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Abstract

This paper investigates the movement of the English passive constructions in the framework of the Minimalist Program (Chomsky 1993) and aims to summarize the common feature of the promoted NP and find out the trigger of movement in English passives. It mainly discusses three types of English passives derived from active clauses of mono-transitive verbs, of intransitive verbs with PP complements and of ditransitive verbs. By checking these structures, it is found that the promoted NPs share the semantic feature of affectedness. Furthermore, if there is more than one NP that is possible to be promoted, the most affected one is selected. By referring to the Chinese *bei*-construction, it is proposed that the promoted NPs in English passives are also locus of affect like *pre-bei* expressions in *bei*-construction. Thus, the domain of affectedness is enlarged to involve delimitedness and this helps to explain the instances that the subjects in English passives are not affected physically. Moreover, it is assumed that the strength of the features on T is associated with the affectedness on NPs and only the most affected NPs in the event can be promoted.

Key words: English passives, affectedness, the Minimalist Program, Chinese *bei*-construction, strong feature.

An Analysis of NP Movement Constraints on the English Passive Construction

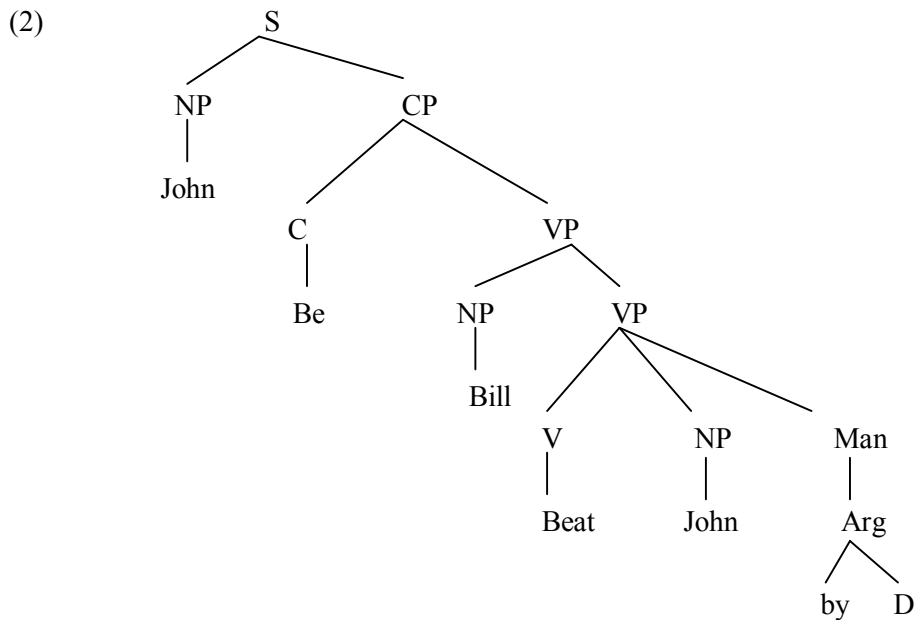
1. Introduction

The English passive construction is one of the most familiar topics in the field of syntactic research as well as other branches of linguistics. The movement mechanism (Chomsky, 1957, 1965; Adger, 2002; Baker, Johnson and Roberts, 1989; Jaeggli, 1986) and the pragmatic and semantic functions of the English passive construction (Langacker, 1975; Shibatani, 1985; Kural, 1998) have attracted a lot of attention.

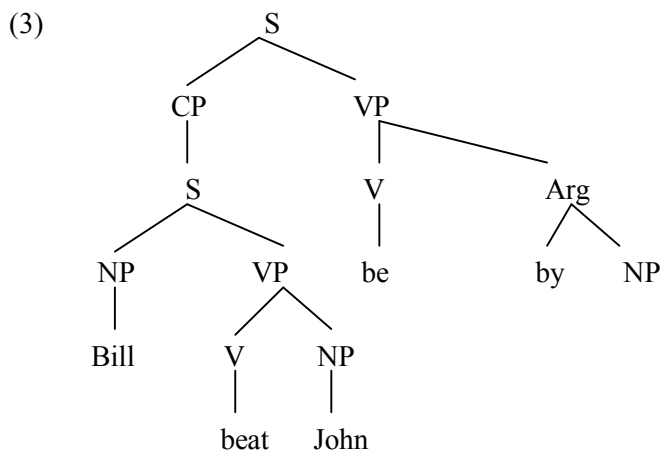
1.1 Structures of English Passives

- (1) a. John beat Bill.
b. Bill was beaten by John.

In Generative Grammar, Chomsky (1981) derives English passives by NP-movement. As exemplified in (1), (1a) is an active clause and (1b) is its passive counterpart. The subject in (1b) is the object in (1a) and the object in (1a) is introduced by an oblique preposition *by*. The *by*-phrase can be omitted. The mechanism of the movement has been discussed for many years. Hasegawa (1968) posits that English passives are formed as an object complement, and thus instance (1b) can be presented clearly as below. (Irrelevant details are omitted.)

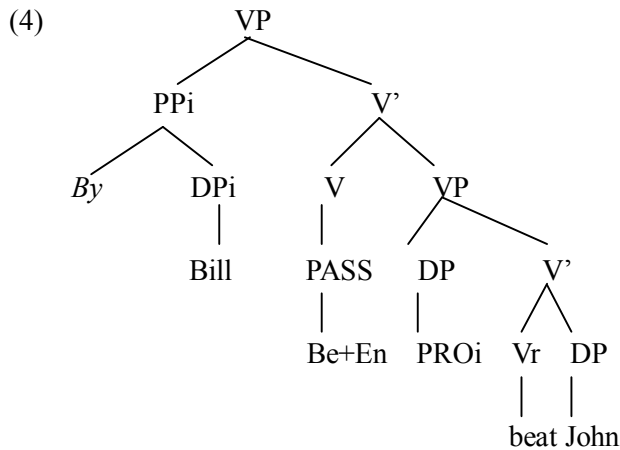


The transformation is carried out mainly in three steps. The first step is to substitute the subject *Bill* of the embedded clause for D and then the C is substituted by the auxiliary *be*. At last the object of the embedded clause is deleted ‘if and only if it is identical with the subject of the matrix’ clause (Hasegawa *ibid*: 235). Similarly, Langacker and Munro (1975: 793) agree with Lakoff’s idea and believe that English passive clause is transformed from object complement and illustrated in (3)



(2) and (3) are both based on the idea that English passives are derived from an embedded clause, but the derivation is too complex and not straightforward. Besides the structures listed above, Kural (1998:4) proposes an idea that treats the passive morpheme as the predicate and the *by*-phrase is the specifier while VP is its complement. The *by*- phrase controls the PRO and the novel aspect of this idea is that the *by*-phrase

and the Vr (root verb) have adopted certain control relationship. The structure is as in (4).



In this structure, the external argument of the root verb is kept in the position of PRO, and the *by*- phrase is treated as the specifier of PASS. He believes the other two structures fail to offer a natural source for the *by*- phrase and the structure (4) just makes up this point. Besides, ‘by treating the passive morpheme as a verb that subordinates the VP of the root verb, it also produces a type of VP architecture that is parallel to causative structures’. In addition, Kural (ibid) provides an analysis of the NP movement by examining all possible candidates one by one. He lists three potential candidates: the *by*-phrase, the PRO and the internal argument. He points that it is not normal to have an oblique agent as a subject though the reason is not very clear and since PRO is c-commanded by the *by*-phrase, it is not possible to move it to the position over its controller. Thus only the internal argument can be moved. The passive structure of Kural’s is much easier to comprehend than (2) and (3), but it does not provide a systematic mechanism of the NP movement in English passives. In this case, this paper adopts a syntactic structure of English passives proposed by Adger (2002) generated in the framework of the Minimalist Program and the detailed discussion is presented in section 2.

1.2 The semantic features of English passives

The semantic features of English passives also have aroused many discussions. Shibatani (1985: 837) proposes a list of features of passive prototype and the semantic

properties of passives are: (i) there are two semantic valences of the predicate called agent and patient (ii) Subjects in passives are affected. Since the subjects in passives originate from the objects in their active counterparts, the grammatical subjects in passives have the semantic features of the patients. Thus, the roles of agent and patient in passives are still crucial. Semantically, the event of beating in (1), repeated here as (5),

(5) a. John beat Bill.

b. Bill was beaten by John.

involves at least two participants, the one who carries out the action of beating volitionally and the one who suffers from the action. These two participants are lexicalized in the verb *beat* and thus they are called arguments of the verb and at the same time the verb is a two-place predicate (Adger *ibid*). The argument which acts volitionally is called the **agent** and accordingly the one affected by the action is the **patient**. These individuals which are able to define the event or state they participate in are called thematic roles or θ -roles. The θ -roles are assigned by the verb or predicate. There are also other roles, like **goal**, **source**, **experiencer**, but the agent and patient are more important in this discussion since they are semantically required in English passives as mentioned above. Thus, in (5a), *Bill* is the agent, *John* is the patient and their roles are assigned by the verb *beat*. According to semantic rules, each thematic role must be assigned to only one constituent in the clause, thus in (5a) the patient role can only be assigned to *Bill*.

Shibatani (*ibid*: 832) observes that the concept of agent is very important since ‘a clause without an agent – or something close to it, like an experiencer – does not permit a passive.’ Thus, some clauses whose subject is not an agent cannot be passivized.

(6) a. John bought a car for \$ 1,000.

b. A car was bought by John for \$1,000.

c. \$1,000 can buy a car.

*d. A car can be bought by \$1,000.

In (6c) *\$1,000* is not the agent in the clause so the passivized form (6d) is ungrammatical.

Moreover, Belletti and Rizzi (1988: 141) add that natural languages do not permit '(further) passivization of passive, raising, or ergative verbs' since there is no agent-like subject in these structures. In addition to agents, when the experiencer is placed in the subject position in an active clause, the clause is still able to be passivized, since the experiencer has close semantic meaning to agent and the other argument which is promoted in passivisation is also affected.

As mentioned above, the subject of passives should be affected. Since the subject is derived from the patient in the active counterpart and according to the features of patients mentioned above, the subject of passive constructions are no wonder affected. In (5b), the subject *Bill* is the affected participant in this event and suffered from the action of beating. From another perspective, *Bill* also sets a limitation on the event. That is to say, the beating event does not continue without a limitation, and *Bill* is involved in the endpoint of the event. This is similar to Chinese *bei-* construction since Cann and Wu (2010) propose that the pre-*bei* expression has the function of locus of affect which is involved in the endpoint of the event or resulting state. Tenny (1987) argues that this delimitedness subsumes the domain of affectedness. In this sense, the concept of affectedness is enlarged and is able to explain the passive cases in which the subjects are not affected physically but mark the endpoint of the event. Bearing this idea in mind, we can say, in English passives, the subjects are affected. This point will be further explained in section three.

1.3 The function of English passives

Okutsu (1983:70) raises a question whether it is uneconomical to have passive and active patterns of sentences to express the same meaning. Actually they do not have the same meaning and in some cases a passive clause and its active counterpart do not even have the same truth conditions as in (7).

(7) a. Every teacher likes a student.

b. A student is liked by every teacher.

(7a) is ambiguous due to the scope of the quantifier phrase while (7b) does not raise this

kind of ambiguity due to the single reading of the promoted quantifier phrase. In this sense, the meanings conveyed by passive clauses and their corresponding active ones are not identical. Shibatani (1985: 830) cites Jespersen's five reasons of using English passive structure (1924: 167-168):

- (8) a. 'The active subject is unknown or cannot easily be stated.'
- b. 'The active subject is self-evident from the context.'
- c. 'There may be a special reason (tact or delicacy of sentiment) for not mentioning the active subject.'
- d. 'Even if the active subject is indicated ('converted subject') the passive turn is preferred if one takes naturally a greater interest in the passive than in the active subject.'
- e. 'The passive turn may facilitate the connection of one sentence with another.'

Shibatani (*ibid*) further summarizes Jespersen's findings and draws three major functions of passives:

- (9) a. 'Passives involve no mention of agent for contextual reasons.'
- b. 'Passives bring a topical non-agentive element into subject position.'
- c. 'Passives create a syntactic pivot (cf. Dixon, 1979), so that coreferential deletion such as Coordinate Subject Deletion and Equi-NP Deletion can apply.'

These functions suggest that the adoption of passives is largely dependent on the contextual requirement and passives play different roles, such as agent omission, topicalization and coreferential deletion, according to the contextual environment. Givon (1979:186) mentions that the function of passivisation is to promote a non-agent 'into the role of a main topic of the sentence' and thus the main topic becomes the subject. Okutsu (*ibid*:70) considers this issue in a conceptual way and remarks that the choice between passive or active clause patterns implies the speaker's point of view: if the speaker looks at the event from the perspective of the agent, the active clause is used and if from a patient point of view, the passive pattern will be chosen. By studying the statistics of passive clauses, Shibatani (*ibid*: 831) observes that the agentless passives take a large proportion in all passive instances: around 80% of passives are agentless on average and passives are used when the agents are not important or unspecified. Based

on this fact, he argues that the main function of passives is defocusing of an agent rather than simply the promotion of the object or topicalization. This conclusion is supported by the fact that in some languages, intransitive verbs can be passivized without object promotion (like Latin and German, listed by Shibatani *ibid*: 834). This paper tends to agree with Shibatani's idea but it is not taken as the only function of the English passives. This will be further discussed in section three.

As suggested above, this paper investigates the movement of the English passive constructions in the framework of the Minimalist Program (Chomsky 1993) and aims to summarize the common feature of the promoted NP and find out the trigger of movement in English passives. In order to better explain the issues, section two will introduce some main ideas of the Minimalist Program which are relevant to the paper and then these ideas will be used to generate the structures of English passives. After settling the only legitimate NP promotion in English passives, section three will be devoted to summarizing the common features of the promoted NP in English passives by referring the Chinese *bei*-construction and based on the semantic feature, the movement trigger will be proposed. The last section will be the conclusion.

2. The structure of English passives

As discussed in the introduction, there are various approaches to probe the structure of English passives. This section aims to formulate a structure of English passives in the framework of the Minimalist Program. First of all, it is necessary to introduce some relevant concepts in the Minimalist Program by Chomsky (1993) before the main research. The introduction is mainly based on Adger (2002) which explains the program in detail.

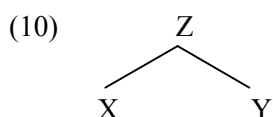
2.1 An overview of the Minimalist Program

2.1.1 The concept of features

The framework this paper adopts is that of the Minimalist Program which emerges from the work of Noam Chomsky. This program, with the principles of simplicity, emphasizes that syntax is not related with features of words but more abstract morphosyntactic features or features for short. A morphosyntactic feature is ‘a property of words that the syntax is sensitive to and which may determine the particular shape that a word has’ (Adger, *ibid*: 19). These features can be divided into two types, the interpretable features which have influence on semantics and the uninterpretable features which lack this influence. For example, the number features of nouns are interpretable features since if a noun is in the form of plural, it has the interpretation of referring more than one item. As to uninterpretable features, case features on nouns and pronouns can serve as examples. Since usually ‘particular case forms are restricted to particular positions in clauses’ (Adger, *ibid*:35) and an NP in the subject position is usually in the form of nominal case and an NP in object position in the form of accusative case. The changing of case in a clause may lead to different semantic interpretations of the clause. However, this fact does not mean that case feature is interpretable or able to give rise to the semantic role of the words in the clause. Adger (*ibid*: 36) emphasizes that ‘the function of case is purely syntactic’ and thus it belongs to uninterpretable features. Furthermore, category features also compose an important set of features. The category features are associated with traditional word classes of noun (N), verb (V), adjective (A), preposition (P) and others. Besides the number features, case features and category features listed above, there are other important types of features like tense, person, gender as well as other features on verbs like participles and infinitive features. In addition, features are allowed to be bundled up to make lexical items, so one word may have more than one feature. The concept of feature which is ‘associated with the inflectional morphology of lexical categories’ (Epstein, Thrainsson and Zwart, 1996: 13) is essential in the Minimalist Program, for if the features of a lexical element are settled, other things about this element, like its pronunciation and interpretation, are all settled.

2.1.2 Merge and feature checking

In the Minimalist Program, **Merge** and **Move** are the main syntactic operations to construct a grammatical sentence and feature checking plays an important role in the process. Sentences are analyzed not as linear structure but hierarchical ones (Burton, 1997) and merge functions as to build up phrases or larger structures like clauses by merging smaller constituents ‘with the smallest elements being lexical items’ (Adger, *ibid*: 48). This operation first labels the constituents which are being joined and these labels are often the ‘subset of the features’ of the constituents. The most often used features are the category features though other relevant features are also listed when necessary. The basic form of Merge is illustrated as follow.



X and Y are smaller constituents and when they join together to form a larger new constituent, they acquire a new label which is Z (the label is dependent on the head of this constituent) and Z can form even a larger structure by merging with other constituents. The labeled bracketing notation is as (11).

(11) [z X Y]

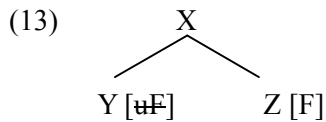
The working hypothesis of Merge is to join only two constituents together, and thus form a binary branching structure. The process of Merge follows the requirement of feature matching which means the features associated with the inflectional form of a lexical item ‘have to match the features represented in the functional heads’ (Epstein, Thrainsson and Zwart, *ibid*: 13). One simple case of matching is based on categorial selectional features (c-selectional features or subcategorization features) which determine which categories of constituents are able to merge together. For example, a transitive verb like *hit* has a V- feature and has (at least one) c- selectional N-feature. Thus, the constituent which is able to merge with *hit* have to have the categorial N-feature. As a result, nouns like *dogs* or noun phrases like *the ball* can merge with *hit* but not verbs or adjectives like in (12). Since this c-selectional feature does not involve semantic interpretation, it also belongs to the uninterpretable features.

(12) a. hit dogs

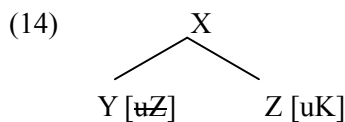
b. hit the ball

- c. *hit run
- d. *hit good

As mentioned above, one constituent is allowed to have more than one feature, and thus rules are required for the order of feature checking when merging. One constraint requires that the semantic rules will not be able to apply before all the uninterpretable features are deleted. This is called **Full Interpretation** in Chomsky (1986). Since uninterpretable features are deleted when checking, this constraint means uninterpretable features must be checked and checked first. Furthermore, the checking is under sisterhood as stated by Adger (ibid: 67) that ‘an uninterpretable (c-selectional) feature F on a syntactic object Y is checked when Y is sister to another syntactic object Z which bears a matching feature F’. This is illustrated in (13) where [uF] represents the uninterpretable features.



And by applying these constraints, the ungrammatical instances (12c) and (12d) are ruled out. X can further merge with other constituents if necessary and the head of the larger constituent determines the features of the new constituent. Moreover, Merge only operates to ‘root nodes of syntactic objects’ (ibid). In other words, when A is merging with B and checking B’s selectional features, A has to have all its features checked before otherwise they will be ‘stuck inside the structure’ (Adger, ibid: 72). In (14), though the [uZ] is checked by Z, there is nothing in the sisterhood of Z to check its [uK] and thus this structure is not correct.

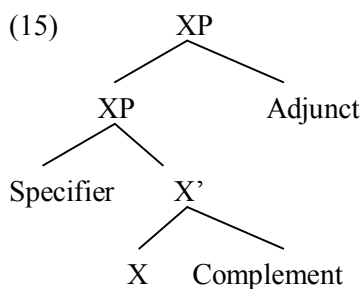


Besides c-selectional features, there are also s-selectional features which stand for semantic selectional features functioning as to regulate the semantics of well-formed sentences. These two types of selectional features are both associated with θ -roles. Adger (ibid: 70) points that lexical items have a slot ‘for each θ -role that they assign’ and these slots arranged into a θ -grid. Each slot has two aspects, one for semantic part which is associated with thematic roles and the other one for syntactic part represents the

word's syntactic category features. When the uninterpretable c-selectional features are checked and then deleted, each θ -role is thus assigned. The sentence **He put the pen* is ungrammatical because the c-selectional features of *put* are not fully checked and the θ -roles are not all assigned.

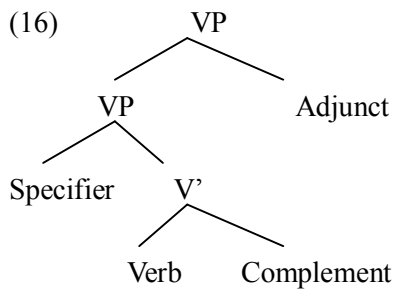
2.1.3 Phrase structure

With the basic process of Merge in mind, we can further construct sentences by merging smaller constituents. In the Minimalist Program, sentences are built up by phrases and phrases are formed by other constituents merging. One of the main features of phrases is that they do not have c-selectional features to be checked or in other words, they are maximal and do not project further. The basic structure of a phrase is constructed by two major steps of merging. The first Merge occurs between Head and its Complement. For example, objects are complements of verbs. According to Adger (ibid), heads are usually lexical items and their complements are complex constituents and that means the first Merge is the Merge of lexical item and the maximal projection. The second Merge happens on an intermediate projection which is called the bar-level projection. This projection is an additional projection to the one of the lexical item and the maximal projection where all selectional features have been checked. Similar to the first Merge, the second Merge involves the bar-level projection and a specifier. This Merge is motivated by the fact that besides the selectional features which are checked by merging with complement, verbs have other selectional features which requires to be met. In addition, there may be other constituents that are not required by feature checking often functioning as modification and thus they are adjuncts and adjoined to the other constituents. So far a basic structure of a phrase can be sketched in (15).



The specifier of VP in a construction where the agent is not overtly expressed can serve

as the agent though as an ‘empty element’ notated as *e*. In Chomsky’s theory, sentences are built around verb phrases, and thus the structure of VP can be derived from (15) in (16).

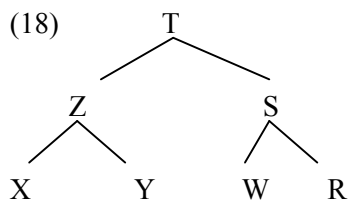


So far, a skeleton of the tree structure of phrases have been built up by Merge and the relationship between nodes of sisterhood seems to be important (because the fundamental operation of construction the structure is merging two nodes of sisterhood). One important syntactic relationship holding between the nodes is c-command (constituent-command) which is explained as follow.

(17) ‘A node A c-commands a node B if, and only if:

- a. either B is A’s sister or
- b. A’s sister contains B.’ (Adger, *ibid*: 93)

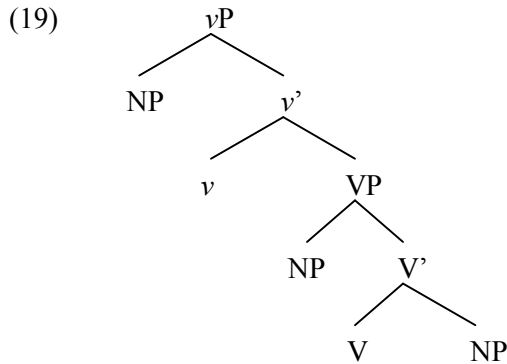
To make it clearer, it can be illustrated by the aid of (18).



According to c-command rules, X c-commands Y due to their sisterhood and Z c-commands S as well as W and R which are contained by S. T c-commands nothing because it has no sister nodes.

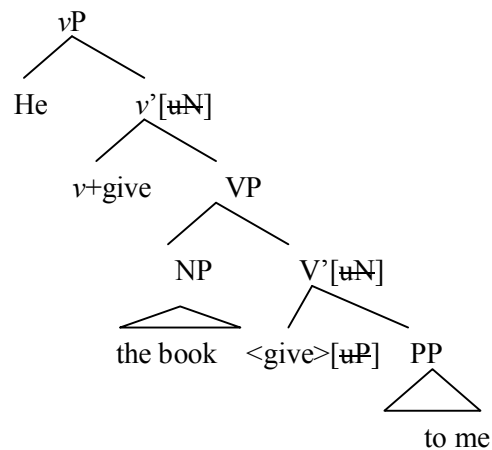
So far, the structure of (16) appears to be perfect, but when ditransitive verbs are concerned, this structure fails to deal with the two objects in the double object construction. It seems to require a ternary Merge in addition to binary Merge discussed so far. In order to maintain the single version of Merge, a more complex analysis of VP structure has been adopted by linking ditransitive constructions to causative construction in general. Ditransitive verbs are able to be paraphrased into *cause + V*. For example, the

ditransitive verb *show* can be decomposed into *cause+see*. The sentence *John showed Bill a letter* can be paraphrased into *John caused Bill to see a letter*. The causative form can be transformed to the ditransitive form by deleting the preposition *to* and move the verb *see* to the position of *cause* and Merge with *cause* to form *show*. This new advanced structure is shown in (19).



In this structure, *v* is also a projection of the verb though it is moved to a higher position and encodes causality. One thing should be noted that *v* does not encode causality all the time. When there is causality semantic component in the verb, this causal verb *v* is taken as a light verb and the main verb moves to join it. As a result, the node labeled VP actually does not have an overt verb but a trace of the moved verb. In other verb, as explained by Adger (ibid: 108) ‘there is a special hierarchy of projections’ where *v* takes VP as its complement. If the verb is unaccusative, *v* is still maintained with no specifier. That means there are two versions of *v*: one has a specifier with causal semantics and one does not have a specifier without causal meaning and ‘semantically vacuous’ (Adger, ibid: 119). This distinction is drawn to maintain the hierarchy of projections and further guarantee the UTAH which will be introduced in the following part. In this structure, a new operation is introduced which is called **Move**. It takes a constituent which is formed by Merge and moves part of the constituent to another position in the tree. Take a ditransitive verb give as an example to see how this structure works. (<> means the trace left by the moved element.)

(20) He gives a book to me.



This structure still needs constraints associated with θ -roles to rule out the ungrammatical form like *He gives to me a book* generated by a different order of feature checking. This constraint is called Uniformity of θ -Assignment Hypothesis (UTAH) which claims that ‘identical thematic relationships between predicates and their arguments are represented syntactically by identical structural relationships at Merge.’ (Adger, *ibid*: 110) To be more specific, it regulates that each θ -role can ‘correspond to a unique phrase-structural configuration:

- (21) a. NP daughter of vP → interpreted as Agent
- b. NP daughter of VP → interpreted as Theme
- c. PP daughter of V' → interpreted as Goal’ (Adger, *ibid*: 111(120))

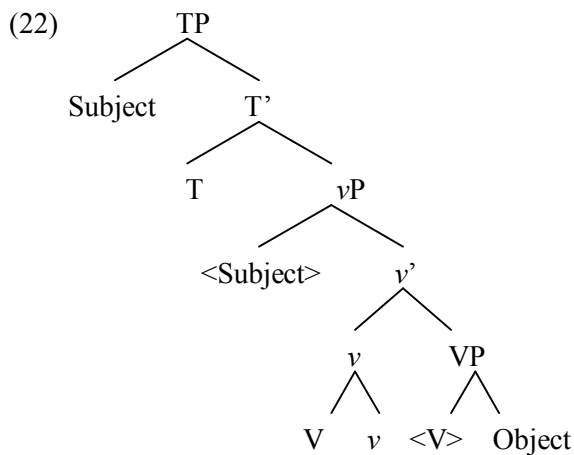
This constraint to some extent regulates the order of feature checking.

So far, within the Minimalist program, we are able to describe how clauses are derived. The Minimalist Program is considered to be a ‘development of earlier work in transformational generative grammar’ (Lasnik 2002: 432) designed to deal with the problem of the linking between sound and meaning. This sound-meaning link is essentially about derivation which takes some lexical elements as its input (the input is called **numeration**), and the two interfaces, Phonetic Form (PF) and Logical Form (LF), as its out put. To be more specific, the first step is to select two lexical elements in numeration which have phonetic, semantic and grammatical features. Then these two elements merge together to form phrases. At last, after move, spell-out occurs and LF and PF are split. This process represents one major requirement of the Minimalist

Program that ‘the derivation should take as few steps as possible’ (Epstein, et al. *ibid*: 15) and reduces the Deep- Structure in previous theories of generative grammar.

2.1.4 Clause structure: TP projection

However, (19) still cannot fully represent the structure of clauses since some other elements such as tense and auxiliaries are not placed in it. By examining the position of modal verbs and emphatic *do* in a clause, it is predicted that there must be another position outside *vP* but ‘follows the surface position of the subject’ and morphological tense marking may also be located in this position (Adger, *ibid*: 131). Thus, based on these facts, a new head T projection is added to the *v* projection which is a mnemonic for tense. The head T merges with *vP*, projects T’ and takes the subject as their specifier. Thus, the structure of (19) is further developed into (22).



In this structure, two movements occur: one is that the verb moved to join *v* and the other is that the subject moves to the specifier position of TP. The motivation or trigger of the movements will be investigated in the following.

Different from (19) in which according to UTAH, each head is able to assign θ -role, the new head T does not assign θ -role and thus it is called functional category to be distinguished from lexical categories like V and N. This distinction is crucial in generative grammar since the functional categories help to explain many phenomena involving movements like the focus of this paper, passivisation.

Now that T bears the tense features (past or present) which are interpretable, it can be

predicted that T has certain relationship with the verbal complex (v and V) which bears the uninterpretable morphological features of tense. As illustrated in (22), T and v P merge together and based on the discussion of feature checking, they must bear certain matching relationship. That is to say, they need to bear the same tense features to enable them matching. Though T and v are not in the positions of sisterhood, there is another feature checking operation called **c-command Agree** allowing T and v to merge by checking. Agree permits ‘an uninterpretable feature uF on a syntactic object Y is checked when Y is in a c-command relation with another syntactic object Z when bears a matching feature F’ (Adger, *ibid*: 134). The uninterpretable tense feature on v acquires its value when it is checked by the tense feature on T. Thus the checking operation between T and v values the tense feature on v and also checks it. This can be illustrated as (23).

(23) T [tense: past]... v [utense:] \rightarrow T[tense: past]... v [~~utense: past~~]

In this instance, the [past] feature on T values the unvalued tense feature on v and the valued tense feature matches with T and then gets deleted. The uninterpretable features are valued by their matching interpretable features and ‘if there is no matching feature with a value, the unvalued feature will remain unvalued’ and thus unchecked (Adger, *ibid*: 136). When there are no auxiliaries in a sentence, the tense features are pronounced on the verb due to the uninterpretable inflectional feature [uInfl:] on v . When v P merges with T, the tense feature on T values the tense features on v . Thus, when the structure is pronounced or spelled out, the verbal complex is pronounced as inflectional form. As mentioned above, case forms are tied to certain positions in a clause: nominal case is often assigned to the surface subject and the accusative case to the object. In this sense, head T also has an uninterpretable case feature [ucase: nom] and this feature is valued on an NP which it c-commands and thus checked. The uninterpretable case features on T regulate the location of nominal phrases and are not related to semantics. These features on T are all associated with the NP movement in English passives and will be applied in the following section. Though the Minimalist Program is a huge theoretical system, the concepts introduced above are enough to help to understand the issues in this paper. So the next section is devoted to formulating a structure of English passives based on the

structure of (22).

2.2 Generating the structure of English passives

In this section the structure of different types of English passives will be discussed within the framework of the Minimalist Program. According to the number of the verbal objects in their active counterparts, they are classified mainly into three types: passives derived from mono-transitive verbs, from verbs taking only prepositional phrases and from the ditransitive verbs.

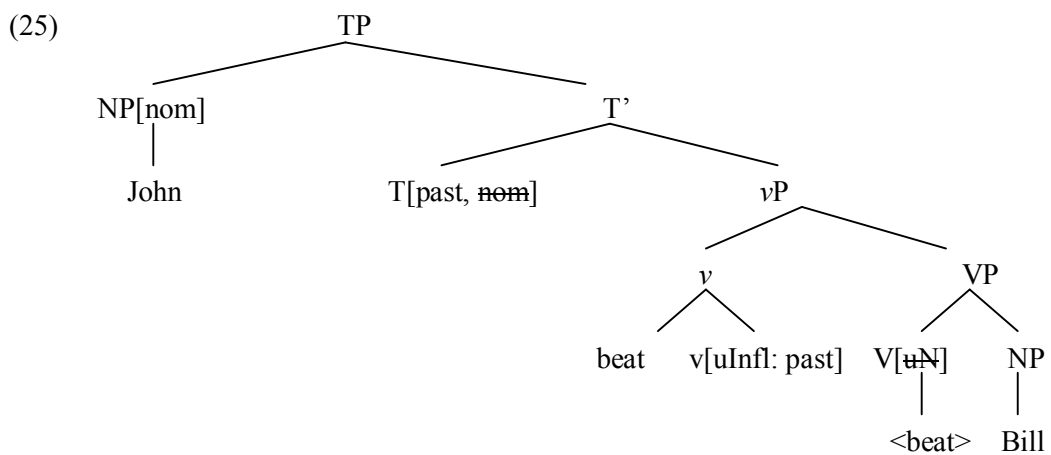
2.2.1 Passive derived from mono-transitive verbs

This section uses the instance of (1) again as a canonical case to illustrate the structure English passives and repeats (1) here as (24)

(24) a. John beat Bill

b. Bill was beaten.

In (24a), *Bill* receives a patient (or theme) θ -role and according to UTAH, it merges as the daughter of VP and has the structure in (25)

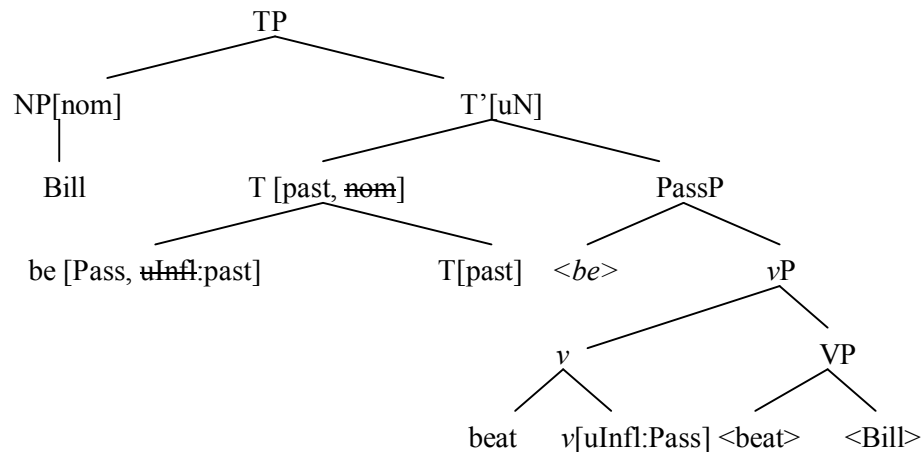


As for (24b), *Bill* has been promoted to the position of surface subject as the specifier of TP.

Since in (24b) the predicate has only one argument, the clause is similar to unaccusative construction and the object does not receive accusative case from the predicate and at the same time, the subject position is empty. In order to satisfy the subject requirement

in English, the object has to check the [nom] case with T and be promoted to the specifier position of TP and therefore becomes the subject of the whole clause. However, this analysis so far is not enough since it does not mention the explanation of the passive auxiliary *be*. Furthermore, as mentioned above, the inflection on the main verb is checked by T but in (24b), the tense inflection is presented by the auxiliary verb *be* and the *beaten* is simply a participle. To solve these problems, this paper adopts Adger's solution (ibid: 189) which adds a new functional head **Passive** in the hierarchy of projection by auxiliary *be*. This head bearing the feature Pass merges with *v*P and *be* behaves like other English auxiliaries bearing the [uInfl] feature. The inflectional feature on *v* is valued by Pass and thus the feature of [uInfl: Perf] is checked. In this sense, (24b) has a structure like (26).

(26)



At last the structure of English passives has been formed. This structure, however, does not present the *by*- phrase which indicates the agent if (24b) is extended into (24c) below.

(24) c. Bill was beaten by John.

There are many discussions about the treatment of *by*-phrases. Katz and Postal (1964) treat them as manner adverbials which are derived from an underlying structure involving a passive marker *by* + *Passive*. Chomsky and Lasnik (1977) also agree that the *by*-phrase 'should be base-generated' (1977:477). This statement is mainly based on the fact that verbs which are able to undergo the process of passivisation are 'restricted to those that take manner adverbials freely' (Hasegawa 1968). Since there still may be passive forms of verbs which do not fit the restriction, this formulation is still not perfect.

Kural (1998:4) proposes an idea, as mentioned in the introduction, which treats the passive morpheme as the predicate and the *by*-phrase is the specifier while VP is its complement. The novel aspect of this idea is that the *by*-phrase and the Vr (root verb) have adopted certain control relationship. Since the main topic in this paper is the object promotion, the treatment of *by*-phrase here appears less significant. In accordance with the structure (26), the *by*-phrase is treated as an adverbial phrase adjoined to TP.

So far, we have already has an ideal structure of English passives formulated within the Minimalist Program. However, the instance of (24) is just a typical type of English passives and there are other peculiar types of passive structures. The rest of the section will continue to investigate other types of English passives.

2.2.2 Preposition object promotion in English passives

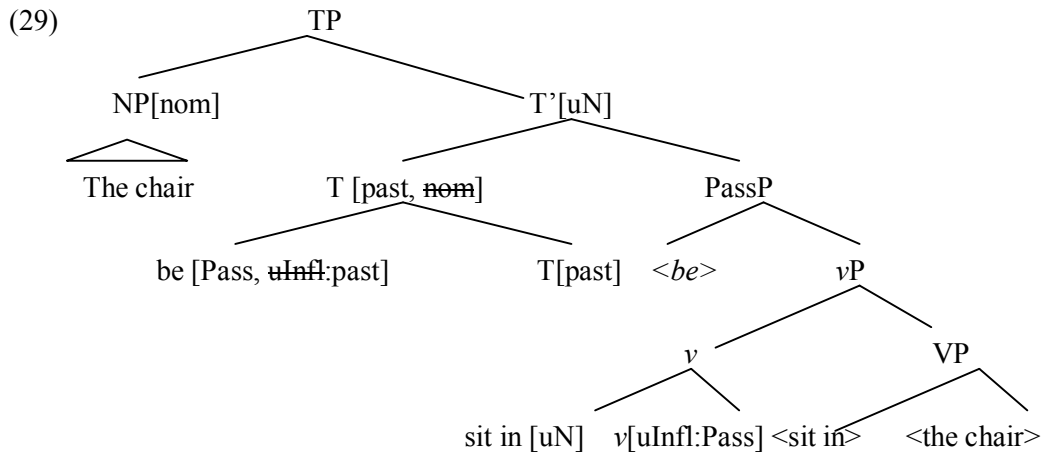
(24) is the case of verb's direct object promotion in English passives. There are some cases, however, that the main verbs do not have direct objects but the adjacent prepositions do. When these clauses are passivised, the objects of the prepositions are promoted to the position of surface subject, like (27).

- (27) a. John sat in the chair.
b. The chair was sat in by John.
c. John sat in the garden.
d. *The garden was sat in by John.

The chair in (27a) and *the garden* in (27c) are both the direct object of the preposition *in*, but only *the chair* can be promoted to generate a well-formed passive clause. Hornstein and Weinberg (1981) propose that this is due to the operation of restructuring and the verb and the preposition in (27a) and (27b) have been restructured to form a unit but this operation is not applied in (27c) or (27d). Thus, in (27c), *the garden* is not allowed to be moved out of the PP. This can be proved by questioning the objects of the preposition, and we have (28).

- (28) a. What did John sit in? The chair.
b. What did John sit in? *The garden.

The answer in (28b) is odd since the PP in (27c) is only used as an adverbial to indicate the location and the PP in (27a) can both indicate the location and join with the preceding verb to form a unit with the NP as its complement. By adopting the concept of restructuring for now, the structure of (27b) is formulated in (29). (The *by* phrase is omitted)

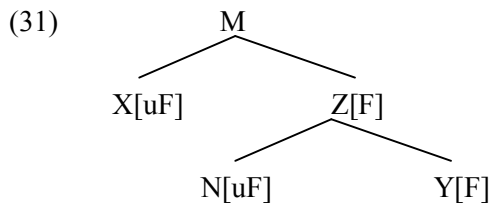


The clauses in (27) have only one PP directly following the main verb. If there is more than one PP following the main verb, it requires more efforts to decide which PP should be restructured. Take the clauses in (30) for example.

- (30) a. John talked to Bill about Sara.
 b. Bill was talked to about Sara.
 c. *Bill was talked about Sara to.
 d. Sara was talked about to Bill.
 e. *Sara was talked to Bill about.

As shown in (30), not all objects from PPs can be promoted when passivized and the selection is also not random. But both the object of *to* and the object of *about* are able to be promoted under certain conditions. It is hard to say which one is restructured with the main verb and the test proposed in (28) fails. However, there is still a certain rule that can be detected from (30): only the object from the PP which is adjacent to the main verb can be promoted in passivisation. Based on the structure of (26), the object is promoted to check the [uN] feature on T as well as the [nom] feature. It is predicted that there must be some constraints to guarantee the correct NP to be promoted to check the features on T and these constraints can also be applied here to rule out impossible

promotions in (30). In this sense, Chomsky (1986) proposes a constraint called Locality of Matching, which means ‘Agree holds between a feature F on X and a matching feature F on Y if and only if there is no intervening Z[F]’ (Adger *ibid*: 178). He further defined the intervening mentioned here as intervention: ‘in a structure [X...Z...Y], Z intervenes between X and Y iff X c-commands Z and Z c-commands Y’. This constraint can be illustrated as following.



In this situation, though Y also has the feature F, it cannot match with X due to the intervention of Z. This is similar to the locality principle which is quoted below:

(32) No rule involves α (i+1), γ (where α c-commands or is parallel to γ) in:

... α (i+1),..., α (i),..., γ , ..., α (i),..., α (i+1),... (i \geq 1) (Koster, 1978: 156).

Based on these, (30c) can be repeated as (33)

(33) *Bill(i) was talked about Sara to e(i) .

α (i+1) α (i) γ

In (33), there is α (i) intervening between α (i+1) and γ , so *Bill* cannot be promoted to the subject position to check the features. Similarly, (30e) is ruled out due to the same reason.

Based on the discussion above, another phenomenon can also be explained. For example:

- (34) a. John ate salad with the fork.
 b.*The fork was eaten salad with.
 c. Salad was eaten with the fork.

In (34 a), the verb has taken a direct object as well as a PP. According to the locality principle, the direct object of the verb intervenes between, and thus, the promotion of the object of the PP is blocked.

2.2.3 English Passives derived from ditransitive verbs

The main verb in (26) takes one object and when it is passivised, the direct object is the direct choice for promotion. But if the main verb has two objects, the promoted candidate is not as clear as that in (26).

(35) a. John gave Bill a letter.

b. John gave a letter to Bill.

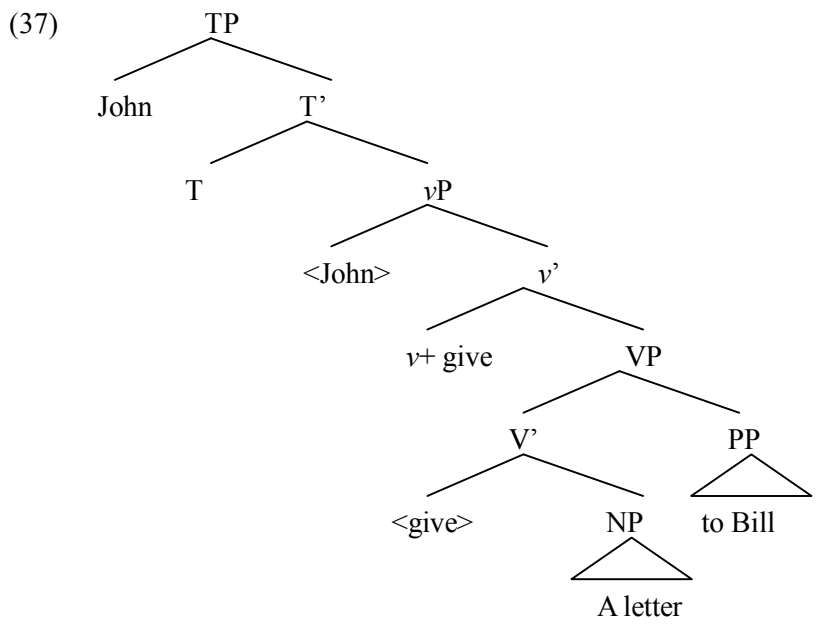
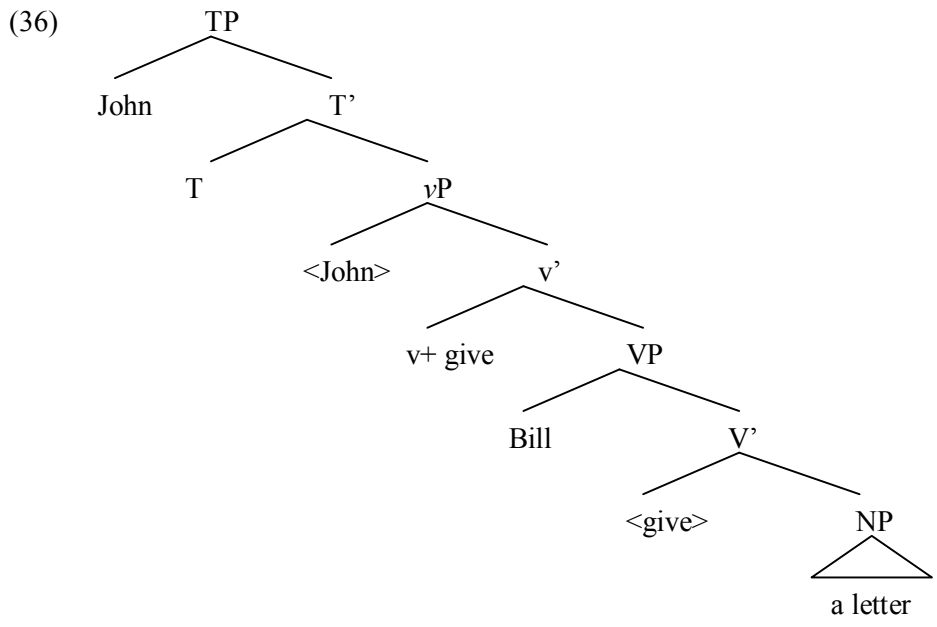
c. Bill was given a letter.

d. * A letter was given Bill. (Though it is acceptable in some dialects, it is still market as ungrammatical following Culicover and Wilkins (1984))

e. * Bill was given a letter to.

f. A letter was given to Bill.

In (35a) there are two objects and in (35b) there are also two NPs in the complement of the verb. When (35a) is passivised, only the indirect object can be promoted to the surface subject position and the direct object cannot; but when (35b) is passivised, the direct object is promoted. It seems the promotion selection does not care whether the NP is direct object, indirect object or the object of preposition. Instead, it selects the NP in certain position. One thing should be noticed that (35b) does not have the same structure as (35a), since in (35b), the verb *give* acts like a mono-transitive verb rather than a ditransitive verb which can take double objects. Their structures are represented as (36) and (37) representatively. (Irrelevant details have been omitted.)



(36) involves dative shift and thus *Bill* is shifted to the daughter position of VP while (37) does not have this shift. Another difference between (36) and (37) lies in the function of *v*. As mentioned in 2.1.3, *v* in (36) represents the causal light verb embedded in the semantics of the ditransitive verb while *v* in (37) is just a functional head. Different structures of (35a) and (35b) determine that they do not have identical process of passivisation.

Based on the discussion in 2.2.2, the derivation of English passives from ditransitive clauses seems much clear. The passivisation of (35b) can be explained similar to (34),

though the functions of PPs in these two sets of instances are not the same: *to* in (35) assigns the thematic role of goal to its object while *with* in (34) introduces the instrument. However, the locality principle can also be applied to (35b). As to (35d), the indirect object *Bill* intervenes and thus the direct object *a letter* can not be promoted. The requirement of NP movement in English passives has been shown but the trigger of the movement has not yet been mentioned. The following section will be devoted to exploring the movement trigger in English passives.

3. The trigger of movement in English passives

3.1 The semantic features of promoted objects in English passives

Before the main task of this section, it is necessary to summarize the common semantic features of the promoted objects in English passives. All grammatical passive instances are repeated as below.

- (38) a. Bill was beaten. (24a)
- b. The chair was sat in by John. (27b)
- c. Bill was talked to about Sara. (30b)
- d. Sara was talked about to Bill. (30d)
- e. Salad was eaten with the fork. (34c)
- f. Bill was given a letter. (35c)
- g. A letter was given to Bill. (35f)

The subject in (38a) is derived from a patient semantically. Since the patient is often the participant which is affected in the event, the surface subject in (38a) is also affected. *The chair* in (38b) is also affected by the action of sitting. The unexpressed agent has contact with the chair which leads to the affectedness on the chair. On the contrary, in (27d), which is ungrammatical, *the garden* is not affected by the agent, and it simply expresses a location. It cannot be expected that the agent has any contact affectedness on the garden as a whole.

In (38c) and (38d) the affectedness meaning in the promoted objects is not as clear as (38a) and (38b). In (38c) and (38d) *Bill* and *Sara* are both affected by the talking event to some extent compared with the other participant, the one who talked. *Bill* is the addressee and he is affected in mind by receiving the information but it is also possible that this new information about Sara does not affect him too much if he already knows it. *Sara* is the topic of the talking event and the affectedness on her is not as obvious as that on *Bill* since she may have no idea that someone talked about her. However, she may still be affected in an indirect way. For example, her secret may be revealed to others and she may still suffer from that. So far, we can comprehend the affectedness of these participants in this way.

It is not obvious which participant is more affected. In (38c) and (38d), the PP indicating the addressee and the PP indicating the topic can exchange their syntactic position in a clause, and as discussed above, the selection of NP promotion is also influenced. This indicates that the phrase order in a clause is associated with something. Koster (1978:152) proposes a **Prominent Hierarchy** which argues that the subjects (SU) in a clause is more prominent than the indirect objects (IO) and the indirect objects are more prominent than the direct objects (DO). The object of preposition (PO) has the lowest prominent. Thus the hierarchy can be formulated in (39).

(39) SU > IO > DO > PO

Similarly, Shibatani (ibid) proposes a **Focus Hierarchy** which following the same order in (39) with the focus on these constituents descending. As illustrated in (35a), this hierarchy coincides with the phrase order in the clause. DeLancey (1981) posits a notion of ‘Attention Flow’ (AF) which means ‘order in which the speaker wishes the hearer to attend to the participants involved in the event’ (Marin-Arrese, 1997:6). The linguistic AF, according to Arrese (ibid), is ‘marked through the linear order of nominal elements in the sentence.’ That is to say, the speaker arranges the order of the nominal elements in the clauses within grammatical rules according to his or her will of attracting hearers’ attention. DeLancey (ibid: 650) also interprets the agent ‘as the first mover in a transitive event, i.e. the starting point of natural AF’. Referring to the Hierarchy in (39), if the

speaker wants the hearer to focus on something, the speaker arranges it earlier in AF. Due to these assumptions, the question proposed earlier can be solved: the phrase order in a clause is associated with the focus of the speakers. It can be expected that the order differences in (30a) and (30b) reflects the speaker's focus. Moreover, based on the discussion above, in (30a) and (30b) both NPs are affected, so intuitively the focus tends to be placed on the one which is more affected. Since in English passives, the agent is expressed in an oblique way and Shibatani (ibid) also proves that in passives, the agent has been defocused, the agent is not involved in the affectedness assessment based on phrase order. Thus, an assumption can be raised that in passivisation of accusative clauses, the order of affected NPs in the active counterparts reflects the degree of affectedness. In (30a), the speaker focuses on the addressee *Bill* and *Bill* tends to be more affected than the topic of the event *Sara*. On the other hand, in (30b), the speaker focuses more on *Sara* and implies that Sara suffers more in this event. The passive counterparts in (38c) and (38d) reflect that the most affected NPs are promoted to the subject position.

Similar to (38c) and (38d), (38f) and (38g) also involve more than one affected participant and either of them are able to be promoted in certain condition (different orders of NPs). In the giving event, *Bill* is the recipient and is affected from the perspective of possessing something which he does not have before; *a letter* is the thing that is transferred and is affected from the perspective of changing its owner. By referring to the arguments above, the order of NPs in clauses reflects the focus hierarchy and further indicates that affectedness degree in these clauses so in (38f) and (38g) the promoted NPs are the more affected ones.

As to (38e), the affectedness is clearer by comparing it with (40).

(40) a. John ate with the fork.

b. The fork was eaten with by John.

In (40), the verb does not have a direct object and when it is passivised, the operation is similar to that in (27a). In (38e), it is not possible to promote the object of preposition in

passivisation and the direct object of the verb is the first choice. From the semantic perspective, in (38e), both *the fork* and *salad* are affected: the fork directly participates in the eating event as an instrument and has contact with the covert agent; salad as food is definitely affected by being chewed, swallowed and finally the status of salad has changed. According to the description, it is clear that *salad* is more affected than *the fork* so in passivisation, the more affected participant, *salad*, is promoted to the subject position. This also supports the argument proposed above that the ordering of the NPs in clauses reflects the affectedness degree. Based on the fact that *salad* in (34a) is more affected than *the fork*, the following instance is ruled out, which arranges *the fork* in front of *the salad*.

(41) *John ate with the fork salad.

So far, we have examined the affectedness of NPs in the subject position in English passives purely based on the intuition and it is suggested that the subject in English passives are affected in the event described in the clause and when there are more than one affected participant in the event, the most affected NP is promoted. However, as mentioned above, besides the active clauses in which the agent occupies the subject position, the clauses which have the experiencer as the subject are also able to be passivised as in (42).

(42) a. John saw Bill.

b. Bill was seen by John.

In (42b), *Bill* which is promoted to the subject position but he is not physically affected by the active of seeing. Similarly, in the examples (38c) and (38f), the participants *Sara* and *the letter* are also not affected obviously. Thus, it is necessary to offer a definition of affectedness. Before the discussion of the notion, it is better to investigate how Chinese solve the problem like this.

3.2 Affectedness feature on the subject in Chinese *bei*-construction

3.2.1 Chinese *bei*-construction

In Chinese, unlike English, there is no distinction of voice in verbs and Chao (1968: 702) points that ‘the direction of a verb may be outward from the subject as actor or inward towards the subject as goal’. *Bei*-construction is used when the direction inward needs to be explicit and marked with *bei*. The Chinese *bei*-construction is like (43) expressing a passive meaning and it shares many features with English passives.

- (43) a. NP1 V NP2
 Zhangsan da le Lisi.
 Zhangsan beat ASP Lisi.
 Zhangsan beat Lisi.
- b. NP2 [bei NP1] V
 Lisi bei (zhangsan) da le.
 Lisi BEI Zhangsan beat ASP
 Lisi was beaten by zhangsan.

Similar to the discussion above, it is clear that the object in active clause is moved to the surface subject position in Chinese *bei*-construction but different from that in English the word *bei* in front of the logical subject cannot be omitted as the preposition *by* in English passives. The logical subject in *bei*-construction is able to be omitted. In other words, the logical subject in *bei*-construction is optional as in English passives while *bei* is obligatory. In addition, Chao (1968) argues that *bei* is also not a verb because it cannot be questioned as in (44A) and have (44B) as its reply.

- (44) A: *Ni bei le ma?
 You BEI ASP PARTICAL(question)
- B: Bei le.
 BEI ASP

Similar to English passives, the promoted object in (43) also has the patient feature or related with the patient and the agent can never be followed by *bei* (Cann and Wu 2010).

- (45) a. *Zhangsan bei da le Lisi.
 Zhangsan BEI beat ASP Lisi.
 Intended meaning: Zhangsan beat Lisi.
- b. Lisi de tui bei Zhangsan da duan le.

Lisi POSS leg BEI Zhangsan beat broken ASP.

Lisi's leg was broken by Zhangsan.

c. Lisi bei Zhangsan da duan le tui.

Lisi BEI Zhangsan beat broken ASP leg.

Lisi's leg was broken by Zhangsan.

In (45a) the pre- *bei* NP is the agent who carries out the action of beating in the clause and since the pre-*bei* NP cannot be the agent, (45a) is ungrammatical. In (45b), the patient which suffers the beating directly is *Lisi de tui* (Lisi's leg) and it is promoted in the *bei*-construction. This is similar to that in English passives. In (45c), the patient, *tui* (leg), is retained in the object position and *Lisi*, the owner of the leg, is promoted to the pre-*bei* position. Though Lisi is not the direct patient, he is related to the direct patient and he is able to be promoted.

However, this is not always true in Chinese *bei*-construction, since *bei*-construction also allows postpositional phrase to be its subject besides NPs derived from the patient.

(46) Niunai li bei Zhangsan fang le tang.

Milk in BEI Zhangsan put ASP sugar.

Sugar was added in the milk by Zhangsan.

In this instance, it is the postpositional phrase which indicates location that occupies the subject position and the object *tang* is still retained following the verb. In (38b) the NP *the chair* which indicates the location is also in the position of subject in passive construction, but it is impossible to promote the whole PP to the subject position as in (46). Besides, in Chinese, the promotion of expressions which are not direct objects is not rare. Besides the promotion of locative adjunct in (46), other adjuncts are also possible to be promoted as in (47).

(47) a. Zhangsan yong zhexie qian mai le che.

Zhangsan with the money buy ASP car.

Zhangsan bought a car with the money.

b. Zhexie qian bei Zhangsan mai che le.

The money BEI Zhangsan buy car ASP.

The money was used to buy a car by Zhangsan.

In (47), the promoted NP is the money which is used to buy the car and real object *che* is intact. What is more, adjuncts indicate material and instruments are also able to be promoted, which is not often in English passives. As in (6a), which is repeated here as (48), there is no way to promote the amount of money and at the same time keep the verb *buy* still as the main verb.

(48) a. John bought a car for \$ 1,000.

b. *\$ 1,000 was bought a car for.

These phenomena that various categories of expressions are able to be promoted in the subject position in Chinese *bei*-construction are due to the special feature of subjects in Chinese clauses. Chao (1968: 69) makes a suggestion that ‘the grammatical meaning of subject and predicate in a Chinese sentence is topic and comment, rather than actor and action’. That is to say, in Chinese, the preverbal NP has the features of topics. Chao’s suggestion, however, is too overgeneralized and the preverbal NPs often behave like subjects as well. Thus, linguists who are working on Chinese linguistics tend to support the view that ‘both topic and subject exist in Chinese as separate grammatical notions and the two can exist in the same sentence (Li and Thompson 1976, 1981, Tsao 1979, 1990, Huang 1982, Li 1990, Jiang 1991, Xue 1991, Ning 1993, Qu 1994, Shyu 1995)’ (Shi 2000: 383). In other words, the preverbal NPs in Chinese can function as either subjects or topics and sometimes they can be both. This section adopts the view that the preverbal NPs have both features of subject and topics, since Chinese *bei*-construction and topic construction have some features in common, for example, they both have an object gap and they do not change the truth value of the original clause which does not have a promoted object as illustrated in (49). (43b) here is repeated as (49b).

(49) a. Lisi, Zhangsan da le.

Lisi, Zhangsan beat ASP.

Lisi, Zhangsan has beaten.

b. Lisi bei (zhangsan) da le.

Lisi BEI Zhangsan beat ASP

Lisi was beaten by zhangsan.

In this sense, the pre-*bei* NPs have mixed properties of both topics and subjects and thus Chinese *bei*- construction is more complex than English passives. Furthermore, as noticed above, *bei* is obligatory and cannot be omitted as the preposition *by* in English passives. In addition, as Chao (ibid) argues *bei* is also not a verb. All these features of Chinese *bei*-construction imply that *bei* is more closely associated with the pre-*bei* NPs, and it is considered to be a ‘device to identify the preceding phrase as the topic of the sentence’ (Cann and Wu ibid: 13). Thus, it can be predicated that *bei* has a special function and the NP preceding *bei* has distinct features.

3.2.2 Pre-*bei* NPs as locus of affect

In the canonical instance (43b), the pre-*bei* NP *Lisi* is derived from the patient of the main verb and similar to English passives, the promoted NP has the semantics of affectedness. That is to say that the promoted NP *Lisi* is affected by the beating event and he suffers from it. Similar to (42), in *bei*-construction, perception verbs are also able to be passivised.

(50) a. Zhangsan kanjian le Lisi.

Zhangsan see ASP Lisi.

Zhangsan saw Lisi.

b. Lisi bei Zhangsang kanjian le.

Lisi BEI Zhangsan see ASP.

Lisi was seen by Zhangsan.

In (50), *Zhangsan* is the experiencer in both instances and the event in (50) is the same but different from that in (42), (50a) and (50b) have different interpretation. Chao (1968) mentions that Halliday considers that Chinese *bei*-construction conveys the meaning ‘pejorative’. (50a) simply describes an event of seeing and *Zhangsan* is the experiencer. *Lisi* is only an object in the perception of *Zhangsan*. In (50b), however, the promoted NP, *Lisi*, is interpreted as a participant in the event who is directly affected in the seeing event and this affectedness is adverse. *Lisi* may be doing something and he does not

want others to see. Thus, we can assume that the promoted NPs in Chinese *bei*-construction are affected adversely in the event described in the clause.

The examples (46) and (47b) can also support this view. Here they are repeated as (51) and (62) respectively.

(51) Niunai li bei Zhangsan fang le tang.

Milk in BEI Zhangsan put ASP sugar.

Sugar was added in the milk by Zhangsan.

(52) Zhaxie qian bei Zhangsan mai che le.

The money BEI Zhangsan buy car ASP.

The money was used to buy a car by Zhangsan.

(51) promotes the expression of location in *bei*-construction and (52) has a PP's object fronted. In both instances, the promoted expressions are considered to be affected in an unfavorable way in the events depicted by the main verb. The milk is affected by Zhangsan's adding sugar and the money in (52) is affected, though not physically, by being used to buy a car, which may be not the premier function of the money. Similarly, in (53), the pre-*bei* expression is not physically affected but the entity denoted in the expression is still strongly affected as it does not end up in a desirable situation.

(53) Huayuan li bei linju zhong le cai.

Garden in BEI neighbours grow ASP vegetables.

Vegetables were raised in the garden by the neighbour.

(53) implies that it is improper to raise vegetables in the garden. Though the garden is not the direct object of the verb, this implied meaning is still able to be detected in *bei*-construction. Different from (53), the English example (27d) above repeated here as (54), also has the object from locative PP promoted but it is ungrammatical.

(54) The garden was sat by John.

The promoted NP in (54) is not affected by the sitting event or there is not affectedness meaning implied from that clause.

Furthermore, as Cann and Wu (*ibid*) suggest, *bei*-construction with retained object can

also be taken as evidence to this.

(55) Zhangsan bei Lisi ma le niang.

Zhangsan BEI Lisi curse ASP mother.

Zhangsan's mother was cursed by Lisi. (Cann and Wu *ibid*: example 34a)

In (55), *niang* (mother) is the direct object of curse but it does not actually refer to any specific mother but to 'a type of female parents' and it can be interpreted as 'Zhangsan was mother-cursed by Lisi' (*ibid*). In this sense, it is not Zhangsan's mother but Zhangsan who is affected in this event. (45c), repeated as (56) here, also has a retained object and is similar to (55).

(56) Lisi bei Zhangsan da duan le tui.

Lisi BEI Zhangsan beat broken ASP leg.

Lisi's leg was broken by Zhangsan.

In this clause, the leg is the direct object of the main verb and it is directly affected by the beating event as it is broken. This point is different from that in (55) since as noted above, the direct object is not necessarily affected. Lv (1980) proposes that when there is a retained object in *bei*-construction, the main function of this object is to denote the effect that created by the action. In this sense, though the leg is directly affected, it is only used to describe the situation of Lisi which is caused by the action of Zhangsan. The leg belongs to Lisi and he suffers from the leg-breaking. Thus, it can be inferred that Lisi is more affected by the action adversely.

Based on the discussion above, we can see that Chinese *bei*-construction shares the same feature with English passives from the perspective of subject affectedness but *bei*-construction adds an additional adverse meaning to the affectedness. Cann and Wu (*ibid*) argue that the notion of affectedness is not conveyed purely by topicalization but it is marked by *bei*. They propose that 'the notion of affectedness is encoded as a semantic effect of *bei*' is from *bei*'s original verbal meaning 'as the ability to assign a participant role to its preceding (originally subject) constituent' (*ibid*: 16). This does not contradict with the previous point that *bei* is not a verb since *bei* is only like a marker of affectedness associated with the preceding element. Cann and Wu (*ibid*) further suggest

that *bei* marks the preceding elements as the locus of affect of the event.

In English passives, the promoted constituent is the patient or theme NP (as in (42)) while in Chinese *bei*-construction, since the promoted expressions are not restricted to NPs but various categories, it is not proper to call these fronted expressions patients following the way in English passives. Chang (2003) applies the idea of Croft (1991) of event role to Chinese clauses event structure and role of participants. Chang (ibid: 330) proposes three roles in event structure as following.

- (57) ‘a. Initiator: an entity that is involved in the initiation or bringing about of an object.
b. Target of activity: an entity that undergoes an action.
c. Locus of affect: an entity that is involved in the endpoint or resulting state.’

Tenny (1987:77) defines the notion of endpoint as ‘a distinct temporal marker for the event’ provided by ‘a change of state in one of the verb’s arguments’. Thus, the pre-*bei* expressions are not necessarily to be the undergoer in the event but they are involved in the endpoint. In (56), the undergoer (or the target of activity) of the leg-breaking is Lisi’s leg rather than Lisi but Lisi is clearly involved in the endpoint of the event. What is more, in (51), the milk in the fronted locative expression indicates the resulting state and the sugar adding is the target of this activity. Similarly, in (52), the promoted NP indicating money is also interpreted as the locus of affect rather than the target of the car buying event. However, this does not mean that the target of activity and the locus of affect have to be realized in different expressions. In the canonical *bei*-construction (43b), *Lisi* has the role of both undergoer in the beating event and the locus of affect. This also helps to understand the passivisation of the example (50) in which the object of *see* is promoted. The pre-*bei* NP *Lisi* is involved in the resulting state of the seeing event in the sense that Zhangsan’s focus is located on him.

3.3 Delimitedness and affectedness in English passives

The discussion about the pre-*bei* expressions as locus of affect in Chinese *bei*-construction will help to understand the notion of affectedness in English. In English

passives, from the perspective of event roles, the promoted arguments are both target of activity and locus of affect. (38) and (42b) is repeated as (58).

- (58) a. Bill was beaten.
b. The chair was sat in by John.
c. Bill was talked to about Sara.
d. Sara was talked about to Bill.
e. Salad was eaten with the fork.
f. Bill was given a letter.
g. A letter was given to Bill.
h. Bill was seen by John.

In the canonical example (58a), *Bill* is the participant who is undergoing the activity of beating and at the same time, since he is also involved in the endpoint of the event, he is also a locus of affect. As to (58b), the chair also has both roles. In (58c) and (58d) *Bill* as the addressee of the talking, can be considered as the target of activity and since he is also related to the resulting state, he is the locus of affect as well. Similarly, subjects in (58e), (58f) and (58g) all have two event roles. As to (58d) and (58b) whose subject is not affected obviously or not physically affected, they are associated with the endpoint as well. To further explain how these participants are involved in the endpoint, a notion of **delimitedness** is applied. Tenny (1987:17) argues that delimitedness is a kind of affectedness. She defines delimitedness as follows:

‘A linguistically described event is delimited if the sentence describes an event as something that must transpire over a fixed length of time. It does not matter whether that length of time is indicated in the sentence. The sentence or event is delimited if it is understood to mean that there is some point in time after which the event is no longer continuing.’

In this sense, the promoted NPs in English passives can be further argued that they have the features of delimitedness. Especially, the in (58d), the talking event is limited to the topic about Sara and in (58b), the seeing action ends when the focus of John is placed on Bill. In other words, the subjects in both (58d) and (58b) are involved in the endpoint or resultative states – they are locus of affect. They are at the same time also the

participants undergoing the activities described in the clauses. Altogether with the discussion above, all subjects of instances in (58) and (58b) are both locus of affect and target of activity and they all have the function of delimiting the events. Tenny (1987) believes that delimitedness subsumes affectedness as they share ‘the relevant classes of predicates’ such as ‘achievement verbs, verbs expressing a change of state, verbs of motion as well as verbs of creation and consumption’ (Egerland, 1998: 21). In this sense, the domain of affectedness is enlarged since delimitedness ‘covers a broader range of predicates’ (ibid) such as perception verbs like *see*, and thus the promoted NPs in English passives are all affected in this sense.

To sum up, the promoted NPs in English passives are all affected in the event described in the clause and when there is more than one NP affected, the one which is affected most is promoted.

3.4 The trigger of NP movement in English passives

In 3.1, the common semantic feature of the promoted object in passivisation has been revealed and there is also a selection criterion that the most affected object is promoted. A question can be raised that whether this selection criterion is associated with the trigger of the NP movement in English passives. The main task of this section is to find the answer to it.

In 2.1.4, (22) shows the TP projection structure of clauses and it involves two movement, the V moving to the daughter node of ν P to join ν and the subject moving from the specifier position of ν P to the specifier of TP. There are kinds of properties which triggers the movement to take place. Adger (ibid) offers an explanation to the movement in TP projection.

According to Adger (ibid: 145) besides the property of interpretability, features have another property called strength and it is this strength that triggers movement to take place in the TP projection. In this paper, the strength is presented by an asterisk on relevant features, following the treatment of Adger (ibid). The process of movement can

be displayed as followed.

(59) $X[uF^*] \dots Y[F] \rightarrow X [uF^*] Y[F] \dots \langle Y [F] \rangle$

In this formulation, X and Y are heads bearing matching feature F. The feature F on X is uninterpretable so it needs checking. The feature on Y checks the [uF] on X and Agree between X and Y occurs. As indicated by the asterisk, the uninterpretable feature on X is strong and thus the checking ‘has to take place locally, rather than at a distance’ (Adger, *ibid*: 144). Adger (*ibid*: 145) summarizes that ‘a strong feature must be local to the feature it checks /is checked by. So this checking requirement triggers the movement of Y to the sisterhood position of X, leaving a trace behind. The concept of strength is used to explain the NP movement in (22). Adger (*ibid*) posits that T bears a strong uN* feature called EPP feature and altogether with the tense feature and uninterpretable case feature, T bearing three features is illustrated as: T [tense, nom, uN*]. With these features when T merges, it agrees with *v* for tense and with the object NP for case. When T is projected to T’, due to the checking requirement of the strong uninterpretable feature, [uN*] has to be checked locally under sisterhood, the NP has to be moved to the position of specifier of TP. Similarly, the NP promotion in English passives can be triggered by the same mechanism. The [uN*] feature is strong on T and the NP in the object position is moved to the local position of T to meet the EPP feature.

There are still some conceptual questions about the concept of strength and one of them is whether it is related to one of the interfaces. One proposal suggests that strength relates to morphology similar to that ‘interpretability relates to semantics’ (Adger, *ibid*: 145). But this question is still not settled and there is no evidence to suggest that strength has nothing to do with the semantics. It is clear that not all NPs are able to be promoted in passivisation as discussed in previous section and the selection of promoting is associated with the affectedness of the objects. Only the most affected object is able to be promoted. Thus, the strength on T is assumed to be associated with affectedness in passivisation. When there is more than one NP candidates for movement, the movement of the most affected NP is easier to be triggered by the strength feature on T.

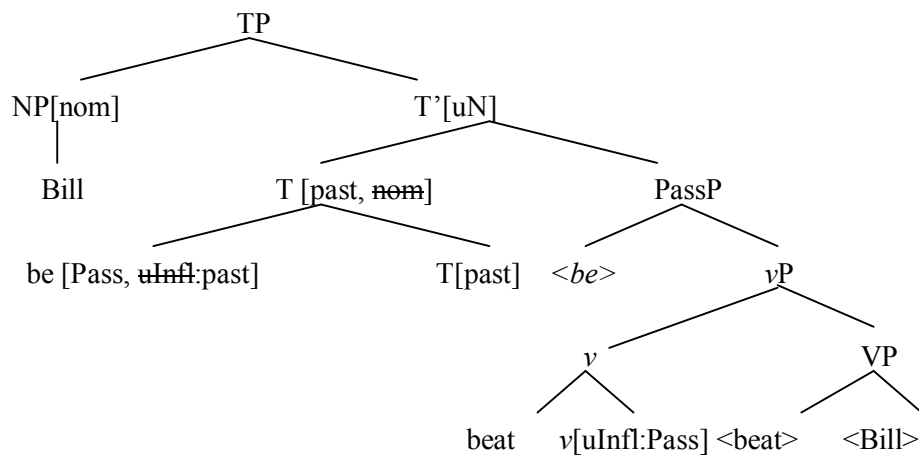
To sum up, the trigger of the NP movement in English passives is the strength property on the feature of T which requires the NP which bears the matching feature to check locally. The strength is more likely to attract the NP which is affected most to move to the specifier of TP.

4. Conclusion

This paper adopts the Minimalist Program as the framework and formulates the structure of canonical English passive structure by adding a functional head PASS as the other daughter node of T' besides T. Thus the structure of (24b), repeated as (60) is repeated here.

(60) Bill was beaten by John.

(61)



This structure is driven by the feature checking requirement of Merge and the NP in the object position is required to be moved to the position of specifier of TP to match the EPP feature on T.

What is more, there are other types of English passives which are derived from the clauses of intransitive verbs with PP complements and of ditransitive verbs. When the main verb does not have a direct object and instead, it has a PP complement, the verb optionally restructures with its adjacent preposition and the object of the preposition is promoted when passivisation. If there are two PP complements but no direct object in the active clause as in (30a), repeated here as (62).

(62) John talked to Bill about Sara.

In this case, the verb restructures with the preposition which is in the closest position to it according to the locality principles and the other PP is an adjunct. However, if there is direct object following the main verb in front of the PP, there is no doubt that the direct object should be promoted in passivisation. In the cases of passivising clauses of ditransitive verbs as in (35a) repeated here as (63), there are two objects able to be promoted.

(63) John gave Bill a letter.

The locality principles also play an important role in formulating the correct result of passivisation.

Based on the structure above, each instance has only one NP can be promoted to the subject position in passivisation. The promoted NPs share the same semantic feature that they are all affected in the events depicted in the clauses. Though in some cases, the affectedness of the subjects in the passive clauses is not obvious or not direct, they still have the function of indicating the endpoint of the event and thus can be assigned the event role of locus of affect like in Chinese *bei-* construction. This feature of marking the endpoint or resultitive state of the subjects in English passives can be defined as delimitedness. Tenny (1987) adds delimitedness to the domain of affectedness and then a conclusion can be drawn that the promoted NPs in English passives have the semantic feature of affectedness as long as they set a limitation to the event. Furthermore, as illustrated in Adger (ibid), the trigger of movement in English clauses is the property of strength of the features on categorial heads in the tree projection. It is assumed that the strength of the features on T is associated with the affectedness on NPs and only the most affected NPs in the event can be promoted.

Reference:

- Adger, D. 2002. *Core Syntax: A Minimalist Approach*. London: Oxford University Press.
- Anderson, J.,M. 1984. Objecthood. In *Objects: Towards a Theory of Grammatical Relations*, Plank, F. (ed.), pp. 29-54. London: Academy Press.
- Baker, M., Kyle, J., and Ian R. 1989. Passive Arguments Raised. In *Linguistic Inquiry*. 20(2), pp. 219-251.
- Belletti, A., and Luigi R. 1988. Notes on Psych-Verbs, θ -Theory, and Binding. In *Principles and Parameters in Comparative Grammar*, Freidin, R (ed.), pp. 132-162. London: MIT Press.
- Burton-R, N. 1997. *Analysis Sentences: an Introduction to English Syntax*. 2nd Edition. Essex: Longman.
- Cann, R., and Wu, Y. 2010. The *Bei* Construction in Chinese: a Dynamic Approach. In *Papers in Dynamic Syntax*, Gregoromichelaki, E. and Ruth K. (eds), pp. 1-46.
- Chao, Y.-R. 1968. *A Grammar of Spoken Chinese*. Berkeley: University of California Press.
- Chang, J-H. 2003. Even Structure and Argument Linking in Chinese. In *Language and Linguistics* 4, pp. 317-351.
- Chomsky, N., & Howard, L. 1977. Filters and Control. In *Linguistic Inquiry*, Vol. 8, No. 3, pp. 425-504.
- Chomsky, N. 1986. *Knowledge of Language: Its Nature, Origin, and Use*. New York: Praeger.
- Chomsky, N. 1993. *A Minimalist Program for Linguistic Theory*. In Hale, K., and

- Samuel, J., K., (eds.), 'The View from Building 20'. Cambridge: MIT.
- Culicover, P., W. and Wilkins, W., K. 1984. *Locality in Linguistic Theory*. Orlando: Academic Press.
- Davison, A. 1980. Peculiar Passive. In *Language*, 56(1), pp. 42-66.
- DeLancey, S. 1981. An Interpretation of Split Ergativity and Related Patterns. In *Language*, 57, pp. 627-657.
- Egerland, V. 1998. The Affectedness Constraint and AspP. In *Studia Linguistica*, 52(1), pp. 19-47.
- Epstein, S., D., Höskuldur, T., and C.Jan-Wouter, Z. 1996. Introduction. In *Minimal Ideas: Syntactic Studies in the Minimalist Framework*, Abraham W, Samuel, D. E., Höskuldur T. and C. Jan-Wouter Z. Amsterdam: John Benjamins.
- Givon, T. 1979. *On Understanding Grammar*. New York: Academic Press.
- Grieve, R. and Wales, R. J. 1973. Passive and Topicalization. In 'British Journal of Psychology', 64: 173-182.
- Hasegawa, K. 1968. The Passive Construction in English. In *Language*, 44(2), Part 1, pp. 230-243.
- Hornstein, N. and Amy, W. 1981. On Preposition Stranding. In *Linguistic Inquiry*, 11, pp. 55-91.
- Huang, C., J. 1999. Chinese Passives in Comparative Perspective. In 'Tsing Hua Journal of Chinese Studies' 29, pp. 423-509.
- Jaeggli, O., A. 1986. Passive. In 'Linguistic Inquiry' 17(4), pp. 587-622.
- Katz, J., J. and Paul, M. P. 1964. *An Integrated Theory of Linguistic Descriptions*.

Cambridge: MIT Press

Koster, J. 1978. *Locality Principles in Syntax*. Amsterdam: Foris Publications.

Kural, M. 1998. *Passive as a Control Predicate*. From UC Irvine:
http://aris.ss.uci.edu/ling/people/lecturers/kural/papers/passive_as_a_control_predicate.pdf Access on: 25/06/2011.

La Polla, Randy J. 1988. Topicalization and the question of the lexical passive in Chinese. In, 'Proceedings of the Third Annual Conference on Chinese Linguistics' Chan, M. and Ernst, T. (eds.). Indiana University Linguistics Club, Bloomington, pages 170–188.

Langacker, R., W. and Pamela, M. 1975. Passives and Their Meaning. In *Language*, 51(4), pp. 789-830.

Lasnik, H. 2002. The Minimalist Program in Syntax. In *TRENDS in Cognitive Sciences*, 6(10) pp. 432-437.

Li, Y., A. 1990. *Order and Constituency in Mandarin Chinese*. Netherland: Kluwer Academic Publisher.

Lu, S. X. 1980. *Xiandai Hanyu Babai Ci* (Eight Hundred Words in Contemporary Chinese). Beijing: Commercial Press.

Marantz, A. 1981. *On the Nature of Grammatical Relations*. Doctoral dissertation, MIT.

Marin-Arrese, J. 1997. Cognitive and Discourse-pragmatic Factors in Passivisation. In *ATLANTIS XIX*(1) pp. 203-218.

Munro, P. 1979. Review: Subject and Topic. In *Language*, 55(2), pp. 372-380.

Okutsu, K. 1983. Why Passive? A Case Study from the Point of View of Empathy. In

Kokugogaku, 132, pp.65-80.

Santorini, B. & Anthony, K. 2000. *The Syntax of Nature Language: An Online Introduction*. <http://www.ling.upenn.edu/~beatrice/syntax-textbook/>. Accessed on 15th May, 2011.

Shibatani, M. 1985. Passive and Related Constructions: a Prototype Analysis. In *Language*, 61(4), pp. 821-848.

Shi, D.-X. 2000. Topic and Topic-Comment Constructions in Mandarin Chinese. In *Language*, 76 (2), pp.383-408.

Tenny, C. 1987. *Grammaticalizing Aspect and Affectedness*. Ph.D. Dissertation, MIT.

Ting, J. 1998. Deriving the Bei- Construction in Mandarin Chinese. In '*Journal of East Asian Linguistics*' 7(4), pp.319-354.