Decomposition of the Little *v*:
Possessors of Interest

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Since the little *v* was introduced into the Minimalist syntax (Larson 1988, Hale and Keyser 1993, Chomsky 1995: chap.3, Collins 1997, among others), its θ-role assignment mechanism has been frequently discussed. There have been two approaches of dealing with the properties of *v*: the feature-specification system which leads to four types of *v* is proposed by Hasegawa (2001) on one hand, and split-*v* analyses have been proposed on the other (cf. Bowers 2002, Pylkkänen 2002, and Tonosaki 2003). Developing Hasegawa's analysis, we propose decomposition of *v* through the examination of data of non-Agentive sentences, especially those which we call Possessive-Relationship Constructions (PRCs). We also argue that the proposed system is preferable in terms of Burzio's Generalization (Burzio 1981, 1986).

*the little *v* *non-Agent *Experiencer *Applicative *possessor

1. Introduction

In this paper, we mainly investigate sentences which we call Possessive-Relationship Constructions (PRCs). Observe the examples in (1).[1]

Possessive-Relationship Constructions (PRCs)

(1) a. Taroo-ga　(ziko-de)　yubi-o　kit-ta.

　　　Taroo-Nom　accident-by　finger-Acc　cut-Past

　　　'Taroo cut his finger (in the accident).'

　　b. Tanaka-san-ga　haisya-de musiba-o nui-ta.

　　　Mr. Tanaka-Nom　dentist-at bad tooth-Acc pull-Past

　　　'Mr. Tanaka had a bad tooth pulled at the dentist's.'

　　c. Hanako-wa　biyooin-de　kami-o　some-ta.

　　　Hanako-Top　beauty shop-at hair-Acc dye-Past

　　　'Hanako had her hair dyed at the beauty shop.'

d. Watasi-wa rakurai-de　　ie-o　　yai-ta.

　　I-Top　　thunderbolt-by　house-Acc　burn-Past

　　'I had my house burnt down by a thunderbolt.'

(Amano 1991: 196)

e. Taroo-ga　　nukarumi-de asi-o　suber-ase-ta.

　　Taroo-Nom　mud-by　　　leg-Acc slip-Caus-Past

　　'Taroo slipped on the mud.'

In PRCs, a possessor and its possessee are realized apart as distinct constituents, namely, the possessor is the subject of the sentence, while the possessee is the object. What is interesting in PRCs is that interpretations of a possessor subject are non-Agentive, although the verbs involved are also used as Agentive transitive. In addition, possessor subjects are of interest: they are Experiencers but may be interpreted as either Malfactive or Benefactive depending on the context. These types of constructions in Japanese have been widely discussed (see Masuoka 1979, Amano 1987, 1991, Sato 1994, Hasegawa 2001, 2004, and Okura 2004 a, b, among others). Okura (2004a,b) argues that the conditions below hold for forming PRCs.

Condition I : A close possessive-relationship is required between the subject and the object.

　　　II : The verbs involved must be accomplishment verbs in that they imply a result state.

Condition II is essentially the same as the description given by Amano (1987, 1991). As for Condition I, Okura (ibid.) focuses on the possessive relationship, while Amano (1991) deals with the relationship in more semantic terms such as "the adjacent relationship"/"the semantic closeness." Then, the issues will be how to explain these descriptive conditions I and II. The analysis will also solve the problem of why non-Agentive interpretations are given to the subject. Further, the relationship between the possessor and the possessee, which in this case are realized apart in a sentence, will be

accounted for.

As a first step, let us examine Condition I. If a possessive relationship is not established, the subject is interpreted as an Agent.

(2) Taroo-ga yubi-o kit-ta.
　　Taroo-Nom finger-Acc cut-Past
　　Lit. 'Taroo cut finger.'

In (2), if the finger is *Taroo*'s finger, then the subject *Taroo* is interpreted as an Experiencer (or Malfactive). On the other hand, if the finger is someone else's, then *Taroo* is interpreted as an Agent, who injured someone. Of course, *Taroo* may cut his own finger intentionally, and in that case, *Taroo* would be an Agent, but what is important here is that if the finger is not *Taroo's* then an Experiencer reading is not obtained. A similar contrast is observed by Takezawa (1991).

(3) a. Yamada-san-ga　zibun-no kami-o　some-*teiru*.
　　　　Mr. Yamada-Nom self-Gen hair-Acc dye-*teiru*
　　　　'Mr. Yamada is dying his hair.'
　　　　'Mr. Yamada has his hair dyed.'

　　 b. Yamada-san-ga　Tanaka-san-no kami-o　some-*teiru*.
　　　　Mr. Yamada-Nom Mr. Tanaka-Gen hair-Acc dye-*teiru*
　　　　'Mr. Yamada is dying Mr. Tanaka's hair.'

(Takezawa 1991: 68)

Japanese *teiru* is ambiguous between the progressive and the result state voices. Takezawa points out that when a possessive relationship holds between the subject and the object as in (3a), the two readings given in the gloss are possible, but when the possessive relationship is lost as in (3b), only the progressive reading is obtained. In other words, the Experiencer reading of the subject is obtained in (3a), but it is lost in (3b), where the subject is only understood as an Agent. Turning to other examples

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of PRCs, there are cases in which the sentence becomes unacceptable without a possessive relationship because an Agentive reading is impossible for a pragmatic reason.

(4) a. (=(1d))　Watasi-wa rakurai-de　　ie-o　　yai-ta.

　　　　　　　I-Top　　thunderbolt-by house-Acc burn-Past

　　　　　　　'I had my house burnt down by a thunderbolt.'

　　　b.　　　*Watasi-wa rakurai-de　　Tanaka-san-no ie-o　　yai-ta.

　　　　　　　I-Top　　thunderbolt-by　Mr. Tanaka-Gen house-Acc burn-Past

　　　　　　　Lit. 'I burnt down Mr. Tanaka's house by a thunderbolt.'

Since the possessive relationship is lost in (4b), the subject should be interpreted as an Agent, but a human cannot control a thunderbolt. Therefore, the sentence becomes unacceptable. Thus, Condition I, which has been partially discussed by Takezawa (1991) among others, holds for the well-formed PRCs.

　　　Next, let us turn to the second condition:

Condition II:　The verbs involved must be accomplishment verbs in that they imply a result state.

A closer look reveals that verbs involved in PRCs are not just transitives but they must also be accomplishment verbs in Vendler's (1967) typology. Amano (1987, 1991) observes that an Experiencer reading of the subject is not obtained when the verb involved is a transitive *action* verb. This point is made clear in (5), where the gloss indicates the intended meaning.

(5) a. *Taroo-ga　·hitogomi-de ude-o　osi-ta.

　　　　Taroo-Nom　crowd-in　arm-Acc push-Past

　　　　'Taroo was pushed in the arm by someone in the crowd.'

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b. *Hanako-ga　esute-de　　　　　asi-o　　mon-da.

　　Hanako-Nom the esthetic salon-at feet-Acc massage-Past

　　'Hanako had her feet massaged at the esthetic salon.'

c. *Tanaka-san-wa　kinoo-no taihuu-de　yane-o　tatai-ta.

　　Mr. Tanaka-Top yesterday-Gen typhoon-by roof-Acc strike-Past

　　'Mr. Tanaka had his roof damaged by yesterday's typhoon.'

cf. Tanaka-san-wa　kinoo-no taihuu-de　yane-o　tobasi-ta.

　　Mr. Tanaka-Top yesterday-Gen typhoon roof-Acc blow-Past

　　'Mr. Tanaka had the roof of his house blown off by yesterday's typhoon.'

(Amano 1987: 109 with slight modification)

Thus, the construction fails if the verb involved is an action verb, even if a possessive relationship is conceivable between the subject and the object. We classify the verbs involved in PRCs as being accomplishment verbs. To be precise, however, a more refined classification is required, for action verbs such as *migak-u* 'polish' and *sor-u* 'shave' may be used in PRCs as in (6).

(6) a. Taroo-wa　ekimae-de　　　　　kutu-o　migai-ta.

　　　Taroo-Top in front of the station-at shoes polish-Past

　　　'Taroo had his shoes polished at the shop in front of the station.'

b. Masao-wa　tokoya-de　hige-o　sot-ta.

　　Masao-Top barbershop beard shave-Past

　　'Masao was given a shave at the barbershop.'

Although verbs such as *migak-u* and *sor-u* are action verbs, they imply result states. For instance, sentence (6a) allows a resultative phrase such as *pika-pika-ni* 'to be shiny' and (6b) allows *turu-turu-ni* 'to be slick.' These verbs are sometimes placed

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into another class (e.g., "Spurious" in Washio 1997). Whatever the classification may be, what is relevant here is that the verbs must imply a result state.

2. The Little *v* Analysis of Hasegawa (2001)

Hasegawa (2001) made a significant contribution to the analysis of non-Agentive subjects in Japanese by introducing the feature specification system of *v*. She argues that Burzio's Generalization in (7) is not complete enough to capture all the facts.

(7) *Burzio's generalization* (Burzio 1981, 1986)
　　If a verb does not assign an external role, it does not assign Object Case.

According to (7), sentences which lack an external θ-role cannot have an accusative object. However, as Hasegawa observes, there are many cases in which accusative Case is assigned to a sentence lacking an external argument as exemplified in (8). Note that Hasegawa uses the term "external θ-role" to refer to an Agent but not an Experiencer or a Cause, which she argues are generated within a VP; thus not external at base.

(8) a. Ziko-ga　　densya-o　okur-ase-ta/okur-asi-ta.
　　　　Accident-Nom　train-Acc　delay-Tr-Past
　　　　'The accident delayed the train.'

(Hasegawa 2001: 13)

　　b. Kyoko-ga　sono hitokoto-ni　kimoti-o　nagom-ase-ta.
　　　　Kyoko-Nom　that one=word-Dat　feeling-Acc　calm-Cause-Past
　　　　'Kyoko got her feelings calmed by that word.'

(Hasegawa ibid.: 14, 24)

Although (8a) and (8b) lack an Agentive subject (the subject of (8a) is a Cause and that of (8b) is an Experiencer), Object Case is assigned. Hasegawa argues that the feature specification of *v* in terms of [± External Role (ER)] and [± Object Case (OC)], which is illustrated in (9), comprehensively accounts for the facts found in examples

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such as those in (8), which are not covered by Burzio's generalization.

(9) *The feature specification of v in Hasegawa (2001, 2004)*

	+ ER	- ER
+ OC	(a) agentive transitive	**(c) unaccusative transitive**
- OC	**(b) agentive unaccusative**[2]	(d) unaccusative intransitive

In the feature specification system of *v* in (9), the four cases (9a)-(9d) are possible. (9a) and (9d) are within Burzio's generalization, while (9b) and (9c) are not covered by the generalization. The cases in (8a-b), where Object Case is assigned but no external θ-role appears, fall under the classification of (9c). In sum, the fact that an accusative object appears without an Agentive subject is elegantly accounted for by (9c). Hasegawa proposes the derivation in (10) for (8b) and (8b').

(8) b.　Kyoko-ga　　sono hitokoto-ni　　kimoti-o　　　nagom-ase-ta.
　　　　Kyoko-Nom　that one=word-Dat　feeling-Acc　calm-Cause-Past
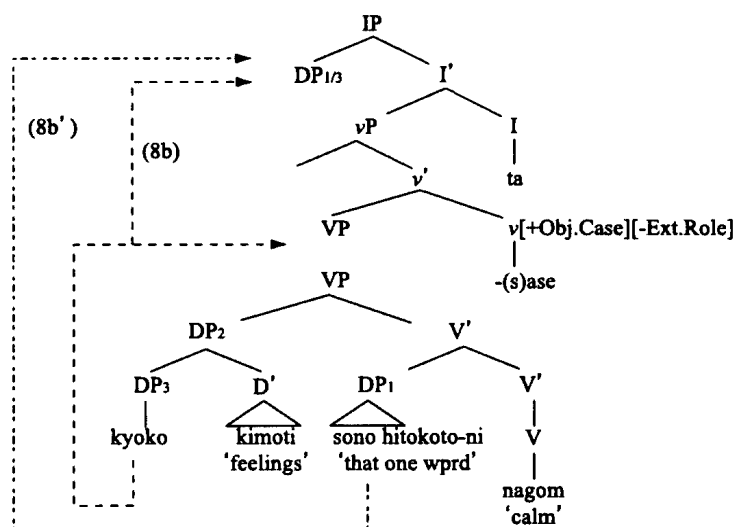　　　　'Kyoko got her feelings soothed by that one word.'

(Hasegawa 2001: 14, 24)[3]

　　b'.　Sono hitokoto-ga　　Kyoko-no kimoti-o　　nagam-ase-ta.
　　　　that one=word-Nom　Kyoko-Gen feeling-Acc　calm-Cause-Past
　　　　'That one word soothed Kyoko's feelings.'　　　　(Hasegawa 2001: 25)

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(10)

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                              IP
                           /     \
          DP₁/₃            I'
     (8b')          / \
              (8b)    vP      I
                    /   \     |
                  v'    ta
                 /    \
            VP      v[+Obj.Case][-Ext.Role]
           /  \            |
         VP    V'        -(s)ase
        /  \
     DP₂    V'
    /  \    / \
  DP₃  D'  DP₁  V'
   |   /\   /\   |
 kyoko kimoti sono hitokoto-ni  V
      'feelings' 'that one wprd'  |
                              nagom
                              'calm'
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The subject *Kyoko*, DP$_3$, first originates as a possessor of the object *kimoti* 'feelings' within the same DP$_2$, and then undergoes possessor ascension to a VP-adjoined position. The accusative Case of the object *kimoti* is due to the Case feature of *v*. Thus, sentence (8b) is derived. The possessor subject *Kyoko* may be alternated with the Cause DP$_1$, *sono hitokoto-ni* 'that one word.' In this case, sentence (8b') is derived: the Cause DP$_1$ originates in a VP, then is raised to the Spec of IP, in the same fashion as the possessor *Kyoko* is raised in (8b). As for the Cause subject in (8a), the derivation is basically the same as in the case of (8b'). Based on the subject alternation between (8b) and (8b'), Hasegawa argues that non-Agentive sentences such as (8b) and (8b') share the same structure and should therefore be given a unified explanation under the properties of *v*. We would like to follow Hasegawa's insight in that the little *v* plays an important role in non-Agentive sentences. As for her point that the Cause subject originates in a VP and is raised, we will not touch upon it in this paper. We will, however, discuss another of Hasegawa's points that the Cause subject and the Experiencer subject may be freely alternated with each other. We will show that they are not always interchangeable.

Adopting the system proposed by Hasegawa, we assume that a possessor originates inside a DP with its possessee, then moves to the subject position, which has been often discussed (e.g., Szabolcsi 1983-1984, Tsujioka 2001). However, Hasegawa's feature specification system does not seem to be sufficient for analyzing

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PRCs exemplified in (1a-e). Although she gives a unified account for sentences of type (8) and PRCs, we will argue that they should be distinguished. We will come back to this problem in Section 5.

Besides this problem, Hasegawa (2001) seems to leave a few points open for wider discussion. First, it is not explained why PRCs require a possessive-relationship. We will discuss this problem in Section 3.2. Another problem is that when we focus on the thematic interpretation, it is not very clear how the Experiencer reading of the subject is obtained in Hasegawa's system. Although Hasegawa (2001) suggests in footnote 10 that "Experiencer" may not be an independent role and could be a derived interpretation, her arguments are mainly based on the cases of sensational predicates or mental-state predicates.

> "I am not sure if Experiencer is an independent role as Agent and Theme are. As observed above and will be further discussed below, the subject of sensational expressions (e.g. (34), (35)) and that of the construction (36)[4] are interpreted as Experiencer, but it is originally a possessor of a body part, which by no means inherently pertains to Experiencer."　　　　　　　(Hasegawa 2001: fn. 10)

In Hasegawa (2004),[5] she argues that predicates must be psychology or sensation type predicates when the Experiencer reading is obtained.

> "To sum, the experiencer reading is a derived one and it is both structurally and semantically conditioned. Semantically, predicates must be psychology or sensation type and the entity must be of human or higher animal. Structurally, possessor raising from inside a VP (most probably from the theme position) is required for this reading."　　　　　　　(Hasegawa 2004: 62)

However, we have observed that even non-sensation or non-mental state predicates may contribute to an Experiencer reading of the subject.

(11) a. (= (1d)) Watasi-wa rakurai-de　　ie-o　　yai-ta.
　　　　　　　I-Top　　thunderbolt-by house-Acc burn-Past
　　　　　　　'I had my house burnt down by a thunderbolt.'

　　　　　　　　　　　　　　　　　　　　　　　　　(Amano 1991: 196)

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b. Hanaoko-wa kaze-de boosi-o tobasi-ta.

Hanako-Top wind-by hat-Acc blow-Past

Lit. 'Hanako got her hat blown off by the wind.'

We have consistently claimed since Okura (2004a, b), by discussing examples such as in (11), that what is crucial for Experiencer readings in PRCs may be reduced to two conditions: (I) a close possessive-relationship must hold between the subject and the object, (II) the verb involved must be an accomplishment verb (or a verb that implies a result state). Other factors are quite irrelevant: non-sensation or non-mental state predicates can lead to Experiencer readings. We take this fact to mean that Experiencer readings in PRCs are not directly assigned by the predicate within the VP, but rather they are structurally obtained in the course of the derivation.[6] Thus, more general verbs may be involved.

3. Where and How is a Possessor Introduced into the Derivation?
3.1. The Derivation of PRCs

In the previous section, we have argued that non-sensation or non-mental state predicates may be involved in PRCs. Additionally, it is possible for PRCs to contain even non-body parts such as *ie* 'house.' This fact seems to suggest that depending on how we recognize an entity and its possessor, the timing of introducing them into the derivation differs. If the cognitive system recognizes a possessor to be seriously affected by his possessee, then the possessor and the possessee are introduced into the derivation together irrespective of the (in)alienability. This is a PRC, whose derivation is illustrated in (14a) (we will revise the derivation later on). On the other hand, even if an entity is a body part or an inalienable possession, its possessor is introduced apart from the possessee at a late stage of the derivation as in (14b) if one recognizes the possessor to be someone who intentionally affects his own possessee.

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(12) Taroo-ga yubi-o kit-ta.

　　　Taroo-Nom finger-Acc cut-Past

　　　a. 'Taroo cut his finger.'　　　　　　　　　　　　　*(PRC)*

　　　b. 'Taroo (intentionally) cut his/someone else's finger.' *(Agentive transitive)*

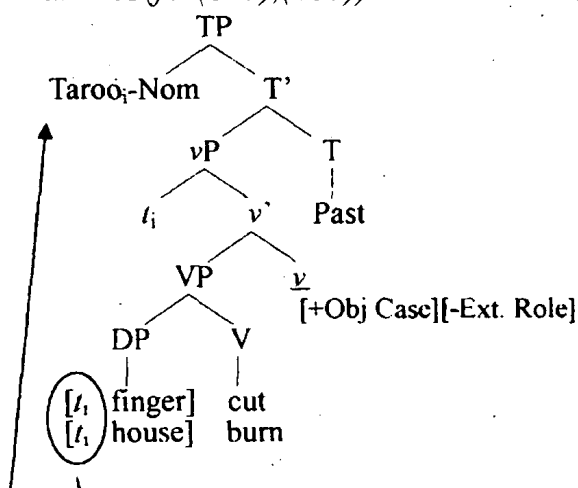(13) Taroo-ga ie-o yai-ta.

　　　Taroo-Nom house-Acc burn-Past

　　　a. 'Taroo had his house burnt down (by someone else).'　*(PRC)*

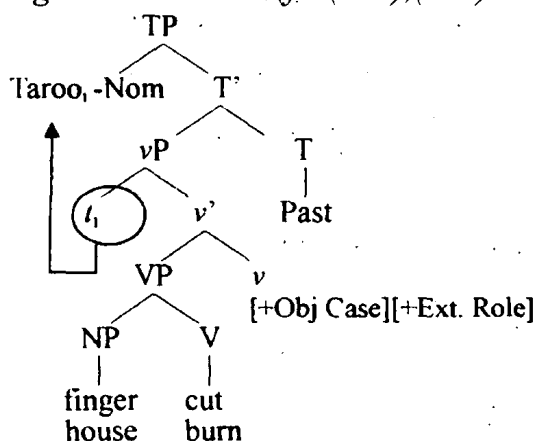　　　b. 'Taroo (intentionally) burnt his/someone else's house down.'

　　　　　　　　　　　　　　　　　　　　　　　　　　(Agentive transitive)

(14) *Derivations*

　　　a. PRC(for(12a),(13a))　　　　　　*b. Agentive transitive(for(12b),(13b))*

3.2. The First Merge as Selection

　　Focusing on the relationship between a possessor and a possessee, it is found that not all possessive-relationships form PRCs as shown in (15).

(15) Taroo-ga kuruma-o yai-ta.

　　　Taroo-Nom car-Acc burn-Past

　　　'Taroo burnt his car (Taroo set his car on fire).'

　　*'Taroo had his car burnt (Taroo had his car set on fire) by someone.'

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Even if a possessive-relationship is conceivable between *Taroo* and the car, *Taroo* is interpreted as an Agent but not an Experiencer.[7] This is another problem mentioned previously: why is there this kind of restriction on forming PRCs? We speculate, as is often discussed, that relational arguments require the licensing of a head noun (cf. Higginbotham 1985, Tellier 1990; "Qualia Structure" by Pustejovsky 1995), and this restricts the productivity of PRCs. Consider the DPs in (16b-c).

(16) a. The enemy destroyed the city.

　　 b. The enemy's destruction (of the city)

　　 c. The city's destruction (by the enemy)

In (16b-c), the deverbal noun *destruction* licenses (selects) *the enemy* as an external argument or *the city* as an internal argument, and these arguments may be realized within a DP. On the other hand, non-deverbal nouns may realize certain arguments within a DP as shown in (17).

(17) a. The boy's arm

　　 b. The cat's tail

Citing examples such as (16) and (17), Haegeman and Guéron (1999: 413) discuss that nouns which are not selected by verbs are "inherently relational," which might be called "a relational argument." Although the system requires refinement, we postulate that only a relational argument which is licensed/selected by a head noun may be involved in PRCs. The relation may be a body-part, a possessor-possessee, or a whole-part relation. The establishment of the relationship would depend on the cognition of the world, so that PRCs, a reflection of such a relationship, are good topics for researching into the interface of the grammar and other systems.

　　 We conjecture that a relational argument (possessor) requires licensing by a head noun (possessee), and this restricts the productivity of PRCs. Following Chomsky (2000), we assume that the First Merge is selection so that a possessee selects a

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possessor and Merges it. This treatment of the possessive relationship in terms of the "θ-grid" is discussed by Kitahara (1993) in analyzing Korean Inalienable Possession Constructions (IAC). In IACs, two NPs, which are in a whole-part/possessor-possessee relation, appear as two accusatives as in (18). (As for analyses of the IAC in Korean, see Kim 1990, Yoon 1990, and Mailing and Kim 1992; for a different view, see Tomioka and Sim (to appear)).

(18) John-i　　　Mary-lul　ppyam-ul　ttaelyo-ss-ta.

　　　John-Nom　Mary-Acc　cheek-Acc　hit-Past-Ind

　　　'John hit Mary's cheek.'

<div align="right">Kitahara (1993: 403)</div>

Interestingly, this construction fails with the noun *car*, even if it is a possessee of *Mary*.

(19) *John-I　　　Mary-lul　cha-lul　ttaelyo-ss-ta

　　　John-Nom　Mary-Acc　car-Acc　hit-Past-Ind

　　　'John hit Mary's car.'

<div align="right">Kitahara (ibid.: 404)</div>

Assuming that a possessor NP and a possessee NP are base-generated as sisters, Kitahara attributes the contrast between (18) and (19) to the Empty Category Principle (ECP) violation.[8] That is, the trace of *Mary* in (18) is "θ-governed" by a "relational nominal" *ppyam* 'cheek,' for it has a θ-grid, but the trace of *Mary* in (19) is not "θ-governed," for the nominal *cha* 'car' does not have a "θ-grid." This is similar to what we have observed and argued in regards to PRCs: PRCs also have a selectional restriction on nouns as seen in (15). We conclude that this selectional restriction is reduced to a property of relational arguments.

3.3. Movement of a Possessor

　　We have argued the following two points so far:

(20) a. The subject of a PRC is a derived subject. A Possessor originates inside a

　　　　nominal whose head is a possessee, then moves to the subject position.

<div align="center">13</div>

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b. The "Experiencer" reading of a subject in PRCs is not a θ-role directly assigned by a particular predicate such as psych-predicates. Rather, the "Experiencer" reading is structurally obtained in the course of the derivation, so that more general verbs may be involved.

Space is limited, however, we briefly summarize arguments for the movement of a Possessor presented by Okura (2004a, b, and 2005). First, a Possessor is not interpreted as a Benefactive/Malfactive if it remains within a DP.

(21) a. [DP Tanaka-san-no ha] -ga   nuke-ta.
　　　　 Mr. Tanaka-Gen tooth-Nom fall-Past
　　　　 'Mr. Tanaka's tooth fell out.'

b. Tanaka-san-ga 　　 ha-o 　　　 nui-ta.
　　 Mr. Tanaka-Nom 　 the tooth -Acc pull-Past
　　 'Mr. Tanaka had his tooth pulled.'

Secondly, constraints on the extraction of an element such as the Specificity Condition (Chomsky 1973, Fiengo and Higginbotham 1981) are respected. Observe how the specificity in Japanese, which is encoded in DPs of the string "[NQ-no NP]-Case, affects the formation of PRCs, namely, extraction of the subject.

(22) a. *"Taroo-wa (ziko-de) 　　　[3-bon-no yubi]-o 　 kit-ta.
　　　　 Taroo-Top accident-by 　[3-Cl-Gen finger]-Acc cut-Past
　　　　 'Taroo cut three of his fingers (in the accident).'

b. Taroo-wa (ziko-de) 　　[yubi-o 3-bon] 　　　kit-ta.
　　 Taroo-Top accident-by [finger-Acc 3-Cl-Gen] cut-Past
　　 'Taroo cut three fingers (in the accident).'

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When a PRC involves the *[NQ-no NP]-Case* sequence as in (22a), the specificity effect is observed.　On the other hand, when the *NP-Case NQ* sequence is involved as in (22b), the specificity effect disappears.[9]　Interestingly, no specificity effect is observed in the *usinau* 'lose'-type predicates, where the Experiencer θ-role is supposed to be directly assigned by a predicate within a VP, so that no movement is involved.

(23) a.　Taroo-wa　(ziko-de)　[3-bon-no yubi]-o　usinat-ta.

　　　　Taroo-Top　accident-by　[3-Cl-Gen finger]-Acc　lose-Past

　　　　'Taroo lost three of his fingers (in the accident).'

　　b.　Taroo-wa　(ziko-de)　[yubi-o 3-bon]　usinat-ta.

　　　　Taroo-Top　accident-by　[finger-Acc 3-Cl-Gen]　lose-Past

　　　　'Taroo lost three fingers (in the accident).'

Thirdly, a Possessee DP, which is assumed to have a trace of a Possessor, may not move across the Possessor (Hasegawa 2001, Tsujioka 2001).

(24) a.　Tomoko$_i$-ga　[$_{DP}$$t_i$ kosi]-o　itam-e-ta.

　　　　Tomoko-Nom　　back-Acc　hurt-Tr-Past

　　　　'Tomoko hurt her back.'

　　b.　*?[$_{DP}$ t_i kosi]-o Tomoko$_i$-ga　itam-e-ta.

　　　　　　　　　　　　　　　　(Hasegawa 2001: 22 with relevant indices)

(25) a.　Taroo$_i$-ga　[$_{DP}$$t_i$ ie]-o yai-ta.

　　　　Taroo-Nom　house-Acc　burn-Past

　　　　'Taroo had his house burnt down.'

　　b.　*[$_{DP}$ t_i ie]-o Taroo$_i$-ga　yai-ta.

The ungrammaticality of the (b)-sentences, where the traces remain unbound, could be attributed to a Proper Binding Condition violation (Fiengo 1977, May 1977, among others).[10] Note that (25b) is grammatical if it is interpreted as an Agentive transitive, where no movement of a Possessor is involved.

Finally, we maintain that a gap in the relevant DP is a trace but not a *pro*. As we have seen above, a trace is left after the extraction of a Possessor from a DP. This is not a *pro*, so that the gap cannot be realized by the DP *zibun-no* 'self's' or *kare-no* 'his,' which is discussed by Hasegawa (2001). We make the point clearer:

(26) Taroo-ga　tokoya-de　zibun-no/kare-no　kami-o　some-ta.

　　　Taroo-Nom　barber-at　self-Gen/he-Gen　hair-Acc　dye-Past

　　　'Taroo dyed his own hair at the barbershop.'

The subject *Taroo* in (26) is interpreted as an Agent but not as an Experiencer (PRC). Thus, movement of a Possessor is verified: the readers are referred to Okura (2004a, 2005) for full discussion.

4. Comparison with Adversity Passives

In this section, we focus on thematic interpretations of non-Agentive sentences. As is well known, Japanese has constructions called "adversity passive" or "indirect passive," where a non-object becomes the subject and the involved verb is marked with the passive-morpheme *(r)are*. Some examples are given in (27).

(27) a. Taroo-wa　ame-ni　hur-are-ta.

　　　　　Taroo-Top　rain-by　fall-Passive-Past

　　　　　'Taroo got caught in the rain.'

　　　b. Hanako-wa　zitensya-o　nusum-are-ta.[11]

　　　　　Hanako-Top　bicycle-Acc　stole-Passive-Past

　　　　　'Hanako had her bicycle stolen.'

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Adversity passives are similar to PRCs in that the subject is non-Agent and affected by an event, as shown in (28) and (29).

(28) a. Taroo-wa yubi-o　　ki-rare-ta.　　　　　*(Adversity passive)*
　　　　Taroo-Top finger-Acc cut-Passive-Past
　　　　'Taroo had his finger cut.'

　　 b. Taroo-wa　yubi-o　　kit-ta.　　　　　　*(PRC)*
　　　　Taroo-Top finger-Acc cut-Past
　　　　'Taroo cut his finger.'

(29) a. Hanako-wa ie-o　　　yak-are-ta.　　　　*(Adversity passive)*
　　　　Hanako-Top house-Acc burn-Passive-Past
　　　　'Hanako had her house burnt down.'

　　 b. Hanako-wa ie-o　　yai-ta.　　　　　　*(PRC)*
　　　　Hanako-Top house-Acc burn-Past
　　　　'Hanako had her house burnt down.'

Although adversity passives and PRCs are semantically similar, they differ from each other in the realization of an Agent.

(30) a. Taroo-wa dareka-ni yubi-o　　kir-are-ta.　*(Adversity passive)*
　　　　Taroo-Top someone-by finger-Acc cut-Passive-Past
　　　　'Taroo had his finger cut by someone.'

　　 b. *Taroo-wa dareka-ni yubi-o　　kit-ta.　　*(PRC)*
　　　　Taroo-Top someone-by finger-Acc cut-Past
　　　　'Taroo had his finger cut by someone.'

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(31) a. Taroo-wa hookama-ni　　ie-o　　　　yak-are-ta.　　*(Adversity passive)*

　　　　Taroo-Top pyromaniac-by house-Acc burn-Passive-Past

　　　　'Taroo had his house burnt down by a pyromaniac.'

　　b. *Taroo-wa hookama-ni　　ie-o　　yai-ta.　　　　*(PRC)*

　　　　Taroo-Top pyromaniac-by house-Acc burn-Past

　　　　'Taroo had his house burnt down by a pyromaniac.'

An Agent may be realized by a *ni*-phrase in adversity passives, while it may not in PRCs. This fact suggests that no Agent is involved in PRCs. It also means that PRCs do not involve a null morpheme which introduces an implicit Agent. However, a simple question arises to our mind. Why do subjects of PRCs sound somehow affected or benefited and tend to be interpreted as "Malfactive" or "Benefactive" without any implicit Agent? In order to answer this question, we propose a split-*v*P analysis, which has been discussed by Bowers 2002, Pylkkänen 2002, and Tonosaki 2003.

5. A Split-*v*P Analysis

5.1. The Subject of PRCs is Not Interchangeable

Let us go back to Hasegawa (2001), which we have briefly reviewed in Section 2. We reproduce some sentences which Hasegawa deals with:

(32) a. Ziko-ga　　　densya-o　okur-ase-ta/okur-asi-ta.

　　　　Accident-Nom　train-Acc　delay-Tr-Past

　　　　'The accident delayed the train.'

(Hasegawa 2001: 13)

　　b. Kyoko-ga　　sono hitokoto-ni　　kimoti-o　　　　nagom-ase-ta.

　　　　Kyoko-Nom that one word-Dat　feeling-Acc　calm-Cause-Past

　　　　'Kyoko got her feelings calmed by that word.'

(Hasegawa 2001: 14)

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Hasegawa proposes a system where the features of *v* are specified [± External Role (ER)] and [± Object Case (OC)] and argues that *v* in sentences of type (32) has the features [- External Role (ER)] [+ Object Case (OC)]. In her system, the non-Agentive subjects are derived: the Cause in (32a) and the Experiencer in (32b) originate within a VP, the derivation of which we have illustrated in (10). Hasegawa also deals with what we call PRCs and adopts the same system as (10). Then, the issue will be whether all the sentences of type (32a), (32b), and PRCs can be given a unified explanation. We tentatively call constructions such as (32a) "Non-Intentional Causatives (NICs)" in order to distinguish them from PRCs.[12]

One of the most significant differences between NICs and PRCs is that a Cause may be the subject in NICs, while it may not in certain PRCs.

(33) a.　Densya-ga ziko-de　　　okure-ta.
　　　　　train-Nom　accident-by　delay-Past
　　　　　'The train was delayed by the accident.'

　　　b.　Ziko-ga　　　　densya-o okur-ase-ta/okur-asi-ta.
　　　　　accident-Nom　train-Acc　delay-Tr-Past
　　　　　'The accident delayed the train.'

(34) a.　Taroo-ga　ziko-de　　yubi-o　　kit-ta.
　　　　　Taroo-Nom　accident-in　finger-Acc　cut-Past
　　　　　'Taroo cut his finger in the accident.'

　　　b.　*Ziko-ga　　　(Taroo-no) yubi-o　　kit-ta.
　　　　　Accident-Nom　Taroo-Gen finger-Acc　cut-Past
　　　　　Lit. 'The accident cut Taroo's finger.'

Sentence (33b) is an NIC, whose subject is a Cause. In comparison, (34a) is a PRC, whose subject cannot be replaced by a Cause as shown in (34b). If both NICs and

PRCs are to be explained under the same mechanism, namely, the feature specification [- External Role (ER)] [+ Object Case (OC)] of v, then the subjects should be free to alternate between a Cause and a Possessor, contrary to the fact in (34b). This fact seems to suggest that the subject position of certain PRCs is not a position in which a non-intentional Cause may appear.[13]

5.2. A Possessor Has to Go Up

As we have touched upon in Section 3.3, if a Possessor is not raised from a DP, its Malfactive/Benefactive readings disappear and the affectedness is neutralized. Consider unaccusative counterparts of PRCs, where Malfactive/Benefactive readings of Possessors are lost.

(35) a. [DP Hanako-*no* kami]-ga　somat-ta.
　　　　Hanako-Gen hair-Nom　dye-Past
　　　　'Hanako's hair was dyed.'

　　b. Hanako-ga　　(biyooin-de)　　kami-o　　some-ta.
　　　　Hanako-Nom　beauty shop-at　hair-Acc　dye-Past
　　　　'Hanako had her hair dyed at the beauty shop.'

(36) a. [DP Tanaka-san-no ha]-ga　　nuke-ta.
　　　　Mr. Tanaka-Gen tooth-Nom　fall-Past
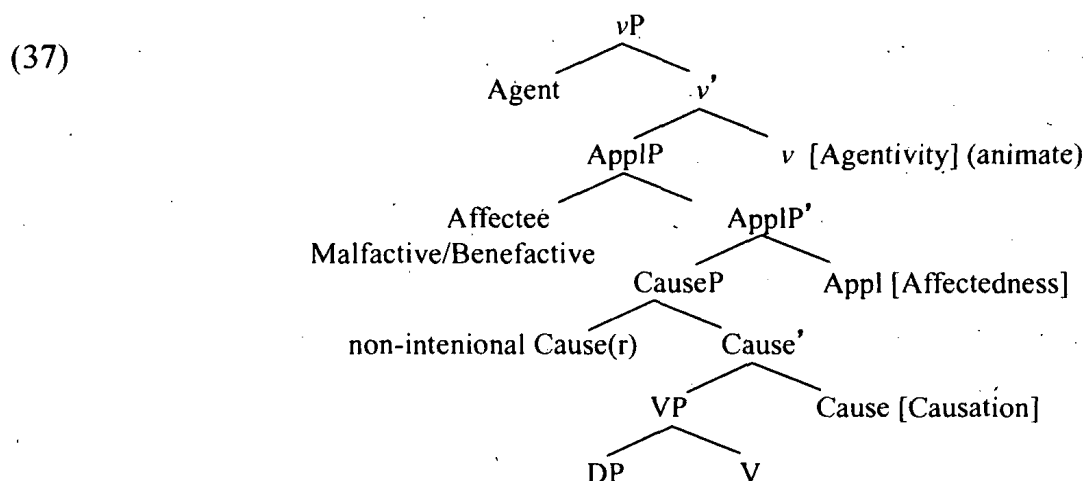　　　　'Mr. Tanaka's tooth fell out.'

　　b. Tanaka-san-ga　　ha-o　　　　　nui-ta.
　　　　Mr. Tanaka-Nom　the tooth -Acc　pull-Past
　　　　'Mr. Tanaka had his tooth pulled.'

We take these facts to suggest that a Possessor should be raised to a certain position in order to be interpreted as an Affectee such as Benefactive/Malfactive.
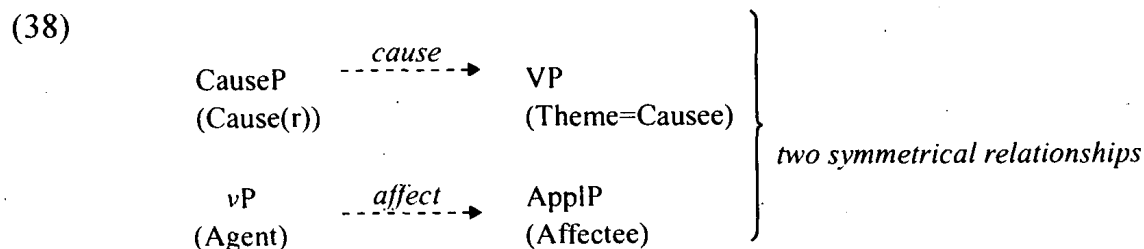
5.3. A Proposal

　　We propose the decomposition of *v* in (37), following Bowers 2002, Pylkkänen 2002, and Tonosaki 2003.

(37)

```
                                vP
                             ┌──────┴──────┐
                          Agent           v'
                                       ┌───┴────┐
                                    ApplP      v [Agentivity] (animate)
                                  ┌───┴────┐
                            Affectee      ApplP'
                       Malfactive/Benefactive  ┌───┴────┐
                                            CauseP     Appl [Affectedness]
                                        ┌──────┴───┐
                          non-intenional Cause(r)  Cause'
                                              ┌─────┴──────┐
                                            VP          Cause [Causation]
                                         ┌───┴───┐
                                       DP        V
```

　　We assume that there are three heads in the traditional *v*P. One is Cause, which takes a Cause(r) and triggers a sub-event expressed by a VP. The second head is *v*, which is responsible for Agentivity (cf. Hale and Keyser 1993, Collins 1997, Bowers 2002, among others). We suppose that *v* is designated to select an animate argument, while Cause is neutral with respect to animacy. As discussed by Tonosaki (2003), we assume that Accusative Case may be dependent on either the *v*-head or the Cause-head. The third head is Appl(icative), which introduces an Affectee (cf. Pylkkänen 2002; as for Japanese, see Tonosaki 2003, Miyagawa and Tsujioka 2004). Our intuition behind (37) is that there are two symmetrical relationships. That is, *v*P is to ApplP in a similar fashion that CauseP is to VP, which is illustrated in (38).

(38)

CauseP	*cause* ------▶	VP	
(Cause(r))		(Theme=Causee)	} *two symmetrical relationships*
*v*P	*affect* ------▶	ApplP	
(Agent)		(Affectee)	

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Now let us see how the split *v*P in (37) accounts for the facts about NICs and PRCs. We present the derivations in (39) for the sentences (33b) and (34a), which are repeated below.
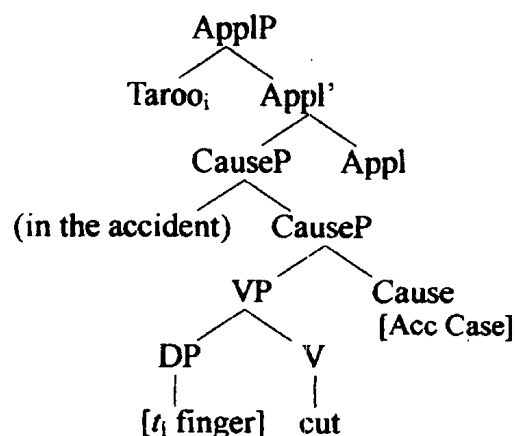
(33) b.　Ziko-ga　　　　densya-o　okur-ase-ta/okur-asi-ta.　　*(NIC)*
　　　　accident-Nom　train-Acc　delay-Tr-Past
　　　　'The accident delayed the train.'

(34) a.　Taroo-ga　(ziko-de)　　yubi-o　kit-ta.　　　　　　*(PRC)*
　　　　Taroo-Nom　accident-by　finger-Acc　cut-Past
　　　　'Taroo cut his finger (in the accident).'
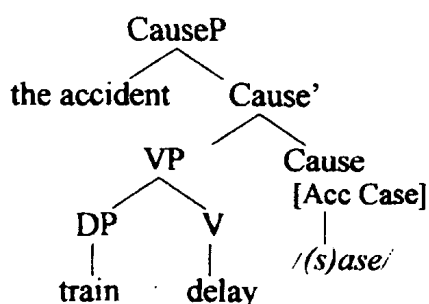
(39)　a. NIC *(for (33b))*　　　　　　　　　　b. PRC *(for (34a))*

Both subjects in (39a) and (39b) are further raised to the Spec of TP. (39a) is a derivation of an NIC. A non-intentional Cause is in the Spec of CauseP.[14] (39b) is a derivation of a PRC. A Possessor is base-generated inside a DP with its possessee, then raised to ApplP, where it is interpreted as an Affectee (Malfactive/Benefactive).[15] This is the reason why a Possessor in PRCs has to be raised as we have seen in (35)-(36). Remember that we have also observed that the subject of (certain) PRCs is not replaced by a Cause. The relevant data are repeated below.

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(33) a. Densya-ga ziko-de   okure-ta.

　　　train-Nom accident-by delay-Past

　　　'The train was delayed by the accident.'

　　b. Ziko-ga　　　　densya-o okur-ase-ta/okur-asi-ta.　*(NIC)*

　　　accident-Nom train-Acc delay-Tr-Past

　　　'The accident delayed the train.'

(34) a. Taroo-ga　　ziko-de　　yubi-o　　kit-ta.　・　*(PRC)*

　　　Taroo-Nom accident-in finger-Acc cut-Past

　　　'Taroo cut his finger in the accident.'

　　b. *Ziko-ga　　　　(Taroo-no) yubi-o　　　kit-ta.

　　　Accident-Nom Taroo-Gen finger-Acc cut-Past

　　　Lit. 'The accident cut Taroo's finger.'

The subject of the PRC in (34a) cannot be replaced by a Cause as shown in (34b). This fact leads us to consider that the structure of the NIC in (33b) and that of the PRC in (34a) are different. Adopting the proposed derivations in (37) and (39), the potential positions for a subject would be the Spec of *v*P, ApplP, or CauseP. The Spec of *v*P is a position for an (animate) Agent and not a proper position for a Cause such as *an accident*. If a Cause or an Instrument are forced to merge in that position, the sentence sounds more artificial or personified, even if acceptable. The Spec of ApplP is a position for an Affectee, which is not a proper position for a Cause either. Then, how about the Spec of CauseP? Why is the Spec of CauseP available for the NIC in (33b) but not for the sentence in (34b), which is related to the PRC in (34a)? We will discuss this problem in the next section, which provides further support for the proposed decomposition of *v*.

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5.4. Morphology of *v*-Heads

In traditional research on Japanese, sentences with the causative marker *(s)ase/(s)as* are regarded as "syntactic causatives" and distinguished from "lexical causatives," i.e., transitive verbs.[16] "Syntactic causatives" are considered to have complex (bi-clausal) structures, where a VP is embedded, whereas "lexical causatives," namely transitive verbs, are considered to have a mono-clausal structure. Miyagawa (1998) argues that *(s)ase* is an "elsewhere" traisitivizer, which transitivizes unaccusative verbs when they have no designated transitive counterpart. Accordingly, the distinction between "syntactic" and "lexical" causatives based on *(s)ase* is not valid. Following Miyagawa's insight, Hasegawa (2001) argues that the causativizing morpheme *(s)ase* may be an allomorph of the "lexical" transitivizing morphemes such as *e, s,* or *as,* which is also pointed out by Inoue (1976: 77).[17] We follow this line and postulate that both the "lexical" and "syntactic" causatives may be treated under *v* in terms of the valency, namely, introducing an argument Cause(r) or Agent. However, we maintain that the difference in morphemes should be taken into consideration, for morphemes are often related to syntactic functions as argued by Kageyama (1996). Compare the NICs in (40) with the PRCs in (41).

Non-Intentional Causatives (NICs)

(40) a. Ziko-ga　　　　densya-o　okur-*ase*-ta/okur-*as*-i-ta.
　　　　accident-Nom　train-Acc　delay-Tr-Past
　　　　'The accident delayed the train.'

Hasegawa (2001: 13)

　　b. Kaze-ga　eda-o　　　　yur-*as*-i-ta.
　　　　wind-Nom　branches-Acc　sway-Tr-Past
　　　　'The wind swayed the branches.'

Hasegawa (ibid.: 13)

　　c. Haha-ga　　　yasai-o　　　　kusar-*ase*-ta.
　　　　mother-Nom　vegetables-Acc　perish-Cause-Past
　　　　'My mother let the vegetables go bad.'

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d. Simo-ga　　　bonsai-o　　　kar-*as*-i-ta.

frost-Nom　　bonsai-Acc　　wither-Tr-Past

'The frost withered the bonsai.'

e. Dosya-ga miti-o　　　husai-da.

dirt-Nom road-Acc fill-Past

'Dirt filled the road.'

Possessive-Relationship Constructions (PRCs)

(41) a. Taroo-ga　　　(ziko-de)　　　yubi-o　kit-ta.

Taroo-Nom　accident-by　finger-Acc cut-Past

'Taroo cut his finger (in the accident).'

b. Taroo-ga　　　(koron-de)　ude-o　　　ot-ta.

Taroo-Nom　fall-because　arm-Acc　break-Past

'Taroo (fell and) broke his arm.'

c. Tanaka-san-ga　　　(haisya-de)　musiba-o　　　nui-ta.

Mr. Tanaka-Nom　dentist-at　　bad tooth-Acc　pull-Past

'Mr. Tanaka had a bad tooth pulled (at the dentist's).'

d. Watasi-wa　kuusyuu-de　ie-o　　　　yai-ta.

I-Top　　　air raid-by　house-Acc burn-Past

'I had my house burnt down by the air raid.'

e. Zisin-de　　tana-kara　tubo-ga　otite-kite　haha-ga　hitai-o wat-ta.

earthquake-by shelf-from vase-Nom fall-come mother-Nom forehead-Acc break-Past

'My mother was injured on her forehead when a vase fell off the shelf during the earthquake.'

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f. Hanako-ga　　(biyooin-de)　　kami-o　some-ta.
　Hanako-Nom　beauty shop-at　hair-Acc　dye-Tr-Past
　'Hanako had her hair dyed (at the beauty shop).'

g. Taroo-ga　　(nukarumi-de) asi-o　　suber-ase-ta.
　Taroo-Nom　mud-by　　　leg-Acc　slip-Caus-Past
　'Taroo slipped (on the mud).'

It is observed that the "elsewhere" causative marker *(s)ase/(s)as* is involved in both NICs and PRCs when an unaccusative verb does not have a designated transitive form. Still, there is a notable tendency for *(s)ase/(s)as* to be used more often in NICs, while the morpheme *e* is more frequently involved in PRCs. This observation is illustrated in (42).

(42) *The transitive/intransitive alternation*
a. *NICs*　　　　　　　　　　　　　　b. *PRCs*

unaccusative	morpheme	transitive	
okur-e-	+/(s)ase/	okur-ase-	'delay'
yur-e-	+/(s)as/	yur-as-	'sway'
kusar-	+/(s)ase/	kusar-ase-	'perish'
kar-e-	+/(s)as/	kar-as-	'wither'

unaccusative	morpheme	transitive	
kir-e	-/e/	kir-	'cut'
or-e	-/e/	or-	'break'
nuk-e	-/e/	nuk-	'pull'
yak-e	-/e/	yak-	'burn'
war-e	-/e/	war-	'break'
som-a-	+/e/	som-e	'dye'
suber-	+/(s)ase/	suber-ase	'slip'

PRCs which involve [-/e/] (minus *e*) do not seem to allow a Cause subject as we have observed in (34b). Based on this observation, we conjecture that the [-/e/] morpheme tends to correspond to higher projections than CauseP, namely, ApplP and *v*P.

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(43) *Morphology of v-heads*

Agentives | PRCs | NICs
[vP | [ApplP | [CauseP [VP

◀••••••••••••••••••▶
-/e/

◀••••••••••••••••••••••••▶
+/(s)ase/ etc.
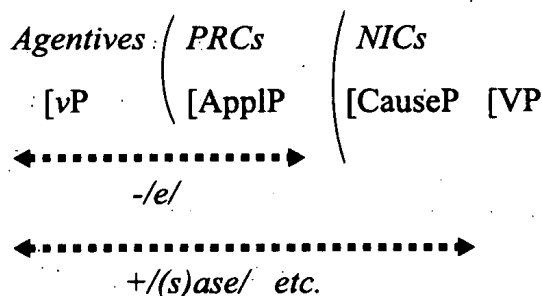
As (43) illustrates, Agentives, PRCs, and NICs differ in clausal size. We speculate that the morpheme [-/e/] is a reflection of a higher projection than CauseP; [-/e/] must be included in ApplP or vP.[18] This is the reason why a non-intentional Cause is not allowed to be a subject when a PRC involves an [-/e/] morpheme, which is illustrated below.

(44) a. Taroo-ga　(ziko-de)　yubi-o　kit-ta.　*(PRC)*
　　　Taroo-Nom　accident-by　finger-Acc cut-Past
　　　'Taroo cut his finger (in the accident).'

　 b. *Ziko-ga　　(Taroo-no) yubi-o　　kit-ta.
　　　Accident-Nom　Taroo-Gen finger-Acc　cut-Past
　　　Lit. 'The accident cut Taroo's finger.'

(45) a. *(for (44a))*　　　　　　(45) b. *(for (44b))*

ApplP
Taroo$_i$　Appl'
　CauseP　Appl
　　　　[-/e/]
(AdvP)　CauseP
　│
(in the accident)　VP　Cause
　　　　　　[Acc Case]
　　DP　V
　　│　│
　[t$_i$ finger]　cut

vP
*the accident　v'
　ApplP　v[-/e/]
　　　　　[Acc Case]
*the accident　Appl'
　CauseP　Appl
　　　　[-/e/]
　VP　Cause
　　　　[Acc Case]
DP　V
│　│
[Taroo finger]　cut
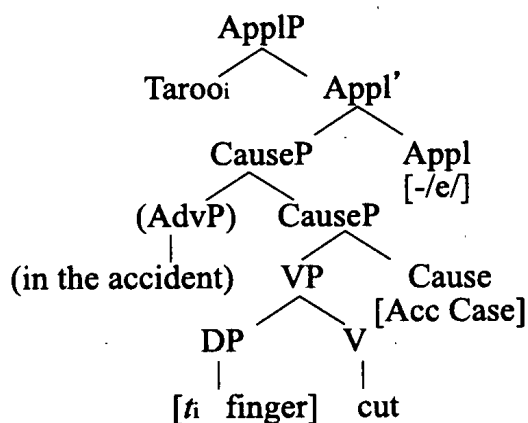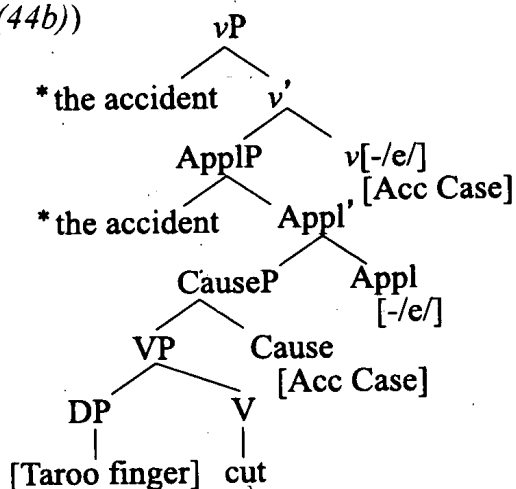
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Based on the observation in (42), we have assumed that the morpheme [-/e/] is a reflection of a *v*P or an ApplP, but not a CauseP, which is illustrated in (43). Then, the potential positions for the subject in (44b)/(45b) would be the Spec of *v*P or ApplP. The Spec of *v*P is a position for an (animate) Agent as we argued in (37), therefore it is not a proper position for a Cause such as *the accident*. The Spec of ApplP is a position for an Affectee, which is not a proper position for a Cause either. On the other hand, PRCs which involve other morphemes such as [+/(s)ase/] may be alternated into an NIC, which allows the Cause subject, as shown in (46a) and (46b). This alternation is explained by (47).

(46) a. Taroo-ga　nukarumi-de asi-o　suber-ase-ta.　　　*(PRC)*
　　　 Taroo-Nom　mud-by　　leg-Acc slip-Caus-Past
　　　 'Taroo slipped on the mud.'

　　 b. Nukarumi-ga (Taroo-no) asi-o　suber-ase-ta.　　　*(NIC)*
　　　 mud-Nom　Taroo-Gen leg-Acc slip-Caus-Past
　　　 'The mud made Taroo slip.'

(47) a. *(for(46a))*　　　　　　 (47) b. *(for(46b))*
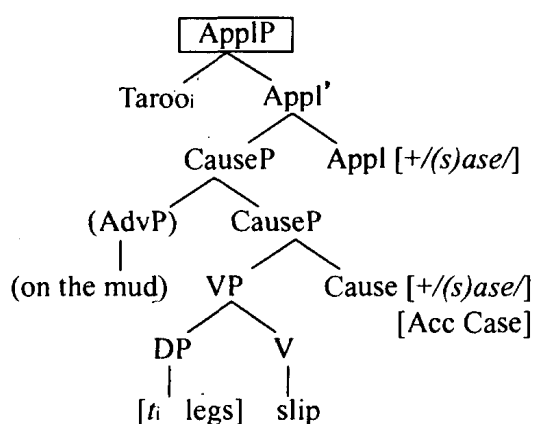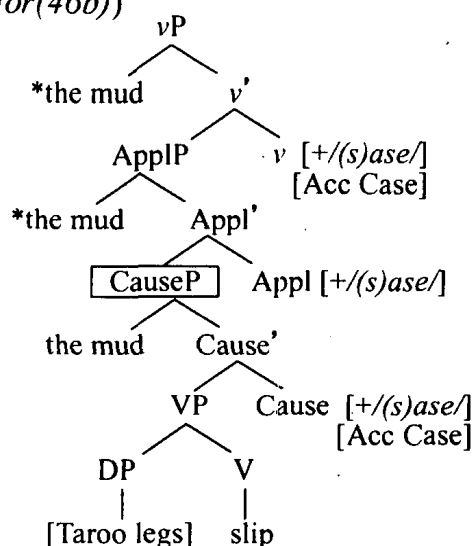
Sentence (46a) is a PRC, while (46b) is an NIC in our terms. We have argued that [+/(s)ase/] and its allomorph [+/(s)as/] function as an "elsewhere" causative if a predicate does not have its designated transitive counterpart, so they may be involved in either Agentive transitives, PRCs, or NICs as illustrated in (43). The Cause *the mud* may appear in the Spec of CauseP as shown in (47b), in contrast to (45b). In other words, a PRC is characterized as an ApplP, whereas an NIC is a CauseP (though the derivations continue to TP or higher projections). Thus, a closer look, focusing on morphemes, provides support for the proposed split-*v*P analysis.[19]

5.5. Physical Affectees and Mental Affectees

In Japanese, there are many idioms which can be classified as PRCs in that a possessor appears as the subject while a possessee as the object; the possessor is interpreted as an Experiencer; the verb involved is an accomplishment verb. Observe the following PRCs in (48)-(49), where the (a)-sentences are non-idiomatic while the (b)-sentences are idioms.

(48) a. Tanaka-san-wa　　(kuusyuu-de)　ie-o　　　　yai-ta.
　　　 Mr. Tanaka-Top　air raid-by　　house-Acc　burn-Past
　　　 'Mr. Tanaka had his house burnt down by the air raid.'

　　 b. Tanaka-san-wa　Hanako-ni　te-o　　　　yai-ta.
　　　 Mr. Tanaka-Top　Hanako-by　hand-Acc　burn-Past
　　　 'Mr. Tanaka was annoyed with Hanako.'

(49) a. Taroo-ga　　hone-o　ot-ta.
　　　 Taroo-Nom　bone-Acc　　　　break-Past
　　　 'Taroo suffered a fracture.'

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b. Taroo-ga　　syoku-o sagas-u-no-ni　　hone-o　　　ot-ta.

　　Taroo-Nom job-Acc look for-Pres-by bone-Acc break-Past

　　'Taroo had difficulty in finding a job.'

(50) a.　Hanako-ga　　　ziko-de　　　kao-no hone-o　　　　yugam-e-ta.

　　　　Hanako-Nom　accident-by　face-Gen bone-Acc　distort-Tr-Past

　　　　'Hanako's face was deformed in the accident.'

b. Hanako-ga　　akusyuu-ni　kao-o　　　yugam-e-ta.

　　Hanako-Nom　smell-by　　　face-Acc　curl-Tr-Past

　　'Hanako was uncomfortable due to the smell.'

Interestingly, the subjects of the (a)-sentences are physical Affectees, whereas the subjects of the (b)-sentences are mental Affectees, although the same predicates are used in each pair. We suppose that the affectedness is more abstracted in fixed expressions such as idioms, where the object nouns are indefinite and the transitivity is suppressed. As a consequence, the quality of the affectedness becomes less physical. Note that Agentivity is kept irrelevant in the idioms, because the v-head is not involved in PRCs. Thus, the proposed decomposition analysis of v readily accounts for idiomatic versions of PRCs: they have the same structure as regular PRCs.

6. Consequences

　　We have clarified the mechanism of non-Agentive sentences such as PRCs and NICs. We are now in a position to explain the descriptive conditions on PRCs, which were discussed in Section 1 and are repeated below:

(51) Condition I：A close possessive-relationship is required between the subject and the object.

　　　　　　　　II：The verbs involved must be accomplishment verbs in that they imply a result state.

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As for Condition I, remember that a Possessor is licensed as a relational argument in the first Merge. This means that a Possessor is not a modifier but it originates in an "A-position," which then makes the movement of the Possessor possible. If a possessor is not licensed as a relational argument, its movement is prohibited as shown by the Korean data in (19). Thus, the required possessive-relationship is explained. As for Condition II, this kind of constraint on the verb type is not restricted to Japanese but can also be observed in English, as discussed by Ritter and Rosen (1993). Ritter and Rosen (R&R) investigate English *have* constructions and argue that the subject of *have* constructions may be interpreted as a Possessor, Location, Cause, or Experiencer, depending on the context.[20] They observe that there are some restrictions on verbs when the subject of *have* constructions is interpreted as an Experiencer.[21] An example given by R&R is cited in (52).

(52) a. *Pat had Terry drive his car.

　　 b. Pat had Terry drive his car into the wall.

<div align="right">(R&R ibid.: 528)</div>

The asterisk in (52a) indicates that the subject *Pat* may not be interpreted as an Experiencer/Malfactive without a resultative phrase such as *into the wall*. R&R (ibid.: 528) state as follows: "The experiencer reading should be impossible unless the core event has an endpoint." It seems that the same condition on the verb type holds in English and Japanese in order to achieve the Experiencer reading: the verbs involved must be accomplishment verbs in that they imply a result state.[22] We conjecture that there would be some semantic correlation between there being a result state and there being an Affectee. In Chomsky (2001), the transitivity alternation is attributed to the selection of *v* (i.e., a transitive v^* or an unacc *v*). We assume that ApplP can be (but does not have to be) selected by a transitive v^* or AspectP through the aspectual property of the accomplishment verb, though more refinement of this theory is required.[23] To summarize, the conditions on forming PRCs are reduced to the conditions on deriving ApplP such as (45a) and (47a), where Possessor raising is crucial.

<div align="center">31</div>

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The proposed decomposition of *v* is also preferable with respect to Burzio's generalization:

(53) *Burzio's generalization* (Burzio 1981, 1986)

　　　If a verb does not assign an external role, it does not assign Object Case.

There are four equally likely possibilities in a system where the features of *v* may be freely specified [± External Role (ER)] [± Object Case (OC)]. In such a system, Burzio's "generalization," namely, the tendency that the two possibilities of the four logical combinations are generally attested, is not captured. On the other hand, the present system captures the generalization. We simply assume that a *v*-head is responsible for an external θ-role, namely, "Agent," "Affectee," or "Cause(r)." An external role does not necessarily have the intentionality in our system. We have also assumed that Object Case is dependent on either the Cause-head or the *v*-head, following Tonosaki (2003). Thus, Burzio's generalization, which correlates an external role and Object Case assignment, is explained.

Notes
[1] The following abbreviations are used in this paper: Nom = Nominative, Acc = Accusative, Dat = Dative, Gen = Genitive, Pres = Present, Comp = Complementizer, Top = Topic, Cop = Copula, Cl = Classifier, Tr = Transitive, Caus = Causative, PRC = Possessive-Relationship Construction, NIC = Non-Intentional Causative. For θ-roles, the first letter is capitalized (so, *Possessor* is an argument, whereas *possessor* is just an owner of something in a general sense). We do not deal with the V-*te-simat-ta* 'have regretfully done' construction in this paper, where non-Agentive readings are forced.
[2] Hasegawa states that a sentence like (i) falls under (9b).
(i) Hanako-ga　(waza-to)　ugoi-ta.

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Hanako-Nom intentionally move-Past
'Hanako moved (intentionally).'   (Hasegawa 2001: 10)

[3] Hasegawa (2001) uses both the words 'calm' and 'sooth' as a gloss for *calm*.

[4] "The construction (36)" is the "Possessor of Feelings or mental state" construction in Hasegawa's terms. This construction involves psych-predicates such as *nagom-u* 'calm' or idioms such as *sesuzi-o kooraser-u* 'chill one's spine' or *kokoro-o ugokas-u* 'move one's mind.'

[5] Note that in Hasegawa (2004), she uses the term PRC to stand for "Possessor Raising Construction," which has been used for broader phenomena. "PRC" in this paper and other work of mine is the abbreviation of "Possessive-Relationship Construction," focused on certain constructions.

[6] In Okura (2004a), we assumed that the position where thematic interpretations of the subject in PRCs are obtained to be CP. In this paper, we will argue that the position should be ApplP.

[7] One might wonder about the difference between *ie* 'house' in (13) and *kuruma* 'car' in (15): the former is easily available in a PRC while the latter is not. Tsunoda (1991: chap.7; 1996) argues that the closeness between the possessor and the possessee is gradual, which he calls "Possession Cline." According to Tsunoda, the Possession Cline is ranked as in (i).

(i)   body part > attribute > clothing > kin > pet, animal > product > other-possessee
closeness ◄ -
                                                                (See Tsunoda 1996: 600)

Tsunoda argues that Japanese verbs that express possession have restriction on selecting a possessee. He observes that the use of the verb *mot-u* 'have' is mainly restricted to "other possessee" type, which is ranked as the least closeness in the Possession Cline in (i). Bearing this in mind, observe the following data, which are the results of the application of Tsunoda's test to our relevant examples.

(ii) a. ??Tanaka-san-wa ie-o   mot-te-i-ru.
       Mr. Tanaka-Top house-Acc have-Pres
       'Mr. Tanaka has a house.'
    b. Tanaka-san-ni-wa ie-ga ar-u.
          -Gen-   be-Pres
       'Mr. Tanaka has a house.'

(iii) a. Tanaka-san-wa   kuruma-o mot-te-i-ru.
        Mr. Tanaka-Top car-Acc   have-Pres
        'Mr. Tanaka has a car.'
     b. Tanaka-san-ni-wa kuruma-ga ar-u.
           -Gen-   be-Pres
        'Mr. Tanaka has a car.'

Sentence (iia) sounds awkward (without any additional modification such as *ookina* 'big' or *2-ken* 'two-Cl'), but the *ar-u* construction, which covers wider possessive-relationships, sounds more natural as (iib) shows. In contrast with (iia), sentence (iiia) is perfect. This fact seems to suggest that a possessee *ie* 'house' is in a closer relationship with a possessor than a possessee *kuruma* 'car' is. However, as Tsunoda discusses, it should be noted that "the closeness" may be influenced by pragmatics or cognitive factors.

[8] Although the notions "ECP violation" and "θ-governed" should be restated in the Minimalist framework, what is relevant here is a problem of selection (so, the ungrammaticality in (19) could be attributed to an illicit chain, whose tail is in an A'-position).

[9] Although we do not discuss the details of the inner structure of DPs here, a traditional view that a floating NQ is outside a DP, namely an adjunct, is compatible with our analysis, for adjuncts do not intervene the extraction of an element.

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[10] "PBC" should be recaptured in the Minimalist framework, which we do not discuss in this paper.

[11] It has been argued that these types of passives, where a possessive relationship is involved, share properties with both direct passives and indirect passives (cf. Shibatani 1978, Terada 1989, and Kubo 1990).

[12] It is not clear whether the Experiencer reading of sentence (32b) is assigned by the predicate *nagom-u* 'calm' within a VP or whether it is dependent on a higher derivation. If the latter, it could be a PRC. It may be an NIC in that the subject non-intentionally causes a calmed situation. We do not further discuss the status of this sentence. Hasegawa (2001, 2004) analyzes all of these non-Agentive sentences in a unified way and claims that Experiencer readings are restricted to psychological or sensational predicates, which differs from our view. See also Section 2.

[13] A non-intentional Cause subject may appear in *(s)ase/(s)as* type PRCs. We will discuss this Topic in Section 5.4.

[14] We do not discuss in this paper whether a Cause is base-generated within a VP and raised as argued by Hasegawa (2001) and Tonosaki (2003).

[15] A Possessor may go through the edge of CauseP when it is extracted.

[16] Following Inoue (1976) and Miyagawa (1998), we assume that *(s)as* is an allomorph of *(s)ase*. When *(s)as* is followed by a consonant, a vowel is inserted in order to avoid a sequence of consonants for a phonological reason. If *(s)ase* or *(s)as* is preceded by a consonant, *s* is dropped for the same reason.

[17] When */(s)ase/* is further attached to a transitive verb, it forms a "syntactic" causative, namely, a bi-clausal structure as follows: *Hanako-ga [Taroo-ni ringo-o tabe]-sase-ta.* 'Hanako made [Taroo eat the apple].'

[18] Inoue (1983) has already observed that the morpheme */e/* is related to the external force. She observes that the unaccusative verb *tok-e* 'melt' has two transitive counterparts *tok-* and *tok-as*, and that only the former involves the external force. In our analysis, the former involves [-/e/] so that it must include a vP. Although we have observed a tendency for [-/e/] to be frequently involved in vP and ApplP, closer examination on morphemes is required.

[19] In Japanese, it seems that verbs (or auxiliary verbs) of creation, giving, and transfer license the Dative Case *ni*, which seems to mark a Benefactive/Malfactive as follows:
(i) Hanako-ga　　Taroo-ni　seetaa-o　　　ande-age-ta.
　　Hanako-Nom　Taroo-Dat　sweater-Acc　knit-give-Past
　　'Hanako knitted a sweater for Taroo.'
On the other hand, a Benefactive/Malfactive of PRCs does not appear with Dative Case. However, it is not clear whether the Dative NP in (i) is a Benefactive like that in PRCs or whether it is a Goal. We leave this problem for future research.

[20] Ritter and Rosen (1993) analyze *have* as a "functor predicate," which lacks semantic content. They argue that Japanese *sase* causatives correspond to English *have* constructions. Hasegawa (2004) argues that the *v* specified with [- External Role] [+ Object Case] in her system gives a unified explanation for English *have* constructions (with Experiencer readings) and Japanese non-Agentive constructions.

[21] I am grateful to Mikinari Matsuoka for suggesting this argument to me.

[22] It is well known that English verbs may change their original properties by adding a resultative phrase or a phrase which denotes the end point, however, Japanese verbs cannot undergo such a change of meaning. For example, not only achievement verbs but also action verbs may be involved in resultatives in English by adding a resultative phrase to the verb, but Japanese allows only achievement verbs to be used in resultatives (Washio 1997, Kageyama 2001 among others). The situation seems to be the same in PRCs: action verbs with a resultative phrase or a phrase which denotes the end point may lead to an Experiencer reading of the subject in English *have* constructions, while only achievement verbs are involved in Japanese PRCs.

[23] In pilot studies which deal with possessor-possessee or whole-part relationships, Kageyama (2002) analyzes "unaccusative transitives" such as *The tanker gushed oil.* He proposes an operation which

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equalizes *x* to *z* on the LCS. (See also Kageyama (1996) for the operations on LCS that he proposes.) He argues that these kinds of sentences are restricted to specific verbs so that they should not be dealt with in syntax. However, we have shown that PRCs are productive and we have given an explanation in terms of syntax. On the other hand, Sugioka (2002) notes that in these kinds of sentences, the subject is the "whole" that undergoes the change and the object is a "part" or the "property/quality" of the subject. Their studies are insightful, and I will reserve a great number of interesting data presented by Kageyama and Sugioka for a future study.

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