

Causatives and the Role of v : Agent, Causer, and Experiencer*

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1. Introduction

The causative construction is one of the topics most often discussed in generative grammar and it includes the phenomena of transitive-intransitive alterations (1), periphrastic causatives (2), and psych-predicates (3) and (4).

- (1) a. Jane broke the glass.
b. The glass broke.

c. Mary closed the door.
d. The door closed.

e. Sue moved the desk.
f. The desk moved.
- (2) a. Jane made Tom leave.
b. Sue made the room clean.
c. Mary had her photograph taken.
- (3) a. The news surprised everyone.
b. The news made everyone surprised.
c. Everyone was surprised at the news.
- (4) a. The rumor about herself_i worried (angered) Mary_i.
b. The rumor about herself_i made Mary_i worried (angry).
c. Mary_i was worried about (angry at) the rumor about herself_i.

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Transitive-intransitive (or causative-noncausative) pairs are presented in (1). The transitive sentences (a, c, and e) are ‘causativized’ versions of their intransitive counterparts (b, d, and f). (2) presents examples of periphrastic causatives. The causative predicates, *make* and *have*, take a clausal complement and the subject causes (or is responsible for the occurrence of) the event expressed by the complement. Examples (3a) and (4a) involve psychological predicates (psych-predicates), *surprise* and *worry*, respectively. These psych-verbs are transitives but, unlike the predicates in (1), they themselves cannot function as intransitive predicates.¹ In terms of meanings, however, they are basically equivalent to the periphrastic causative counterparts (3b) and (4b) and their relation to the non-transitive counterparts (3c) and (4c) is somewhat similar to what is observed in the transitive-intransitive pairs of (1). Thus, as far as English examples are concerned, except that these phenomena commonly involve some kind of causation in meaning, it is not quite clear if they involve a common structural property that is characteristic of the causative construction.

Japanese provides a different picture, however. In comparison to English, these three phenomena in Japanese exhibit one common morphological property: The causatives all involve a causativizing suffix. Transitive-intransitive (or causative-noncausative) pairs are given in (5) and (6).

- (5) a. Hanako-ga gurasu-o kowa-si-ta. (kowa-s-u)
 -Nom glass-Acc break-tr-past (break-tr-pres)
 ‘Hanako broke the glass.’

- b. Gurasu-ga kowa-re-ta. (kowa-re-ru)
 glass-Nom break-intr-past (break-intr-pres)
 ‘The glass broke.’

- (6) a. Kyoko-ga tukue-o ugok-asi-ta. (ugok-as-u)
 -Nom desk-Acc move-tr-past (move-tr-pres)
 ‘Kyoko moved the desk.’

- b. Tukue-ga ugoi-ta. (ugok-u)
 desk-Nom move-past (move-pres)
 ‘The desk moved.’

The (a) examples are transitives and the (b)’s intransitives. As clearly seen, the pair involves the same root, *kowa-* in (5) and *ugok-* in (6), and the transitive or intransitive form obtains via the attachment of a(n in)transitivizing suffix to the root: *-s-* for transitive and *-re-* for intransitive in (5); and *-as-* for transitive and *-ϕ-* (a zero morpheme) for intransitive in (6). The pairing between intransitives (noncausative verbs) and transitives (causative verbs) is not regular and there are various patterns, some of which are shown in (7), and what suffix a particular verb root takes is not predictable.

¹ There are a few psych-predicates like *worry* that can be either transitive or intransitive.

(7) Examples of Intransitivizing and Transitivity Suffix Pairs

	Intransitive (Noncausative)		Transitive (Causative)		gloss
a.	ϕ	kawak-u ugok-u tob-u	-as-	kawak-as-u ugok-as-u tob-as-u	‘dry’ ‘move’ ‘fly’
b.	-re-	tubu-re-ru tao-re-ru kowa-re-ru	-s-	tubu-s-u tao-s-u kowa-s-u	‘crush’ ‘cut-down’ ‘destroy’
c.	-ar-	ag-ar-u sim-ar-u mag-ar-u	-e-	ag-e-ru sim-e-ru mag-e-ru	‘rise/raise’ ‘close’ ‘bend’
d.	ϕ	ak-u tizim-u tat-u	-e-	ak-e-ru tizim-e-ru ta-t-e-ru	‘open’ ‘shrink’ ‘stand’
e.	-e-	or-e-ru nuk-e-ru kudak-e-ru	ϕ	or-u nuk-u kudak-u	‘fold’ ‘pull out’ ‘smash’

Due to this irregular or non-productive nature of the pairing between causatives and noncausatives, it has been assumed that their relationship is to be captured in the lexicon and these causatives (or transitives) are dubbed ‘lexical causatives’ (cf. Shibatani (1976)).

On the other hand, periphrastic causatives are derived by the attachment of the suffix *-(s)ase* to a verb.

- (8) a. Hanako-ga Taro{-o/-ni} kaer-ase-ta.
 -Nom -Acc/-Dat leave-cause-past
 ‘Hanako caused Taro to leave.’
- b. Tomoko-ga Toru-ni kuruma-o kaw-ase-ta.
 -Nom -Dat car-Acc buy-cause-past
 ‘Tomoko caused Toru to buy a car.’
- c. Kyoko-ga yasai-o kusar-ase-ta.
 -Nom vegetable-Acc perish-cause-past
 ‘Kyoko caused the vegetables to perish.’

These causatives are quite productive and they have often been syntactically analyzed; thus, dubbed ‘syntactic’ causatives: *-(s)ase* is a predicate that takes a clausal complement. The differences between ‘lexical’ causatives and ‘syntactic’ causatives have been one of the central issues in Japanese syntax (see Inoue (1976), Shibatani (1977), Tonoike (1978), Kuno (1973, 1978), Kuroda (1967, 1993), Miyagawa (1980, 1984, 1998), etc) and we will take up some of such issues in what follows. Note, however, that it is not easy to draw a clear line between lexical causatives and syntactic causatives since *-(s)ase* has the

allomorph *-(s)as*, which is the same as one of the causativizers (transitivizing morphemes), as seen in (7a). That is, the predicates in (8) have their alternate forms, *kaer-asi-ta*, *kawa-si-ta*, and *kusar-asi-ta* and it is sometimes not clear if a causative form is ‘lexical’ or ‘syntactic’.² For example, the form *kusar-as-u* in (8c) may be either the lexical causative form of the intransitive *kusar-u* with the attachment of *-as-* of (7a) to its root or the periphrastic causative form with the truncation of the final /e/ of *-(s)ase*. In the following discussion (up till Section 4), we will treat intransitive-transitive pairs (i.e., lexical causatives) such as those in (5) and (6) and periphrastic or productive causatives of the type (8c), the type with a theme object, on the same ground, disregarding the differences in their suffixes.³

As for psych-predicates, unlike English ones, object experiencer psych predicates in Japanese are clearly marked causative, involving *-(s)ase* or a transitivizing morpheme. Observe (9) and (10).

- (9) a. Sono sirase-ga minna-o odorok-ase-ta. / odorok-asi-ta
 the news-Nom everyone-Acc surprised-cause-past
 ‘The news surprised everyone.’
- b. Minna-ga sono sirase-ni odoroi-ta.
 Everyone-Nom the news-Dat be=surprised-past
 ‘Everyone was surprised at the news.’
- (10)a. Zibun_i-ni tuite-no uwasa-ga Hanako_i-o okor-ase-ta. / kurusim-e-ta.
 self-about-Gen rumor-Nom -Acc angry-cause-past / be=tormented-cause-past
 ‘The rumor about herself angered Hanako/made Hanako agonized.’
- b. Hanako_i-ga zibun_i-ni tuite-no uwasa-ni okot-ta. / kurusin-da.
 -Nom self-about-Gen rumor-Dat get=angry-past / be=tormented-past
 ‘Hanako was angry at/ tormented with the rumor about herself.’

The (a) examples are object experiencer psych-predicates and they are causativized versions of the noncausatives, (b)’s. For causativization, most psych-predicates make use of the productive causativizer *-(s)ase* (or its allomorph *-(s)as*), but there are cases where a lexical causativizer such as *-e-* is used as in *kurusim-e-ru* in (10a).

As shown above, the three types of causatives all involve a causative suffix and the causative suffix is obviously relevant to the following two theoretical issues that causatives raise: (i) valency change and (ii) Object Case. That is, causativization (or noncausativization) necessarily involves changes in the number of arguments in a sentence. The transitive (or causative) adds an argument to what its intransitive (or noncausative) counterpart requires and the added argument appears as the subject. Furthermore, the transitive (or causative) assigns Object Case to the argument that

² See Kuroda (1993) and Miyagawa (1998) for discussions on *-(s)as*.

³ This does not mean that the distinction between lexical causatives and syntactic causatives is not important. See 4.2 for relevant discussion.

functions as the subject of the intransitive (or noncausative) counterpart. A natural direction to account for this is to consider that a causative suffix is responsible for this change: it gives rise to the presence of an extra argument and the assignment of Object Case.

This in fact is exactly what the category v is assumed to do in recent syntactic theory (cf. Chomsky (1995), Collins (1997) and I will examine the phenomena of causatives in terms of the function of v . In Section 2, we will first review recent proposals concerning v , where v is supposed to account for Burzio's generalization. I will point out the peculiar nature of this generalization, which is necessarily inherited in the recent proposals. In 2.2, I will propose a different view concerning the specification of v , where v is taken to be categorically both lexical and functional. The presence or absence of an external argument is determined by its feature as a lexical category and the availability of Object Case is dependent on its feature as a functional category. I will claim that Burzio's generalization is not a true generalization and show that there exist predicates that do not follow it. Agentive 'unaccusatives' are instances of such predicates. I will argue that such predicates are not anomalous but naturally follow from the proposed system. In Section 3, non-agentive causatives, which, in a strict sense, do not follow Burzio's generalization, either, will be accounted for within our proposed system. Some consequences of the proposal will be discussed in Section 4.

2. The Function of v

2.1 Burzio's Generalization and v

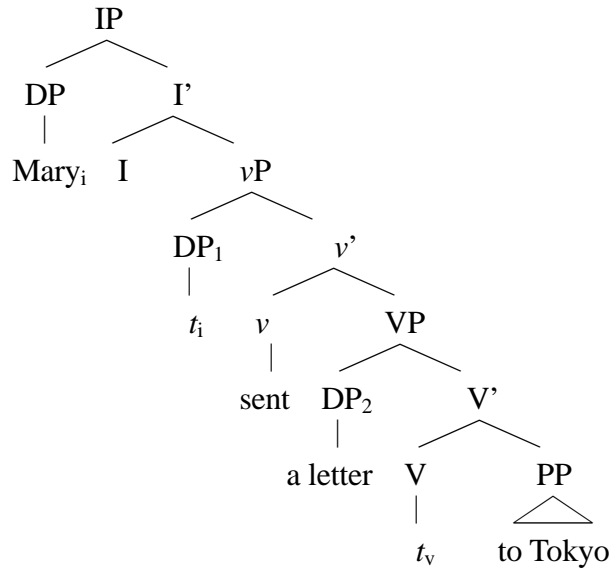
We have seen that causativization crucially involves an addition of an external argument and the assignment of Object Case. This is what v is claimed to do in recent proposals such as Chomsky (1995) and Collins (1997), where the external role is generated at Spec of vP and v takes VP as its complement. Within such a system, typical transitive sentences, say (11a), have a structure like (11b), which is in the following page.

(11) a. Mary sent a letter to Tokyo.

In structure (11b), the verb *send* is generated at V and its internal arguments, *a letter* and *to Tokyo*, are inside the VP. The external argument *Mary* is generated at the Spec of v , which will eventually be raised to Spec of IP to receive Nominative Case (or to have its Nominative Case checked). In this view, particular theta roles are generated at designated structural positions.⁴ That is, Agent is at Spec of vP , Theme at Spec of VP and Goal at the complement position of VP. To the extent that v provides an argument (Agent) position inside its projection, it is like V. However, v has another role that V does not assume. It assigns (or checks) Object Case of DP_2 . This dual function of v accounts for Burzio's generalization (12).

⁴ See Hale and Keyser (1993) for the elaboration of this view. Under this view, the internal structure of VP (or vP -VP combination) corresponds to a version of Lexical Conceptual Structure.

(11) b.



(12) *Burzio's Generalization*

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

According to Burzio's generalization, the presence of an external role is tied to the assignment of Object Case. However, given that Case and θ -roles belong to different sub-theories, it is a mystery why the assignment of Case and that of a θ -role coordinate. One way to account for this mystery is to assume that there is a category that mediates these two sub-theories. In fact, v is considered to be such a category and Burzio's generalization (12) is a result of the specifications given to v : either v assigns an external role and Object Case, which gives rise to a transitive sentence, or v does not, which brings about an intransitive sentence. This idea may be materialized in terms of feature specifications on v , as shown in (13).

(13) Specification on the feature of v : [+Tr] or [-Tr]

[+Tr] : assign External θ -role, assign Object Case

[-Tr] : no external θ -role, no Case assignment

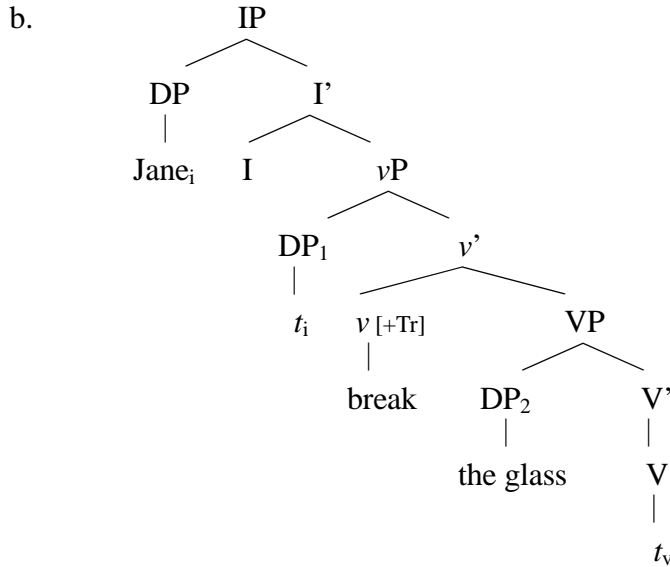
The $[\pm \text{Tr}]$ specifications on v here basically follows Collins (1997)'s system, where he uses Tr (transitive) in place of v . He assumes the following for the head Tr:

For transitive verbs, it checks accusative Case and assigns the external θ -role to its specifier. For unaccusative verbs, it is present, but it checks no accusative Case and assigns no external θ -role. For all verbs, movement of V to adjoin to Tr is obligatory; therefore the V feature of Tr is strong. (Collins 1997:15)

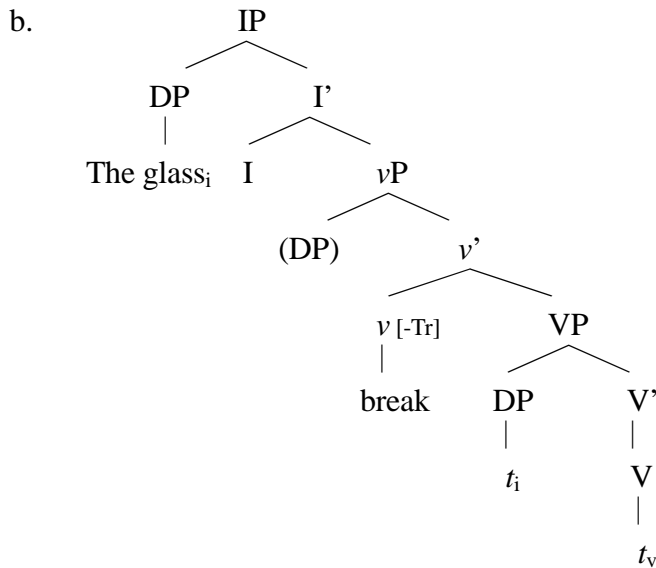
Given this, the transitive-intransitive (or causative-noncausative) pair exemplified in (1) in English and in (5) and (6) in Japanese is described by the difference in the feature specification on v . The structures and derivations of the pair, (1a) and (1b), for example,

are shown in (14) for the causative (or transitive) (1a) and in (15) for the noncausative (or unaccusative) (1b).

(14) a. Jane broke the glass. (=1a))



(15) a. The glass broke. (=1b))



Both (14) and (15) have the same VP structure but they differ in the feature specification on *v*. In transitive (14), due to the feature [+Tr], the external argument, *Jane*, takes place at the Spec of *v*, which is raised to the Spec of IP to receive Nominative Case. In addition, *v* assigns Object Case to the DP at Spec of VP. In intransitive (15), on the other hand, *v* assigns neither an external role nor Object Case; hence the DP at Spec of VP is raised to the Spec of IP for Nominative Case. In both structures, *v* attracts V, due to its strong V-feature.

The Japanese pairs of (5) and (6) can be accounted for in the same way, except that

v is not morphologically empty but a transitivity or intransitivity suffix is generated at v .⁵

2.2 A Proposal: the Dual Characteristics of v

One may wonder if the presence of $v[-Tr]$ is really needed in the derivation of noncausatives, since $v[-Tr]$ is inactive with respect to the assignment of an external role and Object Case. In fact, Chomsky (1995) and Hale and Keyser (1993) seem to consider v (or a category equivalent to it) to be necessary only for transitives, assuming that v is a kind of predicate with the semantic function of CAUSE. Collins (1997), on the other hand, considers v (Tr in his system) to be a functional head and its presence in the structure of a sentence is mandatory. His argument goes as follows.

First, he claims that v is responsible for the parameterization of object shift. When the D feature of v is strong, Object Shift is triggered, whereas no object shift is observed, when it is weak. Assuming that only functional categories are allowed to exhibit such parametric variation of features, v must necessarily be functional. There is more straightforward empirical evidence for the presence of v in unaccusatives. Observe the following.

- (16) a. There arrived a man to the party.
 b. $[_{IP} (there) [_{VP} a\ man\ arrived\ at\ the\ party]]]$
 c. *There a man arrived at the party.
 d. $[_{IP} (there) [_{VP} v [_{VP} a\ man\ arrived\ at\ the\ party]]]$
 e. $[_{IP} there [_{VP} [arrived]_v [_{VP} a\ man\ t_v\ at\ the\ party]]]$

Sentence (16a) involves an unaccusative predicate, *arrive*, and its two arguments, *a man*, which is Theme, and *to the party*, Goal, are supposed to be under VP (cf. structure (11b)). If v is not present in unaccusatives (or noncausatives), a VP is an immediate constituent under IP; i.e., (16b). If so, since the V feature of I in English is weak and V does not raise to I in overt syntax, the sentence that results after the merger of *there* would have a wrong order of the Theme argument and the verb as in (16c). If v takes a VP as its complement, as in (16d), on the other hand, and if its V feature is strong and attracts V, as claimed in the above quote of Collins', the V precedes the Theme argument, giving rise to (16e) (= (16a)). Thus, v plays a crucial role in determining the position of V, which is a typical function of functional categories.

Hence, there seems to be little doubt that v is functional. Furthermore, v also assumes a function of lexical categories, as it assigns an external role to its Spec position. In the above, I mentioned that Burzio's generalization is peculiar in the sense that it requires θ -role assignment and Object Case assignment, which belong to different

⁵ I tentatively assume that a verb root, which is generated under V, and a(n in)transitivity suffix, which is under v , are amalgamated via raising of V to v . A possible problem to this analysis is how a correct combination of a particular verb root and its designated (in)transitive suffix can be attained. See Miyagawa (1998) for relevant discussion, where an approach along the lines of distributive morphology is suggested. Alternatively, a full lexical item that consists of a root and a suffix is generated under V and v checks its (in)transitive feature inherited from the suffix.

sub-theories, go hand-in-hand, being specified both positively or negatively. This peculiarity is inherited in the feature combinations on v in the system (13) and the question of why the feature specifications on θ -roles and Case coordinate is not fundamentally answered. It may be that this peculiarity has to do with the nature of v . But what has to be accounted for is why a single feature like [+Tr] or [-Tr] (or active Tr versus inactive Tr, in the sense of Collins) refers to both θ -roles and Case.

To see where the problem lies more clearly, let us explicate what has been (tacitly, if not explicitly) assumed with respect to the relation between the sub-theories and category types: Theta theory has to do with lexical categories and Case theory with functional categories. What is special about v is then that it assumes the functions of both categories; it is lexical to the extent that it assigns an external role and it is functional in the sense that it plays a role in building structure by attracting a complement V and assigning (checking) Object Case. Then, it is not a mystery why v involves the features relevant to both θ -roles and Case. What still remains peculiar is why the value on θ -roles coincides with that on Case.

If the above reasoning is on the right track and v is in fact both lexical and functional, what we expect is the system (17), rather than (13). That is, functional features on v and lexical features on v can be independently specified.

(17) v is categorically both functional and lexical:

Functional feature⁶: [\pm Object Case].

Lexical feature: [\pm external role].

Given (17), the feature combinations we obtain are shown in (18) and we expect that there are four different types of v , rather than two types, which (13) predicts.

(18)

	+ external role	- external role
+ Obj Case	(a) transitive	X
- Obj Case	Y	(b) unaccusative

In other words, we expect there to be predicates that result from v with [+Object Case][\pm external role] (i.e., X in the table (18)) and those with [-Object Case][\pm external role] (Y), beside (a) ordinary transitives (i.e., [+Object Case] [+external role], the case of v [+Tr] in the system of (13)) and (b) unaccusative or noncausative intransitives (i.e., [-Object Case][\pm external role], the case of v [-Tr]).

The straightforward prediction of (17) is that Burzio's generalization, which allows only (18a) and (18b), is not a true generalization. In fact, this is not so unwelcomed as it might seem, since there exist sentences that do not conform to it. Observe (19).

(19) a. It surprised everyone that John left so early.

⁶ As a functional category, v , beside Case feature, has the strong V-feature, by which a complement V is overtly raised to v . This accounts for the fact in (16), as we have seen.

- b. It made me happy that Mary showed up.

These examples have an expletive subject and, according to Burzio's generalization, there should not be an object (i.e., a DP with Object Case). However, they do have an object; *everyone* in (19a) and *me* in (19b). I would like to claim that these instances of *surprise* and *make* are examples of X, v with [+Object Case] [-external role].

As for *Y*, unergative intransitives, like *run* and *laugh*, may be considered its candidates. They have an external subject (Agent) but do not usually have an object. However, as is well-known, unergatives often allow an object (or a DP with Object Case), as shown in (20) for English examples and in (21) for Japanese.

- (20) a. Mary ran (a track).
b. Sue laughed (a fanny laugh).
c. Jane sang (a song).
- (21) a. Hanako-ga (kootee-o) hasit-ta.
-Nom school yard-Acc run-past
'Hanako ran (the school yard).'
- b. Tomoko-ga (uta-o) utat-ta.
-Nom song-Acc sing-past
'Tomoko sang (a song).'

Because of the presence of these kinds of examples, unergatives are better categorized under (a) not under *Y*. The predicates that meet *Y* must be like unaccusative, i.e. no Object Case, but with an external argument. Assuming that an external argument is to be Agent, which is suggested in structure (14b) (cf. Hale and Keyser (1993)), what *Y* is to be is a predicate that is unaccusative but with an Agent subject. We do have such examples. Observe the following.

- (22) a. Mary (intentionally) moved.
b. John fell (on purpose).
c. Susan stood straight.
- (23) a. The desk moved. a'. John moved the desk.
b. The box fell (from the table)
c. The bottle stood on the bar. b'. They stood the bottle on the bar.
- (24) a. Hanako-ga (wazato) ugoi-ta.
-Nom intentionally move-past
'Hanako moved (intentionally).'
- b. Kyoko-ga (koini) taore-ta.
-Nom on=purpose fall-past
'Kyoko fell on purpose.'

- (25) a. Tukue-ga ugoi-ta.
desk-Nom move-past
'The desk moved.'
- a'. Junko-ga tukue-o ugok-asi-ta.
-Nom desk-Acc move-tr.past
'Junko moved the desk.'
- b. Isu-ga tao-re-ta.
chair-Nom fall-intr-past
'The chair fell down.'
- b'. Tomoko-ga isu-o tao-si-ta.
-Nom chair-Acc fall-tr-past
'Tomoko push down the chair.'

As (23) and (25) show, these predicates are unaccusatives and they are supposed to have the features of (18b) on v . The same predicates are used in (22) and (24) but their subjects are agentive. If Agent is assigned only to Spec of v , the v of these examples must have the [+external role] feature, which means that these instances of the predicates are either (18a), like transitives or unergatives, or Y . It is unlikely that they are transitives, since some of these unaccusatives do have transitive counterparts (cf. the prime examples of (23) and (25)) and, as clearly seen from Japanese examples, they are intransitives (noncausatives). They do not seem to be unergatives either, since they behave differently from true unergatives like those in (20) and (21); they do not allow any kind of object at all. Compare (26) and (27) with (20) and (21).

- (26) a. Mary moved (*a little move / *the track).
b. Mary fell (*a funny fall / *the ground).
- (27) a. Hanako-ga (*kootee-o) ugoi-ta.
-Nom schoolyard-Acc move-past
'*Hanako moved a schoolyard.'
- b. Kyoko-ga (*zimen-o / *karada-o) tao-re-ta.
-Nom ground-Acc/body-Acc fall-intr-past
'*Kyoko fell the ground/her body.'

Obviously these predicates are incapable of assigning Object Case. Burzio's generalization (or the system like (13)) cannot easily explain these 'agentive unaccusatives': 'agentive unaccusatives' cannot be unaccusatives but unergatives, provided that Agent is always an external role. Then, there is no fundamental explanation available for why they cannot allow an object at all, like true unergatives.⁷ Within the proposed system (17), on the other hand, unaccusatives with an Agent subject exemplified in (22) and (24) are instances of Y in (18), predicates with a v [-Object Case] [+external role], which is a straightforward representation of what one type of v can be. Thus, the presence of 'agentive unaccusatives' clearly indicates the feature system of v proposed in (17) is on the right track.

⁷ It is not wise to assume that Agent can be an internal argument just like Theme. If so, the mapping of θ -roles to syntactic structure becomes much complicated and a restrictive view (such as UTAH) must be abandoned, which is obviously an unwelcome move. Thus, Burzio's generalization or (13) has a severe difficulty in accounting for 'agentive unaccusatives'.

In the next section, I will further argue for (17) by examining non-agentive causatives, which I will claim to be *X* of (18). Before closing this section, I would like to point out that, as long as Japanese data are concerned, verbal morphology corresponds with the [\pm Object Case] feature but not with the [\pm external role] feature of *v*. In describing the structures of transitive-intransitive (causative-noncausative) pairs in the above (cf. (14) and (15)), I mentioned that (in)transitivizing suffixes reside in *v*. There, I presented a view that such suffixes are morphological representations of the feature complexes of *v*. Now that the θ -feature and the Case feature are independent from each other, there arises a question as to which feature a suffix represents. Recall the verb forms in (24), ‘agentive unaccusative’, and those in (25), ‘non-agentive unaccusative’. They both involve ‘intransitive (or noncausative)’ suffixes and they both are incapable of Object Case assignment, but they differ in the assignment of an external role (Agent). Thus, what intransitivizing suffixes represent is the [-Object Case] feature of *v*. They are indifferent to the [\pm external role] feature. We then expect that transitivity suffixes represent the [+Object Case] feature and they themselves do not specify [\pm external role]. This in fact is the case. We will see below that what causative suffixes (not only ‘lexical causative’ suffixes exemplified in (7) but also *-(s)ase* and *-(s)as*) invariably do is to assign Object Case, while they do not always assign an external role. I will claim that when a causative suffix (i.e., *v*) assumes [+external role], agentive causatives result and if *v* has the feature [-external role], we obtain non-agentive causatives, which constitute *Y* of (18).

3. Non-Agentive Causatives

3.1 On External Arguments

At the outset of the paper, we have seen some transitive or (lexical) causative sentences, some of which are repeated in (28) and (29).

- (28) a. Jane moved the desk.
 b. Sue opened the window.
- (29) a. Hanako-ga tukue-o ugok-asi-ta.
 -Nom desk-Acc move-tr-past
 ‘Hanako moved the desk.’
 b. Tomoko-ga doa-o ak-e-ta.
 -Nom door-Acc open-tr-past
 ‘Tomoko opened the door.’

These transitive predicates can have not only an agentive subject (as in (28) and (29) but also a non-agentive subject. Observe the following examples.

Non-Agentive Causer

- (30) a. The wind opened the door. a'. Mary opened the door.
 b. The heat dissolved the sugar. b'. The chemist dissolved the sugar in water.
- (31) a. Ziko-ga densya-o okur-ase-ta./okur-asi-ta.
 accident-Nom train-Acc delay-tr-past
 'The accident delayed the train.'
- a'. Syasyoo-ga densya-o okur-ase-ta./okur-asi-ta.
 conductor-Nom train-Acc delay-tr-past
 'The conductor delayed the train.'
- b. Kaze-ga eda-o yur-asi-ta.
 wind-Nom branches-Acc sway-tr-past
 'The wind swayed the branches.'
- b'. Kodomo-ga eda-o yur-asi-ta.
 child-Nom branches-Acc sway-tr-past
 'The child shook the branches.'

It appears that the transitivity of predicates is irrelevant to the specification of θ -role types at the subject position. However, this presents a problem to the view that we would like to maintain: a particular θ -role is represented at a particular syntactic position (cf. the Universal Theta Assignment Hypothesis (UTAH)). Following Hale and Keyser (1993), we assume that Theme is given to Spec of VP and Agent outside of VP, which we take to be Spec of ν P, which is exemplified in the structures above (i.e. (11b), (14b), and (15b)). The question that arises is where in the syntactic structure a non-agentive role of the subject is given. The following discussion will be devoted to answering this question. Before doing so, let us observe some more non-agentive transitive examples.

We have already seen the case of psych-predicates such as (32) and (33). They typically have a non-agentive Causer subject, though as the examples with a prime show, they can also take an Agent subject.

Causer of Psychological State

- (32) a. The news surprised everyone. a'. John surprised everyone.
 b. The rumor angered Mary. b'. John angered Mary.
- (33) a. Sono sirase-ga minna-o odorok-ase-ta.
 the news-Nom everyone-Acc surprised-cause-past
 'The news surprised everyone.'
- a'. Tomoko-ga minna-o odorok-ase-ta.
 -Nom everyone-Acc surprised-cause-past
 'Tomoko surprised everyone.'

- b. Sono uwasa-ga Hanako-o kurusim-{e/ ase}-te-i-ru.
 the rumor-Nom -Acc be=tormented-{tr/cause}-prog-pres
 ‘The rumor tormented Hanako.’
- b’. Taro-ga Hanako-o kurusim-{e/ ase}-te-i-ru.
 -Nom -Acc be=tormented-{tr/cause}-prog-pres
 ‘Taro tormented Hanako.’

Another type of examples with a non-agentive subject is the case of sensation expressions with an Experiencer (or Patient) subject. Examples follow.

Experiencer or Patient of Sensation Expressions

- (34) a. Jane_i broke her_i arm.
 b. Sue_i hurt her_i back.
- (35) a. Hanako-ga ude-o ot-ta.
 -Nom arm-Acc break-past
 ‘Hanako_i broke her arm_i.’
 b. Tomoko-ga kosi-o itam-e-ta.
 -Nom back-Acc hurt-tr-past
 ‘Tomoko_i hurt her_i back.’

In these examples, the subject is a possessor of a body part expressed in the object. Some sentences of this type (e.g., (34a) with *break*, (35a) with *or-u* ‘break, bend’) can be ambiguous as to whether the subject is an Agent or Patient (or Experiencer). And some others (e.g., (34b) with *hurt*, (35b) with *itam-e-ru*) only allow a Patient or Experiencer subject. Note that if the possessor-body part relation is not held between a subject and an object (i.e., *Jane broke the window/Bill’s arm*), the subject is not interpreted as Patient (or Experiencer) but only as Agent.

The construction similar both to the case of psych-predicates (33) and to the case of sensation expressions (35) is presented in (36).⁸

(36) *Experiencer: Possessor of Feelings or Mental State*

- a. Kyoko-ga sono hitokoto-ni kimoti-o nagom-ase-ta.
 -Nom that one=word-Dat feeling-Acc calm-cause-past
 ‘Kyoko got her feelings calmed by that word.’
- b. Tomoko-ga sono dekgoto-ni sesuzi-o koor-ase-ta.
 -Nom the incident-Dat spine-Acc chill-cause-past
 ‘Tomoko got her spine chilled by the incident.’
- c. Taro-ga sono nyuusu-ni kokoro-o ugok-asi-ta./ ??ugok-ase-ta.

⁸ See Hatori (1977, 1999) for the discussion on some lexical-semantic characteristics of this type of causatives.

-Nom the news-Dat mind-Acc move-cause-past
 ‘Taro got his mind moved by the news.’

Japanese has a plenty of examples of this type. These examples are similar to those with a psych-predicate such as (33) in the sense that they both express psychological state of the subject and involve a causative suffix of the ‘productive’ causative type, *-(s)ase* or *-(s)as*. (36) is different from (33), however, to the extent that the subject cannot be interpreted as Agent but only as Experiencer. These examples also exhibit the characteristics of sensation expressions (35): the subject is the inalienable possessor of the object DP. But (36) differs from (35) in that the former refers to a mental or psychological state, while the latter typically involves a physically identifiable body part.

It is clear that the predicates in (28)-(36) are all transitives: they have an object (i.e., they assign Object Case) and Japanese examples clearly involve a transitivity suffix or the causative predicate *-(s)ase*. This means that they all involve the [+Object Case] feature on their *v*. Furthermore, the *v* of the sentences with an Agent subject is with the feature [+external role]. The question now is how a non-agentive subject is to be dealt with. There are two ways to go about to approach this question:

- (37) (i) *v* is [+external role]: A non-agentive subject is structurally represented at the Spec of *v*P, just like an agentive subject;
- (ii) *v* is [-external role]: Only Agent is represented at *v*P-Spec and other types of roles, like Causer, Experiencer, etc. are represented somewhere else (i.e., inside a complement VP of *v*) but end up being at the subject position, the Spec of IP.

If (i) is correct, transitives are invariably [+external role] (and [+Object Case]) and this goes along with Burzio’s generalization (or the view presented in (13)). There are obvious problems in (i), however: no way to structurally determine differences in external roles; no way to maintain a hypothesis like UTAH, which plays a crucial role in mediating lexical semantic characteristics of predicates and syntactic structure that reflects them. Therefore, we will not pursue (i). We would like to pursue (ii), which in fact what the proposal (17) suggest: transitives or [+Object Case] predicates may be either [+external role], which gives rise to agentive transitives, or [-external role], which is for non-agentive transitives. In terms of table (18), non-Agentive transitives fill the slot *X*.

3.2 On Non-Agentive Subjects

If (37-ii) is the direction to pursue, the question to ask is where in structure non-agentive subject roles are represented. The kinds of external roles that have been exemplified in the above are Agent (28)(29), Causer (30)-(33), and Experiencer (34)-(36). The interesting fact that should be explained is that the subject θ -roles of these transitives or causatives, except Agent, can also appear intransitive (or noncausative) counterparts, as can be clearly seen from the following examples. The underlined items appear as a subject in the non-agentive transitive counterparts (30)-(36).

Non-Agentive Causer (cf. (30), (31))

- (38) a. ?The door opened with a gust of wind.
b. ?The sugar dissolved in the heat.
- (39) a. Densya-ga ziko-de okur-e-ta.
train-Nom accident-by be=delayed-intr-past
'The train was delayed by the accident.'
- b. Eda-ga kaze-de yur-e-ta.
branch-Nom wind-by swing-intr-past
'The branches swayed in the wind.'

Causer of Psychological State (cf. (32), (33))

- (40) a. Everyone is surprised at the news.
b. Mary worries about her son.
- (41) a. Minna-ga sono sirase-ni odoroi-ta.
Everyone-Nom the news-Dat be=surprised-past
'Everyone was surprised at the news.'
- b. Hanako-ga sono uwasa-ni kurusin-de-iru.
-Nom that rumor-Dat be=tormented-prog-pres
'Hanako is tormented with the rumor.'

Experiencer or Patient of Sensation Expressions (cf. (34), (35))

- (42) a. Jane's arm broke.
b. My back hurt.
- (43) a. Hanako-no ude-ga or-e-ta.
-Gen arm-Nom break-intr-past
'Hanako's arm broke.'
- b. (Watasi-no) kosi-ga itam-u.
my-Gen back-Nom hurt-pres.
'My back hurts.'

Experiencer: Possessor of Feelings or Mental State (cf. (36))

- (44) a. Kyoko-no kimoti-ga sono hitokoto-ni nagon-da.
-Gen feeling-Nom that one=word-Dat calm-past
'Hanako's feelings calmed with that word.'
- b. Sono nyuusu-ni Taro-no kokoro-ga ugoi-ta.
the news-Dat -Gen mind-Nom move-past
'Taro's mind moved by the news.'

In the non-causative sentences (38)-(41), though the English examples may not be perfect, it seems possible to say that a Causer role can occur as an adjunct. In psych-predicates (39) and (40), a Causer role occurs inside VP (see 3.3 for further discussion). In (42)-(44), the examples with a possessor of a body part, the possessor (or Experiencer) shows up as a Genitive phrase of the possessed DP. As compared with non-agentive cases, agentive subjects cannot occur internal to VP in non-causatives.⁹

Agent

- (45) a. *The door opened by/with Jane.
 b. *The sugar dissolved by/with the chemist.
- (46) a. *Densya-ga syasyoo-de okur-e-ta.
 train-Nom conductor-by be=delayed-intr-past
 ‘The train was delayed by the conductor.’
- b. *Eda-ga kodomo-de yur-e-ta.
 branch-Nom child-by swing-intr-past
 ‘The branches swayed by the child.’

Given UTAH, it is reasonable to assume that non-agentive roles in the subject of transitives take place as an adjunct or a possessor of a body part inside VP. They remain as an adjunct or a possessor DP of an object in accusatives but they are raised to the subject position in transitives. This is exactly what (37-ii) suggests. There in fact is empirical evidence that supports this.

3.3 Movement from Inside VP

The most straightforward argument for the claim that the subject of noncausative transitives is raised from inside VP is seen in the anaphoric binding fact of psych-predicates. Belletti and Rizzi (1988) argue that a subject (Cause) of object experiencer psych-predicates (i.e., psych-causatives) is generated below object argument position at D-Structure. The strongest argument for this claim has to do with the phenomenon of backward binding of anaphors. Assuming that the condition (A) of Binding Theory can be satisfied at any level in syntax, the grammaticality of (47) and (48) naturally follows, if the subject is generated below the object at D-structure.

- (47) a. The pictures of herself_i annoyed Mary_i.
 b. The rumor about himself_i worried John_i.
- (48) a. Zibun_i-ni tuite-no uwasa-ga Hanako_i-o kanasim-ase-ta.
 self-about-Gen rumor-Nom -Acc be=sad-cause-past
 ‘The rumor about herself made Hanako sad.’

⁹ If the *de*-phrase is interpreted as Cause, not Agent, (45) is acceptable.

- b. Zibun_i-no kako-ga Taroi-o kurusim{-e/-ase}-te-i-ru.
 self-Gen past-Nom -Acc be=tormented-{tr/cause}-prog-pres
 ‘His past life distresses Taro.’

If the subjects of these causatives are raised from the positions equivalent to the Causer phrase of their non-causative counterparts (49) and (50) and the anaphors inside are bound within VP by the objects, the grammaticality of (47) and (48) is accounted for along that of (49) and (50).

- (49) a. Mary_i was annoyed bout the pictures of herself_i.
 b. John_i is worried about the rumor about himself_i.
- (50) a. Hanako_i-ga zibun_i-ni tuite-no uwasa-ni kanasim-da.
 -Nom self-about-Gen rumor-Dat be=grieved-past
 ‘Hanako_i was grieved at the rumor about self_i.’
 b. Taro_i-ga zibun_i-no kako-ni kurusin-de-i-ru.
 -Nom self-Gen past-Dat be=tormented-prog-pres
 ‘Taro is distressed with his own past life.’

It is beyond the scope of this paper to specify exactly where a Causer argument (or adjunct) structurally takes place inside VP, but it seems reasonable to assume that it is adjoined to V’, which is c-commanded by the position of Theme, Spec of VP.¹⁰

Another argument for the claim that the subject of non-agentive transitives is raised from inside VP has to do with the possessor of a body part in the examples of the transitive sensation expressions in (35) and that of the construction (36). These examples are repeated here as (51) and (52), respectively.

Experiencer or Patient of Sensation Expressions

- (51) a. Hanako-ga ude-o ot-ta.
 -Nom arm-Acc break-past
 ‘Hanako_i broke her arm_i.’
 b. Tomoko-ga kosi-o itam-e-ta.
 -Nom back-Acc hurt-tr-past
 ‘Tomoko_i hurt her_i back.’

¹⁰ I assume that the subject of psych-noncausatives such as (49) and (50) or the object of psych-causatives is generated at VP-Spec, considering them to be Theme. These arguments are often taken to be Experiencer, however. 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) are interpreted as Experiencer, but it is originally a possessor of a body part, which by no means inherently pertains to Experiencer. It may well be the case that Experiencer is a cover term or a derivative role for animate entities that undergo change in state, which may be theta-theoretically Theme, Possessor, or some other role.

Experiencer: Possessor of Feelings or Mental State

- (52) a. Kyoko-ga sono hitokoto-ni kimoti-o nagom-ase-ta.
 -Nom that one=word-Dat feeling-Acc calm-cause-past
 ‘Kyoko got her feelings calmed by that word.’
- b. Tomoko-ga sono dekgoto-ni sesuzi-o koor-ase-ta.
 -Nom the incident-Dat spine-Acc chill-cause-past
 ‘Tomoko got her spine chilled by the incident.’
- c. Taro-ga sono nyuusu-ni kokoro-o ugok-asi-ta./ ??ugok-ase-ta.
 -Nom the news-Dat mind-Acc move-cause-past
 ‘Taro got his mind moved by the news.’

As we have seen in (43) and (44), the subject of these examples corresponds to the possessor of a body part of the noncausative counterparts. What is interesting in (51) and (52) is that the possessor of the object should not phonologically be represented provided that the subject is non-agentive. This is shown in (53).¹¹

- (53) a. Hanako_i-ga ({*kanozyo_i-no/*zibun_i-no/ ϕ_i }) ude-o ot-ta. (cf. (51a))
 -Nom her-Gen / self-Gen arm-Acc break(tr)-past
 ‘Hanako_i broke her_i arm.’
- b. Kyoko_i-ga sono hitokoto-ni ({*kanozyo_i-no/*zibun_i-no/ ϕ_i }) kimoti-o
 -Nom that one=word-Dat her-Gen / self-Gen feeling-Acc
 nagom-ase-ta. (cf. (52a))
 calm-cause-past
 ‘Kyoko got her_i feelings calmed by that word.’

The prohibition against the occurrence of the possessor in (52) and (53) is quite similar to what is observed in the following possessor ascension phenomenon in Japanese.

- (54) a. Hanako-ga ({*kanojo_i-no/*zibun_i-no/ ϕ_i }) asi-ga naga-i.
 -Nom her-Gen self-Gen leg-Nom long-pres
 ‘Hanako, her legs are long.’
- b. Hanako-no asi-ga naga-i.
 -Gen leg-Nom long-pres
 ‘Hanako’s legs are long.’

In (54a), the predicate is *naga-i* (be long) and its logical subject is *asi* ‘leg’, the Nominative-marked DP, *Hanako-ga*, which results due to Possessor Ascension on the

¹¹ The pronoun, either pronominal or reflexive, is possible in (53a) if the subject is interpreted as agentive, meaning *Hanako broke her arm on purpose*. But it should not be allowed if *Hanako* is to be interpreted as an Experiencer or Patient. We will come back to this issue in 4.1.

Genitive DP of (54b).¹² This process is quite general and its application is sometimes mandatory as shown in (55).

- (55) a. Taro-ga ({*kare_i-no/ *zibun_i-no/ ϕ _i}) atama-ga ita-i (rasii).
 -Nom him-Gen/ self-gen head-Nom ache-pres seem
 ‘(It seems that) Taro has a headache.’
- a'. *Taro-no atama-ga ita-i (rasii)
 -Gen head-Nom ache-pres seem
 ‘(It seems that) Taro’s head aches.’
- b. Pochi-ga ({*soitu_i-no/ *zibun_i-no/ ϕ _i}) onaka-ga sui-ta (yoo-da).
 -Nom it-Gen / self-Gen stomach-Nom empty-past seem
 ‘(It seems that) Pochi got hungry.’
- b'. *Pochi-no onaka-ga sui-ta (yoo-da)
 -Gen stomach-Nom empty-past seem
 ‘(It seems that) Pochi’s stomach got empty.’

Note that in (54) and (55), once the possessor is ascended, what remains at the extraction site is a trace and no pronoun that refers to the moved antecedent is possible. This is exactly what we have observed in the non-agentive transitives with a possessor subject in (52) and (53). The parallelism between (52) and (53) on the one hand and (54) and (55) on the other with respect to the behavior of the possessor DP and the possessed DP strongly suggests that the Experiencer subject of the noncausative transitives in (52) and (53) is in fact ascended from the Genitive possessive DP of the object DP.¹³ The fact in

¹² It is well-known that Japanese very generally exhibits this type of ascension. Sentence (ia) is Kuno’s (1973) celebrated example, where Possessor Ascension, which he calls Subjectivization, applies to each Genitive DP of (ib).

- (i) a. Bunmeikoku-ga dansei-ga heikin-zyumyoo-ga mizika-i.
 civilized country-Nom male-Nom average-life-span-Nom short-pres
 ‘It’s civilized countries that men, whose average life-span is short.’
- b. Bunmeikoku-no dansei-no heikinzyumyoo-ga mizika-i.
 civilized country-Gen male-Gen average-life-span-Gen short-pres
 ‘The average life-span of men of civilized countries is short.’

¹³ Possessor Ascension, as Kuno’s term ‘Subjectivization’ suggests, is often considered to apply only to the possessor of a subject not to the one of an object, because of the ungrammaticality of sentences such as (ia), which is supposed to be derived from (ib) through the ascension of the possessor of the object DP.

- (i) a. Hanako-ga sono konsaato-no tiketto-o kat-ta.
 -Nom the concert-Gen ticket-Acc buy-bast
 ‘Hanako bought the ticket of the concert.’
- b. *Hanako-ga sono konsaato-o tiketto-o kat-ta.

(56) further confirms this conclusion.

- (56) Hanako_i-ga ({?kanozyo_i-no/ zibun_i-no/ ϕ_i }) kao-o {egai-ta / tatai-ta}.
 -Nom her-Gen / self-Gen face-Acc draw-past / hit-past
 ‘Hanako {drew/hit} {?her_i/ self_i’s/ ϕ_i } face.’

What is shown in (56) is that a pronominal or a reflexive is possible at the possessor position of the object as long as the subject is Agentive. The most straightforward explanation for the contrast between (52)(53) and (56) is that the subject of the former is raised from inside VP and the Genitive position of the object is occupied by a trace, while that of the latter is generated outside VP (at the Spec of ν P) and a DP with a phonetic matrix freely take place at that position, referring to the subject.

There is stronger evidence for the existence of a trace at the Genitive position of the object in the examples like (52) and (53). Observe (57) and (58).

- (57) a. Kyoko_i-ga zibun_i-no neko-o sagasi-te-i-ru.

-Acc -Acc

If in fact ascension is impossible from an object DP, the claim that the subject of (52) and (53) is ascended from the object may not be maintained. However, the ungrammaticality of (ib) is not due to the prohibition against ascension from an object but due to the multiple assignment of Accusative Case -*O*. If Accusative Case is not involved, ascension from an object DP is possible as seen in (ii) (Cf. Tada (1992), Hasegawa (1999)).

- (ii) a. Hanako-ga sono konsaato-no tiketto-ga hosi-i.
 -Nom the concert-Gen ticket-Nom want-prest
 ‘Hanako wants the ticket of the concert.’
 b. Hanako-ga sono konsaato-ga tiketto-ga hosi-i.
 -Nom the concert-Nom ticket-Nom want-prest
 ‘It’s the concert that Hanako wants its ticket.’

In Japanese, an object of stative predicates like *hosi-i* ‘want’ is marked Nominative, which can be multiply given. If a possessive DP is ascended from an object and can receive Nominative as in (iib), Possessor Ascension can apply. Further evidence for ascension from an object is seen in (iii).

- (iii) a. Tomoko-ga Taro-no asi-o hum-da.
 -Nom -Gen foot-Acc step=on-past
 ‘Tomoko stepped on Taro’s foot.’
 b. *Tomoko-ga Taro-o asi-o hum-da.
 -Acc -Acc
 c. Taro-ga Tomoko-ni asi-o hum-are-ta.
 -Nom -by foot-Acc step=on-passive-past
 ‘Taro got his foot stepped on by Tomoko.’

The ungrammaticality of (iiib) is due to the multiple occurrence of Accusative -*O*. What is interesting is (iiic), in which the possessor of the object is passivized. We cannot get into exactly how a ‘possessor’ passive is derived; however, it is reasonable to analyze it in the following way: a possessor is first ascended from an object and it moves to the subject position of the passive to receive Nominative Case.

-Nom self-Gen cat-Acc look=for-prog-pres
 ‘Kyoko is looking for her cat.’

- b. Zibun_i-no neko-o Kyoko_i-ga sagasi-te-i-ru.
 self-Gen cat-Acc -Nom look=for-prog-pres
 ‘Kyoko is looking for her cat.’

- (58) a. Tomoko-ga kosi-o itam-e-ta.
 -Nom back-Acc hurt-tr-past
 ‘Tomoko hurt (her) back.’

- b. *?Kosi-o Tomoko-ga itam-e-ta.

- c. Kyoko-ga sono hitokoto-ni kimoti-o nagom-ase-ta.
 -Nom that one=word-Dat feeling-Acc calm-cause-past
 ‘Kyoko got (her) feelings calmed by that word.’

- d. *Kimoti-o Kyoko-ga sono hitokoto-ni nagom-ase-ta.

Japanese allows Scrambling rather freely and the order of the subject and the object can be altered as shown in (57), even if the object involves the reflexive anaphor, *zibun* ‘self’, which is to be bound by the subject at some level of representation. The grammaticality of (57b) suggests that the binding condition on *zibun* is met irrespective of the application of Scrambling. As compared to (57b), Scrambling on the object of the body part in (58a) and (58c) gives rise to ungrammatical (58b) and (58d), respectively. The most plausible explanation for this fact is due to the proper government condition on traces (the PBC): a trace must be bound. Only under the assumption that there is a trace of the ascended subject left at the Genitive position of the object in these non-agentive transitives, it is possible to rule out (58b) and (58d) by means of the PBC

To sum, an Experiencer subject of non-agentive causatives of the types (51), sensation expressions, and (52), psych-expressions, is derived from a possessor of a body part DP at object position. The existence of a trace at Genitive position of an object explains the following facts peculiar to these constructions: (i) a possessor of an object, where a trace resides, cannot be occupied by a pronominal or reflexive pronoun¹⁴ and; (ii) Scrambling of an object over a subject renders a sentence ungrammatical due to the PBC.

3.4 Derivations of Non-Agentive Transitives

We have so far argued that a subject of non-agentive transitives is not an external argument but is derived from inside VP. A non-agentive subject assumes either a Causer role, which is exemplified in ordinary (or lexical) transitives in (30)-(31) and in

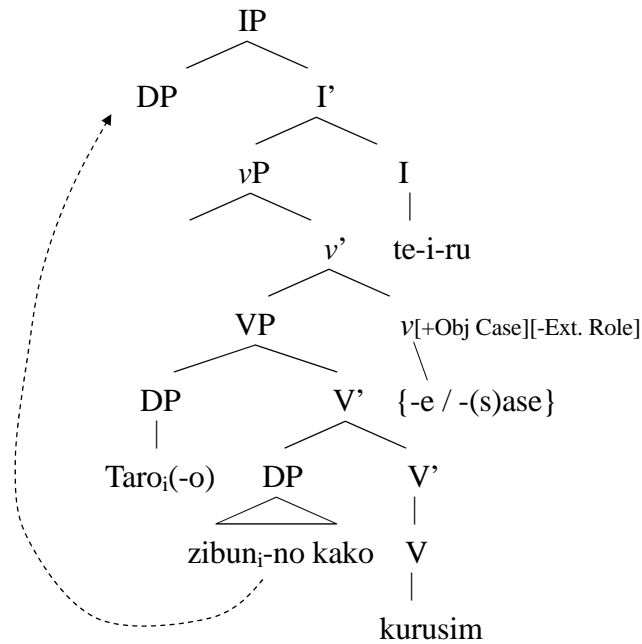
¹⁴ The English equivalents to (51), i.e., (34), do allow (or rather require) a pronoun as a possessor of a body part that refers to the subject. We will come back to this issue in 4.1.

psych-predicate sentences in (32)-(33), or an Experiencer role, which is seen in sensation expressions (34)-(35) (or (51)) and in psych-expressions (36) (or (52)). Both Causer and Experiencer can occur in noncausative counterparts: Causer as a V' (or VP) adjunct and Experiencer as a possessor of an object. The empirical evidence we have examined for this claim includes: (a) the availability of non-agent roles and the non-availability of Agent in non-causatives; (b) the phenomenon of backward binding, which is observed only in non-Agentive transitives; (c) the non-occurrence of a pronominal or reflexive pronoun at a possessor position of an object in sensation expressions and psych-expressions; and (d) the impossibility of Scrambling of an object over a subject in these expressions.

As a summary of the above discussion, let us see how non-Agentive transitives are derived in the proposed system. Let us take (48b) and (52a) for examples, which are repeated here as (59) and (60), respectively.

- (59) a. Zibun_i-no kako-ga Taro_i-o kurusim{-e/-ase}-te-i-ru.
 self-Gen past-Nom -Acc be=tormented-{tr/cause}-prog-pres
 'His past life distresses Taro.'

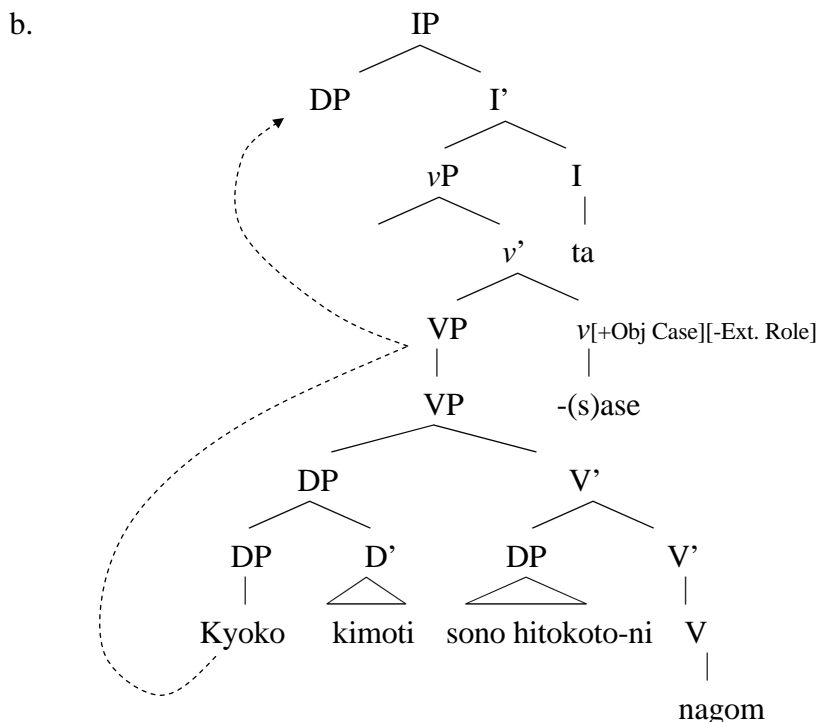
b.



The subject of (59), which includes the anaphor *zibun* 'self', is a Causer and is generated as a V' adjunct of VP, whose head is *kurusim* 'be=tormented'. Since the object *Taro* at the Spec of VP c-commands the V' adjunct, *zibun* is bound. At *v*, either the transitive suffix *-e-* or the causative *-(s)ase* takes place. These transitivizing suffixes have the [+Object Case] feature, by which the object *Taro* is Case-assigned (or checked). They may not assign an external role (i.e. [-external role]). With a *v*[-external role], no Agent is generated at the Spec of *vP*. Since Nominative Case is to be assigned and nothing

else but a V' adjunct (Cause) can receive it, the adjunct moves to the Spec of IP.¹⁵

- (60) a. Kyoko-ga sono hitokoto-ni kimoti-o nagom-ase-ta.
 -Nom that one=word-Dat feeling-Acc calm-cause-past
 'Kyoko got her feelings soothed by that one word.'



The derivation of (60) is essentially the same as (59) except that it involves Possessor Ascension. The specification on *v* is the same as (59); [+Object Case] and [-external role]. The subject *Kyoko* starts out as a possessor of the object, *kimoti* 'feelings' and undergoes Possessor Ascension, which detaches the possessor from the host DP and attaches it to the maximal projection immediately above, to VP in this case (cf. Tada (1992), Hasegawa (1999)). The object *kimoti* receives Object Case from *v* and the ascended possessor moves to the Spec of IP to receive Nominative Case.¹⁶

Note in passing that the *Ni*-phrase in (60a) is some kind of Causer and is adjoined at V' just like in the psych-predicate example (59a). In fact, if Possessor Ascension does not apply to *Kyoko* and the Causer phrase is raised to the subject position instead, (61) results and it is grammatical and semantically equivalent to (59a).¹⁷

¹⁵ The category I presumably has the strong EPP feature (or D feature) in English and it forces a DP to move to the Spec of IP, which receives Nominative Case there as well. I will come back to the question in 4.1 as to whether a moved item from inside VP stops at the Spec of vP on the way to the Spec of IP.

¹⁶ For a reason that I do not understand, the object and the cause *Ni*-phrase are to be ordered in Cause-Object, rather than in Object-Cause, which is expected in structure (60b), however.

¹⁷ The example (i) is just like (61) but the anaphor *zibun* is involved in the Cause subject. This sentence cannot be accounted for straightforwardly. The problem is how to account for the backward anaphora in (i), where the antecedent of *zibun*, i.e., *Kyoko*, remains at the possessor position of the object and cannot bind *zibun* prior or posterior to the movement of the Causer phrase to the Spec of IP.

- (61) Sono hitokoto-ga Kyoko-no kimoti-o nagom-ase-ta.
 that one=word-Nom -Gen feeling-Acc calm-cause-past
 ‘That one word soothed Kyoko’s feelings.’

The availability of two different subjects in non-Agentive causatives without any fundamental change in meanings seems to suggest the correctness of our analysis: both (60) and (61) have the same thematic representation but they differ with respect to the application or non-application of Possessor Ascension.

4. Summary and Consequences

We have examined non-agentive causatives in comparison to agentive causatives and argued that causative types, though they are transitive (i.e., [+Object Case]), differ with respect to whether the value of the [\pm external role] feature on v is either positive or negative. I have argued against the view where v is a sort of embodiment of Burzio’s generalization and only two types of v , either transitive/unergative or unaccusative, are allowed. Instead I proposed a system in which v ’s Case feature and θ -role feature are independently specified, whereby four different predicate types, rather than two, are allowed. The proposal is (17), repeated here as (62), and this feature system is rendered in table (63).

- (62) v is both functional and lexical:
 Functional feature: [\pm Object Case].
 Lexical feature: [\pm external role].

(63)

-
- (i) Mariko-no zibun_i-ni tuite no hitokoto-ga Kyoko_i-no kimoti-o nagom-ase-ta.
 -Gen self-about-Gen one=word-Gen -Gen feeling-Acc calm-cause-past
 ‘Mariko’s word concerning self_i soothed Kyoko_i’s feelings.’

In order to account for (i), we need to assume (a) the movement of the Causer phrase leaves a copy inside VP, (b) Possessor Ascension applies at LF, and (c) the binding condition on *zibun* is satisfied when its copy is bound at LF. It is beyond the scope of this paper to carefully examine these assumptions, however. Note that similar facts are observed also in English. (ii) is due to Campbell and Martin (1989).

- (ii) a. Pictures of herself_i make Sue_i’s head hurt.
 b. Pictures of himself_i give Bill_i a headache.

I assume that (ii) can be analyzed similarly to (i). That is, *make* in (iia) is just like *-(s)ase* of (i), being generated under v with the feature complex of [+Object Case] [-external role], while *give* in (iib) starts at V and is raised to v that has the same feature complex as *make* in (iia). The binding of a reflexive is done in the same way as (i).

	+ external role	- external role
+ Obj Case	(a) transitive	<i>X</i>
- Obj Case	<i>Y</i>	(b) unaccusative

Beside what Burzio's generalization predicts to exist, i.e. (a) and (b), I have shown that if agentivity is tied with [\pm external role], which is a natural consequence of UTAH, both *X* and *Y* in fact exist and various phenomena which resist natural explanation within a theory with Burzio's generalization follow. I have shown that agentive unaccusatives (or unergative use of unaccusatives) correspond to *Y* and non-agentive causatives to *X*.

If this system is on the right track, there are at least two areas in grammar it offers interesting implications. One is so-called reflexive predicates and the other is the relation between 'lexical' causatives and 'syntactic' or 'periphrastic' causatives. Each topic requires an extensive discussion, which I shall leave for future research, and I will simply suggest directions for possible analyses within the proposed system.

4.1 Bound Anaphora Constructions

When considering the derivation of non-agentive causatives in 3.4, I left it vague whether the subject derived from inside VP stops at the Spec of *vP* on the way to the Spec of IP. Nor did I clarify whether an agentive subject of *Y* (agentive unaccusatives) starts out inside a VP and stops at *vP*-Spec or it is generated at *vP*-Spec just like a subject of unergatives. What I would like to suggest is that a DP inside a VP stop at the Spec of *vP*, only when it assumes an Agent role. Compare (64a) and (64b).

- (64) a. Kyoko_i-ga { *kanozyo_i-no/ *zibun_i-no/ ϕ_i } kosi-o kagam-{e/ase}-ta.
 -Nom her-Gen / self-Gen/ back-Acc bend=over-{tr/cause}-past
 'Kyoko bent over (her waist).'
- b. Kyoko_i-ga { *kanozyo_i-no/ *zibun_i-no/ ϕ_i } kosi-o itam-e-ta.
 -Nom her-Gen/ self-Gen/ back -Acc hurt-tr-past
 'Kyoko hurt her back.'

In these sentences, the subjects are interpreted to be a possessor of a body part at object position. However, they differ in θ -roles: an Agent in (64a) but a non-agent in (64b). To the extent that the possessor of the body part can not be expressed by a pronoun or reflexive in these examples, I take the subject to be raised from the object possessor. Then, questions arise: how does the subject of (64a) acquire agenthood and why does the subject of (64b) not assume it? The most natural explanation for these questions is this: *Kyoko*, which starts out as a possessor of a DP at VP-Spec, stops at *vP*-Spec and is assigned an Agent-role in the derivation of (64a), while it directly moves to the Spec of IP in (64b). In other words, (64a) and (64b) differ in the specification of *v*: [+external role] in (64a) and [-external role] in (64b).¹⁸

¹⁸ The analysis suggested here thus allows 'movement into a theta position' so to speak. But such a movement is restricted to the cases where an Agent is involved. I suspect that some cases (if not all) of

Supposing that this analysis of (64) can be maintained, what is then to be discussed is the difference between Japanese and English. Observe (65).

- (65) a. Mary_i moved her_i arm.
b. Mary_i hurt her_i back.

Recall that (65b), the English counterpart of (64b), is a non-agentive with a sensation expression and I have argued that the subject is to be raised from a possessor DP of an object. The question naturally arises as to why a pronoun is possible in English and it is not allowed in Japanese. What I would like to suggest is that the pronoun of (65a), which must be bound by the subject, is a kind of trace or resumptive pronoun left after movement and the phenomenon in (65) is essentially the same as that in (64) of Japanese. I speculate that English, unlike Japanese, does not allow a null possessive (perhaps due to the strong EPP or D feature on D) and a trace is to be phonologically realized.

If this suggestion is on the right track, we may come up with a quite interesting picture on the construction with the mandatory presence of a bound anaphor, such as the following.

- (66) a. Jane_i lost her_i way.
b. Mary_i lost her_i mind.
c. Sue_i held her_i breath.
d. John_i craned his_i neck.
- (67) a. Mary_i absorbed herself_i in computer games.
b. They_i devoted themselves_i in politics.
c. Tom_i engaged himself_i in writing a thesis.

A Genitive pronoun must be bound by the subject in (66); the fact essentially the same as what we saw in (65). If the bound pronoun in these idiomatic expressions is a trace or a resumptive pronoun left at the extraction site of the subject, as suggested above, the mandatory binding of the Genitive pronoun by the subject naturally follows.¹⁹ The obligatory presence of a reflexive in the construction (67) can be accounted for similarly. That is, a reflexive is a resumptive pronoun left after the movement of a subject to the Spec of IP.²⁰ The functional feature on *v* in (67) is [+Object Case], which is responsible for the phonological presence of a reflexive, but its lexical feature is either [+external role] or [-external role]. In either way, the subject is derived from the object position. If *v* is with [+external role], the subject is agentive and it stops at the Spec of *v*P on its way to the Spec of IP. With a *v* with [-external role], the subject does not stop at the Spec of *v*P on its way and cannot acquire agenthood.

This analysis can be naturally extended to reflexive predicates in Romance.

dual θ -role assignment may fall under this type of movement.

¹⁹ Examples (66a) and (66b) differ from (66c) and (66d) in that the subject of the former is non-agentive, i.e., the relevant feature on *v* is [-external role], while that of the latter is agentive; i.e., [+external role] on *v*. Within our system, only the subject of the former stops at the Spec of *v*P on its way to the Spec of IP.

²⁰ See Kageyama (1996) for relevant discussion on reflexives in examples like (67).

- (68) a. Marie se voit.
 refl sees
 ‘Marie sees herself.’
- b. Marie s’est vue.
 refl-is seen
 ‘Marie saw herself.’

Whether a reflexive clitic of this type of construction is an external role or an internal role has been a controversial issue (cf. Grimshaw (1990), Marantz (1984), Pesetsky (1995), Reinhart (2000), Rizzi (1986), etc.). It may be an internal role, if it is considered to be an object, which is incorporated into a verb. Then, reflexive predicates are the same as ordinary transitives except that a reflexive object is cliticized onto a verb. Alternatively a reflexive clitic may be analyzed as an external role, if it absorbs an external role and Object Case. In such an analysis, the subject is an internal role and raised to the subject position due to Case. This mimics the derivation of passives and reflexive predicates are unaccusatives in nature. The fact that the *be*-type auxiliary is used in this construction (cf. (68b)) seems to support the latter analysis.

Let us see how the analysis suggested for (66) and (67) deals with reflexive predicates in Romance. Our analysis is somewhat between the above two approaches. That is, reflexive predicates are neither pure transitives nor pure unaccusatives and a reflexive clitic, though it requires Case, is not an independent argument but a phonological realization of a subject trace. These predicates are transitives in the sense that they assign Object Case to a clitic by incorporating it but they are like unaccusatives since the subject is raised from the object position. If the auxiliary selection is sensitive to the movement from an object, as widely assumed, our approach is compatible with the fact in (68b). Though much careful examination is necessary, the direction suggested here seems worth pursuing.

4.2 Causatives with an Agentive Causee

In our discussion on causatives, for the most part, we have ignored the distinction between ‘lexical’ causatives and ‘syntactic’ or ‘periphrastic’ causatives. I have pointed out that the distinction is not as clear as it has been claimed in the past literature such as Shibatani (1977). As we have seen, the morphological form *-(s)ase*, which is often taken as an indication of ‘syntactic’ or ‘periphrastic’ causatives, has the allophone *-(s)as*, which is the same as one of the ‘lexical’ causative marker. Furthermore, the psych predicates typically make use of *-(s)ase* in deriving object experiencer predicates, which constitute one type of non-agentive causatives. Thus, in our system of causatives, both *-(s)ase* and *-(s)as* can be considered as morphological materializations of the transitive *v*, just like other ‘lexical’ causativizers (or transitivizers) and they are all specified as [+Object Case] (and [\pm external role], depending on the agentivity of the subject). However, this does not mean that *-(s)ase* and *-(s)as* are always to be treated on a par with ‘lexical’ causativizing suffixes. All that I have shown so far is that the *-(s)ase* and *-(s)ae*

that give rise to non-agentive causatives are to be treated along with other ‘lexical’ causativizers or transitivizers. There are clearly cases that cannot fall under the causatives we have discussed in the above; i.e., causatives with an agentive causee such as (69c) and (69d).²¹ Observe (69).

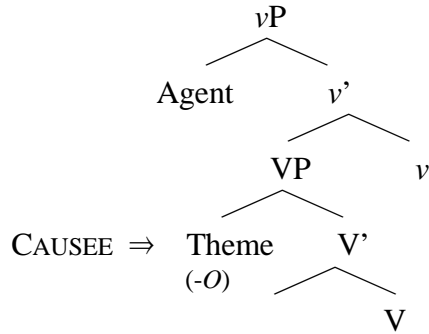
- (69) a. Kyoko-ga yasai{-o/*-ni} kusar-ase-ta. (or hasir-asi-ta.)
 -Nom vegetables-Acc/-Dat perish-cause-past
 ‘Kyoko caused the vegetable to perish.’
- b. Hanako-ga kuruma{-o/*-ni} hasir-ase-ta. (or hasir-asi-ta.)
 -Nom car-Acc/-Dat run-cause-past
 ‘Hanako made the car run.’
- c. Hanako-ga Taro{-o/-ni} hasir-ase-ta. (or hasir-asi-ta.)
 -Nom -Acc/-Dat run-cause-past
 ‘Hanako made Taro run.’
- d. Hanako-ga Taro{*o/-ni} kusuri-o nom-ase-ta. (or nom-asi-ta.)
 -Nom -Acc/Dat medicine-Acc drink-cause-past
 ‘Hanako made Taro take medicine.’

Under the analysis where ‘lexical’ causatives and ‘syntactic’ ones morphologically differentiated, due to the presence of the causative predicate *-(s)ase*, these examples are often taken to be instances of ‘syntactic’ or ‘periphrastic’ causatives, irrespective of θ -role types on the causee.

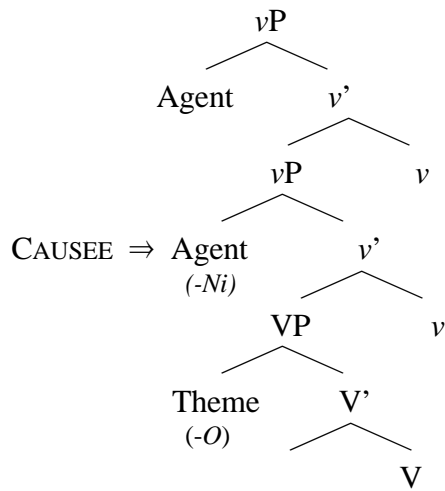
Within the presented approach, however, the distinction is to be made whether the causee is agentive. In (69), (69c) and (69d) have an agentive causee but the others, (69a) and (69b), have a non-agentive causee. Causatives with a non-agentive causee fall under the case of regular transitives that we have discussed so far. That is, *-(s)ase* is an instance of the agentive causative v , whose specification is [+Object Case] and [+external role], and the causee is at the Spec of its complement VP. Causatives with an agentive causee, (69c) and (69d), on the other hand, cannot be analyzed in the same way. Recall that agenthood is available only at the Spec of v with [+external role]. If both *Hanako*, the subject or causer of the causative, and *Taro*, the causee of the causative, are interpreted as Agent, there must be two v ’s not just one. This means that the structure of (69c) and (69d) involves a v P-VP shell structure below another causative v P, at the Spec of which *Hanako* occurs. Thus, our system allows two types of causatives. But the distinction is not whether a causative involves *-(s)ase* or not or whether it is ‘lexical’ or ‘syntactic’ but rather whether it involves an agentive causee or not. If it has a non-agentive causee, it is like any other transitives, involving a simple v P-VP structure. If it involves an agentive causee, on the other hand, the structure is more complex; the causative *-(s)ase*, which is a v , takes another v P (and VP under it) as its complement. These two types of causatives are schematically shown in (70).

²¹ We have already seen causatives with an agentive causee in (8).

(70) a. Causatives with a non-agentive causee



b. Causatives with an agentive causee



Let me emphasize that the dichotomy between (70a) and (70b) does not correspond to the distinction between ‘lexical’ causatives and ‘syntactic’ or ‘periphrastic’ causatives, respectively. In our system, what is previously put under ‘syntactic’ causatives are divided into two and only the ones with an agentive causee is ‘true’ periphrastic causatives (70b) and those with a non-agentive causee are treated the same as ‘lexical’ causatives (70a). Thus, if our system is appropriate in describing causatives, it is not clear how important a role the classical dichotomy of ‘lexical’ vs. ‘syntactic’ causatives plays in grammar. See Miyagawa (1998) for relevant discussion.

Though it is beyond the scope of this paper to examine exactly how Case marking is done in general, I consider that the structural difference shown in (70) is responsible for the difference in the Case marking on the causee: *Ni* is allowed on the causee when it is agentive, while only Accusative *O* is possible if the causee is non-agentive. That is, *O*-assignment is confined to a DP at Spec of VP and *Ni* is assigned to a DP at Spec of vP that holds an agent role.²² This explains why *Ni* is impossible in (69a) and (69b), where the causee is non-agentive (i.e., at Spec of VP). In contrast, only *Ni* is allowed on the

²² It may be the case that *Ni* is assigned to a DP that is subject neither to *O*-assignment (Spec of DP) or to *Ga*-assignment (Spec of IP or in the checking domain of I). See Takezawa and Witman (1998) for some discussion on *Ni*-assignment. See also Inoue (2000).

causee of (69d), where the downstairs *vP* is a full-fledged transitive and the theme object of the transitive *V nom-* ‘drink’ is *O*-marked.

What is interesting is (69c), where the causee *Taro* can be marked either *O* or *Ni*. If the Case marking difference corresponds to the structural difference between (70a) and (70b), as I just suggested, (69c) is to be analyzed ambiguously between the two structures (70a) and (70b). The *O*-causative version of (69c) results if it is analyzed as (70a), where the causee *Taro* appears at the Spec of VP, just like the non-agentive causee, *kuruma* ‘car’, does in (69b), and is marked *O* by the causative *v*. The *Ni*-causative version of (69c), on the other hand, is given rise to by (70b), where *Taro* is at the Spec of *vP*, which means it is an agent, and is *Ni* marked by the higher *v*.

This analysis of (69c) goes along with the fact seen in (71) and (72), where it is shown that the subject oriented adverb *wazato* ‘intentionally’, which modifies an intentional activity of an agentive subject, is possible only with a *Ni*-causative but not with a *O*-causative.

- (71) Taro-ga Hanako-ni wazato waraw-ase-ta.
 -Nom -Dat intentionally laugh-cause-past
 a. ‘Taro caused Hanako intentionally to laugh.’
 b. ‘Taro intentionally caused Hanako to laugh.’

- (72) Taro-ga Hanako-o wazato waraw-ase-ta.
 -Nom -Dat intentionally laugh-cause-past
 a. *‘Taro caused Hanako intentionally to laugh.’
 b. ‘Taro intentionally caused Hanako to laugh.’

The *O*-causative (72) is interpreted only as the gloss (b) but not as (a), which is available in the *Ni*-causative counterpart (71). This fact is explained if *wazato* modifies only *vP* but not VP.²³

There is an interesting predication that our analysis makes: the double-decker structure (70b) is confined to the causative with an agentive causee and it is not available to causatives with a non-agent causee even if transitive predicates are involved. That is, non-agentive causatives (or transitives) we have discussed in the previous sections cannot be ‘embedded’ under another *vP* (i.e., *-(s)ase*). Let us consider the following non-agentive transitives, which we discussed in the previous section.

- (73) a. Tomoko-ga kosi-o itam-e-ta. (=58a)
 -Nom back-Acc hurt-tr-past
 ‘Tomoko hurt (her) back.’
 b. Kyoko-ga sono hitokoto-ni kimoti-o nagom-ase-ta. (=58c)
 -Nom that one=word-Dat feeling-Acc calm-cause-past

²³ If this analysis of (69c) is correct, it is necessary to reconsider the nature of unergative predicates. That is, unergatives may be like unaccusatives, i.e. with a [-external role] *v*, even with an animate subject. The causee of the *O*-causative with an animate subject, as exemplified in (69c) and (72), is an instance of such use of unergatives.

‘Kyoko got (her) feelings calmed by that one word.’

- c. Sono uwasa-ga Hanako-o kurusim-e-ta. (cf. (59))
that rumor-Nom -Acc be=tormented-tr-ta
‘That distressed Hanako.’

If the predicate *-(s)ase* can invariably embed another sentence, irrespective of sentence types, which is assumed in the framework where *-(s)ase* is taken to be a predicate for ‘syntactic’ causative, it is predicted that these non-agentive transitives can be embedded under *-(s)ase* just like agentive transitives such as (69d). However, this prediction is not borne out. As clearly seen from the ungrammaticality of (74), non-agentive transitives cannot be embedded under *-(s)ase*.

- (74) a. *Taro-ga Tomoko-ni kosi-o itam-e-sase-ta.
-Nom -Dat back-Acc hurt-tr-cause-past
‘Taro caused Tomoko to hurt her back.’

b. *Taro-ga Kyoko-ni sono hitokoto-ni kimoti-o nagom-as-ase-ta.
-Nom -Dat the one=word-Dat feeling-Acc calm-tr-cause-past
‘Taro caused Kyoko to get her feelings calmed by that one word.’

c. *Taro-ga sono uwasa-ni Kyoko-o kurusim-ase-ta.
-Nom the rumor-Dat -Acc be=taormented-cause-past
‘Taro caused the rumor to torment Kyoko.’

According to our analysis of non-agentive causatives, the subject of (73) is raised to the Spec of IP from inside VP and nothing is at the Spec of *v*P, which is reserved for an agentive DP. Thus, even if *-(s)ase* can take the *v*P (with VP under it) of (73) as its complement, it cannot assign Case to the non-agentive subject of (73) which is not at Spec of the *v*P, to begin with; hence the ungrammaticality of (74).²⁴

Note that whether *-(s)ase* can be a ‘true’ periphrastic causativizer (i.e., whether *-(s)ase* takes another *v*P as its complement) is dependent on what feature the complement *v* has. The ungrammaticality of (74) is due to the [-external role] feature of the complement *v* not due to the fact that the causee is derived from inside VP. If a complement *v*P is agentive (i.e., the head *v* of the complement *v*P is with the [+external role] feature), ‘periphrastic’ causatives are possible even if the causee is derived from inside VP. Relevant examples are given in (75), which are causatives of the type (64a); the subject is a possessor of a movable body part and is derived from a possessor position of an object DP, and it acquires an Agent role on its way to the Spec of IP when it stops at the Spec of *v*P.

²⁴ The fact shown in (74) indicates that *-(s)ase* does not take an IP as its complement, which is sometimes claimed in the framework where *-(s)ase* is invariably a periphrastic causativizer (cf. Miyagawa (1998)). If it did, the non-agentive subject of (73), which is at the Spec of IP, would be able to occur under *-(s)ase*; which wrongly allows (74).

- (75) a. Hanako-ga ude-o ugok-asi-ta.
 -Nom arm-Acc move-cause-past
 ‘Hanako moved her arm.’
- b. Hanako-ga ude-o wazato ot-ta.
 -Nom arm-Acc on=purpose break-past
 ‘Hanako broke her arm on purpose.’

Thus, the v of (75) is with the feature [+external role]. What is interesting is that the vP of (75) can be embedded under the ‘periphrastic’ causative *-(s)ase*, which is evidenced by the grammaticality of (76).

- (76) a. Taro-ga Hanako-ni ude-o ugok-as-ase-ta. (agentive)
 -Nom -Dat arm-Acc move-tr-cause-past
 ‘Taro caused Hanako to move her arm.’
- b. Taro-ga Hanako-ni wazato ude-o or-ase-ta.
 -Nom -Dat intentionally arm-Acc break(tr)-cause-past
 ‘Taro caused Hanako to break her arm.’

The contrast in grammaticality between (74) and (76) clearly indicates that the fundamental property of ‘periphrastic’ causatives is the agenthood on the causee, which is given by the [+external role] feature on the v of the complement vP . This kind of characterization of periphrastic causatives is possible only within a system where the [\pm external role] (i.e., availability of agenthood) is made independent of its Case feature; thus, periphrastic causatives also lend support for our proposal on the specification on v , namely (62).

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