Syntactic tense in Chinese: evidence from jiang 將

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Is Chinese tenseless?

- An unsettled debate
- No tense morphology
- Use of indirect evidence
  - Overt subject or PRO in embedded clause Huang 1982, Li 1985, Hu, Pan & Xu 2001, a.o.
This talk

• There is syntactic tense in Mandarin.
• Jiang (將) is a future tense morpheme, alternating with an unpronounced non-future morpheme.
• Implications:
  – How we describe Chinese
  – Clause structure
  – Tense typology: future vs. non-future split is uncommon
    Comrie 1985: most future vs. non-future distinctions are actually realis vs. irrealis.
    Reports only Hua, a Papuan language, as a language with a future vs. non-future distinction
Overview

• Four reasons to analyze *jiang* as syntactic tense
  – Marks future time and structurally high
  – Not an auxiliary
  – Not an adverb
  – Not irrealis mood

• Clause structure

• Predictions and issues with a tense analysis of *jiang*

• Conclusion
What is tense?

Syntactic tense

- Tense node / TP
- + Tense morphology

Semantic tense

- Future/Past time operator
- Reichenbachian relation between speech time and reference time
- Etc.

Today’s focus
Future time reference in Mandarin

- Previous research has mostly looked at 會 hui, 要 yao.
- *hui* – usually glossed as “will.”
- *yao* – usually “will,” “be going to.”
- Syntactically analyzed as T(ense), I(nflection), Aux(iliary), Mod(al), etc.

- *Jiang* is rarely discussed.
  - Because it is used in more formal registers?
How frequently is *jiang* used?

**Appearances of modals and *jiang* in 361k-word treebank of Academia Sinica**

<table>
<thead>
<tr>
<th>Modals</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>要 <em>yao</em>  'must, be going to'</td>
<td>942</td>
</tr>
<tr>
<td>會 <em>hui</em>  'may, will'</td>
<td>827</td>
</tr>
<tr>
<td>能 <em>neng</em>  'can'</td>
<td>731</td>
</tr>
<tr>
<td>將 <em>jiang</em></td>
<td>559</td>
</tr>
<tr>
<td>可以 <em>keyi</em>  'may'</td>
<td>540</td>
</tr>
<tr>
<td>可 <em>ke</em>  'may'</td>
<td>482</td>
</tr>
<tr>
<td>可能 <em>keneng</em>  'might'</td>
<td>225</td>
</tr>
<tr>
<td>應 <em>ying</em>  'should'</td>
<td>210</td>
</tr>
<tr>
<td>應該 <em>yinggai</em>  'should'</td>
<td>156</td>
</tr>
<tr>
<td>得 <em>dei</em>  'have to'</td>
<td>88</td>
</tr>
<tr>
<td>能夠 <em>nenggou</em>  'can'</td>
<td>86</td>
</tr>
<tr>
<td>該 <em>gai</em>  'should'</td>
<td>77</td>
</tr>
<tr>
<td>當 <em>dang</em>  'should'</td>
<td>10</td>
</tr>
<tr>
<td>應當 <em>yingdang</em>  'should'</td>
<td>2</td>
</tr>
</tbody>
</table>

Counts are for lexical items coded as “Db” and “VL2” in the Treebank.

- *Jiang* is formal, not used in casual contexts
- … but used productively and frequently!

Source: Academia Sinica’s 中文句結構樹資料庫簡介 (Sinica Treebank Version 3.0); [http://turing.iis.sinica.edu.tw/treereach/](http://turing.iis.sinica.edu.tw/treereach/).
Basic properties of *jiang*

- Syntactically “high” and precedes *hui* and *yao*.

1 (a) 李四 將 會 去 北京。
Lisi jiang hui qu Beijing.
L JIANG HUI go Beijing
Lisi will go to Beijing.

1(b) *李四 會 將 去 北京。*
Lisi hui jiang qu Beijing.
L HUI JIANG go Beijing
Lisi will go to Beijing.
Basic properties of jiang

• Compatible with a large range of time references.

2 (a) The bomb will explode in a minute.

2 (b) The sun will become a red giant after five billion years.
**Jiang is not an auxiliary**

- Use Ren’s criteria for auxiliaries (Ren 2008).
  in turn adapted from those in Chao 1968; Li and Thomspn 1981; Li 2004
- Include ellipsis licensing – *hui* licenses ellipsis

<table>
<thead>
<tr>
<th>Auxiliary diagnostics (Ren 2008)</th>
</tr>
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<tbody>
<tr>
<td>1 Occur only with a main verb</td>
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<tr>
<td>2 Cannot take a direct object</td>
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<tr>
<td>3 Cannot take aspect markers</td>
</tr>
<tr>
<td>4 Can form A-not-A questions</td>
</tr>
<tr>
<td>5 Can be negated with <em>bu</em> 不 “not”</td>
</tr>
<tr>
<td>6 ADDED: License ellipsis</td>
</tr>
</tbody>
</table>
**Jiang is not an auxiliary**

1. Occurs only with a verb (modulo ellipsis).

4. 李四 { 將 / 會 / 要 } *(去 北京)。
   Lisi { Jiang hui yao } qu Beijing.
   L JIANG HUI YAO go Beijing
   Lisi will go to Beijing.

2. Cannot take a direct object.

5. * 李四 { 將 / 會 / 要 } 北京。
   Lisi { jiang hui yao } Beijing.
   L JIANG HUI YAO Beijing
   No meaningful translation
Jiang is not an auxiliary

3. Cannot take aspect markers.

6 (a)  * 李四 { 將了 / 會了 / 要了 } 去 北京。

Lisi { jiang-le hui-le yao-le } qu Beijing.

L JIANG-PF HUI-PF YAO-PF go Beijing

Lisi would be going to Beijing.

– Compare with some control verbs like “to invite.”

6 (b)  我 請過 她 吃 飯。

wo qing-guo ta chi fan.

I invite-EXP her eat meal

I invited her to a meal.
Jiang is not an auxiliary


7 (a) 李四 会 不 会 唱歌？
Lisi hui bu hui changge?
L HUI NEG HUI sing
Will Lisi sing?

• Jiang cannot.

7 (c) * 李四 将 不 将 唱歌？
Lisi jiang bu jiang changge?
L JIANG NEG JIANG sing
Will Lisi sing?
Jiang is not an auxiliary

5. Auxiliaries can be negated by the negative morpheme *bu*.

8 (a) 李四 明天 不 會 唱歌。
      Lisi  mingtian  bu  hui  changge.
      L  tomorrow  NEG HUI  sing
      Lisi won’t sing tomorrow.

- **Jiang cannot be.** Wu and Kuo 2010
  - Verbs can be negated; *jiang* is not a verb. *contra* Smith & Erbaugh 2005

8 (b) * 李四 明天 不 將 唱歌。
       Lisi  mingtian  bu  jiang  changge.
       L  tomorrow  NEG JIANG  sing
       Lisi won’t sing tomorrow.
Jiang is not an auxiliary

6. Hui (and maybe yao) can license ellipsis.

9 (a) 李四 明天 会 去 北京, 我 也 会。
Lisi mingtian hui qu Beijing, wo ye hui.
L tomorrow HUI go Beijing I also HUI
Lisi will go to Beijing tomorrow, and so will I.

• Jiang cannot.

9 (b) * 李四 明天 将 去 北京, 我 也 将。
Lisi mingtian jiang qu Beijing, wo ye jiang.
L tomorrow JIANG go Beijing I also JIANG
Lisi will go to Beijing tomorrow, and so will I.
**Jiang is not an auxiliary**

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<tr>
<td>1 Occur only with a main verb</td>
<td>Y</td>
</tr>
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<td>Y</td>
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</table>
Jiang is not an adverb

1. Time adverbs can appear sentence initially ("movable").

Li and Thompson 1981

11 (a) 明年 李四 去 北京。
Mingnian Lisi qu Beijing.
next.year L go Beijing
Lisi goes to Beijing next year.

Jiang cannot.

11 (b) * 将 李四 去 北京。
Jiang Lisi qu Beijing.
JIANG L go Beijing
Lisi goes to Beijing (in the future).
**Jiang is not an adverb**


12 (a) 別 再 去 美國。了。
Bie zai qu Meiguo. le.
NEG.IMP again go America PRT
Don’t go to America again.

**Jiang cannot.**

12 (b) * 別 將 去 美國 了。
Bie jiang qu Meiguo. le.
NEG.IMP JIANG go America PRT
Don’t go to America.
Jiang is not irrealis mood

- Hypothesis: *Jiang* is irrealis mood – appears when describing events that haven’t happened.
- Future is irrealis, by definition.
- Prediction: *jiang* appears in non-future irrealis contexts.

<table>
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<th>Irrealis diagnostics (Matthewson 2006)</th>
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<tbody>
<tr>
<td>1 Can appear in negation</td>
</tr>
<tr>
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<tr>
<td>3 Can occur in conditionals</td>
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<tr>
<td>4 Can occur in imperatives</td>
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</table>
Jiang is not irrealis mood


14 (a) 李四 以前 (*將) 不 (*將) 喜歡 吃 蔬菜。
Lisi yiqian (*jiang) bu (*jiang) xihuan chi shucai.
L in.the.past JIANG NEG JIANG like eat vegetable
Lisi didn’t like to eat vegetables in the past.

2. Does not occur in yes-no questions about past events.

15 (a) 李四 以前 (*將) 喜歡 吃 蔬菜 嗎?
Lisi yiqian (*jiang) xihuan chi shucai ma?
L in.the.past JIANG like eat vegetable Q
Did Lisi like to eat vegetables in the past?
Jiang is not irrealis mood


16 如果内馬爾昨天(*將)能夠參賽，
if Neymar yesterday JIANG can participate

巴西隊或許就不會輸給德國隊了。
Brazil-team maybe then NEG lose to Germany-team PRT

If Neymar had been able to play yesterday, perhaps Brazil wouldn’t have lost to Germany. (e.g. said the day after Germany beat Brazil in the 2014 FIFA World Cup)

4. Does not occur in imperatives (discussed earlier).
### Jiang is not irrealis mood

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Interim summary

• Jiang is syntactically high and marks future time, but it is …
  – Not an auxiliary
  – Not an adverb
  – Not irrealis mood

Proposal: *jiang* is syntactic tense.
Proposed clause structure for Mandarin

18 ... C [... T [... Neg-1 [... Aux [... Neg-2 [... Aspect [... V

• Builds on the proposals for Mandarin by Soh 2007, Sybesma 2007, T.-H. J. Lin 2012, ...

• Similar to clause structure proposed for unrelated languages – a universal? Cinque 2000, van Gelderen 2013
  – English: van Gelderen 2013, Adger 2003; French: Pollock 1989; Malagasy: Pearson 2001; St’át’imcets: Matthewson 2006; ...

19 李四 将 不 会 不 理睬 我。
Lisi jiang bu hui bu licai wo.
L JIANG NEG HUI NEG pay.attention.to me
Lisi won’t ignore (i.e. will pay attention to) me.

李四 将 不 会 不 理睬 我。
Lisi jiang bu hui bu licai wo.
L JIANG NEG HUI NEG pay.attention.to me
Lisi won’t ignore (i.e. will pay attention to) me.
Two predictions

1. *Jiang* requires a verbal host, like a tense morpheme in English does.

2. There is a finite vs. non-finite distinction in Mandarin.
**Jiang requires a verbal host**

- Tang 2000, Lin 2010: Bare nominal predicates in Mandarin

20 (a) 今天 星期天。
Jintian xingqitian.
today Sunday
Today *(is) Sunday. (Lin 2010 ex. 30a)

- In contrast, English counterparts require a copula, even if it is semantically vacuous.
  - English has syntactic tense.
  - Tense can only be expressed on a verb: * Yesterday -ed Saturday.
  - See also *do-support.

- In Mandarin, semantically-vacuous copula not needed because there is no syntactic tense, “hence no tense features that need to … find a [verbal] host.” (Lin 2010: 318)
Jiang requires a verbal host

• *Jiang* behaves not unlike a tense morpheme would (e.g. in English).
  
  – E.g. requires a semantically vacuous verb like *shi* “be”

22 (a) 明天 將 *(是) 星期一。
  Mingtian jiang shi xingqiyi.
tomorrow JIANG be Monday
  Tomorrow will be Monday.
Finiteness distinction

• Previous syntactic arguments for or against a finiteness ("tense" vs. "non-tense") distinction:
  – Whether modals can appear in an embedded clause.
  – Whether subject of embedded clause is overt.
    See Hu, Pan & Xu 2001 for a detailed summary of arguments for and against.

• What can jiang tell us about this question?
Finiteness distinction

• *Jiang* appears in some embedded clauses (bridge verbs)

23 他們 {相信 / 希望 / 否認} 李四 將 去 美國。
    Tamen {xiangxin xiwang fouren} Lisi jiang qu Meiguo.
    They {believe / hope / denied} that Lisi will go to America.

• … but not all (control verbs).

24 他們 {叫 / 勸 / 鼓勵} 李四 (*將) 去 美國。
    Tamen {jiao quan guli} Lisi (*jiang) qu Meiguo.
    They {told / urged / encouraged} Lisi to go to America.

– Note (24) is unexpected if *jiang* is a future time adverb
Why is *jiang* optional in sentences set in the future?

- Why is this sentence OK?

25 李四 明天 會 去 北京。
Lisi mingtian hui qu Beijing.
L tomorrow HUI go Beijing
Lisi will go to Beijing tomorrow.
Why is *jiang* optional in sentences set in the future?

- Speakers have a variety of grammatical options for future time reference.
- No exclusive one-to-one correspondence between past/future time of an event and tense morphology.
  - English: Comrie 1985; Klein 1994

26 I *wanted* to ask you about your car. (desire to ask is in the present)
27 (a) That’s perfect. (referring to some event in the past)
     (b) She *has* gone to the station. (leaving event was in the past)

I wish I *was* an astronaut. (counterfactuals, Haiyong Liu, yesterday’s talk)
If I *had* gone there, I would have seen it. (as above)
Is *jiang* compatible with all predicates?

- *Jiang* seems to be no good with some predicates.

28 (a)  *每個 病人都將死。*

Mei-ge bingren dou jiang si.

Every patient will die. (e.g. making a diagnosis)

28 (b)  *我們下星期將回。*

Women xia-xingqi jiang hui.

We will go back next week.
Is *jiang* compatible with all predicates?

- An overt adjunct/object requirement?

29 (a) 每個 病人 都 將 死 於 癌症。
Mei-ge bingren dou jiang si yu aizheng.
every-CL patient all JIANG die of cancer
Every patient will die of cancer. (e.g. making a diagnosis)

29 (b) 我們 下星期 將 回 韓國。
Women xia-xingqi jiang hui Hanguo.
we next-week JIANG go.back Korea
We will go back to Korea next week.

- Pragmatics/informativity? Phonological weight?
E.g. Goldberg and Ackerman 2001; Omer Preminger pers. comm.

- But not syntactic incompatibility.
A note on the semantics of *jiang*

- Smith and Erbaugh 2005, Wu and Kuo 2010: *jiang* is modal.

- Semantic tense – encodes relation between reference time and speech time. Klein 1994 (also Reichenbach 1947; Comrie 1985)

- No *a priori* reason to expect *jiang* to be semantic tense
  - Empirical evidence: English modals are in T.
  - Conceptual: Languages can bundle various features into a single syntactic node (Matthewson 2006).
    - Lin 2006: Semantics of tense can be encoded in aspect.

- But possible that *jiang* is simultaneously tense and modal.
Take-aways

- *Jiang* is syntactic (future) tense.
- Distributional properties of *jiang* supports the claims that:
  - Mandarin Chinese has tense.
  - The split is between future vs. non-future.
  - There is a finite vs non-finite distinction.
- Typologically interesting: most languages do not make a future vs. non-future distinction. Comrie 1985; Klein 1994
- Clausal structure and syntax of Mandarin similar to unrelated languages.
  - Additional evidence supporting the notion that there is a universal clause structure in which Tense is a core component.
Credits

• Special thanks to NACCL-27 audience and organizers

• For discussion and critiques: Valentine Hacquard, Norbert Hornstein, Howard Lasnik, Gesoel Mendes Jr., Colin Phillips, Omer Preminger, Alexander Williams

• Verifying judgments: Huang Zhilin, Jennifer Liang