Original Paper

A Constructionalization Approach to the “Hen + X” Construction from the Perspective of Information Structure

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Abstract
“Hen” is a common degree adverb in modern Chinese, which is generally used to modify verbs, adjectives and adverbs. The special phenomenon that “Hen” modifies nouns has attracted the attention of many scholars. Based on the theory of Diachronic Construction Grammar, this study attempts to investigate the constructionalization process of the “Hen + X” construction (X refers to words of any part of speech) through using corpus, clarify the evolution of the form-meaning/function of the “Hen + X” construction, analyze the cognitive mechanism behind the constructionalization of the “Hen + X” construction, and explore the cognitive motivation of the constructionalization of the “Hen + X” construction, which aims to enrich the study of the “Hen + X” construction and provide a new way of thinking for the study of Diachronic Construction Grammar.

Keywords
“Hen + X” construction, constructionalization, information structure, corpus

1. Introduction

1.1 Research Background

It is well known that the study of the “Hen + X” construction is a typical case in the study of Chinese adverb collocation. The general meaning of “Hen + X” is “to deepen the degree of the words it describes”. The study of “Hen + X” construction has changed from studying “Hen + A (Adverb)” to “Hen + V (Verb)”, and then to “Hen + N (Noun)” which reflects the diachronic change of “Hen + X” construction. Many scholars has made a lot of synchronic studies on “Hen + A”, “Hen + V”, and “Hen + N” construction which mainly focus on the syntactic structure, grammatical function and pragmatic value of the three constructions (Gu, 2012; Xi, 2013; Sun, 2014; Liu, 2018; Lei & Li, 2018). In
addition, the diachronic study of the “Hen + X” construction which contains the three constructions needs to be deepened. Based on the situation, the thesis studies the process and cognitive mechanism of the constructionalization of the “Hen + X” construction through using corpus, which can enrich the diachronic study of the “Hen + X” construction to a certain extent. At the same time, the thesis explores the sociocognitive motivations of the constructionalization of the “Hen + X” construction from the perspective of Sociocognitive Linguistics, which provides new ideas for the study of construction.

1.2 Research Questions

This research specifically studies the following questions:
(1) How does the “Hen + X” construction form and change, that is, what is the constructionalization process of the “Hen + X” construction?
(2) What is the cognitive mechanism behind the constructionalization of the “Hen + X” construction?
(3) What is the cognitive motivation of the constructionalization of the “Hen + X” construction from the perspective of Information Structure?

1.3 Purpose and Significance of the Research

1.3.1 Research Purpose

The purpose of this research is (1) to describe the evolution process of form-meaning/function of the “Hen + X” construction; (2) to analyze the cognitive mechanism of the constructionalization of the “Hen + X” construction; (3) to explore the sociocognitive motivation of the constructionalization of the “Hen + X” construction; (4) to enrich the study of “Hen + X” construction and provide a new way of thinking for the study of Diachronic Construction Grammar.

1.3.2 Research Significance

The theoretical significance of the thesis are as follows:
(1) The study helps to clarify the constructionalization process of the “Hen + X” construction. It observes the diachronic change of the form and meaning of the “Hen + X” construction through corpus which is helpful to deepen the understanding of the “Hen + X” construction and clarify the constructionalization process of it.
(2) The study is beneficial to explore the cognitive mechanism behind the constructionalization of the “Hen + X” construction. It sort out the cognitive mechanisms behind the constructionalization of the “Hen + X” construction comprehensively and systematically through analysis and integration, such as neoanalysis, analogization, metonymy, and categorization, which is helpful to enrich the theoretical study of Diachronic Construction Grammar.
(3) The study is conductive to deepen the research on the cognitive motivations of constructionalization. It analyzes the sociocognitive motivations of the constructionalization of the “Hen + X” construction from the perspective of Information Structure which provides new ideas for the study of Diachronic Construction Grammar.

The practical significance of the thesis are as follows:
(1) The study can provide theoretical basis for the research of linguistics, historical linguistics and semantics through discussing the constructionalization process of the “Hen + X” construction.

(2) The study has impacts on the fields of second language acquisition, language teaching and translation studies through investigating the process, cognitive mechanism and sociocognitive motivation of the constructionalization of the “Hen + X” construction.

(3) The study explores the constructionalization process of the “Hen + X” construction by using the corpus method which has influence on the interdisciplinary research.

1.4 Research Methods

This research adopts contrastive analysis method and qualitative research methods to investigate the process, cognitive mechanism, and cognitive motivation of the constructionalization of the “Hen + X” construction through using the corpus.

2. Previous Research

The “Hen + X” construction, as one of the typical cases of Chinese adverb collocation, has aroused many linguists’ interests. The research results of the “Hen + X” construction are quite fruitful in China which can be divided into five parts according to research contents. The first part is the study of the syntactic structure of the “Hen + X” construction (Chu & Liu 1997; Zhu, 2004; Pei, 2009; Xia, 2012). The second is the study of the grammatical function of the “Hen + X” construction (Hu & Yu, 2012; Chen, 2014; Lei & Li, 2018). The third is the study of the pragmatic value of the “Hen + X” construction (Tao, 2011; Liu, 2018). The fourth is the diachronic study of the “Hen + X” construction (Xing, 1997; Zhang, 2017). The fifth is the cognitive study of the “Hen + X” construction (Gu, 2012; Xi, 2013; Sun, 2014; Sun, 2015).

In contrast, foreign scholars have not paid much attention to the research of the “Hen + X” construction in different languages. They have mainly focused on the study of degree adverbs and made research on degree adverbs from different aspects, such as morphology (Klein, 1998; Bonami et al., 2004), syntax (Vermeire, 1979; Hopper & Traugott, 1993; Abeillé & Godard, 2003), semantics (Peters, 1994; Doetjes, 2007) and so on. The diachronic study of degree adverbs needs to be done further. In English, the Oxford Dictionary defines the word “very” as “words used before adjectives, adverbs and determiners to mean ‘in a high degree’ or ‘extremely’”. However, the actual phenomenon of “very” modifies verbs and nouns can be retrieved in the British National Corpus (BNC) which have not been paid attention by linguists. Therefore, the phenomenon of “very” modifies verbs and nouns needs to be explored and explained. Besides, there is very little research on the “Hen + X” construction in other languages except English abroad.

In general, although the previous studies on the “Hen + X” construction has achieved some results, there are still many problems. The first problem is that the study of the “Hen + X” construction is too one-sided. The previous studies mainly focus on the study of the “Hen + N” construction which is the
special phenomenon in the “Hen + X” construction. Therefore, the study of the “Hen + X” construction which contains the “Hen + A” construction, “Hen + V” construction, and “Hen + N” construction needs to be studied further. The second problem is that the study of the “Hen + X” construction mainly focuses on the synchronic level. The previous studies pay much attention to the synchronic study of the “Hen + X” construction, so the diachronic study of the “Hen + X” construction needs to be studied further. The third problem is that the description of the “Hen + X” construction is adequate, but the explanation of it needs to be enriched. The previous studies mainly focus on describing the syntactic structure of the “Hen + X” construction. The study of the cognitive mechanism of the constructionalization of “Hen + X” construction needs to be explored further. The fourth problem is that the analysis of constructionalization motivation of the “Hen + X” construction is inadequate and fragmented. The sociocognitive motivations of the constructionalization of “Hen + X” construction should be paid more attention.

In order to solve the above problems, the study tries to find the change process of the form-meaning/function of the “Hen + X” construction through using corpus, analyze the cognitive mechanism behind the constructionalization of the “Hen + X” construction, and explores the sociocognitive motivation of the constructionalization of the “Hen + X” construction based on Information Structure and Diachronic Construction Grammar theory.

3. Constructionalization

It is necessary to know construction before understanding constructionalization. Although the definition of construction is a controversial issue, it is acknowledged by almost linguists that a construction, as the basic language unit, is a form-meaning/function pair. Goldberg (1995) defined a construction as a form-meaning pair which cannot be predictable from its component parts or from other constructions. In 2006, she broadened her definition of a construction and added that “patterns are stored as constructions even if they are fully predictable as long as they occur with sufficient frequency” (Goldberg, 2006, p. 5). In 2019, according to human memory, learning, and categorization, she added further that “constructions are understood to be emergent clusters of lossy memory traces that are aligned within our high-(hyper!) dimensional conceptual space on the basis of shared form, function, and contextual dimensions” (Goldberg, 2019, p. 7).

Constructionalization is a new constructional approach from a diachronic perspective which focuses on constructional changes equally both in form and meaning (Wen & Yang, 2016). As an important part of Diachronic Construction Grammar, constructionalization is a way of language change, like lexicalization and grammaticalization. Traugott and Trousdale (2013) distinguished between constructionalization and constructional changes. They defined constructionalization as the creation of a form<sub>new</sub>-meaning<sub>new</sub> (combinations of) signs which means that formal changes alone, and meaning changes alone cannot constitute constructionalization, whereas constructional changes as a change
affecting one internal dimension of a construction which does not involve the creation of a new node. Therefore, constructionalization means both the form and meaning of constructions change, whereas constructional changes mean only the form or meaning of constructions changes. Constructional changes might give rise to constructionalization, and there might be new constructional changes after constructionalization.

The study focuses on the constructionalization of the “Hen + X” construction, aiming to explore the evolution process of the form and meaning/function of the “Hen + X” construction, and find the mechanism and motivation of constructionalization of the “Hen + X” construction which might enrich the study of constructionalization in Chinese.

4. Constructionalization of the “Hen + X” Construction

4.1 Process of the Constructionalization

It has been known from above that constructionalization means that both the form and meaning of constructions change which involves the creation of new nodes. There are two ways of constructionalization (Fried, 2008, 2013; Wen & Yang, 2015). One is the emergence of new expressions in which new forms have new meanings. For example, the word “book” was first used to refer to the book is a kind of constructionalization. The other is the combination of existing constructions in which the form and meaning/function of existing construction change. The study investigates the “Hen + X” construction through using Center for Chinese Linguistics (CCL) corpus to find the evolution of the form and meaning of the “Hen + X” construction.

It can be known that “Hen” first appeared in Zhou Dynasty through searching in CCL corpus. At that time, “Hen”, as the adjective, meant “vicious” which was the same as 狠(Hen), used as predicate in the sentences.

(1) 奄心疾狠，不克畏死。

Jue xin ji hen, buke weisi.

He heart vicious, not able fear death.

“He was so vicious that it could not fear him with death”.

In the Spring and Autumn Period, “Hen”, used as the verb, meant “violate”. At that time, “Hen” could collocate with nouns as verb-object structure. It was the emergence of the “Hen + X” construction. Therefore, the “Hen + X” construction dates back to the Spring and Autumn Period, when it was the verb-object construction which meant “violate somebody/something”.

(2) 今王将很天而伐齐。

Jin wang jiang hentian er faqi.

Today king will violate sky and attack Qi.

“Now, the king will violate destiny and attack Qi”.

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In the Warring States Period, “Hen” as nouns had the meaning of argument which is shown in the example (3).

(3) 很求胜。

*Hen wu qiusheng.*

*Argue not pursue victory.*

“Do not be arrogant to *argue* for victory”.

In the Six Dynasties, “Hen” had the meaning which is still in use in modern Chinese. At that time, “Hen” first meant “in a high degree” as the adverb to modify verbs and adjectives. It can be known that the form and meaning of the “Hen + X” construction changed from the Spring and Autumn Period to the Six Dynasties, which is the first constructionalization of the “Hen + X” construction. The form of the “Hen + X” construction changed from verb-object relationship to modifying relationship, whereas the meaning of the “Hen + X” construction changed from “violate somebody/something” to “deepen the degree of the word it describes”.

(4) 人类自从来就很重视食盐的消费。

*Renlei zilai jiu hen zhongshi shiyan de xiaofei.*

*Human since ancient times very value salt consumption.*

“Humans have always *attached great importance* to salt consumption”.

According to the CCL corpus, the use of “Hen” as the adverb increased until the Ming Dynasty. From the Six Dynasties to the Yuan Dynasty, “Hen” mainly used as the verb and adjective. Although the use of “Hen” as the adverb increased in the Ming Dynasty, the frequency of the “Hen + X” construction only took up a small part. In the Ming Dynasty, “Hen” mainly used as the adverb in the “X de hen (X 得很)” construction which is shown in example (5) means “in a high degree”.

(5) 这家子远得很哩！

*Zhejiazi yuan de hen li!*

*This family far very!*

“This family is far *away*”.

In the Qing Dynasty, the use of the “Hen + X” construction increased. At that time, “Hen” used as adverb which mainly collocated with adjectives, verbs, and verb phrases. In other words, the “Hen + X” construction mainly consisted of the “Hen + A” construction and the “Hen + V” construction which meant “deepen the degree of the adjectives or verbs it describes”. The change from “X de hen” to “Hen + X” can be seen as the constructional change in which the form changed but the meaning did not change. In addition, it is important to know that the phenomenon that “Hen” as the adverb modifies nouns existed in the Qing Dynasty which is shown in example (6). However, the use of the “Hen + N” construction was too little to ignore.
Nowadays, the use of the “Hen + N” construction is becoming more and more which is shown in example (7) and (8). The phenomenon that “Hen” as the adverb modifies nouns is not the particular case. The “Hen + X” construction mainly consists of the “Hen + A” construction, the “Hen + V” construction, and the “Hen + N” construction. The form of the “Hen + X” construction changed from the “Hen + A/V” construction to the “Hen + A/V/N” construction, whereas the meaning of the “Hen + X” construction changed from “deepen the degree of the conceptual meaning of the adjectives or verbs it describes” to “deepen the degree of the conceptual meaning of the adjectives or verbs it describes, or the connotative meaning of the nouns it describes”. It is the second constructionalization of the “Hen + X” construction in which both the form and meaning of the “Hen + X” construction change.

In conclusion, there are two constructionalization of the “Hen + X” construction since ancient times which is shown in Figure 1. In the first time, the form of the “Hen + X” construction changed from verb-object relationship to modifying relationship, whereas the meaning of the “Hen + X” construction changed from “violate somebody/something” to “deepen the degree of the word it describes”. In the second time, the form of the “Hen + X” construction changed from “Hen + A/V” to “Hen + A/V/N”, whereas the meaning of the “Hen + X” construction changed from “deepen the degree of the conceptual meaning of the word it describes” to “deepen the degree of the conceptual or connotative meaning of the word it describes”.

(1) 你现在就是这种打扮，很中国，很东方。

You now is this dress, very China, very East.

(2) 这条子太狠了，看上去很女人，做事却很男人。

This police too fierce, look like very woman, act but very man.

In conclusion, there are two constructionalization of the “Hen + X” construction since ancient times which is shown in Figure 1. In the first time, the form of the “Hen + X” construction changed from verb-object relationship to modifying relationship, whereas the meaning of the “Hen + X” construction changed from “violate somebody/something” to “deepen the degree of the word it describes”. In the second time, the form of the “Hen + X” construction changed from “Hen + A/V” to “Hen + A/V/N”, whereas the meaning of the “Hen + X” construction changed from “deepen the degree of the conceptual meaning of the word it describes” to “deepen the degree of the conceptual or connotative meaning of the word it describes”.

(6) 陶氏娘子还是很外场。

Lady Tao still is very outside of the house.

“Lady Tao is very outgoing and generous”.

(1) 你现在就是这种打扮，很中国，很东方。

You now is this dress, very China, very East.

(2) 这条子太狠了，看上去很女人，做事却很男人。

This police too fierce, look like very woman, act but very man.
4.2 Cognitive Mechanism of the Constructionalization

The process of the constructionalization of the “Hen + X” construction is clear through investigating. The aim of the study is not only to know the evolution of the form and meaning of the “Hen + X” construction, but also to know the cognitive mechanism of the constructionalization. According to Traugott and Trousdale (2013), the primary mechanism of constructionalization is neoanalysis and analogization.

Langacker (1977) put forward reanalysis and defined it as “change in the structure of an expression or class of expressions that does not involve any immediate or intrinsic modification of its surface manifestation”. Base on reanalysis, neoanalysis is a micro-step in a constructional change which can be particularly well captured in models of construction grammar that use features whether of form or of meaning (Traugott & Trousdale, 2013). No matter the change from “X de hen” to “Hen + X” or the change from “Hen + A/V” to “Hen + A/V/N” are both the neoanalysis of the “Hen + X” construction.

Besides neoanalysis, analogization is also an important mechanism of constructionalization. Analogization is a mechanism or process of change bringing about matches of meaning and form that did not exist before which means that analogization brings about new form-meaning pairings (Traugott & Trousdale, 2013). As mentioned above, the form of the “Hen + X” construction changed from “Hen + A/V” to “Hen + A/V/N”, whereas the meaning of the “Hen + X” construction changed from “deepen the degree of the conceptual meaning of the word it describes” to “deepen the degree of the conceptual or connotative meaning of the word it describes”. It is analogization which brings about the new form-meaning of the “Hen + X” construction.

In addition to neoanalysis and analogization, metonymy as one of the important cognitive mechanisms of human also plays a part in constructionalization. As mentioned above, the emergence of the “Hen + N” construction is due to neoanalysis and analogization. However, the meaning of the “Hen + N” construction cannot exist without metonymy. The meaning of N in the “Hen + N” construction is not the literal meaning of N, but the abstract conception N represents. For example, “man” in the example
(8) does not represent an adult person who is male, but represents the character of the man, such as brave, decisive and so on. It should be known that which character of N is emphasized in the “Hen + X” construction depends on context.

Categorization is also the important cognitive mechanism of the constructionalization of the “Hen + X” construction. Because of categorization, N in the “Hen + N” construction, which is the core member of the “Hen + X” construction, has many connotative meanings, some of which can be salient in the special context.

In conclusion, there are four major cognitive mechanisms of the constructionalization of the “Hen + X” construction, which are neoanalysis, analogization, metonymy, and categorization. Because of the four cognitive mechanisms, it is known that how the “Hen + X” construction changes.

4.3 Sociocognitive Motivation of the Constructionalization

Sociocognitive Linguistics is the product of the “social turn” of Cognitive Linguistics, which mainly focuses on two questions: one is the representation of sociocognitive function, the other is the sociocognitive mechanism of language acquisition, language use, and language change or evolution. There are three main sociocognitive motivations: the principle of least effort, the principle of Spontaneity and intentionality, and the principle of self-esteem (Pennington, 2000; Wen, 2019). The study tries to find the sociocognitive motivations of the constructionalization of the “Hen + X” construction.

The principle of least effort is similar to the principle of economy which means that human beings want to use language both expressively and efficiently, that is, that want to say least to express most. The change from the “Hen + A/V” construction to the “Hen + N” construction shows the principle of least effort. In the “Hen + N” construction, one word N expresses many connotative meaning.

The principle of Spontaneity and intentionality means that human beings use strategies, such as social schemas, to simplify judgment and decision making. When similar social situations recur, or when there are similar perceptions between different social situations, one’s response may be spontaneous or automatic (Pennington, 2000; Wen, 2019). The similarity between the “Hen + A/V” construction and the “Hen + N” construction results in the creativity of the “Hen + X” construction. As the frequency of the “Hen + N” construction increases, the schema of the “Hen + X” construction has changed.

As a result, the principle of least effort and the principle of Spontaneity and intentionality are two main sociocognitive motivations of the constructionalization of the “Hen + X” construction. There may be more sociocognitive motivations influencing the constructionalization of the “Hen + X” construction which need to study further to find out.

5. Conclusion

5.1 Findings and Implications of the Study

The study investigates the evolution of form-meaning/function of the “Hen + X” construction through
using the CCL corpus, analyzes the cognitive mechanism of the constructionalization of the “Hen + X” construction, and explores the sociocognitive motivation of the constructionalization of the “Hen + X” construction. The major findings are as follows:

(1) The study answers what the “Hen + X” construction changes, in other words, the evolution process of the “Hen + X” construction. It is known that there are two constructionalization of the “Hen + X” contraction since ancient times through investigating. In the first time, the form of the “Hen + X” construction changed from verb-object relationship to modifying relationship, whereas the meaning of the “Hen + X” construction changed from “violate somebody/something” to “deepen the degree of the word it describes”. In the second time, the form of the “Hen + X” construction changed from “Hen + A/V” to “Hen + A/V/N”, whereas the meaning of the “Hen + X” construction changed from “deepen the degree of the conceptual meaning of the word it describes” to “deepen the degree of the conceptual or connotative meaning of the word it describes”.

(2) The study answers how the “Hen + X” construction changes, in other words, the cognitive mechanism of the constructionalization of the “Hen + X” construction. According to analysis, there are four cognitive mechanisms of the constructionalization of the “Hen + X” construction which are neoanalysis, analogization, metonymy, and categorization.

(3) The study answers why the “Hen + X” construction changes, in other words, the sociocognitive motivation of the constructionalization of the “Hen + X” construction. According to analysis, there are two main sociocognitive motivations of the constructionalization of the “Hen + X” construction which are the principle of least effort and the principle of Spontaneity and intentionality.

5.2 Limitations of the Study

There are still some problems of the study.

Firstly, the study only investigates and finds the process, mechanism and cognitive motivation of the constructionalization of the “Hen + X” construction. It is better to analyze the change of the three main factors (schematicity, productivity and compositionality) in the constructionalization of the “Hen + X” construction which is helpful to know the constructionalization of the “Hen + X” construction.

Secondly, the study uses the CCL corpus to investigate the evolution of the form and meaning of the “Hen + X” construction. However, there are some mistakes in the CCL corpus. It is important to find the mistakes in the CCL corpus and use the correct data to do the research.

Thirdly, it is difficult to avoid subjectivity in analyzing the mechanism and sociocognitive motivation of the constructionalization of the “Hen + X” construction. The analysis of the constructionalization of the “Hen + X” construction still needs to be enriched and improved.

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