On the Constructionalization of $[\text{NP}_1 + \text{V}_1 + \text{NP}_2]$ in Mandarin Chinese

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1. Introduction

- In Chinese, there exists a type of \([\text{NP}_1 + \text{Vi} + \text{NP}_2]\) structures. E.g.,

(1) 刚 吃了 一半, 舅父 来了 客人。
\begin{align*}
Gāng &\text{ chī-le} & yībàn & jiùfù & lái- le & kèrén \\
\text{Just} &\text{ eat-ASP} &\text{ one half} &\text{ uncle} & \text{ come-ASP} & \text{ visitor}
\end{align*}

‘Just in the middle of meal, my uncle had a visitor/visitors coming.’

(2) 酸菜 走了 气。
\begin{align*}
suāncài &\text{ zǒu-le} & qì \\
\text{pickled Chinese cabbage} &\text{ walk-ASP} & \text{ air}
\end{align*}

‘In the process of pickling, the Chinese cabbage leaked the air’
(3) 他 从小 死了 父亲。
    Tā  cóngxiǎo sǐ-le fùqīn
He since small die-ASP father

‘His father died when he was young.’

(4) 监狱 跑了 几个 犯人。
    jiānyù păo-le jīgè fànrén
prison run-ASP several prisoners

‘Several prisoners escaped from the prison.’

(5) 睡沙发 飞上海 坐卧铺 哭周瑜
    shuì shāfā fēi shànghāi zuò wòpù ku Zhōuyú
sleep sofa fly Shanghai sit sleeper cry Zhouyu

‘sleep on the sofa’ ‘fly to Shanghai’ ‘take a sleeper’ ‘cry for Zhouyu’
1.1 Previous studies

- In Chinese linguistic literature, those constructions have been generally construed as "intransitive verbs taking an object", the ones like 王冕死了父亲 (Wáng Miǎn sǐ-le fùqīn: lit. Wang Mian died his father, ‘Wang Mian’s father died’), are treated as "possessor-subject possessee-object sentence", and connected with "existential construction", such as 店里来客人了 (diànlǐ lái kèrén le: lit. store in come visitor ASP “The store has visitors”) (Guo 1990, Pan & Han 2005, Shen 2006, Li 2007, Liu 2007, Ren 2009 etc.).

Ren, Y. 2009. How the sentence Wang Mian si le fuqin is generated?: From the correlation of concepts to that of constructions. Chinese Teaching in the World 3: 308-321.
Previous studies and their problems

• Previous studies
  ▪ Generative analysis (Chen & Xiao 2007, Ma 2011 etc.)
  ▪ Cognitive analysis (Ren 2009, Zhang 2010 etc.)
  ▪ Blending analysis (Shen 2006, Shi 2007 etc.)
  ▪ Argument structure and transitivity (Ma 2003, Sun & Li 2010, Sun 2015 etc.)
  ▪ Historical analysis on one case (Yu & Lǚ 2011)

• Their main problems
  ▪ Case studies of a particular expression
  ▪ Lack of an investigation on their diachronic evolutionary process

1.2 Our perspectives

1) Historical perspective
2) Constructionalization
3) General analyses involved all types of \([\text{NP}_1+\text{Vi}+\text{NP}_2]\) structures
2. Features of \([\text{NP}_1+\text{Vi}+\text{NP}_2]\)

2.1 Constructionality

(i) High Frequency

- In modern Chinese, 走zŏu ‘walk’: token-18.83%; type-9).

(ii) Unpredictability

- the whole meaning is richer and unpredictable from their individual parts, e.g. \([\text{NP}_1+\text{来(了)+NP}_2]\) could mean “to gain/have something/someone”; \([\text{NP}_1+\text{死(了)+NP}_2]\) could mean “to lose something/someone”.

(iii) Structuralization

- Different semantic types of \(\text{NP}_2\)s, such as agent, patient, instrument, time, location, manner, purpose and target;
- \(\text{NP}_2\) CANNOT be omitted, the whole meaning will be different if moved to S slot;
- intransitive/low transitive verbs;
- the verb and the \(\text{NP}_2\) should be adjacent, and only some aspect marker or a quantifier phrase can be inserted (e.g. 坐过一次卧铺zuò-guò yīcì wòpù: lit. sit-ASP once sleeper ‘I took sleeper once’).
2.2 Hidden complexity

- **Overt vs. hidden complexity:** Complexity is a property of organized entities, of organisms, or of systems (Givón 2009). Linguistic complexity is the result of the two motivations of explicitness and economy (Bisang 2009, 2015).

  - **Overt complexity** reflects *expliciteness*: the structure of the language simply forces the speaker to explicitly encode certain grammatical categories even if they could easily be inferred from context;

  - **Hidden complexity** reflects *economy*: the structure of the language does not force the speaker to use a certain grammatical category if it can be inferred from context.

- In languages like Chinese, morphosyntactic structures and their properties often cannot fully express the meaning they have in a concrete speech situation. Their interpretation needs pragmatic enrichment from context, which could be called **hidden complexity**.

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The syntactic structure and semantic properties of \([\text{NP}_1 + \text{Vi} + \text{NP}_2]\) construction

- 我妈妈来客人了 (wǒ māma lái kèrén le: lit. I mom come-guest le ‘my mom has a visitor (visitors) now’) means “to gain/have something/somebody”.
- 他跑了老婆 (tā păo-le láopo: lit. he run-ASP wife ‘(His wife ran away) means “somebody lost his wife”.

3. Constructionalization of \([\text{NP}_1+\text{Vi}+\text{NP}_2]\)

- **Constructionalization** is the creation of \(\text{form}_{\text{new}}\)-\(\text{meaning}_{\text{new}}\) (combinations of) signs. It forms new type nodes, which have new syntax or morphology and new coded meaning, in the linguistic network of a population of speakers. It is accompanied by changes in degree of **schematicity**, **productivity** and **compositionality**. The constructionalization of schemas always results from a succession of micro-steps and is therefore **gradual** (Traugott & Trousdale 2013: 22).

- A constructional change is a change affecting one internal dimension of a construction (Traugott & Trousdale 2013: 26).

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Three features of a construction are explicated in Trousdale & Norde (2012):

- **Productivity:** the extent to which a constructional schema is accessible for sanctioning new instances.

- **Schematicity:** the extent to which the constructional schema describing the pattern is schematic rather than specific.

- **Compositionality:** the extent to which the meaning and form of the whole are predictable from those of its parts in accordance with sanctioning schemas.
• Relations among productivity, schematicity and compositionality:
  ➢ High schematicity implies high productivity; it is also true the other way round;
  ➢ High schematicity and high productivity may imply low compositionality; it may be true the other way round.

• We conduct a corpus-based survey of the non-canonical expressions at issue to examine their evolutionary process and productivity, with a particular focus on type frequency and token frequency.

• Based on the frequency of the verbs used in Modern Chinese, we select 12 intransitive/low transitive verbs to investigate:
  死 (sǐ ‘die’) 醉 (zuì ‘get drunk’) 跳 (tiào ‘jump’)
  热 (rè ‘heat’) 破 (pò ‘break’) 走 (zǒu ‘walk’)
  坐 (zuò ‘sit’) 站 (zhàn ‘stand’) 飞 (fēi ‘fly’)
  睡 (shuì ‘sleep’) 哭 (kū ‘cry’) 醒 (xǐng ‘wake’)

3.1 Productivity

8/12 = 66.66% increase

Figure 1. The change of the 12 intransitive verbs’ token frequency
Rising token and type frequencies lead to **High Productivity**

Figure 2. The change of the 12 intransitive verbs’ type frequency
3.2 Schematicity

Figure 3. Gradient productivity (Barðdal 2008)
Schematicity of $[\text{NP}_1+\text{Vi}+\text{NP}_2]$ construction

Figure 4. Schematicity of $[\text{NP}_1+\text{Vi}+\text{NP}_2]$ construction
3.3 Compositionality

Compositionality is concerned with the extent to which the link between form and meaning is transparent. The \([\text{NP}_1+\text{Vi}+\text{NP}_2]\) expressions are not entirely compositional.

- Arbib (2012: 475-482): The compositional structure of a sentence will often provide cues to the meaning of the whole, though in many cases these cues must be resolved with the aid of further cues concerning our situation, which could be called pragmatic inference.

- Traugott & Trousdale (2013: 20): Both compositional and non-compositional examples could be treated as conventionalized pairings of form and meaning, and the noncompositional set could be considered to be stylistically, pragmatically or semantically marked in various ways.

Historically, the low compositionality of \([\text{NP}_1+\text{Vi}+\text{NP}_2]\) means low degree of match between form and meaning. They are some pragmatized or idiomaticized usages, which have been gradually conventionalized.
### 3.4 Extension of NP₂

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**Song Dynasty (宋代)**

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**Yuan-Ming Dynasty (元明)**

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**Qing Dynasty (清朝)**

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**Modern Chinese (现代)**

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L: location  
Q: quantity  
T: time  
C: Causative  
M: manner  
Re: result  
Ca: cause  
I: instrument  
T: target  
S: shadow  
P: path  
Pu: purpose  
E: expletive  
Co: cognate  
Pa: patient  
Ma: material
4. Conclusion

1) The \([\text{NP}_1 + \text{Vi} + \text{NP}_2]\) expressions are form-meaning pair constructions, involving a process of grammatical constructionalization in Chinese history, with high productivity, high schematicity and comparatively low compositionality.

2) The constructions manifest a salient property of hidden complexity (Bisang 2009, 2015), with a low degree of match between form and meaning. They are pragmaticalized or idiomaticalized usages, and gradually conventionalized.

3) The argument structure is determined by the transitivity of the whole construction.
Thank you for your attention!

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