

A Syntactic Analysis of the "Zuo X Zhuang"

Yijie Liu

*School of Linguistic and Language Resources, Beijing Language and Culture University, Beijing,
China*

LIUYIJIEJIAYOU@163.com

Abstract. The paper discusses the structure of "Zuo X Zhuang". First, it analyzes "X" from three perspectives: syllable composition, structural unit, and functional-formal type. Secondly, it analyzes "zhuang," dividing it into "zhuang₁" and "zhuang₂" and explains three morphological processes—inflection, derivation, and compounding—to demonstrate, from a morphological perspective, that "zhuang₁" is a compound word. From the perspective of generative grammar, it introduces Xiong Zhongru's "Functional Category Hypothesis" and the "Same Direction Hypothesis for Adjunction and Movement" to demonstrate that "zhuang₂" is a light noun. Subsequently, it provides a syntactic analysis of the entire "Zuo X Zhuang" structure, demonstrating that regardless of the nature of "X," as long as "X" appears in the "Zuo X Zhuang" construction, it is necessarily extended by the light noun "zhuang".

Keywords: Light noun, Functional Category Hypothesis, Head movement, Same Direction Hypothesis for Adjunction and Movement

1. Introduction

"Zuo X Zhuang" is a construction in modern Chinese, such as "zuo yi ben zheng jing zhuang" and "zuo qian ta ba bai bei zi zhuang". Zhang Yisheng [1] divides "zhuang" into two types. One is disyllabic modifier-head compound words formed by the monosyllabic morpheme "X₁" and the non-positional root "zhuang₁", such as "xingzhuang" (shape), "xianzhuang" (current state) and so on. Since "zhuang" is non-positional in modern Chinese, it can also be placed before roots to form words like "zhuangkuang" (condition), "zhuangtai" (state). The other type is affixational supra-word units, or mimetic patterns, composed of words or phrases "X₂" and the post-positional mimetic particle "zhuang₂". Mimetic particles refer to a group of emerging particles in modern Chinese used to describe states and appearances, mainly including "shi", "zhuang", "yang", "xing" and "xiang". Most of these particles function mainly to mimic states and are gradually evolving toward comparative particles. An affixational supra-word unit is a temporary, transitional linguistic unit between nonce words and quasi-phrases. Hu Chengjiao [2] points out that in modern Chinese, comparative particles and mimetic particles can attach to the end of certain linguistic units, forming "X + comparative verb" and "X + mimetic verb" descriptive structures respectively, to depict and portray the situation or state of the referent. Zhang Yisheng [1] argues that in contemporary Chinese, the internal structure of most "X zhuang" is no longer a fixed, solidified morphological combination,

but a random, occasional syntactic combination. These "X zhuang" are no longer fixed lexical words in the lexical sense, but nonce words with free combinatorial relations, or quasi-phrases with relatively flexible collocations attached by particles. Zhang Yisheng [1] holds that most "zhuang" are neither roots nor affixes in the strict sense, but meaningful enclitics attached to the stem, which can also be regarded as relatively independent mimetic particles. This paper analyzes the two types of "zhuang" as well as the three components "zuo", "X" and "zhuang" in "Zuo X Zhuang" from the perspective of generative grammar, discusses the influence of the property of "zhuang" on "X", and attempts to prove that no matter what word class X belongs to, "X zhuang" is a noun phrase because "zhuang" is a light noun.

2. The property of "X"

Zhang Yisheng [1] analyzes the property of "X" in "X zhuang" from three perspectives.

2.1. Analyzing from syllabic composition, he holds that most elements acting as "X" before "zhuang" are disyllabic adjectives

(1) What is sung and spoken in the song is plain narration, without assuming a deep look or a lofty look.

(2) The manager had been waiting for a long time. He spread out his hands and put on an innocent look.

Four-character idioms account for a fairly high proportion. For example:

(3) For example, when tourists want dogs to be more obedient, the dogs will lie down in front of the tourists' feet and assume a docile and obedient look.

(4) Zhiting pulled a chair and sat in front of me, crossed her hands on her legs, leaned forward, and put on a heart-to-heart look.

The number of phrasal "X" with more than four syllables is relatively limited. For example:

(5) Now we have everything we need. We have whatever we want. What's missing? Just to put on a happy and satisfactory look.

Finally, a small number of monosyllabic adjectives can also form "X zhuang".

(6) The palace guards and maids knelt not far behind the empress dowager, also putting on a crying look.

2.2. Analyzed from the perspective of structural units, various phrasal "X" with different structural relations are common, among which modifier-head phrases (attributive-head or adverbial-head) appear most frequently

(7) As a keynote speaker, he should assume a careful listening look on the rostrum when others are giving speeches, sitting upright and properly.

Next are coordinate "X" phrases with two or more items. For example:

(8) There are still some social groups of petty tricks who still parade around and mislead the public in the emperor's new clothes with self-importance, pretending to be noble, dignified and brilliant, such as some journalists and some professors.

Some subject-predicate phrases and verb-object phrases can also act as "X" sometimes.

(9) Keep your body balanced, switch to the other leg, and make a cycling motion.

Some relatively complex complex sentence forms can also act as "X".

(10) They can stand up righteously to fight piracy, go to the media and TV, write fierce articles to condemn and denounce, putting on an indignant look, a furious look, a look that masters are sacred and inviolable and whoever delays my making money will fight me to the death...

Zhang Yisheng [1] points out that some "X" are preceded by a clause as an attributive, and in this case "X" can be understood in two different ways. For example:

(11) He stretched out his hand as if to shake hands, and I quickly responded with an honored look as if I had been received by Chairman Mao...

(12) Hearing the crisp sound of foot thumping from someone else's room, he could not help but feel restless and anxious. As usual, he lifted his delicate feet and assumed a comfortable look of a young mistress enjoying the attentive service from her maidservant.

Zhang Yisheng [1] holds that in (11) and (12), "X" can refer only to "honored" and "comfortable", or include the preceding clauses. Zhang Yisheng [1] is inclined to include the preceding clauses.

2.3. Analyzed from the perspective of functional-formal category, most "X" are adjectives, and there are also verbs and nouns

(13) We cannot put on a scholarly air, never let our knees go weak, and never pretend to be hypocritical.

(14) A standing terracotta warrior with its head held high, crossing its hands as if taking photos — the newly unveiled "Golden Terracotta Award" design adds a bit of humor.

(15) Sylvia Chang is a person who likes making friends and singing heartily with friends in the circle until drunk, while her foreign husband only holds a pipe and puts on a gentlemanly look.

3. Analysis of "Zhuang"

Xiong Zhongru [3] divides word-formation rules into three types: inflection, derivation and compounding. Inflection is the rule of combining a stem with an inflectional ending. It refers to adding affixes to a word to change its grammatical meaning (such as tense, number, etc.), but does not change the core meaning or word class of the word. For example: work-worked. Adding the past tense affix "-ed" to "work" does not change its core meaning "work", but changes its grammatical meaning. Compounding is the rule of combining roots with roots. Zhu Dexi [4] points out that compounding is a word-formation method that combines two or more root components into a compound word. Compound words formed by compounding are called compound words. The structural relations between components of Chinese compound words are basically consistent with syntactic structural relations. Most compound words are also formed according to structural relations such as subject-predicate, verb-object, complement, modifier-head and coordinate. For example, "bihua" (wall painting) (N+N), "guangchang" (square) (A+N), "dongche" (bullet train) (V+N) and so on. "Bihua" is a kind of "painting", "guangchang" is a kind of "place", "dongche" is a kind of "vehicle". "Bi", "guang" and "dong" are modifying components respectively, while "hua", "chang" and "che" are head components, which also determine the grammatical category of the structure they belong to. Although "bi", "guang" and "dong" are noun, adjective and verb respectively, the whole structure is nominal because the head is a noun or nominal component.

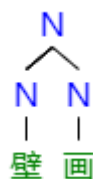


Figure 1. "wall painting" compound word diagram

Note: "壁画" is "bihua" (wall painting) (N+N).

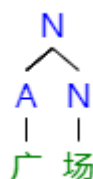


Figure 2. "square" compound word diagram

Note: "广场" is "guangchang" (square) (A+N).

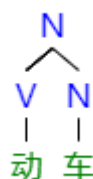


Figure 3. "bullet train" compound word diagram

Note: "动车" is "dongche" (a kind of "vehicle") (V+N).

Derivation is the rule of combining roots with affixes. Xiong Zhongru [3] points out that compounding theory holds that the head determines the grammatical category of the structure it belongs to, and this hypothesis also applies to derivation. For example, suffixes such as "zi", "er" and "tou" are considered morphological heads with nominal property from the perspective of head theory. The head can permeate its categorial features to the compound word, making the whole compound word nominal, such as "tizi" (ladder), "taoer" (peach), "tiantou" (sweetness) and so on.

Zhang Yisheng [1] divides "zhuang" into "zhuang₁" and "zhuang₂", and points out that "zhuang₁" forms compound words. We agree with Zhang Yisheng's analysis that "zhuang₁" is part of compound words. Xiong Zhongru [3] distinguishes between words and phrases: whether a component participates in morphological computation or syntactic computation can be judged by whether it can combine with phrases. If a word can combine with phrases, it indicates that it participates in syntactic computation; if it cannot, it indicates that it participates in morphological computation. Words and phrases can be distinguished by the insertion test or expansion test, that is, whether a phrase can be inserted. When a component acts as a phrase, it can realize additional or coordinate components that cannot be realized when it acts as a word; when it acts as a word, it is just a single word without any additional or coordinate components.

Compound words contain words and sub-word morphemes internally, which prohibits phrases from being their internal components. Qualitative adjectives, verbs and nouns in Chinese can all be internal components of compound words, and none of them can be expanded by phrases inside compound words. "Zhuang₁" can form words such as "xingzhuang", "xianzhuang", "zhuangkuang", "zhuangtai". We insert "de" (of), numeral-classifier phrases and the degree adverb "hen" (very) to test. (16b) shows that words composed of zhuang₁ cannot be expanded by "de". (16c) shows that words composed of zhuang₁ cannot be expanded by numeral-classifier phrases. (16d) shows that words composed of zhuang₁ cannot be expanded by the degree adverb "hen".

- (16) a. xingzhuang xianzhuang zhuangkuang zhuangtai
 b. *xing de zhuang *xian de zhuang *zhuang de kuang *zhuang de tai
 c. *xing yi ge zhuang *xian yi ge zhuang *zhuang yi ge kuang *zhuang yi ge tai
 d. *hen xingzhuang *hen xianzhuang *hen zhuangkuang *hen zhuangtai

Xiong Zhongru [3] points out that words can be divided into lexical categories and functional categories. Functional categories are categories that extend lexical categories. Lexical categories include nouns, verbs, adjectives, prepositions, etc. Functional categories include light nouns, light verbs, light adjectives, light prepositions, determiner category D, tense category T, topic category Top, etc. When analyzing the identity and category of "chuban" (publish) in "zhe ben shu de chuban" (the publication of this book), Xiong Zhongru and Wang Leihong [5] argue that "chuban" is a verb, which projects a verb phrase according to the projection principle, and finally the verb phrase is converted into a noun phrase by a nominal zero element. This can explain both the endocentricity of the structure and the verbal behavior of "chuban", as shown in (17).

- (17) [NP[DeP zhe ben shu de][NP[N Ø][VP[V chuban]]]]

Zhu Dexi [4] divides suffixes into two types: one is "zi", "er", "tou", and the other is "zhe", "le", "guo". The first type are common suffixes, and the second type are inflectional affixes. Inflectional affixes are functional heads that extend verbs, and verbs fuse with them through head movement.

- (18) Zhang San ate an apple.

[TP[Zhang San][T'[T][AspP[Asp'[Asp chi-le]][vP[Zhang San][v'[v chi][VP[V chi][NP pingguo]]]]]]]

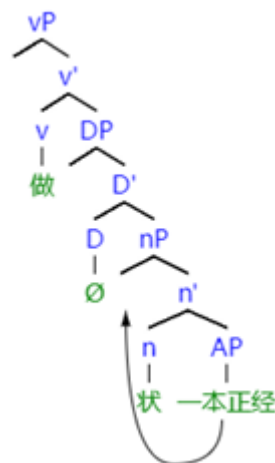


Figure 4. "Assume a serious look." syntax tree

Note: "做" is "zuo" (n); "状" is "zhuang" (n); "一本正经" is "yi ben zheng jing" (AP).

"Chi" (eat) is the head of VP. It first moves to the closest head position v that c-commands it, then moves from v to another head position Asp, resulting in "chi-le". If we call all terminal nodes in

syntactic operations words, then "le" is a word just like "chi", except that "le" is an aspect word and "chi" is a verb. Assuming that "zhuang" is a word similar to "le", we assign a syntactic structure to "zuo yi ben zheng jing zhuang".

To realize that "yi ben zheng jing" (solemn) in "zuo yi ben zheng jing zhuang" is extended by the light noun, it moves to the specifier position of nP, and "yi ben zheng jing zhuang" is extended by the zero determiner D. Xiong Zhongru [3] points out that the determiner category is a word that extends nouns and lacks descriptive content itself. It is then extended by the light verb v, forming "zuo yi ben zheng jing zhuang".

4. Syntactic analysis of "Zuo X Zhuang"

Lü Shuxiang [6] holds that "zuo" has three meanings: 1. to make, to produce; 2. to engage in some work or activity; 3. to act as; to serve as; to be used as. As a content word, we tend to take the third meaning for "zuo" in "Zuo X Zhuang": to act as; to serve as; to be used as. Above, we explained "X" from syllabic composition, structural unit and functional-formal category according to Zhang Yisheng [1]. Zhang Yisheng [1] analyzes "zhuang" as an enclitic, while we analyze "zhuang" as a light noun from the perspective of generative grammar.

Xiong Zhongru [3] explains that the Same Direction Hypothesis for Adjunction and Movement requires: if the moved element moves leftward, it is adjoined to the left side of the target element; if the moved element moves rightward, it is adjoined to the right side of the target element. To satisfy this hypothesis, it is stipulated that all lexical category heads are final, and all functional categories extending lexical categories are head-initial. We can assign the following structure to "zuo zai jiaoshi li" (sit in the classroom): V and PP are sisters, with V as the head. If "zuo" (sit) needs to fuse with "zai" (in), "zuo" can trigger the head "zai" of PP to move to its head position. Since "zuo" is on the right side of the structure, "zai" moving toward "zuo" is rightward movement, so "zai" is adjoined to the right side of "zuo".

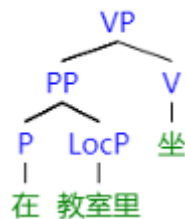


Figure 5. "Sit in the classroom" syntactic structure diagram before head movement

Note: "坐" is "zuo" (sit) (V); "在" is "zai" (in) (P); "教室里" is "jiaoshi li" (in the classroom) (LocP).



Figure 6. "Sit in the classroom" syntactic structure diagram behind head movement

Note: "坐" is "zuo" (sit) (V); "在" is "zai" (in) (P); "教室里" is "jiaoshi li" (in the classroom) (LocP).

The light verb *v* selects "zai jiaoshi li" (in the classroom) and "the person who sits" for "zuo". For example:

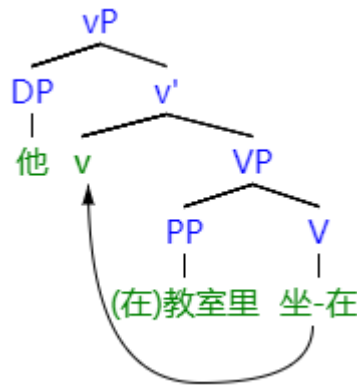


Figure 7. "He sits in the classroom" syntax tree

Note: "他" is "ta" (he) (DP); "坐-在" is "zuo-zai" (sit in) (V); "(在)教室里" is "(zai) jiaoshi li" (in the classroom) (PP).

v attracts the head "zuo zai" of its sister node to move headward, generating "ta zuo zai jiaoshi li".

Xiong Zhongru [3] points out that functional categories not only trigger movement, but also determine merge, including argument selection and theta-role assignment. The syntactic analysis of "zuo qian ta ba bai bei zi zhuang" is as follows:

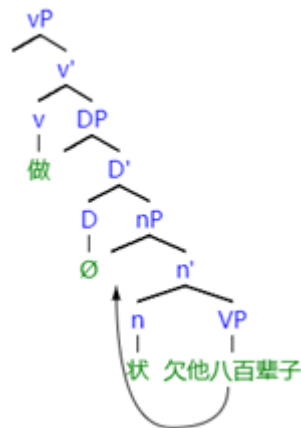


Figure 8. "Act as if I owe him eight hundred lifetimes of debt." syntax tree

Note: "做" is "zuo" (v); "欠他八百辈子" is "owe him eight hundred lifetimes of debt" (VP); "状" is "zhuang" (n).

"Zhuang" is a light noun. "Qian ta ba bai bei zi" (owe him eight hundred lifetimes of debt) moves to the specifier position of "zhuang", forming "qian ta ba bai bei zi zhuang". It is then extended by the zero determiner *D*, and finally extended by *v*, which is phonetically realized as "zuo", eventually forming "zuo qian ta ba bai bei zi zhuang".

When analyzing relative clauses, Xiong Zhongru [3] argues that "de" is often treated as an attributive marker. Nominal phrases with the attributive marker "de" are called "De nominal phrases". Some De nominal phrases are caused by relativization. Relativization is the process in

which a noun phrase in a clause is raised to the head of a De nominal phrase, and the original clause becomes a relative clause. For example:

- (19) a. Ta chi fan. (He eats rice.) → [t₁ chi fan] de ren₁ (the person who eats)
 b. Ta chi fan. (He eats rice.) → [ta chi t₁] de fan₁ (the rice that he eats)
 c. Ta yong mou zhong gongju chi fan. (He eats with a certain tool.) → [ta t₁ chi fan] de gongju₁ (the tool that he eats with)
 d. Ta zai mou ge changdi chi fan. (He eats at a certain place.) → [ta t₁ chi fan] de changdi₁ (the place where he eats)

The raised element can be the logical subject of the verb in the relative clause (19a), the logical object of the verb in the relative clause (19b), or an adverbial in the relative clause (19c-d). There is a gap (marked with "t") in the relative clause, which corresponds to the modified head and is associated with a common index, such as "1". In (19a), both "fan" (rice) and "ren" (person) have a dependency relation with "chi" (eat). According to the Functional Category Hypothesis, the following structure is assigned:

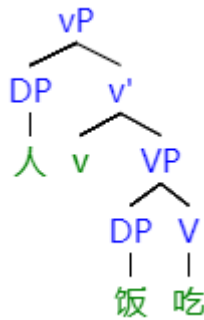


Figure 9. "People eat" syntax tree

Note: "人" is "people" (DP); "吃" is "eat" (V); "饭" is "fan" (DP).

vP continues to be extended by T to form TP, and "ren" moves to the specifier position of TP. n extends TP to form nP, and "ren" moves to the specifier position of nP. nP is extended by D to form DP, D is phonetically realized as "de", and TP as a whole moves to the specifier position of DP, finally deriving "chi fan de ren" (the person who eats). The structure is assigned as follows:

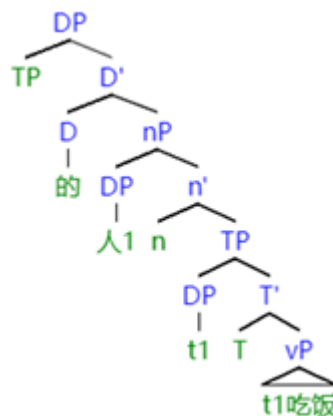


Figure 10. "People who eat" syntax tree

Note: "吃饭" is "eat rice" (vP); "的" is "de" (D); "人" is "people" (DP).

This structure conforms to the syntactic setting that lexical category heads are final and functional category heads are initial. In Figure 10, functional categories extending verbs such as v, T, n and D are all head-initial.

(20) On the contrary, some bold ladies laugh at men who put on a gentlemanly look and say, "Stop this pretentious act!..."

(21) From Panpan the giant panda holding a medal and assuming a running pose at the 1990 Beijing Asian Games, to Jingjing the Fuwa with both traditional charm and modern expression at the 2008 Beijing Olympic Games.

(22) On the right side of the porch is a screen transformed from an old wooden board door. Between the square grids hang two carp spouting water, with wide eyes and open mouths, putting on a surprised look.

We retrieved some examples of "zuo X zhuang de" from the CCL corpus. Based on Xiong Zhongru's [3] analysis of relativization, we analyze "zuo X zhuang de" to prove that "zhuang" is a light noun.

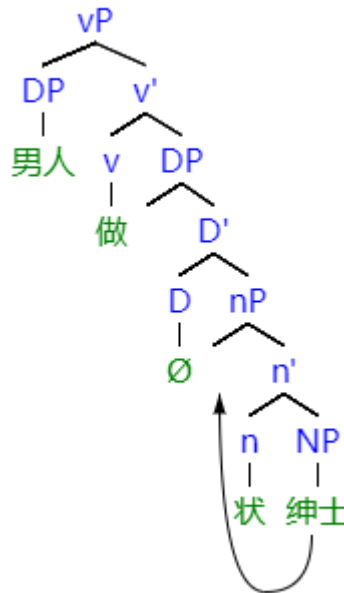


Figure 11. "The man acts like a gentleman." syntax tree

Note: "男人" is "man" (DP); "做" is "zuo" (v); "绅士" is "gentleman" (NP); "状" is "zhuang" (n).

In (20), "zhuang" is a light noun located at the head position of nP. The noun phrase "shenshi" (gentleman) first moves to the specifier position of nP, forming "shenshi zhuang". The light noun is extended by the determiner category D, which is in zero form. It is then extended by v, with "zuo" as the head of v and the external argument "nanren" (man) in the specifier position of v. Finally, "nanren zuo shenshi zhuang" is formed.

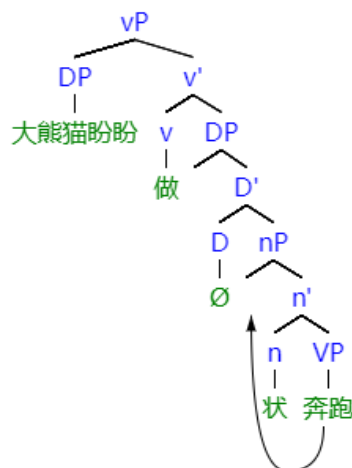


Figure 12. "Panpan the giant panda makes as if to run." syntax tree

Note: "大熊猫盼盼" is "panpan the giant panda" (DP); "做" is "zuo" (v); "奔跑" is "run" (VP); "状" is "zhuang" (n).

The verb phrase "benpao" (run) moves from VP to the specifier position of nP. "Zhuang" is located at the head n of nP, and n is extended by D, which is in zero form here. The head of vP is phonetically realized as "zuo", and the specifier position of vP is the external argument "daxiongmao Panpan" (Panpan the giant panda). Finally, "daxiongmao Panpan zuo benpao zhuang" is formed.

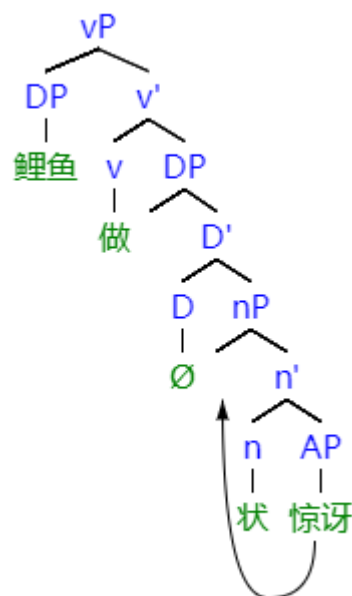


Figure 13. "The carp assumes a surprised look." syntax tree

Note: "鲤鱼" is "liyu" (carp) (DP); "做" is "zuo" (v); "惊讶" is "surprised" (AP); "状" is "zhuang" (n).

The adjective phrase "jingya" (surprised) moves from the AP position to the specifier position of nP. The head position n of nP is phonetically realized as "zhuang". The light noun n is extended by the determiner category D, which has no phonetic realization and is thus zero D. The head of vP is

phonetically realized as "zuo", and the specifier position of vP is the external argument "liyu" (carp). Finally, "liyu zuo jingya zhuang" is formed.

In (20), (21) and (22), we respectively discussed how to construct and interpret the syntactic trees of noun phrases, verb phrases and adjective phrases extended by the light noun "zhuang".

5. Conclusion

This paper aims to analyze the syntactic structure of "Zuo X Zhuang". In the first part, based on Zhang Yisheng's [1] analysis of "X", we analyze "X" from three perspectives: syllabic composition, structural unit and functional-formal category. From the perspective of syllabic composition, most "X" are disyllabic words or four-character idioms, the number of those with more than four syllables is relatively limited, and monosyllabic ones account for a small proportion. From the perspective of structural units, modifier-head phrases (attributive-head or adverbial-head) are common, followed by coordinate phrases with two or more items, some subject-predicate phrases and verb-object phrases, as well as some relatively complex sentence structures. From the perspective of functional-formal category, nouns, verbs and adjectives can all enter this construction. In the second part, we first introduce three word-formation methods: inflection, derivation and compounding. Then Zhang Yisheng [1] divides "zhuang" into "zhuang₁" and "zhuang₂". We use the insertion test proposed by Xiong Zhongru [3] to distinguish words from phrases, proving that "zhuang₁" is part of compound words. Zhang Yisheng [1] holds that "zhuang₂" is a meaningful enclitic attached to the stem, and can also be regarded as a relatively independent mimetic particle. We argue that "zhuang₂" is a light noun, and prove that "zhuang" in "Zuo X Zhuang" is a light noun by using Xiong Zhongru's [3] Functional Category Hypothesis, Same Direction Hypothesis for Adjunction and Movement, and relativization.

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