

The Reflexive Control in Japanese

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The purpose of this paper⁰ 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. 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 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 expression, 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_i thinks he_i is wrong."

ii. Pronouns

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

Hanako Taroo-with he-about talk

"Hanako talks with Taroo about him(self)."

- 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. kare-ga odoru

he dance

"He dances."

- b. Hanako-wa kare-ga suki da

Hanako he is fond of

"Hanako likes him."

The reflexive zibun, which does not change its 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 zibun presupposes an occurrence of a nominal expression with which it is referentially bound.

1.1. Reflexivization.

The standard transformational formulation of (forward) Reflexivization² 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, zibun

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, Reflexivization is cyclical and ordered after Passivization.

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 zibun 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 zibun-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 a transformational approach, 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:

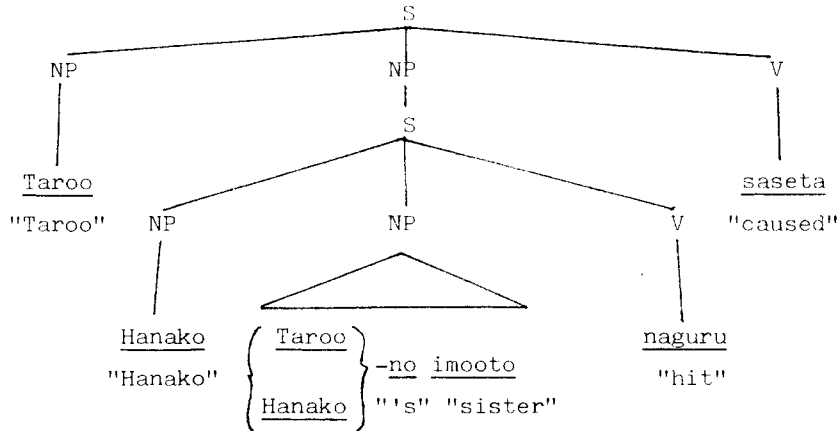
6) Taroo-wa Hanako-ni zibun-no imooto-o nagur-aseta

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)



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-aseta

Hanako came comp. self-'s sister feel sad-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 this paper; 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 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 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 (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 love myself."

ii. a. anata-wa anata-o aisiteiru

you you love

"You love yourself (lit. you)."

b. anata-wa zibun-o aisiteiru

"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 soo de nai
Taroo Taroo love but everyone else is not so
 "Only Taroo loves Taroo, but no one else loves him."
- b. Taroo-ga zibun-o aisiteiru nodeari hokano minna-wa soo de nai
 "Only Taroo loves himself, but no one else does."

It appears to me that Condition (v) is normally meant to exclude 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 aisiteiru
Hanako fond of person Hanako fond of person 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

"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 $\wedge \underline{\text{kare}}_n /_T$ ($n \geq 0$), $\beta \in P_{IV}$, then $F_0(\alpha, \beta) \in P_t$, where $F_0(\alpha, \beta) = \wedge [\alpha -]_1 \gamma' /_t$, where γ' is the result of replacing every occurrence of $\wedge \underline{\text{kare}}_n /_T$ ($n \geq 0$) in γ by $\wedge \underline{\text{zibun}} /_T$, where $\beta = \wedge \gamma /_{IV}$.

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

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

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 nihonjin 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 context or on its own meaning, of a group, the reflexive zibun is inappropriate:

17) a. iinkai-wa iinkai-no kettei-o musu-sita
committee committee-'s decision disregarded

"The committee disregarded the committee's decision."

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

Instead, we have to use the plural of zibun, that is, zibuntati:

18) iinkai-wa zibuntati-no kettei-o musu-sita

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

It appears then that at least in part the distinction between zibun and its plural counterpart zibuntati lies in the usage that while zibun indicates individual-level reflexivity, zibuntati indicates group-level reflexivity. Indeed if we replace zibun in (5b) by zibuntati, 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) nihonjin zenbu-ga zibuntati-o sonkei-si-te-iru

Japanese all selves respect

"All the Japanese respect themselves/the Japanese."

At any rate, since our rule is formulated in such a way that reflexive zibun 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 readings (see (21) below).

As for Condition (ii), since our Reflexivization 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.

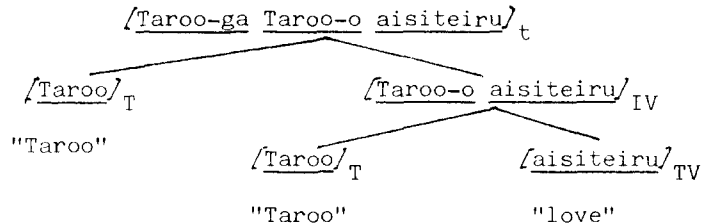
The fourth condition, as we said, is to be disregarded in our grammar in the absence of any useful definition of "higher animate nouns".

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. Taroo-ga Taroo-o aisiteiru

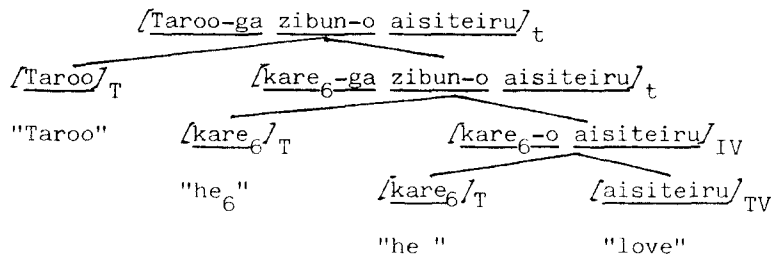
"Taroo loves Taroo."



Translation: aisuru'*(t,t)

b. Taroo-ga zibun-o aisiteiru

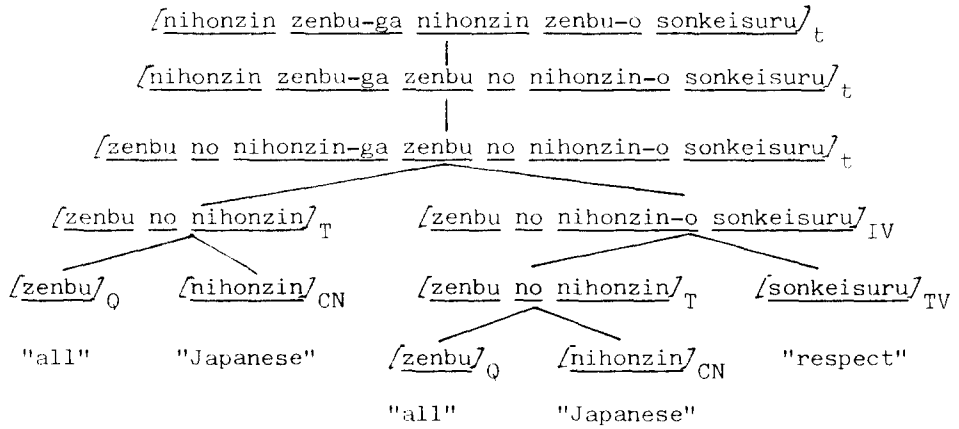
"Taroo loves himself."



Translation: $\lambda P^V P(t)(\hat{\lambda} x_6 \text{aisuru}'_*(x_6, x_6)) \quad (---\rightarrow \text{aisuru}'_*(t, t)).$

21) a. nihonzin zenbu-ga nihonzin zenbu-o sonkeisuru

"All the Japanese respect all the Japanese."

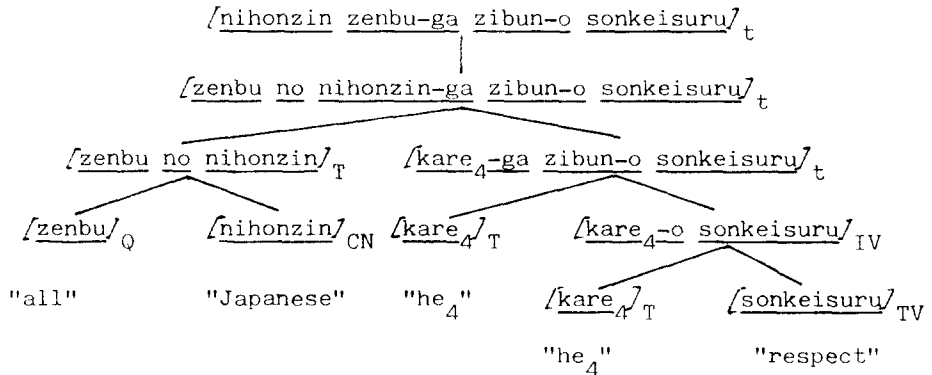


Translation: $(\forall x)/\text{nihonzin}'(x) \rightarrow (\forall y)/\text{nihonzin}'(y) \rightarrow$
 $\text{sonkeisuru}'_*(x,y)]]$

b. nihonzin zenbu-ga zibun-o sonkeisuru

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

"Every Japanese respects himself."



Translation: $\lambda Q(\forall x)/\text{nihonzin}'(x) \rightarrow \forall Q(x)](\lambda x_4 \text{sonkeisuru}'_*(x_4, x_4))$
(i.e., $(\forall x)/\text{nihonzin}'(x) \rightarrow \text{sonkeisuru}'_*(x,x)]$.)

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 accommodate 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 nagutta to omotta
Taroo Hanako self-'s room-in self-'s sister 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."
- 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 the 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 the 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 $/\underline{zibun}/_T$ in part (i) of (16a) by $/\underline{zibun}_n/_{T}$.

(25) will mark, for instance, (23) with the reading (iii) ungrammatical because it then would have the following structure:

26) Taroo-wa /Hanako-ga zibun₆-no heya-de zibun₈-no imooto-o nagutta_t to
omotta

Since differently indexed occurrences of zibun, zibun₆ and zibun₈ 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. (Recall that rules of our grammar are taken to be unordered and optional. For fuller treatment of these and other related constructions, see Sugimoto (1982: Chapter V).)

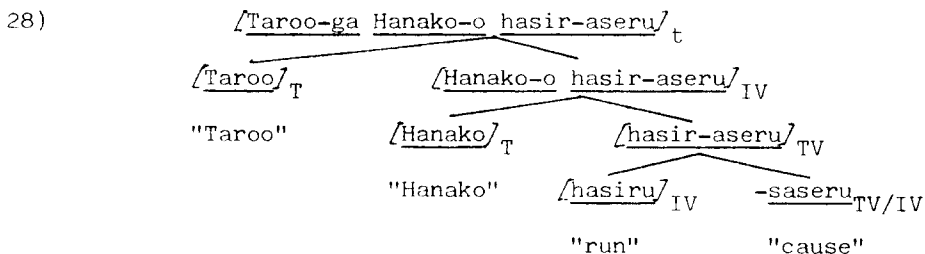
2.1. Reflexives and causatives.

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."



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) Taroo-ga Hanako-ni zibun-no-heya-o soozis-aseru

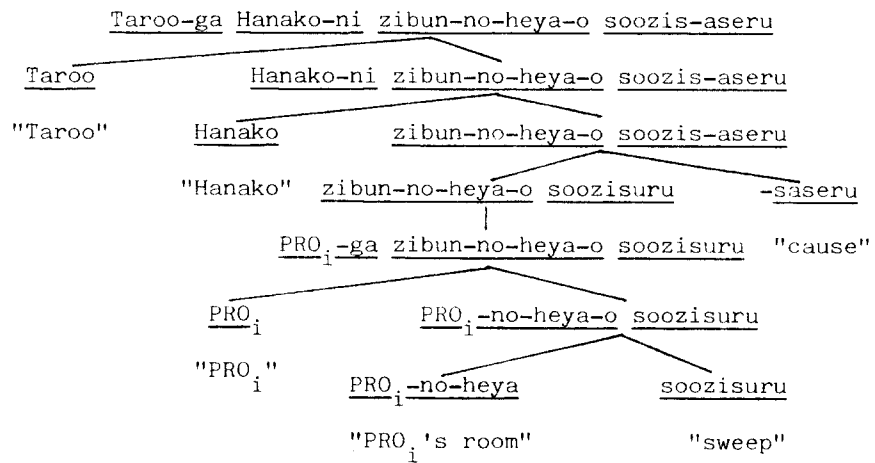
Taroo Hanako self-'s-room sweep-cause

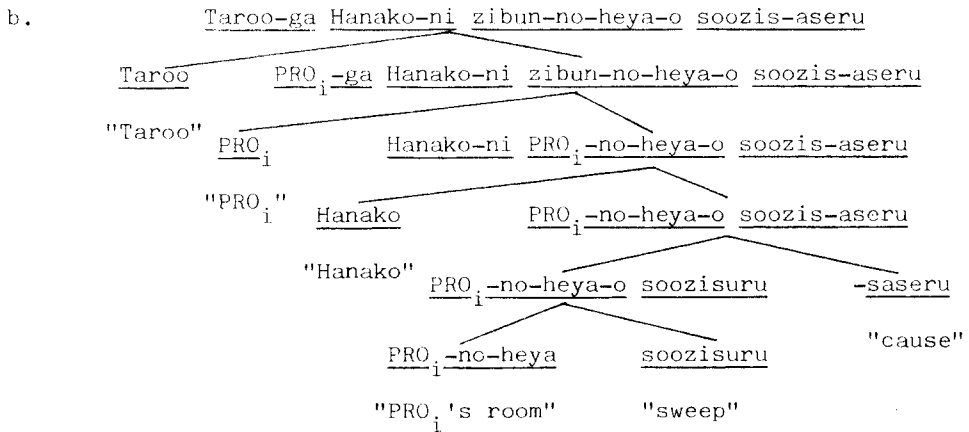
i. "Taroo makes Hanako sweep her own room."

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, (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.





2.2. Indirect passive and reflexivization.

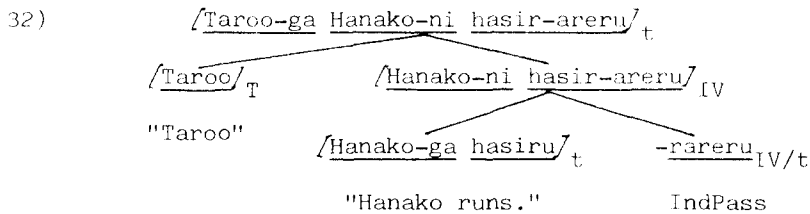
The rule that forms indirect passives may be viewed as a process that derives an expression of category IV from a sentence and a passive suffix -rareru. (This is more in line with the traditional transformational account. Takao Gunji (personal communication) has pointed out to me that this kind of analysis within my framework may need some independent motivation since indirect passive constructions can be treated exactly like the causative constructions as we did above. Either approach will probably do, but my approach, if anything, may be regarded as a tribute to the "traditional" transformational linguists.) (31) may be generated in the manner indicated in (32). (Cf. Sugimoto (1982))

31) Taroo-ga Hanako-ni hasir-areru

Taroo Hanako-by run-IndPass

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

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



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 referent of zibun; it could be either Taroo or Hanako.

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

Taroo Hanako-by self respect-IndPass

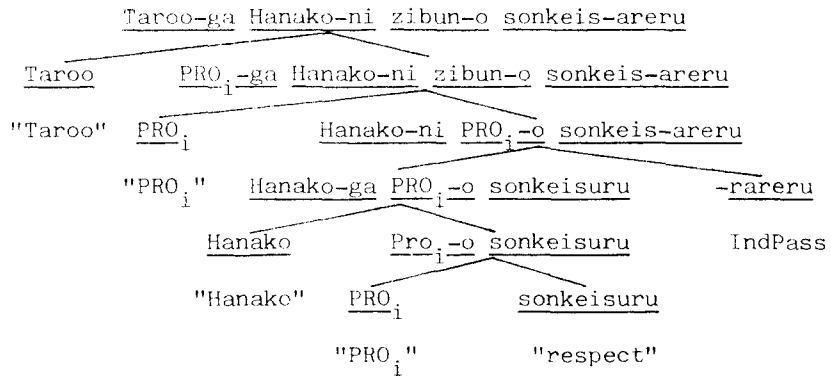
(lit.) "Taroo is respected self by Hanako."

i. "Taroo_i is adversely affected by Hanako's respecting him_i."

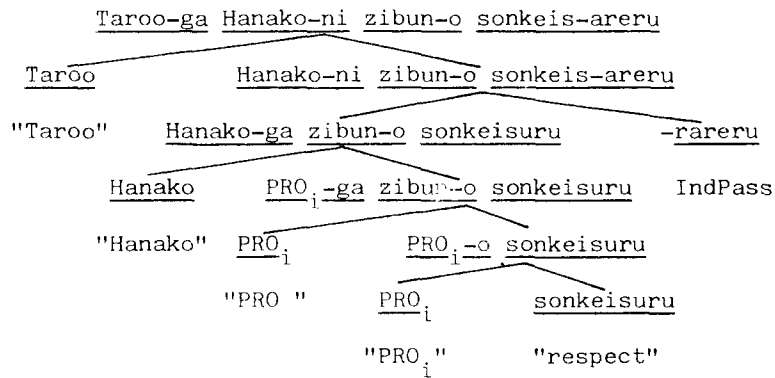
ii. "Taroo is adversely affected by Hanako's respecting herself."

The analysis trees for these readings are (a) and (b) below respectively.

34) a.



b.



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 referent of zibun:

35) Taroo-ga Hanako-ni zibun-no-hey-a-de nagur-areru

Taroo Hanako-by self-'s-room-in hit-Pass

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

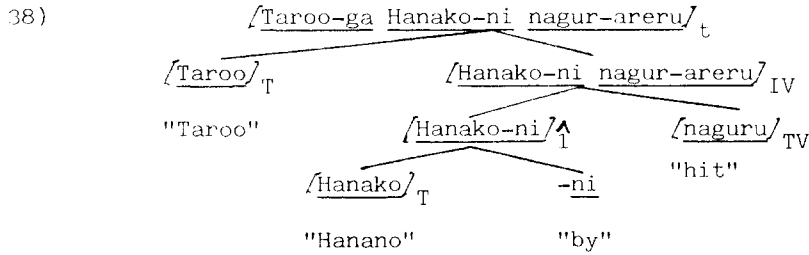
i. "Taroo is hit by Hanako in his own room."

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

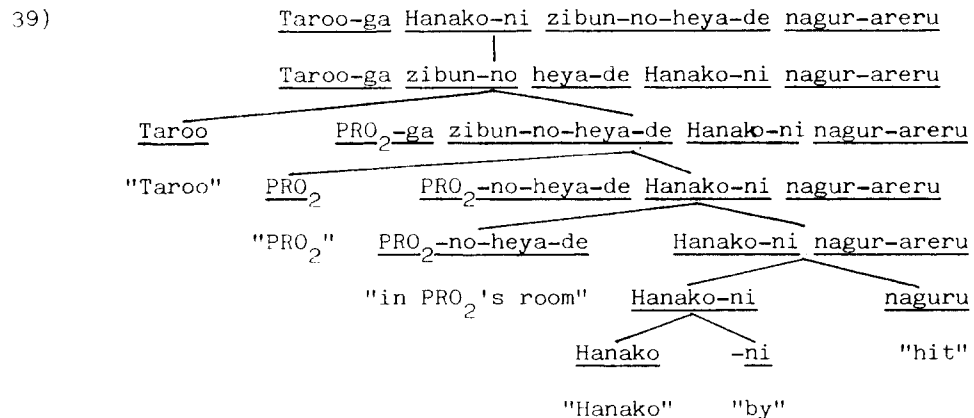
37) Taroo-ga Hanako-ni nagur-areru

Taroo Hanako-by hit-Pass

"Taroo is hit by Hanako."



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 and Direct Passive. Thus a sentence like (35) has only one type of derivation where the reference of zibun 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:



Footnotes

⁰This paper is a slightly revised version of an earlier paper that is to appear in Gakuhoo, Osaka University of Foreign Studies. It basically comprises section 1, Chapter V of my dissertation Sugimoto (1982). The paper was presented at Japan-Korea Workshop on Formal Grammars held in Kyoto, Japan in February, 1982. I am grateful to Takao Gunji, Kenichiroo Shirai, and some other participants for comments and criticism. 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).

¹Strictly speaking, this is not accurate. In the formal style, zibun may be used instead of the first person pronoun watashi "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.

²In 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 "sympathy" or "viewpoint" are to be formally incorporated into the overall framework.

⁴Cf. 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 osieta

teacher pupil-Plural self-'s-seat-'s number 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 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.)

⁵That 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."

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

⁷But the distinction in usage between zibun and zibuntati "(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-'no 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 zibuntati "selves" does indicate individual-level reflexivity; I simply do not know when or how such usage may crop up. Compared with zibuntati "selves", zibun "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.

⁸Hasegawa (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.

⁹Hasegawa (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 sannin amerika-e
 boys SM Mini. of Educ. IO selves OM three America to
haken su-ru yooni yoosei shi-ta
 send-pres. Comp. request-past

'(lit.) The boys requested the Ministry of 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 zibuntati by zibun "self" in (i) results in an

ungrammatical sentence. (I will continue to use Hasegawa's Romanization of Japanese here.)

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

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

iv) sannin-no shoonen(tachi)-ga monbushoo-ni zibun-o amerika-e haken su-ru
yooni yoosei shi-ta.

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

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

¹¹It is to be noted that (24) and (25) make different predictions when zibun'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 discussed, together with the indication of possible modifications one might make in revising (24).

¹²It 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) Taroo-ga /Hanako-ga Taroo-o Hanako-no-heya-de nagur-'_S -rareru

to which the standard 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 the RCC.

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