A Uniform Structure of the Temporal Adverbial Clauses in Mandarin Chinese

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1. Introduction: In the literature of Generative Grammar, adverbial clauses are not discussed as frequently as matrix clauses. The syntax of temporal adverbial clauses in Mandarin Chinese (henceforth Chinese TACs), for instance, appears to be a 'complete mess', not only because the same type of TACs is realised by various categorial status, but also because both the external and internal syntax of TACs share a number of characteristics across categories, which is controversial to tell whether these are similarities over differences or the other way around. In this paper, I propose that there exists a uniform structure underlying Chinese TACs, giving an explanation to their messy syntax on the surface.
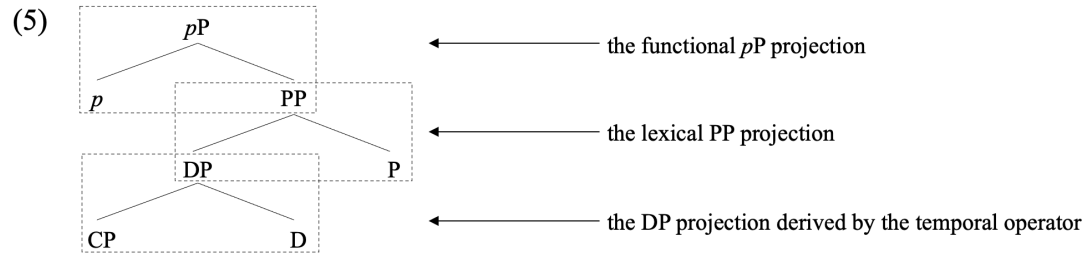
2. Data: Pan & Paul (2018) and Wei & Li (2018) provide a detailed description of TACs:

(1)   [$_{DP}$ [$_{CP}$ Tā dào   Shanghai] *de shíhou*], tiānqi (zài…) bù   tài hǎo.

              he arrive Shanghai DE time   weather   NEG too good

         'When he arrived at Shanghai, the weather was not good.'

(2)   [$_{PreP}$ *Zài* [$_{DP}$ [$_{CP}$ tāde shìyè qǐshǐ] de *shíhou*]], tāde shēngwàng bù   gāo (zài…).

             at   his career begin DE time   his reputation NEG high

         'When his career began, his reputation was not high.'

(3)   [$_{PostP}$ [$_{DP}$ [$_{CP}$ Tāde lùnwén fābiǎo] ∅] *yǐhòu*], tā (zài…) shōudào-le hěnduō guānzhù

                his   paper   publish   after he   receive-LE many attention

         'After his paper was published, he received a lot of attention.'

(4)   [$_{PreP}$ *Zài* [$_{PostP}$ [$_{DP}$ [$_{CP}$ tā dú   dàxué] ∅] *yǐqián*]], tā hé fùmǔ   yīqǐ shēnghuó (zài…).

             at   he study university before   he with parents together live

         'Before he went to university, he lived with his parents.'

The data reflect the messy syntax of Chinese TACs in three aspects:

i.   TACs are realised by different categories: the *when*-adverbials correspond to the DP headed by *shíhou* 'time', and the *after/before*-adverbials correspond to the PostP headed by *yǐhòu/yǐqián* 'after/before'. Both of them can be embedded in the PreP headed by *zài* 'at'.

ii. The appearance of *zài* 'at' depends on the distribution of TACs relative to the position of the associated matrix clauses: though *zài* 'at' is optional when TACs are in the sentence-initial position, it is obligatory while in the sentence-internal and sentence-final positions.

iii. The embedded DP structure is universal across TACs, but the internal construction varies: in *when*-adverbials, an overt element heads the DP and forms an adjunct relative construction; while in *after/before*-adverbials, it is a covert element that heads the DP, making it obscure to judge whether there still exists a relative construction.

3. Analyses: These differences can be accounted for by a uniform underlying structure based on the Split-PP hypothesis (cf. Svenonius 2007):

(5)

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        pP
       /  \
      p    PP
          /  \
        DP     P
       /  \
     CP    D
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⟵ the functional pP projection

⟵ the lexical PP projection

⟵ the DP projection derived by the temporal operator

The analyses consist of three parts, corresponding to the uniform structure from top to bottom.

3.1 The ubiquity of the functional P: The optional appearance of the preposition *zài* 'at' is reminiscent of the complementizer *that*, which is assumed to be universal across matrix clauses, and whose appearance also relies on the distributions of clauses it takes. Both of them are semantically vacuous and only contribute to some purely syntactic function. Considering that matrix clauses are essentially the projection of the functional head C, it is plausible to postulate that TACs are the projection of a specific functional head *p*.

3.2 Differences between pP and PP: The functional *p*P and the lexical PP differ in several aspects. Semantically, the lexical P has a closer relationship with the embedded DP than the functional *p*, probably because postpositions and prepositions are derived respectively from nouns and verbs in history. Thus, a parallel to the VP-NP configuration can explain why the *p*P takes the PP-complement but not the other way around. Also, the 'head-initial vs head final' contrast can be seen as a by-product of the same configuration. A further distinction is reflected in case assignment: it is assumed that the functional *p* is able to assign cases but the lexical P is not. In this case, the obligatory appearance of *zài* 'at' is to assign a case to the embedded DP for passing the Case Filter, while the optional appearance is the result of the TAC being moved from its original position, where the embedded DP is case-assigned beforehand.

3.3 The embedded DP and the temporal operator: In *when*-adverbials, the DP is a relative construction derived by movement of the temporal operator, conforming to the characteristics of A'-movement, i.e. the long-distance dependency and sensitivity to island effects, and showing the ambiguity of high/low construals as well. But in *after/before* adverbials, neither of these phenomena are observed successfully due to the null element as the head of DP, unless it is pronounced explicitly and interpreted as a temporal expression. Adopting a variant of Wei & Li (2018)'s proposal of the overtness of the head noun, my proposal argues it is the richness of features contained by the head noun that determines such a contrast.

4. Implication: This uniform structure can be a starting point for analysing in detail the internal syntactic derivation of the Chinese TACs, in particular the precise temporal operator movement.

References:

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