

On the Syntax of ...*De Shihou* ‘when; during’ in Mandarin Chinese

Introduction. *De shihou* ‘during/when’ in Mandarin Chinese is compatible with elements belonging to at least three different syntactic categories. It can appear after a nominal element, as in (1a), a verbal element, as in (1b), or a clausal element, as in (1c).

- (1) a. Qunian sanyue de shihou, wo kan-le liang ben xiaoshuo.
 last-year March DE time I read-Prf two CL novel
 ‘I read two novels last March.’
 b. Chi-fan de shihou, wo kan-le liang ben xiaoshuo.
 eat-rice DE time I read-Prf two CL novel
 ‘I read two novels while eating.’
 c. Lisi chi-fan de shihou, wo kan-le liang ben xiaoshuo.
 Lisi eat-rice DE time I read-Prf two CL novel
 ‘I read two novels when Lisi was eating.’

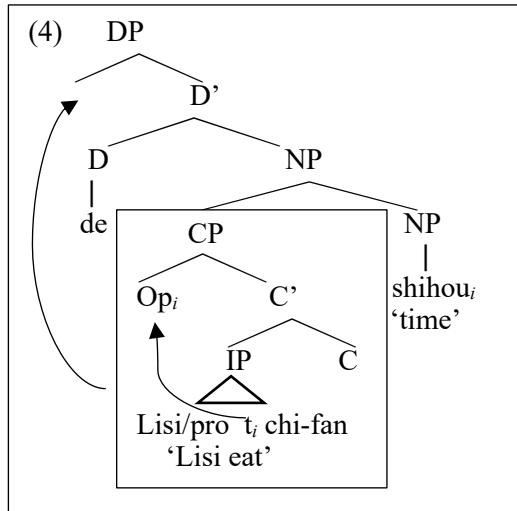
Proposal and Analysis. Previous studies like Liou (2007) account for the syntax of *de shihou* in (1b-c) by analyzing the construction as involving a relative clause modifying a temporal noun. However, the fact that *de shihou* can also combine directly with a nominal expression such as *qunian sanyue* ‘last March’ in (1a) suggests that a more unified structural analysis is required. This study aims to provide a syntactic account that captures its distribution across different environments.

I argue that *de shihou* contains the basic syntactic structure in (2), in which a functional projection, *deP* or *DP* in the sense of Paul (2015), headed by the nominal particle *de* takes the noun *shihou* ‘time’ as its complement and licenses a phrase expressing temporal information in its specifier position. The primary function of *de* is to establish a relation between its two arguments. Accordingly, in (1a), *de* selects the NP *shihou* ‘time’ as its complement and hosts the DP *qunian sanyue* ‘last March’ in its specifier, as illustrated in (3).

- (2) [DP/CP [DP *de* [NP *shihou* ‘time’]]] (3) [DP *qunian sanyue* ‘last March’ [DP *de* [NP *shihou* ‘time’]]]

For cases such as (1b-c), I assume that the construction involves a relative clause. However, instead of adopting a raising analysis (e.g. Liou 2007), I show that an operator movement analysis (e.g., Ning 1993) better accounts for the syntactic properties of these constructions. I propose that the noun phrase *shihou*

‘time’ is generated outside the relative clause that adjoins to it as (4) shows. The relative clause, headed by a null C, takes an IP as its complement. Following Stowell (1993, 1996) and Demirdache and Uribe-Etxebarria (2004), I assume that time-denoting arguments are syntactically represented and argue that a null operator corresponding to Assertion Time moves to the specifier of the CP. This movement establishes a binding relation between the operator and its trace, with the head noun *shihou* interpreted via coindexation. Subsequently, *de* merges with the NP, and the CP raises to the specifier of the DP.



Conclusion. This study argues that *de shihou* instantiates a uniform underlying structure in which temporal modification is mediated by a relational functional head *de*. The proposed operator movement analysis supports the

view that temporal arguments are syntactically projected and compositional, with consequences for the syntax–semantics interface of nominal modification in Mandarin Chinese.