



The VTdeN construction in Chinese – a bracketing paradox –

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Introduction

Topic: subtype of so-called *pseudo/quasi-attribute construction*
in Mandarin Chinese (cf. Huang 1981: 42; Deng 2010: 51)

- (1) wo [xie-le yi-zhou de zuo-ye]
1.SG write-ASP one-week DE assignment
'I worked on my assignment for one week.'

VTdeN construction: Structure with verb (V), time modifier (T),
particle *de* and noun (N) with the interpretation in (1)

Term **pseudo-attribute** suggests: **T** is not a real modifier of **N**

We need an analysis where ...

- **T** combines syntactically with **N** (cf. marker *de*) (Sun 2015)
- **T** modifies the verbal event (V)
- **bracketing paradox**, challenging among others *locality*

(Sag 2007; Müller 2003)



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Previous studies

Mostly: **grammatical descriptions** of the construction focusing on omission of *de* and restrictions applying to V, T, or N

(cf. Hui 2012; Kuang 2015; Miao 2020)

Formal proposal (in a nutshell): (Huang 2008; Huang et al. 2009)

- V and object build (DS) a **nominal gerundive phrase** (NP in (2)).
- NP is modified by **T** (→ accounting for *de*).
- Complex temporally modified gerundive NP is selected by phonetically empty verb DO.
- Head of gerundive clause (our V) moves to the position of DO and merges with (3).

(2) [swo ∅ [NP_{[MOD]san-tian de}][NP_{t_imai yu}]] (DS)
 1.SG DO three-day DE selling fish

(3) wo mai-le san-tian de yu.
 'I sold fish for three days' (SS)



Questions

1 What motivates the **movement** of gerundive N to the verbal position of DO?

(4) [swo ∅ mai_i [NP_{[MOD]san-tian de}][NP_{t_iyu}]]
 1.SG DO selling three-day DE fish
 'I sell fish for three days'

2 How does gerundive **N** get the aspect marker?

3 Are there structures which show the gerundive N in its base position?



Questions

4 [TdeN] forms a **constituent** → fronting

It is possible to **front** the **TdeN** constituent.

(5) wo xie-le [yi-zhou de zuo-ye]
 1.SG write-ASP one-week DE assignment

(6) [yi-zhou de zuo-ye] wo xie-le t_i
 one-week DE assignment 1.SG write-ASP

But the phrase with the alleged **gerundive N** cannot be fronted.

(7) * [yi-zhou de xie zuo-ye] wo ∅(-le) t_i
 one-week DE writing assignment 1.SG DO-ASP
 'I worked on my assignment for one week.'



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VP

V and N in the VTdeN construction form a normal VP.

- ▶ V selects an object and assigns a thematic role to it
→ not possible with **intransitive verbs**
- ▶ not limited to verb+object → idiomatic V+N **separable verbs**
decomposable: *li-fa* lit. 'cut hair' = 'have a haircut'
non-decomposable: *sheng-qi* lit. 'give.birth breath' = 'get angry'

(Wang & Müller 2013)

- (8) a. wo li-le yi xiao-shi de fa
1.SG cut-ASP one hour DE hair
'I had a haircut for an hour.'
- b. wo sheng-le yi-day de qi
1.SG give.birth-ASP one-day DE breath
'I got angry for one day.'

Marker *de*

de marks phrases combining with a noun: possessive (9), adjective (10), argument (11), relative clause (12), etc. (Paul 2005; Sun 2015; Xu 2018)

- (9) [wo de] qun-zi (11) [cheng-shi de] hui-mie
1.SG DE dress city DE destruction
'my dress' '(the) destruction of (the) city'
- (10) [piao-liang de] qun-zi (12) [wo mai de] qun-zi
beautiful DE dress 1.SG buy DE dress
'beautiful dress' '(the) dress that I buy'

Marker *de* indicates that the **preceding phrase is attached to a noun**.
→ evidence for the syntactic combination of T and N

Since *de* is not contributing any meaning, we treat *de*
as a **syntactic marker**. (Pollard & Sag 1994; Müller 2013)



Numeral+Classifier

Event classifiers normally attach to the V(P) and quantify over events denoted by V.

- (13) wo qu-le liang-ci zhong-guo
1.SG go.to-ASP two-time China
'I went to China twice.'

... but they can also **attach to N** but quantify over events denoted by V

- (14) wo qu-le [liang-ci de yin-hang]
1.SG go.to-ASP two-time DE bank
'I went to (the) bank two times.'



Numeral+Classifier

Event classifiers can be combined with N, but not when N has itself a **nominal numeral+classifier** (15) or a **demonstrative** (16).

- (15) *wo mai-le [san-xiao-shi de [san-tiao qun-zi]]
1.SG buy-ASP three-hour DE three-CL dress
Intended: 'I bought three dresses for 3 hours'
- (16) a. *wo mai-le [san-xiao-shi de [na qun-zi]]
1.SG buy-ASP three-hour DE that dress
Intended: 'I bought that dress for 3 hours'
- b. *wo mai-le [na [san-xiao-shi de qun-zi]]
1.SG buy-ASP that three-hour DE dress
Intended: 'I bought that dresses for 3 hours'



Modification

While nominal numeral+classifiers are not allowed in combination with N, **N can be modified**, e.g. by APs (17) or even RCs (18) **before** it is combined with the *de* marked temporal modifier.

(17) wo xie-le [yi-zhou de [hen nan de zuo-ye]]
 I.SG write-ASP one-week DE very difficult DE assignment
 'I wrote very difficult assignments for a week.'

(18) wo xie-le [yi-zhou de [lao-shi bu-zhi de zuo-ye]]
 I.SG write-ASP one-week DE teacher assign DE assignment
 'I wrote the assignments assigned by the teacher for a week.'



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Interim summary

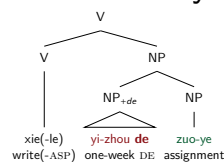


Fig. 1: Syntax

- ▶ bracketing-paradox interpretation of VTdeN: **verb+object** and **separable verbs**
- ▶ TdeN forms a **constituent**.
- ▶ marker *de* → N “**syntactically**” a **noun** (possibly modified e.g. by a RC)
- ▶ N can be combined with **T** or **event classifiers**, modifying the meaning of the verb
- ▶ V is taking N as an **argument**
- ▶ In VTdeN: N cannot combine with **nominal numeral+classifiers** or **demonstratives** → N is syntactically a noun, but semantically a verb

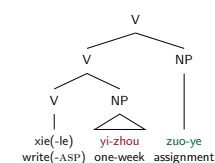


Fig. 2: Semantics

Two rules:
 Unary syntactic rule on N and a Lexical Rule on V



Solving the paradox

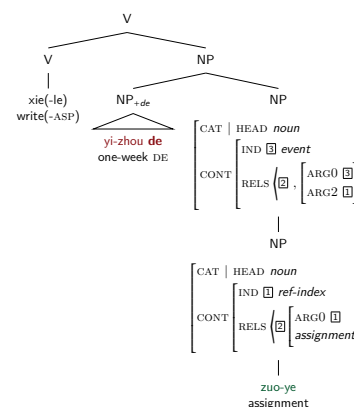


Fig. 3: Unary SynR

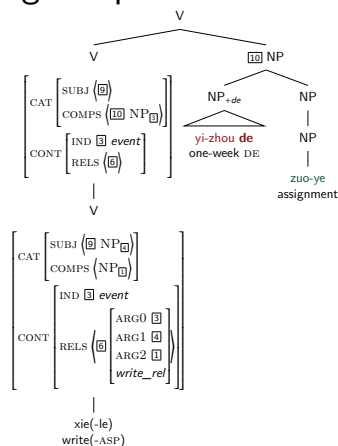
Unary syntactic rule for N(P):

- ▶ IND value of (possibly modified) NP is changed from **ref-index** (cf. [1]) to **event** (cf. [3])
- ▶ **event EP** (not specified yet) is added taking the *ref-index* of N as value of its ARG2, and [3] as its ARG0
- ▶ HEAD value of N (= **noun**) remains the same.

- **T+de** because of *noun*
- **Tde+N(P)** via *head-adjunct*
- **Tde** modifies event
- **N** interpreted as object of event
- **No nominal classifier** allowed



Solving the paradox



Lexical rule for V:

- The **object** of the verb is changed to an NP with the same IND value as the verb.

- **V+TdeN** via *head-argument*
- IND values of V and NP are structure-shared, hence **Tde modifies event**

Fig. 4: Lexical Rule



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Conclusion

We can account for the bracketing paradox:

- constituency of TdeN
- T adjunction to NP and modification of event
- N interpreted as argument of verb
- no combination with nominal classifiers, but with event classifiers
- no extra syntactic combinatory rules needed
- similarity to separable verbs



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