

EMBEDDED ADJECTIVES IN CHINESE AND VIETNAMESE QUANTITATIVE NOUN STRUCTURES FROM A COGNITIVE PERSPECTIVE

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Abstract. From a cognitive perspective, this paper provides an in-depth analysis of the embedded adjectives in the structure of Chinese and Vietnamese quantitative nouns. It employs the theory of distance iconicity and image schema to reveal the cognitive strategies of these languages. The conceptual components within the structure of numeral classifiers are close, and thus they should also be close in language form. Conversely, the conceptual components in the structure of collective classifiers and container classifiers are distant from each other, and therefore, they can be separated in language form. Additionally, when the image is perceived as a whole, the cognitive strategy of summary scanning is adopted. When the image can be decomposed into processes, the cognitive approach of sequential scanning is adopted. There are many syntactic differences between Chinese and Vietnamese in such structures, but certain cognitive rules can still be identified. In the future, we will strive to provide more comprehensive summaries and natural explanations of the language structures of Chinese and Vietnamese, particularly the syntactic structures.

Keywords: image schema, distance-iconicity, Chinese, Vietnamese, embedded adjectives.

1. Introduction

Overview of the studied structure

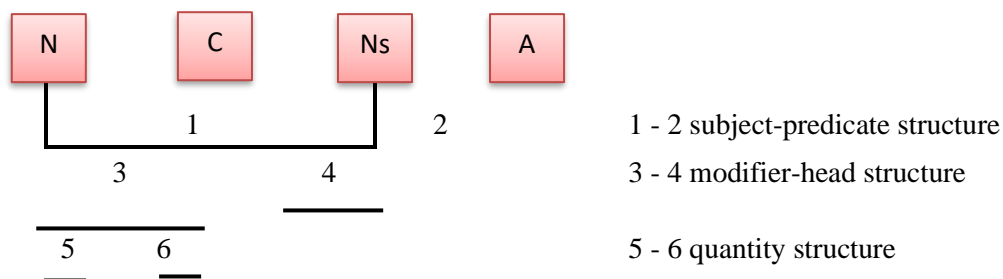
Cognitive linguistics is an interdisciplinary branch that studies the relationship between general principles and cognitive laws of language. The study of cognitive linguistics has penetrated every aspect of language and every branch of linguistics.

Cognitive linguistics assumes that human language ability is not an independent ability but is closely related to general cognitive ability. As a part of language structure, syntax is non-autonomous and inseparable from the lexical and semantic parts of the language (Croft, William, 2004). Cognitive linguistics argues that semantics is not just truth-conditional or objective but a combination of subjective and objective elements. The study of semantics always involves people's subjective views or psychological factors. It can be seen that there is a significant difference between cognitive linguistics and formal linguistics.

Chinese and Vietnamese are analytic languages, and both have the grammatical phenomenon of embedded adjectives in the middle of quantitative noun structures. This similarity contrasts with significant differences in their syntax. Let's first examine this structure syntactically.

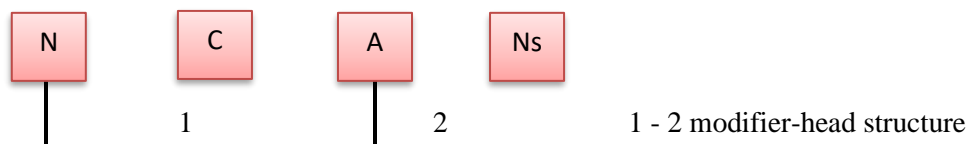
In Chinese, adjectives are embedded within quantitative noun structures in two positions. The analysis of the structural level is as follows:

The second semantic relationship describes the quantity of the object. In this case, the structure of “Number + Classifier + Noun + Adjective” can generally be understood as an adjective modifying the quantitative noun structures, so the embedded adjective is not limited. The analysis at the structural level is as follows:



“Number + Classifier + Noun” and “Adjective” are the direct components of the first level. The meaning of (3a) is “a big pile of stones”.

② The structure of “Number + Classifier + Adjective + Noun”



For example:

- (4) một lớp dày kem dưỡng ẩm
 a layer thick moisturizer
 ‘a thick layer of moisturizer’

In conclusion, the Vietnamese “Number + Classifier + Noun + Adjective” structure is potentially ambiguous, as it may have two syntactic structural relationships and correspondingly express two different semantic relationships. However, it can also be univocal.

- (5) một chồng bát cao
 a stack bowl high
 ‘a high stack of bowls’

Because “bát” (bowl) and “cao” (high) have no modification in (5), Vietnamese people do not say “bát cao” (bowl high), so “một chồng bát cao” can only be understood in one way: the adjective modifies the “Number + Classifier + Noun” structure.

In addition, the Vietnamese “Number + Classifier + Noun + Adjective” structure is similar to the Chinese “Number + Classifier + Adjective + Noun” structure, which has a wide range of applications, and there are basically no restrictions on the embedded adjectives, making it inconvenient for regularization and summary.

On the other hand, from the perspective of syntactic and semantic functions, the Chinese “Number + Adjective + Classifier + Noun” (yì hòu běn shù) and the Vietnamese “Number + Classifier + Adjective + Noun” (một hàng dài fan hâm mộ) are univocal syntactic structures and have more comparable points. Therefore, this paper focuses on these two structures. Through the theory of cognitive linguistics, we provide an explanation for this structure in Chinese and Vietnamese.

Teaching embedded adjectives cannot rely solely on simple memory. Syntactic analysis, semantic participation, and specific context must also be considered, and even cognitive

explanations are required. We hope that our research results can provide valuable references for teaching Chinese as a foreign language and, at the same time, serve as useful reference material for Vietnamese learners.

Previous research status

Regarding the use of embedded adjectives in quantitative noun structures, there are not many studies in the field of Chinese grammar. At present, we only see a few articles and grammar books, as shown below.

Zhu Dexi (1982) divided the situations in which classifiers are modified by adjectives into two types: one is temporary classifiers, which can be modified by adjectives or nouns because they are originally nouns. The second is numeral classifiers. A few numeral classifiers can be modified by monosyllabic adjectives, but the adjectives are limited to a few, such as “da” (big), “xiao” (small), “chang” (long), and “fang” (square).

From the perspective of whether the things represented by nouns can be divided, Liu Yuehua (1983) showed that if the things represented by nouns after numeral classifiers can be divided, the two adjectives “da” (big) and “xiao” (small) can be inserted between numbers and classifiers. For example, “yi da kuai dangao” (a big piece of cake) and “yi xiao tiao bu” (a small piece of cloth). These adjectives can also be used before most collective classifiers expressing indefinite numbers. However, before a certain number of collective classifiers, it is not allowed. Adjectives describing the shape of objects such as “hou” (thick), “bao” (thin), and “chang” (long) can sometimes be used before some nouns and inserted among quantitative phrases. Since container classifiers are originally nouns, an adjective can generally be added in front of them.

Lu Jianming (1987) examines in detail the situation of embedded adjectives in the middle of Chinese quantitative structures. Firstly, from the perspective of classifiers, he inspected 630 commonly used classifiers and found that only 129 classifiers can be inserted into the middle of quantitative structures, accounting for 20% of the total number of classifiers. However, adjectives cannot be inserted in the middle of quantitative structures composed of measurement classifiers. Secondly, from the perspective of numerals, the number structure with the number “yi” (one) has the highest interpolation, with 289 out of 328 examples, accounting for 88.1%. Thirdly, the investigation of adjectives showed that not all adjectives can be inserted in the middle of the structure; only seven such as “da” (big), “xiao” (small), “man” (full), “chang” (long), “zheng” (whole), “hou” (thick), and “bao” (thin) can be inserted. Lu Jianming only described these phenomena objectively without further explanation. Luo Yuanlin (1998) made a supplementary investigation to Lu Jianming's article and provided a preliminary analysis and explanation of this structure from the perspective of semantic and contextual constraints.

Most Vietnamese grammar books involve numerals and classifiers, but they mainly study the classification, semantic features, and grammatical functions of classifiers. At present, there is no research on embedded adjectives in the quantitative noun structures of Vietnamese. The comparative study of embedded adjectives in the quantitative noun structures in modern Chinese and Vietnamese has not yet been discussed by experts and scholars.

Among the relevant materials we have collected, there are only two theses that compare the classifiers or quantitative phrases of the two languages, such as those by Ruan Shiyuhe (2007) and Ruan Chunmian (2006), but none of them involve the comparison of embedded adjectives.

It can be seen that the comparative study of embedded adjectives in the quantitative noun structures of modern Chinese and Vietnamese is still quite weak, almost nonexistent. However, it is very important for an in-depth understanding of Chinese and Vietnamese classifiers, quantitative noun structures, word order, and other issues. It is also of paramount importance to the study of cognitive linguistics. Therefore, we decided to use the theory of cognitive linguistics to conduct an in-depth elaboration on embedded adjectives in the quantitative noun structures of modern Chinese and Vietnamese.

2. Content

2.1. Research Methods

2.1.1. Image schema

In the human cognitive system, in addition to the basic categories, the cognition of the relationships among things constitutes another important cognitive level, which Lakoff (1987) called the “kinesthetic image schema” (or “image schema”). Image schema is the organizational structure that connects abstract relationships and concrete images in human experience and understanding. It is a fundamental structure for understanding and recognizing more complex concepts. Human experience and knowledge are based on these basic structures and relationships. There are many image schemas in human experience, which Lakoff (1987) summarized as:

1. **The PART-WHOLE schema:** People and other objects are wholes composed of parts. Only parts that exist in the same structure form a whole. Human experience considers families and other social groups as wholes made up of parts, and divorce is seen as “disintegration.”
2. **The LINK schema:** Social and interpersonal relationships are viewed as connections.
3. **The CENTER-PERIPHERY schema:** The human body has a center and edges; similarly, trees and plants have trunks, branches, and leaves. The center is important, the edge is unimportant, and the edge depends on the center for its existence.
4. **The SOURCE-PATH-GOAL schema:** When an object moves from one location to another, there must be a starting point, an ending point, and a path. The purpose is seen as the end, and reaching the goal is “reaching the end.”

Other schemas include the UP-DOWN schema, FRONT-BACK schema, LINEAR ORDER schema, and so on.

In the structures we investigated, different classifiers are cognitively examined in different ways. This cognitive strategy can be revealed according to the image schema of cognitive linguistics.

2.1.2. Distance iconicity

Haiman (1983) expressed distance iconicity as the concept that the distance between concepts is often similar to the distance among linguistic symbols. Givón (1985) called this the proximity principle, defined as “entities that are closer together functionally, conceptually, or cognitively will be placed closer together at the code level.” In other words, distance iconicity means that the closer the surface form connection among elements is, the closer the meaning connection is, and the formal relationship is an imitation of the meaning relationship.

This feature of language is not a new discovery of contemporary functional linguists; it was recognized by traditional linguists through their nuanced insight into individual languages. For example, Behaghel (1932) proposed a rule when discussing German word order, which was called the “principle of concept proximity” or “Behaghel's first law” by later generations. Jespersen (1949) also proposed a “principle of adhesion” with similar content. However, contemporary linguists have rediscovered this principle while trying to explain language universals, bringing new meaning to this universal phenomenon in human language.

In the structures we investigated, there is a phenomenon where other elements can be embedded in both Chinese and Vietnamese. Distance iconicity will help us determine under what circumstances embedding occurs and why it can or cannot be embedded.

2.2. Our proposal

2.2.1. Classification

In this structure, the classifiers can be object classifiers, verb classifiers, tense classifiers, etc. This paper only discusses the case of object classifiers. Three kinds of object classifiers can be

There are two types of semantic orientation in the C1 type: first, it refers to container classifiers, indicating that the container is large, but the number of nouns is not necessarily large; second, it refers to nouns, indicating that the number of nouns is large, but the container is not necessarily large. Therefore, “*yi da wan fan*” (a big bowl of rice) has two meanings: one indicates a big bowl, and the other indicates a lot of rice.

Similarly, the semantic orientation of the C2 type is also these two. For example, “*một cốc to nước táo*” (a big glass of apple juice) has two meanings: one indicates that the glass is big, and the other indicates that there is a lot of apple juice.

In general, container classifiers are most likely to form a selective relationship with adjectives, followed by collective classifiers. In Chinese, only a small part of numeral classifiers can form a selective relationship with adjectives. In Vietnamese, numeral classifiers cannot form a selective relationship with adjectives.

2.2.2. Cognitive explanation

2.2.2.1. Distance iconicity

From the perspective of semantic orientation, embedded adjectives in type A point to nouns (numeral classifiers in Vietnamese A2 type generally do not accept adjective modification), in type B point to classifiers, and in type C can point to either nouns or classifiers.

In Chinese and Vietnamese, numeral classifiers are the largest and most representative class of classifiers. We found that numeral classifiers, numbers, and adjectives form quantitative noun structures that modify nouns, and it is generally not possible to add “*de*” between the classifier and noun (Vietnamese does not have the A2 type).

- | | | | | |
|-----|----|---|---|---|
| (9) | a. | <i>yi da jian miaotang</i>
a big temple
'a big temple' | * | <i>yi da jian DE miaotang</i>
a big DE temple
'a big temple' |
| | b. | <i>yi hou ben zazhi</i>
a thick magazine
'a thick magazine' | * | <i>yi hou ben DE zazhi</i>
a thick DE magazine
'a thick magazine' |

There are two reasons: First, Chinese numeral classifiers can only be matched with countable individual nouns, which clearly shows that “things that can be counted also need classifiers” in Chinese. That is to say, numeral classifiers are mainly used to describe nouns in form or morphology rather than to measure, so they are closely combined with nouns in terms of semantic relation. Second, the semantic orientation of adjectives in type A points to nouns, so the relationship between the quantitative structure and nouns in type A must be close, and the conceptual distance is also close.

In contrast, the semantics of adjectives in type B do not point to nouns, so the relationship between the quantitative structure and nouns in type B must be estranged. In terms of syntax, “*de*” can be added between collective classifiers and nouns in Chinese B1 type and indefinite numerals such as “*những*” (some) and “*các*” (some) can be added between adjectives and nouns in Vietnamese B2 type.

“*Những*” and “*các*” in Vietnamese usually go before a noun, and they both indicate that the noun is plural. Both “*những*” and “*các*” refer to all individuals in a specific group. “*Những*” refers to a specific group among other groups and implies a comparison between two groups. So, the noun that follows is often accompanied by the determinant or attribute. “*Các*” is used when the entire group is included; and “*những*” is used when there are differences between two groups referred to. “*Các*” refers to the group as a whole rather than to a subgroup, but it also refers to each of the members of the group. “*Các*” usually comes before a noun that refers to a person or thing that is already known and indicated in the mind.

We have investigated 87 collective classifiers in Chinese and 68 collective classifiers in Vietnamese. Among them, there are 29 collective classifiers in Chinese and 51 collective classifiers in Vietnamese that can add “de” or “những” (some), “các” (some) in the middle of the structure. For example:

B1 type:

- | | | | |
|------|----|--|--|
| (10) | a. | yi da pian nongtian
a big field
'a big field' | yi da pian DE nongtian
a big DE field
'a big field' |
| | b. | yi xiao dui tingzhong
a small group audience
'a small group of audience' | yi xiao dui DE tingzhong
a small group DE audience
'a small group of audience' |

B2 type:

- | | | | |
|------|----|--|--|
| (11) | a. | một nắm to cọng rau muống
a handful big river spinach
'a large handful of river spinach' | một nắm to NHỮNG cọng rau muống
a handful big NHỮNG river spinach
'a large handful of river spinach' |
| | b. | một nhóm nhỏ sinh viên
a group small student
'a small group of students' | một nhóm nhỏ CÁC sinh viên
a group small CÁC student
'a small group of students' |

In type C, the situation is the same. Compared to collective classifiers, container classifiers have a stronger ability to add “de” or “những” (some), “các” (some) in the middle of the quantitative structure. There are 10 out of 14 container classifiers in Chinese (about 72%), and 14 out of 18 container classifiers in Vietnamese (about 78%) that can add “de” or “những” (some), “các” (some).

C1 type:

- | | | | |
|------|----|---|---|
| (12) | a. | yi da pan rou
a big plate mate
'a big plate of meat' | yi da pan DE rou
a big plate DE meat
'a big plate of meat' |
| | b. | yi xiao bei shui
a small glass water
'a small glass of water' | yi xiao bei DE shui
a small glass DE water
'a small glass of water' |
| | c. | yi man bei jiu
a full glass wine
'a full glass of wine' | yi man bei DE jiu
a full glass DE wine
'a full glass of wine' |

B2 type:

- | | | | |
|------|----|---|--|
| (13) | a. | một túi lớn tờ giấy bạc 100 USD
a bag big 100 bill
'a big bag of \$100 bills' | một túi lớn NHỮNG tờ giấy bạc 100 USD
a bag big NHỮNG 100 bills
'a big bag of \$100 bills' |
| | b. | một giỏ to bánh và hoa quả
a basket big cake and fruit
'a big basket of cakes and fruits' | một giỏ to CÁC loại bánh và hoa quả
a basket big CÁC cakes and fruits
'a big basket of cakes and fruits' |

We assume that whether “de” or “những” and “các” can be added between classifiers and nouns is not only related to the characteristics of the classifiers themselves but, more importantly, depends on the semantic relationship between classifiers, numbers, nouns, and adjectives.

If the semantic relationship is closely related to nouns, the particles “de” or “những” and “các” cannot be added between classifiers and nouns. However, if it is closely related to numerals and focuses on measurement, it can be added.

According to the principles of cognitive linguistics, the distance among language components is consistent with the distance among corresponding conceptual structures. This reflects the concept of distance iconicity. Since the conceptual components of type A are close, they should also be close in language form. Generally, “de” cannot be added between numeral classifiers and nouns in Chinese. In type B, where conceptual components are farther apart and can be separated in language form, “de” can be added between classifiers and nouns of B1 type, and “những” and “các” can be added between adjectives and nouns of B2 type. Here, “de” and “những” and “các” function to increase the linguistic distance, thereby reflecting their conceptual distance according to the theory of iconicity.

Sometimes, “de” or “những” and “các” may not be added, depending on pragmatic needs. Generally, not adding is a common practice while adding is more emphatic. Zhang Min (1998) argued that the modifier-head construction with “de” is predicative and can convey new information. This is also true for type B.

- (14) a. Mei tian kan dao yi da dui ren fatie zhao gongzuo.
 Every day see a big pile people post status look for jobs
 ‘Every day, I see a lot of people posting status looking for jobs.’
- b. Zhe tiao jie zhu de dou shi laopo haizi yi da dui DE ren.
 This street live DE all are women children a big pile DE people
 ‘This street is full of people with women and children’

In example (14a), “yi da dui ren” (a lot of people) is a general expression that is only modified, not predictive, and does not convey new information. In example (14b), “yi da dui de ren” (a large group of people) indicates emphasis and requires accentuation in pronunciation. It is not only modified but also predicative, and it conveys new information.

Among the three types—A, B, and C—of modifier and head component combinations, the tightly combined form naturally has a smaller linguistic distance than the loosely combined form, based on the degree of closeness. Type A generally cannot embed another component like “de” because the components of this type are tightly combined, resulting in the smallest linguistic distance. Type B has a moderate embedding capability, while type C has the largest distance, indicating the strongest ability to add “de” or “những” and “các” in the middle of the structure. Thus, a close relationship reflects a closer conceptual distance compared to a loose relationship. The fundamental differences between the two relationships can be intuitively expressed as follows: A close relationship is long-lasting, stable, and essential. It is a relationship established earlier and fully understood in terms of cognition. In contrast, a loose relationship is temporary, unstable, and non-essential. It is a relationship established later and not fully understood cognitively.

The above discussion shows that the distance between the modifier and the head depends on the distance between the concepts they express. The establishment of a specific language form depends on our understanding of the relationship between the attribute of the modifier and the thing expressed by the noun. This understanding is based on the interactive patterns between humans and things, what’s more, it relies heavily on world knowledge or encyclopedic knowledge. This knowledge reflects the popular beliefs formed from everyday experience and our understandings as well as assumptions about common sense and conventions.

image of type B can be decomposed into processes, so the cognitive strategy of sequential scanning is used.

For example, consider type A: “yi hou ben dianhua bu” (a thick phone book). This is an integral image that cannot be decomposed. On the other hand, type B examples such as “yi da dui wanju” (a large pile of toys) and “môt chông dày tài liệu” (a thick stack of materials) can be decomposed into a process from beginning to end. The starting point is a noun (wanju, materials), and the endpoint is “da dui” (big pile) and “chông dày” (thick stack). This process can be viewed as creating a large pile of toys or a thick stack of materials. The C type has two kinds of semantic orientation, so the image of type C employs both cognitive strategies: summary scanning and sequential scanning.

3. Conclusions

According to the principle of distance iconicity in cognitive linguistics, the distance among linguistic symbols reflects the distance among the conceptual components. In type A (where the classifiers in the structure are numeral classifiers), the conceptual components are close, so they should also be close in language form. In types B and C (where the classifiers in the structure are collective classifiers and container classifiers), the conceptual components are more distant from each other, so they can also be separated in language form. In Chinese structures, this separation can be indicated by adding “de,” while in Vietnamese structures, indefinite numerals such as “những” (some) and “các” (some) can be used.

From a cognitive perspective, the image in type A is perceived as a whole, so the cognitive strategy of summary scanning is used. The image in type B can be decomposed into processes, so the cognitive strategy of sequential scanning is employed. Type C includes both of these cognitive strategies.

In the future, we will continue to apply cognitive linguistics theory to analyze, generalize, and explain syntactic structures involving classifiers, nouns, and adjectives in Chinese and Vietnamese. These studies will also provide deeper insights into the cognitive modes of Vietnamese and Chinese speakers.

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