

## Abstract

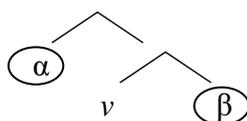
In the Government and Binding (GB) framework (Chomsky 1981, 1986), argument structure is defined as pieces of “static” information lexically encoded in each verb. The number of arguments is specified for each verb, as traditionally formulated in formal logic as “one-place predicate,” “two-place predicate,” etc. Thematic roles to assign to the arguments of a verb are designated in the theta ( $\theta$ )-grid.

Along with the paradigm shift from the GB framework to the Minimalist Program (Chomsky 1995), the concept of argument structure has changed drastically. Argument structure is not “static” information anymore, but it is phrase structure, dynamically derived in syntax (Hale and Keyser 1993). If the process of deriving argument structure is the process of deriving phrase structure in syntax, two issues are brought about:

- (1) a. How is argument/phrase structure derived?
- b. How is illegitimate argument/phrase structure excluded?

We will argue, following Pylkkänen (2002), that functional verbs (i.e. little verbs), including Applicative (Appl), play a crucial role not only in deriving thematic interpretation, but also in designating legitimate argument/phrase structure. This is possible because a  $\theta$ -role-assigning head also mediates the relationship between  $\alpha$  and  $\beta$ , and restricts the relationship, as illustrated in (2) below:

(2)



In (2),  $v$  is a  $\theta$ -role-assigning head; a kind of little verb. The head mediates the relationship between  $\alpha$  and  $\beta$ . That is, the head introduces an argument  $\alpha$  to assign a  $\theta$ -role, and at the same time, selects  $\beta$  to build up phrase structure. Through these operations, the  $\theta$ -role-assigning head completes the legitimate phrase structure,  $vP$ . Developing this idea, we will propose the “generalized little-verb hypothesis”:

(3) The generalized little-verb hypothesis

Properties of little verbs restrict legitimate derivation in a language by interacting with each other, with a lower head V, or with a higher head T.

We assume that little verbs include  $v^*$ ,  $v$ , Cause, and Appl. In order to show how the hypothesis in (3) empirically works, the head-head relationship should be taken into focus and examined. We will approach this aim by investigating three cases in Japanese. The Japanese language is advantageous for observing the head-head relationship in question, for Japanese is a head-final language and the heads are often morphologically marked to show their functions.

First, the structure which we will call the “Possessive Relationship Construction” (PRC) is investigated, where a close possessive relationship between the subject and the object is established. We will show that thematic roles ( $\theta$ -roles) of the arguments are derived by little verbs in correlation with a possessive relationship, which is also represented in syntax. In other words, interaction between little verbs and other syntactic properties leads to a certain thematic interpretation.

Second, we will examine how a Benefactive argument is introduced into phrase structure. As in many other languages, Japanese exploits the ‘give’ verb, realized as *(-te)-age-ru/yar-u*, in a Benefactive/Malefactive construction, which we will call the “Give Benefactive/Malefactive construction” (GBC). We will argue that the head realized by *(-te)-age-ru/yar-u* is a little verb, Appl. The properties of the two heads, “functional” Appl and “lexical” V, are closely connected: for example, the way that Appl introduces a Benefactive argument and marks it with or without the Dative *-ni* is closely related to the verb-type. Although *ni*-marking has been extensively discussed

in Japanese linguistics, not many studies seem to explain data from the perspective of a systematic relationship between V and a higher functional head, Appl.

Third, we will investigate V-V compounds. Head-head combination is a productive process in the Japanese language, and provides us with ideal data to investigate how one argument structure is derived from more than one verb. We will further examine the head-head relationship between a little verb and T. Possible variations of integrated argument structure from two predicates depend on the way that functional and lexical heads, T, *v*, and V are intertwined.

These topics are related to a conceptual issue which has been extensively discussed in generative grammar:

- (4) Where is the location of the interface between lexicon and syntax?

We will show that the interface exists not on a border where two components meet, such as “D-structure,” which is assumed to be the interface between “lexical component” and “syntactic component” in the GB framework. Rather, we will argue that the interface between lexicon and syntax is obtained in each head-head relationship between “lexical” V and “functional” little verb in the course of the derivation. In this sense, it is not the “interface,” but “interfaces.”

The issues addressed above are brought about in the Minimalist framework. It is conceptually desirable to assume more than one little verb in syntax, for a one-to-one relationship between a  $\theta$ -role and a  $\theta$ -role-assigning head is simple, though the layered structure looks complicated on the surface. Theoretically, some tools which were available to build up phrase structure in the GB framework are not available in the Minimalist framework. In particular, X'-theory, including “artificial” products such as labels and intermediate projections, is reduced to one simple operation, “Merge,” of two elements (Chomsky 2006). X'-theory is a theory of possible phrase structure in natural language. If our research is on the right track, we believe that little verbs play a core role in generating legitimate phrase structure, and constitute part of the work which is taken over from X'-theory.