

Boundedness as a Condition of Sentence Completion

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Abstract

This paper aims to explore the relationship between boundedness and sentence completion. We found that it is the boundedness of eventualities instead of verb telicity that virtually affects and restricts sentence completion. Unboundedness and boundedness of eventualities are the underlying factors that influence and restrict sentence completion while sentence-completing elements are explicit markers of boundedness and unboundedness.

Key words: verb telicity; boundedness; sentence completion

1. Introduction

Boundedness is an important concept in linguistics. For a long time, it has been one of the most heatedly discussed topics in semantics, syntax and cognitive grammar. Linguists at home and abroad have made sound explorations in this field and yielded a lot of achievements.

Sentence completion is another hot academic topic. The study on sentence self-sufficiency of Chinese has begun since 1940s. At that time, under the influence of structuralism, it was widely held that the structures of phrase and sentence are almost the same, and phrases can be converted into sentences as long as intonations are added to them. Zhu (1985) pointed out clearly that “sentences are merely independent phrases and phrases can become sentences at any time.” However, this idea was challenged later. Ever since 1990s, with development of three-dimensional grammar theory and cognitive functional grammar, scholars realized that many conditions can affect sentence self-sufficiency. Wang Ailu (1990) pointed out that whether a sentence is self-sufficient or not is restricted by grammatical, semantic and pragmatic conditions. Jing Cheng (1996) argued that many factors can influence the completion of

sentences, and that tense-aspect factors ones. Guo Yancheng (2003) has explored the issue of sentence completion from the perspective of pragmatics. In his view, context, the indispensable background of a complete sentence, can affect the external forms of sentences in a direct way. Mood is also essential in making a sentence complete which is always represented via intonations, mood particles and interjections. Scholars also discussed the differences between sentences and phrases, sentence completion standards, self-sufficiency degree and sentence-completing categories. Yang Chengkai (1993) held that phrases are structural units while sentences are functional units. A sentence contains more information than a phrase. He Yang (1994) summarized ten sentence-completing categories, namely intonation category, mood category, negation category, modal category, intention category, tense-aspect category, directional category, degree category and quantity category. Huang Nansong (1994) generalized primary sentence-completing elements into three categories, namely degree category, functional mood category and tense-aspect category.

Although scholars have made some discoveries about boundedness and sentence completion respectively, existing research is not systemic enough. This paper, therefore, attempts to make a deeper exploration into the relationship between boundedness and sentence completion.

2. Boundedness

Langacker (1987, 1990, 1991, 2001) put forward the bounding theory first from the perspective of cognitive grammar. The essence is that, when an entity is entirely contained in the scope of a predication, we can use bounding to describe it. He held the view that the distinction between countable nouns and uncountable nouns is actually the distinction between boundedness and unboundedness. Langacker also pointed out that the

notions of boundedness and unboundedness are relative. They can transform into each other. According to Langacker (1987), boundaries can be divided into three types. The first type, such as the boundary of the ball, exists in reality and can be seen clearly. The second type, such as the boundary of the archipelago, merely exists in a part of the outermost part of an entity. The third type, such as portion of boundary of the dent, does not exist in reality but exists in our mind.

Talmy (2000 a, b) also made some contribution to the development of the bounding theory. According to him (Talmy 2000 a, b), some grammatical elements can trigger cognitive operations of debounding. Debounding is the process in which a bounded quantity is conceptualized in a form with indefinite extension. The entity doesn't change in the process. What changes is the quantity of the entity. He (Talmy, 2000: 52) took English nouns *shrub* and *panel* as examples. The two nouns indicate bounded entities. However, when we add grammatical elements *-ery* and *-ing* to them respectively, they will become *shrubbery* and *paneling* which are unbounded. Linguistic devices can cancel the original limit of entities and accomplish the process of debounding. The bounded quantity will lose its boundary temporarily after being debounded by debounding devices.

Shen Jiaxuan (1995) first introduced the bounding theory into the analyses of Chinese. He thinks that the distinction between boundedness and unboundedness is a part of human beings' general cognitive mechanisms. This distinction is one of our basic cognitive concepts. He has shown that the distinction between boundedness and unboundedness exists in various word classes such as nouns, verbs and adjectives. Xu Shenghuan (2002, 2005) held that both English and Chinese sentences have to be boundarized. Wang Hongbin (2009) analyzed various sentence patterns in detail from the perspective of event sentences and non-event sentences. Liu Chendan (2006) listed four kinds of boundarizing devices, including measuring device, definiteness device, tense-aspect device and pragmatic comparison device. All these studies contributed a lot to our understanding of the nature of boundedness and its reflection in our languages.

3. Sentence Completion

Since 1990s, with the emergence and rise of the three dimensional grammar theory and cognitive functional grammar, many Chinese scholars have tried to investigate the problem of sentence-completion in depth. Their research mainly concentrated on three aspects: the differences between phrases and sentences, the standards and conditions of sentence completion, and sentence-completing elements.

Some scholars tried to find out the differences between phrases and sentences from the perspective of pragmatic function. Yang Chengkai (1993) held that phrases and sentences belong to different layers. Phrases are structural units while sentences are functional units. A sentence contains more information than a phrase. As for Chinese, when converting a phrase into a sentence, we have to supply some necessary information which is often carried by modal and tense-aspect elements.

Scholars also tried to propose standards and conditions of sentence completion from various perspectives. Wang Ailu (1990) pointed out that whether a sentence is self-sufficient or not is restricted by grammatical, semantic and pragmatic standards. Specifically, he pointed out that sentence completion in the pragmatic aspect involves humanistic background, pragmatic habits, mental sets and other factors. Hu Jianhua & Shi Dingxu (2005) proposed their unique interpretation from the perspective of generative grammar and argued that the sole condition on the completion of sentences is the licensing of referential features on DP and IP by introducing sentence operators into the relevant structures.

What can act as sentence-completing elements is another important aspect in sentence completion. There are many findings about it. Hu Mingyang & Jin Song (1989) put forward the notion of sentence-completing elements for the first time in 1989. Since then, many scholars have come up with concrete sentence-completing elements. He Yang (1994) summarized ten sentence-completing categories, namely intonation category, mood category, negation category, modal category, intention category, tense-aspect category, directional category, degree category and quantity category. However, he did not provide further

explanations for the underlying reasons why these categories can have the function of completing sentences. Kong Lingda (1994) not only summarized thirteen kinds of language forms that can convert non-self-sufficient structures into complete sentences, but also explored the reason why these sentence-completing elements can affect sentence completion. In his view, whether there is any new information in the sentence and how much the amount of new information restricts sentence completion. Most sentence-completing elements have great significance in language communication, and sometimes they are the carrier of new information and the expressing focus of the sentence. At this time, they are indispensable. Huang Nansong (1994) generalized primary sentence-completing elements into three categories, namely: degree category, functional mood category and tense-aspect category. He pointed out that all of the three categories can occur as sentence-completing elements separately. Besides these categories, there are still some sentence-completing categories which cannot occur and function on their own and must coordinate with other sentence-completing categories. These categories include quantity category, directional category and manner category.

Although quite fruitful, the existing research still has problems. So far, scholars have not put forward clear and detailed standards of how to judge completion degree of sentences. Their demarcation of the categories of sentence completing elements is not clear and definite enough, and the sentence-completing elements and categories listed by each scholar are not identical. Generally speaking, these studies have not been deep-going enough. Particular emphasis is placed on describing superficial phenomena. Studies that have revealed the fundamental factors that can influence self-sufficiency of sentences are scarce.

4. Relationship between Boundedness and Sentence Completion

In our view, (un)boundedness and sentence completion are interrelated with each other. Boundedness and unboundedness are the underlying factors that affect and restrict sentence completion while sentence-completing elements are explicit markers of (un)boundedness. Sentence-completing elements actually function as

boundarizing or deboundarizing devices. With these sentence-completing elements, linguistic structures can be given proper boundaries so that language communication can go on smoothly. In other words, a sentence can stand on its own only when the (un)boundedness of the sentence is clearly marked. Before discussing the relationship between sentence completion and (un)boundedness of eventualities in detail, we will first explore how verb telicity can affect boundedness of eventualities.

4.1. Verb Telicity

Vendler (1967) divided verbs into four types according to the different situation types they represent:

- (1) a. States. They represent non-dynamic situations. States include verbs like *love, resemble, know* and *have*.
- b. Activities. They represent open-ended processes. Activities include verbs like *walk, run, write* and *sing*.
- c. Achievements. They represent nearly instantaneous events. Achievements include verbs like *get home, arrive, die* and *recognize*.
- d. Accomplishments. They represent processes which have natural endpoints. Accomplishments include verbs or verbal phrases like *eat an apple, draw a picture, make a table* and *build a house*.

Vendler (1967) captured three kinds of features of verbs in his classification, namely telicity, durativeness and dynamicity. The features of states, activities, achievements and accomplishments are shown as follows:

- (2) a. States: [-telic] [-durative] [-dynamic]
- b. Activities: [-telic] [+durative] [+dynamic]
- c. Achievements: [+telic] [-durative] [+dynamic]
- d. Accomplishments: [+telic] [+durative] [+dynamic]

As is shown above, in terms of telicity, states and activities are atelic with no inherent temporal endpoints while achievements and accomplishments are telic with inherent temporal endpoints.

4.2 Boundedness of Eventuality

However, verb telicity is not equal to boundedness of eventuality. Although the verb is the core of the sentence, verb telicity itself can not totally determine boundedness of a sentence. Besides telicity of verbs, other elements in sentences can also affect (un)boundedness of sentences. It

is the interaction of verbs and other elements that determines the (un)boundedness of eventualities.

4.2.1 The Interaction between Verbs and Objects

The quantification of objects is one of the most frequently-used devices to represent boundedness of situations. Quantification of objects can restrict the action within a certain range of time or space, and thus give a boundary to the action. In this way, when a verb combines with a bounded object, the object will help to form a bounded event. Take the phrases *eat apples* and *eat an apple* as examples. The activity verb *eat* is the head word of the two phrases. In the first phrase, the plural noun *apples* indicates an unquantified notion. When it combines with the verb, an atelic eventuality is formed. In the second phrase, the use of the article *an* makes the object noun become quantified and this causes the situation to become telic. Obviously, the quantification of the object noun has affected boundedness of the eventuality.

The object noun that can affect boundedness of eventualities is called incremental theme. Krifka (1992) pointed out that the incremental theme is made up of several separable parts which map various elements of an event. During the developing process of an event, the progress of the event is proportional to the consumption level of the internal argument represented by the object noun. When the internal argument is quantified, the event will reach its natural endpoint with the complete consumption of the object. In contrast, when the internal argument is not quantified, then the verb-object phrase cannot get quantified, and therefore the event has no natural endpoint. Verkuyl (1993) regarded incremental theme as a kind of event odometer. He divided verbs into three types: states, processes and events. He held that boundedness of the eventuality denoted by a sentence is decided by the properties of the subject and the predicate of the sentence, and boundedness of its predicate is in turn determined by the properties of its verb and object. State verbs are atelic while the other two types of verbs are telic. Only when both the verb and its object are bounded can the eventuality denoted by the sentence be bounded. Tenny (1994) held that incremental theme can measure out event progress. She divided telic verbs into four kinds: verbs of creation, verbs of consumption, verbs

of change of state and verbs of performance. The direct internal argument is the only apparent argument that can measure out event progress. An event gets bounded through the combination of its verb and quantified direct argument because the boundedness of the quantized direct object has established the developing scale of the event.

However, it should be pointed out that quantification of the object would not always affect boundedness of events. For example: *look at a picture* and *look at pictures* are both unbounded. In fact, the aspectual feature of the verb is another significant factor. Only when the predicate verb is a consumption or creation verb (such as *eat*, *build*, and *draw*) can quantification of the object affect boundedness of events.

4.2.2. The Interaction between “Verb + Noun” Phrases and Prepositional Phrases or Adverbs

“V + NP” can be treated as a unit and interact with prepositional phrases or adverbs to affect boundedness of a sentence.

4.2.2.1. Prepositional Phrases

In general, three kinds of prepositional phrases can affect boundedness of “verb+ noun” phrases. The first type is temporal prepositional phrases. Prepositional phrases “in+ a period of time” always occur in sentences which indicate bounded events as in *He walked through the field in an hour* while “for+ a period of time” always occur in sentences which represent unbounded activities as in *He walked through the field for an hour*. The second type is prepositional phrases indicating goal of motion. Most prepositional phrases of this kind can make the activity bounded as in *He ran to the store*. The third type is resultative prepositional phrases. They can demonstrate results clearly and therefore can convert activities to accomplishments no matter the verb-object phrase is bounded or unbounded as in the phrase *read the book to the end* and *beat the man to death*.

4.2.2.2. Adverbs

Adverbs can affect boundedness of “verb+ noun” phrases as well. For example, some frequency adverbs can affect boundedness of verb-object phrases as in the phrase *sing the song twice*. Degree adverbs can also shift activities into accomplishments as in the sentence *He has read the letter entirely*. Adverbs which appear in resultative constructions and serve as the second predicates can also

add endpoints to actions and restrict the situation that the sentence indicates within a certain range as in *They drank the pub dry*.

4.2.3. The Interaction between Verbal Phrases and Tense-Aspect

The combination of verb-object phrases and propositional phrases or adverbs can also be taken as a whole and interact with tense and aspect in determining boundedness of sentences.

Tenses and aspects are closely related with the notion of time and therefore can affect actions in the dimension of time. They can either impose a temporal boundary to an action or cancel the original boundary of the action. The devices of tenses and aspects are often used together. The past tense and perfective aspect usually indicate that the action has come to its endpoint. Therefore they can shift activities to accomplishments as in *He opened the parcel*.

In Chinese, the aspect marker *le* is regarded as related to perfectiveness, boundedness and completion. Therefore, it can impose a boundary to an event and change unbounded eventualities into bounded ones. When we add it to state verbs, it will shift states to achievements as in *Ta zhidao le zhejian shi* 'He has come to know the affair.' When we add it to the activity verbs, it will shift activities to accomplishments as in the sentence *Ta chi le fan* 'He had his meal.' *Zhe* is a marker of the progressive aspect and indicates the continuation of an event. It can change bounded events to unbounded ones, and shift accomplishments and some achievements to activities as in the sentence *Ta zheng du zhe yiben shu* 'He is reading a book.'

4.2.4. The Interaction between Clauses and Peripheral Factors

The so-called peripheral factors include moods, intonations, pragmatic factors and contexts. In general, the imperative mood, interrogative mood and the rising tone can cancel the connection between the action denoted by the clause and reality. Therefore, they can convert bounded clauses into unbounded ones. On the contrary, the declarative mood and the falling tone can impose a boundary to an action, and thus make a clause become bounded. Depending on their semantic properties, pragmatic factors and contexts can convert bounded

clauses to unbounded ones, and vice versa. Therefore, they can shift states and activities to achievements and accomplishments. For example, in *Ta hua le yifu hua, keshi mei huawan* 'He painted a picture, but he hasn't finished it.', the clause *Ta hua le yifu hua* 'He painted a picture' denotes an accomplishment. However, the context provided by the sentence converts it into an activity which is unbounded.

4.3. Relationship between Sentence Completion and Boundedness

In general, there are seven types of sentence-completing categories, namely tense and aspect, quantity, degree, direction, modality, negation and context. Tense-aspect, quantity, degree and direction can serve as sentence-completing elements of bounded sentences while modality and negation can serve as sentence-completing elements of unbounded sentences. Context can serve as sentence-completing elements of either bounded sentences or unbounded sentences. The reason why they can serve as sentence-completing elements is that they can clearly mark the boundedness or unboundedness of eventualities denoted by sentences. As long as the boundedness or unboundedness of a sentence is demonstrated clearly, the sentence can be complete. This is the condition of sentence completion. And the higher the (un)boundedness degree is, the higher the sentence completion degree is. As for bounded sentences, the events indicated by these sentences must be restricted within a certain range in at least one dimension, such as space, time and degree. And sentence-completing elements just have the function of restricting the events within certain ranges in certain dimensions.

5. Conclusion

In this paper, we found that boundedness and sentence completion are interrelated with each other. Unboundedness and boundedness of eventualities are the underlying factors that influence and restrict sentence completion while sentence-completing elements are explicit markers of boundedness and unboundedness.

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