

Falsifiability and Repeatability in Generative Grammar: A Case Study of Passive and Scrambling in Japanese¹

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The typical treatment of the English passive in the generative tradition is as in (1b), which corresponds to its active counterpart in (1a).

- (1) a. NP1 V NP2.
b. NP2_i be V-en t_i (by NP1).

Informally speaking, *-en* is understood to have the following two effects, forcing the A-movement of NP2 in (1b).

- (2) a. The *V* of *V-en* loses its external argument.
b. The internal argument of the *V* of *V-en* can no longer be 'licensed' as an object; i.e., the Case cannot be assigned/checked in the object position.

(3b) in Japanese appears to correspond to (1b) and has been referred to as passives in Japanese.

- (3) a. NP1-ga NP2-o V 'NP1 V NP2'
b. NP2-ga (NP1-*{ni/niyotte}*) V-rare

It is, however, not immediately clear whether (3b) has a structure like (4), and the answer will have much bearing on one's overall characterization of the Japanese language.

- (4) NP2-ga_i (NP1-*{ni/niyotte}*) t_i V-rare

For example, if *-rare* in Japanese had the effects in (2b), making it possible/necessary to derive a structure like (4), that would provide support for the view in (5), adopted by many researchers over the years.

- (5) There are items in Japanese, like English and other languages, that bear a feature responsible for agreement/checking; and agreement/checking plays a central role in the generation of Japanese sentences.

In contrast to (5), a thesis like (6) has also been pursued in Fukui 1986, 1993, and Fukui & Sakai 2003; cf. also Kuroda 1988.

- (6) No items in Japanese bear a feature that is responsible for agreement/checking, and hence agreement/checking plays no role in Japanese, unlike English and other languages.

If (6) is correct, Japanese passive morpheme *-rare* should not have the property that has the effects in (2b).

This in and by itself, however, does not exclude the structure given in (4). For there is 'scrambling' in Japanese and it is possible for 'scrambling' to derive (4). The choice between (5) and (6) in regard to passives in Japanese should thus be contingent upon (i) whether Japanese passives involve movement as indicated in (4), and (ii), if they do, whether the movement has properties of A-movement or 'scrambling'.

Let us first examine consequences of the hypothesis that Japanese passives are represented as in (4) and the movement therein is A-movement, the movement of the sort observed in the passive and raising constructions in English. Although it has been argued (Belletti & Rizzi 1988, Barss 2001) that A-movement exhibits reconstruction effects, a closer inspection reveals that such effects involving two maximal projections are available only with certain QPs. For example, as pointed out by J.-R. Hayashishita, (7a) does not have the reading "more than five men each find at least one book worth reading," although (7b) seems to have the reading "every man finds at least one book worth reading." Similarly, the bound reading seems unavailable in (8a); cf. (8b).

- (7) a. [at least one book] seems to [more than five men] to be worth reading
b. [at least one book] seems to [every man] to be worth reading
(8) a. *his₁ student seems to [at least one professor]₁ to be worth promoting
Cf. it seems to [at least one professor]₁ that his₁ student is quite promising
b. ??his₁ student seems to [every professor]₁ to be worth promoting

In the case of the Japanese passives, on the other hand, the availability of reconstruction effects under discussion is not affected by the 'QP type', as illustrated by the bound reading in (9); see Hoji 2003: sec. 2.2, where it is argued

¹ This is a very slightly revised version of my J/K Conference Abstract, 2003.

that the bound readings in (9) can arise only on the basis of LF c-command. (The quantifier scope-based paradigms are not supplied here due to space considerations.)

- (9) a. [soko₁-ni hairitagatteita gakusei]-ga Abe kyoozyu-**niyotte** [itutu izyoo-no kaisya]₁-ni suisensareta
 'a student who wanted to work for it₁] was recommended by Prof. Abe to [5 or more companies]₁'
 b. [soko₁-ni hairitagatteita gakusei]-ga Abe kyoozyu-**niyotte** [Toyota-ni-sae]₁ suisensareta
 'a student who wanted to work for it₁] was recommended by Prof. Abe to [even Toyota]₁'

Thus, although this observation indicates that sentences in (9) involve movement, the relevant movement should not be A-movement (at least of the sort understood to be involved in the passive and raising constructions in English).

One might object that reconstruction effects are possible only in the case of passives with *NP-niyotte* as the agent, observing that the bound reading is not possible in (10), in which the agent is expressed by *NP-ni*.

- (10) a. *[soko₁-ni hairitagatteita gakusei]-ga Abe kyoozyu-**ni** [itutu izyoo-no kaisya]₁-ni suisensareta
 'a student who wanted to work for it₁] was recommended by Prof. Abe to [5 or more companies]₁'
 b. *[soko₁-ni hairitagatteita gakusei]-ga Abe kyoozyu-**ni** [Toyota-ni-sae]₁ suisensareta
 'a student who wanted to work for it₁] was recommended by Prof. Abe to [even Toyota]₁'

One might suggest that it is the Japanese passive with *NP-ni* as the agent that involves A-movement. Such a position, however, does not seem tenable. If the so-called *ni*-passive is derived in terms of A-movement, we expect that there are no restrictions on what NPs/DPs can undergo A-movement, regarding animacy, for example, but such is not the case with the *ni*-passive in Japanese; see below. In conclusion, the movement in (4), if (4) indeed involves movement, does not seem to be A-movement.

Recall that (case-)markings on NP1 and NP2 differ in (3b) from (3a). A most natural account of this is to assume that the addition of *-rare* affects argument structure. A change in argument structure is either an elimination or an addition of an argument. The elementary observation that there are two sentence patterns with *-rare* that correspond to (11) suggests that there are two *-rare*'s, and one has an argument-reducing property and the other an argument-adding property.

- (11) NP1-ga NP2-o V
 (12) a. NP2-ga V-rare
 b. NP3-ga [NP1-ni NP2-o V]-rare

Of interest here are the observations in Old Japanese (=OJ) and the recent introduction of the so-called *niyotte* passive reported and discussed in Kinsui 1997, 1999. First, the subject of the majority of passive sentences in OJ was an 'animate NP', and when the *NP1-ni* is overtly expressed, the 'animacy restriction' on the subject was quite strictly enforced. We can reasonably understand this as indicating that the 'new argument' in (12b), i.e., *NP3*, receives an experiencer theta role from *-rare*. (Although it has become less strict in recent years, a restriction of this sort still exists in Modern Japanese.) While there were passive sentences in OJ in which the subject was an 'inanimate NP', what is noteworthy is that in such examples, most of which appeared in *kanbun kundoku tai* (the literary style translating Chinese), the agent was not overtly expressed. We can thus analyze such an example as an instance of (12a).

In Modern Japanese, it is possible for an inanimate NP to express the agent, as in (13).

- (13) a. NP1-niyotte NP2-ga V-rare
 b. NP2-ga NP1-niyotte V-rare

Forms such as (13), in which *NP-ni{yotte/yorite}* expresses the agent, came to be used in the 19th century as the result of the grammatical translation of Dutch passives. The use of *NP-niyotte* is not restricted to passive sentences, as can be seen in examples like *A-ga B-niyotte C-ni naru* 'A becomes C {by/with/because of} B' (as in some chemical reaction). Furthermore, an adjunct *NP-no tameni* 'due to NP' is also found in place of *NP-niyotte*. It is in fact not impossible to add *NP-niyotte* to (12b).

- (14) NP3-ga NP4-niyotte NP1-ni NP2-o V-rare

The head of *NP-niyotte* (the reduced form of *NP-ni yorite*) is the connective form of (*-ni*) *yoru* 'to depend on ...' and, as such, has the property of a modifier under the projection of V. All this indicates that *NP-niyotte* is indeed an adjunct, and is quite distinct from *NP-ni* (in (12b)).

The analysis of Japanese passives pursued here, which is along the lines of Kuroda 1979, can be summarized as follows. There are two *-rare*'s. One takes an NP (as its external argument) and a VP as its complement, assigning the former an experiencer theta role, and the *NP-ni* that expresses the agent therein remains to be an

argument. The 'basic' form of the passive with this *-rare* is as in (15b), corresponding to (15a).

- (15) a. A-ga (B-ni) (C-o) V (e.g., 'A introduced C to B')
b. D-ga [A-ni (B-ni) (C-o) V]-rare

The other *-rare* eliminates an argument of the V to which it is attached, and the 'basic' form of the passive of this type corresponding to (16a) is as in (16b), and an adjunct *NP-niyotte* can appear at the sentence-initial position, for example.

- (16) a. A-ga (B-ni) C-o V (e.g., 'A introduced C to B')
b. (B-ni) C-ga V-rare

It seems that this type of *-rare* cannot be attached to a verb that has only one argument, but this naturally follows from the argument-reducing property of *-rare*. The first *-rare*, by contrast, does not have such a restriction, and it can occur with an intransitive, transitive, and 'ditransitive' verb.

Given that (15b) and (16b) are the 'basic' forms, the other 'word orders' can be understood as corresponding to 'scrambled' sentences. As such, we could make predictions in regard to the possibility of bound variable anaphora and scope dependency, for example, once we adopt a particular and well-articulated analysis of 'scrambling' in Japanese. I will explore various empirical and theoretical consequences of the analysis of Japanese passives outlined above, in conjunction with Ueyama's analysis of 'scrambling' in Japanese, paying close attention to *repeatability* and *falsifiability*, much as in Hoji 2003.

The essentials of the analysis outlined above are made in Kuroda 1979, where two types of passives are recognized in Japanese, the *ni* passive and the *niyotte* passive, and the former is explicitly argued in Kuroda 1979 to be of the type in (15b). It is also clear that for Kuroda 1979 the agentive *NP-ni* is an argument in the sense relevant here and *NP-niyotte* is an adjunct. This work can thus be understood as an attempt to substantiate Kuroda's proposal by providing empirical evidence that differentiates two types of passives, and to explore its consequences, making definite and testable predictions.

References

- Barss, A., 2001. Syntactic Reconstruction Effects. In M. Baltin, and C. Collins, eds., *The Handbook of Contemporary Syntactic Theory*, 670-696, Blackwell Publishers.
- Belletti, A. and L. Rizzi, 1988. Psych-Verbs and Theta-Theory. *Natural Language and Linguistic Theory* 6-3, 291-352.
- Fukui, N., 1986. *A Theory of Category Projection and Its Applications*. Doctoral dissertation. Cambridge, MA: MIT.
- Fukui, N., 1993. Parameters and Optionality. *Linguistic Inquiry* 24-3, 399-420.
- Fukui, N. and H. Sakai, 2003. The Visibility Guidelines for Functional Categories: Verb Raising in Japanese and Related Issues. *Lingua* 113/4-6, 321-375.
- Hoji, H., 2003. Falsifiability and Repeatability in Generative Grammar: A Case Study of Anaphora and Scope Dependency in Japanese. *Lingua* 113/4-6, 377-446.
- Hoshi, H., 1994. *Passive, Causative and Light Verbs: A Study on Theta Role Assignment*, Doctoral dissertation. University of Connecticut.
- Hoshi, H., 1999. Passives, in Natsuko Tsujimura, ed., *The Handbook of Japanese Linguistics*, 191-235, Blackwell Publishers.
- Kinsui, S., 1997. The Influence of Translation upon the Historical Derivation of the Japanese Passive Construction. *Journal of Pragmatics* 28, 759-779.
- Kinsui, S. 2002 Passive and Related Phenomena in Modern Japanese (Nihongo no zyudo-bun to sono syuhen), a handout for a seminar at Summer Institute of Linguistics held by the Linguistics Society of Japan, August 19-24, 2002, Nagano, Japan.
- Kitagawa, Y., and S.-Y. Kuroda, 1992. Passive in Japanese. Ms., University of Rochester and University of California, San Diego.
- Kuroda, S.-Y., 1978. Case-marking, Canonical Sentence Patterns, and Counter Equi in Japanese (A Preliminary Survey), in Hinds ed., *Problems in Japanese Syntax and Semantics*. 30-51, Kaitakusha, Tokyo. (Reprinted in Kuroda, 1992, 222-239).
- Kuroda, S.-Y., 1979. On Japanese Passives, in Bedell et al., eds., *Explorations in Linguistics: Paper in Honor of Kazuko Inoue*, 305-347, Kenkyuusha, Tokyo. (Reproduced as Kuroda, 1992: chap. 5. (183-221). The page reference is to Kuroda 1992.)
- Kuroda, S.-Y., 1992. *Japanese Syntax and Semantics*, Dordrecht, Boston and London.
- Matsushita, D., 1930. *Kaisen Hyoozyun Nippon Bunpoo (Revised Standard Japanese Grammar)*, Tyuubunkan Syoten, Tokyo (Reissued by Benseisyu, Tokyo, 1978).
- Miyagawa, S. 1989. *Structure and Case Marking in Japanese*, Syntax and Semantics 22, Academic Press, San Diego.
- Saito, M., 2003. A Derivational Approach to the Interpretation of Scrambling Chains. *Lingua* 113/4-6, 481-518.
- Ueyama, A., 1998. *Two Types of Dependency*. Doctoral dissertation. Los Angeles: University of Southern California. (Distributed by GSIL publications. Los Angeles: University of Southern California).
- Ueyama, A., 2002. Two Types of Scrambling Constructions in Japanese. In: A. Barss (ed.), *Anaphora: A Reference Guide*, 23-71. Blackwell, Cambridge.