A Cognitive Approach to Ellipsis

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Abstract—The study of syntactic ellipsis represented by generative linguistics has been dominant since 1950s. Comparatively, the cognitive study of ellipsis is fewer and starts later than it. The paper poses challenges and raises questions toward the traditional syntactical ellipsis study, and comes up with its cognitive view of ellipsis. With the development of cognitive sciences, the cognitive study of ellipsis will flourish in the future.

Index Terms—ellipsis, cognitive linguistics, cognitive view, generative linguistics, generative view

I. INTRODUCTION

Ellipsis is a common phenomenon in natural language which has been concerned by domestic and foreign linguistic circle (Ross, 1967; Sag, 1976; Dalrymple et al., 1991; Hardt, 1993; Lobeck, 1995; Merchant, 2001; Lobke, 2010; Chung, 2013; Phillips, 2013). From the data in Table 1, we can see that the syntactical study of ellipsis is dominant among the core journals articles of ellipsis in CSSCI and SSCI data base, there are 120 theses about syntactic ellipsis from the total 253 articles. Comparatively, the ellipsis study from other perspectives is fewer than the syntactical study, for example, there are only 22 articles about the cognitive study of ellipsis.

To a large extent, the study of linguistic phenomenon reflects the development trend of linguistics and represents the basic assumptions and guiding ideology of main schools of linguistics, the study of ellipsis phenomenon in this paper is a typical example. The ellipsis study also reflects the total development trend of linguistics: (1) The generative linguistics represented by Chomsky has played a leading role in the development of linguistics since 1950s, therefore, syntactic ellipsis study represented by generative linguistics is dominant in all document literature about ellipsis. (2) The cognitive linguistics begins to show its vigor since the 21st century, compared with syntactic ellipsis study, the cognitive ellipsis study is fewer and starts later than it, therefore, the ellipsis study from a cognitive approach has a broad research prospect and development space.

As we know, generative linguistics and cognitive linguistics are two main current schools of modern linguistics. Some scholars say that cognitive linguistics is the second “cognition revolutionary” toward generative linguistics because their basic assumptions and guiding ideology are opposite to each other. The divergence between generative linguistics and cognitive linguistics is summarized as follows:

(1) Autonomy of syntax thesis vs. symbolic thesis in grammar: According to autonomy of syntax thesis in generative linguistics, grammar is an autonomous system and grammatical rules aren’t influenced by other factors except grammatical system such as semantics, pragmatics etc, in other words, grammar can be separated from semantics which reflects the modularity thesis of generative linguistics. On the contrary, cognitive linguistics objects to modularity thesis and assumes that grammar is not an autonomous system, grammar is symbolic and grammatical structures are just another kind of meaningful symbolic unit which is unified by two poles of phonology and semantics. Lakoff (1991) gave a great deal of evidence to prove that pure syntactic rules don’t exist, and pointed out that all problems can be solved and explained at a semantic level if we can abandon autonomy of syntax.

(2) Language innatism thesis vs. language usage-based thesis: This divergence reflects different understanding toward the sources of language knowledge between generative linguistics and cognitive linguistics. Generative linguistics assumes that grammar is highly abstract principles and rules which are embedded in language faculty, so grammar or language knowledge is innate, that is language innatism thesis of generative linguistics. Comparatively, cognitive linguistics holds to usage-based thesis and assumes that language knowledge comes from language use, categories and structures in semantics, syntax, morphology and phonology are built up from our cognition of specific

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The article first introduces the divergence between generative linguistics and cognitive linguistics which provides a background knowledge for the following study. In section 2, the article reviews the study of ellipsis guided by generative linguistics. In section 3, the article questions the generative view of ellipsis and puts forward the cognitive view of ellipsis which is the main achievement of this paper. In section 4, the article introduces the current cognitive study of ellipsis and provides a new research thought for ellipsis in the future. Finally, the article comes to the conclusion and summarizes the content of the paper.

II. REVIEW OF ELLIPSIS STUDY IN GENERATIVE LINGUISTICS

Since Ross (1967), many linguists discussed two core puzzles about ellipsis: the first question is what kind of identity relationship between the elliptical part and other syntactical structure it is, the second question is whether the syntactical structure of elliptical part exists or not, if exists, what kind of syntactical structure it is (Chung, 2013). The scholars in generative linguistics gave different answers about the above two questions and studied ellipsis from various routes which was summarized by Phillips (2013) as Figure 1:

![Figure 1. Various routes about ellipsis study in generative linguistics](image)

According to various routes in figure 1, we summarize the main viewpoints of ellipsis in generative linguistics as follow:

Firstly, ellipsis is anaphoric in nature, as it depends on an antecedent in the context for recovery of meaning (Phillips, 2013).

Secondly, the relationship between the ellipsis and its antecedent is subject to a parallelism requirement and shows a formal identity including syntactic identity and semantic identity. The identity relationship can be defined by syntactic structure or semantic representations.

Thirdly, the scholars from the syntactic account hold that the relationship between the ellipsis and its antecedent is syntactic identity because the information of the elided site can be recovered from the syntactic representations of antecedent (Sag, 1976; Fiengo & May, 1994). The reason of the syntactic route is: if the ellipsis and its antecedent are not matched in syntactic structure, the sentence can’t be accepted by people. Sag also pointed out that the identity of syntactic structure can’t be limited to formal identity, for instance, “entered” and “enter” should be regarded as identity in example (1):

(1) Bob entered the competition and Paul may enter the competition, too. (syntactic identity)

Fourthly, the scholars from the semantic account hold that the relationship between the ellipsis and its antecedent is semantic identity. As for the situation of syntactic mismatch between the ellipsis and its antecedent, however, the sentence can be also accepted by people, the relationship between the ellipsis and its antecedent should be regarded as semantic identity (Dalrymple et al., 1991; Hardt, 1993). For instance, the passive voice and active voice is regarded as syntactic mismatch in example (2), it shouldn’t belong to syntactic ellipsis but semantic ellipsis (Hartman, 2011):

(2) This problem was to have been looked into, but obviously nobody did look into this problem. (semantic identity)

Fifthly, as for the content of the ellipsis site, the decision tree continues to be divided into two routes: detailed structure / null copy account and pointer / anaphor account, these two routes stand for two distinguished positions. The
debate between two positions is about whether or not there is unpronounced syntactic structure at the ellipsis site. The null copy account assumes that the ellipsis site hosts a detailed structural representation of the antecedent. Comparatively, the pointer account assumes that the ellipsis site does not include a copy of the antecedent.

Sixthly, the main points of the pointer account can be described as follow: there is no additional unpronounced syntactic structure at the ellipsis site, the recovery and understanding of elliptical content depends on context. Syntax should be matched with phonology, that is, what you see is what you get, therefore, there in no additional unpronounced syntactic structure, no deleted elements and no null forms (Culicover & Jackendoff, 2005). Especially, Culicover & Jackendoff (2005) also put forward bare argument ellipsis and provided evidences for the ellipsis without syntactic structure, for example:

(3) A: When is Robin coming?
B: ɸ On Tuesday.

Seventhly, the null copy account can be divided into three routes according to the derivational status of ellipsis: only pre spell-out, only post spell-out and throughout. All three routes assume that the ellipsis site has unpronounced internal structure. Based on the transformational account of syntax, syntactic structures consist of two representations: phonological form (PF) representation and logical form (LF) representation (Chomsky, 1995). As for the “only pre spell-out” route, or PF deletion route, it assumes that structure is present at the ellipsis from the beginning of the syntactic derivation, but that this structure undergoes deletion at some point prior to the pronunciation of the sentence (Merchant, 2001). As for the “only post spell-out”, or LF copy route, it assumes that the ellipsis site initially lacks internal structure, and that structure is inserted via a structure copying operation at LF (Fiengo and May, 1994; Chung et al., 1995). As for the “throughout” route, it assumes that the syntactic structure in the ellipsis site is present throughout the syntactic derivation, and is only marked for non-pronunciation at the phonological level (Ross, 1969; Sag, 1976; Merchant, 2001).

(4) Someone was singing La Marseillaise, but I don’t know who ɸ. (PF deletion route)
(5) Christina read every book Hilary did ɸ. (LF copy route)

The ellipsis study from various routes in generative linguistics is all involved in two themes: the licensing of ellipsis and the identification of ellipsis, both of them are the constraints of ellipsis. The former focuses on the syntactic environments to permit the appearance of ellipsis, the latter focuses on the recoverability of ellipsis from contexts.

III. QUESTIONS ABOUT THE ELLIPSIS STUDY OF GENERATIVE LINGUISTICS FROM THE COGNITIVE APPROACH

A. Is the Ellipsis Site a Syntactical Unit?

The ellipsis is defined as “mismatching between phonology and semantics” by the school of generative linguistics (Lobke, 2010, p.1). They claim that ellipsis is a syntactic unit in nature with meaning but without overt phonological form. In other words, it means that phonology, semantics and syntax can be separated from each other, which reflects the modularity thesis and the guiding principle of “autonomy of syntax” in generative linguistics.

The generative view of ellipsis is contrary to the symbolic thesis in cognitive grammar. The autonomy of syntax thesis is the serious divergence and debate between generative linguistics and cognitive linguistics because autonomy of syntax makes it impossible to realize the symbolic relationship of grammar (Langacker, 1991, p.533). Langacker pointed out that grammar is symbolic in nature, a symbolic unit is the basic unit and the research object of grammar (Langacker, 1987, p.11). A symbolic unit can be defined as “matching between phonological structure and semantic structure” (Langacker, 1987, p.77), which is shown as figure 2:

![Figure 2. The symbolic unit](image)

According to Langacker’s viewpoints, a grammatical unit is a symbolic unit which is “matching between phonology and semantics”, a grammatical unit is unified by a phonological unit and semantic unit. Grammar is similar to a coin
The recoverability of ellipsis is one of two study themes of ellipsis in generative linguistics, the recovery of elided site means the understanding of ellipsis. So far, generative linguistics hasn’t provided powerful proof to verify the mental reality of recovering process or filling process of ellipsis in our mind. Does the understanding of ellipsis appear after the recovery of elided site? Can the recovery of ellipsis guarantee the understanding of ellipsis? It is a question. The recoverability of ellipsis doesn’t mean the real recovery process of ellipsis in practice. The recoverability of ellipsis only tells us that an elliptical sentence has a correspondent full sentence in form, it can’t explain the understanding process of ellipsis. The construal of a sentence is a cognitive process in mind not as simple as the recovery of syntactic structure. The construal of a sentence is a cognitive process in mind not as simple as the recovery of syntactic structure. The construal of a sentence is a cognitive process in mind not as simple as the recovery of syntactic structure. The construal of a sentence is a cognitive process in mind not as simple as the recovery of syntactic structure. The construal of a sentence is a cognitive process in mind not as simple as the recovery of syntactic structure.
In short, the cognitive view of ellipsis is summarized as follows: (1) Grammar or syntax is symbolic in nature, a symbolic unit is “matching between phonology and semantics”, however, ellipsis is “mismatching between phonology and semantics”, therefore, the elided site is not a symbolic unit or a syntactic structure. (2) Since elided site is not a syntactic structure and is not limited to grammatical principles of generative linguistics, therefore, ellipsis can’t be generated by grammatical rules. (3) Chomsky, the representative of generative linguistics, distinguished language knowledge and language performance and focused on the former and ignored the use of language. Cognitive linguistics objects to the dictionary view of generative linguistics and holds to the encyclopaedic view and assumes that language knowledge comes from language use, based on viewpoints of cognitive linguistics, the meaning of ellipsis does not only come from its antecedent but from both linguistic knowledge and encyclopedic knowledge. (4) One of guiding principles in cognitive semantics is that meaning construction is conceptualization, the process of obtaining the meaning of the elided site and the whole sentence is also a process of conceptualization. The understanding or construal process of ellipsis is not a simple recovery process but a dynamic process of conceptualization, a result that cognitive abilities act on semantic content.

IV. THE STUDY OF ELLIPSIS IN A COGNITIVE APPROACH

There are not much achievements of the cognitive study of ellipsis in domestic and foreign linguistic circle, which includes the following three aspects:

A. Types of Ellipsis and Prototype Theory

Quirk(1985) is the first linguist to divide ellipsis into various types according to family resemblance, first he established five criteria for ellipsis and then divided ellipsis into six types according to the degrees of strictness including strict ellipsis, standard ellipsis, quasi-ellipsis, situational ellipsis, structural ellipsis and semantic implication. The strict ellipsis accords with all five criteria, which is the best example, the central member and the prototype of ellipsis. Comparatively, semantic implication accords with all five criteria, which is the best example, the central member and the prototype of ellipsis. Therefore, semantic implication is from both linguistic knowledge and encyclopedic knowledge, the construal and understanding of ellipsis. The main viewpoints of cognitive view of ellipsis include: there is no syntactical structure in elided site, the meaning of ellipsis is from both linguistic knowledge and encyclopedic knowledge, the construal and understanding of ellipsis is a dynamic process of conceptualization, a result that cognitive abilities act on semantic content.

B. The Exploration of Cognitive Models of Ellipsis

Wu Dilong and Zhao Yan (2010) explained semantic ellipsis with idealized cognitive model; Zhang Tianwei (2012) analyzed ellipsis from conceptual metaphor; Yang Leida and Zhao Genglin (2013) put forward a cognitive network model for ellipsis; Tang Yinyi (2013) provided a cognitive mechanism for semantic ellipsis with conceptual blending theory; Xia Riguang (2010) explained discourse ellipsis with figure-ground theory etc.

C. The Empirical Research of Ellipsis

Some scholars began to study event-related brain potentials of ellipsis (Martin, 2012); Martin & McElree (2009) revealed the relevance of language understanding with memory representation by the eye movement method and speed-accuracy tradeoff procedure; Poirier & Shapiro (2010) tested the processing time of sluicing sentences with prime effect; Johnson (1994), Tesak et al.(1995) and Hardt (1997) studied ellipsis with a corpus-based approach etc.

In addition to the above achievements, Langacker (2012) studied ellipsis in coordination sentences from the cognitive perspective, Culicover & Jackendoff (2005) tried to analyze ellipsis from the interface between syntax, semantics and cognition. With the development of cognitive linguistics, cognitive psychology, neurolinguistics, psycholinguistics and other cognitive sciences, the cognitive study of ellipsis will gain new development and breakthrough.

V. CONCLUSION

If cognitive linguistics is the second “cognition revolutionary” toward generative linguistics, it can also say that the cognitive study of ellipsis is the “cognition revolutionary” toward the generative study of ellipsis. The paper poses challenges and raises questions toward the traditional syntactical ellipsis study, and comes up with its cognitive view of ellipsis. The main viewpoints of cognitive view of ellipsis include: there is no syntactical structure in elided site, the meaning of ellipsis is from both linguistic knowledge and encyclopedic knowledge, the construal and understanding of ellipsis is a dynamic process of conceptualization. Cognitive linguistics is a linguistics research paradigm which absorbs achievements comprehensively from cognitive sciences and has a strong vitality and explanatory power, the cognitive study of ellipsis will flourish with the development of cognitive sciences in the future.

REFERENCES


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