Title	Forward Reflexivization in Japanese Reconsidered
Author(s)	Sugimoto, Takashi
Citation	大阪外国語大学学報. 1983, 62, p. 55-77
Version Type	VoR
URL	https://hdl.handle.net/11094/80952
rights	
Note	

Forward Reflexivization in Japanese Reconsidered

Takashi Sugimoto

Abstract

The purpose of this paper[0] is to discuss several conditions that pertain to the rule of Reflexivization in Japanese, reexamine them within the general framework of Montague Grammar (MG), and propose our analysis of it. Section 1 deals with Reflexivization itself; section 2 is a brief sketch of how Reflexivization may interact with other rules of grammar — especially Passivization and Causativization. I will assume some familiarity with MG and generative grammars on the part of the reader. (For these approaches, the reader is referred to Dowty et al. (1981), Partee (1975), etc. among many others.) The rules of the grammar in this discussion are taken to be all unordered and optional.

1. Reflexivization and pronominalization.

1.0. Pronoun binding.

Pronominal expressions have two major functions:
1) they are referentially bound with some other nominal expressions, and 2) they deictically refer:

1) i. Reflexives.

    a. minna-ga zibun-o sonkeisuru

       every (one) self respect

       "Everyone respects himself."

    b. Taroo-wa   zibun-ga   warui   to   omou

       Taroo   self   wrong   comp. think

       "Taroo$_j$ thinks he$_j$ is wrong."

  ii. Pronouns.

    a. Hanako-wa Taroo-to kare-nituite hanasu

       Hanako Taroo-with he-about talk

       "Hanako talks with Taroo about him."

    b. Hanako-wa   Taroo-ni   kare-no   heya-de   butareta

       Hanako   Taroo-by   he-'s   room-in   was slapped

       "Hanako was slapped by Taroo in his room."

2) i. Reflexives.

    (No deictic use.[1])

  ii. Pronouns.

    a. <u>kare-ga</u>   <u>odoru</u>

      <u>he</u>   <u>dance</u>

      "He dances."

    b. <u>Hanako-wa</u>   <u>kare-ga</u>   <u>suki</u>   <u>da</u>

      <u>Hanako</u>   <u>he</u>   <u>is fond of</u>

      "Hanako likes him."

The reflexive <u>zibun,</u> which does not change form according to person or number, may be called a "pure" pronoun since it is the only item that has to be always bound by some occurrence of a noun; the occurrence of <u>zibun</u> presupposes an occurrence of a nominal expression with which it is referentially bound.

1.1   Reflexivization.

   The standard transformational formulation of (forward) <u>Reflexivization</u>[2] in generative grammar (hereafter the standard approach/treatment) may be roughly characterized as follows.[3]

3) Reflexivization

        NP, X, NP

         1, 2, 3 ----->

         1, 2, <u>zibun</u>

             where   i) 1=3,

                     ii) 1 is a subject,

                    iii) 1 commands 3,

                    iv) 1 is a human or higher animate noun, and

                    v) obligatory if 1 and 3 are t-daughters.

Furthermore, <u>Reflexivization</u> is cyclical and ordered after <u>Passivization</u>. Let us discuss each of these conditions in the following subsections and see how we may characterize reflexivization in our grammar (cf. footnote 2), which is free of rule ordering and obligatory rule application.

1.1.1. Condition (i) : 1 = 3.

   This condition simply says, in part, that the reflexive <u>zibun</u> is referentially bound with another NP, which as we pointed out in section 1.0 has no exception to it. We have, for instance, no sentence like:

4) Hanako-ga zubun-o nagutta

   Hanako self hit

   (lit.) "Hanako hit self."

with the reading on which Hanako hit someone other than herself. A difficulty arises, as is almost always the case with any formulation in transformational grammar, when 1 (= the subject) is a quantified expression. A typical example, borrowed from Hasegawa (1980: 12), is:

5) (=Hasegawa's (19))

    a. Nihonzin zenbu-ga nihonzin zenbu-o sonkei shi-te-i-ru

       Japanese all   SM Japanese all   OM respect-prog. -pres.

       "All of the Japanese respect all of the Japanese."

    b. Nihonzin zenbu-ga zibun-o sonkei shi-te-i-ru

       "(lit.) All of the Japanese respect self."

Thus, though the subject nihonzin zenbu "all the Japanese" and the object nihonzin zenbu "all the Japanese" are identical in (a), the reflexivized version (b) means something totally different from (a); while we have very altruistic Japanese in (a), we have self-centered Japanese in (b).

The usual way out of indexing is of no use here since both the subject NP and the object NP are coreferential, so the argument goes, for they both refer to the same set of people. In general, it is a feature of a quantified expression that its repetition or pronominalization in a sentence results in different meanings. From a semantic point of view, this is more or less obvious considering the fact that quantified expressions are in a sense referentially closed because of a Quantifier that binds the variable. The problem that faces a grammar is then: given the condition 1 = 3 on Reflexivization as in (3), how can one generate both (5a) and (5b), and assign them proper meanings?

1.1.2. Condition (ii): 1 is a subject.

This simply says that it is the subject of a sentence that triggers (forward) Reflexivization. Again there is no exception to this[4]. Sentences like:
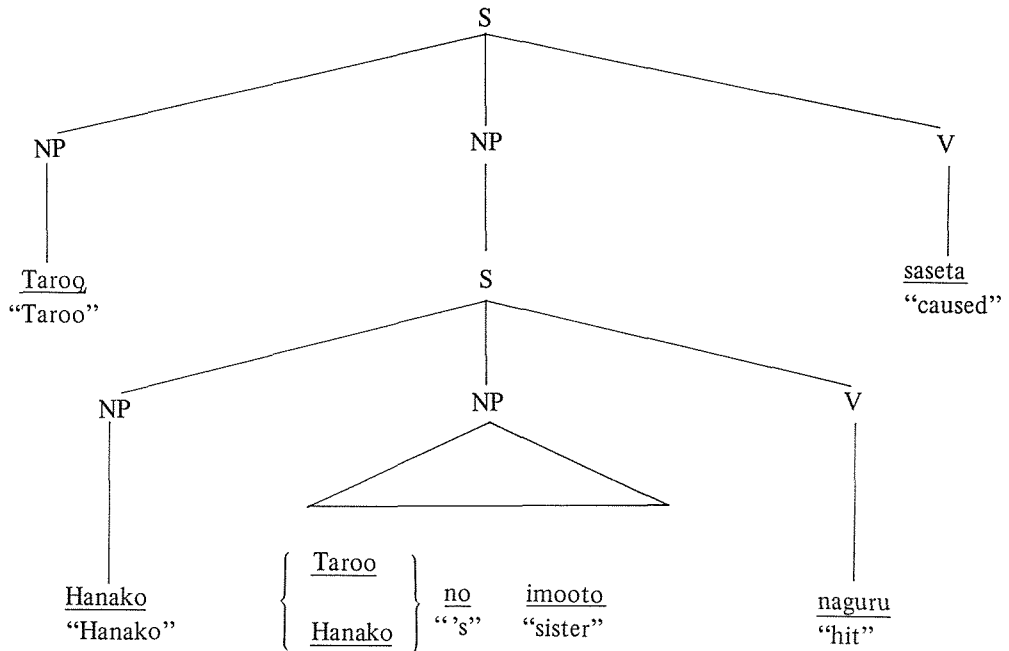
6) Taroo-wa Hanako-ni zibun-no imooto-o nagur-aseta

   Taroo   Hanako   self-'s   sister   hit-caused

   "Taroo caused Hanako to hit self's (i. e., his/her own) sister."

which appears to violate this condition on the surface, of course, are derived from a structure like the following via cyclic application of Reflexivization.

7)

```
                                S
           ┌────────────────────┼────────────────────┐
          NP                    NP                    V
           │                     │                    │
         Taroo,                  S                  saseta
         "Taroo"     ┌───────────┼───────────┐      "caused"
                    NP           NP           V
                     │        ┌──┴──┐         │
                   Hanako  ⎧ Taroo ⎫ no  imooto  naguru
                   "Hanako" ⎨       ⎬ "'s" "sister" "hit"
                           ⎩ Hanako ⎭
```

So, in the standard treatment, there is no exception whatsoever to the generalization that it is the subject of a sentence that triggers Reflexivization (again see footnotes 2 and 4).

1.1.3 Condition (iii) : 1 commands 3.

This condition is necessary to block sentences like:

8) a. *Hanako-ga kita koto-ga zibun-no imooto-o kanasim-
        Hanako came comp. self-'s sister feel sad-
        aseta
        caused
        "That Hanako_i came caused her_i own sister to feel sad."
    b. *Hanako-ga odotte zibun-ga utatta
        Hanako dance+and self sang
        "Hanako_i danced and she_i sang."

In (a), the subject of a subordinate clause has reflexivized an NP in the main clause; in (b), the subject of a coordinate sentence has reflexivized another NP in the other conjunct. Neither sentence is grammatical in Japanese; hence the condition (iii).

1.1.4 Condition (iv): 1 is a human or higher animate noun.

This condition, as may be obvious, is a hedge, there being no clear-cut definition of "higher animate nouns". Even if there should be such a definition, this condition cannot be a grammar internal one, but rather a pragmatic condition that is most likely to show speaker-to-speaker

variation. I have nothing to say about this condition in our formulation of Reflexivization below; it is simply disregarded.

1.1.5 Condition (v): obligatory if 1 and 3 are t-daughters.

This condition is usually attached to account for a contrast in grammaticality like the following:

9) a. Taroo-ga zibun-o aisiteiru
      Taroo   self   love
      "Taroo loves himself."
   b. ? Taroo-ga Taroo-o aisiteiru
        Taroo   Taroo   love
        "Taroo loves Taroo."

Compare this pair with the following:

10) a. Taroo-ga zibun-no heya-ni   iru
       Taroo   self-'s   room-in   is
       "Taroo is in his own room."
    b. Taroo-ga Taroo-no heya-ni   iru
       Taroo   Taroo-'s   room-in   is
       "Taroo is in Taroo's room."

With respect to Taroo, the only difference between (9b) and (10b) is that while the former has it as a direct object, hence a t-daughter[5], the latter has it as part of a larger NP, hence not a t-daughter. Since (10a) and (10b) are both perfectly normal sentences, it is natural, within the standard formulation, to require that Reflexivization be obligatory when condition (v) is met, while optional otherwise. But here, the standard approach comes to an impasse because of examples like (5a) and (5b), where it was noted that (5a) is not to be converted to (5b). To repeat the point noted there, whenever the controller and the controllée are quantified expressions, even when both are t-daughters, Reflexivization must be blocked; but then there arises the problem of how one may produce the reflexivized version like (5b) with a proper assignment of meaning.

It is not at all clear whether one should exclude a sentence like (9b) from a set of well-formed sentences of Japanese. Note first that when the NP involved is first-person pronoun or second-person pronoun, both versions are perfectly normal:

11) i. a. watasi-wa watasi-o aisiteiru
         I   I   love
         "I love myself (lit. me)."

b. watasi-wa zibun-o aisiteiru

    I   self   love

    "I love myself."

ii. a. anata-wa anata-o aisiteiru

    you   you   love

    "You love yourself (lit. you)."

b. anata-wa zibun-o aisiteiru

    you   self   love

    "You love yourself."

Second, there is at least one context in which sentences like (9b) must be retained as well-formed. Kuno (1973: 49ff) notes that one of the main usages of the particle -ga is to indicate exhaustive listing, by which he means that a sentence like the following could mean either (a), in which case it is called neutral description, or (b), which is called exhaustive listing.

12) Zyon-ga sinda

John   died

"John died."

    a. "John died." (statement of an event)

    b. "John, and only John died."

Thus exhaustive listing -ga indicates that only the NP preceding it has the property expressed by the predicate. When we have this reading, a sentence like (9b) must be considered as a fully grammatical sentence, for notice that the following sentences express different meanings.

13) a. Taroo-ga Taroo-o aisiteiru nodeari hokano minna-wa

    Taroo   Taroo   love   but   everyone else

    soo de nai

    is not so

    "Only Taroo loves Taroo, but no one else loves him."

b. Taroo-ga zibun-o aisiteiru nodeari hokano minna-wa

    Taroo   self   love   but   everyone else

    soo de nai

    is not so

    "Only Taroo loves himself, but no one else does."

It appears to me that Condition (v) is normally meant to exclude strange sentences like the following:

14)　a.　kare$_i$ -ga　kare$_i$ -o aisiteiru

　　　he$_i$　　　he$_i$　　　love

　　　"He$_i$ loves him$_i$."

　　b.　Hanako-no　suki na　　hito-ga　　Hanako-no　　suki na　　hito-o

　　　Hanako　　fond of　person　　Hanako　　　fond of　　person

　　　aisiteiru

　　　love

　　　"The man who Hanako is fond of loves the man who Hanako is fond of."

In each sentence, if the coreferentiality between the subject and the object is intended, the entire sentence sounds very odd, unless the object is replaced by the reflexive zibun: (a) involves the third person pronoun kare while (b) involves a relative clause (and, in general, a non-basic expression). Semantically, such oddity is more or less predicted; in the case of (a), the sentence sounds odd because of the double usage of the third person pronoun either as a bound pronoun or as a deictic pronoun, there being no guarantee that the second pronoun kare is not a deictic pronoun; in the case of (b), as the English gloss suggests, the relative clause construction is a kind of a quantified expression, hence the repetition of two identical quantified expressions would suggest that different references are intended (cf. (5)). In fact any CN, when appearing alone, behaves like (14b) with respect to Reflexivization. Thus:

15)　a.　syoonen-ga　syoonen-o　aisiteiru

　　　boy　　　　boy　　　　love

　　　　　i.　"A boy loves a boy."

　　　　　ii.　*?"A boy loves himself."

　　b.　syoonen-ga　zibun-o　aisiteiru

　　　boy　　　　self　　　love

　　　"A boy loves himself."

Thus, these CNs are in a sense behaving like quantified expressions, a point which we cannot go into in this paper. (For discussion see Sugimoto (1982: Chapter VI).) In conclusion, I will regard (9b) well-formed in Japanese, alongside of (11), but consider (14) and (15a), when coreference is intended between the subject and the object, as ill-formed.[6]

1.1.6. Our formulation.

We consider (forward) Reflexivization as part of sentence formation from expressions of categories T and IV of the following sort:

16) a) i. If $\alpha \in P_T$ and has the form $[\underline{kare}_n]_T$ $(n \geq 0)$, $\beta \in P_{IV}$, then F_0 $(\alpha, \beta) \in P_t$, where F_0 $(\alpha, \beta) = [[\alpha -]_1 \gamma']_t$, where γ' is the result of replacing every occurrence of $[\underline{kare}_n]_T$ $(n \geq 0)$ in γ by $[\underline{zibun}]_T$, where $\beta = [\gamma]_{IV}$.

   ii. If $\alpha \in P_T$ and does not have the form $[\underline{kare}_n]_T$ $(n \geq 0)$, $\beta \in P_{IV}$, then F_1 $(\alpha, \beta) \in P_T$, where F_1 $(\alpha, \beta) = [[\alpha -]_1 \gamma]_t$, where $\beta = [\gamma]_{IV}$.

   b) i. If $\alpha \in P_T$, $\beta \in P_{IV}$, and α, β translate as α', β' respectively, then F_0 (α, β), F_1 (α, β) translate as α' $(^\wedge \beta')$.

The effect of (16) with respect to Reflexivization is that whenever a pronominal subject combines with an intransitive verb phrase, any other pronoun that is coreferential with it (i. e., any pronoun with the same subscript as the subject pronoun) is replaced by a reflexive pronoun zibun; otherwise there is no syntactic change except the simple concatenation of subject and the verb to form a sentence. Let us briefly see how the five conditions presented above are reflected in our rule.

Condition (i) is reflected by our requiring that the pronouns to be replaced by the reflexive zibun have the same subscript numeral as the subject pronoun. The difficulty noted with respect to quantifiers (cf. (5)) never arises since our way of requiring coreferentiality is only on the level of individuals. Sentences like (5) are a problem to the standard formulation simply because it is blind to the distinction between group-level coreferentiality and individual-level coreferentiality. Take again (5); clearly to index the expression nihonzin zenbu "all of the Japanese" by an index is to index the group as a whole, while the predicate involved there, i.e., sonkei shi (sic!)-te-iru "respect" is an individual-level predicate. Since reflexivization depends on the reflexivity of the predicate, in cases like (5), we should be able to have indexing on the individual level, which is precisely what our formulation requires. In fact, while the problem is not very extensively discussed, whenever the predicate involved clearly holds, either by contexts or on its own meaning, of a group, the reflexive zibun is inappropriate:

17) a. iinkai-wa iinkai-no kettei-o musi-sita
       committee committee-'s decision disregarded
       "The committee disregarded the committee's decision."

   .b. *iinkai-wa zibun-no kettei-o musi-sita

Instead, we have to use the plural of <u>zibun</u>, that is, <u>zibuntati</u>:

18) <u>iinkai-wa</u> <u>zibuntati-no</u> <u>kettei-o</u> <u>musi-sita</u>

    <u>committee</u> <u>selves-'s</u> <u>decision</u> <u>disregarded</u>

    "The committee disregarded their own (lit. selves') decision."

It appears then that at least in part the distinction between <u>zibun</u> and its (semantic) plural <u>zibuntati</u> lies in the usage that while <u>zibun</u> indicates individual-level reflexivity, <u>zibuntati</u> indicates group-level reflexivity. Indeed if we replace <u>zibun</u> in (5b) by <u>zibuntati</u>, it appears we have a sentence synonymous to (5a)[7] (I have reverted to my own way of Romanization of Japanese in giving the following form.):

19) <u>nihonzin</u> <u>zenbu-ga</u> <u>zibuntati-o</u> <u>sonkei-si-te-iru</u>

   <u>Japanese all</u>   <u>selves</u>   <u>respect</u>

   "All the Japanese respect themselves/the Japanese."

At any rate, since our rule is formulated in such a way that reflexive <u>zibun</u> only indicates individual-level coreferentiality, the difficulty a standard approach faces with respect to sentences like (5) never arises, and both (5a) and (5b) are produced with correct reading (see (21) below).

As for Condition (ii), since our <u>Reflexivization</u> is part of the sentence formation, the subjecthood of the controller is automatically ensured. We will discuss examples like (7), where the so-called cyclic subject is involved in yielding reflexive pronouns later in section 2.

Condition (iii) is also a consequence of our rule since in our formulation, the controller must necessarily command the controllée, the former being the subject of the sentence to be formed.

The fourth condition, as we said, is to be disregarded in our grammar in the absence of any useful definition of "higher animate nouns".

Condition (v), as we pointed out, must be slightly altered; our rule is going to generate both (9a) and (9b), for instance, and at the same time block sentences like (14).

We present below abbreviated sample derivations of representative sentences, together with their translations.
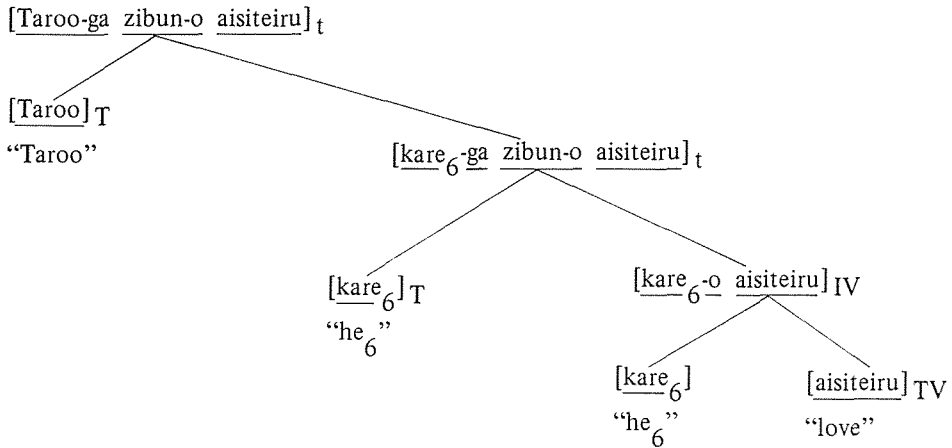
20) a. <u>Taroo-ga</u> <u>Taroo-o</u> <u>aisiteiru</u>

"Taroo loves Taroo."

[<u>Taroo-ga</u> <u>Taroo-o</u> <u>aisiteiru</u>]$_t$

[<u>Taroo</u>]$_T$

"Taroo"

[<u>Taroo-o</u> <u>aisiteiru</u>]$_{IV}$

[<u>Taroo</u>]$_T$

"Taroo"
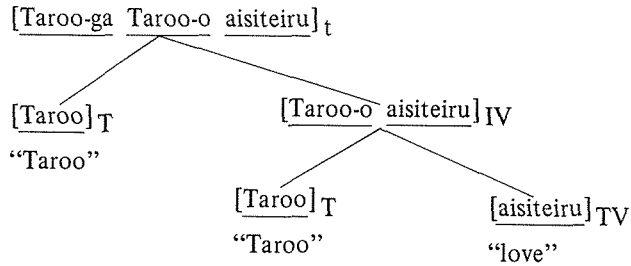
[<u>aisiteiru</u>]$_{TV}$

"love"

Translation: <u>aisuru'</u>$_*$(t,t)

b. <u>Taroo-ga</u> <u>zibun-o</u> <u>aisiteiru</u>

"Taroo loves himself."

[<u>Taroo-ga</u> <u>zibun-o</u> <u>aisiteiru</u>]$_t$

[<u>Taroo</u>]$_T$

"Taroo"

[<u>kare</u>$_6$<u>-ga</u> <u>zibun-o</u> <u>aisiteiru</u>]$_t$

[<u>kare</u>$_6$]$_T$

"he$_6$"

[<u>kare</u>$_6$<u>-o</u> <u>aisiteiru</u>]$_{IV}$

[<u>kare</u>$_6$]

"he$_6$"

[<u>aisiteiru</u>]$_{TV}$

"love"

Translation: $\lambda P \ \check{} \ P (t) \ (\hat{} \ \lambda x_6 \ \text{aisuru'}_* (x_6, x_6))$

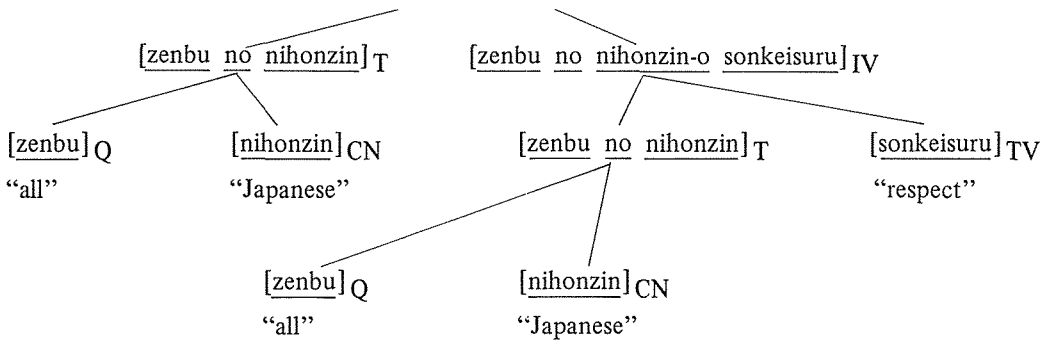-----> <u>aisuru'</u>$_*$(t, t)

21) a. <u>nihonzin</u> <u>zenbu-ga</u> <u>nihonzin</u> <u>zenbu-o</u> <u>sonkeisuru</u>

"All the Japanese respect all the Japanese."

[<u>nihonzin</u> <u>zenbu-ga</u> <u>nihonzin</u> <u>zenbu-o</u> <u>sonkeisuru</u>]$_t$

[<u>nihonzin</u> <u>zenbu-ga</u> <u>zenbu</u> <u>no</u> <u>nihonzin-o</u> <u>sonkeisuru</u>]$_t$

[<u>zenbu</u> <u>no</u> <u>nihonzin-ga</u> <u>zenbu</u> <u>no</u> <u>nihonzin-o</u> <u>sonkeisuru</u>]$_t$
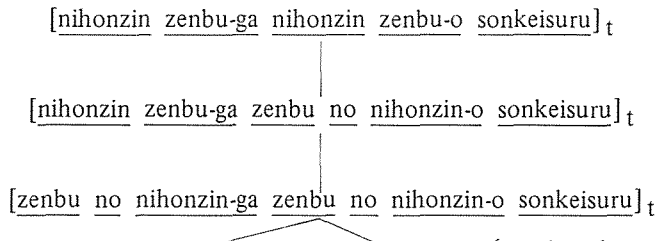
(continued on the next page)

64

[zenbu no nihonzin]$_T$ [zenbu no nihonzin-o sonkeisuru]$_{IV}$

[zenbu]$_Q$ [nihonzin]$_{CN}$ [zenbu no nihonzin]$_T$ [sonkeisuru]$_{TV}$
"all"   "Japanese"   "respect"

[zenbu]$_Q$ [nihonzin]$_{CN}$
"all"   "Japanese"

Translation: $(\forall x)$ [nihonzin$'$ (x)---➤ ($\forall y$) [nihonzin$'$ (y) ---➤ sonkeisuru$'$ $_*$ (x, y)]]

b. nihonzin zenbu-ga zibun-o sonkeisuru

(lit.) "All the Japanese respect self."

"Every Japanese respects himself."

[nihonzin zenbu-ga zibun-o sonkeisuru]$_t$

[zenbu no nihonzin-ga zibun-o sonkeisuru]$_t$

[zenbu no nihonzin]$_T$ [kare$_4$-ga zibun-o sonkeisuru]$_t$

[zenbu]$_Q$ [nihonzin]$_{CN}$ [kare$_4$]$_T$ [kare$_4$-o sonkeisuru]$_{IV}$
"all"   "Japanese"   "he$_4$"

[kare$_4$]$_T$ [sonkeisuru]$_{TV}$
"he$_4$"   "respect"
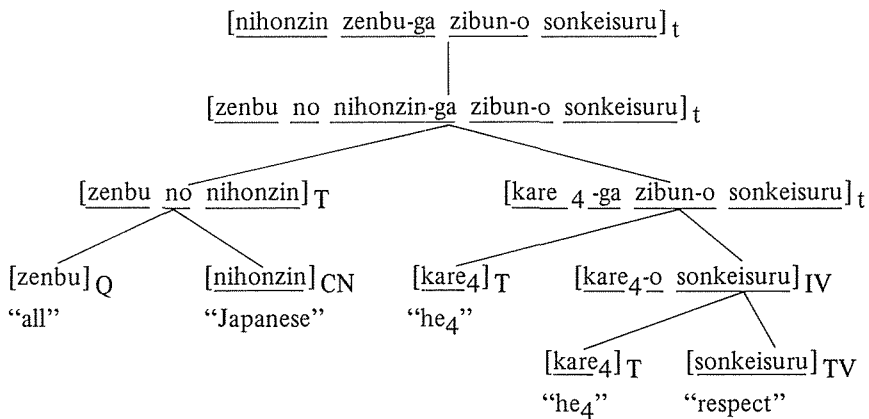
Translation: λQ $(\forall x)$ [nihonzin$'$ (x)---➤ $\smile$ Q(x)]

($^\wedge \lambda_4$ sonkeisuru$'$ $_*$ (x_4, x_4))

$(\forall x)$ [nihonzin$'$ (x)---➤ sonkeisuru$'$ $_*$(x,x)] .

We note that an ungrammatical sentence like (a) below as opposed to the grammatical (b), which contrast is normally explained in the standard approach by requiring that Reflexivization be cyclic and Q-float last cyclic and that Reflexivization precede Q-float, is never generated in our grammar.[8]

22) a. *sannin no syoonen-ga zibun-o sannin semeta
        three   boys   self   three   accused
        (lit.) "Three boys accused three self."
     b. sannin no syoonen-ga zibun-o semeta
        three   boy   self   accused
        (lit.) "Three boys accused self."

The derivation of (22b) parallels (21b); (22a) is never generated because our Reflexivization is a kind of a pronoun binding, and hence there is no occasion a full NP other than a pronoun gets reflexivized; furthermore, since (forward) Reflexivization is part of sentence formation and Q-float is a transformation that operates on a sentence, sentences like (22a) are a sheer impossibility. Thus the ungrammaticality of (22a) provides strong support for our approach, for note that should (22a) be grammatical, a standard approach would be able to accomodate this "fact" easily by ordering the last cyclic Q-float before Reflexivization in the final cycle while there would be no way for our approach to account for it. Thus, while the ungrammaticality of (22a) is rather an arbitrary matter of rule ordering in the standard approach, our approach predicts that sentences like (22a) cannot be grammatical under any circumstances if reflexivization is a process of pronoun binding.[9]

1.1.7. Reflexive Coreference Constraint (RCC)

Howard and Niyekawa-Howard (1976) pointed out that a sentence like the following can be only two-ways ambiguous rather than the expected four-way ambiguity.

23) Taroo-wa Hanako-ga zibun-no heya-de zibun-no imooto-o
     Taroo   Hanako   self-'s   room-in self-'s   sister

     nagutta to   omotta
     hit   comp.   thought
     (lit.) "Taroo thought that Hanako hit self's sister in self's room"
            i. ". . . . . his own sister in his own room."
            ii. ". . . . . her own sister in her own room."
            iii.*". . . . . his own sister in her own room."

66

iv.*" . . . . her own sister in his own room."

They proposed that this be explained by a constraint in Japanese of the following sort, which they called Reflexive Coreference Constraint, or RCC (Howard and Niyekawa-Howard (1976: 229))[10]:

24) Reflexive Coreference Constraint (RCC)

> Two instances of the reflexive pronoun zibun commanded by the same pair of possible antecedents must be coreferential. If they are not, the sentence is marked as ungrammatical.

Since our grammar (and probably any version of transformational grammar) is going to wrongly predict the four readings above for (23), some kind of constraint like the RCC must be incorporated somehow in the system. While a solution based on RCC-like perceptual strategy may at first look appealing, this should not perhaps be pursued as a possible explanation. For note that unlike the usual case of quantifier scopes, the readings given in (23) are not based on likely and unlikely, but rather possible and impossible. In other words, the sentence in (23) is grammatical with the readings (i) and (ii), and ungrammatical with (iii) and (iv). The distinction is clear-cut. And where grammaticality is involved, the perceptual strategy seems to make no sense, for such a strategy is at best a convenient short-cut for arriving at the preferred or likely reading of a grammatical sentence. I do not know why we have a constraint like RCC in Japanese; to be sure, it would be very confusing without such a constraint, but this does not explain why. For the meantime I will resort to a makeshift solution and propose the following surface constraint, based on RCC, which presumably is a constraint to adjust forms of the output of the syntax.

25) Surface RCC

> A sentence that has differently indexed multiple occurrences of zibun that command each other is ungrammatical.

Accordingly we replace $[zibun]_T$ in part (i) of (16a) by $[zibun_n]_T$. (25) will mark, for instance, (23) with the reading (iii) ungrammatical because it then would have the following structure:

26) Taroo-wa [Hanako-ga zibun$_6$ -no heya-de zibun$_8$ -no imooto-o

nagutta]$_t$ to omotta.

Since differently indexed occurrences of zibun, zibun$_6$ and zibun$_8$ command each other, the sentence is marked as ungrammatical by (25).[11]
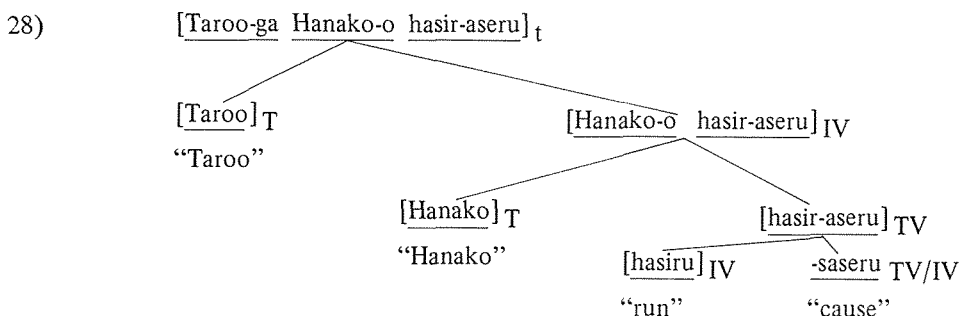

2.   Reflexives and other constructions.

In this section we will take up three constructions — causative, indirect passive, and direct passive — in Japanese, briefly outline the syntax of each, and outline how Reflexivization may interact with each construction. (For fuller treatment of these and other related constructions, see Sugimoto (1982: Chapter V).)

2.1   Reflexives and causatives.

We regard causativization to be a process that derives an expression of category TV from an expression of category IV and a causative suffix - saseru, which is of category TV/IV. Disregarding the distinction between the o-causative and the ni-causative (both syntactic and semantic problems related with these constructions are treated more fully in Sugimoto (loc. cit.)), (27), for instance, may be derived as in (28).

27)   Taroo-ga   Hanako-o   hasir-aseru

Taroo   Hanako   run-cause

"Taroo makes Hanako run."

28)   [Taroo-ga   Hanako-o   hasir-aseru]$_t$

[Taroo]$_T$ [Hanako-o   hasir-aseru]$_{IV}$
"Taroo"

[Hanako]$_T$ [hasir-aseru]$_{TV}$
"Hanako"   [hasiru]$_{IV}$ -saseru$_{TV/IV}$
"run"   "cause"

Since this analysis of causative constructions does not have any complement sentences (as opposed to the standard treatment), the referential ambiguity involving the use of reflexive pronoun zibun (cf. section 1.1 above) as in:

29) <u>Taroo-ga</u> <u>Hanako-ni</u> <u>zibun-no-heya-o</u> <u>soozis-aseru</u>
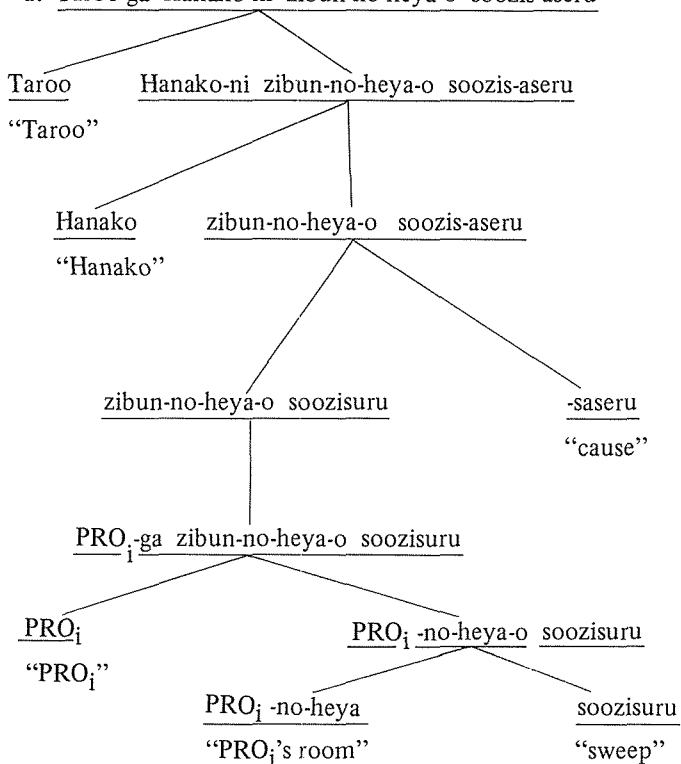   <u>Taroo</u>　　<u>Hanako</u>　　<u>self-'s-room</u>　　<u>sweep-cause</u>

    i. "Taroo makes Hanako sweep her own room."
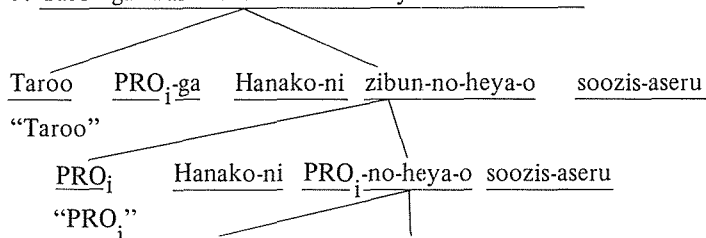
    ii. "Taroo makes Hanako sweep his own room."

may not be so obvious. But our analysis predicts such ambiguity as is clear from the following analysis trees: the analysis tree (a) corresponds to reading (i) above, and (b) to reading (ii). (We assume here a rule of Derived IV that derives an expression of category IV from sentences with pronominal subjects; see Sugimoto (loc. cit.))):
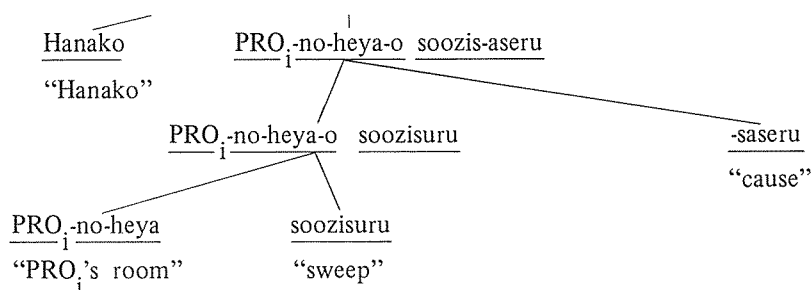
30)

a. <u>Taroo-ga Hanako-ni zibun-no-heya-o soozis-aseru</u>

<u>Taroo</u>　　　<u>Hanako-ni zibun-no-heya-o soozis-aseru</u>
"Taroo"

    <u>Hanako</u>　　<u>zibun-no-heya-o soozis-aseru</u>
    "Hanako"

       <u>zibun-no-heya-o soozisuru</u>　　　　　<u>-saseru</u>
                                           "cause"

          <u>PRO$_i$-ga zibun-no-heya-o soozisuru</u>

      <u>PRO$_i$</u>　　　　　　　<u>PRO$_i$ -no-heya-o soozisuru</u>
      "PRO$_i$"

            <u>PRO$_i$ -no-heya</u>　　　　<u>soozisuru</u>
            "PRO$_i$'s room"　　　　"sweep"

b. <u>Taroo-ga Hanako-ni zibun-no-heya-o soozis-aseru</u>

<u>Taroo</u>　<u>PRO$_i$-ga</u>　<u>Hanako-ni</u> <u>zibun-no-heya-o</u>　<u>soozis-aseru</u>
"Taroo"

    <u>PRO$_i$</u>　　<u>Hanako-ni</u> <u>PRO$_i$-no-heya-o</u> <u>soozis-aseru</u>
    "PRO$_i$"

Hanako   PRO$_i$-no-heya-o soozis-aseru

"Hanako"

           PRO$_i$-no-heya-o soozisuru   -saseru

                                                              "cause"

PRO$_i$-no-heya   soozisuru

"PRO$_i$'s room"   "sweep"

2.2. Indirect passive and reflexivization.

The rule that forms indirect passives may be viewed as a process that derives an expression of category IV from a sentence and a passive suffix -rareru so that (31), for instance, may be generated in the manner indicated in (32). (Cf. Sugimoto (1982))

31) Taroo-ga Hanako-ni hasir-areru

    Taroo   Hanako   run-IndPass

    (lit.) "Taroo is run by Hanako."

    "Taroo is adversely affected by Hanako's running."

32)   [Taroo-ga Hanako-ni hasir-areru]$_t$

        [Taroo]$_T$ [Hanako-ni hasir-areru]$_{IV}$

        "Taroo"   [Hanako-ga hasiru]$_t$ -rareru

                    "Hanako runs."   IndPass   IV/t

Formulated in this way, indirect passives do not present much of a problem to reflexivization since, as may be easily guessed at, this does not create any "new" subject like direct passives; hence Reflexivization, which in effect is a statement of dependency of reference between subject and non-subject, should not be affected in any significant way if indirect passives are formulated the way we do (or as in the standard literature where -rareru takes a complement). A sentence like the following is ambiguous as to the reference of zibun; it could be either Taroo or Hanako.
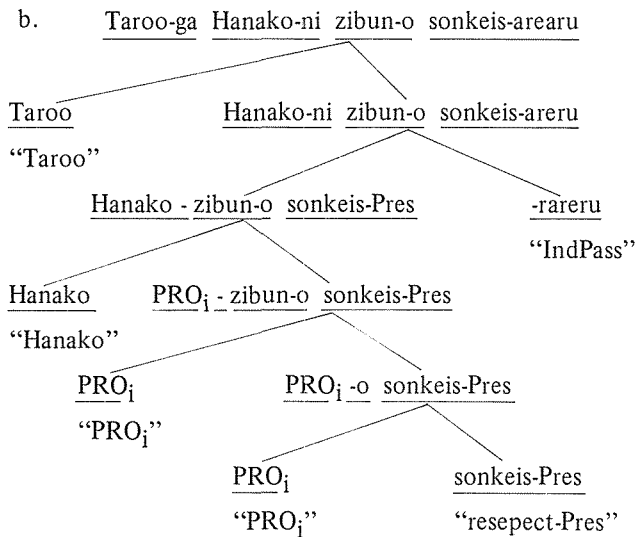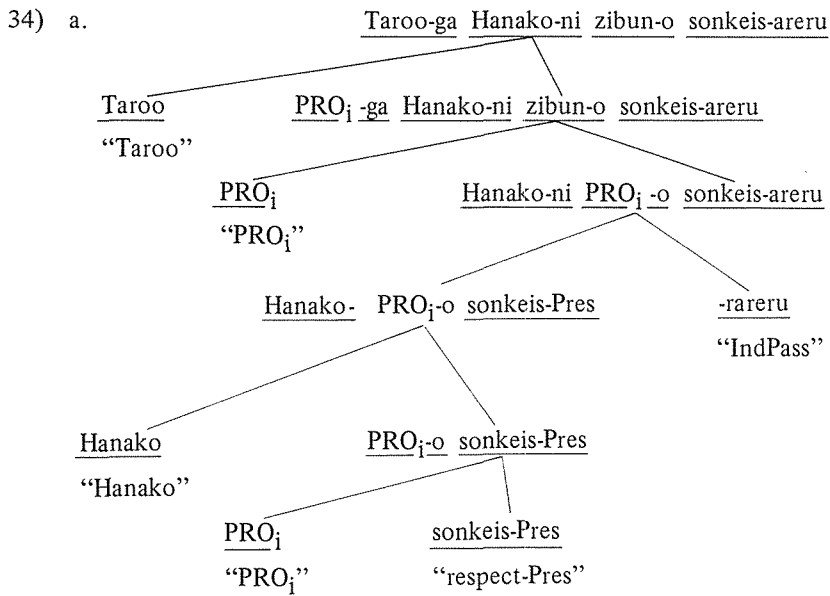
33) Taroo-ga Hanako-ni zibun-o sonkeis-areru

    Taroo   Hanako-by self   respect-IndPass

    (lit.) "Taroo   is   respected   self   by   Hanako."

    i. "Taroo$_i$ is adversely affected by Hanako's respecting

        him$_i$."

    ii. "Taroo is adversely affected by Hanako's respecting

herself."

The analysis trees for these readings are (a), (b) below respectively:

34) a.

Taroo-ga Hanako-ni zibun-o sonkeis-areru

Taroo — "Taroo"

PRO$_i$ -ga Hanako-ni zibun-o sonkeis-areru

PRO$_i$ — "PRO$_i$"

Hanako-ni PRO$_i$ -o sonkeis-areru

Hanako- PRO$_i$-o sonkeis-Pres

-rareru — "IndPass"

Hanako — "Hanako"

PRO$_i$-o sonkeis-Pres

PRO$_i$ — "PRO$_i$"

sonkeis-Pres — "respect-Pres"

b.

Taroo-ga Hanako-ni zibun-o sonkeis-arearu

Taroo — "Taroo"

Hanako-ni zibun-o sonkeis-areru

Hanako - zibun-o sonkeis-Pres

-rareru — "IndPass"

Hanako — "Hanako"

PRO$_i$ - zibun-o sonkeis-Pres

PRO$_i$ — "PRO$_i$"

PRO$_i$ -o sonkeis-Pres

PRO$_i$ — "PRO$_i$"

sonkeis-Pres — "resepect-Pres"

2.3. Direct passive and reflexivization.

I first outline why, in the standard treatment, Passivization has to be ordered before Reflexivization. Unlike the case of indirect passives, a sentence like the following does not show referential

ambiguity as to the reference of <u>zibun</u>:

35) <u>Taroo-ga Hanako-ni zibun-no-heya-de nagur-areru</u>

<u>Taroo   Hanako-by self-'s-room-in   hit-Pass</u>

(lit.) "Taroo is hit by Hanako in self's room."

    i. "Taroo is hit by Hanako in his own room."

    ii. *"Taroo is hit by Hanako in her own room."

But if, in the standard treatment of passives, Passivization did not precede Reflexivization, the reading (ii) will also be predicted to be a possible reading since (35) could be generated, given such relaxation of ordering, in the following manner, too.

36) <u>Hanako-ga Taroo-o Hanako-no-heya-de naguru</u>

                ⇓ Reflexivization

    <u>Hanako-ga Taroo-o zibun-no-heya-de naguru</u>

               ⇓ Passivization

    <u>Taroo-ga Hanako-ni zibun-no-heya-de nagur-areru</u>

In order to block such an undesirable derivation, Passivization must be ordered before the application of Reflexivization in the standard treatment.[12]

It appears that such a rule ordering is a necessary consequence of formulating a rule of Direct Passivization as an operation on a sentence to form another sentence because such an operation necessarily has to create a new subject. Since (forward) reflexivization is a referential dependency between subject and nonsubject, in the absence of any rule ordering, such dependency should obtain whenever and wherever there is a subject; thus the subject before and after the application of Passivization is a potential antecedent of reflexive pronoun <u>zibun</u>.

We regard, à la Dowly (1978), the process of passivization to be basically lexical, i. e., the category change from TV to IV is effected by this process. The agentive <u>ni</u>-phrase plays the key role to such a change. (For detailed syntax and semantics of direct passives, see Sugimoto (1982).) Given this approach, (37), for instance, is generated as in (38).
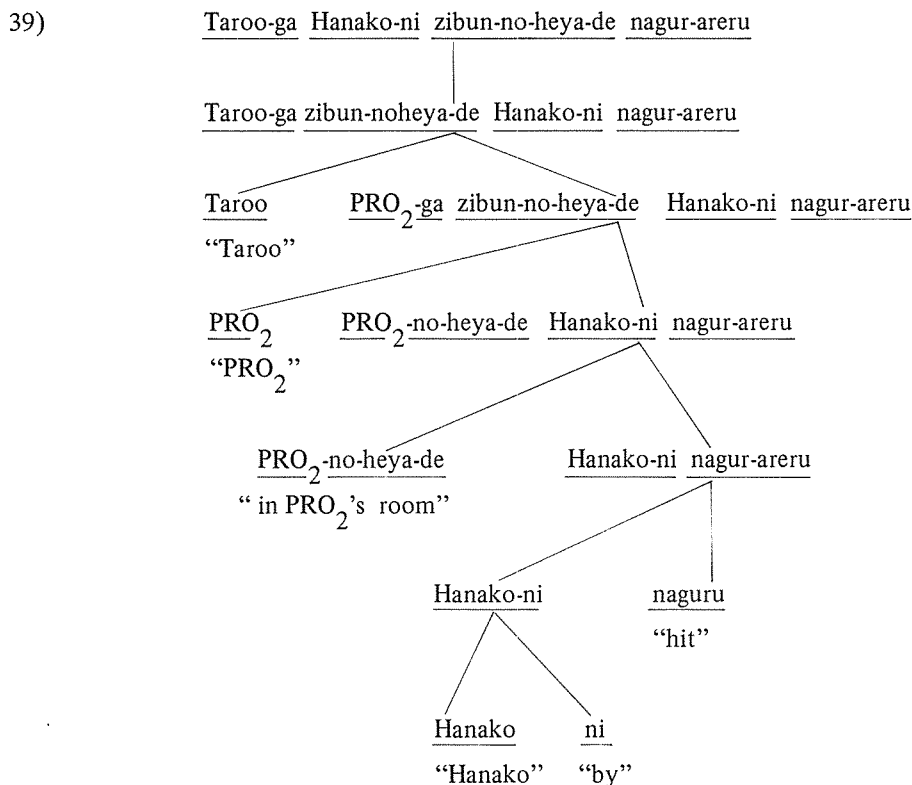
37) <u>Taroo-ga Hanako-ni nagur-areru</u>

    <u>Taroo   Hanako-by hit-Pass</u>

    "Taroo is hit by Hanako."

38)   [<u>Taroo-ga Hanako-ni nagur-areru</u>]$_t$

        [<u>Taroo</u>]$_T$

"Taroo"   [Hanako-ni nagur-areru] IV

[Hanako-ni] î   [naguru] TV
                      "hit"

[Hanako]   -ni
"Hanako"   "by"
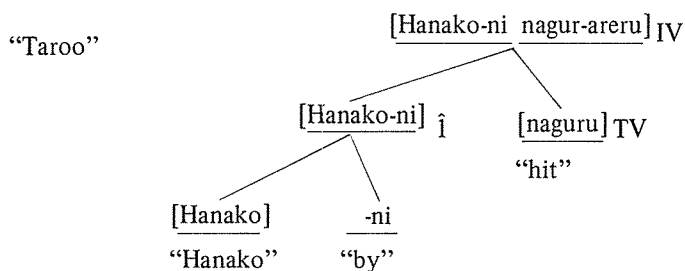
Since our rule of Direct Passive forms an IV from a TV, nowhere is there a syntactic process whereby an "old" subject is replaced by a "new" subject. Since, furthermore, our rule of Reflexivization is actually part of a sentence formation from T and IV (16), it follows that, in our approach, there is an intrinsic ordering of Reflexivization after Direct Passive. Thus a sentence like (35) has only one type of derivation where the reference of <u>zibun</u> is concerned, and the reading predicted by such a derivation is (35i). A partial analysis tree for (35), assuming a rule for adverbial formation may look something like this:

39)   Taroo-ga Hanako-ni zibun-no-heya-de nagur-areru

       Taroo-ga zibun-noheya-de Hanako-ni nagur-areru

   Taroo PRO_2-ga zibun-no-heya-de   Hanako-ni nagur-areru
   "Taroo"

PRO_2 PRO_2-no-heya-de Hanako-ni nagur-areru
"PRO_2"

           PRO_2-no-heya-de   Hanako-ni nagur-areru
           " in PRO_2's room"

                       Hanako-ni   naguru
                                        "hit"

                   Hanako   ni
                   "Hanako"   "by"

Footnotes

[0] This paper is essentially section 1, Chapter V of my dissertation, Sugimoto (1982). Due to space limitation, the discussion found in section 2 below had to remain at most sketchy. For details of the particular approach adopted here, see Sugimoto (1982: Chapters I and II).

[1] Strictly speaking, this is not accurate. In the formal style, zibun may be used instead of the first person pronoun watasi "I". Also, in some dialects, notably in Kansai area, including my own idiolect, zibun is very often used as a second person pronoun in a conversation; the use of zibun in such a case signals peerhood of speaker and hearer.

[2] In addition to (3), there is also what may be called Backward Reflexivization, in which a nonsubject in the main clause serves to reflexivize another NP in the subordinate clause. Very often the predicate of the main clause in such a case expresses a human emotion. Although I believe the phenomenon of backward reflexivization can be treated in our framework, too, I will focus my discussion here on forward reflexivization. For some details and points of interest, see the references given below in footnote 3.

[3] (3) is based on Hasegawa (1980: 3), which in its turn is based on works like Kuno (1973), Oyakawa (1973, 1974), N. McCawley (1976), Inoue (1976a, 1976b). Kuno and Kaburaki (1975) is important in that it first pointed out the relevance of nonsyntactic factors (like "empathy" or "speaker's viewpoint") to reflexivization; but I regret to say that I have to disregard their functional approach to syntax in this paper simply because I cannot imagine at this writing how such notions like "empathy" or "viewpoint" are to be formally incorporated into the overall framework.

[4] Cf. footnote 2 above. Though not widely discussed, a sentence like the following may well turn out to be a counterexample to this generalization. (I am grateful to John Haig for the following example.)

i) sensei-ga seito-tati-ni zibun-no-seki-no bangoo-o
   teacher pupil-plural self-'s-seat-of number

   osieta
   told

   (lit.) "The teacher told (his) pupils the number of self's seat."

   a) "The teacher told his pupils his seat number."

   b) "The teacher told his pupils their seat numbers."

In this example, it appears zibun could refer to either sensei, a subject, or seito-tati, an object. Where this kind of example leads to with respect to the formulation of (forward) Reflexivization

is not clear at present. And we must simply ignore an example like (i) with reading (b) in the discussion below. (John Haig credits examples like (i) originally to a Yuriko Hatori (personal communication).)

[5] That is, if one maintains a flat, non-configurational structure, a direct object is always a t-daughter. With a hierarchical, configurational structure, the condition of t-daughter-hood must accordingly be changed; Hasegawa (1980: 3), for instance, has the following characterization: "1 and 3 do not have to be clause mates, but when 1 and 3 are clause mates and 3 is not dominated by another NP, RFLX (= Reflexivization / TS) is obligatory."

[6] In other words, (14) and (15a) are ok if the subject and the object are not referentially bound with each other.

[7] But the distinction in usage between <u>zibun</u> and <u>zibuntati</u> "(lit.) self and others" as remarked here is not completely accurate. It appears to me that the following has two readings:

i)   Taroo to Hanako-wa zibuntati-no heya-ni iru
     Taroo and Hanako   selves-'s   room-in are
     a. "Taroo and Hanako are in their own room."
     b. "Taroo and Hanako are each in his/her own room."

The first reading is a case of joint possession; the second a case of individual possession. So sometimes <u>zibuntati</u> "selves" does indicate individual-level reflexivity; I simply do not know when or how such usage may crop up. Compared with <u>zibuntati</u> "selves", <u>zibun</u> "self" always indicates individual-level reflexivity, and the following has only the second reading above.

ii) Taroo to Hanako-wa zibun-no heya-ni iru.

[8] Hasegawa (1980: footnote 3, p.18) simply ignores this possibility of rule ordering and rejects any ordering solution for a sentence like (21a); she appears to consider both Q-float and Reflexivization cyclic, an assumption not necessarily true or plausible.

[9] Hasegawa (1980: 9) notes a very interesting sentence, saying "in a certain construction, an NP from which a quantifier moves out can undergo RFLX." Her example is:

i)   (=Hasegawa's (12))
     Shoonentachi-ga   monbushoo   -ni zibuntachi-o
     boys   SM Mini. of Educ.   IO selves   OM
     sannin amerika-e haken su-ru yooni yoosei shi-ta
     three America to send-pres. Comp. request-past
     '(lit.) The boys requested the Ministry of

75

Education to send selves three (three of them) to the U.S.A.'

Of course "in a certain construction" is the key to this kind of sentences, in which Q's do seem to have floated from an NP that later gets reflexivized. I do not know what is going on here; one thing that is clear about (i) is that this necessarily involves a group-level reflexivity, and the sentence is equivalent to the following English gloss:

ii) "The (three) boys together as a group requested the Ministry of Education to send the three of them to the U.S.A."

Note that replacement of <u>zibuntati</u> by <u>zibun</u> "self" in (i) results in an ungrammatical sentence. (I will continue to use Hasegawa's Romanization of Japanese here.)

iii) *<u>Shoonentachi-ga</u> <u>monbushoo-ni</u> <u>zibun-o</u> <u>sannin</u> <u>amerika-e</u>
  <u>haken</u> <u>su-ru</u> <u>yooni</u> <u>yoosei</u> <u>shi-ta</u>

In order to express the individual-level reading, one would have to say:

iv) <u>sannin-no</u> <u>shoonen(tachi)-ga</u> <u>monbushoo-ni</u> <u>zibun-o</u>
  <u>three</u>   <u>boy(s)</u>   <u>Mini. of Educ.</u> <u>self</u>

  <u>america-e</u> <u>haken</u> <u>su-ru</u> <u>yooni</u> <u>yoosei</u> <u>shi-ta</u>
  <u>U.S.A.-to</u> <u>send-pres.</u> <u>Comp.</u> <u>request-past</u>

  "Three boys requested the Ministry of Education to send them (lit. self) to the U.S.A."

Thus the sequence <u>zibun-o</u> <u>sannin</u> is simply impossible (iii). As for (i), I have to content myself by simply noting that group-level reflexivity and the plural reflexive <u>zibuntati</u> "selves" are both in need of further careful studies; no brute-force syntactic reflexivization that covers both individual and group-level reflexivizations seems to be capable of offering us any light on these issues.

[10] See Sugimoto (1977) for an examination of RCC.

[11] It is to be noted that (24) and (25) make different predictions when <u>zibun</u>'s do not command each other. (25) is stronger in that it applies to a narrower range of cases. Both versions, I believe, are inadequate as they stand. For an examination of (24), see Sugimoto (1977), where some apparent/real counterexamples are presented, together with the indication of possible modifications one might make in revising (24).

[12] It is an example like this that directly motivated Howard and Niyekawa-Howard's (1976) RCC (cf. section 1.1.7 above). Note that their deep structure for (35ii) would be:

i) <u>Taroo-ga</u> [<u>Hanako-ga</u> <u>Taroo-o</u> <u>Hanako-no-heya-de</u> <u>nagur-</u>] ₛ<u>-rareru</u>

to which the stadard Reflexivization may apply first in the first cycle and then in the second cycle, resulting in:

ii) Taroo-ga [Hanako-ga zibun-o zibun-no-heya-de nagur-] $_S$ -rareru,

where, it is to be noted, the first and the second occurrences of zibun refer to different antecedents; hence the tree is marked ungrammatical by RCC.

References

Dowty, David R. (1978) "Governed transformations as lexical rules in a Montague grammar." Linguistic Inquiry 9.3: 393-426.

_____, Robert E. Wall, and Stanley Peters (1981). Introduction to Montague Semantics. Dordrecht: D. Reidel Publishing Company.

Hasagawa, Nobuko (1980) "Three reasons for not deriving Japanese reflexives from full NP's." Papers in Japanese Linguistics, Vol. 7:3-21.

Howard, Irwin and Agnes M. Niyekawa-Howard (1976) "Passivization." M. Shibatani (ed.) (1976) Syntax and Semantics 5: Japanese Generative Grammar. N.Y.: Academic Press. Pp. 201–237.

Kuno, Susumu (1973) The Structure of the Japanese Language. Cambridge, Mass.: M.I.T. Press.

_____ and Etsuko Kaburaki (1975) "Empathy and syntax." Kuno (ed.) Harvard Studies in Syntax and Semantics Vol. 1. Department of Linguistics, Harvard University, Cambridge, Mass. Pp. 1–74.

McCawley, Noriko A. (1976) "Reflexivization: a transformational approach." Shibatani (ed.) (See Howard and Niyekawa-Howard (1976) above.) Pp. 51–116.

Oyakawa, Takatugu (1973) "Japanese reflexivization I." Papers in Japanese Linguistics 2: 94-135. (1974) "Japanese reflexivization II." Papers in Japanese Linguistics 3: 129–201.

Partee, Barbara H. (1975) "Montague grammar and transformational grammar." Linguistic Inquiry 6.2: 203-300.

Sugimoto, Takashi (1977) "Notes on RCC." Nebulae Vol. 3: 131-186. Osaka: Osaka Gaidai Linguistics Circle.

_____ (1982) Transformational Montague Grammatical Studies of Japanese. University of Hawaii Ph. D. dissertation.