UNIVERSITY OF OXFORD | MIT Linguistics

Non-Future Tense in Mandarin Chinese:
Evidence from Contradictory (Forward) Lifetime Effects

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Goals

- Present new experimental evidence and empirical observations to propose a non-future tense analysis of Chinese
- Bring together recent work on the Future/Non-Future tense distinction in Chinese
- Propose a typology of tense, and discuss some implications for the study of superficially "tenseless" languages

Roadmap

- The debate: Tense Phrase in Chinese?
- A syntactic-semantic approach to Tense
- The Current Study: "Lifetime Effects"
  - Experimental evidence
  - Empirical observations
- Implications & Predictions

Temporal interpretation in Chinese

(1) Mary was studying.

(2) mali zai xue-xi.
Mary PROG study
'Mary was/is studying.'

- An ever unsettled debate
  - Established: no (past) tense morphology
  - Question: Is there **syntactic tense**, with semantic features under a phonologically empty **T node**?

Tense in Chinese?

- Three proposals
  - Tenseless: no semantic features under a phonologically empty T node (J. W. Lin, 2006; Smith & Erbaugh, 2005; Grano, 2017)
  - Covert past tense (Sybesma, 2007)
    - Consequence: a non-past tense too?
  - Future/Non-Future tenses (Sun, 2014; Huang, 2015; Li 2016; Chen, 2017)

The tenseless analysis

- Tenseless (J. W. Lin, 2006, 2010)
  - There is no need to resort to a covert T node in Chinese
  - A purely aspectual system can account for temporal interpretations in this language:
    - Perfective aspect = $\lambda P_{<i,t>} \lambda t_{Top} \lambda t_0 \exists$ t [t $\subseteq t_{Top} \wedge t_{Top} < t_0 \wedge P(t)$]
    - Imperfective aspect = $\lambda P_{<i,t>} \lambda t_{Top} \exists$ t [$t_{Top} \subseteq t \wedge P(t)$]
  - $[_{CP} \ldots [_{IP} \ldots [_{ModalP} \ldots [_{AspP} \ldots [_{VP} \ldots]]]]]$

The tenseless analysis (cont.)

- Problems:
  - Lin's analysis does actually build in the semantic notion of **tense.**
  - There is little evidence *against* a T node.
  - Some of the arguments are committed to the error of taking the (phonologically empty version of) English past tense as the only model for Chinese tense.
- Does it account for all temporal phenomena in Chinese?

Covert tense analyses

- Covert tense in Chinese:
  - The T node is not morpho-phonologically realized.
  - The finiteness property stems from the TP.
  - This TP may possess [±PAST] or [±FUTURE] features.
- If there is syntactic tense……
  - What different predictions do these analyses make?
  - What evidence do we need?

Methodological notes

- Common approaches to Tense sometimes focus on either "syntactic tense" or "semantic tense":
  - Structural evidence: Finiteness → T (T. H. Lin, 2015)
    - Insufficient; difficult to make a connection (Grano, 2017)
  - Semantically, tense encodes temporal relations
    - If semantic tense does not entail T, why not just call this syntactic position Arg/Infl/Case?

Tense at the syntax-semantics interface

- The most convincing argument must involve both syntactic and semantic evidence.
- Direct Mapping Hypothesis (Matthewson, 2001, p.155)
  - "…… the null hypothesis is that in each language, the semantics transparently reflects the (surface) syntax."
  - The current study pursues this hypothesis and uses semantic evidence to make syntactic claims about Chinese tense.
- See Kratzer (2005) for a discussion about making a close connection between syntactic and semantic evidence.

Lifetime effects

- Lifetime effects refer to the inferences about the life/death of the individual in the subject position (Arche, 2006; Jäger, 2001; Magri, 2009; Musan, 1997; Roy, 2013; Thomas, 2012).
  - e.g. '*Mary is from California*', '*John was blue-eyed*'
- Individual-level predicates impose restriction on the lifetime of their subjects.
- Clausal tense interacts with temporal information in the nominals.

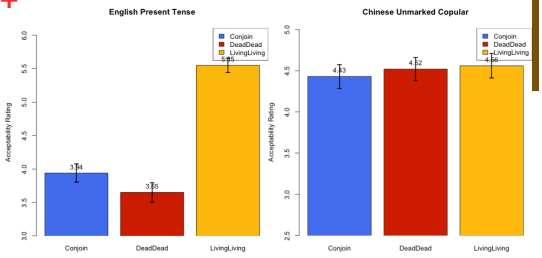
Contradictory Lifetime Effects

- Contradictory lifetime effects (Mittwoch, 2008)
  - *This house was built for Bill Stevens, the actor, who died last year. The one over there belonged to his brother, John Stevens, the property tycoon; he now lives in America. They **#are/??were** both very handsome.*
- Given the same context, no contradictory lifetime effects arise in the Chinese sentence:

(3) ta-men dou shi hen yingjun de nanren
3PL both **BE** very handsome DE man
'They both BE very handsome man.'

Experimental design

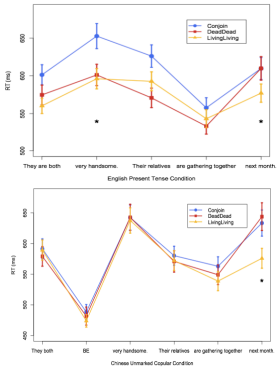
- Purposes:
  - To confirm judgements for contradictory lifetime effects in both English and Chinese.
  - To gain insights from the real-time processing of these sentences.
- Conditions:
  - Conjoin: one living and one dead individual
  - DeadDead: two dead individuals
  - LivingLiving: two living individuals



- A covert past tense analysis predicts that the TP, which may possess [±PAST] features, should also lead to contradictory lifetime inferences in Chinese.
- This prediction is not borne out.

Processing Contradictory Lifetime Effects

- Self-paced reading: participants read sentences phrase-by-phrase **at their own pace**, pressing a button to get the next phrase displayed.
- English and Chinese participants encountered similar reading time disruption on the same region.
- *Suggestive* that Chinese is unlikely to be completely tenseless.



"Forward lifetime effects"

- A tenseless analysis fails to predict that what we call **contradictory "forward lifetime effects"** (Arche, 2006).

Context: Holly, a British actress, will give birth to her first baby in New York. Her assistant, Georgia, had her baby in California last month.

(4) ta-men de haizi dou **#shi** meiguo gongmin
3PL DE child both BE America citizen
Intended: 'Their babies both BE American citizens.'

- No difference should be expected between (3) and (4) under a tenseless analysis. Instead, (4) suggests that the bare predicate may project a T node but with the [-FUTURE] value.

The non-future tense

- Recent research on Future/Non-Future in Chinese:
  - A phonologically null non-future tense in the bare predicates (Li, 2016; Sun, 2014).
  - A future tense morpheme *jiang* which projects a T node and alternates with the covert non-future morpheme (Huang, 2015).
- These new analyses of Chinese as a superficially "tenseless" language are reminiscent of Matthewson's (2006) observations in St'át'imcets (Salish).

The non-future tense

- Several predictions made in Matthewson's (2006) proposal, which are further fleshed out by Mucha (2013), can be confirmed in Chinese:
  - Prediction #1: superficially tenseless sentences (STSs) can freely receive both past and present readings regardless of possible aspect marking.

(5) shi nian qian / rujin / **#shi nian hou**, ta **shi** yige yishujia
ten year ago / now / ten year later, 3SG BE one-CL artist
'Ten year ago, (s)he was an artist.' OR 'Today, (s)he is an artist.'

The non-future tense (cont.)

- Prediction #2: If there is a covert, underspecified tense morpheme, STSs can refer to present and past events *at the same time*.

(6) Suoxu'er he Qiaomusiji dou **shi** yuyanxuejia
Saussure and Chomsky both BE linguist
'Saussure and Chomsky both BE linguists.'

- Prediction #3: Future time reference requires overt grammatical marking.

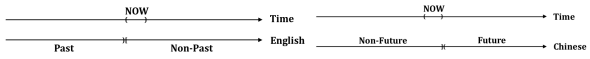
(7) shi nian hou, ta **#(jiang)/(hui)** shi yige yishujia
ten year later 3SG FUT / MOD BE one-CL artist
'Ten years later, (s)he will become an artist.'

Conclusion

- The covert tense in Chinese bare predicates restricts possible reference times to the non-future, similar to the St'át'imcets tense morpheme.
- The feature of this covert tense is held in a Tense Phrase.
- Ongoing work with Nick Huang (Maryland) looking at both future and non-future tenses in Chinese.

Toward a typology of tense

- The morpho-syntactic features of tense can be schematized below: the time interval NOW has two boundaries, i.e. Past/ Non-Past (as in English), Future/Non-Future (as in Chinese).
- Languages are sensitive to (at least) one boundary, and the relevant temporal features are held in a Tense Phrase.
- These features may be encoded overtly or covertly; some languages can lack the overt morpho-phonological marking of the values of these features.



Implications

- It remains a possibility that many Future/Non-Future languages have been misanalyzed as tenseless.
- From our typology:
  - Languages can be tenseless only superficially (i.e. in terms of morpho-phonological marking).
  - Tense is reserved as a universal category.
  - Binary feature distinction, with parametric choices to be made between either [±PAST] or [±FUTURE].

Predictions

- #1: Similar patterns for (forward) lifetime effects should be found in other superficially "tenseless" languages.
  - Covert non-future tense –> no contradictory lifetime effects, but "forward lifetime effects"
- #2: All "tenseless" languages can be alternatively analysed as possessing a covert tense (e.g. Tonhauser, 2011).
- #3: Impossible and improbable tenses
  - Present/Non-Present: the temporal reference of a tense cannot be separated by the NOW interval, i.e. it must be "a continuity" (Comrie, 1985).
  - Three-way distinction: Unattested?
  - Incompatible with UG or just historical accidents?

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+ Thank you!

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