The Role of Head Movement in Structural Realization: V-*te* V vs. V-*ni* V Constructions in Japanese*

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SUMMARY

This paper explores how head movement interacts with the structural realization of two types of complex predicates, the V_1-*te* V_2 and V_1-*ni* V_2 constructions, focusing on the verb *ik* 'to go' as the V_2 predicate. This study carefully examines the distinctions between the complement and adjunct V-*te* clauses (*te*P) on the one hand (Hayashi and Fujii 2015), and the complement and adjunct V-*ni* clauses (*ni*P) on the other hand (Sugimura and Miyamoto 2015, 2017). It is revealed that *te*P is a canonical adjunct when *ik* appears with an intervening goal argument, whereas *ni*P is always an atypical adjunct. The study further shows that this (non-)canonical adjunct behaviour is closely related to the (un)availability of head movement, tying the structural realization (cf. Sugimura 2012) and argument selection (Nakatani 2013, 2016) to head movement.

RÉSUMÉ

Ce travail explore l'interaction du mouvement de tête avec la réalisation structurelle de deux types de prédicats complexes, les constructions V_1-*te* V_2 et V_1-*ni* V_2, mettant l'accent sur le verbe *ik* 'aller' comme prédicat V_2. On y examine de près les distinctions entre les propositions V-*te* (*te*P) compléments et adjoints (Hayashi et Fujii 2015), et d'autre part, les propositions V-*ni* (*ni*P) compléments et adjoints (Sugimura et Miyamoto 2015, 2017). Il en ressort que *te*P est un adjoint canonique quand *ik* apparaît avec un argument de but intervenant, alors que *ni*P est toujours un adjoint atypique. L'étude démontre aussi que ce comportement d'adjoint (non-)canonique est étroitement lié à la (non-)disponibilité du mouvement de tête, ce qui relie la réalisation structurelle (cf. Sugimura 2012) et la sélection d'argument (Nakatani 2013, 2016) au mouvement de tête.

*This study is in part a continuation of Sugimura (2012), the doctoral dissertation I wrote under the supervision of Prof. Lisa Travis. In my dissertation I only managed to partially uncover the syntactic nature of *ni*Ps and contrasting behaviours between *ni*Ps and *te*Ps. In this paper I aim to present to Lisa some of the progress I have made during the six years since leaving McGill, although there is still a lot to be worked out.

It goes without saying that this work is undertaken with the great support of linguists and non-linguists through insightful discussions and exchanges. I am especially indebted to Yoichi Miyamoto and Yohei Oseki for their well-thought out and constructive feedback. I am also grateful to Bethany Lochbihler for her thorough editorial support and to Émile Khordoc for his careful French translation of the paper summary. I also thank the McGWPL editorial board of this volume for all their work and support. This work is in part supported by JSPS KAKENHI Grant Number JP16K21479. All errors are entirely my own.

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1 INTRODUCTION

Japanese is a language where complex predicates emerge in various forms; some involve overt intervening morphemes between predicates. Complex predicates such as V_1-*te* V_2s and V_1-*ni* V_2s (see Nakatani 2013 for the terminology) represent this type, and each intervening morpheme, *-te* and *-ni*, not only takes a verb (V_1) but also heads an infinitival clause (henceforth, *te*P and *ni*P), which in turn merges with the matrix verb (V_2).[1] Hayashi and Fujii (2015) carefully examine the properties of *te*Ps and distinguish *te*P complements from *te*P adjuncts according to the (non-)obligatory nature of head movement. Sugimura and Miyamoto (2015) further explore Hayashi and Fujii's (2015) analysis in the context of V_1-*ni* V_2s, arguing that no head movement of V_1 out of the *ni*P is available (see also Sugimura 2012) and that the *ni*P is structurally ambiguous between a complement and an adjunct (see also Sugimura and Miyamoto 2017).

The aim of this paper is to bring new insight into Hayashi and Fujii's (2015) dichotomy between the complement and adjunct *te*Ps and Sugimura and Miyamoto's (2015, 2017) observation on the *ni*P. More specifically, I present an instance where the complement *te*Pseems to show the properties of the adjunct *te*P at first glance, apparently behaving likethe *ni*P. I point out that this peculiar behaviour of the *te*P is observed when the verb *ik* 'to go' is used for V_2, revealing that the similarity between the *ni*P and the *te*P is only on the surface and so needs to be explained in a different way, for which I claim that head movement provides an answer.

The paper is organized as follows: In section 2, I first review Sugimura and Miyamoto's (2015, 2017) work on the comparison between *te*Ps and *ni*Ps to show that *ni*Ps act as if they are adjuncts and complements at the same time, whereas *te*Ps are simply divided into complements and adjuncts (Hayashi and Fujii 2015). On this specific point, however, in section 3, I show that *te*Ps also seem to at first show an ambiguous status between complements and adjuncts when the verb *ik* 'to go' serves as V_2 and when the verb takes a goal argument. However, I reveal that the *te*P, when accompanied by *ik* and its intervening goal argument, is unambiguously an adjunct (see see also Nakatani 2013 and Shibatani 2007). I then show that this restriction in structural realization only applies to *te*Ps but not to *ni*Ps, based on Sugimura and Miyamoto's (2017) finding on *ni*Ps. In section 4, I suggest that this outcome offers additional support for Nakatani's (2013, 2016) claim that head movement creating the V-*te* V complex is semantically motivated and that the V-*te* Vas a whole takes a goal argument when it conforms to the "interpretive well-formedness condition" (Nakatani 2016). I further show that this semantic constraint does not apply to V_1-*ni* V_2s because V_1 and V_2 each take an argument on their own. I claim that this distinction is attributed to the (un)availability of V_1's head movement in both constructions, which in turn guarantees that head movement in fact plays a crucial role in structural realization. Section 5 concludes this paper.

[1] Whether they take infinitival 'clauses' is a different issue. I remain agnostic about this issue in this paper, but see Wurmbrand (2001), Takahashi (2011) and references therein.

2 *NI* VS. *TE*: V-*TE*/*NI* V CONSTRUCTIONS

2.1 COMPLEMENT VS. ADJUNCT: (UN)AVAILABILITY OF HEAD MOVEMENT

Based on Hayashi and Fujii's (2015) work on the complement (1) and adjunct *te*P (2), Sugimura and Miyamoto (2015, 2017) compare *te*Ps with an apparently similar type of clause, the *ni*P in (3):[2]

(1) *Complement teP*
Taro-ga [$_{te\text{P}}$Ziro-ni piza-o tukut-te] morat-ta
-Nom -Dat pizza-Acc cook-TE get-Past
'Taro had Ziro cook pizza.' (adapted from Hayashi and Fujii 2015: 32)

(2) *Adjunct teP*
Taro-ga [$_{te\text{P}}$piza-o tukut-te] okane-o morat-ta
-Nom pizza-Acc cook-TE money-Acc get-Past
'Taro got money by cooking pizza.' (adapted from Hayashi and Fujii 2015: 33)

(3) *NiP*
Taro-ga [$_{ni\text{P}}$ Ziro-ni piza-o tukuri-ni] it-ta.[3]
-Nom -Dat pizza-Acc cook-NI go-Past
'Taro went to cook Ziro pizza.

In (1), the *te*P corresponds to a complement clause and is merged with the matrix verb *moraw* 'to get' as its complement. As shown in (2), the *te*P can also be realized as an adjunct to the verb phrase. In (3), the apparent complement *ni*P is merged with the matrix verb *ik* 'to go', constituting a purpose expression.

According to Hayashi and Fujii (2015), the complement/adjunct distinction of *te*P is made explicit when the *te*P is displaced: complement *te*P cannot be displaced (4a), but adjunct *te*P can undergo movement (4b):[4]

(4) a. *[$_{te\text{P}}$ Ziro-ni piza-o tukut-te]$_1$ Taro-ga t_1 morat-ta.
-Dat pizza-Acc cook-TE -Nom get-Past
'Taro had Ziro cook pizza.' (intended reading)
b. [$_{te\text{P}}$ piza-o tukut-te]$_1$ Taro-ga t_1 okane-o morat-ta.
pizza-Acc cook-TE -Nom money-Acc get-Past
'Taro got money by cooking Ziro pizza.'
(Hayashi and Fujii 2015:36)

[2] Predicates that appear in the V-*te* V construction include *ik* 'to go', *ku* 'to come', *kure* 'to give', *age* 'to give', *ok* 'to put', and *mi* 'to see', to name a few (see Nakatani 2016 for the extensive list of V-*te* V predicates). V-*ni* V predicates are much more limited, and they typically appear with the motion verbs such as *ik* 'to go' and *ku* 'to come', of which I only focus on the verb *ik* in this paper.

[3] In its past tense form, the root *ik* 'to go' changes to *it*.

[4] Hayashi and Fujii (2015) use a set of tests to tease the complement and adjunct *te*Ps apart, which include displacement, nominalization, and ellipsis. See their analysis and the relevant data for details.

Hayashi and Fujii (2015) argue that the different syntactic behaviours of the complement/adjunct *te*Ps above are best analysed by the (un)availability of head movement: As shown in (5),the V-*te* undergoes head movement out of the complement *te*P to the matrix verb, whereas the V-*te* does not move out of the adjunct *te*P, as illustrated in (6):

(5) Taro [$_{\text{Complement } te\text{P}}$ Ziro pizza t] [cook-*te*]+get-PAST

(adapted from Hayashi and Fujii 2015: 34)

(6) Taro [$_{\text{Adjunct } te\text{P}}$ pizza [cook-te]] money get-PAST

(adapted from Hayashi and Fujii 2015: 34)

Since head movement of the V-*te* vacates the *te*P, the complement *te*P cannot move with the verb residing inside the clause. But the adjunct *te*P, with no such head movement, can move with the head inside the clause.

Given Hayashi and Fujii's head movement analysis, Sugimura and Miyamoto (2015) show that *ni*P patterns with the adjunct *te*P because *ni*P, like the adjunct *te*P, can be displaced:[5,6]

(7) [$_{ni\text{P}}$ hon-o kai-ni]$_1$ Taro-ga t$_1$ it-ta.
book-Acc buy-NI -Nom go-Past
'Taro went to buy books.' (Sugimura and Miyamoto 2017: 4)

However, *ni*Ps also behave like adjuncts for another operation, *soo su* 'do so' replacement, which Hayashi and Fujii (2015) add to the diagnostics for the complement/adjunct status. First, consider (8) and (9) to see how *te*Ps behave in this respect:[7]

(8) a. Taro-ga [$_{te\text{P}}$ Ziro-ni piza-o tukut-te] morat-ta
-Nom -Dat pizza-Acc cook-TE get-Past
'Taro had Ziro cook pizza.'
b. Saburo-mo (*piza-o tukut-te) soo si-ta.
-also pizza-Acc cook-TE so do-Past
'Saburodid so, too.'

(adapted from Hayashi and Fujii 2015: 35)

(9) a. Taro-ga [$_{te\text{P}}$ piza-o tukut-te] okane-o morat-ta
-Nom pizza-Acc cook-TE money-Acc get-Past
'Taro got money by cooking pizza.'

[5]Tsujimura (1993) made the observation on the replacement itself but reached the opposite conclusion; namely, she argues that the *ni*P is an argument of *ik*, but what we call the complement *te*P is not.

[6]In Sugimura and Miyamoto (2015) we confirmed that ellipsis of the *ni*P supports the same analysis as displacement, which is in accordance with Hayashi and Fujii's (2015) diagnosis of the *te*P ellipsis.

[7] In (8) and (9) Hayashi and Fujii (2015) label *te*P as TP; I remain silent about the category of *te*P in this paper.

b. Saburo-mo (piza-o tukut-te) soo si-ta.
-also pizza-Acc cook-TE so do-Past
'Saburo did so (by cooking pizza), too.'
(adapted from Hayashi and Fujii 2015: 35)

Assuming that *soo su* is a VP-proform, Hayashi and Fujii (2015) show that only the adjunct *te*P, not the complement *te*P, can be left out from the *soo su* replacement. This is because the adjunct *te*Pdoes not form a constituent with the matrix verb. The complement *te*P, however, is included in its domain, because of which the complement *te*P should be replaced along with the matrix verb.

Now, consider (10), where *soo su* 'do so' replacement must target both the matrix verb and the *ni*P, suggesting that the *ni*P acts as a complement:

(10) a. Taro-ga [$_{ni\text{P}}$ hon-o kai-ni] it-ta.
-Nom book-Acc buy-NI go-Past
'Taro went to buy books.'
b. Saburo-mo (*fuku-o kai-ni) soo si-ta.
-also clothes-Acc buy-NI so do-Past
'Saburo did so (*to buy clothes), too.'
(Sugimura and Miyamoto 2017: 4)

Unlike the replacement test applied in (9), in (10) the *ni*P behaves as a complement, which in fact conforms to the standard treatment of the *ni*P in terms of its structural realization (Miyagawa 1987, Tsujimura 1993, Takahashi 2011, Wurmbrand 2001, among others).

From these facts, Sugimura and Miyamoto (2017) conclude that the *ni*P, being a purpose clause, is an adjunct and at the same time is a complement. We analyse this by assuming that the *ni*P occupies an empty complement position of the intransitive verb *ik* 'to go' without being selected by the verb, thus showing both complement and adjunct properties. Extending Hayashi and Fujii's (2015) analysis to the *ni*P, we also conclude that no head movement is involved in the *ni*P construction (see also Sugimura 2012), and agree with Hayashi and Fujii that head movement occurs in the complement *te*P, but not in the adjunct *te*P. The displacement of the *ni*P in (7) thus follows because the *ni*P can freely move since no head movement is involved. The *soo su* 'do so' replacement in (10b) also follows because the *ni*P appears in the "complement" position, and therefore it is inside the domain of the matrix VP, to which the *soo su* replacement applies.

In the following section, I show what this means in the structural realization of the *ni*P and *te*P, referring to as well as extending Sugimura and Miyamoto (2015). It is revealed that *ik* 'to go' can optionally take a goal argument, which in turn offers another structural realization of the *ni*P.

2.2 TWO MODES OF STRUCTURAL REALIZATION WITH *NI*PS AND *TE*PS

Continuing from section 2.1, let us start with the structures of the complement *te*P (11) and the adjunct *te*P (12), where each *te*P occupies the canonical complement or adjunct position:[8]

(11) $[_{\text{VP}}\,[_{\text{Complement}\,te\text{P}}\,[_{\text{VP}}\ \text{OBJ}\ \ V_1]\ \text{TE}\ ]\ \ V_2]$ (*the matrix verb selects the teP*)
(12) $[_{\text{VP}}\,[_{\text{Adjunct}\,te\text{P}}\ [_{\text{VP}}\ \text{OBJ}\ \ V_1]\ \text{TE}\ ]\,[_{\text{VP}}\,\text{OBJ}\ \ V_2]]$ (*the matrix verb does not select the teP*)

[8] I remain silent about the detailed structure inside and outside of the *te*P. See Hayashi and Fujii (2015) on this point.

As for the structure of *ni*P, Sugimura and Miyamoto (2017) suggest that *ni*P occupies an empty complement position of the intransitive verb *ik* 'to go' but without being selected by the verb, and so is structurally ambiguous between a complement and an adjunct:

(13) $[_{VP}\,[_{niP}\,[_{VP}$ OBJ V] NI] go] (*the matrix verb does not select the niP*)

Crucially, the verb *ik* optionally takes a goal argument such as *honya-ni* 'to the bookstore' in (14):

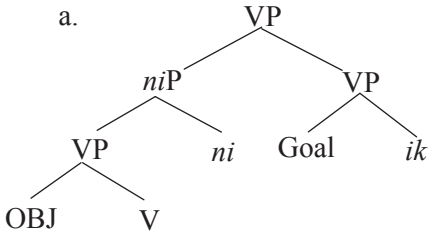
(14) Taro-ga honya-ni $[_{niP}$ hon-o kai-ni] it-ta.
-Nom bookstore-to book-Acc buy-NI go-Past
'Taro went to the bookstore to buy a book.'

This is not surprising because the verb *ik* takes a goal phrase when it functions as a regular intransitive verb (*e.g. Tokyo-ni ik* 'to go to Tokyo'). A goal phrase can also appear after a *ni*P:

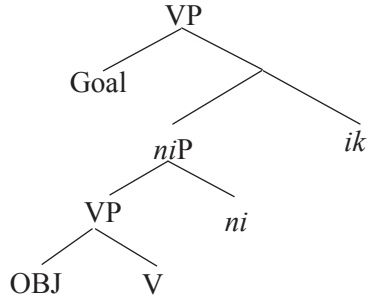
(15) Taro-ga $[_{niP}$hon-o kai-ni] honya-ni it-ta.
-Nom book-Acc buy-NI bookstore-to go-Past
'Taro went to the bookstore to buy a book'

Sugimura and Miyamoto (2015) assume that the *ni*P, when it appears with a goal phrase as in (15), is realized as an adjunct (16a).[9] Furthermore, it follows from (14) that the *ni*P can also form a complement-like structure (16b), and is therefore structurally ambiguous:

(16) a.



b.



Since merge applies freely in the current Minimalist framework (Chomsky 2004, 2008, 2013), it is not surprising if the verb *ik* first merges with the goal phrase, and then the resulting VP merges with the *ni*P in a canonical adjunct position, as in (16a). (16a) in fact conforms to Hayashi and Fujii's (2015) diagnostics with displacement (17) and replacement (18):

(17) $[_{niP}$ hon-o kai-ni$]_1$ Taro-ga t_1 honya-ni it-ta.
book-Acc buy-NI -Nom bookstore-to go-Past
'Taro went to the bookstore to buy a book.'

[9] Sugimura and Miyamoto (2015) suggest that in (16a) *ni* makes the constituent it heads (*ni*P) invisible for labelling along the same lines as Saito (2014). Thus, no problem for labelling {XP, YP} (Chomsky 2013) arises when the *ni*P and the VP merge in (16a).

(18) a. Taro-ga [$_{ni}$P hon-o kai-ni] honya-ni it-ta.
-Nom book-Acc buy-NI bookstore-to go-Past
'Taro went to the bookstore to buy a book'
b. Ziro-mo ([$_{ni}$P pen-o kai-ni]) soo si-ta.
-also pen-Acc buy-NI so do-Past
'Ziro did so (to buy a pen), too.'

(17) shows that the *ni*P acts as an adjunct because it can be displaced, and (18) also shows that it is outside of the domain of the matrix VP, which can be independently replaced with *soo su* 'do so'. When *ni*P is realized in the "complement" position, as in (16b), *ni*P can still move because no head movement is involved in the embedded clause (19). However, it must be replaced in (20) with the matrix verb because *ni*P is in the "complement" position:[10]

(19) [$_{ni}$P hon-o kai-ni]$_1$ Taro-ga honya-ni t_1 it-ta.
book-Acc buy-NI -Nom bookstore-to go-Past
'Taro went to the bookstore to buy a book'

(20) a. Taro-ga honya-ni [$_{ni}$P hon-o kai-ni] it-ta.
-Nom bookstore-to book-Acc buy-NI go-Past
'Taro went to the bookstore to buy a book.'
b. Ziro-mo (*[$_{ni}$P pen-o kai-ni]) soo si-ta.
-also pen-Acc buy-NI so do-Past
'Ziro did so (*to buy a pen), too.'

The *ni*P shows both adjunct and complement properties, as shown in section 2.1.

In next section, I present an instance where *te*P shows rather different properties from *ni*P when it appears with *ik*, which can also take a *te*P and optionally select a goal argument.

3 AMBIGUOUS STATUS OF 'COMPLEMENT' *TE*PS

As briefly mentioned in section 1 (fn. 2), the *te*P-taking predicates also include the verb *ik* 'to go', meaning V-*te* V and V-*ni* V constructions can constitute a minimal pair:[11]

(21) Taro-ga [$_{ni}$P hon-o kai-ni] it-ta.
-Nom book-Acc buy-NI go-Past
'Taro went to the bookstore to buy a book'

[10] I will not comment on the difference between 'restructuring' and 'non-restructuring' properties between (14) and (19) when the object is nominative Case-marked. See Miyagawa (1987) for the adjacency requirement for restructuring.

[11] Yet, as pointed out by Nakatani (2013, 2016), the two constructions are significantly different in meaning, indicated by each sentence's translation: in the V-*ni* V construction, the event of the *ni*P follows the event of the matrix verb, but in the V-*te* V construction, the event of the *te*P precedes that of the matrix verb. This shows, as Nakatani emphasizes, that -*te* and -*ni* are not semantically vacuous and have some aspectual/temporal information.

(22) Taro-ga [$_{te\text{P}}$ hon-o kat-te] it-ta.
-Nom book-Acc buy-TE go-Past
'Taro bought a book and went (away).'

Note that (22) is an example of the complement *te*P because the *te*P cannot move (23) or be stranded for replacement (24):

(23) *[$_{te\text{P}}$ hon-o kat-te]$_1$ Taro-ga t_1 it-ta.
book-Acc buy-TE -Nom go-Past
'Taro bought a book and went (away).' (intended reading)

(24) a. Taro-ga [$_{te\text{P}}$ hon-o kat-te] it-ta.
-Nom book-Acc buy-TE go-Past
'Taro bought a book and went (away).'
b. Ziro-mo (*[$_{te\text{P}}$ pen-o kat-te]) soo si-ta.
-also pen-Acc buy-TE so do-Past
'Zirodid so, too.'

As was the case with the *ni*P, a goal phrase can optionally appear when the matrix verb is *ik*:[12]

(25) Taro-ga honya-ni [$_{te\text{P}}$ sono hon-o mot-te] it-ta.
-Nom bookstore-to that book-Acc bring-TE go-Past
'Taro brought that book to the bookstore.'

Unlike *ni*P (see (14) in section 2.2), however, a goal phrase cannot always appear in a *te*P (see Nakatani 2013,2016, Shibatani 2007,Tsujimura 1993, Takahashi 2011 and references therein for the restrictions on what can appear in *ni*P and *te*P):[13]

(26) ??Taro-ga honya-ni [$_{te\text{P}}$ hon-o kat-te] it-ta.
-Nom bookstore-to book-Acc bought-TE go-Past
'Taro bought a book and went to the bookstore.' (intended reading)

The contrast between (25) and (26) seems to suggest that the structure in which the goal phrase appears as *ik*'s argument is always available for *ni*P (27), but it is not for *te*P (28):

(27) = (16b) [$_{\text{TP}}$ SUBJ [$_{\text{VP}}$**GOAL** [[$_{ni\text{P}}$ [$_{\text{VP}}$ OBJ V] NI] go]]]

(28) (*) [$_{\text{TP}}$ SUBJ [$_{\text{VP}}$**GOAL** [[$_{te\text{P}}$ [$_{\text{VP}}$ OBJ V] TE] go]]]

On the one hand, Hayashi and Fujii's (2015) *soo su* 'do so' replacement seems to conform to the *te*P complement structure in (28):

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[12] See Takahashi (2011) for the peculiar behaviour of the embedded verb *mot* 'to bring' with respect to restructuring properties.

[13] Note that (26) is grammatical when the *te*P is interpreted as an adjunct and has the reading 'Taro, having bought a book, went to the bookstore.'

(29) a. Taro-ga honya-ni [$_{te\text{P}}$ sono hon-o mot-te] it-ta.
-Nom bookstore-to that book-Acc bring-TE go-Past
'Taro brought the book to the bookstore.'
b. Ziro-mo (*[$_{te\text{P}}$ zassi-o mot-te]) soo si-ta.[14]
-also magazine-Acc bring-TE so do-Past
'Ziro did so, too.'

(29b) shows that the *te*P is in fact in the complement position, being the target of replacement.

On the other hand, the *te*P in (29a) can undergo movement, as shown in (30), contrary to (23) without the goal argument:

(30) [$_{te\text{P}}$ sono hon-o mot-te]$_1$ Taro-ga honya-ni t_1 it-ta.
that book-Acc bring-TE -Nom bookstore-to go-Past
'Taro, having brought that book, went to the bookstore.'

Thus, (30) seems to show that the *te*P acts as an adjunct. Given the ungrammaticality of (29b) and the grammaticality of (30), it appears to show that *te*P acts as if it were a complement on the one hand, but at the same time, it acts as an adjunct on the other hand. In fact, the latter point is indicated by its translation of (30), where the V-*te* V reading disappears and the *te*P is interpreted as an adjunct in the regular way. *Te*P and *ni*P seem to behave alike in this respect, showing their ambiguous status between complements and adjuncts. However, in section 4, I show that *te*P is different from *ni*P in that *te*P is unambiguously an adjunct when the verb *ik* takes an intervening goal phrase (Nakatani 2013, Shibatani 2007), but *ni*P is always ambiguous between a complement and an adjunct.

4 SEMANTICALLY MOTIVATED HEAD MOVEMENT AND GOAL-TAKING V-VS

Following Nakatani (2013), I assume that *te*P, when appearing with the verb *ik* 'to go' with an overt goal phrase, occupies an argument position. The compatibility of a goal phrase in the sentence is determined by the principle called *Principles of Causation Flow* in (31):

(31) *Principle of Causation Flow*
If the causing event involves a patient, then the resulting event must specify the state of the patient, rather than the agent. (Nakatani 2013:189)

Nakatani (2013), independently of Hayashi and Fujii (2015), assumes that the embedded verb of the *te*P head moves to the matrix verb *ik* 'to go', and that the resulting V-*te* V takes a goal argument in accordance with (31). Interpreted in the current Minimalist framework that assumes free merge of syntactic objects (Chomsky 2004 and his subsequent work), Nakatani's claim means that the semantic component can only successfully interpret the V-*te* V construction with a goal argument when it conforms to (31), even though the application of merge itself comes free.

[14] (29b) is grammatical if the *te*P is interpreted as an adjunct but cannot be interpreted as 'Ziro brought the magazine to the bookstore.'

The grammaticality contrast between (25) and (26), repeated here as (32) and (33), then follows from Nakatani's head movement assumption, coupled with (31):

(32) = (25) Taro-ga honya-ni [$_{te\text{P}}$ sono hon-o mot-te] it-ta.
-Nom bookstore-to that book-Acc bring-TE go-Past
'Taro brought that book to the bookstore.'

(33) = (26) ??Taro-ga honya-ni [$_{te\text{P}}$ hon-o kat-te] it-ta.
-Nom book-to book-Acc bought-TE go-Past
'Taro bought a book and went to the library.' (intended reading)

(32) is grammatical because the resulting event specifies the state of the book, namely, it being in the office in accordance with (31). In contrast, in (33), the V-*te* V complex *kat-te ik* 'buy-*te* go' cannot take the goal argument because the resulting event *honya-ni ik* 'going to the bookstore' does not specify the state of *hon* 'the book'; rather, it specifies the state of the subject. Thus, Nakatani's (2013) predicate formation via head movement successfully explains the selection of a goal argument.

Now, the ungrammaticality of (29b), repeated here as (34), also follows because the *te*P is indeed a complement: it cannot be left outside of the *soo su* replacement of the matrix VP:

(34) a. Taro-ga honya-ni [$_{te\text{P}}$ sono hon-o mot-te] it-ta.
-Nom bookstore-to that book-Acc bring-TE go-Past
'Taro brought the book to the bookstore.'
b. Ziro-mo (*[$_{te\text{P}}$ zassi-o mot-te]) soo si-ta.
-also magazine-Acc bring-TE so do-Past
'Ziro did so, too.'

Finally, I claim that the grammaticality of (30), repeated here as (35), indicates that the derivation does not start off with the *te*P complement structure from which the *te*P moves. Instead, it starts with the adjunct *te*P structure in (36), from which the adjunct *te*P can optionally move:

(35) [$_{te\text{P}}$ sono hon-o mot-te]$_1$ Taro-ga t_1 honya-ni t_1 it-ta.
that book-Acc bring-TE -Nom bookstore-to go-Past
'Taro, having brought that book, went to the bookstore.'

(36) [$_{\text{TP}}$ Taro [$_{\text{VP}}$ [$_{\text{Adjunct } te\text{P}}$ [$_{\text{VP}}$ that book bring] TE][$_{\text{VP}}$ to the bookstore go]]]

Unlike *te*P, *ni*P has the option of deriving (37), either from (38) or from (39):

(37) Taro-ga [$_{ni\text{P}}$ hon-o kai-ni]$_1$ honya-ni (t_1) it-ta.
-Nom book-Acc buy-NI bookstore-to go-Past
'Taro went to the bookstore to buy a book.'

(38) [$_{\text{TP}}$ SUBJ [$_{\text{VP}}$ GOAL [$_{\text{VP}}$ [$_{ni\text{P}}$ [$_{\text{VP}}$ OBJ bring] NI] go]]] (*niP in the complement position*)

(39) [$_{\text{TP}}$ SUBJ [$_{\text{VP}}$ [$_{ni\text{P}}$ [$_{\text{VP}}$ OBJ bring] NI] [$_{\text{VP}}$ GOAL go]]] (*niP in the adjunct position*)

If the construction starts off with (38), with the *ni*P being in the "complement" position, then *ni*P undergoes movement to the front of the goal phrase, but if it starts off with (39), with the *ni*P being in the adjunct position, no movement is involved. The interpretive difference between *te*P and *ni*P indeed confirms this point: when *te*P is fronted as in (35), it affects the sentence's meaning, so that the usual V-*te* V reading disappears and *te*P can only be interpreted as an adjunct. In contrast, when *ni*P is fronted, it does not change the meaning (see (15)/(17), for example), which is in fact predicted because *ni*P is always an adjunct, despite being in the complement or adjunct position, and *te*P is only an adjunct when the goal phrase intervenes.[15]

Given these facts, it seems reasonable to conclude that head movement is closely related to structural optionality (cf. Sugimura 2012): V-*te* movement unambiguously associates the *te*P complement or adjunct with its corresponding complement or adjunct structure, respectively. The lack of V-*ni* movement, however, allows the *ni*P to be either in the "complement" or adjunct position, although it is consistently a syntactic adjunct.[16] Moreover, Nakatani's analysis in (31) together with head movement of V_1 can be extended andcan explain the fact that there is no such restriction on *ni*P: since V-*ni* does not move to create the V-*ni* V complex, *ik* can take a goal argument independently of the embedded verb. This in turn suggests that head movement, as well as the two clause-heading morphemes, play a crucial role in the syntax. Thus, any approach to the V-*te* V formation with recourse to post-syntactic operations such as morphological merger (*e.g.* Kobayashi 2016) should face a challenge in accommodating this fact.

5 CONCLUDING REMARKS

In this paper, I have attempted to uncover the syntactic nature of *te*P in comparison with *ni*P, especially with respect to goal argument selection, displacement and replacement properties, while focusing on the verb *ik* 'to go' as the matrix verb. I have first shown that *te*P and *ni*P are different in that *te*P is classified as a complement and as an adjunct (Hayashi and Fujii 2015), while *ni*P is consistently analyzed as an adjunct appearing in the "complement" position without selection (Sugimura and Miyamoto 2017). Based on this observation, I have further demonstrated that when *te*P appears with *ik* and its intervening goal argument, the *te*P necessarily appears as an adjunct in the canonical adjunct position, but there is no such restriction in structural realization on *ni*P and it can either appear in the canonical complement or adjunct position. I then claimed that this structural restriction on *te*P is attributed to Nakatani's (2013) analysis of the complex predicate formation via head movement and argument selection after predicate formation. I have further shown that Nakatani's claim, that the V-*te* V predicate is formed by semantically motivated head movement and selects a goal argument, naturally explains the fact that *ni*P, in contrast to *te*P, has no such restriction in argument selection. This is because no such head movement occurs in the V-*ni* V construction, and as a consequence no restriction on the goal argument is incurred. I concluded that any other non-head movement approaches to the V-*te* V formation would not be able to easily account for this contrasting behaviour between *te*P and *ni*P.

[15] Again, see Miyagawa (1987) for the difference between 'restructuring' and 'non-restructuring' properties between the *ni*P in the "complement" position and the one in the "adjunct" position.

[16] In Sugimura (2012), I associated head movement with the structural optionality for nominative objects in Japanese. Although the environment and configuration discussed there is different from the current study, the point is the same.

These findings suggest that head movement plays a crucial role in the syntax to determine structural realization and that the clause-heading morphemes also play an important role in the application of head movement (Nakatani 2013, Hayashi and Fujii 2015, Sugimura 2012).

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