

The Tough Construction in Japanese*

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0. Introduction

In this paper, we shall discuss an analysis of the Japanese tough construction within the framework of LFG. In order to do so, we shall first briefly review an existing analysis of the tough construction in Japanese introduced in Saito (1982).

One of the main characteristics of Saito's analysis of the tough construction in Japanese is that it posits essentially two different kinds of tough constructions based on different configurational structures. Unlike Saito's explanation, the analysis of the tough construction which we introduce in this paper is uniform, treating all tough phenomena alike. Moreover, we shall claim that the complexity seen in Saito's analysis of the Japanese tough construction is the result of the significance of a simple fact that the subject of tough may be interpreted either as a subject or as a non-subject within the complement of the tough morpheme. The two different patterns of syntactic behavior which Saito recognized in the Japanese tough construction can be shown to follow directly from this distinction in the grammatical function of a complement clause argument with which the tough subject is related. We shall show that our analysis provides us with correct predictions with regard to syntactic phenomena like the reflexive binding, case-marking, and nominalization with regard to the tough construction.

1. Saito's (1982) Analysis of the Tough Construction in Japanese

1.1. Saito's Two Different Kinds of Tough Construction

In Saito's (1982) analysis of the tough construction in Japanese, it is argued that Japanese has essentially two different kinds of tough sentences, each with its own distinct constituent structure. We shall call the two kinds of tough construction TC-Non-S and TC-S, and they are exemplified by sentence (1) and (2), respectively.

- (1) Kono hon ga John ni(totte) yomi-yasui
 this book NOM for read-easy
 'This book is easy for John to read.'
- (2) Watashi ga [XADJUNCT kega o shiteiru node] aruki-nikui
 I NOM injury ACC do since walk-hard
 'Since I am hurt, I am hard to walk. (lit.)'

The elements *-yasui* 'to be easy' and *-nikui* 'to be difficult' are what Saito and other researchers call tough morphemes in Japanese, and we shall assume that they are attached to verbs in the lexicon to form tough predicates.

1.1.1. Case Marking in Tough Sentences

There are two points which differentiate TC-Non-S and TC-S. One is that TC-S inherits the case array of the verb to which the tough morpheme is attached, while TC-NON-S does not. Thus in (1), the subject and object of *yomu* 'to read' are marked with *ni(totte)* and *ga*, respectively, although in a non-tough context they would be marked with the respective case markers *ga* and *o*.

Inoue (1978) notices the stative nature of tough predicates and tries to account for the above fact about case making of the arguments in TC-Mon S in terms of the rules in (3), which are proposed in Kuno (1973). Notice here that Inoue assumes that there is no change in grammatical relations caused by the suffixation of the tough morphemes.

- (3) a. An object is marked by *ga* when the verb is stative.
 b. When the object is marked by *ga*, subject must be marked by *ni*.

Furthermore, Inoue notes that there are cases in which not only the direct object but also other arguments of verbs are marked by *ga* in the corresponding tough sentences. Examples follow.

- (4) Kono tosyokan *ga* *gakusei ni(totte)* *hon o* *nusumi-yasui*
 this library NOM student for book ACC steal-easy
 'It is easy for students to steal books from this library.'
- (5) Tanaka-sensei *ga* *gakusei-tachi ni(totte)* *ichiban hanashikake-yasui*
 Prof. NOM students for most talk to-easy
 'It is the easiest for students to talk to Prof. Tanaka.'

In (4) and (5), oblique arguments (OBL_{loc} in (4) and OBL_{goal} in (5)) of the verbs to which the tough morphemes are attached are marked by *ga*. Because of this, Inoue argues that we should be able to extend the case marking rules in (3) so that (3. a) applies to arguments other than the direct objects. However, Saito (1982) claims that this is untenable because of the following two reasons. The first reason is a simple one. He points out that if we generalize (3. a), it follows that all the major constituents can be marked with *ga* when the predicate is stative, which leads us to numerous ill-formed sentences like (6. a). (6. a) shows that even though the predicate *aeru* 'to be able to meet' is stative, its OBL_{goal} argument cannot be marked with *ga*. Instead, it has to preserve the case marking of the OBL_{goal} argument of the verb *au* 'to meet' to which the potential morpheme *-eru* is attached as in (6. b).

- (6) a. **Watashi wa ashita Takashi ga a-eru*
 I TOP tomorrow NOM meet-*potential*
 'I can meet Takashi tomorrow.'
 b. *Watashi wa ashita Takashi ni a-eru*
 I TOP tomorrow DAT meet-*potential*
 'I can meet Takashi tomorrow.'

The second reason why Saito claims Inoue's extension of rule (6. a) is untenable comes from his observation of sentences like the following.

- (7) Kono syu no jiko ga songaibaisyoo o seikyuushi-nikui
 this kind of accident NOM compensation ACC claim-difficult
 'As for this kind of accident, it is hard to claim damages.' (Saito (1982) 3:15)
- (8) Kooitta hon_i senseigata ni(totte) kodomo-tachi, ni
 this kind of book NOM teachers for children to
 [*e_j e_i yomu*] koto o susume-yasui
 read NM ACC recommend-easy
 'This kind of book is easy for teachers to recommend that children read.'
 (Saito (1982) 3:16 with change)
- (9) Kooitta tekunikarurepooto_i ga hisyo_j ni
 this kind of technical report NOM secretary DAT
 [*e_j e_i taipusuru*] *yooni tanomi-nikui-noda*
 type to ask-hard-affirmative
 'This kind of technical report is hard to ask the secretary to type.'
 (Saito (1982) 3:17)

Saito claims that the *ga* marked arguments above (the underlined elements) are not the arguments of the verbs to which the tough morphemes are attached. In (8) and (9), they are the arguments of the complement verbs *yomu* 'to read' and *taipusuru* 'to type', respectively. Also, in (7), Saito points out that there is not a gap with which the *ga* marked element *kono syu no jiko ga* 'this kind of accident' is associated within the rest of the sentence. The same point is illustrated by a further example of a TC-Non-S tough sentence where a time adverbial appears marked by *ga*. Consider the following sentence which is from Farmer (1984).

- (11) Asahayaku ga (suzushii node) benkyooshi-yasui
 early in the morning NOM cool because easy-study
 'It is easy/easier to study early in the morning, because it is cool.'
 (Farmer (1984) 3:20. b)

Notice that *asahayaku* 'early in the morning' is again by no means an argument of the matrix verb *benkyoosuru* 'to study'. Thus, the attachment of the tough morphemes to the matrix verbs cannot in any way affect the case marking of the above underlined elements. Then where does the *ga* marking come from? Here Saito's conjecture is

that the *ga* marking of an argument in TC-Non-S is not due to the general rule of case marking of stative predicates, but rather to the characteristics of the tough construction TC-Non-S. In particular, Saito claims that the *ga* marking in TC-Non-S is the focus marking. We shall come back to this point below.

1.1.2. The *Zibun* Facts in Tough Sentences

A further fact which distinguishes TC-Non-S and TC-S is that the *ga* marked element of TC-Non-S does not antecede *zibun*, while that of TC-S does as illustrated in (12) and (13) which are examples of TC-Non-S and TC-S, respectively.

- (12) John_i ga Mary_j ni(totte) ichiban [*zibun**_{ij} no
 NOM for most self GEN
 kazoku no koto] o hanashi-yasui
 family GEN matter ACC talk to-easy
 'John is the easiest for Mary to talk to about self's family matters. (lit.)'
- (13) Watashi_i ga [ADJUNCT kega o shiteiru node] [*zibun*_i
 I NOM injury ACC doing since self
 no heya saemo] aruki-nikui (Koto)
 GEN room even walk-hard (that)
 '(that) since I am hurt, it is hard for me to walk even in self's room. (lit.)'

Given the hypothesis that *zibun* is anteceded by subjects (Kameyama (1984, 1985), etc.), (12) might suggest that the *ga* marked element in TC-Non-S is not a subject. It also suggests that the element which is marked by *ni(totte)* 'for' in TC-Non-S is a subject at some level of representation. Assuming this to be the case, we might ask how we can predict the *ga* marking of the non-subject and the *ni(totte)* marking of the subject in TC-Non-S, in contradiction with the usual case marking rule of Japanese. In answering this question, Saito hypothesizes that the *ga* marked argument in TC-Non-S is an instance of focus with nominative case which is structurally associated with TC-Non-S. Thus, Saito supposes that the *ga* marking in TC-Non-S is another instance of a type of the focus *ga* marking which is illustrated by (14).

- (14) Fuji-san wa koko kara ga yoku mieru
 Fuji-mountain TOP here from FOCUS see
 'It is from here that you can see Mt. Fuji well. (lit.)' (Ishikawa (1985) 5:62. b)

Saito claims that focus with nominative case carries exhaustive listing connotation which is said to associate an element E with the reading 'E and only E' (Kuno (1973)). Saito also points out that focus with nominative case causes the rest of the sentence to carry a reading which describes a property of the focus element. This is the intuitive reason why Saito and other researchers use the term focus to refer to such an element within a sentence.

Furthermore, Saito argues that the reason why the *ga* marked element in TC-Non-S does not antecede *zibun* is that it is linked to a non-subject position in the

sentence. Notice that this not only explains the reason why a non-subject argument is marked by *ga* in TC-Non-S, but also contributes to an explanation of the facts about the case array in TC-Non-S. In addition, Saito claims that the element marked by *ni(totte)* 'for' in TC-Non-S is an adverbial element which is anaphorically linked to the subject of the tough predicate, which allows us to capture the fact that it antecedes *zibun*.

Another reason why Saito claims that the *ga* marked element in TC-Non-S is focus is that it behaves the same way as other instances of *ga* marked focus with regard to scrambling. Saito observes that focus with nominative case in Japanese cannot be scrambled with other element of the sentence as in the following sentences which are from Saito (1982 1:37). Note that *John ga* is the focus of each sentence.

- (15) a. John_i ga [*e*_i ototoo] ga butsuri o benkyooshite-iru
 NOM POSS younger brother NOM physics ACC studying
 'It is John whose mother is studying physics.'
- b. ?John_i ga butsuri o [*e*_i ototoo] ga benkyooshite-iru
 NOM physics ACC POSS younger brother NOM studying
- c. ?*Butsuri Physics o John_i ga [*e*_j ototoo] ga
 ACC NOM POSS younger brother NOM
 benkyooshite-iru
 studying
- d. * [*e*_i ototoo] ga John_i ga butsuri o benkyooshite-iru
 POSS younger brother NOM NOM physics ACC studying

Similarly, the scrambling of the *ga* marked element in TC-Non-S gives us ill formed results as shown in the following sentences.

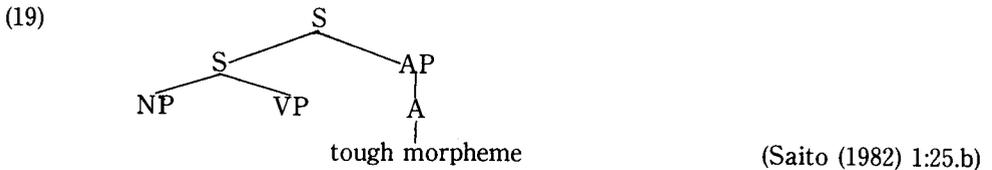
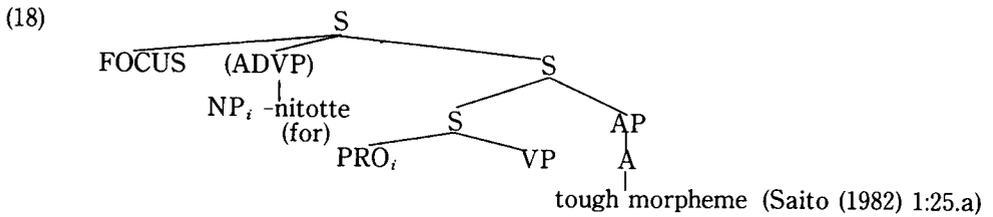
- (16) a. John ga Mary ni(totte) ichiban nayami o soodanshi-yasui
 NOM for most problem ACC consult-easy
 'John is the easiest for Mary to consult self's problems. (lit),
- b. Mary ni(totte) John ga ichiban nayami o soodanshi-yasui
 for NOM most problem ACC consult-easy
- c. ?John ga nayami o Mary ni(totte) ichiban soodanshi-yasui
 NOM problem ACC for most consult-easy
- d. ?*Mary ni(totte) nayami o John ga ichiban soodanshi-yasui
 for problem ACC NOM most consult-easy
- e. *Nayami o Mary ni(totte) John ga ichiban soodanshi-yasui
 problem ACC for NOM most consult-easy
- f. *Nayami o John ga Mary ni(totte) ichiban soodanshi-yasui
 problem ACC NOM for most consult-easy

Here, Saito also notices that the *ga* marked element in TC-S behaves differently from that of TC-Non-S with regard to scrambling. Consider the following sentences.

- (17) a. Eriito *ga* sooshita zassetsukan o ajiwai-yasui
 elite NOM that kind of frustration ACC feel-east
 'It is easy for elites to feel that kind of frustration.' (Saito (1982) 3:24.a)
- b. Sooshita zassetsukan o eriito *ga* ajiwai-yasui
 that kind of frustration ACC elite NOM feel-easy
 (Saito (1982) 3:24.b, the judgement is mine)

Notice that contrary to the case in TC-Non-S as illustrated in (16), scrambling of the *ga* marked element in TC-S does not cause any ungrammaticality. Thus, Saito argues that the *ga* marked element in TC-S is not a focus of the sentence, but a genuine subject of the sentence, which ultimately explains the reason why it antecedes *zibun*.

Because of this, Saito posits the configurational structures for TC-Non-S and TC-S in (18) and (19), respectively.



1.2. Arguments against Saito's Analysis of the Tough Construction

There seem to be at least two arguments against Saito's analysis of the tough construction in Japanese which we reviewed above.

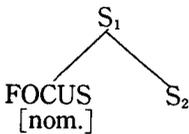
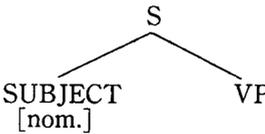
1.2.1. The Status of Focus with Nominative Case in Japanese

The first point concerns the status of what Saito calls focus with nominative case in Japanese. We mentioned above Saito's observation that focus with nominative case is associated with an exhaustive listing connotation and that the sentence in which it occurs connotes a property reading. Saito says, however, that the presence of the exhaustive listing connotation cannot be used to distinguish a focus from a mere subject in that an interpretive rule for the exhaustive listing reading with a nominative element can simply be characterized in the following way: if the predicate represents

a non-temporary state or a habitual or generic action, then the nominative element E is interpreted as 'E and only E'. Thus, he claims that the nominative element in (20) is not the focus of the sentence, despite the exhaustive listing connotation it bears.

- (20) Yama no ki ga kirei-desu
 mountain GEN tree NOM pretty-affirmative
 'It is the trees of mountains, and only the trees of mountains, that are beautiful.'
 (Saito (1982) 1:52 taken from Kuno (1973))

Instead, Saito claims that the *ga* marked noun phrase in sentences like (20) is simply the subject of the sentence. In addition, he claims that a sentence containing focus with nominative case has the configuration in (21.a), while a sentence without it the configuration in (21.b).

- (21) a.  b. 
 (Saito (1982) 2:39.a) (Saito (1982) 2:39.b)

Note that Saito is assuming that the focus noun phrase illustrated in (21.a) lies in an A position rather than an \bar{A} position. This is because focus need not be coindexed with any empty argument position in S_2 as illustrated in (22) and (23) where *natsu ga* and *Kumamoto ga* are claimed to be FOCUSs with nominative case.

- (22) Natsu ga [biiru ga umai]
 summer NOM beer NOM tasty
 'It is during the summer that beer tastes good.'
 (Saito (1982) 1:24)
- (23) Kumamoto ga [PRO baniku o taberu]
 NOM horse meat ACC eat
 'It is the Kumamoto region where people eat horse meat.'
 (Saito (1982) 2:38.a)

Instead, Saito claims that it is semantics that decides the well-formedness of the sentence in which a nominative focus appears. In particular, Saito goes on to assume that a sentence initial focus is assigned its own semantic role by the following S. When there is a gap in the following S which is linked to the focus as in (24), Saito describes the coindexing between them as a coindexing between a focus and a phonologically null element which is recoverable from the context. Thus, he places it in the discourse level.

- (24) Kono syu no hon_i ga [kodomotachi ga e_i yorokobu]
 this kind GEN book NOM children NOM enjoy
 'It is this kind of book that it appears that children want to read.'
 (Saito (1982) 1:20, judgement is mine)

Now we would like to note that Saito's assumptions on the status of nominative focus and nominative subject seem to exclude the possibility of a nominative element's being simultaneously focus and subject. Thus, for example, he claims that the nominative element *yama no ki ga* 'trees on mountains NOM.' in (20) is not a focus but a simple subject. Recall that Saito's criterion for the identification of focus with nominative case was its inability to scramble with other arguments in the same sentence. However, the fact that *yama no ki ga* does not have any sister noun phrases which represent other arguments of its predicate makes it impossible for us to make use of this test. Thus, given that no other test for the non-focus-hood of *yama no ki ga* in (20) is provided in Saito's system, we have enough room to speculate that *yama no ki ga* is in fact simultaneously focus and subject, thus is associated with the configurational structure in (21.a).

Furthermore, we could suppose that a nominative element in a simple sentence with a transitive predicate is ambiguous between a focus and a subject. In fact, a nominative subject can be interpreted either as being semantically neutral or as being a carrier of an exhaustive listing connotation. And even in the latter case, the scrambling of such an element with the other arguments of the sentence seems to be free as illustrated in the following set of sentences.

- (25) a. Takashi ga Reiko ni raburetaa o Watashi-tagatte-iru-no-yo
 NOM DAT love letter ACC give-want-*prog-part-part*
 'It is Takashi who wants to give a love letter to Reiko, you know.'
- b. Takashi ga raburetaa o Reiko ni watashi-tagatte-iru-no-yo
 NOM love letter ACC DAT give-want-*prog-part-part*
- c. Reiko ni Takashiga raburetaa o watashi-tagatte-iru-no-yo
 DAT NOM love letter ACC give-want-*prog-part-part*
- d. Reiko ni raburetaa o Takashi ga watashi-tagatte-iru-no-yo
 DAT love letter ACC NOM give-want-*prog-part-part*
- e. Raburetaa o Reiko ni Takashi ga watashi-tagatte-iru-no-yo
 love letter ACC DAT NOM give-want-*prog-part-part*
- f. Raburetaa o Takashi ga Reiko ni watashi-tagatte-iru-no-yo
 love letter ACC NOM DAT give-want-*prog-part-part*

Indeed, as we discussed, Saito claims that the presence of the exhaustive listing connotation does not license a focus-hood of a given nominative element. Yet, our present situation is that there is no way to guarantee that a nominative subject is never a focus but always a simple subject. In addition, such a nominative subject displays a free scramblability inside the sentence in which it occurs. Therefore, we can at least claim that there still is room to doubt the validity of Saito's identification of focus with nominative case based on its non-scramblability.

Here, if we are to allow the possibility of a nominative subject to be at the same time a focus, then the focus element should be considered as co-indexed with the

subject of the following S. And this possibility can be hardly deemed impossible in Saito's system in that Japanese allows free occurrences of phonetically null element in any argument position in a sentence and the subject position is not an exception. Remember that Saito argues that coindexing of a focus and the corresponding gap in the rest of the sentence is done by the discourse. Thus, in order to account for the binding of the focus, he does not posit any syntactic mechanism like Move α into an A position which is subject to asymmetries in grammatical relations (Hasegawa (1984), Saito (1985)). Hence nothing in Saito's system prevents discourse from extending its expertise from the coindexing of a focus and a null non-subject to the coindexing between a focus and a phonetically null subject.

Notice that Saito's analysis of the tough construction is subject to the same criticisms. Here, his test to identify focus with nominative case seems to work in order to prove that the nominative element in TC-Non-S is a focus while that of TC-S is not but a mere subject in that the former does not scramble with other elements in the sentence while the latter does as illustrated in (16) and (17). However, on the face of the point that there is no way to prove the non-focus-hood of the nominative element in TC-S, it may be the case that TC-Non-S and TC-S share the identical configurational structure. Then, the difference between TC-Non-S and TC-S would be that the focus in the former is coindexed with the non-subject position of the sentence while that in the latter with the subject of the sentence.

1.2.2. Interaction between the Tough Construction and the Subject Raising Construction

A more significant argument against Saito's analysis of the tough construction comes from the fact that the element which Saito claims is the base generated focus of the sentence in TC-Non-S also behaves just like a subject with regard to the subject to object raising phenomenon. Our concern in this section is to find out how the nominative elements in Saito's two different kinds of tough constructions interact with subject to object raising.

1.2.2.1. TC-Non-S and the Subject Raising Construction

First of all, let us look at the sentence in (26.a) in which a TC-Non-S sentence is embedded as a subordinate clause. Notice, as (26.b) illustrates, it is possible to raise the subject of the TC-Non-S sentence to the matrix object position. Thus, the TC-Non-S construction appears to fit in the subject raising construction.

- (26) a. Takashi ga [John ga Mary ni(totte) ichiban nayami o
 NOM NOM for most problem ACC
 soodanshi-yasui] to omotte-iru
 consult-easy COMP think

'Takashi thinks that John is the easiest for Rary to consult about her problems.'

- b. Takashi ga John_i o [_{e_i} Mary ni(totte) ichiban nayami o
 NOM ACC for most problem ACC
 soodanshi-yasui] to omotte-iru
 consult-easy COMP think
 'Takashi thinks that John is the easiest for Mary to consult about her problems.'

Recall now that Saito likens the *ga* marked NP of the TC-Non-S construction to non-subject, *ga* marked NPs like *natsu ga* and *Kumamoto ga* in (22) and (23), and identifies it as an instance of focus. If Saito's assertion is correct, then we naturally have certain expectations: since a TC-Non-S sentence allows raising of its *ga* marked NP (witness 15.b), the sentences in (22) and (23) should behave in the same way. Note that (27.a) and (28.a), sentences (22) and (23) appear as complements of a raising verb *omotteiru* 'think'. In the (b) examples of (27) and (28) we attempt to apply raising to the corresponding (a) examples.

- (27) a. Takashi ga [natsu ga biiru ga umai] to omotteiru
 NOM summer NOM beer NOM tasty COMP think
 'Takashi thinks that it is during the summer that beer tastes good.'
- b. *Takashi ga natsu_i o [_{e_i} biiru ga umai] to omotteiru
 NOM summer ACC beer NOM tasty COMP think
 'Takashi thinks that it is during the summer that beer tastes good.'
- (28) a. Daremo ga Kumamoto ga [PRO baniku o taberu] to
 everybody NOM NOM horse meat ACC eat COMP
 omotteiru
 think
 'Everybody thinks that it is the Kumamoto region where people eat horse meat.'
- b. *Daremo ga Kumamoto_i o [_{e_i} PRO baniku o
 everybody NOM ACC horse meat ACC
 taberu] to omotteiru
 eat COMPthink
 'Everybody thinks that it is the Kumamoto region where people eat horse meat.'

These data show that it is impossible to raise a normal *ga* marked focus NP, contrary to the expectations that we would have if we were to accept Saito's analysis. Thus, we are led to suppose that the *ga* marked NP of the TC-Non-S construction and the *ga* marked NPs of (22) and (23) are not syntactically alike.

1.2.2.2. TC-S and the Subject Raising Construction

Let us turn our attention to the TC-S construction. Example (29.a) exhibits a well-formed instance of this structure. The clause in (29.a) is then embedded inside of (29.b) as a complement of *hyooka-shita* 'evaluated'. Notice now that (29.c) is a variant of (29.b) in which raising has been applied. And the result is quite grammatical.

- (29) a. S-sya no terbi ga ichiban koware-nikui
 S-company GEN television NOM most break-hard
 'It is most hard for the television of company S to break.'
- b. Syoohisya guruupu ga [S-sya no teregi ga
 consumer advocate group NOM S-company GEN television NOM
 ichiban koware-nikui] to hyooka-shita
 most break-hard COMP evaluated
 'The consumer advocacy group evaluated that it is most hard for the
 television of company S to break.'
- c. Syoohisya guruupu ga S-sya no terebi_i o
 consumer advocate group NOM S-company GEN television ACC
 [*e_i* ichiban koware-nikui] to hyooka-shita
 SUBJ most hard-break COMP evaluated
 'The consumer advocacy group evaluated that it is most hard for the
 television of company S to break.'

The acceptability of (29.c) has a rather damaging impact on Saito's analysis of the TC-S construction. Recall from (21) that Saito supposes the *ga* marked NP found in such constructions to be a subject which itself lies inside of a sentential subject. This subject clause is in turn the single argument of the tough predicate. Thus, using the Standard Theory terminology, on Saito's analysis we would have to suppose that the *S-sya no terebi o* in (29.c) has been raised not from one clause into the immediately dominating clause, but rather from one clause into its "grand parent" clause, crossing two clause boundaries in the process. Under any theoretical interpretation—traditional or modern—of raising phenomena, it seems doubtful that one would wish to allow this sort of raising across multiple clause boundaries. If no locality restriction were enforced on raising phenomena, one would have to find some alternative means of ruling out such ill-formed strings as those found in (30).

- (30) a. *Reiko wa Takashi_i o [[*e_i* kurasu de ichiban bakana koto] ga
 TOP ACC SUBJ class in most foolish fact NOM
 tashikada] to omotteiru
 certain COMP think
 'Reiko thinks that Takashi is the most foolish in the class is certain.'
- b. *I expect John_i [[(that) *e_i* is dead] to be sad.]

Since the Japanese and English examples in (30) have essentially the structure

proposed by Saito for TC-S (see (18)), one might wonder if there is any satisfying, non-ad hoc criterion for distinguishing TC-S structure from (30) in order to predict the difference in the acceptability of raising.

We wish to propose an alternative analysis that would make the *ga* marked NP of the TC-S construction an argument of the tough morpheme. This modification will predict the acceptability of raising out of a TC-S structure and will also make it possible to propose a unified analysis of the two superficially different forms of tough constructions, TC-Non-S and TC-S.

Here, the reader must have noticed the dilemma which the observations on the nominative element of TC-Non-S so far discussed above exhibit with regard to each other. We just mentioned that it has a property which can be most adequately referred to by the notion SUBJ in our theory. It must follow, then, that it has to qualify as a potential antecedent of the Japanese reflexive *zibun* given Kameyama's (1984, 1985) generalization on *zibun* based on grammatical functions. However, as we recall from section 1.1.2. of this paper, the element in question does not antecede *zibun*. A relevant example to show this point is repeated below.

- (31) John_i ga Mary_j ni(totte) ichiban [zibun*_{i,j} no kazoku no koto] o
 NOM for most self GEN family GEN matter ACC
 hanashi-yasui
 talk to-easy
 'John is the easiest for Mary to talk to about self's family matters. (lit)'

Thus, the new analysis of the construction which we shall propose below should get over such a dilemma. There remains, however, certain more facts about the tough construction in Japanese which must be explored in order to propose a truly adequate analysis of the tough construction in Japanese. Thus in what follows, while developing our analysis of the construction, we shall also consider further aspects of the tough construction in Japanese which must eventually be captured in our analysis.

2. An LFG Analysis of the Tough Constructions in Japanese

2.1. A Proposal

We claim, following Ishikawa's (1985) theory of the complex predicate formation in Japanese, that a tough morpheme is concatenated with a verb in the lexicon in order to form a tough predicate. More specifically, the tough morpheme is affixed to the infinitive form of a verb to produce a complex tough predicate which is categorized as an adjective. This is because their pattern of inflection conforms to the inflectional paradigm of adjectives in Japanese. Thus, the suffixation of a tough morpheme is a category-changing word formation. Examples of the word formation by tough morphemes are schematized in (32), where V and A correspond to categories verb and adjective respectively. In addition, note that infinitive forms of the verbs whose stems and with closed syllables assume the default vowel *i* in the end.

- (32) [[tabe] _v niku] _A → [tabeniku] _A ‘hard to eat’
 [[koware] _v niku] _A → [kowareniku] _A ‘hard to break (lit.)’
 [[suwar-i] _v yasu] _A → [suwariyasu] _A ‘easy to sit on’
 [[aruk-i] _v zura] _A → [arukizura] _A ‘hard to walk (lit.)’

Semantically, the tough morpheme is predicated of a single argument which is a proposition: in turn, the predicate of this proposition is the verb to which the tough morpheme is affixed. Since the tough morpheme takes only a single, propositional argument, it follows that the *ga* marked NP is not a semantic argument of this predicate. Given this, and the fact that the sentence initial nominative elements in both types are subject to raising, it seems to be reasonable to consider them as non-thematic SUBJs of the tough morphemes. In other words, they bear the grammatical function of SUBJ, but there is no thematic or semantic role associated with SUBJ by this particular PRED.

Moreover, the semantic difference between TC-Non-S and TC-S is that the sentence initial nominative element (in the canonical constituent order), i.e. the tough SUBJ of TC-Non-S is the semantic non-subject of the verb to which a tough morpheme is attached, whereas that of TC-S is the semantic subject of the verb to which a tough morpheme is attached. In addition, as we notice in examples (7) and (8), the element which the tough SUBJ of TC-Non-S is linked to can be an element which is embedded deep inside the complement of the tough morpheme. Thus, we see that our analysis has to capture such unbounded instances of the linking between the tough SUBJ and the gap to which it is linked.

Recall here Saito's claim that it is not a necessary condition for a tough SUBJ to have a gap with which it is associated. The relevant examples are repeated below.

- (33) Kono syu no jiko ga songaibaisyoo o seikyuuushi-nikui
 this kind of accident NOM compensation ACC claim-difficult
 ‘As for this kind of accident, it is hard to claim damages.’ (Saito (1982) 3:15)
- (34) Asahayaku ga (suzushii node) benkyooshi-yasui
 early in the morning NOM cool because study-easy
 ‘It is easy/easier to study early in the morning, because it is cool.’
 (Farmer (1984) 3:20.b)

However, it seems to be possible to think of the underlined elements in (33) and (34) as linked to the ADJUNCTs of the verbs *sikyuu-suru* ‘to claim’ and *benkyoo-suru* ‘to study’ respectively given the sentences like the following.

- (35) Kono jiko de higaisya ga tagaku no songaibaisyoo o
 this accident in victim NOM large amount of compensation ACC
 seikyuu-shita
 claim-did

'The victim claimed large amount of damages in this accident.'

- (36) Asahayaku ni Mary wa benkyoosuru
 early in the morning TOP study
 'Mary studies early in the morning.'

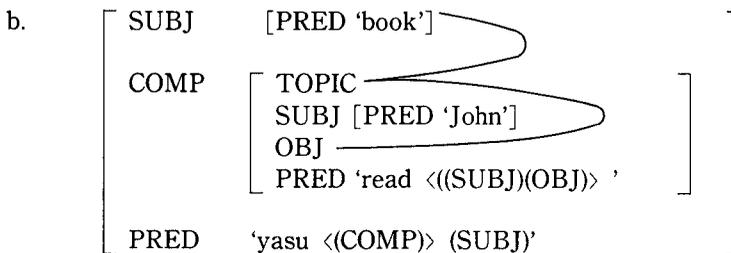
Thus, in the light of the absence of gapless tough sentences, we shall consider that the linking of a tough SUBJ to a gap somewhere in the complement of the tough morpheme is a necessary condition of the construction.

In order to analyze the Japanese tough constructions in our framework, we propose that the linking between the tough SUBJ and a gap in the complement of the tough morpheme such as *yasu* 'easy', *niku* 'difficult/hard', *tsura* 'difficult/hard' and its allomorph *zura*, etc. is realized through the local control of a discourse function TOPIC specified to be located in the tough morpheme's complement by the lexical entry of the tough morpheme. Also we shall argue that this TOPIC in turn gets linked to some element within the complement in terms of the mechanism of functional uncertainty (Kaplan and Zaenen (1985)). Thus, the simplified lexical entry for a tough morpheme looks like the following.

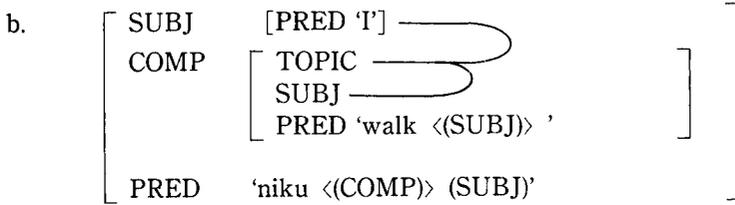
- (37) 'yasu <(\uparrow COMP)> (\uparrow SUBJ)²
 (\uparrow COMP TOPIC)=(\uparrow SUBJ)
 (\uparrow COMP TOPIC)=(\uparrow COMP GF)>

When the TOPIC is linked to the immediate SUBJ of the tough morpheme's COMP in terms of functional uncertainty, we get a TC-S tough sentence; when it is linked to some other element within the f-structure of the COMP, the resulting tough sentence exhibits the pattern for TC-Non-S. Examples of tough sentences and their f-structures are in (38) and (39) below.

- (38) a. Kono hon ga John ni(totte) yomi-yasui³
 this book NOM for read-easy
 'This book is easy for John to read.'



- (39) a. Watashi_i ga ([ADJUNCT kega o shiteiru node]) aruki-nikui (koto)
 I NOM (injury ACC doing since) walk-hard (that)
 '(that) Since I am hurt, it is hard for me to walk.'



2.1.1. Functional or Anaphoric Binding of Tough TOPIC ?

Bresnan and Mchombo (1985) claim that the discourse functions TOPIC and FOCUS must be bound to some argument positions either functionally or anaphorically. They call this condition an extended coherence condition and hypothesize that it universally applies to every natural language. Now, given that Japanese is a language which allows relatively free occurrences of zero pronominals, i.e. pronominals which lack phonetic value, there is a possibility for us to analyze the binding of TOPIC in the tough complement as being ensured by anaphoric control between the TOPIC and a zero pronominal which is construed as occupying a certain position inside the tough complement.

Kameyama (1985) argues that zero pronominals in Japanese can be specified with the feature [- nucleus] in the theory of anaphora introduced by Bresnan, Halvorsen, and Maling (1985) within the framework of LFG. This means that an unexpressed pronoun in Japanese looks for its antecedent outside of its minimal nucleus, i.e. minimal clause. Also this is compatible with a universal condition on anaphoric control which states that an unexpressed pronoun is not assigned its antecedent within its minimal clause (Bresnan (1982)). Now, notice that this condition rules out the possibility of the tough TOPIC's being linked to an element which is in the same nucleus. However, given numerous grammatical examples of that sort, such as (38.a) and (39.a) in which their complements' TOPICs are linked to the gaps in the same minimal clauses, the idea that the tough TOPIC might control a zero pronominal anaphorically seems to be untenable.

2.2 Consequences

There are number of consequences which follow from our analysis of the tough constructions in Japanese. We discuss three of them below.

2.2.1. *Zibun* Facts

First, we claim that the fact that the SUBJ of TC-Non-S does not antecede *zibun* but that of TC-S does follows from our analysis which ensures the tough SUBJ as non-thematic. The relevant examples are repeated in (40) and (41) which are examples of TC-Non-S and TC-S respectively.

- (40) John_i ga Mary_j ni(totte) ichiban [zibun *_{i/j} no kazoku no
 NOM for most self Gen family GEN
 koto] ga Mary_j ni(totte) hanashi-yasui
 matter NOM for talk to-easy
 'John is the easiest for Mary to talk to about self's family matters.(lit.)'
- (41) Watashi_i ga[ADJUNCT kega o shiteiru node][Zibun_i
 I NOM injury ACC doing since doing since self
 no heya saemo] aruki-nikui
 GEN room even (that)
 '(that) since I am hurt, it is hard for me to walk even in self's room. (lit.)'

In our analysis, *John ga* in (40) is linked to the OBL_{goal} argument of the verb *hanasu* 'to talk to about. . .' in the COMP of *yasui* for which *John ga* is a SUBJ. Notice that since it qualifies as a SUBJ, according to Kameyama's analysis of Japanese *zibun*, which posits that either SUBJ or POSS can serve as an antecedent of *zibun*, *John ga* in (40) should be able to antecede *zibun*. However, contrary to our expectation, it fails to do so.

In order to account for this, we claim that it is because of the nature of the tough subject as a non-thematic argument that *John ga* in (40) does not antecede *zibun*. Since it has no semantic relation with regard to the matrix verb, it does not participate in the semantic structure of the sentence as a SUBJ. Indeed, it participates in the sentence as a thematic OBL_{goal} argument of the verb to which a tough morpheme is attached. However, OBL-ness does not fulfill the antecedency of *zibun*, as Kameyama's claim on *zibun* implies. In this way, its failure to be an antecedent of *zibun* is explained.

Such behavior of non-thematic arguments, i.e. the fact that non-thematic arguments do not antecede reflexive pronouns, is reported in other languages, too. Annie Zaenen (personal communication) pointed out that in English, for example, the SUBJ of *seem* does not antecede reflexives. Consider the following examples.

- (42) a. John seems to Mary to be the smartest student in the department.
 b. *John_i seems to himself_i to be the smartest student in the department.

Note that *John* in the above examples is not a semantic SUBJ of *seem*. It is just a syntactic SUBJ of *seem*, and does not have any thematic relation with respect to *seem*. Thus, one proposed lexical form for this entry of *seem* looks like (43).

- (43) seem V <(OBL_g)(XCOMP)> (SUBJ) (Bresnan (1982))

In the theory of bound anaphora introduced by Bresnan, Halvorsen, and Maling (1985), English reflexive pronouns are marked for the feature [+nucleus]. This means that English reflexive pronouns find their antecedents within their minimal clause nucleus. Now let us go back to the examples in (42) and note that *to Mary* and *to himself* are in the same minimal nucleus as *John*, the SUBJ of *seem*. In (42.b),

however, *John* fails to antecede *himself*. We claim that this behavior of the SUBJ of *seem* is due to its property as a non-thematic argument of *seem*.

Also, Bellutti and Rizzi (1986) discuss a similar phenomenon in Italian where long-distance anaphora is impossible with a non-thematic antecedent. Examples follow.

- (44) a. *Gianni_i sembra [*e* essere efficiente] a chiunque sostenga la propria_j candidatura.
 'Gianni seems to be efficient to whoever supports his own candidature.'
 (Bellutti and Rizzi (1986) 72.a)
- b. Gianni_i promette [*di* *PRO* essere efficiente] a chiunque sostenga la propria_i candidatura.
 'Gianni promised to be efficient to whoever supports his own candidature.'
 (Bellutti and Rizzi (1986) 72.b)

In (44.a) the SUBJ of *sembra* 'seem' is non-thematic, while in (44.b) that of *promette* 'promise' is thematic. And while the former fails to be an antecedent of *la propria* 'his own', the latter succeeds.

Now if we come back to the tough construction in Japanese, unlike (40), the matrix SUBJ of (41) is functionally linked to the SUBJ of its COMP. This is why it can antecede *zibun*. More specifically, it is not the tough SUBJ but the SUBJ of the COMP that is serving as the antecedent of *zibun*. Then, the SUBJ of the COMP is construed as having the same value as the tough SUBJ in (41), this superficial anaphoric relation between the matrix SUBJ of TC-S and its f-commanding *zibun* is explained.

2.2.2. Case Marking

As we discussed in the previous section, one of the reasons which led Saito to posit two different configurational structures for the tough constructions in Japanese, i.e. TC-Non-S and TC-S, is that TC-S preserves the case array of the verb to which the tough morpheme is attached, while TC-Non-S does not. (45) and (46) are examples of TC-Non-S and TC-S sentences respectively. (47) displays the usual case array of the verb *semeiru* 'to attack' to which the tough morpheme *nikui* 'difficult' is attached in (45) and (46). *Semeiru* takes *ga* and *ni* for its SUBJ and OBLgoal arguments respectively.

- (45) Sono shiro ga Takeda-gun ni(totte) semeiri-nikui
 that castle NOM troops for attack-difficult
 'It is difficult for the Takeda troops to lay siege to that castle.'
- (46) Takeda-gun ga sono shiro ni semiri-skkui (Koto)
 troops NOM that castle to attack-difficult (that)
 '(that) It is difficult for the Takeda troops to lay siege to that castle.'
- (47) Takeda-gun ga sono shiro ni semeitta
 troops NOM shat castle to attacked
 'The Takeda troops laid siege to the castle.'

Notice that in (46), which is an instance of TC-S, the case array of the verb *semeiru* is preserved. Thus, its SUBJ and OBL_{goal} arguments are marked by *ga* and *ni* respectively. On the contrary, in (45) which is an instance of TC-Non-S, the case array of *semeiru* is not preserved: its OBL_{goal} and SUBJ arguments are now marked by *ga* and *ni(totte)* respectively.

One of the questions which we have to provide an answer with is this this: how does a non-subject argument of a verb to which a tough morpheme is suffixed get *ga* marking in TC-Non-S? As far as this problem is concerned, our analysis gives a natural explanation. Recall that in our approach to the tough construction in Japanese, we consider the nominative case *ga* as the canonical case marker for SUBJ in Japanese. Thus, given this, the fact that even a non-subject argument of the verb to which a tough morpheme is suffixed gets the *ga* marking in TC-Non-S is a natural consequence of our analysis. In addition, we suggest that the *ga* marking of the sentence initial argument in TC-S is an instance of the nominative marking to the SUBJ of the tough morpheme, not that to the SUBJ of the verb to which a tough morpheme is attached.

Another question which requires an answer is how the SUBJ of the complement of a tough morpheme can get marked by *ni* instead of *ga*. In answering this question, it is important to pay attention to the fact that there are examples of TC-Non-S sentences where the element in question is marked by *ga* instead of *ni(totte)*, thus preserving the case marking of the original SUBJ. Consider the following examples.

- (48) Paipu no tsunagime ga mizu {*ga*/**ni(totte)*} more-yasui
 pipe GEN joint NOM water NOM/for leak-easy
 'It is easy for water to leak through the joint of a pipe.' (Saito (1982) 3:35)
- (49) Kyuusyuu wa Fukuoka ga hikooki {*ga*/**ni(totte)*} tyankurikusi-yasui
 TOP NOM airplane NOM/for land-easy
 'As for Kyuusyu, it is easy for airplanes to land in Fukuoka.' (Saito (1982) 3:34)
- (50) Shinjuku no chikagai ga kodomotachi {*ga*/?*ni(totte)*}
 GEN underground town NOM children NOM/for
 maigo ni nari-yasui
 lost child become-easy
 'It is easy for children to get lost in the underground town in Shinjuku.'
 (Saito (1982) 3:33)

- (51) Kokuritsu-daigaku ga chihoo no kookoosei
 national university NOM region GEN high school student
 {ga/ni(totte)} hairi-yasui
 NOM/for enter-easy
 'It is easy(easier) for high school students from the area outside Tokyo to
 enter national universities.' (Saito (1982) 3:32)

Concerning this phenomenon, Saito (1982) has an insightful claim : the more self-controllable the action denoted by the complement's predicate is, the more tendency there is for *ni(totte)* marking to be preferred over *ga* marking. In (48), (49), and (50) above, the predicates of the complements of the tough morphemes denote un-self-controllable actions. Thus, their subjects do not get *ni(totte)* marking. Also, in (51), semantically, entering universities denotes both controllable and un-controllable situations : the former concerns the determination on the part of its subject as to whether or not he or she will attend a school ; the latter has to do with uncontrollable factors like entrance examinations, committee decisions, etc. This is why the subject of *yasui*'s 'easy' complement can take either *ga* or *ni(totte)*. Moreover, in the following example, since the action denoted by the complement verb *damasu* 'to deceive' always implies volition on the part of the subject, and hence self-controllability, its *ni(totte)* marking is strongly preferred over *ga* marking.

- (52) John ga Mary { ? *ga/ni(totte) } damashi-yasui
 NOM NOM/for deceive-easy
 'John is easy for Mary to deceive.' (Saito (1982) 3:30)

However, as Saito notices, whether or not the complement's predicate is interpreted as self-controllable depends crucially on the context. Hence, the mechanism of the grammar which determines the choice between *ni(totte)* and *ga* seems to be a semantic one. Thus, in our analysis, we suggest that the *ni(totte)* marking of the SUBJ of the tough COMP is due to the special semantic factors triggered by the suffixation of the tough morpheme, while *ga* is the default case marking of the tough complement's subject.

In addition, we conjecture that the element marked by *ni(totte)* is an instance of an ADJUNCT carrying the morphological marker *ni(totte)* which is located outside of the tough COMP and is semantically linked to the tough COMP's SUBJ slot. This possibility is supported by the presence of other instances of semantic argument linking in Japanese. Consider examples in (53).

- (53) a. Gityoo ga kaikai o sengen-shita
 chairman NOM opening of the meeting ACC announced
 'The chairman announced the opening of the meeting.' (Inoue (1976) 2:5.b)
 b. Kaikai ga gityoo {niyotte/kara}
 opening of the meeting NOM chairman by/from

sengens-are-ta

announce-*passive-past*

'The opening of the meeting was announced {by/from} the chairman.(lit.)'

(Inoue (1976) 2:41.b, with modification)

(53.b) is a passivized version of the sentence in (53.a). Here, the oblique argument of the passive verb *sengen-s-are-ta* 'was announced' can be marked either by the canonical passive oblique (OBL_{agent}) marker *niyotte* or else *kara*, which semantically designates source. Notice this is analogous to the linking of the element marked by *ni(totte)* to the SUBJ slot of a tough COMP. It is a property of the semantics that licenses the linking of the argument marked by *kara* to the OBL_{agent} argument slot for passive predicate.

Furthermore, there is a generalization about long-distance preposing which states that a complement's subject cannot be preposed long-distance (Kuno (1976), Saito (1985)). Our idea that the element marked by *ni(totte)* is semantically linked to the SUBJ of the tough COMP and is not itself the SUBJ of the tough COMP predicts that it is subject to long-distance preposing to the sentence initial position. Consider the following sentences.

- (54) a. John ga Mary Mary ni(totte) ichiban nayami o noodanshi-yasui
 NOM for most problem ACC consult-easy
 'John is the easiest for Mary to consult self's problems. (lit.)'
 b. Mary ni(totte) John gb ichiban nayami o soodanshi-yasui
 for NOM most problem ACC consult-easy
 'John is the easiest for Mary to consult self's problems. (lit.)'

In (54.b), *Mary ni(totte)* 'for Mary' in (54.a) is preposed to the sentence initial position. And the result is perfectly grammatical. Note that if the element marked by *ni(totte)* were really the SUBJ of the tough morpheme's complement, thus, located in the tough COMP's SUBJ position, then, the above generalization would expect (54.b) to be ungrammatical. However, our analysis which considers it as a matrix ADJUNCT that is semantically linked to the SUBJ of the tough COMP, however, readily explains the grammaticality of (54.6).

Moreover, the correctness of the idea that the *ga* marked counterpart of the *ni(totte)* NP in TC-Non-S sentences is itself in fact the SUBJ of the tough COMP syntactically is shown in terms of the examples like (55).

- (55) a. Kokuritsu-daigaku ga chihoo no kookoosei
 national university NOM region GEN high school student
 {ga/ni(totte)} hairi-yasui
 NOM/for enter-easy
 'It is easy(easier) for high school students from the area outside Tokyo
 to enter national universities.' (Saito (1982) 3:32)

- b. *Chihoo no kookoosei ga kokuritsu-daigaku ga hairi-yasui
 region GEN high school student NOM notional university NOM enter-easy
 'It is easy(easier) for high school students from the area outside Tokyo
 to enter national universities.'
- c. Chihoo no kookoosei ni(totte) kokuritsu-daigaku
 region GEN high school student for national university
 ga hairi-yasui
 NOM enter-easy
 'It is easy(easier) for high school students from the area outside Tokyo
 to enter national universities.'

As we discussed above, the tough COMP's SUBJ in (55.1) is realized either by *ga* or by *ni(totte)*. Notice in (55.b) and (55.c) that the *ga* marked instance cannot be preposed while the *ni(totte)* marked equivalent can. This is predicted if we assume that the *ni(totte)* marked argument is itself not the SUBJ of the tough COMP, while the *ga* marked argument is. Here it is important to note, as we discussed earlier in this paper, that the ill-formedness of (55.b) is not simply due to the parsing problem which arises when there are two consecutive occurrences of *ga* marked elements in the same sentence. This claim is supported by the genuine ungrammaticality of the type which is seen in the long-distance preposing of a complement subject that is marked by the dative marker *ni*. The relevant examples are repeated in the following.

- (56) a. Takashi ga [Yamashita-sensei ni onnanoko mo aru] to omotteiru
 NOM Prof. DAT daughter also have COMP think
 'Takashi thinks that Prof. Yamashita has a daughter, too.'
- b. ?*Yamashita-sensei_i ni Takashi ga [_i onnanoko mo aru]
 Prof. DAT NOM daughter also have
 to omotte-iru
 COMP think
 'Takashi thinks that Prof. Yamashita has a daughter, too.'

2.2.3. The Tough Construction and Nominalization

Now, how does our analysis of the tough constructions in Japanese interact with nominalization?

Kaplan and Bresnan (1982) analyze the subject of the tough construction in English as non-thematic. It is shown that the tough construction in English is borne by the following lexical entry for the adjectives like *tough*, *easy*, *difficult*, *hard*, etc. which trigger this construction.

- (57) tough A 'tough<(↑ COMP)>(↑ SUBJ)
 (↑ COMP TOPIC)=(↑ SUBJ)

(Kaplan and Bresnan (1982) 167 with change)

Notice that the above analysis of the tough construction in English is compatible with Rappaport's (1983) analysis of derived nominals in English. This is because a non-thematic element is not expected to appear as an argument to derived nominals in Rappaport's theory, and tough subjects behave exactly so with regard to nominalization. This point is illustrated in examples (58) and (59).

- (58) a. Mary is difficult to please.
 b. * Mary's difficulty to please
- (59) a. This problem is tough to solve.
 b. * This problem's toughness to solve

The fact that non-thematic arguments cannot appear as arguments to nominals is an automatic consequence of the theory of nominalization utilizing what Saiki (1987) called the Thematic Constancy Hypothesis (TCH). In TCH, the realization of nominal arguments is only sensitive to the thematic roles of the arguments to the corresponding verbal forms. Thus, the fact that arguments without thematic roles in English do not participate in nominalization is easily explained.

Given, as we discussed above, that the subject of the tough construction in Japanese is also non-thematic, the theory of nominalization based on TCH would predict that the nominalization of Japanese tough sentences leads us to ungrammaticality. This is, however, as the following example from Ishikawa (1985) shows, by no means the case.

- (60) a. John no koogi ga gakusei-tachi ni(totte) rikaishi-yasui
 GEN lecture NOM students for understand-easy
 'John's lecture is easy for the students to understand.'
- b. John no koogi no gakusei-tachi ni(totte) no
 GEN lecture GEN students for GEN
 rikaishi-yasu-sa
 understand-easy-*nominalizer*
 'John's lecture's easiness for the students to understand (lit.)'
 (Ishikawa (1985) 200.b, with change)

(61) is another set of examples which illustrates the possibility of nominalizing the Japanese tough construction.

- (61) a. S-sya no seihin ga koware-nikui
 S-company GEN product NOM break-difficult
 'It is difficult for the product of company S to break.'
- b. S-sya no seihin no koware-niku-sa
 S-company GEN product GEN break-difficult-*nominalizer*
 'Company S's product's difficulty to break (lit.)'

In the theory of nominalization based on the Functional Constancy Hypothesis (FCH) introduced in Saiki(1987), however, the above phenomenon is readily captured. FCH captures the parallelism between the arguments of derived nominals and those of corresponding verbal forms on the level of grammatical functions. More specifically, it suggests that there is a direct syntactic correspondence between verbals and their corresponding nominals and they share the same predicate-argument structures. And Saiki claims that Japanese is one of the languages whose nominalization phenomenon is most suitably explained utilizing FCH. In LFG, semantically empty formatives are also considered to qualify as governors of grammatical functions (Kaplan and Bresnan (1982)). Thus, the fact that a tough subject in Japanese, though non-thematic, is associated with a grammatical function is expected. And, as argued above, it is identified as a carrier of the grammatical function SUBJ with regard to the tough morpheme. Hence, in FCH, that is, the theory of nominalization which is based on grammatical functions of arguments, the tough SUBJs are readily predicted to occur as arguments to nominals despite the fact that they are semantically empty. This prediction is borne out by the data in (59) and (60) above.

3. The Tough Construction in English

Before we conclude this paper, we would like to take a brief look at the tough construction in English taking Kaplan and Bresnan's (1982) analysis of the tough construction in English which we touched on above into account. If we compare our lexical entry for tough morphemes in Japanese which is stated in (37) with Kaplan and Bresnan's (1982) lexical entry for the tough adjectives in English which is stated in (57), we notice that they are identical. However, in addition to the fact that (57) is a separate word while (37) is a suffix which is concatenated with verbs in the lexicon, there is a crucial syntactic difference between them with regard to the long-distance dependency relation emanating from the discourse function TOPIC inside the COMP.

It seems invariably possible to tough-move non-subject despite how deep they are embedded within the complement of tough as we can see in the following sentences.

- (62) a. This book_{*i*} is easy to read *e_i*.
 b. Mary_{*i*} is tough for me to believe that John would ever marry *e_i*.
(Kaplan and Bresnan (1982) 166)
 c. Sea-weed_{*i*} is difficult to persuade anyone to eat *e_i*.
 d. This kind of movie_{*i*} is easy for me to believe that no one would pay money to see *e_i*.

However, notice that in English one cannot extract subjects by tough movement.

- (63) a. *John_{*i*} is difficult *e_i* to walk.
 b. *Bill_{*i*} is easy for me to suggest *e_i* should work harder.

- c. *Mary_i is tough for me to believe e_i will go back to college next year.

This suggests that there is a SUBJ versus non-SUBJ asymmetry in English with respect to tough movement in that the TOPIC inside the tough COMP is functionally linked to some element identified as non-SUBJ within the COMP but never to a SUBJ.

As for Japanese, we claimed earlier in this paper that the relation between the tough COMP's TOPIC and some element inside the COMP which is to be captured by the mechanism of functional uncertainty (Kaplan and Zaenen (1985)) does not exhibit such an asymmetry like English. Thus, given the foregoing observation on the tough constructions in English and Japanese, we can state the difference in the two languages in terms of the LFG mechanisms as follows: in English, the functional uncertainty path emanating from the tough COMP's TOPIC chooses non-SUBJ as its destination, whereas in Japanese, it chooses either SUBJ or non-SUBJ as its destination.

4. Conclusion

In this paper, we have discussed an analysis of the tough construction in Japanese in the framework of LFG. Our proposal was, in short, that the construction is analogous to the tough construction in English which is introduced in Bresnan (1982). Specifically, we posited a complex f-structure for a tough sentence whose complement's TOPIC plays a crucial role in capturing the difference between the tough construction in English and that in Japanese. This TOPIC function was equated with the tough SUBJ while pursuing its functional uncertainty path inside the f-structure where it occurs. What was argued to be the difference between the tough construction in English and that in Japanese was that in the former this functional uncertainty path chose only non-SUBJ as its destination while in the latter it chose either SUBJ or non-SUBJ, which incidentally led linguists like Saito (1982) to posit two different syntactic structures to explain this point in the construction.

FOOTNOTES

* This paper is a revised version of Chapter 6 of Saiki (1987).

The same version of this paper also appears in *Gengo no Sekai* Vol. 8, No. 1-2, M. Ootsuki ed.

1. Later in this paper, we argue for the possibility to analyze the *ga* marked element to be linked to an ADJUNCT argument of *seikyuu-suru* 'to claim'.
2. The SUBJ of *yasu* is located outside of the angle brackets. This notation is intended to express the non-thematic-ness of a given argument in LFG.
3. The *ni(totte)* argument in (38.a) shows up in the SUBJ position in the complement of *yasu*. However, later in this paper, it is going to be argued that an element which is marked with *ni(totte)* is an ADJUNCT which is semantically linked to the SUBJ of the complement. Thus, the identification of this *ni(totte)* argument within f-structures is subject to change in the later discussion.

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