

## On the Locative Structure of *-te iru* Progressives in Japanese

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**Abstract:** This article focuses on the syntactic structure of *-te iru* progressives in Japanese, which contain a verbal complex composed of a verb with the gerundive suffix *-te* and the existential verb *iru* 'be'. It is proposed that there are two types of *-te iru* progressives that involve different structures. One type has a biclausal locative structure in which *iru* is the existential main verb selecting the subject and a PP headed by a null postposition; the PP contains a nominalized clause whose subject is controlled by the matrix subject. The other type is built on a monoclausal structure in which *iru* occurs as an aspectual functional head; *-te iru* progressives with inanimate subjects can only be constructed on this structure because *iru* as the main verb cannot select those subjects. It is argued that this analysis provides a natural account of the fact that animate subjects of *-te iru* progressives behave like an internal argument with respect to the interpretation of a quantificational adverb regardless of the kind of the verb with *-te*, while inanimate subjects do not have the characteristic. Moreover, it is suggested that the dichotomy of the structure of *-te iru* progressives argued for here is parallel to the one proposed for progressives in Basque in a previous study, which also indicates that the monoclausal progressive is derived from the biclausal one due to grammaticalization.\*

**Key words:** progressive, locative predication, quantificational adverb, nominalization, null postposition

### 1. Introduction

It is observed across languages that progressive sentences are realized in syntax in the form of a locative predication (Bybee et al. 1994). Progressives in Japanese may also have the characteristic since they involve a verbal complex composed of a verb

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with the gerundive suffix *-te* and the existential verb *iru* ‘be’, as shown in (1a).<sup>1,2</sup> The present study focuses on these progressive sentences in Japanese (henceforth, *-te iru* progressives) and proposes that there are two types of them in terms of syntactic structure. One involves a biclausal locative structure, as shown in (1b) for (1a); *iru* as the main verb selects the subject as the theme argument; *iru* also selects a PP headed by a null postposition as the location; the null P selects a nominalized clause with the gerundive marker *-te*; the subject of the embedded clause is controlled by the matrix subject.<sup>3</sup>

- (1) a. Taroo-ga e-o kai-te-i-ru.  
 Taro-NOM picture-ACC draw-GER-be-PRES  
 ‘Taro is drawing a picture.’  
 b. [Taro<sub>i</sub>-NOM [<sub>PP</sub> [<sub>NP</sub> PRO<sub>i</sub> picture-ACC draw-GER] Ø<sub>p</sub>] be<sub>v</sub>]

The other type involves a monoclausal structure shown in (2b) for (2a); the subject is selected by the verb with the gerundive marker *-te*; *iru* occurs as an aspectual functional head. The structure in (2b), however, has other parts in common with the one in (1b): *iru* selects a PP headed by a null postposition; the null P selects a nominalized clause with *-te*. It is claimed that *-te iru* progressives with inanimate subjects always have the structure in (2b), not (1b), because the lexical verb *iru* in (1b) cannot select those subjects:

- (2) a. Kaze-ga konoha-o yurasi-te-i-ru.  
 wind-NOM leaf-ACC shake-GER-be-PRES  
 ‘The wind is shaking leaves.’  
 b. [[<sub>PP</sub> [<sub>NP</sub> wind-NOM leaf-ACC shake-GER] Ø<sub>p</sub>] be<sub>Asp</sub>]

With this dichotomy of the structure of *-te iru* progressives, I argue that the present study provides a natural account of peculiar interpretations of a quantificational adverb occurring in them; their animate subjects behave like an internal argument even if the verb with *-te* is unergative or transitive, while their inanimate

<sup>1</sup> Following abbreviations are used in the glosses of examples: ACC (accusative case), CAUS (causative), COP (copula), DAT (dative case), DET (determiner), ERG (ergative case), GEN (genitive case), GER (gerund), IMPF (imperfect), INF (infinitive), LOC (locative), MsS (masculine singular subject), NEG (negative), NOM (nominative case), NOML (nominalizer), PASS (passive), PRES (present), PROG (progressive), PRT (particle), PUNC (punctual), TOP (topic).

<sup>2</sup> The gerundive particle *-te* is realized as *-de* after stems that end with a voiced consonant (e.g. *yom-de* ‘read-GER’). Although *iru* is a derived form of the verbal stem *i* ‘be’ involving the present tense suffix *-ru*, as shown in the glosses of (1a), the verb is cited in the dictionary form in the text throughout this article. As is well known, the complex predicate in the *-te iru* form can also have resultative interpretations depending on semantic and pragmatic conditions (Ogihara 1998). However, the present study is only concerned with *-te iru* progressives.

<sup>3</sup> The subjects in (1b) and (2b) are assumed to be in their base-generated positions; it is left open in this study whether they move to Spec, TP for Case or EPP reasons.

subjects do not have the characteristic. Moreover, it is noted that these two types of structures are parallel to those proposed for progressives in Basque by Laka (2006); she claims that the Basque counterpart of (2b) has arisen from that of (1b) due to grammaticalization of the progressive marker in the language, which I claim corresponds to *iru* in Japanese.<sup>4</sup>

There is a large volume of research on both the syntax of aspectual verbs and that of complex predicates involving the gerundive marker *-te* in the Japanese literature. I would like to note some relevant issues the present study is concerned with and the proposals that distinguish it from previous studies. First, regarding aspectual verbs, in particular, those describing inception (e.g., *hajimeru* ‘begin’), continuation (e.g., *tuzukeru* ‘continue’), and termination (e.g., *owaru* ‘finish’), it has been traditionally claimed that they are all lexical verbs that select a clausal complement, distinguished in whether they involve a control or raising structure (see Shibatani 1978, Kageyama 1993, Nishigauchi 1993, Koizumi 1995, Matsumoto 1996, among others). Recently, however, Fukuda (2012) argues against this view, proposing that some of those verbs are functional heads that encode aspectual information about events, called Aspect heads (Travis 1991, 2010, Borer 1994). Although the aspectual verb *iru* is not dealt with by Fukuda, I argue in this article that it can occur either as a lexical verb or as an Aspect head in *-te iru* progressives. Moreover, *iru* in *-te iru* progressives is often assumed to be unambiguously a raising verb in previous studies that hold a traditional view about aspectual verbs (Mihara 1997, Takezawa 2004, Kishimoto 2018). The present study is different in claiming that the verb can take a control structure as a lexical verb.

Second, this article also takes issue on the syntax of complex predicates involving the gerundive marker *-te*, that is, those composed of the first verb with *-te* and an auxiliary-like verb or adjective in a lexically designated set including *morau* ‘receive’, *kureru* ‘give’, *hosii* ‘desirous’, and *iru* ‘be’. Because sentences involving the complex predicate exhibit some monoclausal properties, it has often been claimed that the complex is united in syntax by complement predicate raising or head movement (Nakau 1973, Shibatani 1978, Nakatani 2013, among others). A piece of data often cited to motivate the analysis is the fact that the complement involving the first verb with *-te* cannot undergo scrambling, separated from the second predicate (McCawley and Momoi 1986, Terada 1990, Hayashi and Fujii 2015). Noting that there is an empirical problem with the previous analysis, I propose a novel account of the data based on licensing of the null postposition heading the complement (see (1b) and (2b)).

The discussion is organized as follows. In section 2, we consider data concerning interpretations of an adverb in which subjects of *-te iru* progressives behave like an internal argument even if they are based on an unergative or transitive verb. In section 3, I propose that *-te iru* progressives can involve the biclausal locative structure, providing empirical support for the view; it is then argued that the data

<sup>4</sup> Laka (2006) provides a slightly different structure from (2b) for the monoclausal progressive in Basque. See note 23.

presented in section 2 are accounted for on the basis of the structure. In section 4, I claim that the biclausal structure is not available for *-te iru* progressives with inanimate subjects; they instead involve a monoclausal structure. Finally, concluding remarks are given in section 5.

## 2. The quantificational adverb *ippai* in *-te iru* progressives

In this section, we note that subjects of *-te iru* progressives including those embedding an unergative or transitive verb exhibit a characteristic of an internal argument with respect to interpretations of a quantificational adverb *ippai* 'a lot'. It is also indicated that an analysis of the facts proposed in a previous study encounters some empirical problems.

### 2.1. Basic properties of *ippai*

It is noted by Kishimoto (2005) that the quantifier *ippai* 'a lot' in Japanese cannot directly modify a noun by occurring in an NP whether the noun refers to a countable or uncountable entity, as shown in (3):

- (3) a. \*John-wa [<sub>NP</sub> ippai-no ringo-o] tabe-ta.  
 John-TOP a.lot-GEN apple-ACC eat-PAST  
 'John ate a lot of apples.' (Kishimoto 2005: 124)
- b. \*Mary-wa [<sub>NP</sub> ippai-no mizu-o] non-da.  
 Mary-TOP a.lot-GEN water-ACC drink-PAST  
 'Mary drank a lot of water.'

However, if *ippai* occurs as an adverb in a clause, it can be interpreted as modifying an NP merged at a certain syntactic position by specifying the quantity of its referent. In particular, it is associated with the direct internal argument of a verb, or the theme, but not with the external argument, or the agent. For example, when the adverb occurs in a sentence involving a transitive verb, it denotes the quantity of the object referent, and not the subject referent, as shown in (4):

- (4) a. Gakusei-ga puramoderu-o heya-de ippai tukut-ta.  
 student-NOM plastic.model-ACC room-in a.lot make-PAST  
 'The student(s) made a lot of plastic models in the room.'  
 NOT: 'A lot of students made plastic models in the room.'  
 (Kishimoto 2005: 121)
- b. Gakusei-ga kabin-o kyoositu-de ippai kowasi-ta.  
 student-NOM vase-ACC classroom-in a.lot break-PAST  
 'The student(s) broke a lot of vases in the classroom.'  
 NOT: 'A lot of students broke vases in the classroom.'  
 (Kishimoto 2005: 122)

Note that *ippai* cannot be analyzed as a floating quantifier associated with the object NP in these sentences since it cannot directly modify NPs, as we saw in (3).

As suggested by Kishimoto (2005), the interpretation of *ippai* in (4) is attributed to special aspectual properties of the internal argument. In particular,

the internal, but not external, argument can aspectually ‘measure out’ the event to which the verb refers (Tenny 1994). This effect can be exemplified by the sentence *John ate an apple*, where the internal argument *an apple* provides a measure of the eating event in the sense that some quantity of apple must be consumed during each interval of eating until the entire apple is consumed. However, the external argument *John* does not serve as such a measure; although he may be changed by becoming full, the sentence does not have to have such an interpretation (see Tenny 1994: 11–12).

It is notable that the adverbial particle *eso* ‘many’ in Mohawk discussed by Baker (1997) seems to have the same properties as *ippai* in the relevant respects. The adverb occurs in the following sentence involving a transitive verb in (5):<sup>5</sup>

- (5) Eso wa-ha-tshari’ ne onhúhsa’  
 a.lot fact-MS-find-PUNC NE egg  
 ‘He found a lot of eggs.’ (Baker 1997: 99)

Baker notes that though this sentence literally means that there were many events of him finding an egg, it is understood that there were many eggs found, since egg-finding events are individuated by the eggs that are found. He suggests that this interpretation is derived because *eso* can modify the event argument of the VP it attaches to. Then if the modified verb has an internal argument that measures out the event, many events are understood as involving many tokens of the kind referred to by the argument. I assume that *ippai* in (4) is subject to the same analysis as *eso* in (5). In particular, it is interpreted as specifying the quantity of the object referent because it modifies the event argument of the VP and the object argument of the verb measures out the event.

As noted by Kishimoto (2005), *ippai* can also be construed with the subject of an unaccusative verb, as shown in (6):<sup>6</sup>

- (6) a. Suzumusi-ga kono musikago-de ippai sin-da.  
 singing.cricket-NOM this insect.cage-in a.lot die-PAST  
 ‘A lot of crickets died in this insect cage.’ (Kishimoto 2005: 123)  
 b. Kabin-ga zisin-notame ippai koware-ta.  
 vase-NOM earthquake-owing.to a.lot break-PAST  
 ‘A lot of vases broke owing to the earthquake.’ (Kishimoto 2005: 122)

This is predictable given that the subjects of unaccusative verbs are merged as internal arguments; they measure out the event denoted by the verbs.

Moreover, as observed by Kishimoto (2005), if *ippai* occurs with an unergative verb, it is not associated with the subject but with the verb itself, yielding the interpretation according to which there are many events denoted by the verb, as

<sup>5</sup> Since the grammatical function of the particle *ne* involved in the example in (5) is not known, it is glossed as NE, following the source of the example (Baker 1997).

<sup>6</sup> Kishimoto (2005) notes that *ippai* can also be construed with the subject of a passive as predicted under the hypothesis that the adverbial modifies an internal argument.

shown in (7):

- (7) a. Kinoo-wa kodomo-ga kooen-de ippai ason-da.  
 yesterday-TOP child-NOM park-in a.lot play-PAST  
 ‘Children (or the child) played a lot in the park yesterday.’  
 NOT: ‘A lot of children played in the park yesterday.’
- b. Kono kaisya-de-wa zyuugyoo-in-ga nityoobi-mo ippai  
 this company-at-TOP employee-NOM Sunday-also a.lot  
 hatarai-ta.  
 work-PAST  
 ‘At this company, employees worked a lot on Sundays, too.’  
 NOT: ‘At this company, a lot of employees worked on Sundays, too.’  
 (Kishimoto 2005: 124)

This interpretation is also predictable. Given that the subjects of unergative verbs are merged as external arguments, there is no argument that can measure out the event denoted by the verbs. Since *ippai* modifies the event argument of the VP, it is understood literally in (7) that there were many events expressed by the verbs.

## 2.2. The interpretations of *ippai* in *-te iru* progressives

Note that the interpretation of *ippai* seems to deviate from the general pattern noted above when it occurs in certain *-te iru* progressives. As noted by Kishimoto (2005: 153 fn. 8), if an unergative verb occurs in a *-te iru* progressive, *ippai* seems to be able to be construed with the subject of the verb, as shown in (8):<sup>7</sup>

- (8) a. Kinoo-wa kodomo-ga kooen-de ippai ason-de-i-ta.  
 yesterday-TOP child-NOM park-in a.lot play-GER-be-PAST  
 ‘Children (or the child) were playing a lot in the park yesterday.’  
 OR ‘A lot of children were playing in the park yesterday.’
- b. Kono kaisya-de-wa zyuugyoo-in-ga nityoobi-mo ippai  
 this company-at-TOP employee-NOM Sunday-also a.lot  
 hatarai-te-i-ta.  
 work-GER-be-PAST  
 ‘At this company, employees were working a lot on Sundays, too.’  
 OR ‘At this company, a lot of employees were working on Sundays, too.’

The deviation is also observed in sentences involving a transitive verb. We saw that *ippai* cannot modify the subject of the transitive verb in (4a), which still holds true

<sup>7</sup> Kageyama (1993: 55) and Kishimoto (2015: 17) observe that the quantificational adverb *takusan* ‘a lot’, which is also assumed to be able to modify the event argument of the VP like *ippai*, can be construed with the subject of an unergative verb in *-te iru* progressives. However, the present study focuses on *ippai* rather than *takusan* because *takusan* can also occur as a quantifier directly associated with a noun, as noted by Kishimoto (2005: 124); it is difficult to determine whether *takusan* modifies the event argument or a noun in some examples. I thank an anonymous reviewer for bringing this point to my attention.

when the adverb immediately follows the subject, as shown in (9a). However, the adverb can be construed with the subject if the verb occurs in a *-te iru* progressive, as shown in (9b):

- (9) a. Gakusei-ga      ippai    puramoderu-o      heya-de    tukut-ta.  
 student-NOM    a.lot    plastic.model-ACC    room-in    make-PAST  
 'The student(s) made a lot of plastic models in the room.'  
 NOT: 'A lot of students made plastic models in the room.'
- b. Gakusei-ga      ippai    puramoderu-o      heya-de  
 student-NOM    a.lot    plastic.model-ACC    room-in  
 tukut-te-i-ta.  
 make-GER-be-PAST  
 'The student(s) were making a lot of plastic models in the room.'  
 OR 'A lot of students were making plastic models in the room.'

In the *-te iru* progressives in (8) and (9b), *ippai* seems to be able to modify the external argument of a verb, contrary to its behavior observed in non-progressive sentences in general (see (4), (6), (7)). The question arises as to what underlies these apparently exceptional interpretations of the adverb.<sup>8</sup>

Kishimoto (2005, 2015) suggests a structural analysis of these apparently exceptional interpretations of *ippai* and comparable examples of another quantificational adverb *takusan* 'a lot'. He assumes that these adverbs are adjoined to a position in VP which is lower than the base-generated position of the external argument but higher than internal arguments. Then he claims that the adverbs can be associated with internal arguments, and not external ones, in non-progressive sentences (see (4), (6), (7)) because internal arguments, and not external ones, are in the scope of the adverbs. As for *-te iru* progressive sentences, he claims that the adverbs can be adjoined to the VP headed by the verb *iru* 'be', which is assumed to occur as a raising verb taking a clausal complement. Then the adverbs are predicted to be able to modify any argument of the embedded verb in the complement, as shown in (10).

- (10) [<sub>VP</sub> Adv [<sub>VP</sub> [<sub>VP</sub> NP (NP) V]-te iru]]  
 (see Kishimoto 2005: 153 fn. 8, Kishimoto 2015: 17)

Kishimoto claims that this analysis provides us with a unified account of the interpretations of the adverbs in question.

However, there are some examples in which the interpretations of *ippai* do not seem to be predicted under Kishimoto's (2005, 2015) analysis. First, as noted by Kishimoto (2005), when *ippai* occurs in ditransitive sentences, it is construed with the direct object, and not with the indirect object (nor with the subject), as

<sup>8</sup> It is observed by Nakanishi (2007: 91) that although Japanese floating quantifiers associated with the external argument generally receive a distributive reading unambiguously, they can also have a collective reading in *-te iru* progressives. I leave further investigation of this fact and its potential relation to the present study for future research.

shown in (11):<sup>9</sup>

- (11) a. Yuubinyasan-ga gakusei-ni tegami-o asoko-de ippai  
 mailman-NOM student-DAT letter-ACC that.place-at a.lot  
 watasi-ta.  
 pass-PAST  
 ‘The mailman delivered many letters to a student (or students) there.’  
 NOT: ‘The mailman delivered letters to many students there.’
- b. Kimura-sensei-wa gakusei-ni gakkoo-no himitu-o  
 Kimura-teacher-TOP student-DAT school-GEN secret-ACC  
 naisyo-de ippai osie-ta.  
 secret-in a.lot teach-PAST  
 ‘Professor Kimura told a student (or students) many secrets about the  
 school in private.’  
 NOT: ‘Professor Kimura told many students secrets about the school in  
 private.’ (Kishimoto 2005: 122)

This is predictable if we consider Tenny’s (1994: 11, 68) observation that unlike direct internal arguments, indirect internal arguments cannot aspectually ‘measure out’ the event to which the verb refers. Note that the adverb still cannot modify the indirect objects when these ditransitive verbs occur in *-te iru* progressives, as shown in (12):

- (12) a. Yuubinyasan-ga gakusei-ni tegami-o asoko-de ippai  
 mailman-NOM student-DAT letter-ACC that.place-at a.lot  
 watasi-te-i-ta.  
 pass-GER-be-PAST  
 ‘The mailman was delivering many letters to a student (or students)  
 there.’  
 NOT: ‘The mailman was delivering letters to many students there.’
- b. Kimura-sensei-wa gakusei-ni gakkoo-no himitu-o  
 Kimura-teacher-TOP student-DAT school-GEN secret-ACC  
 naisyo-de ippai osie-te-i-ta.  
 secret-in a.lot teach-GER-be-PAST  
 ‘Professor Kimura was telling a student (or students) many secrets about  
 the school in private.’  
 NOT: ‘Professor Kimura was telling many students secrets about the  
 school in private.’

According to Kishimoto’s analysis shown in (10), *ippai* would be predicted to be able to modify the indirect objects by adjoining to the VP headed by *iru* because the indirect objects occur within the complement of the verb. Then the question would arise as to why the interpretation is not available.

<sup>9</sup> Baker (1997) also observes that the Mohawk adverbial *eso* (see (5)) occurring with a ditransitive verb is construed with the theme argument, and not with the goal.



Second, consider the complex verb construction in Japanese which is headed by the aspectual verb *dasu* ‘begin’ or *hazimeru* ‘begin’ occurring as the second verb, as shown in (13) and (14). On the basis of facts concerning clausal idioms and selectional restrictions, Kishimoto (2005, 2009) argues that the aspectual verbs heading the construction are raising verbs that take a clausal complement involving the first verb; the first verb is transitive in (13) and unergative in (14) (see also Shibatani 1978, Kuno 1983, Nishigauchi 1993):

- (13) a. John-ga hon-o yomi-hazime-ta.  
 John-NOM book-ACC read-begin-PAST  
 ‘John began to read a book.’  
 b. [John<sub>i</sub>-NOM [ t<sub>i</sub> book-ACC read] begin] (Kishimoto 2005: 49)
- (14) a. Kodomo-ga asobi-dasi-ta.  
 child-NOM play-begin-PAST  
 ‘Children (or a child) began to play.’  
 b. [children<sub>i</sub>-NOM [ t<sub>i</sub> play] begin] (Kishimoto 2009: 95)

If we apply Kishimoto’s analysis of *-te iru* progressives (see (10)) to this construction, assuming that *ippai* adjoins to the VP headed by the raising verb, it would be able to modify the external argument of the first verb. However, in fact, the adverb is construed with the internal argument of the first verb in (15a) or with the verb itself in (15b), and not with the external argument:

- (15) a. Gakusei-ga ippai hon-o yomi-hazime-ta.  
 student-NOM a.lot book-ACC read-begin-PAST  
 ‘Students (or the student) began to read a lot of books.’  
 NOT: ‘A lot of students began to read books.’  
 b. Kodomo-ga kooen-de ippai asobi-dasi-ta.  
 child-NOM park-in a.lot play-begin-PAST  
 ‘Children (or the child) began to play a lot in the park.’  
 NOT: ‘A lot of children began to play in the park.’

Unless it is demonstrated that *ippai* cannot occur in the matrix VP in (15) for some reason, these examples would also be difficult to explain under Kishimoto’s analysis.

To summarize, it has been observed in this section that subjects of *-te iru* progressives exhibit a peculiar behavior with respect to the interpretation of a quantificational adverb that usually modifies only internal arguments; the adverb can be construed with the subjects even if the progressives are based on an unergative or transitive verb. We have also noted that a previous analysis of this phenomenon leaves some facts unaccounted for.

### 3. Biclausal progressives

It is argued in this section that the peculiar interpretations of *ippai* observed above are explained if we apply Laka’s (2006) analysis of a progressive constriction in

Basque to *-te iru* progressives. In particular, I propose that *-te iru* progressives can involve a biclausal locative structure in which *iru* is the existential main verb; *iru* selects the subject as the theme argument, whereas it takes a PP headed by a null postposition as the location.

### 3.1. Basque *ari* progressives

It is observed across ergative languages that the case marking of the subject of a transitive verb changes depending on aspectual properties of the sentence. This is also found in Basque. In the imperfective transitive sentence in (16a), the subject *emakumea* ‘the woman’ is marked by ergative Case, whereas the object *ogi-a* ‘(the) bread’ bears absolutive Case; absolutive Case is not pronounced. However, if the sentence is turned into the progressive aspect, marked by *ari*, the subject bears absolutive rather than ergative Case, as shown in (16b):

- (16) a. emakume-a-k            ogi-a            jaten du.  
           woman-DET-ERG    bread-DET    eating has  
           ‘The woman eats (the) bread.’  
       b. emakume-a    ogi-a            jaten ari        da.  
           woman-DET    bread-DET    eating PROG    is  
           ‘The woman is eating (the) bread.’ (Laka 2006: 173)

Although this phenomenon is known as split ergativity, Laka (2006) argues that it is explained without appealing to the notion of a Case split.

As discussed by Bybee et al. (1994), progressive is realized syntactically in the form of a locative predication across typologically different languages. Laka (2006) notes that the progressive marker *ari* in (16b) can occur as the main verb taking a locative PP whose complement is an ordinary NP, as shown in (17):

- (17) a. emakume-a    dantza-n        ari        da.  
           woman-DET    dance-LOC    engaged is  
           ‘The woman is engaged in dance (The woman is dancing).’  
       b. [<sub>IP</sub> [<sub>DP</sub> emakume-a] [<sub>VP</sub> [<sub>PP</sub> dantza-n] ari] da] (Laka 2006: 174)

Laka proposes that *ari* in (16b) also occurs as the main verb taking a locative PP, but the PP contains a nominalized clause as its complement; the progressive construction is thus assumed to involve a biclausal structure, as shown in (18):<sup>10</sup>

- (18) a. emakume-a    ogi-a            ja-te-n            ari        da. (= (16b))  
           woman-DET    bread-DET    eat-NOML-LOC    engaged is  
           ‘The woman is (engaged in) eating the bread.’  
       b. [<sub>IP</sub> [<sub>DP</sub> emakume-a<sub>i</sub>] [<sub>VP</sub> [<sub>PP</sub> [<sub>NP</sub> [<sub>VP</sub> PRO<sub>i</sub> ogi-a ja(n)] ] n] ari] da] (Laka 2006: 174–175)

<sup>10</sup>Laka (2006) assumes that both external and internal arguments are generated in VP. Her analysis of the progressive in Basque will also be maintained under the view that external arguments are introduced by a functional head like *v* or Voice outside VP.

According to this analysis, the subject *emakumea* ‘the woman’ in (16b)/(18a) is the theme argument of the verb *ari*; it is the only NP to be Case-marked in the matrix clause. This accounts for why the subject is assigned absolutive rather than ergative Case. Note that the verb embedded in the nominalized clause (i.e. *jan* ‘eat’) takes PRO as its external argument; PRO is controlled by the matrix subject; the embedded verb is not involved in Case-marking of the matrix subject at all.<sup>11</sup>

### 3.2. The structure of biclausal *-te iru* progressives

Note that *iru* involved in *-te iru* progressives in Japanese independently occurs as the main verb in a locative construction, in particular, an existential construction, as shown in (19):

- (19) a. *Kodomo-ga kooen-ni i-ta.*  
 child-NOM park-in be-PAST  
 ‘A child (or children) was (were) in the park.’  
 b. *Gakusei-ga kyoositu-ni i-ta.*  
 student-NOM classroom-in be-PAST  
 ‘A student (or students) was (were) in the classroom.’

With this fact in mind, I propose that *-te iru* progressives can also involve the locative structure that is assigned to the *ari* progressive in Basque by Laka (2006). In particular, *iru* is the main verb that selects the subject as the theme argument, i.e. the direct internal argument; the VP headed by the embedded verb, which is nominalized by the gerundive suffix *-te*, occurs as the complement of a null postposition which heads the locative PP selected by *iru*, as illustrated in (20):<sup>12</sup>

- (20) a. *Kodomo-ga kooen-de ason-de-i-ta.*  
 child-NOM park-in play-GER-be-PAST  
 ‘A child (or children) was (were) playing in the park.’  
 b. [<sub>VP</sub> child<sub>i</sub>-NOM [<sub>PP</sub> [<sub>NP</sub> [<sub>VP</sub> PRO<sub>i</sub> park-in play]-GER] Ø<sub>p</sub>] be<sub>v</sub>]

The main verb *iru* mediates the predication relationship between the subject *kodomo* ‘child’ and the PP designating an abstract location of the subject referent (i.e. (at) playing in the park), as the verb *ari* does in the Basque progressive construction discussed above. I will argue below that the interpretations of *ippai* in *-te iru* progressives discussed in section 2 are accounted for straightforwardly under this analysis. Before doing so, I present data providing support for positing the structure in (20b) by indicating that (i) the embedded VP with the gerundive marker *-te* (henceforth, VP-*te*) is nominalized and (ii) the VP-*te* occurs as the complement of a null postposition.

<sup>11</sup>As regards aspect-based split ergativity, see Coon’s (2013) account of Chol and Baker’s (2014) of Shipibo along the same lines as Laka’s (2006) of Basque; it is argued for each language that progressive sentences can involve a biclausal structure.

<sup>12</sup>I assume for expository purposes that both external and internal arguments of lexical verbs are generated in VP. The present analysis of *-te iru* progressives can also be maintained under the view that external arguments are introduced by a functional head outside VP.

### 3.2.1. Nominal properties of VP-*te*

It is observed here that the VP-*te* can occur in two positions where NPs are assumed to have their Case feature licensed. This fact lends support to the view that the VP-*te* is nominalized in *-te iru* progressives.

First, let us consider the focus position of the cleft construction. It is observed by Sadakane and Koizumi (1995) that NPs without a Case particle may occur in the position, as shown in (21), whereas NPs with such a particle may not, as shown in (22):

- (21) a. Kinoo piza-o tabe-ta-no-wa Mary-da.  
 Yesterday pizza-ACC eat-PAST-NOML-TOP Mary-COP  
 'It's Mary that ate pizza yesterday.'
- b. Kinoo Mary-ga tabe-ta-no-wa piza-da.  
 Yesterday Mary-NOM eat-PAST-NOML-TOP pizza-COP  
 'It's pizza that Mary ate yesterday.' (Sadakane and Koizumi 1995: 10)
- (22) a. \*Kinoo piza-o tabe-ta-no-wa Mary-ga-da.  
 Yesterday pizza-ACC eat-PAST-NOML-TOP Mary-NOM-COP  
 'It's Mary that ate pizza yesterday.'
- b.??Kinoo Mary-ga tabe-ta-no-wa piza-o-da.  
 Yesterday Mary-NOM eat-PAST-NOML-TOP pizza-ACC-COP  
 'It's pizza that Mary ate yesterday.' (Sadakane and Koizumi 1995: 9)

Sadakane and Koizumi assume that the focus position is a Case position; given that the copula *da* consists of the postposition *de* and the verb *aru*, *de* is assumed to assign oblique Case to its complement (Nakayama 1989). Bare NPs may occur in the position in (21), whereas NPs with a Case marker may not in (22), being doubly Case-marked. Now note that as observed by Yoshinaga (2012), the VP-*te* can also occur in the focus position, which is shown in (23).<sup>13</sup> By contrast, VPs headed by a verb in the infinitive form, called *renyookei*, cannot, as shown in (24):

- (23) a. Akira-ga sono syoosetu-o kat-ta-no-wa  
 Akira-NOM that novel-ACC buy-PAST-NOML-TOP  
 [Kinokuniya-ni it-te]-da.  
 Kinokuniya-to go-GER-COP  
 'It is by going to Kinokuniya that Akira bought the novel.'

<sup>13</sup> The VP-*te* involved in *-te iru* progressives, unlike the adjunct VP-*te* in (23), cannot occur in the focus position of the cleft construction, as shown in (i):

- (i) \* Taroo-ga i-ta-no-wa [e-o kai-te]-da.  
 Taro-NOM be-PAST-NOML-TOP picture-ACC draw-GER-COP  
 (lit.) 'It is drawing a picture that Taro was.'

I assume that this example is ruled out for reasons that are independent of the nominal properties of the VP-*te*. See note 21.

- b. Hanako-ga sigoto-o ikka-getu yasun-da-no-wa  
 Hanako-NOM work-ACC one-month be.absent-PAST-NOML-TOP  
 [taityoo-o kuzusi-te]-da.  
 health-ACC ruin-GER-COP  
 ‘It is due to ruing her health that Hanako was absent from work for one month.’  
 (Yoshinaga 2012: 102)
- (24) a. \*Akira-ga sono syoosetu-o kat-ta-no-wa  
 Akira-NOM that novel-ACC buy-PAST-NOML-TOP  
 [Kinokuniya-ni ik-i]-da.  
 Kinokuniya-to go-INF-COP
- b. \*Hanako-ga sigoto-o ikka-getu yasun-da-no-wa  
 Hanako-NOM work-ACC one-month be.absent-PAST-NOML-TOP  
 [taityoo-o kuzus-i]-da.  
 health-ACC ruin-INF-COP

These facts indicate that the VP-*te* can be assigned oblique Case like regular NPs.

Second, the VP-*te* as well as regular NPs can be marked by the genitive Case particle *-no*, occurring within an NP, as shown in (25), which is observed by Nakatani (2013) and Shibatani (2017):<sup>14</sup>

- (25) a. [omoi nimotu-o mot]-te-no tozan  
 heavy baggage-ACC hold-GER-GEN hiking  
 ‘(lit.) holding heavy baggage’s hiking’/‘hiking with heavy baggage’  
 (Nakatani 2013: 65 fn. 3)
- b. [tosyokan-de hon-o yon]-de-no kaeri  
 library-at book-ACC read-GER-GEN return  
 ‘(lit.) having read a book at the library’s return’/‘a return home having read a book at the library’  
 (Shibatani 2017: 281 fn. 15)

Note that VPs headed by an infinitive verb cannot be marked by the genitive particle, as shown in (26):

- (26) a. \*omoi nimotu-o mot-i-no tozan  
 heavy baggage-ACC hold-INF-GEN hiking  
 ‘hiking with heavy baggage’
- b. \*tosyokan-de hon-o yom-i-no kaeri  
 library-at book-ACC read-INF-GEN return  
 ‘a return home having read a book at the library’

These facts corroborate the claim above that the VP-*te* occurs in Case-marked positions like regular NPs.<sup>15</sup>

<sup>14</sup> Shibatani (2017) proposes a different analysis of nominalization of the VP-*te* involved in (25b) from the present study, claiming that the stem of the verb heading the VP is nominalized before *-te* attaches to the VP.

<sup>15</sup> Watanabe (2010) argues that there are two types of particle *-no* that mark prenominal modifiers in Japanese. One is a genuine Case marker, which only attaches to NPs; the other

Given the contrast between the VP-*te* and the VP headed by an infinitive verb in the two Case-marked positions we saw above, it seems plausible to attribute the nominal properties of the VP-*te* to the gerundive marker *-te*. This is comparable to the view that nominal properties of English gerunds are ascribed to the suffix *-ing*. For example, Abney (1987: 222ff.) claims that *-ing* has the feature [+N]; it converts a projection of V into a nominal category by adjoining to it. I assume that *-te* also bears the feature [+N] and nominalizes the VP to which it attaches.<sup>16</sup>

### 3.2.2. VP-*te* selected by a null postposition

It is observed in this section that no phrasal categories can intervene between the VP-*te* and the verb *iru* in *-te iru* progressives. I argue that we can provide a natural account of this fact by assuming that (i) the VP-*te* occurs as the complement of a null postposition which heads the locative argument of *iru* and (ii) the null postposition is an affix that undergoes Morphological Merger with *iru*.

Note that the VP-*te* cannot be separated from *iru* by any phrasal category in *-te iru* progressives. For example, the subject NP cannot occur between them, as shown in (27b), which would be possible if the VP-*te* could be moved to the front of the subject. Moreover, adverbial phrases cannot intervene between the VP-*te* and *iru*, either, as shown in (28b, c):

- (27) a. Taroo-ga e-o kai-te-i-ru.  
 Taro-NOM picture-ACC draw-GER-be-PRES  
 ‘Taro is drawing a picture.’

is a linking element inserted morphologically, which can follow elements other than NPs. He claims that the two exhibit different distributions when the head noun that follows them undergoes ellipsis; *-no* as the linking element must be omitted for morphological reasons, while *-no* as the Case marker is retained. As shown in (i), the particle *-no* attaching to the VP-*te* is maintained under ellipsis:

- (i) [[Omoi nimotu-o mot]-te-no tozan]-wa [[kamera-dake-o  
 heavy baggage-ACC hold-GER-GEN hiking-TOP camera-only-ACC  
 mot]-te-no  $\emptyset_N$ -yorimo taihen-dat-ta.  
 hold-GER-GEN -than hard-COP-PAST  
 ‘(lit.) Holding heavy baggage’s hiking’ was harder than only carrying a camera’s.  
 ‘Hiking with heavy baggage was harder than only with a camera.’

This fact is consistent with our claim that the VP-*te* in (25) is marked by the genitive Case particle.

<sup>16</sup>Nakatani (2013) argues that the gerundive marker *-te* occurs as the T head whether it appears in the complement of a verb or in an adjunct clause. This view may be compatible with the present study to the extent that the projection of the T counts as a nominalized clause. A comparable approach to certain types of English gerunds is proposed by Reuland (1983), who claims that *-ing* is a realization of a nominal element in Infl. Noting that this issue is directly concerned with the ongoing debate on labeling algorithm (Chomsky 2013, 2015), I leave further investigation of the categorial status of *-te* for future research.

- b. \*E-o kai-te Taroo-ga i-ru.  
 picture-ACC draw-GER Taro-NOM be-PRES
- (28) a. Tasika kinoo kodomo-ga sono kooen-de  
 probably yesterday child-NOM that park-in  
 ason-de-i-ta.  
 play-GER-be-PAST  
 ‘Probably children were playing in the park yesterday.’
- b. \*Kinoo kodomo-ga sono kooen-de ason-de tasika  
 yesterday child-NOM that park-in play-GER probably  
 i-ta.  
 be-PAST
- c. \*Tasika kodomo-ga sono kooen-de ason-de kinoo  
 probably child-NOM that park-in play-GER yesterday  
 i-ta.  
 be-PAST

Similar restrictions are observed with respect to the relation between VP-*te* complements and the verbs or adjectives that select them such as *morau* ‘receive’, *kureru* ‘give’, and *hosii* ‘desirous’, as discussed by McCawley and Momoi (1986), Terada (1990), and Hayashi and Fujii (2015). These authors all claim that the verb with *-te* is required to raise overtly to the higher predicate by head movement; the examples comparable to (27b) and (28b, c) are ruled out because the movement is blocked in the configurations.

However, such an analysis encounters a problem if we consider the fact that various focus particles such as *-wa* ‘at least’, *-mo* ‘also’, *-sae* ‘even’, and *-bakari* ‘just’ can occur between the gerundive marker *-te* and *iru*, as noted by Martin (1975: 510ff.) and Nakatani (2013):

- (29) Boku-wa nai-te-wa/-mo/-sae/-bakari i-nakat-ta.  
 I-TOP cry-GER-at.least/also/even/just be-NEG-PAST  
 ‘I was not at least/also/even/just crying.’ (Nakatani 2013: 109)

Given that these focus particles are generally attached to a lexical element to its left due to their morphological properties, as argued by Kishimoto (2001, 2005), the example in (29) indicates that the verb heading the VP-*te* and *iru* do not compose a complex head.<sup>17,18</sup>

<sup>17</sup> Kishimoto (2005: 46–47) notes that complex predicates contained in causative and passive constructions in Japanese cannot be assumed to involve head movement on the basis of the fact that those predicates can be separated by focus particles.

<sup>18</sup> Noting that VP-*te* complements can be separated from the predicates that select them by a focus particle, as shown in (29), Hayashi and Fujii (2015: 50) claim that although the verb with *-te* undergoes head movement to the higher predicate in syntax, they do not get collapsed into one word in morphology. They suggest that though their analysis is contrary to the standard assumption about head movement, it is in line with the view that movement of heads in syntax and Morphological Merger of heads are independent operations (Ma-

I argue here that the present analysis of the structure of *-te iru* progressives, as shown in (20b), provides an alternative account of the examples in (27) and (28) that also fares well with the one in (29). Let us consider the structure that is assigned to the ungrammatical example in (27b) under our analysis, as shown in (30b):

- (30) a. \*E-o kai-te Taroo-ga i-ru. (= (27b))  
 picture-ACC draw-GER Taro-NOM be-PRES  
 b. [<sub>PP</sub> [<sub>NP</sub> [<sub>VP</sub> PRO<sub>i</sub> picture-ACC draw]-GER] Ø<sub>Pj</sub>] Taro<sub>i</sub>-NOM t<sub>j</sub> be-PRES

The VP-*te* occurs as the complement of the null postposition (P); the P is separated from the verb *iru* by the subject. The ungrammatical examples in (28b, c) are assumed to involve a similar configuration; the null P is separated from *iru* by an adverbial. By contrast, the null P is assumed to occur adjacent to *iru* in the grammatical counterparts in (27a) and (28a). Moreover, if we assume that the focus particles in (29) are attached to the gerundive marker *-te* to their left, the null P is also analyzed as being adjacent to *iru* in the example, as shown in (31):

- (31) a. Boku-wa nai-te-wa/-mo/-sae/-bakari i-nakat-ta. (= (29))  
 I-TOP cry-GER-at.least/also/even/just be-NEG-PAST  
 b. I<sub>i</sub>-TOP [<sub>PP</sub> [<sub>NP</sub> [<sub>VP</sub> PRO<sub>i</sub> cry]-GER-PRT] Ø<sub>P</sub>] be-NEG-PAST

Thus, the difference between the grammatical examples and the ungrammatical ones from (27) through (29) seems to correspond to the difference in whether the null P is adjacent to *iru* or not.

Note that this distribution of the null P is similar to the familiar distribution of a null complementizer (C) in English. The complement of a verb can be headed by either *that* or a null C, as shown in (32a). However, the null C cannot occur in the subject clause, extraposition, and topicalization contexts, as shown in (32b, c, d).<sup>19</sup>

- (32) a. It was widely believed [<sub>CP</sub> that/(?)Ø<sub>C</sub> [<sub>IP</sub> he liked linguistics]].  
 b. [<sub>CP</sub> That/\*Ø<sub>C</sub> [<sub>IP</sub> he liked linguistics]] was widely believed.  
 c. It seemed at that time [<sub>CP</sub> that/\*Ø<sub>C</sub> [<sub>IP</sub> David had left]].  
 d. [<sub>CP</sub> That/\*Ø<sub>C</sub> [<sub>IP</sub> John likes Mary]] Jane didn't believe.  
 (Bošković and Lasnik 2003: 527, 529)

Regarding the licensing of the null C, various analyses have been proposed in the literature (Kayne 1981a, Stowell 1981). On the basis of Pesetsky's (1992), Bošković and Lasnik (2003) argue that the null C is an affix that must undergo Morphological Merger with a lexical verb in PF. In order for an affix to be phonologically realized on a host, the two elements must be adjacent to each other in PF. Merger between the verb and the null C occurs in (32a), whereas it is blocked in

tushansky 2006).

<sup>19</sup> It is observed by Saito (1986) and Kishimoto (2006) that null complementizers in some varieties of Kansai dialects in Japanese exhibit the same syntactic distribution as the null complementizer in English.



(32b, c, d) because the two heads are not adjacent in PF. The null C counterparts in (32b, c, d) are ruled out due to the presence of a stranded affix.

It has often been claimed that certain Cs and Ps belong to the same syntactic category or have some syntactic or morphological features in common (Émonds 1985, Kayne 1981b, Cinque 1990, Grimshaw 2005). I propose that like the null C in (32), the null P involved in *-te iru* progressives is also an affix that undergoes PF Merger with the verb *iru*. The ungrammaticality of the examples in (27b) and (28b, c) is then straightforwardly accounted for; Merger between the null P and *iru* fails because they are not adjacent in PF.

One might wonder why the null P does not take the gerundive marker *-te*, which immediately precedes it, as the host of affixation. I assume that this is due to categorial restrictions imposed on the host of the null P; in particular, it must have the feature [+V]. Bošković and Lasnik (2003) suggest that the same kind of restriction is imposed on the host of the null C in English in explaining the fact that the null C cannot head the complement of a noun even if they are adjacent, as shown in (33):

- (33) a. I heard about the proof [<sub>CP</sub> that/\* $\emptyset$ <sub>C</sub> Mary did it].  
 b. I heard about the fact [<sub>CP</sub> that/\* $\emptyset$ <sub>C</sub> Mary did it].  
 (Bošković and Lasnik 2003: 534)

Noting that affixes in general have subcategorization requirements, Bošković and Lasnik claim that the null C in English can only be hosted by [+V] elements. If we assume that the gerundive marker *-te* bears not only the feature [+N], as proposed in section 3.2.1, but also [-V], it cannot serve as the host of the null P (see Abney (1987: 224 fn.62) for *-ing* in English).<sup>20,21</sup>

<sup>20</sup> Although overt Ps usually occur adjacent to their NP complement in Japanese, they are not considered to be affixes hosted by the NP because they can be separated from the NP by a focus particle, as shown in (i):

- (i) a. John-wa Mary-sae-kara tegami-o morat-ta.  
 John-TOP Mary-even-from letter-ACC receive-PAST  
 'John received a letter even from Mary.'  
 b. John-wa kureyon-bakari-de e-o kai-ta.  
 John-TOP crayon-just-with picture-ACC draw-PAST  
 'John drew pictures just with crayons.'

Note also that there are morphologically complex Cs and Ps in Japanese that consist of a C or P and a verb. For example, *toyuu* 'that' is a C composed of the C *to* 'that' and the verb *yuu* 'say' with the present tense marker *-ru* (Nakau 1973: 155); *nituite* 'about' is a P composed of the P *ni* 'to' and the verb *tuku* 'attach' with the gerundive marker *-te*. Kishimoto (2005: 59ff.) argues that some of these complex Cs and Ps have become a word through grammaticalization; they occur as an inseparable head in syntax. The presence of these complex Cs and Ps can provide further support for the claim made in the present study that there is a null affix P as well as a null affix C that is hosted by a verb.

<sup>21</sup> As mentioned in note 13, the VP-*te* involved in *-te iru* progressives cannot occur in the

### 3.3. Deriving the interpretations of *ippai* in *-te iru* progressives

With the structure of *-te iru* progressives proposed above in mind, we can provide a natural account of the interpretations of *ippai* discussed in section 2. First, as we saw in (8) and (9b), the adverb can be construed with the subjects of *-te iru* progressives involving an unergative or transitive verb. Note that the subjects of the verb *iru* in the simple existential construction can also be modified by the adverb, as shown in (34):

- (34) a. Kodomo-ga ippai kooen-ni i-ta.  
 child-NOM a.lot park-in be-PAST  
 'A lot of children were in the park.'  
 b. Gakusei-ga ippai kyoositu-ni i-ta.  
 student-NOM a.lot classroom-in be-PAST  
 'A lot of students were in the classroom.'

The adverb is construed with the subjects in (34) because the subjects are the direct internal argument of the verb. The subjects in (8) and (9b) are also assumed to be generated as the direct internal argument of *iru* under the present analysis, which accounts for why they are modified by the adverb; they are interpreted as if they were the subject of the embedded unergative or transitive verb just because they control PRO as the subject of the embedded verb.

Second, it is also predictable under the present analysis that the adverb cannot modify the indirect objects of ditransitive verbs that occur in *-te iru* progressives, as we saw in (12). This is because the indirect objects are not the direct internal argument of either the main verb *iru* or the embedded ditransitive verb.

Third, it is also accounted for why the adverb cannot modify the subjects of the complex verb construction in which an unergative or transitive verb is com-

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focus position of the cleft construction, as shown in (ia). There are two potential structures that are assumed to underlie the ungrammatical sentence in (ia), which are shown in (ib, c):

- (i) a. \*Taroo-ga i-ta-no-wa [e-o kai-te]-da.  
 Taro-NOM be-PAST-NOML-TOP picture-ACC draw-GER-COP  
 (lit.) 'It is drawing a picture that Taro was.'  
 b. Taro-NOM  $\emptyset_p$  be-PAST-NOML-TOP [<sub>NP</sub> picture-ACC draw-GER]-COP  
 c. Taro-NOM be-PAST-NOML-TOP [<sub>PP</sub> [<sub>NP</sub> picture-ACC draw-GER]  $\emptyset_p$ ]-COP

In (ib), the VP-*te* occurs in the focus position, while the null P that selects the VP is in the cleft clause. This structure would be ruled out given that postpositions in general cannot be stranded, separated from their complement, in Japanese. On the other hand, in (ic), the VP-*te* appears in the focus position accompanied by the null P. This structure may be more plausible given that PPs can occur in the focus position, as discussed by Sadakane and Koizumi (1995). However, it would also be ruled out under the present analysis; the null P must affix to an element having the feature [+V, -N]; given that the copula *da* consists of the postposition *de* and the verb *aru* (see section 3.2.1), *de* is assumed to bear the feature [-V, -N] (see Chomsky 1981), failing to host the null P. I assume that the adjunct VP-*te* occurring in the focus position in (23) is not accompanied by a null P affix.

bined with the raising verb *dasu* or *hazimeru*, as we saw in (15). This is because neither *dasu* nor *hazimeru* is a locative verb; they cannot select the subjects as their direct internal argument. Thus, the subjects are generated as the external argument of the first verb; the adverb cannot be construed with them.

To summarize, it has been argued in this section that *-te iru* progressives can involve a biclausal locative structure in which *iru* occurs as the existential main verb; the subject is selected as the theme argument of the verb; the complement clause is selected by a null postposition that heads an abstract locative argument of the verb. We have seen that this analysis provides us with a natural account of the fact that subjects of *-te iru* progressives exhibit a characteristic of the direct internal argument even if they embed an unergative or transitive verb.

#### 4. Monoclausal progressives

I have argued that *-te iru* progressives can involve a biclausal structure in which *iru* occurs as the main verb. It should be noted that this analysis has been based on examples of the progressives whose subjects are animate. It is indicated in this section that *-te iru* progressives with inanimate subjects have a monoclausal structure in which *iru* occurs as a functional head.

As shown in (35), *-te iru* progressives can take subjects that refer to inanimate entities:

- (35) a. Denwa-ga nat-te-i-ru.  
phone-NOM ring-GER-be-PRES  
'A phone is ringing.'
- b. Kaze-ga konoha-o yurasi-te-i-ru.  
wind-NOM leaf-ACC shake-GER-be-PRES  
'The wind is shaking leaves.'

However, it is well-known in the Japanese literature that the theme argument of *iru* cannot be inanimate when the verb occurs in the simple existential construction, as shown in (36a). Existence of inanimate entities is denoted instead by the verb *aru* 'be', as shown in (36b) (see Kishimoto 2005: 173):

- (36) a. \*Denwa-/Kaze-/Tukue-ga i-ru.  
phone-/wind-/desk-NOM be-PRES  
'There is a phone/wind/a desk.'
- b. Denwa-/Kaze-/Tukue-ga ar-u.  
phone-/wind-/desk-NOM be-PRES  
'There is a phone/wind/a desk.'

Then the subjects of *-te iru* progressives in (35), unlike those we saw in section 2 and 3, could not be generated as the theme argument of *iru*. A structure of *-te iru* progressives different from the one proposed in section 3 seems to exist.

It is notable here that according to Laka (2006), the progressive construction in eastern dialects of Basque involves a different structure from the construction in its central dialects discussed in section 3.1. This is indicated by the fact that the



With these facts in mind, I assume that *-te iru* progressives taking inanimate subjects involve a structure in which the VP-*te* is selected by a null affix P that is hosted by *iru*, as shown in (40b) for (40a):

- (40) a. Kaze-ga konoha-o yurasi-te-i-ru.  
 wind-NOM leaf-ACC shake-GER-be-PRES  
 ‘The wind is shaking leaves.’  
 b. [<sub>AspP</sub> [<sub>PP</sub> [<sub>NP</sub> [<sub>VP</sub> wind-NOM leaf-ACC shake]-GER] Ø<sub>P</sub>] be<sub>AspP</sub>]

Although *iru* is assumed to have become a functional head in *-te iru* progressives with inanimate subjects due to grammaticalization, as noted above, it seems to select the same kind of PP complement as the lexical verb *iru* involved in *-te iru* progressives with animate subjects. I suspect that *iru* as a functional head inherits the properties from *iru* as a lexical verb.<sup>23,24</sup>

It is predicted under this analysis that unlike the animate subjects of *-te iru* progressives we saw in section 2, their inanimate subjects cannot be modified by *ippai* unless they are the direct internal argument of the embedded verb. This prediction is borne out by the examples in (41). Because they involve causative transitive verbs, the inanimate subjects are assumed to be their external argument. The adverb is construed with the object, not with the subject, in (41):

- (41) a. Nikkoo-ga ippai yanegawara-o terasi-te-i-ta.  
 sunlight-NOM a.lot roof.tile-ACC shine-GER-be-PAST  
 ‘The sunlight was shining a lot of roof tiles.’  
 NOT: ‘A lot of sunlight was shining roof tiles.’  
 b. Yuki-no katamari-ga ippai ki-o yurasi-te-i-ta.  
 snow-GEN lump-NOM a.lot tree-ACC shake-GEN-be-PAST  
 ‘Lumps of snow were shaking a lot of trees.’  
 NOT: ‘A lot of lumps of snow were shaking trees.’

Note that the difference in the interpretations of the adverb between (8)–(9b) and (41), i.e. the one concerning whether it can modify the subject or not, would not be predicted under Kishimoto’s (2005, 2015) analysis of *-te iru* progressives because the subjects would all be assumed to be generated as arguments of the embedded verb (see section 2.2).

Furthermore, the following examples also suggest a difference in the syntactic status of *iru* between *-te iru* progressives with animate subjects and those with

<sup>23</sup> The structure of *-te iru* progressives with inanimate subjects given in (40b) is different from the structure of the progressive in eastern dialects of Basque in (37b) in some details. In particular, although the VP-*te* is nominalized and accompanied by a null P in (40b), Laka (2006: 189) suggests that the lexical verb is not in a nominalized form followed by a postposition (cf. (18)) but has the imperfective value in (37). Further research is needed to examine whether Laka’s analysis may be applied to the *-te iru* progressives in question.

<sup>24</sup> It is assumed that *-te iru* progressives with animate subjects are potentially structurally ambiguous; they can involve the biclausal structure headed by the lexical verb *iru*, as discussed in section 3, or the monoclausal structure headed by the Asp head *iru*.

inanimate subjects. Those taking animate subjects can occur as the complement of the indirect passive construction, as shown in (42):

- (42) a. Taroo-ga musuko-ni ikka-getu ason-de-i-rare-ta.  
 Taro-NOM son-DAT one-month play-GER-be-PASS-PAST  
 'Taro was (adversely) affected by his son idling for one month.'
- b. Taroo-ga Hanako-ni iti-niti-zyuu terebi-o  
 Taro-NOM Hanako-DAT one-day-through TV-ACC  
 mi-te-i-rare-ta.  
 watch-GER-be-PASS-PAST  
 'Taro was (adversely) affected by Hanako watching TV all the day.'

By contrast, *-te iru* progressives with inanimate subjects cannot become the complement of the indirect passive, as shown in (43) (Note that the examples are grammatical if the progressive marker *-te iru* is dropped):

- (43) a. \*Taroo-ga ame-ni iti-niti-zyuu hut-te-i-rare-ta.  
 Taro-NOM rain-DAT one-day-through fall-GER-be-PASS-PAST  
 'Taro was (adversely) affected by raining all the day.'
- cf. Taroo-ga ame-ni iti-niti-zyuu hu-rare-ta.  
 Taro-NOM rain-DAT one-day-through fall-PASS-PAST
- b. \*Taroo-ga kyoohuu-ni karada-o aot-te-i-rare-ta.  
 Taro-NOM strong.wind-DAT body-ACC stir-GER-be-PASS-PAST  
 'Taro was (adversely) affected by strong wind stirring his body.'
- cf. Taroo-ga kyoohuu-ni karada-o aor-are-ta.  
 Taro-NOM strong.wind-DAT body-ACC stir-PASS-PAST

Noting that functional heads in general exhibit ordering restrictions with respect to each other, Fukuda (2012) observes that Japanese aspectual verbs that he analyzes as Asp heads occur in fixed orders relative to the passive morpheme *-rare*, which is also assumed to be a functional head. Although he does not discuss *iru*, it is assumed to be an Asp head in (43a, b) under the present analysis because it occurs in a *-te iru* progressive with an inanimate subject. Then the ungrammaticality of the examples may be attributed to the order between *iru* and *-rare*. By contrast, the examples in (42) are predicted to be grammatical; because the progressives take an animate subject, *iru* can be a lexical verb, which can be embedded under the functional head *-rare* without being subject to any particular ordering restrictions as long as semantic and pragmatic conditions are met.

A similar contrast is observed between the two types of *-te iru* progressives with respect to embedding under the causative construction marked by the morpheme *-sase*. Those progressives taking animate subjects can occur as the complement of the construction, as shown in (44):

- (44) a. Taroo-ga Ziroo-o damat-te-i-sase-ta.  
 Taro-NOM Ziro-ACC be.silent-GER-be-CAUS-PAST  
 'Taro made Ziro stay being silent.'

- b. Sensei-ga seito-o kyoositu-de mat-te-i-sase-ta.  
 teacher-NOM student-ACC classroom-in wait-GER-be-CAUS-PAST  
 ‘The teacher made the student keep waiting in the classroom.’

By contrast, *-te iru* progressives with inanimate subjects cannot become the complement of the causative, as shown in (45) (Note that the examples are grammatical if the progressive marker *-te iru* is dropped):

- (45) a. \*Baiuzensen-ga ame-o hut-te-i-sase-ta.  
 seasonal.rain.front-NOM rain-ACC fall-GER-be-CAUS-PAST  
 ‘The seasonal rain front made the rain continue falling.’  
 cf. Baiuzensen-ga ame-o hur-ase-ta.  
 seasonal.rain.front-NOM rain-ACC fall-CAUS-PAST  
 b. \*Kyoohtuu-ga booto-o susun-de-i-sase-ta.  
 strong.wind-NOM boat-ACC move-GER-be-CAUS-PAST  
 ‘The strong wind made the boat keep moving.’  
 cf. Kyoohtuu-ga booto-o susum-ase-ta.  
 strong.wind-NOM boat-ACC move-CAUS-PAST

Given that the causative morpheme *-sase* is a functional head that introduces an external argument (Harley 2008), the ungrammaticality of the examples in (45a, b) may be ascribed to the order between *iru* and *-sase*. On the other hand, the examples in (44) are expected to be grammatical; because *iru* can be a lexical verb, it can be embedded under the functional head *-sase* with no particular ordering restrictions imposed on them.

To summarize, it has been claimed in this section that the structure of *-te iru* progressives with inanimate subjects is different from the one of those with animate subjects; it is a monoclausal configuration where *iru* occurs as a functional head. We have seen that the distinction of the structure of *-te iru* progressives gains support from the facts about the interpretation of a quantificational adverb and embedding under passive and causative constructions.<sup>25</sup>

## 5. Conclusion

The present study has focused on the syntactic structure of *-te iru* progressives in Japanese. I have proposed that they can involve two different structures attributed

<sup>25</sup> Given that *-te iru* progressives can involve a locative structure headed by the existential verb *iru*, as claimed in the present study, the question would arise as to why there is no progressive based on the other existential verb *aru* ‘be’ in Japanese. The verb *aru* occurs as the main verb of the simple existential construction, selecting an inanimate NP for the theme argument, as we saw in (36b). However, *aru* cannot head a progressive construction even if the subject is inanimate, as shown in (i):

- (i) \*Ame-ga hut-te-ar-u.  
 rain-NOM fall-GER-be-PRES  
 ‘Rain is falling.’

This question is left for future research.

to a difference in the syntactic status of the verb *iru*, which are parallel to a dichotomy of Basque progressives proposed by Laka (2006). One is a biclausal locative structure in which *iru* occurs as the existential main verb; the verb selects the subject as the theme argument, while it takes a PP headed by a null postposition as the location; the PP contains a nominalized clause whose subject is controlled by the matrix subject. It has been argued that with this structure, we can provide a natural account of apparently exceptional interpretations of a quantificational adverb observed in *-te iru* progressives. The other is a monoclausal structure in which *iru* occurs as a functional head encoding progressive aspect; the functional head selects a PP headed by a null postposition; the PP contains a nominalized clause where the subject is generated. I have claimed that *-te iru* progressives with inanimate subjects can only involve this monoclausal structure because *iru* cannot select those subjects. It has also been suggested that the monoclausal progressive has arisen from the biclausal one due to grammaticalization of the verb *iru*, following Laka's analysis of Basque progressives.

In closing, let us note some general consequences of the present study. First, it provides support for the view that there is grammatical isomorphism between progressive and locative, which has been known to be a widespread characteristic of human languages (Bybee et al. 1994). Second, this work corroborates the claim made by Kageyama (1993) and Kishimoto (2005) that certain quantificational adverbs in Japanese can serve as a reliable test for unaccusativity, that is, drawing a distinction between external and internal arguments. Furthermore, this article has presented a fresh look at the syntax of VPs with the gerundive marker *-te* in Japanese; they can be nominalized by *-te* and selected by a postposition, which may be null, like gerunds in English.

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## 【要 旨】

## 日本語の「ている」進行形の場所格構造について

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本稿は、日本語の「ている」進行形の文について、統語構造が異なる2つのタイプがあると論じる。一方では、「いる」が存在動詞として現れ、その項として主語名詞句と音形のない後置詞を主要部とする後置詞句を選択する。そして、その後置詞句内には、名詞化された節が現れ、その主語が「いる」の主語によってコントロールされるという二重節構造を成す。もう一方では、「いる」が相を表す機能範疇として現れ、単一節構造が形成される。無生名詞を主語とする「ている」進行形の文は、主語が「いる」によって選択されず、常に単一節構造を持つ。これによって、「ている」進行形の有生主語が、「ている」が付く動詞の種類に関わらず、内項の性質を示し得るのに対し、無生主語はそのような特徴を持たないという事実が説明される。さらに、ここで提案する2種類の「ている」進行形は、先行研究で分析されている、バスク語の2種類の進行形に対応すると主張する。