

COMPLEMENT SELECTION AND THE LEXICON
IN JAPANESE

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ABSTRACT

This study is on the extended line of Grimshaw 1979, which explains the complement selection in Japanese. By extending Grimshaw's analysis that the combination of predicates and their complements are explicable by imposing well-formedness conditions on two different levels of representation: one at the syntactic level; the other at the semantic level, the analysis given here which utilizes two semantic restrictive features under the semantic feature: [+presupposition] and [\pm factive], is able to explain the anomalies concerning the complementizer selection in Kuno 1973.

INTRODUCTION

As far as complement selection is concerned, Bresnan 1972 and Chomsky 1973 assumed that the selectional restrictions between verbs and types of complements are made solely on syntactic level. However, Grimshaw 1979 claims that the combination of predicates and their complements are explicable by imposing well-formedness condition on two different levels of representation, i.e., one at the syntactic level, and the other at the semantic level. That is, subcategorization gives restrictions between verbs and the type of complements, and the semantic selection restricts the combination between verbs and the semantic type of their complements. Grimshaw 1979 argues that it is not possible to reduce the two restrictions to either one of levels.

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For ease of exposition, observe examples in (1).

- (1) a. John wondered [who Bill saw].
 b. John wondered *[that Bill saw someone].
 (2) a. John thought [that Bill saw someone].
 b. John thought *[who Bill saw].

The verb wonder takes only questions, but does not take that-complements. However, the verb think takes that-complements and not questions. At the syntactic level, what we need is for the verb wonder and the verb think to have the syntactic feature +[̄S]. At the semantic level, the verb wonder requires questions, that is, +[Q], while the verb think requires propositions, that is, +[P]. Figure 1 summarizes what has been discussed so far.

The plausibility of this analysis is attested by null complement anaphora such as the following:

- (3) A: Did John leave?
 B: *I agree.
 I don't know.
 (4) A: John is telling lies again.
 B: I agree.
 It's too bad.
 *I inquired.

In (3), B's answer is used in response to A's question. Therefore, in order for this discourse to be complete, B's answer

	syntactic level	semantic level
wonder	+ [<u>̄S</u>]	+ [<u>Q</u>]
think	+ [<u>̄S</u>]	+ [<u>P</u>]

Figure 1: Well-formedness conditions of wonder and think

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- (8) [[Mary-ga Jack-o aishite-iru _S][koto] \bar{S}]-wa
 SUB OBJ loves COMP SUB
 shuuchi-no jijitsu da.
 well-known fact is
 'It is a well-known fact that Mary loves Jack.'

Following the same line of argument presented in Grimshaw 1979, let us assume that at the syntactic level, verbs or adjectives only have such subcategorization features as +[\bar{S} ___] or +[\bar{N} ___], and at the semantic level, verbs or adjectives specify semantic features like P or Q. However, we still have such ungrammatical sentences as follows:¹

- (9) Watashi-wa [[John-ga Mary-o butsu][$\left\{ \begin{array}{l} *koto \\ no \\ *to \end{array} \right\}$]]-o
 I SUB SUB OBJ hit COMP OBJ
 mita.
 saw
 'I saw John hit Mary.'
- (10) Watashi-wa [[nihongo-ga muzukashii][$\left\{ \begin{array}{l} koto \\ *no \\ *to \end{array} \right\}$]]-o
 I SUB Japanese SUB difficult COMP OBJ
 mananda.
 learned
 'I learned that Japanese is difficult.'
- (11) John-wa [[nihongo-ga muzukashii][$\left\{ \begin{array}{l} *koto \\ *no \\ to \end{array} \right\}$]] itta.²
 SUB Japanese SUB difficult COMP said
- 'John said that Japanese is difficult.'

The ungrammatical sentences suggest that we need further specifications along the line of analysis given by Grimshaw 1979. That is, the semantic feature +[P___] has to be more specific to restrict complementizer selections. Kuno 1973 gives partial analy-

¹Data from (8) through (26) except (20) are from Kuno 1973.

²The particle o is deleted obligatory when preceded by the complementizer to.

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sis concerning this topic. However, because he differentiates verbs according to whether verbs include presupposition or not, some listings of verbs are left unexplained as to why they take only one complement rather than the others.

The claim to be made under the analysis given here is that complementizer selections of verbs can be explicable by using two semantic restrictive features under the semantic feature $+[P_]$, namely $[\pm\text{presupposition}]$ and $[\pm\text{factive}]$. The feature $[\pm\text{presupposition}]$ means that the verb requires P with a presupposition. The feature $[\pm\text{factive}]$ means that P is based on fact. The whole combination is summarized in Figure 2.

In Kuno 1973, the verb omow-u 'think' has the semantic feature $[-\text{presupposition}]$ and the verb wasure-ru 'forget' has the feature $[\pm\text{presupposition}]$. These carry the grammaticality and the ungrammaticality of (12) and (13).

(12) John-wa [Mary-ga baka da $\left\{ \begin{array}{l} *koto \\ to \\ COMP \end{array} \right\}]$ -o omotta.
 SUB SUB stupid is OBJ thought

'John thought that Mary was stupid.'

(13) John-wa [Mary-ga tunbo de aru $\left\{ \begin{array}{l} koto \\ no \\ *to \\ COMP \end{array} \right\}]$ -o
 SUB SUB deaf is OBJ

wasurete-ita.
 forgot

'John forgot that Mary was deaf.'

Complementizer	$+[P_]$	
	Presupposition	Factive
no	+	+
koto	+	-
to	-	+
	-	-

Figure 2: Semantic restrictive features under $+[P_]$

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- (16) *Anata-wa [Mary-ga tunbo da to] shitte-imasuka?
 you SUB SUB deaf is COMP know
 'Do you know that Mary is deaf?'
- (17) Watashi-wa [Mary-ga tsunbo da to] sonotoki
 I SUB SUB deaf is COMP then
 shitta.
 got-to-know
 'I got to know then that Mary was deaf.'
- (18) *^h[Mary-ga konna baka da to] shitte-imashitaka?
 SUB such-a fool is COMP know
 'Do you know that Mary was such a fool?'
- (19) [Mary-ga konna baka da to] shirimasen deshita.
 SUB such-a fool is COMP know not past
 'I did not know that Mary was such a fool.'

However, a close examination shows that shir-u, which is the present form, means 'come to the state of knowing' or 'get to know', and the past tense shitta means 'came to the state of knowing' or 'got to know'. Shirimasen, which is the negative counterpart of shir-u, means 'not come to the state of knowing' or 'not get to know'. On the other hand, shitte-iru means 'be in the state of knowing'. That is, Kuno 1973 fails to assume that the verb shitte-iru is a stative verb unlike the verb shir-u, which is an action verb. The semantic restrictions of the verbs shir-u and shitte-iru will be as follows:

- (20) shir-u: [±presupposition, ±factive]
 shitte-iru: [+presupposition, ±factive]

With (20), we can now clearly explain the grammaticality from (16) through (19).

By extending the semantic restrictions, the analysis given here can now explain anomalies in Kuno's paradigm. First, verbs of perception can take only a no clause.

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- (21) Watashi-wa [John-ga Mary-o butsu {^{no}/_{*koto}}] -o mita.
 I SUB SUB OBJ hit COMP OBJ saw
 'I saw John hitting Mary.'
- (22) Watashi-wa [John-ga piano-o hiku {^{no}/_{*koto}}] -o kiita.
 I SUB SUB OBJ play COMP OBJ heard
 'I heard John playing the piano.'
- (23) Watashi-wa [sesuji-ga samuku naru {^{no}/_{*koto}}] -o
 I SUB spine SUB cold become COMP OBJ
 kanjita.
 felt
 'I felt a cold shiver running down my spine.'

The analysis given here predicts that the verbs in (21)-(23) have the semantic feature, +[P___], [+presupposition, +factive]. This feature specification clearly distinguish no and koto.

Second, verbs of ordering are specified by the semantic feature, [+presupposition, -factive], which restricts the complementizer to only koto.

- (24) Watashi-wa John-ni [hataraku {^{koto}/_{*no}/_{*to}}] -o
 I SUB to work COMP OBJ
 {
 yookyuu-shita.
 demanded
 tanonda.
 asked
 kyoosei-shita.
 forced
 }
 'I {
 demanded
 asked
 forced
 } John to work.'

Third, verbs of expecting have implication that things to expect have not yet come true. Therefore, the feature [-factive] is assigned to these types of verbs. To put it more precisely, the semantic restriction is +[P___], [+presupposition, -factive], which allow complementizers koto and to.

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- (25) Mary-wa [John-ga kuru {^{koto-o}_{to}}] kitai-shite-ita.
 SUB SUB come COMP OBJ was-expecting
 'Mary was expecting that John would come.'

Finally, the verbs of waiting take no and koto. This seems to be a natural consequence because there have to be things to wait for when one waits for something. Therefore, the feature [+presupposition] is marked at the semantic level. Whether the complementizer no or koto is specified is based on the things to wait for. The following examples show that the highly abstract concept is marked [-factive], while waiting for John to come is less abstract, and rather more factive because the reason that one can wait for John to come is due to the fact that John is coming.

- (26) a. Watashi-wa [John-ga kuru {^{no}_{*koto}}]-o matta.
 I SUB SUB come COMP OBJ waited
 'I waited for John to come.'
- b. Watashi-wa [sekai-ni heiwa-ga otozureru {^{no}_{koto}}]
 I SUB world to peace SUB visits COMP
 -o matte-imasu.
 OBJ am-waiting
 'I am waiting for peace to descend on the world.'

CONCLUSION

By subcategorizing the semantic feature +[P___] into the combinations of [±presupposition] and [±factive], Kuno's anomalies come under the regular pattern. It seems that the solution we have made argues for non-autonomous syntactic hypothesis. However, the point to be made is that assuming syntax and semantics are two different autonomous systems and that each module serves to generate grammatical sentences, we will get higher generalizations in rules of grammar.

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