

The Appositive NP-Complement Clause and Restructuring

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Abstract

This paper examines properties of Japanese N-ga-aru construction involving an appositive NP-complement clause and presents a new approach to restructuring. The new analysis can explain the monoclausality of sentences with an appositive NP-complement as well as that of restructuring constructions with a VP-complement. I will show that the former construction has the same properties as the latter while the former cannot be restructured at base structure or by overt operations based on two points: (i) the string N-ga-aru cannot form a complex predicate through overt operations, (ii) what I call Type1 appositives cannot be monoclausal within overt syntax. I propose that the notion of Spell-Out and TRANSFER along the line in Chomsky (2004) can provide a principled account for the above constructions.

Keywords: Restructuring, Exhaustive Control, TRANSFER

1. Introduction

In this paper, I will examine a sentence “NP(-ni)-wa NP-ga-aru” where a nominative NP takes an appositive clause. The noun which heads the appositive clause is restricted to a certain type of NP such as *keiken* ‘experience’, *kakugo* ‘readiness’, *riyuu* ‘reason’. Let us look at the examples in (1).

- (1) a. Taroo(-ni)-wa [[nihongo-o osie-ta] keiken]-ga aru.
Taro(-Dat)-Top Japanese-Acc teach-Past experience-Nom exist
‘Taro has an experience of having taught Japanese.’
- b. Taroo(-ni)-wa [[teki-to tataka-u] kakugo]-ga nai.
Taro(-Dat)-Top enemy-with fight readiness-Nom exist-not
‘Taro is not ready to fight the enemy.’
- c. Taroo(-ni)-wa [[teki-to tataka-u] riyuu]-ga aru.
Taro(-Dat)-Top enemy-with fight reason-Nom exist
‘Taro has a reason to fight the enemy.’

In (1), the head nouns of appositive clauses are marked with nominative *-ga* by the verb *aru/nai* of the matrix clauses. We have, on the other hand, examples like (2), in which the

matrix verbs are not *aru/nai* and the head nouns of appositive clauses need not be nominative.

- (2) a. Taroo-wa [[nihongo-o osie-ta] keiken]-o zyuusi-sita.
 Taro-Top Japanese-Acc teach-Past experience-Acc consider-Past
 ‘Taro believed that an experience of having taught Japanese was important.’
- b. Taroo-wa [[teki-to tataka-u] kakugo]-ni kyookan-sita.
 Taro-Top enemy-with fight resolution-Dat sympathize-with-Past
 ‘Taro sympathized with someone’s resolution to fight the enemy.’
- c. Taroo-wa [[teki-to tataka-u] riyuu]-ga wakara-nai.
 Taro-Top enemy-with fight reason-Nom understand-not
 ‘Taro doesn’t understand the reason why he should fight the enemy.’

Although both (1) and (2) involve an appositive clause as a complement to the head noun, examples in (1) are distinguished from those in (2) in three properties as shown in the following. Henceforth, sentences in (1) will be referred to as Type1 and those in (2) as Type2.

1.1. Three Properties that distinguish Type1 from Type2

The first property concerns the subject of the appositive NP-complement clause. As is exemplified in the contrast in (3) and (4), the appositive NP-complement clause in Type1 cannot take a different subject from that of the matrix clause while the complement in Type2 can. The appositive clause in Type1 has a property of obligatory control (OC).

- (3) a. *Taroo(-ni)-wa [[Hanako-ga nihongo-o osie-ta] keiken]-ga aru.
 Hanako-Nom
- b. *Taroo(-ni)-wa [[Hanako-ga teki-to tataka-u] kakugo]-ga nai.
- c. *Taroo(-ni)-wa [[Hanako-ga teki-to tataka-u] riyuu]-ga aru.
- (4) a. Taroo-wa [[Hanako-ga nihongo-o osie-ta] keiken]-o zyuusi-sita.
 ‘Taro believed that Hanako’s experience of having taught Japanese was important.’
- b. Taroo-wa [[Hanako-ga teki-to tataka-u] kakugo]-ni kyookan-sita.
 ‘Taro has sympathize with Hanako’s resolution to fight the enemy.’
- c. Taroo-wa [[Hanako-ga teki-to tataka-u] riyuu]-ga wakara-nai.
 ‘Taro doesn’t understand the reason for Hanako to fight the enemy.’

As for OC, Landau (2000) argues that the category of OC is divided into two subtypes – Exhaustive Control (EC) and Partial Control (PC). In the case of PC, the reference of PRO need not be strictly identical to that of the controller. Consider the examples in (5). The verb *atuma-ru* ‘gather’ is a collective predicate and the ungrammaticality of (5a) indicates that its

subject is required to be (semantically) plural. (5b) shows that the complement of the verb *tagaru* ‘want’ has the OC property. The fact that (5c) is acceptable with the empty subject PRO controlled by the matrix singular DP shows that the complement of the verb *tagaru* has a property of PC.

- (5) a. *Taroo-wa sinya kooen-ni atuma-tta.
 Taro-Top midnight park-in gather-Past
 ‘Taro gathered in the park at midnight.’
 b. *Taroo-wa [Ziroo-ga mizu-o nomi]tagaru.
 Taro-Top Jiro-Nom water-Acc drink want
 ‘Taro wants Jiro to drink water.’
 c. Taroo-wa [PRO sinya kooen-ni atumari]tagatta.
 Taro-Top midnight park-in gather want-Past
 ‘Taro wanted to gather in the park at midnight.’

In contrast to (5c), the unacceptability of examples in (6) shows that the complement in Type1 has an EC property.¹

- (6) a. *Koko-no sityoo-wa [[PRO zikandoori (kaigi-ni) atuma-tta] keiken]-ga nai.
 here-of mayor-Top on-time meeting gathered
 ‘The mayor of this city doesn’t have an experience of having gathered on time.’
 b. *Koko-no sityoo-wa [[PRO zikandoori kaigi-ni atuma-ru] kakugo]-ga nai.
 ‘The mayor of this city doesn’t have a resolution to gather on time.’
 c. *Koko-no sityoo-wa [[PRO zikandoori kaigi-ni atuma-ru] riyuu]-ga aru.
 ‘The mayor of this city has a reason to gather on time.’

The second property concerns tense restriction of the appositive NP-complement clause. In Type2, the tense of the appositive clause which is specified by the temporal adverb can be different from that of the matrix clause. For example in (7c), the matrix predicate *wakara-nai* ‘not-understand’ expresses a present state which is specified by the temporal adverb *ima-mo* ‘still-now’ and the predicate of the appositive clause *tataka-tta* ‘fought’ expresses a past event which is specified by *kyonen* ‘last-year’.

¹ If we change *sityoo* ‘the mayor’ in (6) into *giin* ‘(a) member(s) of the municipal assembly’, the sentences become acceptable. This is because the mayor is not likely to go along with some other members of the assembly to attend the meeting but the members of the assembly are.

2. Exhaustive Control, Tense Deficiency and Monoclausality

2.1. Exhaustive Control and Tense Deficiency

With regard to the properties in (12a) and (12b), Landau (2000) observes that they are correlated in control constructions involving infinitival VP-complements. As is shown in (13), Landau points out that predicates which select infinitival VP-complements having an EC property are limited to the restricted class of predicates, such as aspectual, modal, and implicative verbs.

- (13) a. *John met at 6.
b. *John₁ {began/was able/managed} [PRO₁ to meet at 6].

He also observes that the EC complements do not allow the temporal modifier *tomorrow* which is independent of the tense specified in the matrix clause as in (14a-c) (cf. Landau (2004: 836)).⁴

- (14) a. *Yesterday, John began to solve the problem tomorrow. (aspectual verb)
b. *Yesterday, John was able to solve the problem tomorrow. (modal verb)
c. *Yesterday, John managed to solve the problem tomorrow. (implicative verb)

This shows that, in the English sentences involving the infinitival VP-complement, the properties in (12a) and (12b) are correlated in the same way as in the Japanese Type1 sentences involving the appositive NP-complement clause.

As will be shown in section 2.3.1, the string “N(e.g. *keiken*)-*ga* + *aru*(/nai)” turns out to be a complex predicate, which causes the Type1 appositive NP-complement clause to become a VP-complement of the complex predicate. It is worth pointing out that the complex predicate *keiken-ga-aru* does not belong to the restricted class of the EC verbs as discussed in Landau (2000).^{5, 6}

⁴ On the other hand, the reference of PRO need not be strictly identical to the reference of the controller in PC. Predicates such as factive, propositional, interrogative, and desiderative verbs allow PC as in (i). And PC complement allows different temporal modifiers from the matrix clause as in (ii).

- (i) John₁ {hated/claimed/hoped/wondered how/...} [PRO_{1+α} to meet at 6].
(ii) a. Yesterday, John hoped to solve the problem tomorrow. (des.)
b. Yesterday, John wondered how to solve the problem tomorrow. (int.)
c. Today, John regretted having solved the problem last week. (fac.) (cf. Landau (2004: 836))

⁵ The types of EC verbs in Japanese are quite similar to those in English, such as aspectual, modal, implicative and motion verbs (see Inokuma (2004)). Let us look at the following examples with the aspectual verb *oe-ru*.

- (i) a. *Taroo-ga [6-zi-ni atumari] oe-ta.
Taro-Nom 6 o'clock-at gather finish-Past

2.2. Tense Deficiency and Monoclausality

As for the properties in (12b) and (12c), Wurmbrand (2001) observes that they are also correlated in control constructions involving infinitival VP-complements in Japanese and German. Consider first the following Japanese sentences involving an aspectual verb *oe-ru*, which is an EC verb (see footnote 5). In the VP-complement of the aspectual verb, the embedded verb cannot be marked by a tense-marking particle *ru/ta* as in (15b) and, as in (15c), the tense of the embedded clause which is specified by the embedded temporal modifier *konsyuu* cannot be different from that of the matrix clause as specified by the temporal modifier *kinoo*.

- (15) a. Hanako-ga ringo-o tabe oe-ta.
 Hanako-Nom apple-Acc eat finish-Past
 ‘Hanako finished eating an apple.’
- b. *Hanako-ga ringo-o tabe-{ru/ta} oe-ta.
 eat-{Pres/Past} (cf. Wurmbrand (2001: 89))
- c. **Kinoo* Hanako-ga [syoo-setu-o *konsyuu* kaki] oe-ta.
 Yesterday novel-Acc this-week write finish-Past

In this Japanese aspectual construction, the NPI *-sika* in the VP-complement clause is licensed by the matrix Neg *naka(-tta)* as if it is monoclausal as in (16) (cf. Miyagawa (1987: 276)).

- (16) Hanako-wa [sono sigoto-sika yari] oe-naka-tta.
 Hanako-Top that work-NPI do finish-Neg-Past
 ‘Hanako finished doing only that piece of work.’

Next, let us consider the following aspectual construction in (17).

- (17) [Sono sigoto]_i-ga [_i yari] oe-rare-ta.
 that work-Nom do finish-be-Past
 ‘That work was finished.’

-
- b. ??Taroo-ga [6-zi-ni atumar-ooto] si-ta.
 Taroo-Nom 6 o'clock-at gather-yooto try-Past

⁶ It has been pointed out that Landau’s analysis of OC, which is based on the agreement relation between a functional head in matrix clause and an embedded C^0 , has some problems. For example, his system of control designed for English infinitives does not work in the case of gerundive complements, which lack CPs but show the property of PC.

(i) John preferred meeting at 6.

Landau’s technical implementation leaves many problems in both conceptual and empirical aspects (see Hornstein (1999), Inokuma (2004)).

In (17), the object in the VP-complement is passivized and is assigned nominative case as if the embedded object is an argument of the matrix predicate *oe-ru* (or the complex predicate *yari-oe-ru*). The observation that Long-Distance passive is possible in the Japanese aspectual construction also indicates that the construction is monoclausal (cf. Nishigauchi (1993)).

Let us look at the German aspectual construction. A German aspectual verb *beginnen* is also an EC verb and does not allow PC in its complement clause with the collective verb *versammeln* ‘gather’ as in (18).

- (18) *Der Bürgermeister begann [sich im Schloß zu versammeln].
 the mayor began SELF in the-castle to gather
 (Wurmbrand (2001: 245))

This complement clause of the aspectual verb *beginnen* also exhibits Tense-Deficiency as in (19). When the matrix verb is in the past form *begann*, its infinitival VP-complement does not allow the occurrence of the temporal modifier *morgen* which specifies future tense.

- (19) Hans begann (*morgen) einen Brief zu schreiben.
 John began (*tomorrow) a letter to write
 ‘John began to write a letter (*tomorrow).’ (Wurmbrand (2001: 79))

As in the case of Japanese, Long-Distance passive is possible in this construction.

- (20) als der Brief zu verlesen begonnen wurde
 when the letter-Nom to read begun was
 ‘when they began to read the letter’ (Wurmbrand (2001: 97))

In Wurmbrand (2001), the verbs which select complement clauses showing Tense-Deficiency and Monoclausality are called restructuring predicates. Wurmbrand observes that, cross-linguistically, core restructuring predicates are restricted to certain class of verbs, such as modal, motion, aspectual, and irrealis verbs. We can now conclude that the three properties in (12) are closely related to each other, and that not only Type1 involving the NP-complement structure, but also the VP-complement structure exhibits all the three properties at the same time.

2.3. Previous Analyses

In this section, I would like to consider how we can explain the three properties in (12) which are observed in the two constructions: Type1 involving the appositive NP-complement

clause and the restructuring construction involving the infinitival VP-complement clause. In section 2.3.1, I will reexamine previous studies which analyze N+*ga-aru* as forming a complex predicate. In section 2.3.2, I will look at Wurmbbrand's (2001) approach to restructuring and point out that her analysis cannot account for the restructuring in infinitival VP-complements or the properties of appositive NP-complement clauses.

2.3.1. N-*ga+aru* as a Complex Predicate

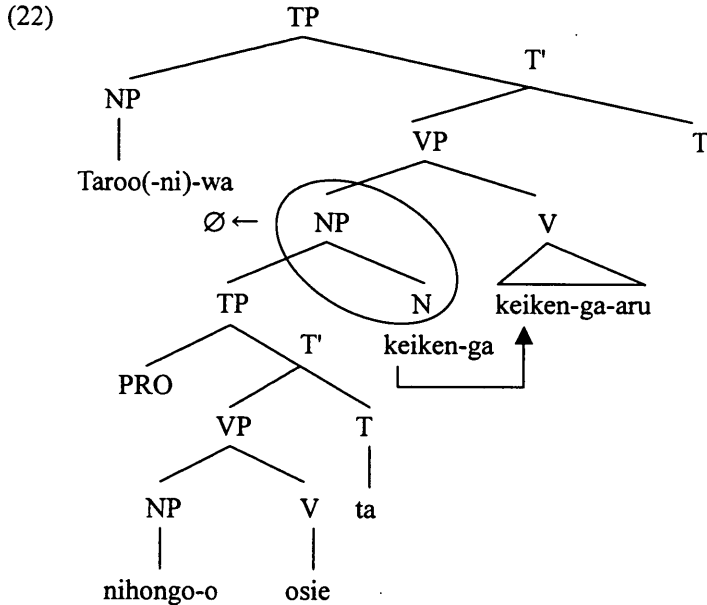
If the N-*ga+aru* forms a complex predicate and the appositive NP-complement clause turns out to be a complement to the complex predicate as an infinitival VP-complement, then I can take Type1 sentences as parallel to the restructuring construction. To explain the long-distance licensing of NPI *-sika* in the *keiken-ga-aru* construction like Type1, Muraki (1978) has shown that Predicate Restructuring (PR) is applicable to the *keiken-ga-aru* sentence with the appositive NP-complement clause. PR is an overt transformational rule and serves to form complex predicate NP-*ga-aru*, which causes an appositive clause to become a complement clause of the complex predicate. Although his proposal is in essence valid to capture the parallelism between the NP-complement and VP-complement, it is also problematic in one important respect. As shown in (21), the intervening elements such as the adverb *nando-mo* or the NP *Taroo* can occur between *keiken-ga* and *-aru* as in (21).

- (21) a. Taroo(-ni)-wa [[PRO nihongo-o osie-ta]keiken]-ga nando-mo aru.
 Taroo(-Dat)-Top Japanese-Acc taught experience-Nom many-times exist
 'Taro has an experience of having taught Japanese many times.'
- b. [[PRO nihongo-o osie-ta] keiken]-ga Taroo(-ni)-wa nando-mo aru.
 'Taro has an experience of having taught Japanese many times.'

This observation that the intervening elements are allowed as in the examples (21) indicates that *keiken-ga-aru* does not form a complex predicate morpho-syntactically.

The operation that applies in these cases is not an overt PR, but a covert operation of LF Incorporation. Suppose that what is necessary here is an LF Incorporation analysis such as Saito and Hoshi (2000) (S&H). Then, the appositive NP-complement clause of *keiken* in Type1 turns out to be the VP-complement clause of a complex predicate, *keiken-ga-aru* which is derived by N-Incorporation at LF. I will argue that the N-Incorporation which applies to a light verb *suru* (e.g. *keiken-suru* 'experience (verb)') in S&H is also applicable to the light verb *aru/nai* to form a complex predicate N-*ga-aru* as is illustrated in (22).⁷

⁷ I assume that the light verb *aru/nai* is light enough, though they have an ability to assign theme-roles (e.g. *Taroo(-ni)-wa zaisan-ga aru*). I also assume that the NP projection for which its head is incorporated into the matrix V in (22) is semantically vacuous and does not exist at LF. I will not go



2.3.2. Appositive NP-complement as a VP-complement

Through the LF Incorporation, which generally applies to Japanese light verb constructions, *N-ga-aruru* forms a complex predicate, taking what used to be the appositive NP-complement clause as its VP-complement clause. However, the derived configuration in (22) still remains bi-clausal with two independent TPs. For the configuration to become monoclausal, this configuration needs to undergo further restructuring.

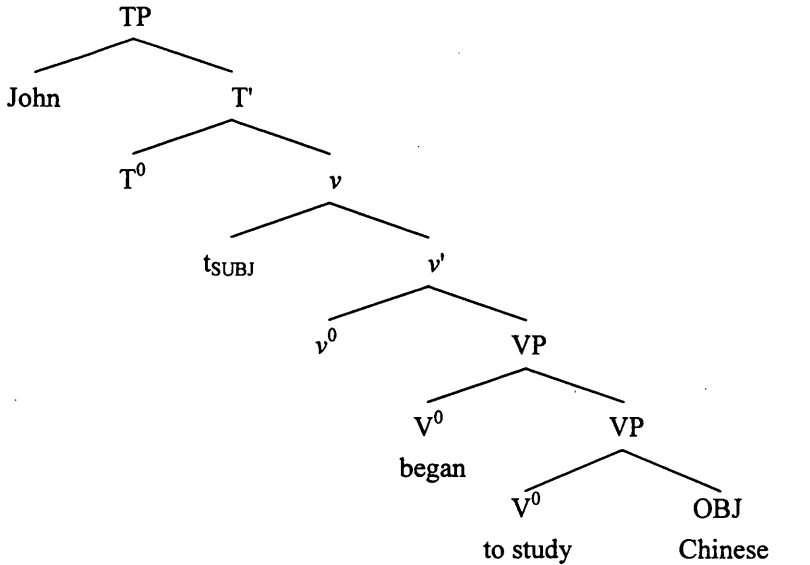
Wurmbrand (2001) claims that the complement clause of a restructuring verb consists of VP (or *vP*) at an underlying structure to explain the monoclausality of the restructuring construction. She assumes that the projection hosting the infinitival marker (e.g. English *to*) is invisible and becomes part of the lexical VP.⁸ In this analysis, the infinitival marker (which is originated in T^0 position) and the verb occupy V^0 position as if they constitute one word as illustrated in the English example (23).

too far into this problem here, though Chomsky (1995: note 111) suggests the possibility that a VP-projection disappears when V-raising has occurred.

⁸ See Wurmbrand (2001: 109-115) for more details. Note that Wurmbrand's analysis of restructuring involves modal and causative constructions where the infinitival marker does not occur in English and German.

(23) a. John began to study Chinese.

b.



(cf. Wurmbrand (2001: 17))

I would like to point out that Wurmbrand's restructuring analysis cannot explain the following two facts. The first concerns the occurrence of an intervening adverb between the infinitival marker *to* and V at the V⁰ position as in (24) (cf. see Cinque (2004)).

(24) John began to secretly study Chinese.

Wurmbrand's analysis of restructuring cannot deal with the occurrence of the intervening adverb because *to-V* (*to study*) is analyzed as forming one word and thus being lexically integrated.⁹ The second concerns the claim that the appositive clauses in Type1, which have been restructured as monoclausal through syntactic derivation, are base-generated as a VP-complement of the matrix predicate. Consider the examples in (21) (repeated as (25)) with intervening elements between *keiken-ga* and *-aru*.

(25) a. Taroo(-ni)-wa [[PRO nihongo-o osie-ta] keiken]-ga nando-mo aru.

b. [[PRO nihongo-o osie-ta] keiken]-ga Taroo(-ni)-wa nando-mo aru.

Though *keiken-ga* and *-aru* are discontinuous in (25), the three properties in (12) are observed in these examples. With the intervening elements between *keiken-ga* and *-aru*, Type1 still shows Exhaustive Control in (26a), Tense-Deficiency in (26b) and Monoclausality in (26c).

⁹ Strictly speaking, the adverb *secretly* in (24) can adjoin the invisible projection hosting the infinitival marker *to* (Wurmbrand (2001: 115)).

- (26) a. *[[Hanako-ga nihongo-o osie-ta] keiken]-ga Taroo(-ni)-wa nai
 b. *[[PRO nihongo-o kyonen osie-ta] keiken]-ga Taroo(-ni)-wa kotosi-mo nai.
 c. [[PRO nihongo-sika osie-ta] keiken]-ga Taroo(-ni)-wa nai.

Thus Wurmbrand's approach to restructuring based on the base-generated monoclausal configuration, is untenable in these constructions.

3. A New Approach to Restructuring

Wurmbrand (2001) claims that the crucial property of the restructuring construction is Tense-Deficiency of the infinitival VP-complement. In other words, Tense-Deficiency triggers EC property and Monoclausality of the construction. This, however, gives rise to a more fundamental question: why does restructuring occur when the complement clause is tense-deficient? Wurmbrand's analysis cannot explain that the tense-deficient appositive NP-complement in Type1 also triggers the other two properties as shown in section 2.3.2. In this section, I would like to pursue a new analysis which can explain that this is the case.

I have adopted the LF Incorporation approach to the complex predicate formation in section 2.3.1 and have seen that the overt restructuring analysis is untenable in section 2.3.2. Suppose the restructuring in question occurs at LF and that the TP projection of the appositive clause is deleted. Then, at LF, Type1 has a monoclausal structure and the parallelism between Type1 and the restructuring construction can be captured.

The mechanism of LF Restructuring can be naturally explained with the idea of Spell-Out to LF/PF and TRANSFER proposed in Chomsky (2004). In this model, syntactic structures are built up in "phases" which are consisting of CP and vP, and at the end of each phase, a part of the syntactic structure that is formed undergoes "TRANSFER" to the phonological and semantic components, which transfers the relevant features to each component. Once all the operations which apply within a given phase have been completed, the domain of the phase becomes impenetrable to further syntactic operations. In this approach, which crucially incorporates the notion of TRANSFER in CP and vP phases, it can be assumed that semantically vacuous elements are not transferred to a semantic component. Thus those untransferred elements do not exist in the semantic representation (Σ). I argue that the tense-deficient T^0 is a kind of semantically vacuous item which does not have any Semantic Features (SF). Those elements are, by definition, never transferred to LF representations Σ and hence do not contribute to the semantic component. The only contribution of the tense-deficient T^0 is to the PF representation Φ as is in the case of English *to* in the infinitive T^0 position.¹⁰

¹⁰ There is a possibility that these ϕ -features of the tense-deficient T^0 may have contributed to the

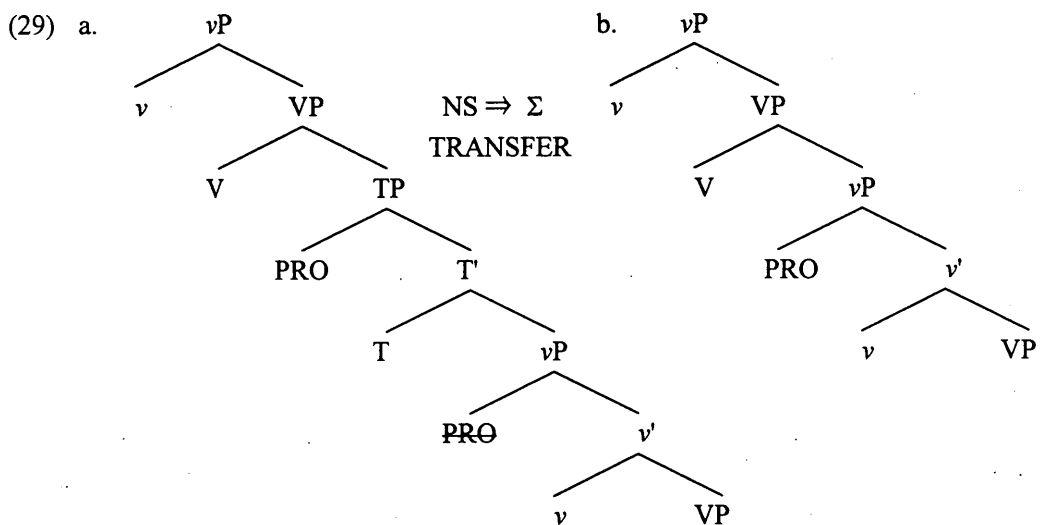
(27) Tense-deficient TP projection does not exist at Σ .

More precisely, which element in the tense-deficient TP projection is transferred to PF and/or LF, and which element is not, can be shown in the table (28).¹¹

(28)

	PF	LF
T ⁰	Infinitival marker (e.g. <i>to</i>)	\emptyset ¹²
PRO in spec-TP	\emptyset	\emptyset

In addition to the tense-deficient T⁰, I also argue that PRO in spec-TP (of tense-deficient EC) is semantically vacuous because the (copy of) PRO occupies that position only for satisfying EPP and ϕ -features which have already been “checked off” in overt syntax. Thus, no element related to tense-deficient TP is transferred to Σ and the complement clause of matrix V⁰ becomes vP at Σ as illustrated in (29).¹³



checking relation between T and PRO in narrow syntax.

¹¹ At the complex predicate formation, the Japanese Case-marker *-ga* in (17) is also considered to be the element that is transferred to PF, but not to LF.

¹² The symbol \emptyset means that the element is not transferred and does not exist in the component.

¹³ Chomsky (2004) claims that control structures are CPs and that T functions in the Case-agreement system only if it is selected by C. Furthermore, it is only in this case that T has the semantic properties of true Tense. As I have suggested in section 2, the complement clause of *keiken-ga-aru* does not have an independent tense. Moreover, a common view among works on restructuring is that restructuring verbs or restructuring infinitives are deficient in tense as I have observed in section 2. Therefore, we can argue that restructuring infinitives lack an embedded CP projection, whereas non-restructuring infinitives assume CP projections with tensed TPs.

What is important is that the resultant structure at Σ is the “restructured” monoclausal structure as Wurmbrand has assumed in the base generated structure.

Based on the idea of TRANSFER in Chomsky (2004), we can give not only a principled explanation to the required LF-restructuring, but also an answer to the essential question of why and how tense-deficient infinitive constructions have such a monoclausal structure.¹⁴

4. Summary

This paper has examined the properties of Type1 sentences with an NP-complement and provided a new approach to restructuring which can explain monoclausality of Type1 appositive clauses as well as the restructuring construction involving a VP complement. I have demonstrated that Type1 has the same properties as the restructuring construction. On the other hand, I have argued that Type1 cannot be restructured at base structures or by overt operations based on the two points. The first is that the string *N-ga-arū* cannot be a complex predicate by overt operation, and the second is that Type1 cannot be monoclausal within overt syntax. I have proposed that the idea of Spell-Out to LF/PF and TRANSFER in Chomsky (2004) can provide the principled mechanism of restructuring at LF-level. The proposed analysis can also help to clarify the nature of other types of tense-deficient complement clauses.

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¹⁴ In addition, with the notion of Phase and TRANSFER, we can shed a new light on the question of why those infinitives have an EC property. When we compare EC verbs with restructuring verbs, we can find clear correspondence between them as we have seen above (verb types taking a tense-deficient infinitival complement). One promising possibility we can expect is that EC in English control phenomena results from the restructuring effect which is observed cross-linguistically in a variety of languages. I assume that the minimalist theory of restructuring in this section automatically explains this variation in the way of choosing a controller. Because of the particular property of tense, restructuring infinitives lack an embedded CP projection, whereas non-restructuring infinitives involve CP. The embedded predicate (in EC) and the matrix VP are transferred to Σ (and then interpreted) together as if they are a complex predicate. On the other hand, the embedded predicate (in PC) and the matrix predicate are transferred to the semantic component one by one because the CP phase intervenes between them. This yields the rigid interpretation of PRO in EC (i.e., one subject per clause at Σ) but loose interpretation in PC in principle (with controlled PRO subject guaranteed).

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