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The Indirect Passive in Japanese is a Mono-clausal Phenomenon

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Abstract The so-called indirect passive, where the subject is not the argument of the underlying verb that bears the Theme/Patient role, is generally understood to be a biclausal phenomenon (cf. Kuno 1973; Shibatani 1978; Kuroda 1979). In other words, the passive morpheme rare is merged with a clause, and then the resulting item is combined with the subject. In this paper, however, we argue that the indirect passive is best understood as a mono-clausal phenomenon. We first point out that with some instances of the indirect passive, the passive morpheme rare is not understood as being combined with a verb or clause in syntax. Thus, we are led to assume that the lexicon contains numerous instances of the Vrare form. This implies that even when the passive morpheme rare is combined in syntax, it forms a constituent with the relevant verb; hence, the indirect passive is a mono-clausal phenomenon. We furthermore maintain that when the indirect passive involves the merging of rare with a verb in syntax, the verb must be a volitional verb, and demonstrate that this generalization, as well as the case particle alternation involved in the indirect passive, poses a challenge to the bi-clause analysis but not to the mono-clause analysis. Finally, we review one of the main arguments for analyzing the indirect passive to be a bi-clausal phenomenon, which concerns the antecedent of zibun. We show that it is inconclusive at best.

Keywords Japanese. Syntax. The indirect passive. Lexicon. The mono-clause analysis.

Summary 1 Introduction. – 2 Indirect Passives being Mono-clausal Phenomena. – 3 The Mono-clause Analysis of Indirect Passives. – 4 Reconsidering Previous Arguments for the Bi-clause Analysis. – 5 A Summary and Further Remarks.



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1 Introduction

Descriptively, passives are phenomena that involve a shift of the subject. The standard analysis of the English passive construction as in (1) states that the passive morpheme -ed is attached to a verb, which causes the external argument of the verb to get eliminated, and consequently the internal argument becomes unable to receive abstract Case in its original position, so moves to the subject position to receive the nominative case.¹

(1) Mary was chased by John.

Since the internal argument of a verb generally has the Theme/Patient theta role, this analysis captures the fact that the subject of the English passive bears the Theme/Patient role.

The study of Japanese follows in the footsteps of the study of the English passive and assumes that the construction of passives necessarily involves the passive morpheme merging with a relevant expression in the computational system. In other words, every instance of passive is assumed to involve the productive use of a passive morpheme.

Japanese passives are different from English passives in that the passive subject need not be the argument of the underlying verb that bears the Theme/Patient role; in fact, even an expression that is not an argument of the verb can serve as the subject; see (2).^{2,3}

- (2) a. Mary ga John ni tonari de nerareta rasii. Mary NOM John by next:to at sleep:PASS:PAST seem 'Apparently, John dozed next to her, annoying Mary.'
 - Mary wa ame ni hurarete bisyobisyoni nattesimatta.
 Mary TOP rain by pour:PASS soaked become:finish:PAST 'Rain poured on Mary, making her soaked.'

In what follows, adopting the standard practice, we term those passives – like the ones in (2) where the subject is not the argument of the underlying verb that bears the Theme/Patient role – the 'indirect

¹ Cf. Jaeggli 1986; Burzio 1986

² In this paper, we use the following abbreviations: NOM = nominative; ACC = accusative; DAT = dative; GEN = genitive; TOP = topic; PRES = present; PASS = passive; IMP = imperative; NEG = negation; COMP = complementizer; COP = copula.

³ The underlying form of the passive morpheme is /rare/; it appears as rare after vowel-ending verbs and are after consonant-ending verbs. Throughout the paper, the relevant passive morphemes in the example sentences are boldfaced.

passive'. The indirect passive typically expresses a situation where some animate entity is psychologically affected by an event (cf. Yamada 1908). To account for this, researchers generally assume that the passive morpheme rare in the indirect passive serves to introduce a new argument to the sentence (henceforth the Argument-adding rare); the added argument is realised as the subject bearing the Affectee theta role. It is thus expected that the subject of the passive involving the Argument-adding rare is an animate entity, and for this reason the sentences in (3) are degraded in comparison with those in (2).

- (3) a. (Takai 2009, no. [24], adapted) ??Beddo ga John ni ne**rare**ta rasii bed MOM John by sleep:PASS:PAST seem '(Lit.) Apparently, the bed got affected by John sleeping on it.'
 - b. (Takai 2009, no. [23], adapted) ??Soto bisyobisyoni miti wa ame ni hurarete outside GEN road TOP rain by pour:PASS soaked nattesimatta. become:finish:PAST

'Rain poured on the road outside, making it soaked.'

There are also passives whose subject denotes an inanimate entity and many such cases are neutral in meaning, i.e. they do not add any additional meaning to their active sentence counterpart, cf. (4).

(4)(Kuroda 1992, 206, no. [112]) Fermat no teiri ga John niyotte syoomeisareta Fermat GEN theorem NOM John by prove:PASS:PAST. 'Fermat's Theorem was proved by John.'

Given such cases, researchers also assume that the passive morpheme rare may also function similarly to the English passive morpheme in that it eliminates the external argument of the verb to which it attaches (henceforth the Argument-reducing rare). In sum, two types of passives are assumed: those involving the Argumentadding rare and those involving the Argument-reducing rare.

Standardly, passives involving the Argument-reducing rare are analysed as mono-clausal phenomena where the passive morpheme is directly attached to a given verb. But the indirect passive, which

⁴ The 'indirect passive', as well as the 'direct passive', to be introduced later in § 4, is a term used purely for descriptive purposes without any theoretical commitment.

⁵ Cf. Kuno 1973; Shibatani 1978; Kuroda 1979/1992; Masuoka 1991; Kinsui 1993.

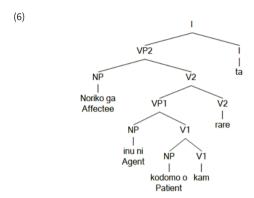
⁶ Cf. Kuno 1973; Kuroda 1979/1992; Saito 1982; Miyagawa 1989; Shibatani 1990.

involves the Argument-adding *rare*, has been described as a bi-clausal phenomenon where the passive morpheme is attached to the clause headed by a given verb. For example, the indirect passive in (5) is analysed as (6), where the clause to which the Argument-adding *rare* is attached is VP₁.

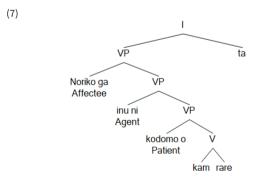
(5) Noriko ga inu ni kodomo o kam**are**ta (sooda).

Noriko NOM dog by child ACC bite:PASS:PAST I:heard

'(I heard) it occurred to Noriko that a dog bit her child.'



In this paper, we argue that the indirect passive is also best understood as a mono-clausal phenomenon. According to the analysis we will propose, (5) is analysed as (7) instead.



⁷ Cf. Kuroda 1965; Makino 1972; Kuno 1973; Inoue 1976; Shibatani 1978. In this paper, we use the term 'bi-clausal phenomena' to cover all the cases that are analysed in such a way that the Argument-adding *rare* is directly combined with a phrase that includes the underlying verb and its arguments, irrespective of what syntactic label the phrase has.

In § 2, we first point out that to analyze the indirect passive to be a mono-clausal phenomenon is a possibility in view of the acquisition of the Argument-adding rare, and then present two sets of phenomena that are difficult for the bi-clause analysis to deal with. In § 3, we demonstrate that the mono-clause analysis does not encounter the same problems. For the demonstration, we use Ueyama's (2015) theoretical framework for practical reasons. Furthermore, § 4 reviews one of the major arguments for the bi-clause analysis, namely the one having to do with the antecedent of zibun, and shows that it is not valid. We conclude the paper in § 5 with a brief summary and further remarks.

2 **Indirect Passives being Mono-clausal Phenomena**

2.1 The Origin of the Argument-adding rare

As we noted above, the study of Japanese passives typically assumes that the construction of passives necessarily involves the productive use of a passive morpheme. In this section, we first point out that this assumption cannot be maintained, and then consider how the productive use of the Argument-adding rare is acquired. As we explain below, considering this leaves us the possibility that the Argumentadding rare forms a constituent with a verb stem, and thus the indirect passive is a mono-clausal phenomenon.

If every instance of the indirect passive were productively constructed in syntax through the merging process of a given verb and the Argument-adding rare, we would expect to find an active sentence serving as the base for each instance of the passive. However, there are a good number of passives that do not have an active sentence counterpart (cf. Muraki 1991, 195). For example, consider (8) through (10).

- (8) Hayashishita, Takai, Ueyama 2020, nos. [81a] and [82a])
 - a. Kono ookazi de ooku no hito ga yakedas**are**ta. big:fire with many GEN person NOM burn:push:out:PASS:PAST 'Many people were forced to evacuate because of this major fire.'
 - hito b. *Ooku no vakedasita. many GEN person ACC burn:push:out:PAST 'It made many people evacuate.'

- (9) a. Seihu wa Asahi Sinbun no syasetu ni konkai no government TOP Asahi Newspaper GEN editorial by this:time GEN hutegiwa o tukkomareta. mishandling ACC pick:on:PASS:PAST.
 'The government's recent mishandling of the matter was picked on by the
 - The government's recent mishandling of the matter was picked on by the Asahi Newspaper editorial.'
 - b. *Asahi Sinbun seihu konkai no syasetu ga nο editorial NOM government GEN this:time Asahi Newspaper GEN no hutegiwa tukkonda GFN mishandling ACC pick:on:PAST 'The Asahi Newspaper editorial picked on the government's recent mishandling of the matter.'
- (10) a. Ooku no hito ga tunami ni ie o
 many GEN person NOM tsunami by house ACC
 nagas**are**ta rasii.
 wash:away:PASS:PAST seem.
 'Apparently, many people's houses were washed away by the tsunami.'
 - b. *Tunami ga ooku no hito nο ie tsunami NOM many ACC **GEN** person GEN house nagasita rasii. wash:awav:PAST seem. 'Apparently, the tsunami washed away many people's houses.'

The a-examples in (8)-(10) are instances of the indirect passive, but we cannot identify the active sentences serving as their base; in fact, the b-examples are all unacceptable. Thus, the a-examples present cases of the indirect passive that are not constructed in syntax. Furthermore, we cannot consider the VP to be an idiom chunk with the a-examples, as the word order can be shifted.

To explain the existence of the a-examples in (8)-(10), we must assume that the verb stems involved – namely yakedasare 'burn:push:out:PASS', tukkomare 'pick:on:PASS', nagasare 'wash:away:PASS' – are stored in the lexicon as items consisting of multiple morphemes. In what follows, we refer to verb stems ending with rare as Vrare.8

Although this might be counterintuitive to those who hold the view that the lexicon only includes single morpheme items, the lexicon of the Japanese language actually includes many multiple morpheme items. For instance, consider the pairs of intransitive and transitive verbs in (11).

8 *Vrare* is realized as *Vare* when *V* is consonant-ending.

- (11) a. her 'to decrease her as 'to make something decrease'
 - b. de 'to exit' das 'to make something exit'
 - c. sasar 'to pierce sas 'to pierce something'
 - d. kimar 'to be decided' kime 'to decide something
 - e. or e'to get snapped' or 'to snap something'
 - f. ak 'to open' ake 'to open something'

Each pair is morphologically related, but the placement of an extra morpheme is random. With the pairs in (11a) and (11c), only one item of the pair includes an extra morpheme. So if we focus on these instances alone, we get the impression that as converts an intransitive verb to a transitive verb, and ar changes a transitive verb to an intransitive verb. However, the pairs in (11b) and (11d) present cases where both sides include an extra morpheme, though one in each pair includes as or ar. The pairs in (11e) and (11f) are more idiosyncratic cases where the same extra morpheme sometimes appears with the intransitive verb but at other times with the transitive verb. Importantly, none of the extra morphemes seen in these cases can be used productively. We are therefore led to assume that all the intransitive and transitive verb stems in (11) are listed in the lexicon, including those whose root morpheme is an attested lexical item. Pairs of morphologicallyrelated intransitive and transitive verbs thus highlight that the Japanese lexicon includes a good number of multiple morpheme items.

We have concluded above that the lexicon includes instances of *Vrare* whose *V* counterpart is not listed (e.g. *vakedasare*, *tukkomare*, nagasare). Given the observation that the Japanese lexicon also includes numerous stems consisting of multiple morphemes, nothing precludes the possibility that a given speaker's lexicon may also list instances of *Vrare* that have their *V* counterpart such as *taberare* 'eat:PASS', nagurare 'punch:PASS' and sinare 'die:PASS', along with those V counterparts, i.e. tabe 'to eat', nagur 'to punch' and sin 'to die'. As we explain below, this is likely in view of language acquisition.

When a child learns the Japanese language, what he/she hears is not the morpheme rare in isolation, but a cluster of instances of Vrare and their V counterparts if any. So, it is reasonable to assume that a given speaker's lexicon at some point may include items like those in (12).

Suppose that the speaker wishes to utter a sentence whose meaning corresponds to that of an indirect passive sentence, using V_5 . In this situation, he/she isolates the meaning and function of rare by comparing relevant instances of Vrare and their V counterparts in his/her lexicon, and tries to use V_5 with rare being attached. If this attempt is successful and accepted by his/her language community, he/she starts to use it with other verbs. In this way, we maintain, the Argument-adding rare gets included in his/her lexicon.9

We leave open the issue of what his/her lexicon looks like after the Argument-adding rare has been recorded independently. It is possible that it is simply added as in (13). Alternatively, we may think that many instances of *Vrare* have been removed, as in (14), for they can be reconstructed through the merge process in syntax.

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(13) ..., V<sub>1</sub>, V<sub>2</sub> rare, V<sub>2</sub> rare, V<sub>3</sub> rare, V<sub>4</sub> rare, V<sub>5</sub>, rare (Argument-adding rare),...
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As we see, either assumption allows us to account for the fact that the lexicon includes *Vrare* stems, especially those whose *V* counterpart is not listed. 10

Once we view that the Argument-adding rare has originated from the Vrare stem, we cannot preclude the possibility that even when it is used productively, it forms a constituent with a given verb, making the indirect passive a mono-clausal structure. One might counter this, saying that how the Argument-adding rare has originated and how it should merge in syntax are independent issues. We point out, however, that those indirect passives that do not have an active sentence counterpart must be understood to be mono-clausal because they are built from Vrare stems in the lexicon. Thus, if we analysed

⁹ Horiguchi's (1990) work may help us determine when the productive use of the Argument-adding rare became fully available. He reports that a certain type of the indirect passive, where the subject is not the possessor of the entity denoted by one of the underlying verb's arguments or is not in competition with the agent, is attested only after the early modern period. Thus, the instances of the indirect passive like (i) are of comparatively recent origin.

⁽i) Mary ga John ni tonari de nerareta rasii. (= (2a)) Mary NOM John by next:to at sleep:PASS:PAST seem 'Apparently, John dozed next to her, annoying Mary.'

It is thus suggested that the productive use of the Argument-adding rare started rather late, though nothing precludes the possibility that the isolation process itself took

We maintain that the Argument-reducing rare is included in the speaker's lexicon in a similar way. Many researchers assume that the so-called direct passive, where the subject is the argument of the underlying verb that bears the Theme/Patient role, involves the Argument-reducing rare (cf. McCawley 1972; Kuno 1973; Saito 1982; Miyagawa 1989; Shibatani 1990). In fact, there are instances of the direct passive for which we cannot identify an active sentence serving as their base; see (i).

⁽i)(Hayashishita, Takai, Ueyema 2020, [81c] and [82c])

a.Takusan no nimotu ga densya ni yur**are**teiru. GEN luggage NOM train by toss:PASS:being:PRES 'A lot of luggage was being tossed up and down inside the train.'

b.*Densya ga takusan no nimotu o {yutteiru / yuteiru}. GEN luggage ACC toss:being:PRES NOM many train 'The train is tossing a lot of luggage up and down.'

the indirect passive involving the productive use of rare as a bi-clausal phenomenon, we would end up assuming two types of indirect passives, those having the mono-clausal structure and those with the bi-clausal structure, though they are semantically indistinguishable. We find this to be unnatural. In the following sections, in pursuit of the mono-clause analysis, we will introduce two sets of phenomena, which the bi-clause analysis has difficulty accounting for.

2.2 Restriction on the Verb Type

It is not the case that the Argument-adding rare is compatible with any type of verbs. In particular, we maintain (15).

(15) The Argument-adding rare needs to occur with a volitional verb. (Cf. Mikami 1953; Masuoka 1991, 114, no. [54].)

For example, with (16a), the daughter started dating the man voluntarily, and we can construct the indirect passive based on it as in (16b).

- (16) a. Musume ga ano otoko to tukiaidasite irai, iroiro yakkaina since various troublesome daughter NOM that guy with date:start koto okotteiru. ga incident NOM occur:being:PRES
 - 'Since my daughter started dating that guy, many troubles are happening.'
 - b. Musume ni ano otoko to tukiaw**are**dasite irai. iroiro vakkaina with date:PASS:start since various troublesome daughter by that guy koto ga okotteiru. occur:being:PRES. incident NOM 'Since my daughter started dating that guy, many troubles that concern me are happening.'

By contrast, the daughter needing to live with diabetes in (17a) is not her choice, and as shown in (17b), the indirect passive constructed based on it is not acceptable.

(17) a. Musume ga toonyoobyoo to tukiaidasite irai, iroiro yakkaina daughter NOM diabetes with cope:start since various troublesome koto okotteiru. incident NOM occur:being:PRES. 'Since my daughter started coping with diabetes, many troubles are happening.'

tukiaw**are**dasite irai. iroiro b. *Musume toonyoobyoo to ni daughter by diabetes cope:PASS:start since various with vakkaina koto okotteiru. ga troublesome incident NOM occur:being:PRES 'Since my daughter started coping with diabetes, many troubles that concern me are happening.'

Similarly, (18a) states Player A's voluntary action which caused the team to go downhill, and we can construct the indirect passive based on it; see (18b).

- de (18) a. A sensyu ga kozin nο ketudan pozisyon o A player NOM personal GEN decision with position ACC kawatte tiimu teimeisiteiru. irai. wa TOP go:down:being:PRES change since team 'Since Player A changed his position for personal reasons, the team has been going down.'
 - b. A sensyu ni kozin nο ketudan de pozisyon o A player bγ personal GEN decision with position ACC teimeisiteiru. kawar**are**te irai. tiimu wa change:PASS since team TOP go:down:being:PRES 'Player A changed his position for personal reasons, which negatively affected us, and our team has been going down.'

(19a), on the other hand, depicts the situation where the Head Coach needed to leave involuntarily due to the manager's decision, and as illustrated in (19b), the indirect passive cannot be constructed based on it.11

(19) a. Oonaa no ketudan de tiimu kantoku ga kawatte irai. owner GEN decision with director NOM change since team wa teimeisiteiru. TOP

go:down:being:PRES

'Since the Head Coach was changed because of the owner's decision, the team has been going down.'

¹¹ The Argument-reducing rare need not occur with a volitional verb. For example, the acceptable passive sentence in (i-b) is based on (i-a), which involves a non-volitional verb.

⁽i) a. Ano bas ziko wa takusan no wakamono no inoti o ubatta. that bus accident TOP many GEN young:person GEN life ACC steal:PAST 'That bus accident took away many young people's lives.'

inoti ga ano basu ziko niyotte ubawareta. b. Takusan no wakamono no GEN young:person GEN life NOM that bus accident by steal:PASS:PAST 'Many young people's lives were taken away in that bus accident.'

It thus follows that we must postulate the Argument-adding rare independently of the Argument-reducing rare, contra Washio (1990), among others.

 b. *Oonaa no ketudan de kantoku ni kawararete irai, tiimu owner GEN decision with director by change:PASS since team wa teimeisiteiru.

TOP go:down:being:PRES

'The Head Coach was changed because of the owner's decision, which negatively affected us, and our team has been going down.'

Admittedly, there are cases where the indirect passive includes a non-volitional verb; see (20).

- (20) a. Kono hei wa, donna kyoohuu ni huk**are** temo this wall TOP any strong:wind by blow:PASS even:if taorenai hei desu.
 fall:NEG wall COP
 'This wall is a kind of wall that does not fall no matter how strong a wind blows on it.'
 - Kaerimiti, yuudati ni hurarete, bisyonureni returning:way late:afternoon:rain by pour:PASS soaked nattesimatta.

become:finish:PAST

'On the way back, the late afternoon rain poured on me, and I was soaked.'

But given the assumption that the lexicon includes instances of *Vrare* as discussed in section 2.1, nothing so far prevents us from assuming verbs like *hukare* 'blow:PASS' and *hurare* 'pour:PASS' are stored in the lexicon independently.

Although we do not know why the Argument-adding *rare* needs to occur with a volitional verb, this observation holds and thus needs to be incorporated in the analysis of the indirect passive. If we assumed the indirect passive to be a bi-clausal phenomenon, it would not be possible to incorporate this observation unless *ad hoc* assumptions are made. For example, we would need to say that the clause with which the Argument-adding *rare* merges inherits the feature [+volition] from the verb so that the Argument-adding *rare* can see [+volition] when it merges with the clause. We point out that [+volition] is to describe the meaning of a given verb; thus, it is a semantic feature. Thus, this move makes one commit to the view that semantic features may percolate up, which we think is not preferable in view of constructing a restricted theory of syntax.

2.3 The Case Particle Alternation

Even if the percolation of [+volition] is justified, the bi-clause analysis of the indirect passive still faces the problem of case particle assignment. This seems to have been acknowledged in the field but not

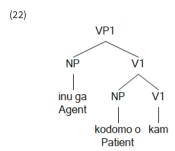
addressed explicitly. To illustrate this point, let us consider the example in (5), repeated as (21).

(21) Noriko ga inu ni kodomo o kam**are**ta (sooda).

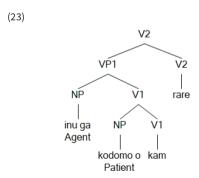
Noriko NOM dog by child ACC bite:PASS:PAST I:heard

'(I heard) it occurred to Noriko that a dog bit her child.'

With the bi-clause analysis, the two-place predicate *kamu* 'to bite' first merges with the argument bearing the Patient role and then the argument with the Agent role as in (22).



At this point, the case particle assignment has been already completed via the procedure applied to 'regular' non-passive sentences. The Argument-adding *rare* now merges with the resulting clause, as in (23).



Notice that the Argument-adding *rare* cannot see the items inside the clause, so there is no way to change *ga* to *ni* at that point.

The argument against the bi-clause analysis outlined above assumes that the information of case particles is part of a given verb's lexical information. We think this assumption is reasonable, because the assignment of case particles is not predictable from theta roles. For example, (24) shows that the same verb may appear with a different set of case particles while retaining the same meaning.

- (24) a. Mati ga kuruma de ahureteiru. town NOM car with overflow:being 'The town is overflowed with cars.'
 - Mati ni kuruma ga ahureteiru.
 town DAT car NOM overflow:being
 'The town is overflowed with cars'

In this connection, we would like to mention Kuroda (1978), as it in effect illustrates that the case particle assignment is difficult to handle with the bi-clause analysis even if we decide to abandon the assumption that the information of case particles is part of a given verb's lexical information. To account for the case particle alternation, Kuroda devises two grammatical operations: 'Subject ni-Raising' and 'Counter-Equi NP Deletion'. However, realising that these two operations do not give us right results with some other grammatical constructions and also generate unwanted sentences, he supplements them with several *ad hoc* assumptions such as that case assignment might be cancelled after it has been performed, and that generated sentences need to be filtered out by the three canonical sentence patterns that he has postulated. These *ad hoc* assumptions are not only untenable but also incompatible with currently accepted theoretical frameworks.

It is clear from the above discussion that in order to describe the case particle alternation, we must analyse the indirect passive in such a way that the Argument-adding rare has access to the argument structure of the verb and can convert it so that the argument bearing the Agent role ends up having the particle ni. To achieve this within the current Merge-based syntactic theory, we must assume that the Argument-adding rare merges with a given verb as its sister; hence, the mono-clause analysis is needed. 12, 13

¹² Washio (1990) analyses the indirect passive to be an instance of the impersonal passive, known to be found in German, plus an extra NP. We note that his analysis highlights the importance of the Argument-adding rare directly merging with the main verb. The sentence Sensei ga gakusei ni kuruma o kerareta 'Sadly to the teacher, his student kicked his car' (transl. by the Authors) is, for example, analysed as follows.

⁽i) a. [_{TP} [_{VP} gakusei ni kuruma o ker**are**ta]] →

b. $[T_{TP}]$ sensei ga $[T_{TP}]$ gakusei ni $[T_{TP}]$ kuruma o ker**are**ta]]

First the lowest clause is constructed as in (i-a), which he considers to be an instance of the impersonal passive. Then the subject of *ker* 'to kick', already marked with *ni*, moves up and the passive subject *sensei ga* is added, as in (i-b). Notice that this analysis is possible only because the Argument-adding *rare* is first combined with the main verb and changes its Argument-structure in such a way that *ga* becomes *ni*.

¹³ Phrase structure rules give us the option of assuming the Argument-adding *rare* to be combined with a VP, i.e. an alternative mono-clause analysis. Gunji (1983) pursues this option based on examples like (i), and devises a set of phrase structure rules which allow the item that is combined with the VP to have the particle *ni*.

3 The Mono-clause Analysis of Indirect Passives

In this section, we demonstrate that the mono-clause analysis can describe the observation that the Argument-adding rare needs to occur with a volitional verb, as well as the case particle alternation. For practical reasons, we adopt Ueyama's (2015) theoretical framework, which is understood to be a development of the Minimalist Program in Chomsky (1995) for the purpose of describing specific instances of natural language (as opposed to the properties of Universal Grammar).

3.1 Theoretical Framework: Ueyama (2015)

Like the Minimalist Program, Ueyama's (2015) framework assumes that the Numeration is formed, drawing a set of lexical items from the lexicon, and Merge, the operation of the computational system, combines them and yields as output a pair of semantic and phonological representations. Ueyama's (2015) theory also makes use of uninterpretable features to restrict the output of the computational system so as to define a set of well-formed sentences. To be able to describe specific instances of natural language (as opposed to the properties of Universal Grammar), however, Ueyama's (2015) theory modifies three aspects of those theories developed by Chomsky (1995) and his subsequent works. First, Merge has directionality; in other words. Merge determines precedence relation. Second, uninterpretable features come in a wider variety in order to describe specific grammatical constructions. Third, some aspects of sentence meaning, including theta-role assignment, are decided by the syntax, and to account for that, some uninterpretable features are added to semantic features. These three assumptions are necessary to describe the contribution of the computational system to word orders and sentence meanings.

(i) (Gunji 1983, 125 no. [37])

Ken ga Naomi ni $[_{TVP}[_{TVP}]$ byookininar**are**] sosite $[_{TVP}]$ sin**are**]] ta. ill:become:PASS and die:PASS

'Ken was adversely affected by Naomi's becoming ill and dying.' Crucially, this approach does not necessitate the assumption that the information of case particles is part of a given verb's lexical information.

We understand that those examples by Gunji argue against the bi-clause analysis but are compatible with the mono-clause analysis that we will pursue below in which the Argument-adding rare is combined with the verb directly. While Gunji's analysis is meritorious, we do not consider it here, for phrase structure rules are known to be inadequate in many areas and replaced by the Merge-based syntactic theory (cf. Chomsky 1995), and the distribution of case particles is so complex that it is not possible to describe all with phrase structure rules.

We now introduce our theoretical assumptions in concrete terms. First, we assume that the speaker's lexicon consists of lexical items where each lexical item is a bundle of syntactic, semantic and phonological features, in particular, we assume (25). We use the format in (26) to describe that.

- (25) A lexical item is a bundle of (i), (ii), and (iii):
 - (i) a set of syntactic features,
 - (ii) a set of semantic features consisting of an id-slot and a set of properties where a property is a pair consisting of an attribute and a value, and
 - (iii) a phonological form.
- (26) [{syntactic features, ...}, {<id-slot, {properties, ...}>, ...}, phonological form]

The Numeration is thus a set of feature bundles. The series of Merge operations determines the hierarchical and linear orders among them, from which semantic and phonological representations are read off. The semantic features are described as pairs of an index and a set of properties, and the 'id-slot' is a place to host an index. We will explain below how id-slots get filled. Since this paper is concerned with the structure and meaning of sentences, we leave out the details of phonological features; we simply write the sequence of sounds making up the item in alphabets.

We now explain how the semantic representation of a given sentence is created by the computational system. For example, in the theory we are adopting here, the semantic representation of the sentence in (27) turns out to be (28).14

```
(27) Inu
                                oikaketa
          ga
                 kodomo o
                           ACC chase:PAST
    dog
          NOM child
    'The dog chased the child.'
```

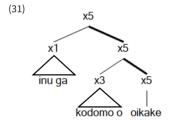
```
(28) {<x1, {<dog, T>}>,
     <x3, {<child, T>}>,
     <x5, {<chasing, T>, <Theme, x3>, <Agent, x1>, <Time, perfect>}>}
```

In this theory, the semantic representation of sentences is a set of objects. (28), for example, consists of three objects, x1, x3 and x5, where x1 is a dog, x3 a child and x5 a chasing event whose Agent and Theme are x1 and x3, respectively. The speaker then 'understands' the meaning of the sentence in the context by identifying these objects with the objects in their Information Database.

We now consider how the semantic representation in (28) is generated. First, we understand that $\langle x1, \{\langle dog, T \rangle \} \rangle$ comes from the lexical specification of inu 'a dog'. To capture this, we assume the lexical entry of inu 'a dog' to be (29a), which turns to be (29b) when it is selected for the Numeration.

Similarly, we assume that $\langle x3, \{\langle child, T\rangle \}\rangle$ in (28) comes from the lexical entry of kodomo 'a child', i.e. (30a), which turns to be (30b) at the Numeration.

We wish to say that $\langle x5, \{\langle chasing, T\rangle, \langle Theme, x3\rangle, \langle Agent, \rangle \}$ x1>, <Time, perfect>}> obtains after the parts of the sentence are combined as in (31).



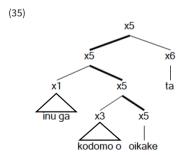
To achieve this, we assume the lexical specification of oikake 'to chase' to be (32a), which turns into (32b) at the Numeration, and the Merge operation, which combines kodomo o and oikake, and then inu ga and kodomo o oikake, is Right-headed Merge (= RH-Merge) in (33).

(33) RH-Merge:15

 \star_{o} in (32) is an uninterpretable feature that is to be replaced with the index of the item with the o feature (i.e. the o-marked NP in this case) via Merge, and \star_{ga} an uninterpretable feature that is to be replaced with the index of the item with the ga feature (i.e. the ga-marked NP in this case) via Merge. Thus, they end up being replaced with the index of $kodomo\ o$ (i.e. x3) and that of $inu\ ga$ (i.e. x1), respectively.

<Time, perfect> of <x5, {<chasing, T>, <Theme, x3>, <Agent, x1>, <Time, perfect>}> comes from the lexical specification of the tense ta. We assume that its lexical specification is (34a), which turns to (34b) at the Numeration.

Here \star is an uninterpretable feature that is to be replaced with the index of the item when the unit is merged with it. In the configuration of (35), \star in (34) becomes x5.

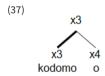


Bound morphemes must be combined with a certain syntactic category item. Depending on the item, it may be combined as the right-or left-hand item and serve as the head or non-head. In the case of

ta, it must be combined as the right-hand item with an item with the V feature, serving as the non-head. To achieve that, we assume that the syntactic features of ta include +V(right)(nonhead). The Merge operation involved in this situation is Left-headed Merge (LH-Merge), which is the mirror image of RH-Merge above. We consider RH-Merge and LH-Merge are two basic Merge operations in natural language.

Let us now consider how inu and ga, and kodomo and o, are combined. We use kodomo and o for illustration. Since the value of 'Theme' in (32) must be the index of kodomo, we assume that kodomo must be the head when it is combined with o, thus the Merge operation involved is LH-Merge. However, komodo o must carry the o-feature when it is combined with the verb to ensure the replacement of \star_a , and it should come from the particle o, so we assume that the o-feature percolates to its mother in the first instance of Merge. In sum, the lexical specification of the particle o is (36), and kodomo and o are combined as in (37).

- (36) a. [{J, +N(right)(nonhead), o}, φ, o]
 - <x4, [{J, +N(right)(nonhead), ο}, φ, ο]>



The particles like *qa* and *o* must be combined as the right-hand item with an item with the N feature, serving as the non-head. To ensure that, we assume that their syntactic features include +N(right)(nonhead).

The overall procedure to generate the semantic representation in (28) is provided here. In the process of forming a Numeration, the two operations in (38) take place.

(38) a. Each selected lexical item is assigned an index. b. If a lexical item has id in the id-slot, the assigned index replaces it.

Thus, if the lexical items mentioned above are chosen, the Numeration in (39) is formed.

¹⁶ There is a viable analysis where the particle qa needs to relate to Tense. If we adopt such an analysis, we need to assume that when the VP merges with T, T is the head, so the lexical specification of ta must include +V(right)(head) in place of +V(right)(nonhead).

```
(39) {<x1, [{N}, <x1, {<dog, T>}>, inu]>,

<x2, [{J, +N(right)(nonhead), ga}, φ, ga]>,

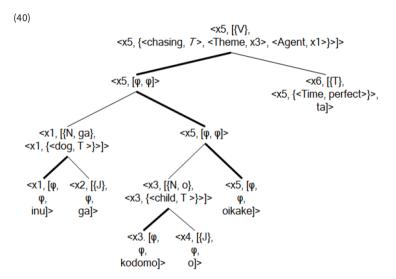
<x3, [{N}, <x3, {<child, T>}>, kodomo]>,

<x4, [{J, +N(right)(nonhead), o}, φ, o]>,

<x5, [{V}, <x5, {<chasing, T>, <Theme, ★₀>, <Agent, ★ցa>}>, oikake]>,

<x6, [{T, +V(right)(nonhead)}, <★, {<Time, perfect>}>, ta]>}
```

To generate the sentence in (27), the items of the Numeration in (39) are combined through RH-Merge and LH-Merge, giving rise to the structure in (40).



Then, all the semantic features are taken off as in (41) and rearranged according to the indexes, which result in the semantic representation in (28), repeated as (42) here.

3.2 The Argument-adding rare

We now introduce our mono-clause analysis of the indirect passive. We claim the lexical entry of the Argument-adding *rare* to be (43).

```
(43) (Cf. Ueyama 2015, 70 no. [45].)
     [\{V, +V[Argument-adding](right)(nonhead)\}, <\star, \{<Affectee, \star_{ga}>\}>, rare]
```

Since the Argument-adding rare is unique in that it changes the argument structure of the verb with which it is combined, we must assume that it employs a special instance of Merge, namely the Argumentadding Merge in (44). +V[Argument-adding](right)(nonhead) in (43) ensures that this item is combined via the Argument-adding Merge as the right item with an item having *V*, serving as the non-head.

```
(44) Argument-adding Merge:
```

```
<xn, [{V, syntactic features<sub>1</sub>, ...}, {<xn, {..., <Agent, \star_{ga}>, ...}>, phonology<sub>1</sub>]>
<xm, [{V, +V[argument-adding] (right) (nonhead)}, <★,{<Affectee, ★,, >}>, rare]>
<xn, [{V, syntactic features<sub>1</sub>, ...}, {<xn, {..., <Agent, \bigstar_{ni}>, <Affectee, \bigstar_{na}>, ...}>, ...}<
<xn, [{V}, \emptyset, phonology,]>,
<m, [{V}, Ø, rare]>
>]>
(Cf. Ueyama 2015, 70 no. [46])
```

The Argument-adding Merge ensures the Argument-adding rare merges with a volitional verb (i.e. a verb having an Agent property) and changes its particle from *qa* to *ni*.

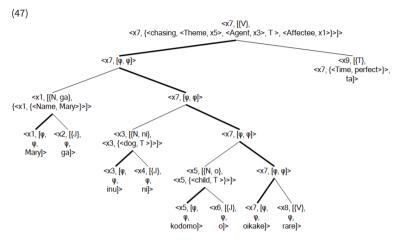
We illustrate our analysis through the derivation of the sentence in (45).

```
(45)
      Mary ga
                  inu ni
                           kodomo
                                            oikakerareta
      Mary NOM dog by child
                                     ACC
                                            chase:PASS:PAST
      'Mary was affected, as the dog chased her child.'
```

First, the Numeration in (46) is formed.

```
(46) {<x1, [{N}, {<x1, {<Name, Mary>}>}, Mary]>,
     <x2, [{J, +N(right)(nonhead), ga}, φ, ga]>,
     <x3, [{N}, {<x3, {<dog, T>}>}, inu]>,
     <x4, [{J, +N(right)(nonhead), ni}, φ, ni]>,
     <x5, [{N}, {<x5, {<child, T>}>}, kodomo]>,
     <x6, [{J, +N(right)(nonhead), o}, φ, o]>,
     <x7, [{V}, <x7, {<chasing, T>, <Theme, \bigstar_0>, <Agent, \bigstar_{ga}>}>, oikake]>,
     <x8, [{V, +V[argument-adding](right)(nonhead)}, <\star, {<Affectee, \star_{Pa}>}>, rare]>,
     <x9, [{T, +V(right)(nonhead)}, <\star, {<Time, perfect>}>, ta]>}
```

Then the items in (46) are combined through Argument-adding Merge, RH-Merge and LH-Merge, resulting in the structure in (47).



Finally, the semantic features are taken off from the resulting structure and rearranged according to the indexes, giving rise to the semantic representation in (48).

4 Reconsidering Previous Arguments for the Bi-clause Analysis

One of the most celebrated arguments for assuming the indirect passive to be a bi-clausal phenomenon has to do with the antecedent of *zibun* 'self'.¹⁷ This argument assumes that the direct passive (where the subject is the argument of the underlying verb that bears the Theme/Patient role) is, by contrast, a mono-clausal phenomenon, and draws on the contrast between the indirect passive and the direct passive.

It is said that *zibun* is different from the English anaphor (e.g. 'himself') in that its antecedent must be a syntactic subject, but it is not clause-bounded. In support of this assumption, a set of examples like those in (49)-(50) is often reported, where the items of the same index refer to the same entity.

- (49) a. Hanako, ga Taroo ni zibun, no nooto watasita DAT self GEN notebook ACC hand:PAST Hanako NOM Taro 'Hanako handed her notebook to Taro.'
 - b. ?*Hanako ga Taroo, ni zibun, no nooto kaesita Hanako NOM Taro DAT self GEN notebook ACC return:PAST 'Hanako returned Taro his notehook'
- (50)Hanako, ga [zibun, ga itiban hayakatta] Hanako NOM self NOM first fast:PAST COMP iihurasiteiru. say:to:people:being:PRES 'Hanako keeps saying to people that she was the fastest.'

The contrast between (49a) and (49b) supports the view that the antecedent of zibun must be a syntactic subject. On the other hand, (50) shows that the antecedent of *zibun* need not be in the same clause.

Turning to passive examples, Kuno (1983), for example, compares the direct passive in (51) and the indirect passive in (52).

- (51)(Kuno 1983, 213 no. [71a]) Taroo, ni zibun_{1/*2} no Hanako, wa heya ni tozikomerareta. Hanako TOP Taro by self GEN room at lock:PASS:PAST 'Hanako was locked in her room by Taro.'
- (52)(Kuno 1983, 213 no. [71b]) Hanako, wa Taroo, ni zibun_{1/2} no heya ni roozyoosareta. Hanako TOP Taro bv self GEN room at stay:PASS:PAST 'Taro stayed in her/his room, annoying Hanako.'

Kuno's (1983) factual assessment is that the antecedent of zibun can only be *Hanako* in (51), but it can be either *Hanako* or *Taro* in (52). Those who advocate for the bi-clause analysis of the indirect passive claim that the reason why (52) allows the reference ambiguity is because the indirect passive is a bi-clausal phenomenon, i.e. (52) is analysed as (53), where there are two syntactic subjects. 18

(53) (Kuno 1983:213 [71b]) [s Hanako, wa [s Taro, ni zibun, no heya ni roozyos] **are**ta]

We, however, claim that this argument is not valid. Firstly, there are also cases of direct passives where the *ni*-marked agent phrase

18 Cf. McCawley 1972 and Kuno 1973.

serves as the antecedent of zibun. For example, with (54a), the antecedent of zibun is best understood to be the passive subject, but the natural interpretation of (54b) is the one where the agent phrase Kimura sensei ni 'by Prof. Kimura' is the antecedent of zibun.

- (54) a. Ano keiri Kimura sensei ni zibun, hito. wa that finance GEN person TOP Kimura teacher by self GEN buka mae de sikarituke**rare**ta no da. worker GEN front at scold:PASS:PAST COMP COP 'That person, from the Finance Department was scolded by Prof. Kimura in front of his, workers.'
 - b. Ano keiri hito Kimura nο sensei, ni zibun, no that finance GEN person TOP Kimura teacher by self GEN puraido tameni sikaritukerareta no da. pride scold:PASS:PAST_COMP COP GEN for 'That person from the Finance Department was scolded by Prof Kimura, in order to protect his, own pride.'

Second, the assumption that the antecedent of zibun must be a syntactic subject does not seem to be correct; examples where the antecedent of *zibun* is not a syntactic subject are often reported. 19 Those in (55) are among them.

- (55) a. (McCawley 1976, 78 no. [109]) Zibun, ga nakatta koto Hirosi, o NOM cancer COP NEG:PAST COMP NOM Hiroshi ACC yorokobaseta. rejoice:CAUSE:PAST '(Lit.) That self, did not have cancer made Hiroshi, happy.'
 - b. (Kitagawa 1980, 437 no. [2]) Hayaku Naomi, o zibun, no ie kaesitesimai nasai. quickly Naomi o self GEN house to send:back:finish IMP 'Send back Naomi to her home quickly.'

Hence we conclude that the *zibun*-based argument for the indirectpassive being a bi-clausal phenomenon is not valid.

The issue of what can be the antecedent of *zibun* is complex and beyond the scope of the present paper, but we nevertheless would like

¹⁹ Cf. McCawley 1976; Kitagawa 1980; Saito, Hoji 1983.

to comment on it briefly. Intuitively, examples like those in (54) and (55) seem to indicate that the zibun's antecedent must be an entity from whose perspective the speaker can utter the sentence. Given this, one may wonder why Taro cannot be the antecedent of zibun in (51). In fact, we think the interpretation under discussion is not impossible. At the same time we acknowledge that with the direct passive, it can be more difficult to interpret the *ni*-marked agent phrase as the antecedent of zibun than it is with the indirect passive. The question we must address, therefore, is why this is the case.

As stated above, many researchers assume that the direct passive involves the Argument-reducing rare.²⁰ We also take the position that many such instances of the direct passive may involve the Argument-reducing rare. Because the Argument-reducing rare eliminates the relevant verb's external argument, we may understand that with many cases of the direct passive, the *ni*-marked agent phrase may be an adjunct. By contrast, the *ni*-marked agent phrase of the indirect passive is an argument since what is involved is the Argument-adding rare. To account for the tendency discussed above, we thus maintain (56).21

(56) Adjunct phrases cannot be the antecedent of zibun.

The following set of data supports this generalization. The sentences in (57) constitute a minimal pair. They only differ in the particles accompanying the causee Zyon 'John'; (57a) has ni but (57b) kara. We may understand both to mean that the speaker will arrange things so that John would convey his own intention directly to the hearer.

- (57) a. Zyon, ni tyokusetu kare, no ikoo tutaesaseru John DAT directly he GEN intention ACC convey:CAUSE:PRES vooni simasu. such do:PRES
 - 'I will make John convey his intention directly to you.'
 - b. Zyon, kara tyokusetu kare, no ikoo tutaesaseru John from directly he GEN intention ACC convey:CAUSE:PRES yooni simasu. such do:PRES 'I will make John convey his intention directly to you.'

²⁰ Cf. McCawley 1972; Kuno 1973; Saito 1982; Miyagawa 1989; Shibatani 1990.

²¹ An anonymous reviewer has noted that this thesis may follow from the obliqueness hierarchy in Pollard, Sag 1992.

However, if we change *kare* 'he' to *zibun* 'self', we see the difference between the two; the first one retains the interpretation under discussion, but the second does not. This is shown in (58).

```
(58) a. Zyon, ni
                   tyokusetu zibun, no
                                                          tutaesaseru
       John DAT directly
                              self
                                     GEN intention ACC convey:CAUSE:PRES
       vooni simasu.
       such do:PRES
       'I will make John convey his intention directly to you.'
```

b. *Zyon, kara tyokusetu zibun, no ikoo tutaesaseru John from directly self GEN intention ACC convev:CAUSE:PRES vooni simasu. do:PRES such 'I will make John convey his intention directly to you.'

We thus understand that *Zyon* 'John' can be the antecedent of *zibun* 'self' in (58a), but not in (58b). Given that Zyon 'John' in (58a) is considered to be an argument while that in (58b) is an adjunct, this contrast supports the generalization in (56).

We thus conclude that the tendency that the agent phrase of the direct passive does not serve as the antecedent of zibun can be attributed to (56), and it is too far-fetched to use it to support the assumption that the indirect passive is a bi-clausal phenomenon.

5 **A Summary and Further Remarks**

In this paper, we have maintained the view that the indirect passive is best understood to be a mono-clausal phenomenon. In view of the acquisition of the Argument-adding rare, we may understand that the lexicon of a given speaker at some point included instances of Vrare, i.e. multiple morpheme items, and then the speaker isolated the Argument-adding rare through comparison between relevant instances of Vrare and their V counterparts. Given that the Argument-adding rare has originated from the *Vrare* stem, it is possible to assume that it forms a constituent with a given verb. We then put forward the generalisation that the Argument-adding rare needs to occur with a volitional verb, and argued that this generalisation, together with the case particle alternation involved in the indirect passive, poses a challenge to the bi-clause analysis. With an example of the mono-clause analysis we have also demonstrated that the mono-clause analysis can account for those two phenomena that are problematic to the bi-clause analysis.

Before closing the paper, we would like to briefly comment on passives involving the Argument-reducing rare. Researchers typically adopt the analysis of the English passive for them.²² That is, the passive morpheme is attached to a verb, which causes the external argument of the verb to be eliminated, and consequently the internal argument becomes unable to receive abstract Case in its original position, so moves to the subject position to receive the nominative case. We are hesitant to endorse this approach for two reasons. First, as we have seen above, the Argument-reducing rare is also understood to have originated from the Vrare stem, the same as the Argument-adding *rare*. Thus, the most straightforward analysis is the one that mirrors the analysis of the indirect passive we have maintained above. That is, there is a special instance of Merge, by which the Argument-reducing rare is combined with a given verb, and as a result, the verb loses its external argument and the particle *ga* is assigned to the argument that bears the Theme/Patient role. Thus, no case-triggered movement is involved (cf. Hoji 2008). Second, the analysis of the English passive assumes that cases are structurally assigned, triggering movement. However, we are yet to be convinced that Japanese particles are assigned in the same way as English cases (cf. Kuroda 1978).

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