

A Lexical, Constraint-Based Analysis of English Complex Prepositional Passives

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Abstract: Complex prepositional passive structure is one of the very special phenomena in English passive structure. Although the surface structures are the same as "V + NP + P", their passive conversion ability is different. This paper discusses the semantic features of complex preposition from three aspects: the position of complex prepositional passive in English passive historical evolution; the advantages and disadvantages of conversion generated grammar on the passive analysis of complex preposition. Finally, this paper analyzes the semantic features of different types of complex preposition verbs in the context of constraint-based HPSG analysis framework, and discusses the constraint role of semantic on syntax.

Key words: complex prepositional verbs, Internal Passive; External Passive; HPSG; syntax-semantics pairing

1. Introduction

As one of the commonest sentence patterns in English, the passive constructions play a very important role in English grammatical system. Therefore, many scholars and linguists have done a lot of studies from different perspectives and with different approaches such as Generative Grammar (Chomsky, 1957; Emonds, 1975), Lexical Functional Grammar (Dalrymple, 2001) etc. Taking perspective of meaning-form interface, Head-driven Phrase Structure Grammar scholars (hereafter HPSG for short) make a re-analysis of the systematic syntactic and semantic relations between English active and passive sentences within constraint-based lexical framework. HPSG scholars believe that the grammar which is fit for human language processing should be described by constraints because words are rich in syntactic and semantic information, which can to a great extent determine their syntactic and semantic structures in sentence. The syntactic formation of English passives is constrained by semantics of the Head because syntax is not autonomous but interwoven with semantics (Pollard & Sag, 1994; ong-book Kim, 2002; Jong-Bok Kim & Peter Sells, 2007). Therefore, within lexical, constraint-based HPSG framework, this paper attempts to make a systematic analysis of their syntactic and semantic features and interactions.

2. Grammaticalization of English Passive Constructions

"Voice" in modern English generally falls into active, middle and passive whose prototypical structure is "NP1+be+P.P+(by+NP2)". According to Denison (1993), English passives roughly go through the following stages.

1.1 Direct Passive

Except *hāttan* (to call), OE does not contain other morphological passive forms. The passive constructions in OE are usually composed of "auxiliary (*bēon/weorþan*) +P.P" just as those in modern English. It is typical in OE that the nominative subject in passive sentence corresponds to the accusative object in active sentence and the agent is introduced by prepositions "fram" or "durh" (Traugott, 1972: 82). In OE, transitive verbs usually have only one object, which can be either accusative or dative. The cases in active sentence remain unchanged when transformed into the passive, so it is called "Direct Passive".

1.2 Indirect Passive

In ME, most of distinctions in nominative, accusative and dative disappeared and they can be interchangeable in sentences. The dative or accusative is identical with the nominative in active-passive transformation. The preposition "to" begins to be used to introduce indirect object in double-object constructions and the indirect object begins to be promoted as passive subject, which is called "Indirect Passive".

1.3 Prepositional Passive

Prepositional verbs, which are composed of intransitives verbs and prepositions, can take NP as their objects because they can act as transitive verbs as a whole. Their structure is analyzed into [VP [V look into] [NP this problem]]. Lightfoot (1979) argues that the prepositional passive appears in early modern English about from 15th to 16th century whereas Visser (1973) believes that the prepositional passivization shows up in 16th century.

1.4 Complex Prepositional Passive

Complex prepositional verbs usually take the form of "V+X+P" with X filled with noun and the whole phrase can act as a transitive verb with NP as object because it is frequently idiomatic in nature. The complex prepositional verb is analyzed into [VP [V take advantage of] [NP him]] like (1).

(1) John took advantage of him. He was taken advantage of by John.

1.5 Phrasal-Prepositional Passive

Another type of complex prepositional verbs are made up of "V+Adv+P", which is also called phrasal prepositional verbs. They also carry transitivity and take NP after the preposition as object because of their idiomaticity.

(2) John looked down on these things.

Such things were looked down on by John.

Denison (1993) claims that the passivization of the phrasal prepositional verbs appears in about 17th century, so it is even later than that of the complex prepositional verbs. And Lightfoot (1979) deems that OE and ME have only lexical passives like Direct Passives, and transformational passives do not appear until 15th or 16th century like prepositional passives. Although the exact time of the passivization of each English passive remain controversial, their development sequence is very clear. The investigation of English passive development will be beneficial for our analysis of English complex prepositional passives.

3. Transformational Analysis of English Complex Prepositional Passives

Complex prepositional verbs, prepositional verbs and phrasal verbs are all called multi-word verbs. This paper mainly attempts to examine the semantic and syntactic interactions and interrelations of complex prepositional verbs and their passivization because they are not fully examined previously. According to which constituents in complex prepositional verbs can be promoted as passive subject, this paper classifies the complex prepositional passives into two sub-categories: one category is called “Internal Passive” because it promotes NP after V in “V+NP+P” into the subject position of the passive sentence; the other “External Passive” because it takes prepositional object outside of “V+NP+P” as the passive subject. However, both types are derived from “V+NP+P” whether it is internal or external. For the convenience and clarity of description, we put “V+NP+P” into “V+NP1+P+NP2” whose NP1 is an essential part of the complex prepositional verb and cannot be arbitrarily changed into other nouns, while NP2 is not an indispensable part the verb phrase, so it changes in different sentences. Wei-Guo Shao (2006) claims that different analysis of the structure of the complex prepositional verbs leads to generation of internal passives or external passives.

Although this kind of movement or derivational analysis can well reveal the relationships between typical active and passive sentences, it leaves many passive phenomena unexplained. Consequently, in what follows, this paper will discuss complicated types of complex prepositional passives in English, and the need to examine not only grammatical categories but also grammatical functions, and semantic/pragmatic constraints on complex prepositional passives to see how semantics and syntax are interwoven and interactive.

4. A Lexicalist Approach

4.1 Semantic Features of Complex Prepositional Verbs

Complex prepositional verbs of “V+NP+P” have already been idiomatic of different degree in their long-standing use, so they are also called “Verbal Idiom”. The verb idioms are usually used as a whole. According to whether they can be passivized or not, Huddleston & Pullum (2002) categorize the complex prepositional verbs into four subcategories as follows:

- a. John made full use of the opportunity.
→Full use was made of the opportunity.
→The opportunity was made full use of.
- b. They attach great importance to the project.
→Great importance is attached to the project.
* The project is attached great importance to.
- c. They made fun of John.
→John was made fun of.
* Fun was made of her.
- d. They made friends with many foreigners.
* Many foreigners were made friends with.
* Friends were made with many foreigners.

Figure 1. Classification of complex prepositional verbs

Although the complex prepositional verbs given above have the same formal structure, they have different ability to be passivized. Therefore, as a type of grammatical constructions, the complex prepositional verbs are conventionalized unities of semantics and syntax. Only through full description of their lexical, semantic and syntactic features to find the constraints laid by semantics on syntax can it better explain the particularity and heterogeneity of the complex prepositional verbs. One of the methods to solve this problem is to make a description of lexical rule of the complex prepositional verbs within constraint-based HPSG framework. Example (3) is used to illustrate the semantic and syntactic features of the complex prepositional verbs.

(3) John made full use of the opportunity.

Complex prepositional verbs such as keep pace with, keep tabs on, make use of, take advantage of, etc. have particular meanings. The verbal idioms have their idiomatic meanings only when the constituents forming the whole verb phrase co-occur. In (3), the complex prepositional verb make full use of is composed of a transitive verb make, a noun phrase full use and a preposition of, and the subject John exert certain influence on the object opportunity by means of the verb phrase make full use of, which sometimes can be interchangeable with transitive verbs use or utilize.

4.2 Both Internally and Externally Passivized

Some complex prepositional verbs can be simultaneously passivized internally and externally, but they are limited in number and are strictly semantic-constrained. On the one hand, this sub-category of complex prepositional verbs is similar to those that can be only

internally passivized because the NP after V can be modified by other adjectives or determiners like careful, effective, fresh, good, great, strong, serious, terrible, all, some, little, more, much, any, no, etc., so they can be transformed into Internal Passives; on the other hand, they are similar to those that can be only externally passivized because they act as a transitive verb as a whole, so the prepositional object can be promoted into the passive subject position. We take the phrase pay attention to as an example to make semantic and syntactic analysis of this subcategory. First of all, as a transitive verb, the lexical information of the verb pay can be described by means of Attribute-Value Matrix of HPSG as follows.

(4) We should pay attention to his demands.

(5) <pay,

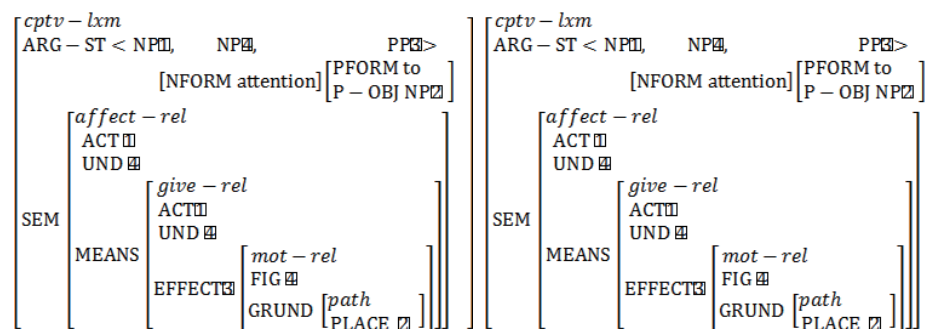


Figure 2. Attribute value matrix of the verb pay

The VAM of the verb pay indicates that the lexical semantic feature of pay implies give-relation. The direct object of give-like verbs in English can be promoted as passive subject, so the NP attention in the verbal idiom pay attention to can be promoted as the subject in the passive voice.

The Complex Prepositional Internal Passive Lexical Rule can guarantee that NP1 after V can be promoted into the subject position of the passive sentence. In other words, the passive verb paid chooses NP1 as its SPR. The passive verb paid in Output still takes two COMPS: one is PP which is identical with that in Input; the other is an optional PP, which introduces the agent by preposition by. According to Complex Prepositional Internal Passive Lexical Rule, active sentence (9) can be transformed into passive sentence (6):

(6) Attention should be paid to his demands (by us).

The description made above considers that the verb pay implies give-relation, so its direct object can be directly promoted into the subject position of the passive voice. If its indirect object is promoted into the passive subject, it will be (7):

(7) * His demands should be paid attention (to) (by us).

It is generally known that the preposition to is always deleted when the indirect object of give-like verbs are used as the passive object, so the preposition to in (7) should be omitted, or else the sentence will be ungrammatical. However, to must be kept in (7), so the verbal idiom pay attention to is not totally identical with the construction “give NP1 to NP2”, and other methods have to be used to explain the maintenance of the preposition to. As is mentioned above, the complex prepositional verbs are idiomatic in nature, so it is a bit different from V within them and can be used as a transitive verb as a whole. The meaning of the verbal idiom pay attention to is similar to that of single-word verb notice. Namely, pay attention to is a derived transitive verb which is composed pay, attention and to.

The VAM of the verbal idiom pay attention to shows that its lexical semantic feature implies notice-relation. As a transitive verb, the object of notice can be promoted into the passive subject position, so NP2 after the preposition to can be promoted into the passive subject position to generate External Passive.

The Complex Prepositional External Passive Lexical Rule can make sure that the prepositional object is promoted into the passive subject. In other words, the passive verbal idiom chooses the prepositional object as its SPR. The passive verbal idiom in Output only takes one optional COMP PP, which introduces the agent by the preposition by.

We have discussed two types of passivization of Subcat I of complex prepositional verbs. However, appropriate type has to be chosen in actual use on the basis of discourse context, style, semantic focus, thematic structure, information structure, etc. Generally, Internal Passive is more formal than External Passive because it appears earlier than External Passive.

4.3 Only Internally Passivized

Language continually changes. As a distinguished feature of complex prepositional verbs, the idiomaticity is a matter of degree. When the structure of the complex prepositional verbs is relatively loose, NP1 after V can be frequently modified by some adjectives or determiners just as Subcat I. However, this type of complex prepositional verbs can only be internally passivized without External Passives. For convenience, this type is called Subcat II. Sentence (8) is used to illustrate the verbal idioms which have only Internal Passives:

(8) We cast serious doubt on their motives.

According to the Complex Prepositional Internal Passive Lexical Rule, sentence (8) can be transformed into Internal Passive (9):

(9) Serious doubt was cast on their motives (by us).

4.4 Only Externally Passivized

When the structure of complex prepositional verbs is very close, NP1 after V cannot be modified by other adjectives or determiners and the verbal idiom functions transitive as a whole, this type of complex prepositional verbs, which is called Subcat III, can only be externally passivized. Sentence (10) is taken to illustrate this case:

(10) They caught sight of the mountain top.

4.5 Neither Internally nor Externally Passivized

Not all complex prepositional verbs of “V+NP+P” can be passivized either internally or externally. The structure of some verbal idioms is so close, even frozen, that the relations between V and NP1 are not directly shown by their literal meanings. For example, in the verbal idiom shake hands with somebody, the relation between the verb shake and the noun phrase hands are not simply shaking somebody’s hands, but embodying interpersonal relations. It reflects certain kind of cultural connotations. If the noun phrase hands is used as the passive subject, the meaning of the verbal idiom will be totally changed, which only expresses that somebody’s hands are shaken because of certain outer force without any tincture of interpersonal relations. In addition, the verbal idiom shake hands with embodies a mutual relationship because the status between the subject and the object of the preposition with is equal, so the object of with cannot be greatly affected by the subject. Therefore, this type of complex prepositional verbs, which is called Subcat IV, can be neither externally nor internally passivized. Sentence (11) is used to show why Subcat IV cannot be passivized.

(11)a. He shook hands with us.

The VAM of it shows that the lexicale semantic features of the complex preposition verb shake hands with imply equi-rel relationships. Conversely, it exerts specific influence on the noun phrase hands together with the subject he. Therefore, the verbal idiom shake hands with is like the transitive verb resemble, which can take object, but the object cannot be promoted into the passive subject position.

5. Conclusions

Based on the investigation of English passive evolution and analysis of advantages and disadvantages of Transformational Generative Grammar towards English passive constructions, this paper explores the feature structure and lexical information representation of English complex prepositional verbs within constraint-based HPSG framework. The analysis indicates that semantics lay great constraints on syntax, so discussion of syntactic structures cannot do without mention of semantics, which makes up the disadvantages of Transformational Generative Grammar’s neglect of semantics and also proves that constraint-based lexicalist approach can better represent linguistic signs formally. Of course, the Internal and External Passives are comparatively special linguistic phenomena in the passivization of English complex prepositional verbs. This paper only chooses some representative examples to illustrate the lexical semantic features of each type, so we will further and more deeply describe their pragmatic constraints in addition to their semantic and syntactic information to form a complete analysis framework for the passivization of the complex prepositional verbs.

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