

Dependency Syntactic Analysis of the Non-Interrogative Uses of Chinese *shéme*

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Abstract

The Chinese interrogative pronoun *shéme* possesses a rich variety of non-interrogative uses. Previous research has mostly classified and described the non-interrogative uses of *shéme* from functional and semantic perspectives, but systematic analysis of its internal syntactic structure, particularly from a dependency syntax standpoint, remains insufficient. This study systematically investigates the syntactic features of Chinese *shéme* within the framework of Dependency Grammar. The results show that the syntactic features of *shéme* exhibit variation depending on its non-interrogative function: when *shéme* serves as an argument (e.g., in universal, anaphoric, and rhetorical uses), it typically passes constituency tests, constituting a complete syntactic component, and often undergoes scrambling in universal and indefinite uses; however, when *shéme* serves as an adjunct or as part of an argument (e.g., in enumerative, borrowed, and negative uses), it often fails constituency tests, indicating that it does not form a constituent when it appears within adjunct. This study not only deepens the understanding of the syntactic nature of the non-interrogative uses of Chinese interrogative pronouns but also verifies the applicability and explanatory power of Dependency Grammar in analyzing special linguistic phenomena in Chinese.

Keywords: *shéme*, Non-interrogative use, Dependency grammar, Syntactic analysis, Constituency tests

1. Introduction

Interrogative pronouns are a core means of realizing the questioning function of specific interrogative sentences in Modern Chinese. Since the 1940s, the scope and nature of interrogative pronouns have been deeply explored in Chinese grammatical studies. Scholars such as Wang Li (1943), Lü Shuxiang (1982), and Zhu Dexi (1982) have all discussed this in

their works. It is noteworthy that the function of Chinese interrogative pronouns extends far beyond questioning; they possess extremely rich and complex non-interrogative uses. Among the various interrogative pronouns, the non-interrogative uses of *shéme* are particularly typical and diverse. The foundational study named *Research on the Non-Interrogative Uses of shéme* by Shao and Zhao Xiufeng (1989), systematically collated and classified these uses, distinguishing eight extended types: universal reference, enumerative reference, anaphoric reference, borrowed reference, empty (indefinite) reference, negation, rhetorical question, and independence, laying a solid theoretical foundation for subsequent research.

Although existing studies have provided a relatively profound understanding of the semantic and pragmatic functions of the non-interrogative uses of *shéme*, their syntactic analysis from the perspective of dependency grammar, remains relatively weak. Most research focuses on lexical-sentential parsing based on constituent relations or is influenced by the traditional separation of lexicon, making it difficult to reveal the specific syntactic structural characteristics of *shéme* in different non-interrogative uses. The Dependency Grammar theory proposed by the French linguist Lucien Tesnière (1965) provides a new analytical path. This theory emphasizes that the dependency relationships between words in a sentence are the core of syntax, advocating for the revelation of syntactic structure through analyzing the governor-dependent relationships between words. Dependency Grammar, with its intuitive depiction of syntactic relations and convenience for transitioning to the semantic level, has been widely applied in natural language processing and multilingual syntactic analysis.

This study employs Dependency Grammar theory to conduct a systematic syntactic investigation of the non-interrogative uses of *shéme*. This study aims to investigate the syntactic positional features of *shéme* in its different non-interrogative uses and the validity of applying constituency tests to *shéme* in Chinese.

2. Literature Review

Interrogation is a functional category belonging to the whole sentence, while interrogative pronouns are the main means of conveying interrogative information in specific interrogative sentences. The grammatical community has never had a unified definition regarding which words belong to interrogative pronouns. Since the 1940s, some linguists have discussed interrogative pronouns in their works, such as Wang Li (1943) 's *Chinese Modern Grammar*, Lü Shuxiang (1982) 's *Essentials of Chinese Grammar*, Zhu Dexi (1982) 's *Lectures on Grammar*. Among them, scholars who believe that only words substituting for nouns are pronouns divided interrogative words into three parts: interrogative pronouns, interrogative adjectives, and interrogative adverbs. For example, Zhang Shizhao's *Medium Chinese Grammar* (1911) categorized those substituting for nouns as one class, while those that cannot substitute for nouns were classified under adjectives and adverbs respectively, with "interrogative adjectives" under adjectives and "interrogative adverbs" under adverbs. Those adopting the second view centrally treat words that can substitute for unknown entities in interrogative sentences as interrogative pronouns. Wang (1985) treated words that can substitute for unknown entities in interrogative sentences as interrogative pronouns, i.e., words that can serve as subject, object, predicate, or adverbial in a sentence and can express

interrogative or rhetorical mood. Chinese interrogative pronouns can be functionally categorized into those asking about people or things, e.g., *shé* ‘who’, *shéme* ‘what’, *nǎ* ‘which’; those asking about location, e.g., *nǎr* ‘where’, *nǎlǐ* ‘where’; those asking about nature, state, action, manner, e.g., *zěnmé* ‘how’; those asking about time, e.g., *nǎhuìr* ‘when’; and those asking about degree.

Chinese interrogative pronouns possess very rich non-interrogative functions. Lü Shuxiang (1942), based on whether the relationship between the pronoun and the referred entity is determinate or not, reclassified Chinese reference forms into “definite reference” and “indefinite reference”. The commonly termed interrogative pronouns fall into the “indefinite reference words”, but these words can also be used not for questioning. For example, *shé* ‘who’ can substitute for an unknown or any person, *shéme* can substitute for an unknown or any thing. That is, indefinite reference words have two uses: expressing “regardless” (arbitrary reference) and expressing “unknown” (indefinite reference). Wang Li (1943) specifically mentioned the special uses of interrogative pronouns that they no longer express question or rhetorical question, but are equivalent to a special kind of personal pronoun or demonstrative pronoun. These special uses can be roughly divided into four types: substituting for unnameable things, substituting for any thing, functioning as numerical substitutes, and helping to express euphemistic tone. Shao Jingmin and Zhao Xiufeng’s (1989) research on the Non-Interrogative Uses of *shéme* conducted in-depth and detailed research on the non-interrogative uses of *shéme*, distinguishing extended uses such as universal reference, enumerative reference, anaphoric reference, borrowed reference, empty (indefinite) reference, negation, rhetorical question, and independence, also discussing the grammatical meaning and functional types of *zěnmé* “how”.

Syntactic research on the non-interrogative uses of interrogative pronouns is mainly reflected in the following aspects (Zhang, 2005). First, examining the syntactic position of the interrogative pronoun in the sentence whether it is in subject or object position, and the relative order between the interrogative pronoun and the main predicate verb. Ding et al. (1961) pointed out that when *shéme* is inserted between the verb and object in a verb-object phrase or separable word, it often indicates negation or a rhetorical question. For example, *Nǐ shuō yā! Zhūāng shéme yǎba*. ‘You speak! What mute are you pretending to be?’. Second, examining the use of interrogative pronoun repetition to express non-interrogative meaning. Interrogative pronoun repetition has two forms: continuous repetition, e.g., *nǎr a* ‘where?’, and interval repetition, e.g., *shé yě bùfúshé* ‘nobody submits to anybody’. Third, examining interrogative pronouns coordinating with conjunctions, adverbs, or other words to express non-interrogative meaning, e.g., *shé dōu bùxǔ shuō* ‘nobody is allowed to say’. Fourth, the non-interrogative use of interrogative pronouns in yes-no questions and rhetorical questions, where the interrogative pronoun is not the focus of the question, thus remaining indefinite. For example: *Hái yǒu shé xiàohuà zánmen bùchényǐng?* ‘Is there anyone else who would laugh at us?’. Regarding the non-interrogative functions of *shéme*, there has been much discussion in academia: Luo (2025) focused on the syntactic, semantic, and pragmatic features of the two modal constructions *ràng/jiào nǐ X nǐ jù X* ‘have/ask you to X then you X’ and *shuō shéme/zěnmé(zháo) yě děi X* ‘no matter what/how (emphasis) must X’, emphasizing their

constituent components and modal semantics. Pan (2025), based on cognitive grammar and conversational strategy perspectives, deeply analyzed the Chinese oral conversational construction *sh éime ya* ‘what’, finding that in terms of cognitive domains, its manifestations in the epistemic, effective, and speech-act domains all deviate from expectations, and each domain has its own characteristics in semantics, form, and epistemic status, forming a unique expressive system. The issue of *sh éime* appearing at the end of Chinese sentences while *what* fronts English sentences has long been unresolved, attracting lasting attention in linguistics. Zhong & Sun (2023), from the perspective of diachronic evolution of language systems and constructional selection relationships, explored the construction mechanisms of the *sh éime* interrogative construction and the *what* interrogative construction and the cognitive reasons for the distribution difference of the interrogative words. Research indicates that the boundedness of the predicate structure profoundly influences the construction of both types; both Chinese and English nations have a dual cognitive attribute (known and unknown) towards questioning events, but the Chinese nation prefers to emphasize the unknown aspect.

Previous research has certain theoretical value for understanding the syntactic features of the non-interrogative uses of *sh éime*, but scholars in these studies primarily parsed vocabulary and statements based on constituent relations, exploring the impact of the independence and substitutability of each component on the content effect. Influenced by the traditional linguistic thought of separating vocabulary and grammar, and analyzing language content in isolation only at the lexical level, it is difficult to grasp more deeply the intrinsic connection between the expression of language content and its different contexts. The French linguist Lucien Tesnière (1965) proposed a linguistic theory more aligned with a systemic view, namely Dependency Grammar (DG). It considers vocabulary as the basic unit of language content, and the dependency relationships existing between words should also be regarded as fundamental components of the sentence, thus becoming the core of research.

There are some basic properties of DG for analyzing *sh éime*. A distinctive property of DG is one-to-one mapping, which means for each word in the sentences, there is only one node in the corresponding tree diagram (Niu & Osborne, 2019). A component can be individual words or groups of words, which is a component that is a complete subtree. The relevant concept of generic and relational units are as following (Osborne, 2019):

String:

A word or a combination of words that are continuous with respect to precedence

Catena: A word or a combination of words that are continuous with respect to dominance

Component:

A word or a combination of words that are continuous with respect to both precedence and dominance

Root:

The one word in a given catena that is not dominated by any other word in that catena.

Head:

The one word that immediately dominates a given catena

Dependent:

A constituent that a given word immediately dominates

Governor:

The one word that licenses the appearance of a given word

Governee:

A word the appearance of which is licensed by a given word

The constituent could be identified by the constituency tests including the following:

Topicalization:

The test fronts the test constituent to identify whether the sentence is acceptable.

Clefting:

It focus the test constituent by putting it after it is/was

Pseudoclefting:

using what...is/was in the case of pseudoclefting

Proform substitution:

The test substitute the test constituent with proform to identify whether the sentence is acceptable.

Answer fragments:

It identifies the test constituent by seeing if it can be questioned using a single question word.

The constituent may undergo scrambling rising, a widely studied type of syntactic discontinuity that is absent in English but present in other languages with more flexible word order. Scrambling refers to the syntactic phenomenon whereby syntactic constituents deviate from the standard word order and undergo positional movement. It is always a form of constituent rising, which allows the displaced constituent to appear either before or after its governor and typically occurs to accommodate the information contribution of the relevant constituents in a sentence (Osborne, 2019).

The analysis considers coordinate structure in the syntactic structure, which refers to the entirety of words that appear between the left-most conjunct bracket and the right-most conjunct bracket (Osborne, 2019). Dependency syntax pays more attention to studying the relationships between the various components of a sentence, facilitating the transition from the syntactic level to the semantic level. Applying dependency syntactic analysis from Dependency Grammar theory can help this study better parse the syntactic characteristics of

the non-interrogative functions of *shéme*. Currently, some scholars have studied the syntactic features of Chinese verbs of saluting using dependency syntax (Wang, 2023), but research on interrogative pronouns, especially the non-interrogative uses of Chinese interrogative pronouns, remains to be supplemented. The study endeavors to explore the validity of constituency test in Mandarin Chinese and the syntax properties of *shéme* in non-interrogative function.

3. Methodology

Based on Zhao & Shao's (1989) 8-category classification of non-interrogative uses of interrogative pronouns, this study selects representative real-language examples from the CCL Corpus, then conduct sentence-by-sentence syntactic analysis to summarize their features. This study aims to solve the following research questions:

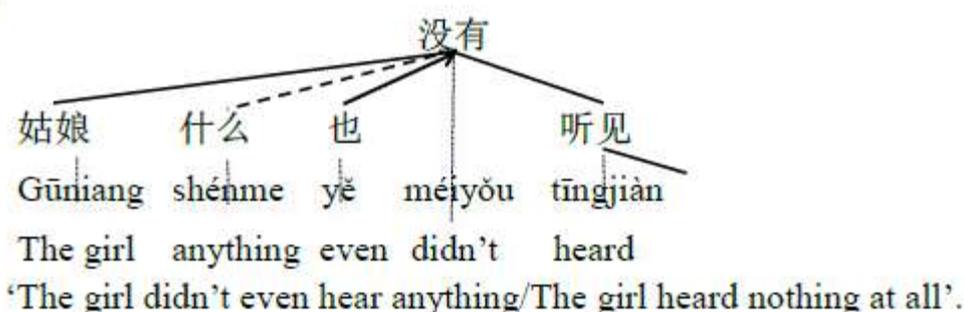
- (1) What are the syntactic position features of *shéme* in non-interrogative uses?
- (2) What syntactic components does *shéme* often function as in non-interrogative contexts? To what extent are constituency tests applicable?

4. DG Analysis

4.1 Universal Reference

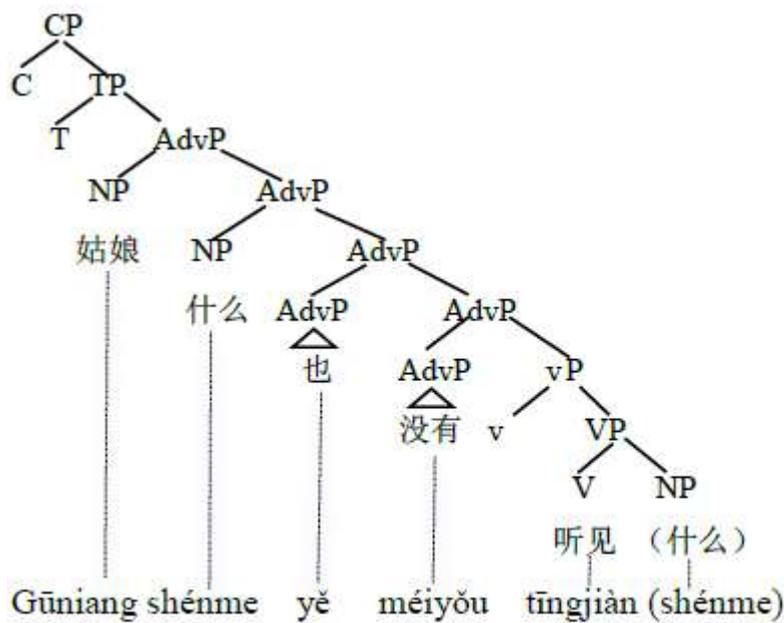
The universal usage of *shéme* refers to cases where *shéme* refers to all entities within a domain without exception, possessing comprehensive scope. In such cases, *shéme* generally appears before the main predicate verb of the entire sentence, between predicate verbs, is accompanied by *dōu/yě* 'all/even', or is preceded by words like *wú'èn* 'no matter' (Shao & Zhao, 1989). This paper takes the structure *shéme* + *dōu/yě* as an example for DG analysis, with the specific sentence as follows:

(1)



In this sentence, *shéme* is located within the sentence, indicating a situation without exceptions. From the perspective of syntactic structure, although this sentence exhibits object fronting, its core structure is SVO. *Gūniang* 'girl' is the subject, indicating the agent of the action; *tīngjiàn* 'hear' is the predicate head, expressing the core action; *shéme* serves as the object, and its syntactic position precedes the predicate verb *tīngjiàn* 'hear', conforming to the typical distributional characteristic of universal *shéme* often co-occurring with *yě* 'even'.

Its core function is to use the combination *yě + shénme* to cover all potential objects involved in the action *tīngjiàn* ‘hear’, thereby negating that *Gūniang* ‘girl’ has any object that was heard. Simultaneously, this syntactic configuration intensifies the negative tone. From a DG analysis perspective, scrambling occurs here because the displaced constituent *shénme* is allowed to precede its governor *tīngjiàn* ‘hear’. This happens to accommodate the information contribution of the constituents involved. Constituents that contribute old information, already established in the context, tend to appear towards the left, whereas constituents contributing new information, not yet established in the context, tend to strive rightward. Since *shénme*, referring to all cases without exception, represents old information that may have appeared in the previous context, it undergoes scrambling, moving leftward to appear further to the left.



Gūniang shénme yě méiyǒu tīngjiàn (shénme)
The girl anything even didn't heard (anything)
'The girl didn't even hear anything/The girl heard nothing at all'.

It is worth noting that such scrambling in Dependency Grammar (DG) is essentially different from the movement operation proposed in Generative Grammar. The study of movement theory in Generative Syntax has evolved from the trace theory of the Government and Binding (GB) framework to the early copy theory of the Minimalist Program (MP), and then to the internal merge model in the recent Minimalist Program (Chomsky, 1993; Chomsky, 2000; Chomsky, 2004). The Generative Syntax analysis of this sentence is shown in the figure below, with the lexical array as {C, T, v, *Gūniang*, *shénme*, *yě*, *méiyǒu*, *tīngjiàn*}. In line with the recent Minimalist Program, movement in Generative Syntax is part of the merge operation, and the movement of the constituent *shénme* is constrained by Phase Theory. It can only move to the edge of a phase, leaving a trace in its base position, whereas scrambling in DG involves no such traces. In addition, the two differ in their operational motivations. In the early stage of Generative Syntax, movement had definite motivations, such as the elimination of uninterpretable features and feature checking; after being categorized as internal merge in

the later stage, it became a free operation conforming to the Third Factor Principles, with overgeneration in derivations filtered out by the interface systems. By contrast, the core motivation for scrambling in DG lies in discourse-pragmatic factors, as it serves the expression of information structure in an all-round way: constituents carrying given information undergo leftward scrambling, while those conveying new information tend to move rightward, so as to adapt to the information transmission needs of specific contexts. It is worth noting that such scrambling in Dependency Grammar (DG) is essentially different from the movement operation proposed in Generative Grammar.

- a. *什么 姑娘 也 没有 听见
 Shénme Gūniang yě méiyǒu tīngjiàn -Topicalization
 Anything the girl even didn't hear
 'Anything the girl didn't even hear'.
- b. 是 什么 姑娘 也 没有 听见
 Shì shénme gūniang yě méiyǒu tīngjiàn -Clefting
 It was anything the girl even didn't hear'
 'It was anything the girl didn't even hear'
- c. 姑娘 没有 听见 的 是 什么
 Gūniang méiyǒu tīngjiàn de shì shénme -Pseudoclefting
 the girl didn't hear what is anything
 'What the girl didn't hear is anything'
- d. 姑娘 也 没有 听见 它
 Gūniang yě méiyǒu tīngjiàn tā -Proform substitution
 The girl even didn't hear it
 'The girl didn't even hear it'
- e. 姑娘 也 没有 听见 什么 什么
 Gūniang yě méiyǒu tīngjiàn shénme? -Shénme -Answer fragment
 The girl even not did hear what? -anything
 'What did the girl even not hear? -anything'

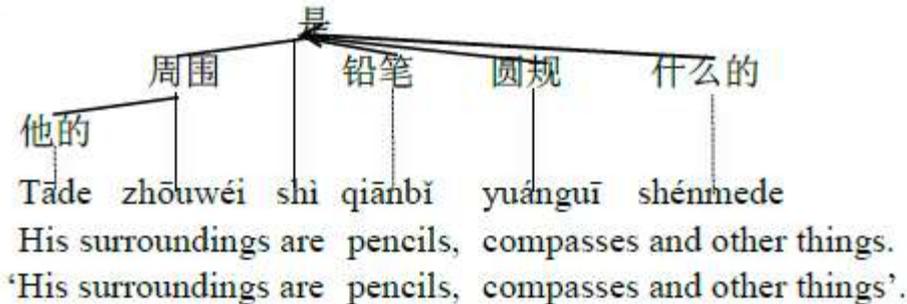
By applying constituency tests to analyze whether *shénme* can be identified as a constituent when used in its universal sense in the sentence, it is found that apart from Topicalization being debatable, the other tests can be passed, indicating that *shénme* has a certain validity as a constituent in this usage. Syntactically, the sentence formed by Topicalization is acceptable, albeit somewhat odd (due to the lack of complete correspondence between Chinese and English), and semantic ambiguity exists. Because *shénme* in Chinese can also represent 'any', using this test leads to a change in sentence meaning, shifting from originally referring to a single girl who heard nothing to all girls hearing nothing. Despite these limitations, the

evidence provided by these tests is sufficient to conclude that the object *sh éime* is a constituent.

4.2 Enumerative Reference

The enumerative usage indicates a non-exhaustive list, with syntactic patterns such as *X (Y, Z...) sh éime de* or *sh éime X, Y (Z...)* (Shao & Zhao, 1989). This analysis focuses on the former pattern, as illustrated in the following example:

(2)



From a syntactic position perspective, *sh éime* in this sentence appears after the enumerated items *qiānbǐ, yuánguī* ‘pencils, compasses’ and before the sentence-final particle, occupying a clause-final attached position. This distribution perfectly matches the characteristic pattern of the enumerative construction *X (Y, Z...) sh éime de*. Similar examples include *zhuōzi shàng fàngzhe shūběn, bǐjìběn sh éime de* ‘on the table are placed books, notebooks and other things’ and *zhōumò kěyǐ qù guàngjiē, kàn diànyǐng sh éime de* ‘on weekends one can go shopping, watch movies and do other things’, where *sh éime* consistently attaches after the enumerated items in clause-final position, serving to supplement the list.

In terms of function and syntactic role, *sh éime* itself does not serve as core syntactic elements like subject, predicate, or object. Instead, it combines with the preceding enumerated items *qiānbǐ, yuánguī* ‘pencils, compasses’ to form a nominal phrase that functions collectively as the predicate complement in the sentence. By combining with *de* to form the adjunct *sh éime de*, its core function is to mark the preceding enumeration as non-exhaustive, implying the existence of other similar items (such as erasers, rulers, and other stationery).

The predicate-argument structure of this sentence can be represented as *are pencils, compasses (His surroundings)*, and *sh éime de* here is an adjunct because its presence is not necessary to complete the predicate's meaning; rather, it adds supplementary information about the predicate and arguments that are present. This can be distinguished using discovery diagnostics, for example:

- a. 他的周围 是 铅笔 圆规
 Tāde zhōuwéi shì qiānbǐ yuánguī (omission)
 His surroundings are pencils, compasses
 ‘His surroundings are pencils, compasses’.
- b. *他的周围 是 铅笔 圆规 这 发生了 什么的
 Tāde zhōuwéi shì qiānbǐ yuánguī, zhè fā shēngle shénmede (clause)
 His surroundings are pencils, compasses, which happens and other things
 ‘His surroundings are pencils, compasses, which happens and other things’
- c. *他 这样 做 什么的
 Tā zhè yàng zuò shénmede (substitution)
 He so did and other things
 ‘He did so and other things’.

Among these, omission is applicable, as removing *shénme de* does not affect the semantics. However, the other two tests, including the adjunct in a relative clause or substitution, are not applicable and render the sentence unacceptable. Using this method to identify the adjunct provides some evidence, though its validity might be relatively weak.

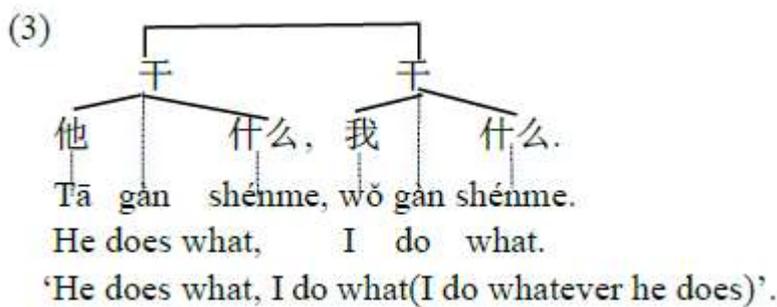
- a. 什么的 他的周围 是 铅笔 圆规
 shénme de tāde zhōu wéi shì qiān bǐ yuán guī -Topicalization
 and other things, his surroundings are pencils, compasses
 ‘and other things, his surroundings are pencils, compasses’
- b. *是 什么的 他的周围 是 铅笔 圆规
 shì shénme de tā de zhōu wéi shì qiān bǐ yuán guī -Clefting
 It is the other things that his surroundings are pencils, compasses
 ‘It is the other things that his surroundings are pencils, compasses’
- b. 他的 周围 是 铅笔 圆规 的 是 什么的
 Tā de zhōu wéi shì qiān bǐ yuán guī de shì shénme de
 What his surroundings are pencils, compasses is and the other things
 ‘What his surroundings are pencils, compasses is and the other things’ -Pseudoclefting
- c. 他的周围 是 铅笔 圆规 它
 Tā de zhōu wéi shì qiān bǐ yuán guī tā -Proform substitution
 His surroundings are pencils, compasses, it.
 ‘His surroundings are pencils, compasses, it.’
- e. *他的 周围 是 什么 铅笔 圆规? -什么的
 Tā de zhōu wéi shì shénme qiānbǐ yuánguī? -shénmede
 What his surroundings are pencils, compasses? -And the other things’
 ‘What are his surroundings pencils, compasses? -And the other things’ -Answer fragment

Through constituency tests, it can be observed that *shénme* essentially fails all tests and does not function as a constituent.

4.3 Anaphoric Reference

The anaphoric usage of *shénme* refers to cases where two instances of *shénme* corefer, and they occupy parallel syntactic positions within parallel clause structures (Shao & Zhao, 1989). In the following example, both instances of *shénme* appear after the predicate verb *gàn* 'do' and function syntactically as objects. The first *shénme* in the initial clause refers back to some unspecified action, matter, or activity from the context, while the second *shénme* in the subsequent clause fully inherits this reference.

From the perspective of syntactic position, *shénme* appears post-verbally, filling the slot for a specific object required by the verb *gàn* 'do'. Its core function is to act as an object that anaphorically references an unspecified entity, maintaining expressive flexibility while ensuring clear and concise semantic transmission. This usage is very common in daily communication. Extended examples like *tā xué shénme, wǒ xué shénme* 'he studies what, I study what' (I study whatever he studies) and *tā xuǎn shénme, wǒ xuǎn shénme* 'he chooses what, I choose what' (I choose whatever he chooses) continue this pattern of *shénme* serving as an object in anaphoric usage.



From the perspective of predicate-argument structure, *shénme* is an argument. The sentence can be represented as *does(he, what), do(I, what)*. This anaphoric usage in Chinese necessarily involves a coordinate structure, and the coordinator is frequently omitted:

Tā gàn shénme, wǒ gàn shénme.

He does what, I do what.

a. [Tā] gàn shénme, [wǒ] gàn shénme.

[He] does what, [I] do what.

b. Tā [gàn] shénme, wǒ [gàn] shénme.

He [does] what, I [do] what.

c. Tā gàn [shénme], wǒ gàn [shénme].

He does [what], I do [what].

d. [Tā gàn shénme], [wǒ gàn shénme].

[He does what], [I do what].

Every left-to-right string can be coordinated, and this case is generally representable as NP1 + V + NP2, NP3 + V + NP2. The omission of the coordinator aligns with the characteristic of Chinese not relying on formal markers, instead utilizing contextual and semantic logic to convey relationships. The logic of “I follow him” is clear in this sentence, directly perceivable by the reader without needing supplementary conjunctions like *ránhòu* ‘then’, *jìù* ‘then’, or *yě* ‘also’. Furthermore, the symmetrical structure itself inherently implies a coordinate relationship.

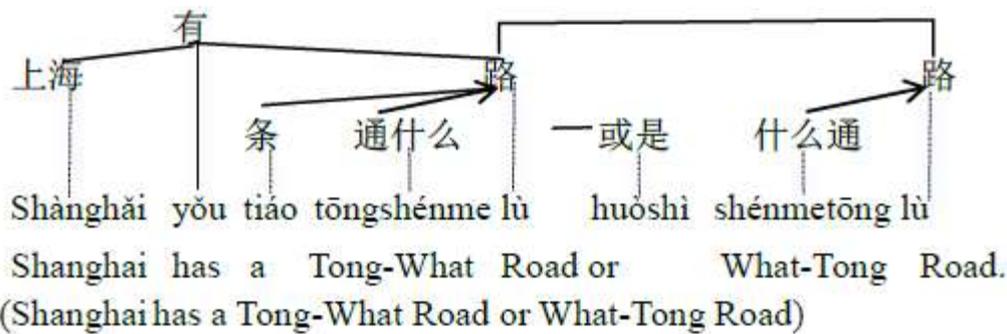
- a. 什么 他 干, 什么 我 干
 shénme tā gàn, shénme wǒ gàn -Topicalization
 What he does, what I do
 ‘What he does, what I do’
- b. *是什么 他 干, 是 什么 我 干
 shì shénme tā gàn, shì shénme wǒ gàn -Clefting
 It is what that he does, it is what that I do
 ‘It is what that he does, it is what that I do’
- c. *他干的什么 是什么 我干的什么 是什么
 Tā gàn de shénme shì shénme, wǒ gàn de shénme shì shénme -Pseudoclefting
 he does What is what, I do what is what
 ‘What he does is what, what I do is what’
- d. 他干的它, 我干的它
 Tā gàn de tā, wǒ gàn de tā -Proform substitution
 He does it, I do it
 ‘He does it, I do it’
- e. 他干的什么? -是什么 -我干的什么? -是什么
 Tā gàn de shénme?-shì shénme -wǒ gàn de shénme?-shì shénme
 does he do What? -What. -What do I do? -What
 ‘What does he do? -What. What do I do? -What’-Answer Fragment

Through constituency tests, it can be observed that *shénme* passes all tests except (b) and (c), indicating it is a constituent. Tests (b) and (c) produce syntactically acceptable but semantically uncommon sentences. Such expressions are rare in Chinese because the emphatic *shì* cleft construction conflicts with the anaphoric function of *shénme*, and clause-initial position in Chinese is typically for topics rather than focus markers. Generally, when *shénme* appears clause-initially, it serves as a topic or indicates a direct question.

4.4 Borrowed Reference

The borrowed reference usage of *shénme* involves its temporary use to refer to a specific object, such as indicating unknown information, special information, or secondary information (Shao & Zhao, 1989). An example is as follows:

(4)



In this sentence, *shénme* appears before the nominal element *lù* ‘road’, forming the structures *tōng shénme lù* and *shénme tōng lù*. Syntactically, it functions as an attributive modifier, temporarily standing in for the core morpheme in a road name that is either not yet specified or does not need precise identification. For instance, *tōng shénme lù* might refer to specific road names like *Tōng Hǎi Lù* or *Tōng Jiāng Lù*, where *shénme* substitutes for elements like *hǎi* or *jiāng*. Similarly, *shénme tōng lù* could refer to names like *Cháo yáng Tōng lù* or *Hu àn n Tōng lù*, where *shénme* replaces elements like *cháo yáng* or *hu àn n*.

Syntactically positioned before the nominal head, *shénme* fills the gap of unknown or secondary information in the road name without affecting the overall semantic expression of the sentence. This allows the speaker to clearly convey the core meaning that there is a road in Shanghai associated with the character *tōng* or directly using *tōng lù* as a suffix even when the specific road name is uncertain or precise formulation is unnecessary. This usage is highly practical in daily communication. Other examples include *lǒu xī à kǎi le jiā shénme nǎi chá diàn* and *tā mǎi le liàng shénme pā zǐ de chē*, where *shénme* similarly appears before nouns like *nǎi chá diàn* and *pā zǐ*, serving as an attributive modifier that refers to the unknown name of the milk tea shop or the car brand, respectively.

- a. *什么 通路 上海 有条 或是 什么 通路
Shénme tōng lù Shànghǎi yǒu tiáo huò shì shénme tōng lù
What Tong Road Shanghai has a or What-Tong Road
'What Tong Road or What-Tong Road Shanghai has a' -Topicalization
- b. *是 什么 上海 有条 通路 或是 什么 通路
Shì shénme Shànghǎi yǒu tiáo tōng lù huò shì shénme tōng lù
It was what that Shanghai has a Tong-Road or Tong Road.
'It was what that Shanghai has Tong-Road or Tong Road.' -Clefting
- c. *上海 有条 通路 或是 通路 是什么
Shànghǎi yǒu tiáo tōng lù huò shì tōng lù shì shénme
Shanghai has a Tong Road or What-Tong Road is What
'What Shanghai has a Tong Road or What-Tong Road is What' -Pseudoclefting
- d. *上海 有条 通 它 路 或是 它 通路
Shànghǎi yǒu tiáo tōng tā lù huò shì tā tōng lù
Shanghai has a Tong-It Road or It-Tong Road
'Shanghai has a Tong-It Road or It-Tong Road' -Proform substitution
- d. *上海 有 条 通路 什么? -是什么
Shànghǎi yǒu tiáo tōng lù shénme? - Shì shénme
Shanghai does have a the Tong Road What? -What
'What the Tong Road does Shanghai have? -What' -Answer Fragment

From a syntactic analysis perspective, *shénme* is embedded within the core of the predicate structures *tōng shénme lù* or *shénme tōng lù*, serving as part of the adjunct that provides additional information to *lù*.

4.5 Indefinite Reference

The indefinite usage of *shénme* refers to uncertain people, things, or matters, equivalent to "certain/some" (Shao & Zhao, 1989).

(5)



What is required (and) what is not has been perfectly clear.
'What is required (and) what is not has been perfectly clear'.

Shénme or *shénme X* can appear after or before the verb. This analysis takes *shénme* in pre-verbal position as an example, where it often serves to introduce a topic, using indefinite reference to elicit subsequent statements, belonging to topicalization. In this sentence, *shénme* appears in pairs at the beginning of the clause and precedes the verbs *yào* ‘want’ and *bú yào* ‘not want’, forming a coordinate structure that summarizes various uncertain objects. *Shénme* functions as the subject in both coordinate clauses and is also an argument. There is scrambling because the displaced constituent *shénme* was allowed to precede its governor *yào*. Combined with the judgment in the latter part of the sentence, *yǐjīng hěn qīngchū* ‘already very clear’, the sentence clearly conveys the core meaning of needing to make explicit choices while avoiding the limitations of specific enumeration through the indefinite reference of *shénme*, making the expression more generalized.

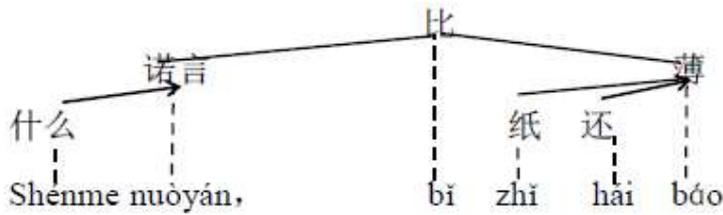
- a. 什么 是要, 什么 是不要
 Shénme shì yào, shénme shì bú yào, yǐjīng hěn qīngchū
 ‘It is what that is required (and) it is what that is not being perfectly clear’. - Clefting
- b. 什么要的是 什么 什么不要的是 什么 已经很清楚
 Shénme yào de shì shénme, shénme bú yào de shì shénme, yǐjīng hěn qīngchū
 ‘what is required being perfectly clear is what (and) what is not being perfectly clear is what’. - Pseudoclefting
- c. 它要, 它不要, 已经很清楚
 Tā yào, tā bú yào, yǐjīng hěn qīngchū - Proform substitution
 ‘It is required (and) it is not being perfectly clear’.
- *d. 要 什么 已经很清楚? -是 什么? 不要 什么 已经很清楚? -是 什么
 Yào shénme yǐjīng hěn qīngchū? -Shì shénme? Bú yào shénme yǐjīng hěn qīngchū? -Shì shénme? - Answer Fragment
 ‘What is required being perfectly clear? -what; what is not required being perfectly clear? -what’.

Through constituency tests, it can be observed that *shénme* essentially passes all tests. Note that “it is” is not a unique Chinese expression and therefore does not require pinyin and word-for-word English correspondence. When *shénme* in Chinese is used at the beginning of a clause to refer to unknown things, it can function as a constituent.

4.6 Negation

The negative usage of *shénme* indicates the speaker's negative attitude toward the subject under discussion, such as in patterns like *shénme X*, *shénme X*, *Y(Z...)*, *shénme X bù X*, *shénme X*, etc. (Shao & Zhao, 1989).

(6)



What promises? (They're) than paper even thinner.
'What promises? (They're) even thinner than paper.'

In this sentence, *shénme* appears at the beginning of the clause and directly modifies the noun *nuòyán* 'promises', breaking conventional expression through its abrupt referential usage, instantly highlighting the negative attitude toward *nuòyán*. In terms of function and role, *shénme* here serves as an adjunct, modifying the argument *nuòyán*. The originally neutral term *nuòyán* acquires implied meanings of "not worth mentioning" and "carrying no weight" due to the negative modification by *shénme*. Combined with the metaphorical expression in the latter part of the sentence, *bǐ zhǐ hái báo* 'even thinner than paper', *shénme* not only establishes a dismissive tone through its negative function but also strengthens the force of negation through concrete comparison. This allows the speaker's negative attitude—viewing *nuòyán* as lacking credibility and value—to be expressed vividly and powerfully. Simultaneously, this syntactic structure lends the expression a colloquial emotional tension, making it more impactful than a straightforward negative statement.

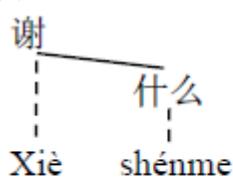
- a. *什么 诺言 比 纸 还 薄
Shénme nuòyán bǐ zhǐ hái báo - Topicalization
What promises? They're than paper even thinner.
'What promises? They're even thinner than paper'.
- b. *是什么 诺言 比 纸 还 薄
Shì shénme nuòyán bǐ zhǐ hái báo - Clefting
It is what that promises than paper even thinner
'It is what that promises even thinner than paper'.
- c. *诺言 比 纸 还 薄 的 是 什么
Nuòyán bǐ zhǐ hái báo de shì shénme - Pseudoclefting
What promises than paper even thinner is what
'What promises are even thinner than paper is what'.
- d. *它 诺言 比 纸 还 薄
Tā nuòyán bǐ zhǐ hái báo - Proform substitution
They promises? than paper even thinner.
'They promises? (They're) even thinner than paper'.
- e. *诺言 比 纸 还 薄 的 是 什么
Nuòyán bǐ zhǐ hái báo de shì shénme? — Shénme?
(What) promises than paper even thinner ARE? -What
'What promises are even thinner than paper? -What'. - Answer Fragment

Through constituency tests, it can be observed that *shéime* essentially fails all tests. When *shéime* in Chinese is used at the beginning of a clause to express negation, it does not function as a constituent.

4.7 Rhetorical Question

The rhetorical usage of *shéime* serves to intensify rhetorical questioning and reinforce negation, with applications such as functioning directly as an object, forming “*shéime* X” as an object, or serving as a parenthetical element (Shao & Zhao, 1989).

(7)



Thank nothing

‘Thank nothing’ (Don’t thank (me) or You’re welcome)

In this sentence, *shéime* follows the verb *xiè* ‘thank’ and occupies the sentence-final position. This compact structure focuses attention on the rhetorical focus while avoiding redundant expression. Functionally, *shéime* here directly serves as an argument of the predicate *xiè*. While superficially questioning “what is the object of thanks,” it actually employs rhetorical usage to negate the very premise of “needing to express thanks.” The speaker utilizes the referential vagueness of *shéime* to diminish its interrogative force, instead strengthening the negative attitude of “no need to thank” or “no need for politeness.” This syntactic structure is both concise and natural, while the rhetorical function of *shéime* makes the tone more straightforward and familiar. Compared to the direct statement *bùyòng xiè* ‘no need to thank,’ this construction carries a more natural conversational quality while accurately conveying the core intention of refusing the other party’s gratitude.

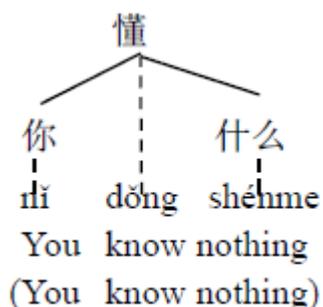
- a. *什么 谢
Shénme xiè - Topicalization
Nothing thank
'Nothing thank'.
- b. 是什么 谢
Shì shénme xiè - Clefting
It is nothing that thank
'It is nothing that thank'.
- c. 谢 的 是什么
Xiè de shì shénme - Pseudoclefting
thank what is nothing
'What thank is nothing'.
- e. 谢 它
Xiè tā - Proform substitution
Thank it
'Thank it'.
- f. 谢的什么? -什么?
Xiè de shénme? -Shénme? - Answer Fragment
Thank what? -nothing
'Thank what? -nothing'.

Through constituency tests, it can be observed that *shénme* passes all tests except Topicalization. When *shénme* in Chinese is used to intensify rhetorical questioning, it can function as a constituent.

4.8 Independence

The independent usage of *shénme* conveys meanings beyond simply not hearing something clearly, expressing surprise, unexpectedness, or, when combined with *ya*, negation (Shao & Zhao, 1989). This usage can convey specific emotions without relying on complex contexts, with *nǐ dǒng shénme* 'what do you understand' serving as a typical example.

(8)



In this sentence, *shénme* follows the verb *dǒng* ‘understand’ and occupies the sentence-final position. The concise “subject + verb + *shénme*” structure focuses attention on the key expression, allowing for more direct emotional conveyance. Functionally, *shénme* here serves as an argument of the predicate *dǒng*. While superficially questioning “what content you understand,” it actually utilizes its independent usage to convey attitudes of surprise, negation, or disdain. Through the referential vagueness of *shénme*, the speaker weakens the actual interrogative intent, instead emphasizing that “you don’t actually understand the matter.” This both expresses negation of the listener’s cognition and may imply surprise. This syntactic structure aligns with colloquial expression habits while leveraging the independent function of *shénme* to create a more impactful tone. Compared to the direct statement *nǐ bù dǒng* ‘you don’t understand,’ it better highlights emotional tension and precisely conveys the core meaning of questioning the listener’s cognition and expressing the speaker’s attitude.

a. 什么 你 懂

shénme nǐ dǒng -Topicalization

nothing you know

‘nothing you know’

b. 是 什么 你 懂

shì shénme nǐ dǒng -Clefting

It is nothing that you know

‘It is nothing that you know’

c. 你 懂 的 是 什么

nǐ dǒng de shì shénme -Pseudoclefting

you know what is nothing

‘What you know is nothing’

d. 你 懂 它

nǐ dǒng tā -Proform substitution

you know it

‘you know it’

e. 你 懂 的 是 什么

nǐ dǒng de shì shénme - shén me -Answer Fragment

do you what understand? -nothing

‘what do you understand? -nothing’

Through constituency tests, it can be observed that *shénme* essentially passes all tests. Based on this example, when *shénme* in Chinese is used in its independent function, it does not serve as a constituent.

5. Discussion and Conclusion

Through the Dependency Grammar analysis of the non-interrogative uses of *shénme*, this

study reveals that the syntactic characteristics of Chinese *shéime* vary systematically depending on its referential functions. Generally functioning as a dependent in syntactic structure, its thematic role differs according to its relationship with the predicate. Furthermore, based on constituency tests (Osborne, 2019), *shéime* does not necessarily qualify as a constituent. Although it may function as a string or catena within sentences, in specific usages such as borrowed reference where it serves as part of an adjunct, it does not constitute an independent constituent.

The findings demonstrate distinct syntactic patterns across different usage types. In universal usage, *shéime* typically functions as an argument within the clause, governed by the predicate, and exhibits scrambling to represent given information from previous context. Similarly, in anaphoric usage, it commonly serves as an argument while occurring alongside coordination. The rhetorical and independent usages also show *shéime* functioning as an argument, with its governor consistently being the head. Conversely, in enumerative usage, *shéime* combined with the nominal particle *de* acts as a sentential adjunct for listing items, identifiable through omission tests. Likewise, it modifies an argument as an adjunct in borrowed reference usage, while in negative usage, it similarly serves as an adjunct modifying an argument. The indefinite usage presents a more complex pattern where *shéime* functions as an argument appearing before its governor through scrambling, often accompanied by coordination.

The constituency tests reveal a clear pattern: *shéime* passes these tests in universal, anaphoric, rhetorical, and independent usages, but fails in enumerative, borrowed reference, indefinite, and negative usages. This indicates that when *shéime* serves as an argument, it typically constitutes a valid syntactic constituent and may exhibit scrambling when preceding its governor. However, when functioning as an adjunct, it cannot stand as an independent constituent, primarily because it forms part of a complete subtree with other lexical elements rather than constituting a subtree itself.

Notably, scrambling in Dependency Grammar is essentially distinct from the movement theory in Generative Grammar. The latter has evolved from the trace theory of the Government and Binding framework to the copy theory of the early Minimalist Program, and finally to the internal merge model of the recent Minimalist Program, with movement constrained by Phase Theory, leaving traces in base positions and driven by syntactic feature checking in its early stage and free from specific syntactic motivations as internal merge in the later stage (Chomsky, 1993; Chomsky, 2000; Chomsky, 2004). By contrast, DG scrambling involves no trace or hierarchical syntactic constraint, and is purely motivated by discourse-pragmatic factors for optimizing information structure with constituents bearing given information moving leftward and those with new information rightward to fit contextual information transmission needs.

This study refines the typology of non-interrogative *shéime* by clarifying the correlation between its referential functions, syntactic roles and constituency features, and supplements the cross-theoretical understanding of scrambling. Future research can extend this DG analysis to other Chinese interrogative pronouns to explore the syntactic universals and

individualities of their non-interrogative uses, and incorporate diachronic data to trace the evolutionary trajectory of these uses, thus revealing the developmental mechanisms of non-interrogative functions in Chinese interrogative pronouns and providing empirical evidence for cross-linguistic comparative studies.

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