (7) Context 1: I am telling my friend about a book I am currently reading.

wǒ hěn xǐhuān nà běn shū.
1SG.PRN very like that COUNTER book

“I really like that book.”

- (8) Context 2: I am explaining to a friend why I read a certain book so many times in middle school.

wǒ hěn xǐhuān nà běn shū.
1SG.PRN very like that COUNTER book

“I really liked that book.”

On one side of the debate, the lack of morphological tense does not definitively prove that there is no syntactic T; it may just be that T encodes temporal information, but is always phonologically null in MC. Sybesma (2007) is one such account which concludes that T is present in MC. The essence of Sybesma (2007)’s argumentation can be summarized as follows:

- (9) a. Current theories assume that T is universal, and that it is essential to derive temporal interpretation. If we are committed to this idea, then MC also has T.
b. The fact that sentences without any pronounced adverbials, modifiers, or context have a default interpretation (present tense) suggests that this temporal interpretation is encoded somewhere (namely, in T).
c. Dutch and Mandarin behave similarly, and since Dutch has T, so does Mandarin.

Sybesma (2007) brings the data in (10) - (11) to show the idea in (9b).

- (10) Zhāngsān zhù zài zhèr.
 Zhangsan live at here
 “Zhangsan lives here.”
 # “Zhangsan lived here.”
- (11) Zhāngsān 1989 nián zhù zài zhèr
 Zhangsan 1989 year live at here
 “Zhangsan lived here in 1989.”

There is no difference morphologically between the verb in (10) and the verb in (11). In (11) we are able to get a past interpretation because of the presence of the temporal adverbial “1989 nián” (= in 1989). The key observation for Sybesma (2007) is that when (10) is uttered “out of the blue,” that is to say, with no context whatsoever, it has a present interpretation by default. This is why the same sentence cannot felicitously have a past interpretation, without some element which can shift the temporal interpretation. This element can be a temporal adverbial, as in (11), or it can be some previous *linguistic* context.

- (12) nà ge shíhòu hěn nán. **Zhāngsān zhù zài zhèr.** wǒ zhù zài
 that CL time very difficult. Zhangsan live at here. 1SG live at
 Běijīng. yīnwèi jùlí hěn yuǎn, suǒyǐ méi yǒu hěn duō jīhuì
 Beijing. because distance very far, so not have very many opportunity
 jiànmiàn.
 see.each.other

At the time it was very hard. **Zhangsan lived here**, I lived in Beijing. We were very far from each other, so we didn’t get many opportunities to see each other.

A pronounced context, as in (12), is compatible with a past interpretation. Crucially for Sybesma (2007), the context in (12) is *pronounced*, or what he refers to as a specifically “linguistic” context, as opposed to the kind of situational context in (13).

- (13) Situation: I am showing a friend around my hometown. My childhood friend Zhangsan has passed away. I point out where he lived when we were younger.
- #Zhāngsān zhù zài zhèr.
 Zhangsan live at here
- Intended: “Zhangsan lived here.”

For (13), even though the situation makes it clear that the sentence could not possibly be present, the sentence cannot be interpreted as past, and so it is infelicitous; it needs some kind of pronounced context. A sentence like (14) is thus perfectly felicitous.

- (14) wǒmen xiǎo de shíhòu, Zhāngsān zhù zài zhèr.
 we small COMP time, Zhangsan live at here
 “When we were little, Zhangsan lived here.”

For Sybesma (2007), the fact that a sentence like (13) necessarily receives a present interpretation *unless* there is some pronounced element suggests that the present interpretation is encoded somewhere in the syntax.

Sybesma (2007) also presents what looks like an identical pattern in Dutch:

- (15) Ik woon in Rotterdam.
 I live in Rotterdam
 “I live in Rotterdam.”
- (16) #Ik woonde in Rotterdam.
 I live.PST in Rotterdam
 Intended: “I lived in Rotterdam.” (very odd/infelicitous in isolation)
- (17) Ik woonde in 1989 in Rotterdam.
 I live.PST in 1989 in Rotterdam
 “I lived in Rotterdam in 1989.”

Unlike for MC, it is uncontroversial to claim that Dutch has tenses, but they behave differently from their English counterparts. The Dutch past tense morpheme is *-de*, but without any pronounced context, the sentence is infelicitous, as in (16). With the addition of the temporal adverbial, as in (17), the sentence is perfectly fine. In this way, Sybesma (2007) argues, Dutch seems to pattern more like MC than English. Sybesma tentatively terms this phenomenon which is common to Dutch and MC TENSE AGREEMENT: T must agree with some temporal adverbial. Thus, any past marking on the verb or a past interpretation results from agreement with the temporal adverbial. The tentative conclusion is that since Dutch and MC pattern similarly in this regard, it may be that MC also has a similar structure in which T agrees with the temporal adverbial, but T has no pronounced content.

The same generalization does not always apply, however. The previous examples made use of an atelic predicate “live in Rotterdam.” Telic predicates pattern differently.

- (18) #wǒ mǎi yī běn shū.
1SG buy one CL book
Intended: “I bought a book.” (infelicitous in isolation)
- (19) #wǒ zuótiān mǎi yī běn shū.
1SG yesterday buy one CL book
Intended: “I bought a book yesterday.” (infelicitous in isolation)
- (20) wǒ mǎi-le yī běn shū.
1SG buy-PERF one CL book
“I bought a book.”
- (21) wǒ zuótiān mǎi-le yī běn shū.
1SG yesterday buy-PERF one CL book
“I bought a book yesterday.”

For telic predicates, a temporal adverbial is not necessary; in fact, it does nothing to change the felicity of a sentence like (18), as in (19). Instead, marking the verb with the perfective morpheme *le* yields a perfectly acceptable sentence. Perfective marking seems to be obligatory when the telic predicate refers to an event which has been completed (i.e., whenever perfective marking is appropriate).

This constitutes another parallel between Dutch and MC. Dutch also requires a perfective construction to be used in the same contexts.

- (22) #Ik kocht een boek.
I buy.PST a book
Intended: “I bought a book.” (infelicitous in isolation)
- (23) #Ik kocht gisteren een boek.
I buy.PST yesterday a book
Intended: “I bought a book yesterday.” (infelicitous in isolation)
- (24) Ik heb een boek gekocht.
I have a book buy.PAST-PARTICIPLE
“I bought a book.”
- (25) Ik heb gisteren een boek gekocht.
I have yesterday a book buy.PAST-PARTICIPLE

“I bought a book yesterday.”

Sybesma (2007) describes the Dutch past participle as able to be deconstructed into three parts. The first part encodes perfective aspect, the second part is the lexical verb, and the third part is what Sybesma (2007) calls a past tense marker. Below are the Dutch and MC verbs for perfective “bought” in isolation.

(26) ge- koch- t
 PERF buy PAST

(27) mǎi- le
 buy PERF

The claim is that since Dutch and MC pattern similarly with respect to perfective marking on telic predicates, perhaps the MC perfective verb is structured similarly to the Dutch one, except that the tense morpheme is phonologically null.

It is not clear that the *-t* suffix on Dutch past participles is a marker of past tense. Dutch has a future perfect construction.

(28) Voor het einde van de dag zal de haan drie maal gekraai-d hebben.
 before the end of the day will the cock three time crow-t have
 “Before the end of the day the cock will have crowed three times.”

van Eynde (2000): 253

The future perfect construction in Dutch is similar to the present perfect construction in (25), consisting of the auxiliary *hebben* plus the participle. The form of the participle in future perfect and present perfect constructions is identical; while it could be possible that *-t* marks tense, it would be necessary to assume that the spellout of past, present, or future on the participle is identical. The composition of the Dutch past participle is the subject of ongoing debate (see (Hoekstra, 2004) for more discussion).

The description of TENSE AGREEMENT also tells a somewhat complicated story. According to the data in Sybesma (2007), TENSE AGREEMENT only applies for past tense, atelic predicates; in fact, it is shown to be irrelevant for present tense predicates and telic predicates. It is not immediately clear why TENSE AGREEMENT should apply selectively in this way.

2.2 Case and agreement

MC also lacks morphologically marked case. In the following examples, the 1st and 3rd person singular pronouns *wǒ* and *tā* have the same form in both subject and object position.

(29) **wǒ** bù xǐhuān **tā**
 1SG.PRN not like 3SG
 “I don’t like him.”

(30) **tā** bù xǐhuān **wǒ**.
 3SG.PRN not like 1SG.PR
 “He doesn’t like me.”

MC does not morphologically mark phi-feature agreement.

(31) No morphological marking of phi-feature agreement.

a. wǒ hěn **xǐhuān** nà běn shū.
 1SG.PRN very like that COUNTER book
 “I really like that book.”

b. nǐ hěn **xǐhuān** nà běn shū.
 2SG.PRN very like that COUNTER book
 “You really like that book.”

c. tāmen hěn **xǐhuān** nà běn shū.
 3PL.PRN very like that COUNTER book
 “They really like that book.”

Syntacticians have also tried to show that Case is relevant in MC despite the lack of morphology. In Li (2008), Case is proposed as an explanation for the mixed head-directionality that we see in MC. In the data below, heads of phrases are bolded.

(32) nǐ huì yòng kuàizi le ma?
 2SG can use chopsticks PERF Q
 “Can you use chopsticks now?”

(33) [[nǐ **huì** [[yòng kuàizi] **le**]] **ma**]

- (38) nǐ xǐhuān nà ge lánhuā **ma**?
 you like that COUNTER orchid Q
 “Do you like that orchid?”

Li (2008) argues that we can explain the head-directionality patterns in the data with Case. The claim is that MC is a head-final language, except where Case assignment applies. When Case assignment applies, it obeys a left-to-right directionality requirement, so that the Case-assigning head must occupy a position to the left of its complement. NPs and CPs are therefore never head-initial because N and C do not assign Case.

Essentially, Li (2008) describes how Case can be used to account for some word-order properties of MC even though we do not see morphological case; Case assignment accounts for the fact that VPs and PPs can be head-initial. This analysis raises some questions, however; if Case affects the head-directionality of VPs and PPs, why is it the case that VPs and PPs are only optionally head-initial? The analysis makes the prediction that VPs and PPs must always be head-initial, if nominals are to receive Case. For head-final VPs and PPs like (35b) and (36b), it is unclear then how the nominals receive Case.

The data itself is somewhat problematic. In (35b), we see that the head-final word order is optionally conditioned by the MC particle *ba*. There is an extensive literature on *ba* (see Sybesma (1992) for one account). Examples (35a) and (35b) are not examples which minimally differ only in word order; in fact there is another quite significant element *ba* in (35b) which suggests that (35a) and (35b) differ more in their structure than Li (2008) discusses. The element(s) *xiě-wán-le* which is analyzed as the verb head is apparently complex; the suffixing of the perfective marker LE suggests that this element may be larger than a verb head.

The data shown for PPs is also misleading, because it is not the case that for each “preposition,” head-directionality is flexible. Rather, there is a class of location-encoding elements that is head-initial in MC, and a class that is head-final:

- (39) a. *nàlǐ **cóng**
 there from
 Intended: “from there”
 b. *shàng zhuōzi
 on table
 Intended: “on the table”

(40) A nonexhaustive list of pre- and postpositions in MC:

pre	post
<i>cóng</i> “from”	<i>lǐ(miàn)</i> “inside”
<i>dào</i> “to”	<i>wài(miàn)</i> “outside”
<i>zài</i> “at”	<i>shàng(miàn)</i> “top”
	<i>xià(miàn)</i> “under”

Li (2008) argues that observing nominative and accusative case is a good indicator of the relationship between an NP and an associated T or verbal head. Li (2008) presented the data in this section in order to demonstrate that MC shows the “effects” of case. To the extent that the analysis works, it is unclear how it relates to the T head and nominative case assignment. At least as we have often conceived of it in English, nominative case assignment proceeds from right to left.



The inconsistencies in the data notwithstanding, it remains difficult to explain why MC should have a left-to-right case assignment rule, and why the above data should show how we can observe grammatical relations in MC à la case assignment in English.

2.3 Finiteness

2.3.1 Scope ambiguities with modals and *le*, in relation to finiteness

MC does not mark finiteness morphologically, either. Despite this, there has been debate over the extent to which we can show that MC exhibits finiteness, and whether or not this constitutes evidence of T in MC.

In one attempt to show that MC exhibits a finite-nonfinite contrast, Lin (2011) observes interactions in the scope of *le* and different modals. When *le* takes narrow scope relative to a modal, the interpretation of *le* is perfective aspect; when *le* takes wide scope relative to the modal, the interpretation of *le* is roughly paraphraseable as “it has become the case that *x*.” According to Lin (2011), only narrow scope is possible for epistemic modals, whereas for root modals, only wide scope is possible.

- (42) Zhāngsān [kěnéng [qù Táiběi le]].
 Zhangsan be.likely.to go Taipei LE
 “Zhangsan may have gone to Taipei.” keneng > le
- (43) *Zhāngsān [[kěnéng qù Táiběi] le].
 Zhangsan be.likely.to go Taipei LE
 Intended: “It has become possible that Zhangsan goes to Taipei.” *le > keneng
- (44) *Zhāngsān [néng [qù Táiběi le]].
 Zhangsan be.able.to go Taipei LE
 Intended: “Zhangsan is able to have gone to Taipei.” *neng > le
- (45) Zhāngsān [[néng qù Táiběi] le].
 Zhangsan be.able.to go Taipei LE
 “It has become the case that Zhangsan is able to go to Taipei” le > keneng

In order to explain this opposite patterning, Lin (2011) cites the following data with *hui*. Even though it was shown that *hui* patterns with root modals in terms of raising, it does not pattern with root modals with respect to *le*. The contrast between (46) and (47) is explained by the presence of a time expression in (47):

- (46) Zhāngsān huì qù Táiběi (*le).
 Zhangsan will go Taipei LE
- (47) xiàwǔ sān diǎn, Zhāngsān [huì [qù Táiběi le]].
 afternoon three o'clock, Zhangsan will go Taipei LE
 “Zhangsan will have gone to Taipei by three o'clock in the afternoon.” hui > le

- (48)
-
- ```

graph TD
 TP --- T
 TP --- AspP
 T --- t1[t]
 AspP --- VP
 AspP --- Asp
 VP --- t2[t]
 Asp --- e[e]
 subgraph le_label [le <r=t, e>]
 t1
 t2
 e
 end

```

Lin (2011) follows Shen (2004) in arguing that the T head in MC encodes the reference time *t*; when *t* is present in the structure, then *le* can occur because *le*

takes **t** as an argument. A clause with an encoded **t** is finite, whereas a structure lacking **t** is nonfinite. In addition, Lin (2011) follows Lin and Tang (1995) in assuming that MC modals take a clausal complement, which Lin (2011) takes to be a TP.

Lin (2011)'s explanation of (42)-(45) then proposes that epistemic modals take finite TP complements, whereas root modals take nonfinite TP complements. Since there is no **t** encoded in the structure in (48), we cannot get an interpretation for *le*, and so *le* is ungrammatical.

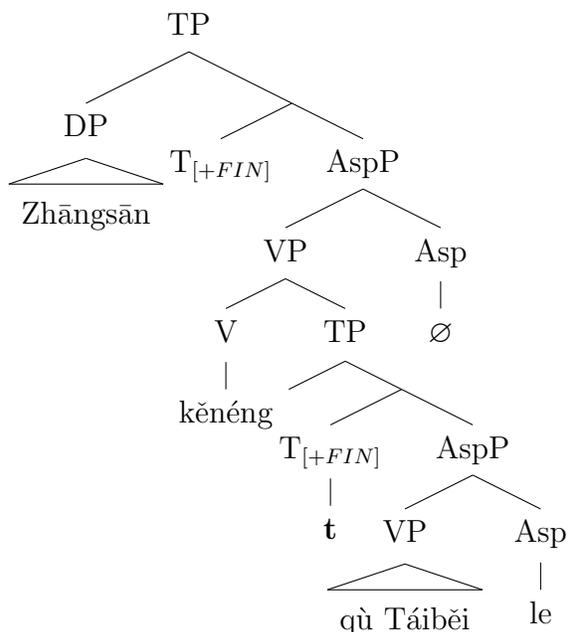
(49) In MC:

- a. Epistemic modals take a *finite* TP complement.
- b. Hui and root modals take a *nonfinite* TP complement.

Below are (42) and (45), copied here as (50) and (52), and drawn out as trees (51) and (53).

- (50) Zhāngsān [kěnéng [qù Táiběi le]].  
 Zhangsan be.likely.to go Taipei LE  
 “Zhangsan may have gone to Taipei.” keneng > le

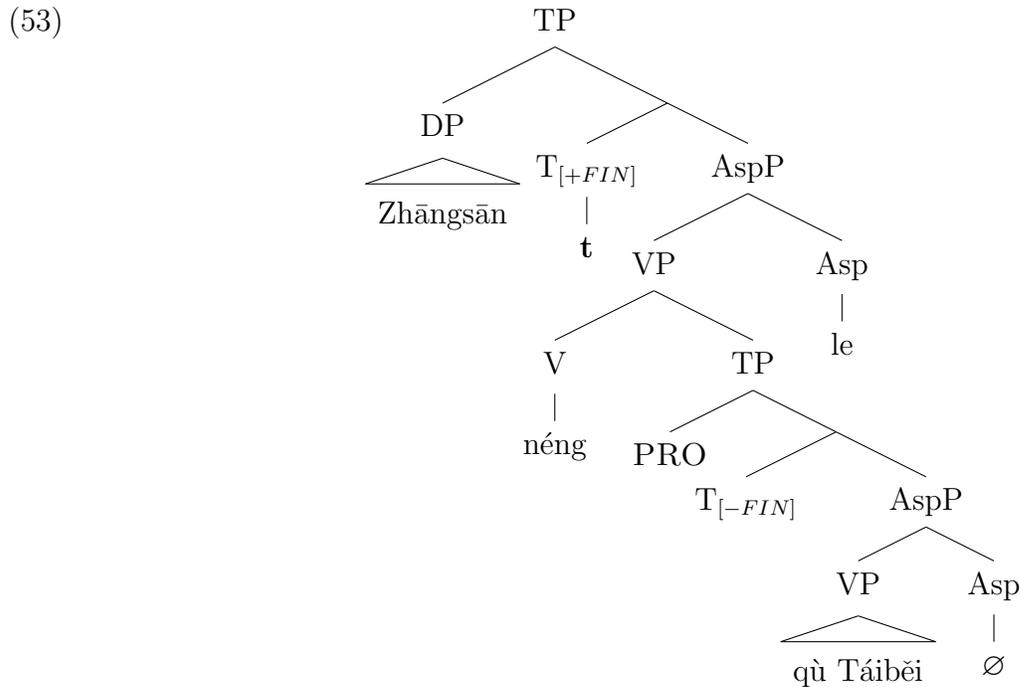
(51)



In this analysis, *le* can occur as the head of the lower AspP because T is finite, and therefore encodes a time which *le* can take as an argument. Lin (2011)'s analysis does not spell out why the *le* cannot occupy the higher Asp head; the higher T is also

finite and encodes a time. However, if you assume a bottom-up derivation, it follows that the lower T is the first time-encoding element that is merged into the structure to allow for the interpretation of *le*.

- (52) Zhāngsān [[néng qù Táiběi] le].  
 Zhangsan be.able.to go Taipei LE  
 “It has become the case that Zhangsan is able to go to Taipei” *le* > *neng*



Here, the lower T is nonfinite, and so does not encode a time to allow for the interpretation of *le* in the lower AspP; however, *le* can occur in the higher clause because the higher T is finite.

The conclusion that Lin (2011) comes to is not entirely satisfying for several reasons. First, it seems to be internally inconsistent in that *hui* is shown to pattern with root modals in certain respects but not with regard to finiteness. Additionally, *hui* is said to take a nonfinite complement clause like other root modals, but it patterns like epistemic modals in its scope relative to *le*. This is internally inconsistent; the central claim is that the scope relation between the modal and *le* is dependent on the finiteness of the complement clause.

### 2.3.2 Evidence from finiteness is insufficient

The above argument rests on two assumptions. First, that the observations about scope and object fronting are indeed evidence of a finite-nonfinite contrast in MC. Second, that finiteness is a property regulated in T. This analysis is not without its critics. Grano (2017) responds directly to Lin (2015) and addresses the key points of the argument, in an attempt to show that finiteness, if it can be demonstrated to exist in MC, does not prove that T is present in MC. Grano (2017) represents Lin (2015)'s argument as follows:

- (54) a. *Premise 1:* Mandarin exhibits a finite-nonfinite contrast.  
b. *Premise 2:* If a language exhibits a finite/nonfinite contrast, then it has Tense.  
c. *Conclusion:* Mandarin has Tense.

Grano (2017) states that, indeed, if we take a broad view of “finiteness” (i.e. consider it to be a cluster of properties that allow a clause to stand alone, i.e. be unembedded) then Premise 1 is unproblematic.

As Grano (2017) points out, across the literature the word “finiteness” has been used to refer to two things, namely, a morphological verb form, or a grammatical property of a clause. It seems like the latter is more useful cross-linguistically, in the sense that not every language is going to have morphologically realized finite and nonfinite forms, but clause behavior is something that we can more readily observe regardless of the language. In Grano (2017) in very general terms, the term “finite” then is taken to mean a set of properties that is associated with clauses that can be used as standalone assertions, i.e. be unembedded.

For Grano (2017)'s purposes, the precise definition of finiteness is not important, because ultimately Grano shows that regardless of how we define finiteness, the contrasts that TH Lin (2015) attributes to Tense can be accounted for without Tense.

## 2.4 Against Jo-Wang Lin's arguments

Tzong-Hong Lin (2015) (TH Lin) argues against Jo-Wang Lin (2010)'s (JW Lin) claim that Mandarin Chinese (MC) does not have tense. TH Lin (2015) first argues against the syntactic arguments that JW Lin (2010) gives, and then against the semantic arguments. JW Lin (2010) also argues against Sybesma (2007), which

maintains that MC must have T. In turn, TH Lin (2015) then refutes JW Lin (2010)'s counter-arguments against Sybesma (2007). Finally, given that he is arguing against a tenseless approach to analyzing MC, TH Lin (2015) then gives an account of what tense in MC might look like.

### 1. Syntactic arguments

JW Lin (2010)'s arguments against presence of T for MC can be summarized as follows:

- (55) a. a lack of a copula in the nominal predicate construction  
 b. a lack of subject expletive  
 c. the possible lack of finite-nonfinite contrast  
 d. the possible lack of Case-driven movement

In support of (55a), JW Lin (2010) gives (56):

- (56) jīntiān xīngqītiān  
 today sunday  
 “Today is Sunday.”

For JW Lin (2010), the reason that (56) lacks a copula is that there is no tense that requires overt realization.

Against this line of reasoning, TH Lin (2015) points out that (56) only shows that tense in MC is not morphologically realized, i.e. it could be null. TH Lin (2015) also points out that the copula is actually possible and the resulting sentence is equally grammatical, as in (3):

- (57) jīntiān shì xīngqītiān  
 today COP sunday  
 “Today is Sunday.”

TH Lin (2015) then addresses (55a-d). He cites earlier work in claiming that MC has finiteness contrasts, refuting (55c). According to TH Lin (2015), the scope contrasts in the following data is related to finiteness. Different types of modals take either finite or nonfinite complements, which leads to a different scope reading.

- (58) zhāngsān néng qù xuéxiào le.  
 Zhangsan be.able.to go.to school PERF  
 “Zhangsan has become able to go to school.”

*le* > *neng* “be able to”; \**neng* “be able to” > *le*

- (59) zhāngsān kěnéng qù xuéxiào le.  
 Zhangsan be.likely.to go.to school PERF  
 “It is likely that Zhangsan has gone to school.”

\**le* > *kěnéng* “be likely to”; *kěnéng* “be likely to” > *le*

The more dubious claim is the one that TH Lin (2015) makes against (55b); namely, that the EPP is at play in requiring a null subject expletive in a sentence like (60).

- (60) kěnéng [zhāngsān qù xuéxiào le].  
 be.likely.to Zhangsan go.to school PERF  
 “It is likely that Zhangsan has gone to school.”

## 2. Semantic arguments

JW Lin (2010)’s semantic arguments (as summarized by TH Lin):

- (61) a. Temporal interpretations of MC can be obtained through aspectual properties of the sentences; we don’t need tense.  
 b. The assumption that MC sentences have Tense yields nonexistent readings.

In support of (61b), JW Lin (2010) claims that (62) can only have a present tense interpretation, i.e. that a past interpretation is one of these “nonexistent readings.”

- (62) wǒ hěn jǐnzhāng  
 I very nervous  
 “I am very nervous.”

Against this claim, TH Lin (2015) points out that the right context can easily yield a past interpretation.

- (63) (wǒ zuótiān zài jiē-shàng yù-dào jiàoshòu.) wǒ hěn jǐnzhāng  
 (I yesterday at street-on run.into professor) I very nervous  
 “(Yesterday I ran into the professor on the street.) I **was** very nervous.”

### 3 Tenselessness in other languages

In the MC literature, linguists have had to propose indirect ways of observing T because there is little to no morphological inflection in MC. The discussion of “tenselessness” is not limited to MC, however. Many of the world’s languages exhibit properties which we might call “tenselessness,” and there is a large body of linguistic literature on “tenselessness” in languages other than MC. In this section, I look at work on West Greenlandic, Halkomelem, and Blackfoot that engages with the question of “tenselessness.”

#### 3.1 West Greenlandic

West Greenlandic (WG), like MC, is a language which does not mark tense morphologically. Shaer (2003) discusses some interesting properties of certain temporal morphemes in WG, and ultimately concludes that we should not throw out the idea of a tenseless analysis of WG. Similar to what we have seen in MC, Shaer (2003) presents WG data where the same linguistic material can yield both past and present readings. Example (5) is reproduced here as (64).

- (64) aggir-puq  
 come.IND-3SG  
 “He is coming.” OR “He was coming.”

He also shows that although there are temporal morphemes like *-sima-* and *-ssa-* in WG, they should not be analyzed as tense. The presence of the morpheme *-sima-* in the verb yields a past interpretation, and the presence of *-ssa-* yields a future interpretation.

- (65) Nuum- miis- sima- vunga.  
 Nuuk- be.in- PERF- IND.1SG  
 “I have seen Nuuk.” *Shaer (2003): 147, Fortescue (1984): 272*
- (66) Tuqu- ssa- atit.  
 die- FUT- IND.2SG

“You will die (e.g., if you drink the poison).”

*Shaer (2003): 147, Fortescue (1984): 274*

However, Shaer (2003) argues that *-sima-* and *-ssa-* should be analyzed as lexical morphemes and not functional morphemes for several reasons: *-sima-* is always optional and conveys mainly aspectual information as opposed to tense information; a few cases can be found where *-ssa-* is not present and the sentence has a future interpretation, and conversely where *-ssa-* is present and the sentence does not have a future interpretation. Shaer posits that perhaps it is more correct to say that *-ssa-* conveys information about the speaker’s attitude towards the events, namely commitment or certainty, rather than encoding tense.

I found some of the arguments that Shaer provided about *-ssa-* to be unconvincing. Specifically, he claims that in some cases where *-ssa-* occurs, the sentence has a non-future interpretation.

(67) *irn- i ipi- ssa- sura- lu- gu*  
 son- 3SG drown- EXP- think- ELA.S- 3SG

“Thinking that his son would drown,

*anguta- a annilaa- nga- lir- pu- q*  
 father- 3SG get.frightened- ST- INCH- IND.IV- 3SG

the father began to feel frightened.”

*Shaer (2003): 148*

In the data that he provides for this claim it seems that *-ssa-* actually is denoting a future event in that it places the event time after the reference time, but it is just that the event time is placed before the speech time.

He also claims that a null T probably does not occur in WG syntax because there is a general absence of null morphemes in general in WG.

(68) *nalunaaqutta- p akunnir- a- ni quirsur- tar- puq*  
 clock- REL (space-)between- its- LOC cough- ITER- IND.3SG

“He coughed (repeatedly) for an hour.”

*Shaer (2003): 150*

In this example, an affix denoting repetitive-ness is attached to the verb, despite the repetitive-ness being inferrable from the context. Shaer (2003) gives this data to make the point that WG is a morphologically rich language, which typically overtly encodes a great deal of contextually inferrable information. The intuition is that

given that we see this tendency to overtly encode information in the language, it is less likely that there is a null tense morpheme.

Shaer gives an account of WG as a tenseless language in support of the idea that some languages truly do not contain T and that there is no compelling reason to include some null T structure in the analysis of these languages.

### 3.2 Tenselessness in Halkomelem and Blackfoot

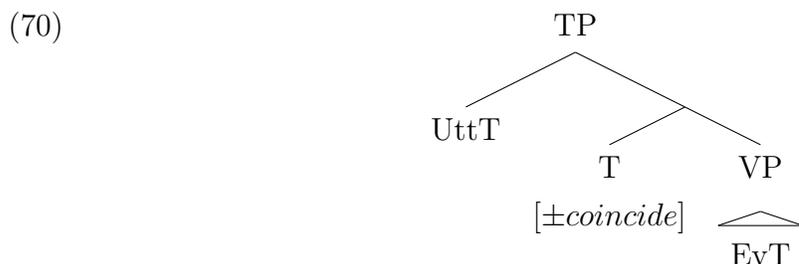
Another point of view in the literature comes from Ritter and Wiltschko (2005). In this body of work, we get a glimpse of what a “tenseless” analysis like the one described in the last section could look like. As a jumping off point, Ritter and Wiltschko (2005) invoke the Anchoring Principle proposed in Enç (1987).

(69) Anchoring Principle: “Each tense must be anchored.”

*Enç (1987): 642*

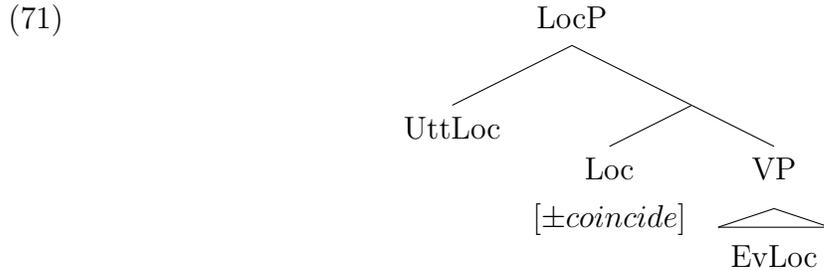
Ritter and Wiltschko (2005) broaden this principle to say that events must be anchored to either the utterance or a reference point; that is to say, that the anchoring principle does not only apply with respect to tense and temporal information. They are looking to apply the anchoring principle in the analysis of languages that do not have tense, and conclude that the Anchoring Condition applies to all languages. A major element of this analysis is that some languages indeed lack T. If some languages lack T, then some other projection must provide the structure to anchor events.

Central to the analysis is the adoption of Demirdache and Uribe-Etxebarria (2007)’s proposal that “tense is a temporal predicate of (non-)coincidence,” which takes the arguments UttT (utterance time) and EvT (event time). T carries the feature  $[\pm\textit{coincide}]$ , which relates UttT and EvT.



If T is  $[\textit{+coincide}]$ , then the utterance time and event time coincide, yielding a present tense interpretation. If it is  $[\textit{-coincide}]$ , then they do not, yielding a past tense interpretation.

Ritter and Wiltschko (2005) focuses mainly on two languages spoken in Canada, Halkomelem and Blackfoot, as examples of languages where events are anchored via something other than T. In Halkomelem, they propose, the event is anchored spatially in a LocP (location phrase).



(72) **?i** cən c'éc'əw-ət  
 aux 1SG.S be.helping-TRANS  
 “I’m helping him.”

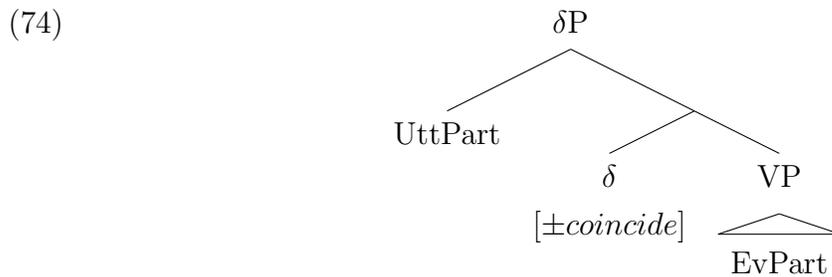
(73) **ni?** t'ít'əl'-əm'  
 aux be.singing-INTRANS  
 “There is someone singing.”

*Ritter and Wiltschko (2005)*

The two locative auxiliaries of note in (72) and (73) are *?i* and *ni?*. They serve to relate the locations of the event and the utterance. *?i* conveys that UttLoc (utterance location) and EvLoc (event location) coincide (+*coincide*), whereas *ni?* conveys that they do not coincide (−*coincide*).

Analogous to T, Loc is a spatial predicate of coincidence that takes an UttLoc (utterance location) argument and an EvLoc (event location) argument; a Loc carrying the feature [+*coincide*] (*?i*) yields the interpretation that the event location is the same as the utterance location (“here”), while [−*coincide*] (*ni?*) yields the opposite (“there”, away from both speaker and addressee). The event and the utterance are related via their locations.

Conversely, in Blackfoot events are anchored via the *discourse participants*.



- (75) nit- a- yiitsittsimaa- **hp**- innan  
 1- IMPF- slice.meat.AI- LOCAL- 1PL  
 “We (exclusive) are thinly slicing meat (for dried meat).”
- (76) kit- a- yiitsittsimaa- **hp**- oaawa  
 2- IMPF- slice.meat.AI- LOCAL- 1PL  
 “You are thinly slicing meat (for dried meat).”
- (77) a- yiitsittsimaa-  $\emptyset$ - yi- aawa  
 IMPF- slice.meat.AI- NONLOCAL- 3PL - 3PL.PRN  
 “They are thinly slicing meat (for dried meat).”

*Wiltschko (2014)*

Here we see that one morpheme (*hp*) occurs when the event participants coincide with the discourse participants (i.e. the external argument is either the speaker or the addressee), whereas another ( $\emptyset$ ) occurs when they do not coincide (i.e. a third party).

Ritter and Wiltschko call the coincidence predicate here  $\delta$ , which takes an *UttPart* (utterance participants) and an *EvPart* argument;  $\delta$  [+*coincide*] gives an “us” interpretation, and  $\delta$  [–*coincide*] gives a “them” interpretation. The event and the utterance are related via their participants.

In defense of the claim that Halkomelem truly lacks T, Ritter and Wiltschko (2005) give as evidence the fact that the following 3 predictions are borne out: 1) that Halkomelem should lack temporal deictics, 2) that it should lack infinitives, and 3) that it should not pattern like English in terms of passivization and nominative case assignment. They also point out that the auxiliaries have other unambiguously spatial uses in the language, e.g. spatial prepositions (“in my house”) or spatial main predicates (“He’s here”). For Blackfoot, Ritter and Wiltschko (2005) provide data showing that verb inflection morphology correlates with the discourse roles and not the thematic roles of the arguments. For example, the anchoring participant in sentences like “I love my daughter” and “My daughter loves me” is the speaker; it does not change, and therefore neither does the first-person proclitic that attaches to the verb, even though the thematic role of the anchoring participant is different in the two sentences. (The difference between the sentences instead arises from a “theme marker,” which Ritter and Wiltschko (2005) analyze as an instantiation of the  $\delta$  head.)

## 4 Universal Spine Hypothesis

Thus far, we have seen that many linguists have argued for and against the presence of T in MC.

The proposal in section 3.2 is actually a specific application of a larger theoretical proposal by Martina Wiltschko, called the Universal Spine Hypothesis (USH), which she details in her 2014 book *The Universal Structure of Categories*. In this section, I will give an overview of her proposal, as well as the kind of argumentation she brings in support of it. Ultimately, the goal will be to see what insights we can gather from applying this mode of analysis to MC.

The basic goal of the USH is to address the question of how we should reconcile the similarity and variation in the structure of different languages. The unique proposal of Wiltschko (2014) is that what is universal is a small set of primitive categories, and that language-specific categories are constructed through the association of language-specific lexical items with these primitives. In the sections that follow, I describe this proposal in more detail.

### 4.1 What is a category?

Before we can discuss which categories are universal, we need to define what a category is. The term category has been used to designate a wide variety of elements which do not necessarily form a natural class. Units of language (to borrow Wiltschko (2014)'s term) that have been designated as categories form some rough groups, as described in (78). We use categories that are instantiated in English as a starting point.

- (78) Categorizable Units of Language
- a. words: DETERMINERS, COMPLEMENTIZERS, ...
  - b. morphemes: POSSESSIVE, PROGRESSIVE, ...
  - c. features: TENSE, NUMBER, CASE, ...
  - d. clause-types: IMPERATIVE, SUBJUNCTIVE, ... *Wiltschko (2014): 11*

Categorial identity is linked with distribution. For example, for English, if we know that a word is a determiner, then we know that it must precede a noun phrase.

(79) I love **the** cat.

(80) \*I **the** love cat.

## 4.2 Diagnosing language-specific categories

Any syntactic analysis that attempts to designate cross-linguistic universals runs into the problem that languages exhibit enormous variation across many different dimensions. Wiltschko (2014) points out that while much work in syntax over the past few decades has attempted to account for variation in linear word order and grammatical constructions, less focus has been given to the variation that exists between different languages' categorial inventories.

For example, in English, tense inflection is obligatorily marked in every sentence. It is the inflection itself which is obligatory and not the temporal information it encodes; it must be present even if temporal information is expressed elsewhere in the sentence.

- (81) a. Yoshi play-**ed** ball (yesterday).  
 b. Yoshi play-**s** ball (today).
- (82) a. \*Yoshi play ball (yesterday).  
 b. \*Yoshi play ball (today).

As we have seen, a language like Mandarin Chinese does not obligatorily mark sentences for tense.

- (83) wǒ yào qù dǎ lánqiú.  
 1SG want go hit basketball  
 "I want to go play basketball." OR "I wanted to go play basketball."

In (5), the temporal interpretation of the utterance is dependent on context.

Diagnostics for individual categories are different for every language. For example, to diagnose auxiliaries in English for any UoL you can look at (84) its distribution, (85) tense inflection, (86) subject agreement, and (87) subject-auxiliary inversion.

- (84) a. Edward **has** blown the whistle.  
 b. Edward **is** blowing the whistle.
- (85) a. Edward **had** blown the whistle.  
 b. Edward **was** blowing the whistle.
- (86) a. They **have** blown the whistle.  
 b. They **were** blowing the whistle.

- (87) a. **Has** Edward blown the whistle?  
 b. **Is** Edward blowing the whistle?

Not all languages have morphological tense or subject agreement, and not all languages have subject-auxiliary inversion. These kinds of diagnostics cannot be used to diagnose universals.

### 4.3 Diagnosing universal categories

As discussed in section 4.2, certain diagnostics can only be applied to specific languages. This is because not every category will behave in the same way in every language, and not every category is overtly expressed in every language to begin with. An auxiliary in English can be identified by its distribution, the kinds of morphology that can attach to it, and the kinds of syntactic operations that it participates in; however, auxiliaries will not exhibit the same patterns in every language. In German, auxiliaries do not precede main verbs in matrix declarative clauses. One tense, mood, or aspect element appears as the second element in the clause (German exhibits V2-order), and any other verbal elements appear at the right edge.

- (88) Ich **ha-b-e**                das Buch **gelesen**.  
 I    have-PRES-1SG the book read  
 “I have read the book.”

Swedish auxiliaries do not morphologically mark  $\phi$ -feature agreement, although they do inflect for tense.

- (89) **Har** du smakat på sallad-en?  
 Have you tasted on salad-the  
 “Have you tasted the salad?”
- (90) **Har** hon smakat på sallad-en?  
 Have she tasted on salad-the  
 “Has she tasted the salad?”

#### 4.3.1 Universal patterns of multi-functionality

However, there is something universal about the patterns of multi-functionality that UoLs exhibit. For example, the above examples with verb/auxiliary *have* and *be*;

also, cross-linguistically there is a tendency for demonstratives to do “double duty” as complementizers.

- (91) a. I know **that** guy.  
b. I know **that** this guy is courageous.

This kind of “double duty” is one kind of universal pattern.

### 4.3.2 Universal patterns of contrast

Another type of universal pattern concerns the ways in which different morphemes’ interpretations may or may not overlap. To illustrate this, Wiltschko (2014) employs the example of plural marking in English.

In English, nouns may bear no number morphology or may be marked by the plural morpheme -s.

- (92) I ate the **apple**.  
(93) I ate the **apples**.

In (92), we get a singular interpretation, whereas in (93), we get a plural interpretation. A plural interpretation in (92) is not possible, and vice versa for (93). However, it is not the case that all unmarked nouns in English have a dedicated singular interpretation. For instance, in noun compounds in English, an unmarked noun may receive a plural interpretation.

- (94) light switch  
(95) bug spray

Sometimes, an unmarked noun in a compound may receive a singular interpretation, as in (94). A light switch is a device that is related to one lighting appliance. However, it is not always the case that the unmarked first noun in a noun compound receives a singular interpretation. We understand that bug spray, as in (95), is used to kill multiple bugs. The first noun is able to receive a plural interpretation, despite the fact that the noun is unmarked in the compound. There is then a crucial difference between the kind of unmarkedness that we see in (92) and (95). Using Wiltschko (2014)’s terminology, we can call (92) **zero-marked**, whereas (95) is **truly unmarked**.

The difference between a zero-marked noun, as in (92), and a truly unmarked noun, as in (95), then, is that a zero-marked noun receives a dedicated interpretation (singular), whereas a truly unmarked noun does not. In other words, a zero-marked noun’s interpretation **complements** the interpretation of a plural-marked noun. For a zero-marked noun, it can only receive a singular interpretation. Conversely, a truly unmarked noun’s interpretation **includes** the interpretation of a plural-marked noun. A truly unmarked noun can receive a singular interpretation *or* a plural interpretation, overlapping with the interpretation of a plural-marked noun. This kind of contrast Wiltschko (2014) considers to be a universal pattern of contrast.

#### 4.4 The Universal Base Hypothesis, No Base Hypothesis, and the Universal Spine Hypothesis

At one end of the spectrum, there is the Universal Base Hypothesis, which makes the following claim:

- (96) Universal Base Hypothesis (UBH): The deep structures of all languages are identical, up to the ordering of constituents immediately dominated by the same node.

However, we have seen that (96) is too strong, because not all languages instantiate the same categories, and even the same categories in different languages will exhibit different properties. For example, while English instantiates a category tense, Blackfoot does not:

- (97) *Anna Mai’stoo isttso’kiniwa.*

ann-wa      Mai’stoo-wa isttso’kini-wa  
DEM-PROX Raven-PROX hungry.AI-PROX

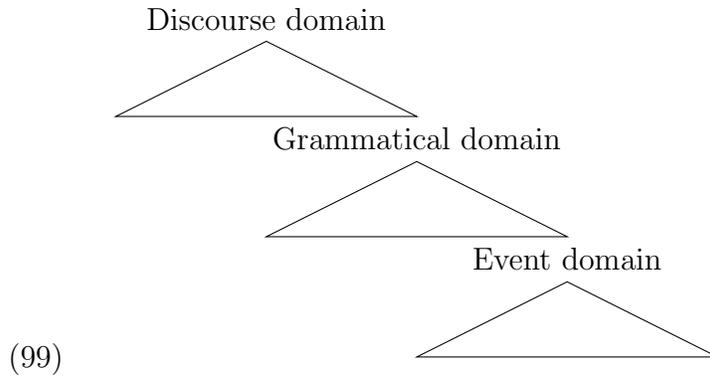
“Mai’stoo is hungry.” OR “Mai’stoo was hungry.”

At the other end of the spectrum, there is the No Base Hypothesis:

- (98) No Base Hypothesis (NBH): There are no universal categories or word order effects.

However, we see that there are indeed broad commonalities between different languages’ syntax. The notion that the syntactic spine is very generally able to be

broken into different domains is not new. The domain containing the verb phrase is associated with assignment of thematic roles. The domain above that is associated with tense and aspectual marking and the introduction of grammatical roles such as “subject” and “object.” Then, the domain above that is where clauses are typed; discourse roles like topic and focus are also defined here (Wiltschko, 2014).



Take these parallel orderings in English and Blackfoot:

(100) Who did you see?  
focus > tense > subject > verb

(101) *Nitsóóhtowawa.*  
nit-yooht-o-a-wa  
1-hear-TA-DIR-PROX  
“I heard him/her.”

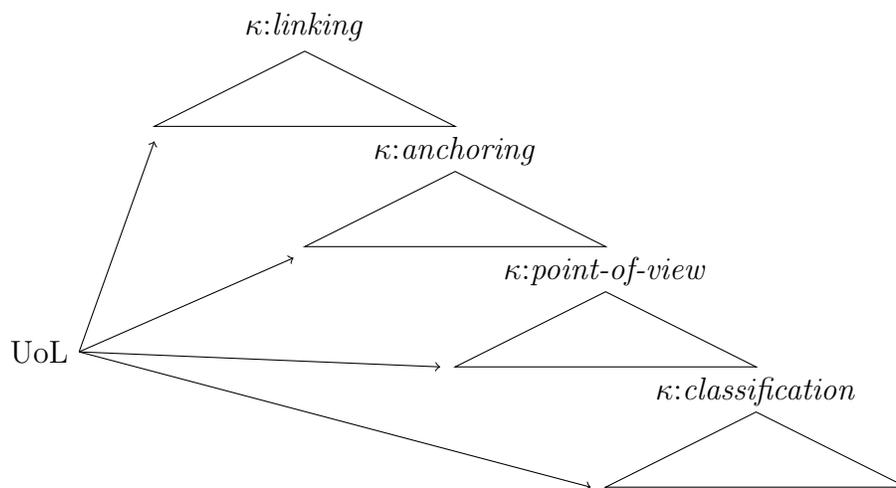
The solution that Wiltschko (2014) proposes, then, is what she calls the Universal Spine Hypothesis. It seeks to strike a balance between the UBH and the NBH. Following the kind of intuition illustrated in (99), Wiltschko (2014) proposes that what is universal is a set of primitive universal categories  $\kappa$ , which associate with language-specific UoLs (units of language) to construct language-specific categories.

(102)  $c = \kappa + \text{UoL}$

where  $\kappa$  is a member of the set of primitive universal categories. The set of primitive universal categories is illustrated below; the categories are strongly related to the intuition we have about different domains of the syntactic spine. The classification domain corresponds roughly to what we might call the VP-shell. The point-of-view

domain then corresponds with aspect, the anchoring domain with the TP, and the linking domain with the CP.

(103)



*Wiltschko (2014): 36*

## 4.5 Anchoring categories

In this section, I will focus specifically on the area of the spine that is of greatest interest to the question of tenselessness, namely  $\kappa:anchoring$ , and briefly discuss practical diagnostics for anchoring categories.

In order to identify an anchoring category, it is necessary to make observations regarding its distribution and function. Specifically, an anchoring category must display the distribution of a syntactic head (it must associate with  $\kappa$  via the *is-a* relation), it must be located in the anchoring domain  $\kappa:anchoring$  (between  $\kappa:classification$  and  $\kappa:linking$ ), and it must perform the function of anchoring the event (relating the event to the discourse in some way).

(104) Characteristics of an anchoring category:

- a. Displays the distribution of a syntactic head
- b. Located in the anchoring domain
- c. Performs the function of anchoring the event

In what follows, I will describe how to concretely determine if a morpheme displays the distribution of a syntactic head, if it is located in the anchoring domain, and if it performs the function of anchoring the event.

### 4.5.1 The *is-a* relation

If a morpheme associates with  $\kappa$  by the *is-a* relation, it will display the distribution of a head. Otherwise, it will display the distribution of a modifier. The *is-a* relation is so named because the morpheme itself instantiates  $\kappa$ ; it *is* a  $\kappa$ .

In the plural marking example described in section 4.3.2, the zero-marked noun is an instance of a category which has associated with  $\kappa$  via the *is-a* relation, whereas the truly unmarked noun is an instance of a category which has associated via the modifying relation. The crucial diagnostic for determining whether or not a morpheme has associated with  $\kappa$  via the *is-a* relation is observing whether or not it has a dedicated interpretation. The zero marked noun in (92) has the dedicated interpretation of being singular, whereas the truly unmarked noun in (95) does not have a dedicated interpretation; its interpretation may overlap with that of the marked form (it may receive a plural interpretation).

For Halkomelem and Blackfoot, tense inflection is an example of a category which does not associate with  $\kappa$  via the *is-a* relation (see section 3.2 for more detail). Halkomelem has a past morpheme which may attach to a verb for a past interpretation. However, a past interpretation is also possible without the past morpheme.

(105) **í-lh**      qw'eyílex tú-tl'ò.  
 AUX-PST dance      DET-PRN  
 “He was dancing.”

(106) **í**      qw'eyílex tú-tl'ò.  
 AUX dance      DET-PRN  
 “He is/was dancing.”

The fact that a past interpretation is possible in the absence of the past morpheme *-lh* (in (106)) indicates that the past morpheme *-lh* does not associate with  $\kappa$  via the *is-a* relation, or in other words, that it does not have the distribution of a syntactic head. If it did, we would expect dedicated interpretations for the verb with and without the morpheme.

These kinds of phenomena contrast with something like English tense marking, which does pattern like a head. In English, a verb that is not marked for past tense cannot receive a past tense interpretation, whereas a Halkomelem verb that does not bear the past morpheme *-lh* can still have a past interpretation.

## 5 Candidates for an anchoring category in MC

Wiltschko (2014) provides a promising new framework to describe crosslinguistic differences and universals because it draws on our existing intuitions about the universal structure of the spine; namely, that the spine is composed of various regions which are defined by their relative locations in the spine as well as their functions. In this section, I explore the application of the USH to MC data, and attempt to identify some possibly candidates for the anchoring category in MC.

There are several candidates for UoLs which may associate with  $\kappa$ :*anchoring* in MC. Ultimately, the diagnostics described in section 4.5 need to be expanded for a case like MC, since they rely on morphology to a certain extent.

### 5.1 Future/non-future

If we look first in the realm of tense-like anchoring categories, one possible candidate in MC is the future marker *huì*.

- (107) wǒ **huì** gàosù nǐ.  
 1SG will tell 2SG  
 “I will tell you.”

If *huì* instantiates the anchoring category in MC, we might imagine that MC is a language which manifests a future/non-future tense contrast, as opposed to a past/non-past contrast. In this line of thinking, MC is a language which relates the event in the verbal domain to the discourse situation via futurity, or whether or not the world described by the event coincides with the actual world and its events, past and present. If the anchoring head is valued [+COINCIDE], then we get a non-future (past or present) interpretation of the event.

The candidate also seems to occupy the right place in the clause. Consider the following data.

- (108) wǒ shì [<sub>CP</sub> ∅ huì [<sub>VP</sub> qù Běijīng] de].  
 1SG COP HUI go Beijing COMP  
 “I am the one who will go to Beijing.”

In (108), we have a relative clause where the relativized NP is null. *Huì* seems to occupy a position between the CP layer, headed by the complementizer *de*, and the VP-layer.

This candidate runs into a number of problems. I will discuss these problems with reference to the general diagnostics for anchoring categories given in Wiltschko (2014), reproduced here as (109).

- (109) Characteristics of an anchoring category:
- a. Displays the distribution of a syntactic head
  - b. Located in the anchoring domain
  - c. Performs the function of anchoring the event

The first problem we run into is that *huì* does not seem to display the right distribution. That is to say, we see cases where a sentence has a future interpretation even though *huì* does not appear in the sentence. The following comes from the drama *Yuánlái jiùshì nǐ* “It was you all along”. Given that the pronunciation of *huì* is not obligatory to encode a future interpretation, it seems that *huì* does not associate with the spine via the *is-a* relation, and therefore does not display the correct kind of distribution.

- (110) The addressee’s clothes have been damaged, and the speaker is offering to compensate him for the damage.

zhè yīfu duōshǎo qián? wǒ péi gěi nǐ.  
 this clothes how.much money? 1SG compensate give 2SG

How much are these clothes? I’ll pay you.

In (110), the sentence we are interested in is the second, where *huì* does not appear in the sentence and yet it receives a future interpretation. These kinds of sentences that exhibit promissive interlocutionary force often encode a future interpretation in the absence of *huì*.

Another problem posed by *huì* is that there are a number of other modals which can occur in what looks like the same position, discussed by Lin (2011) in section (A). Some of these options are shown here.

- (111) wǒ **kěyǐ** gào sù nǐ.  
 1SG be.permitted.to tell 2SG  
 “I am allowed to tell you.”

- (112) wǒ **néng** gào sù nǐ.  
 1SG be.able.to tell 2SG  
 “I am able to tell you.”

- (113) wǒ **kěnéng** gào sù nǐ.  
 1SG be.likely.to tell 2SG  
 “I am likely to tell you.”

If *huì* belongs to a similar set of elements to the ones shown in examples (111)-(113), then it is not clear what privileges one of these modals over the others to be considered the anchoring category.

## 5.2 Aspect

Another possible candidate for an anchoring category in MC is the perfective marker *le*.

- (114) wǒ chī fàn **le**.  
 1SG eat PERF  
 “I have eaten.” “I ate.”

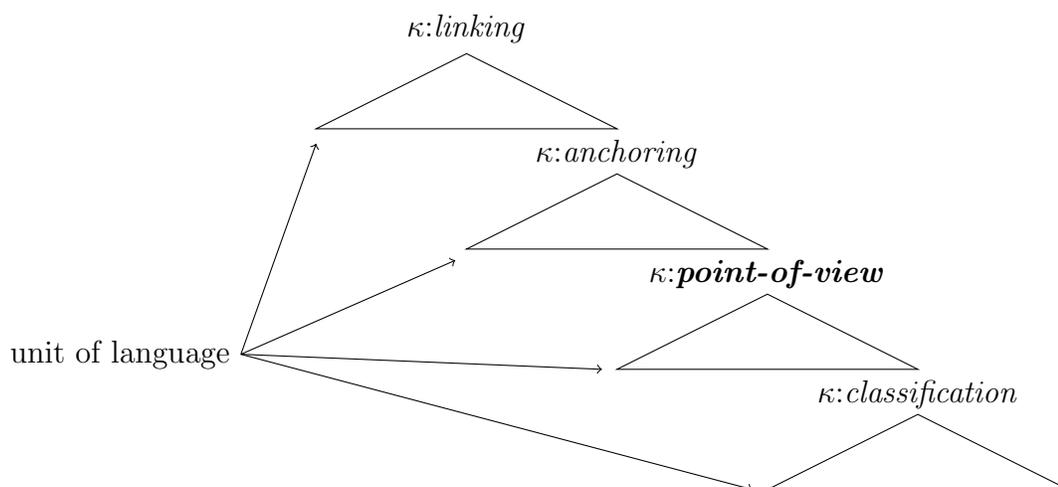
*Le* satisfies criteria (109a) (the element must display the distribution of a syntactic head). In this sense, *le* is actually one of the most robust pieces of morphology that appears in MC, in that its presence is obligatory for the encoding of any kind of perfective meaning. Unlike *huì*, *le* can be said to associate with the spine via the *is-a* relation.

- (115) nǐ zuótiān qù túshūguǎn \*(le) ma?  
 2SG yesterday go library LE Q  
 “Did you go to the library yesterday?”

In (115), we see that even when a temporal adverbial is present in the sentence which allows some perfective meaning to be recoverable, i.e. that it is understood that the event took place in the past and has therefore been completed relative to the speech time, the presence of *le* in the sentence is still required.

At least within the framework that Wiltschko (2014) outlines, this candidate is problematic because it seems to associate in the wrong place.

- (116)



Aspect is relegated to  $\kappa:point-of-view$  in Wiltschko (2014). Using the  $[\pm COINCIDE]$  feature which Wiltschko (2014) takes to live in the anchoring domain, it seems like *le* may also run into issues with criteria (109c), which is also a side-effect of its violation of (109b). Given that *le* does not seem to associate with the spine in the right place, it follows (if we follow Wiltschko (2014)) that it also should not perform the right function. Indeed, the aspectual marker *le* does not relate anything in the event domain with the discourse domain via some feature  $[\pm COINCIDE]$ .

If Wiltschko (2014) is on the right track, then we expect that MC truly does instantiate language-specific versions of each of the four universal categories  $\kappa$ . Neither candidate considered in this section has fully satisfied the diagnostics for anchoring categories laid out by Wiltschko (2014). The difficulty we have in applying the diagnostics from Wiltschko (2014), which considered relatively morphologically-rich languages, indicates that perhaps we need to take a step back and identify diagnostics which are still more general than the ones proposed in Wiltschko (2014). We can attempt to refine these diagnostics so that we are able to handle languages which are relatively morphologically-impooverished, like MC, and conversely, so that we are able to more specifically designate what characterizes the anchoring category (i.e., determine which, if any, of the modals from section 5.1 might be the MC anchoring category).

Finally, it is worth considering the possibility that the four universal categories identified by Wiltschko (2014) may sometimes be instantiated by language-specific, phonologically-null variants. The diagnostics given, and the reasoning described by Wiltschko (2014) rely on the unspoken assumption that these universal categories

are instantiated by some pronounced morpheme whose interpretation, distribution, and function we can observe. This limits our choices for a language like MC, which already has relatively few such morphemes to choose from.

## 6 Conclusion

In this essay, I described some of the arguments that have been made within the MC literature regarding the analysis of MC with and without syntactic T. In other languages, T can be observed very easily in its morphological reflexes on the verb. Specifically, T is reflected morphologically through tense, case, and finiteness marking. Because MC is a relatively morphologically impoverished language, syntacticians have had to identify what look like the effects of these T-related phenomena. In the case of tense, some have argued that in the absence of a T node, temporal interpretation would be impossible. Others have argued that not only do we need T to derive a semantics of these MC sentences, we can also observe its effects by observing the interaction of linguistic modifiers with the default interpretation. I described one account of effects of Case in MC, and finally discussed one version of an account of finiteness in MC which explicitly makes reference to the T or T-less debate.

Moving outside of the MC literature, I discussed work on West Greenlandic, Halkomelem, and Blackfoot, and discussed the kinds of observations that linguists have made in their attempts to outline T-less analyses of these languages. The work done on these languages has shown that not all temporal morphemes display the distribution of a syntactic head, although perhaps other morphemes do in these languages, even though they do not encode temporal information.

Finally, I moved on to a discussion of Wiltschko's USH and its implications for the MC tenselessness debate. If we adopt the framework described in Wiltschko (2014), then it provides a fittingly elusive answer to the question of whether or not MC has a syntactic category T. The debate on this question is ongoing because of two seemingly irreconcilable facts; (1), that TP plays an important role in the syntactic architecture, and (2), that it is unclear that MC shows the effects of TP's presence. If we adopt Wiltschko (2014), we can acknowledge the importance of the region of the spine associated with TP while entertaining a broader range of possibilities for its content.

Although an MC anchoring category has yet to be identified, Wiltschko (2014)

provides a promising framework which seems fit to accommodate a broad range of languages. What remains to be done is identifying more universally applicable diagnostics which may be applied to a language like Mandarin Chinese.

## APPENDIX

## A Properties of modals in MC

In this section, I present some properties of modals in MC, as discussed in Lin (2011). Lin (2011) presents the data in this section in order to establish a typology of MC modals, which is used as a backdrop for the discussion on finiteness.

Lin (2011) begins with a discussion of two modals, *huì* “be able to” and *kěnéng* “be likely to”. *Huì* is a root modal, whereas *kěnéng* is an epistemic modal. According to Lin (2010), the data in (117)-(118) shows that *huì* is a raising modal, because the relative felicity of different nouns in subject position is subject to the selectional criteria of the embedded predicate and not *huì*. In other words, the subject is “semantically sensitive” to the embedded predicate and not *huì*. For example, (117) is grammatical and (118) is not because Zhangsan is an appropriate subject for *huì jiā* “go home,” whereas “the wall” is not.

(117) Zhāngsān huì huí jiā.  
Zhangsan will return home  
“Zhangsan will go home.”

(118) #qiáng huì huí jiā.  
wall will return home  
“The wall will go home.”

(119) provides some examples of other modals in MC and which category they belong to.

|       | Modals patterning with <i>huì</i><br>(Root)                        | Modals patterning with <i>kěnéng</i><br>(Epistemic) |
|-------|--------------------------------------------------------------------|-----------------------------------------------------|
| (119) | kěyǐ “be permitted to”<br>néng “be able to”<br>kěn “be willing to” | yīnggāi “should”                                    |

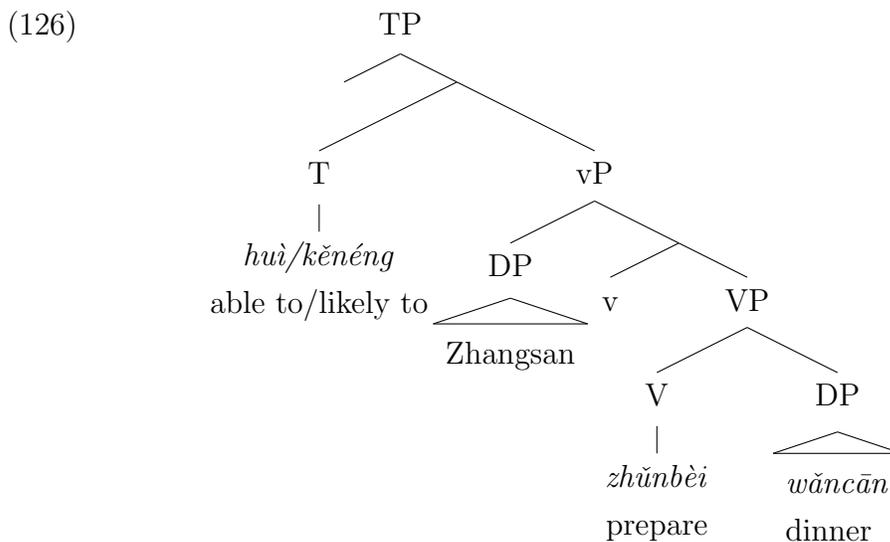
Lin (2011) also demonstrates that the two types of modals differ with respect to raising of the argument DPs. In the case of *huì* (root modals), raising of the external argument is obligatory and raising of the internal argument is disallowed; this also means that a sentence where no raising occurs (120) is ungrammatical.

- (120) \*huì Zhāngsān zhǔnbèi wǎncān.  
will Zhangsan prepare dinner
- (121) Zhāngsān<sub>i</sub> huì [t<sub>i</sub> zhǔnbèi wǎncān].  
Zhangsan will prepare dinner  
“Zhangsan will prepare dinner.”
- (122) \*wǎncān<sub>j</sub> huì [Zhāngsān zhǔnbèi t<sub>j</sub>].  
dinner will Zhangsan prepare

*Kěnéng* (epistemic modals) behaves differently; for *kěnéng*, raising is optional and when raising occurs it can be either the external or internal argument.

- (123) Zhāngsān kěnéng zhǔnbèi wǎncān.  
Zhangsan be.likely.to prepare dinner  
“Zhangsan might prepare dinner.”
- (124) wǎncān kěnéng Zhāngsān zhǔnbèi.  
dinner be.likely.to Zhangsan prepare  
“Dinner might be prepared by Zhangsan.”
- (125) kěnéng Zhāngsān zhǔnbèi wǎncān.  
be.likely.to Zhangsan prepare dinner  
“It is likely that Zhangsan prepares dinner.”

Below is a tree representing the basic structure of (120)-(125), as well as a summary of the raising properties described in this section:



- (127) Epistemic modals in MC “permit freer extraction” than root modals. For epistemic modals:
- a. Raising is optional.
  - b. When raising occurs, either the external or the internal argument can raise.
- (128) For root modals:
- a. The external argument **must** raise.
  - b. The internal argument **cannot** raise.

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