

Talmy's Lexical-Semantic Typology and Three Types of Directional PPs in Japanese

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0. Introduction

Talmy (1985, 1991) has shown that verb-framed languages (VFLs) such as French and Japanese differ from satellite-framed languages (SFLs) such as Dutch and English with respect to how semantic features related to motion events are mapped onto verbs and prepositions. Differences in lexicalization patterns in the two types of languages can surface in various ways. For example, in the first type of language, unergative motion verbs cannot appear with a directional PP, as shown in (1) and (2), whereas in the latter type of language, the same kind of verb can appear with a directional PP, as in (3) and (4):

- (1) *J'ai marché **au** parc. [VFL, French]
I have walked to.the park
'I walked to the park.'
- (2) */?*Taroo-ga kooen-**ni/-e** arui-ta. [VFL, Japanese]¹
Taroo-NOM park-to/-to walk-PAST
'Taroo walked to the park.'
- (3) Hij is **naar** huis gelopen [SFL, Dutch]
he is to house run
'He ran home.'

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¹ (2) contrasts with (i), in which the directional *-ni* and *-e* phrases can appear with unaccusative motion verbs:

- (i) Taroo-ga gakkō-**ni/-e** it-ta.
Taroo-NOM school-to/-to go-PAST
'Taroo went to school.'

- (4) I walked **to** the park. [SFL, English]

However, there seem to be counterexamples to the above description for VFLs, as illustrated in (5) and (6):

- (5) J'ai marché **jusqu'au** parc. [VFL, French]

I have walked until the park
'I have walked to the park.'

- (6) Taroo-ga kooen-**made** arui-ta. [VFL, Japanese]

Taroo-NOM park-until walk-PAST
'Taroo walked to the park.'

Concentrating on Japanese in this paper, we notice that the Japanese example in (6) minimally contrasts with that in (2). That is, in (2), the unergative motion verb *arui-ta* 'walk-PAST' cannot co-occur with the *-ni* phrase or the *-e* phrase. On the other hand, the same verb can co-occur with the *-made* phrase as in (6).

The principal goal of the present study is to provide a syntactic account of the contrast between (2) with the *-ni* and *-e* phrases and (6) with the *-made* phrase in Japanese.² This paper makes the following three proposals. First, unergative motion verbs in Japanese do not participate in the unergative-unaccusative alternation, in contrast to the same type of verbs in Dutch and English that do alternate, and they remain unergative. Second, the directional *-ni* and *-e* phrases in Japanese are secondary predicates and are always under VP (Takezawa 1993, 2001). In addition, such phrases being secondary predicates, their antecedents must also be under VP in order to satisfy a locality condition: the secondary predicate and its antecedent must m-command each other (Rothstein 1983, among others). Failure to satisfy this locality condition results in ungrammaticality. Third, the *-made* phrase is not a secondary predicate. Therefore, the locality condition does not apply to the *-made* phrase, hence the grammaticality of (6).

This paper is organized as follows. Section 1 provides a review of Takezawa (1993, 2001), who argues that the directional *-ni* phrase is a secondary predicate. Section 2 shows that, unlike the *-ni* and *-e* phrases, which are argument directional PPs, the *-made* phrase exhibits adjunct properties. Section 3 presents two desirable consequences of the proposed analysis of directional PPs in Japanese.

1. Secondary Predication Analysis of the Directional *-ni* Phrase

In this section, I will examine the properties of the directional *-ni* phrase by reviewing Takezawa (1993, 2001), who shows that it is a secondary predicate.

² As the gloss for *-made* 'until' in (6) suggests, in contrast to the two directional PPs, namely the *-ni* phrase and the *-e* phrase, the *-made* phrase is not a directional PP, but rather an event modifier, which I will discuss in Section 2.

1.1. Parallel Behaviors of the Spatial *-ni* Phrase and the Resultative *-ni* Secondary Predicate

At the outset of this analysis, it is necessary to introduce another spatial PP in Japanese, namely, the *-de* 'in/at' phrase. The *-de* phrase expresses location and can appear with unergative motion verbs, while the *-ni* and *-e* phrases express direction and cannot appear with unergative motion verbs, as has already been observed in (2). Consider (7):

- (7) a. Taroo-ga kooen-ni/-e/*-de tui-ta.
 Taroo-NOM park-to/to/in arrive-PAST
 'Taroo arrived at/at/in the park.'
 b. Taroo-ga kooen-de/*-ni/*-e arui-ta.
 Taroo-NOM park-in/to/to walk-PAST
 'Taroo walked in/to/to the park.'

The table in (8) summarizes the observations in (7):

(8) Spatial phrases with *-de*, *-ni*, and *-e* in Japanese

	Directional/locational	Unaccusative	Unergative
<i>-ni/-e</i>	directional	OK	*/?*
<i>-de</i>	locational	*	OK

Interestingly, *-ni* and *-de* are also used as suffixes for secondary predicates. As such, they exhibit almost the same behaviors as the spatial *-ni* and *-de* phrases.³ (9) shows that the resultative secondary predicate marked by *-ni* can appear with an unaccusative verb, but not with an unergative verb. On the other hand, the depictive secondary predicate marked by *-de* can appear with an unergative verb, but not with an unaccusative verb.

- (9) a. Aisukuriimu-ga katikati-ni/*-de koot-ta.
 ice cream-NOM solid-NI/-DE freeze-PAST
 'The ice cream froze solid.'
 b. John-ga kutakuta-de/*-ni odot-ta.
 John-NOM exhausted-DE/-NI dance-PAST
 'John danced (when he was) exhausted.'

A table summarizing (9) is presented in (10). Comparing (8) with (10) reveals the parallel behaviors of the directional and resultative *-ni* phrases on the one hand, and those of the locational and depictive *-de* phrases on the other.

³ As far as secondary predication is concerned, *-ni* can be used as a suffix for resultative secondary predicates, whereas *-e* cannot. Note that with unergative and unaccusative motion verbs, the *-ni* and *-e* phrases behave in the same manner. I assume that they share the same syntactic properties with respect to the environments discussed in this paper.

-de phrase is correct, while the unavailability of the same paraphrasing for the depictive *-de* phrases in (18b) and (19b) shows that the same analysis does not hold for them.

- (17) a. John-ga kooen-de ason-da. [locational *-de*]
 John-NOM park-in play-PAST
 ‘John played in the park.’
 b. (The event of) John’s playing in the park.
- (18) a. John-ga sakana-o nama-de tabe-ta. [depictive *-de*]
 John-NOM fish-ACC raw-DE eat-PAST
 ‘John ate the fish raw.’
 b. *(The event of) fish’s being eaten happened raw.
- (19) a. John-ga hadaka-de sakana-o tabe-ta. [depictive *-de*]
 John-NOM nude-DE fish-ACC eat-PAST
 ‘John ate the fish nude.’
 b. *(The event of) John’s eating fish happened nude.

The above event-modifier analysis of the locational *-de* phrase can be further supported by two VP constituency tests: pseudo-clefting in (20) and VP-preposing in (21). The results show that the locational *-de* phrase has different syntactic properties from the directional *-ni* and *-e* phrases. That is, the locational *-de* phrase is not selected by the verb, nor is it under VP, whereas the directional *-ni* and *-e* phrases are selected by the verb and are under VP.

- (20) a. Gakusee-ga kooen-de si-ta-no-wa aruku-koto da-ta.⁶
 student-NOM park-in do-PAST-NM-TOP walk-NM COP-PAST
 ‘What the students did in the park was to walk’.
 b. *Gakusee-ga eki-ni/-e si-ta-no-wa tuku-koto da-ta
 student-NOM station-to/-to do-PAST-NM-TOP arrive-NM COP-PAST
 ‘What the students did at the station was to arrive.’
- (21) a. ?[Aruki-sae]_k gakusee-ga kooen-de *t_k* si-ta.
 walk-even student-NOM park-in do-PAST
 ‘Even walked, the students did in the park.’
 b. *[Tuki-sae]_k gakusee-ga eki-ni/-e *t_k* si-ta.
 arrive-even student-NOM station-to/-to do-PAST
 ‘Even arrived, the students did in the station.’

Given that the directional *-ni* phrase is a secondary predicate, which requires its antecedent to be under VP, the ungrammaticality of unergative sentences with the directional *-ni* phrase, e.g. the sentence in (2), can be readily accounted for. That is, since the subject of an unergative motion verb is base-generated in the

⁶ NM stands for nominalizing morpheme.

Spec of *v* (Chomsky 1995), and is not under VP, the directional *-ni* phrase, which is under VP, cannot be predicated of the subject, hence the ungrammaticality. I assume that the same analysis holds for the directional *-e* phrase (see footnote 3).

Having seen how directional *-ni* and *-e* phrases are incompatible with unergative motion verbs, the following section will explore the syntactic properties of the *-made* phrase, which can appear with unergative motion verbs.

2. Syntactic Properties of the *-made* Phrase

Unlike directional *-ni* and *-e* phrases, the directional *-made* phrase can appear with unergative motion verbs. Recall the contrast between (2) and (6). One may argue that the grammaticality of (6) can be attributed to a change in verb class from unergative to unaccusative, which can be observed in SFLs such as Dutch and English.⁷ For example, Tsujimura (1994:342) argues that the grammaticality of (22b) with the *-made* phrase stems from the fact that the subject is locally associated with the floated numeral quantifier (NQ) in the base position, i.e. the object position of the verb (Miyagawa 1989). On the other hand, the subject in (22a) is not base-generated within VP and thus is not locally associated with the NQ, hence its ungrammaticality:⁸

- (22) a. ?*Kodomo-ga inu-to awatete san-nin hasit-ta.
 child-NOM dog-with hastily three-CL run-PAST
 'Three children ran hurriedly with a dog.'
- b. Kodomo-ga inu-to awatete san-nin kooen-made hasit-ta.
 child-NOM dog-with hastily three-CL park-until run-PAST
 'Three children ran hurriedly to the park with a dog.'

Tsujimura (1994:343) reports another contrast as follows, in which the difference

⁷ Given the *have-be* alternation in Dutch, the facts in (i) show that unergative motion verbs with a goal PP undergo a change in verb class from unergative to unaccusative (Zaenen 1993:22).

- (i) a. Hij heeft/*is gelopen. [unergative] b. Hij is/?heeft naar huis gelopen. [unaccusative]
 he has/is run he is/has to house run
 'He ran.' 'He has run home.'

⁸ Kizu (1996:194) provides the following facts:

- (i) a. ?*Gakusee-ga kooen-de isoide san-nin hasit-ta.
 student-NOM park-in hurriedly three-CL run-PAST
 'Three students ran in the park hurriedly.'
- b. Gakusee-ga kooen-made/?-ni isoide san-nin hasit-ta.
 student-NOM park-until/to hurriedly three-CL run-PAST
 'Three students ran to the park hurriedly.'

I do not agree with Kizu's judgment of (ib) with the *-ni* phrase, which to me is very bad. In addition, (ia) improves if the adverb *isoide* 'hurriedly' is replaced by *zensokuryoku-de* 'at full speed.' See also the discussion of non-standard judgments of floated NQs in adjunct-focus environments (Miyagawa and Arikawa 2004) towards the end of this section.

lies in the absence versus the presence of the *-made* phrase.

- (23) a. ?*Gakusee-ga kodomo-to inukaki-de san-nin oyo-da.
 student-NOM child-with dog.paddling-by three-CL swim-PAST
 ‘Three students swam with the children by dog paddling.’
 b. Gakusee-ga kisi-made kodomo-to inukaki-de san-nin
 student-NOM shore-until child-with dog.paddling-by three-CL
 oyo-da.
 swim-PAST
 ‘Three students swam to the shore by dog paddling with the children.’

Contra Tsujimura (1994), I propose (i) that the *-made* phrase neither is a secondary predicate, nor is selected by the verb, and (ii) that unergative sentences with the *-made* phrase remain unergative. There is evidence to support this analysis.

The first piece of evidence comes from an aspectual diagnostic in Japanese, namely, the *te-i-ru* test. As shown in (24) and (25), transitive and unergative verbs in the *te-i-ru* form are progressive.

- (24) Ima Taroo-ga ringo-o tabe-te-i-ru. [transitive]
 now Taroo-NOM apple-ACC eat-TE-I-RU
 ‘Taroo is eating an apple now.’
 (25) Ima Taroo-ga kooen-de hasi-te-i-ru. [unergative]
 now Taroo-NOM park-in run-TE-I-RU
 ‘Taroo is running in the park now.’

In contrast, unaccusative verbs in the same form are perfective.

- (26) Ima Taroo-ga tui-te-i-ru. [unaccusative]
 now Taroo-NOM arrive-TE-I-RU
 ‘Taroo has just arrived.’

Crucially, unergative motion verbs in the *te-i-ru* form appearing with the *-made* phrase are progressive, which suggests that they remain unergative.⁹

⁹ Note that *jusque* ‘until’ in French and *hasta* ‘until’ in Spanish display similar behaviors to *-made* ‘until’ in Japanese with respect to aspectual properties. French unergative sentences containing the *jusque* phrase do not exhibit typical achievement (or unaccusative) properties, as shown in (ib) and (iib) (Bonami 1997:3-4). Concerning (ii), achievements are typically felicitous in the *imparfait* under an episodic interpretation, but (iib) is not.

- (i) a. Paul a atteint le sommet à 8h32.
 ‘Paul reached the top at 8:32.’
 b. *Paul a marché jusqu’au sommet à 8h32.
 ‘Paul walked to the top at 8:32.’

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- (27) a. Ima Taroo-ga eki-made arui-te-i-ru.
 now Taroo-NOM station-until walk-TE-I-RU
 'Taroo is walking to the station now.'
- b. Ima Taroo-ga kooen-made hasit-te-i-ru.
 now Taroo-NOM park-until run-TE-I-RU
 'Taroo is running to the park now.'

The second piece of supporting evidence for the proposed analysis is based on VP constituency tests: pseudo-clefting in (28) and VP-preposing in (29).¹⁰ Both tests show that the *-made* phrase exhibits syntactic behaviors similar to the *-de* phrase, which is in sharp contrast to the behaviors of the *-ni* and *-e* phrases.

- (28) a. Gakusee-ga kooen-de si-ta-no-wa aruku-koto da-ta.
 student-NOM park-in do-PAST-NM-TOP walk-NM COP-PAST
 'What the students did in the park was to walk.'
- b. *Gakusee-ga eki-ni/-e si-ta-no-wa tuku-koto da-ta.
 student-NOM station-to/-to do-PAST-NM-TOP arrive-NM COP-PAST
 'What the students did at the station was to arrive.'
- c. Gakusee-ga kooen-made si-ta-no-wa aruku-koto da-ta.
 student-NOM park-until do-PAST-NM-TOP walk-NM COP-PAST
 'What the students did as far as the park was to walk.'
- (29) a. ?[Aruki-sae]_k gakusee-ga kooen-de t_k si-ta.
 walk-even student-NOM park-in do-PAST
 'Even walked, the students did in the park.'
- b. *[Tuki-sae]_k gakusee-ga eki-ni/-e t_k si-ta.
 arrive-even student-NOM station-to/-to do-PAST
 'Even arrived, the students did at the park.'
- c. ?[Aruki-sae]_k gakusee-ga kooen-made t_k si-ta.
 walk-even student-NOM park-until do-PAST
 'Even walked, the students did as far as the park.'

The contrast between the *-made* phrase and *-ni* and *-e* phrases shows that they have different syntactic properties: as mentioned earlier, directional *-ni* and *-e*

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- (ii) a. Paul atteignait le sommet quand il s'est mis à pleuvoir.
 'Paul was reaching the top when it started to rain.'
- b. *Paul marchait jusqu'au sommet quand il s'est mis à pleuvoir.
 'Paul was walking to the top when it started to rain.'

Consider also the Spanish example in (iii) (Jaume Mateu, p.c.):

- (iii) *Juan caminó hasta la cima en veinte minutos.
 'John walked up to the top in twenty minutes.'

¹⁰ My judgments concerning the *-made* PP are in sharp contrast with those of Kizu (1996), who considers (28c) and (29c) ungrammatical.

phrases are selected by the verb and are under VP, while the *-made* phrase is neither selected by the verb, nor under VP. If this is the case, the question arises as to what the contrasts in (22) and in (23), which Tsujimura (1994) regards as evidence for the verb-class change analysis of unergative motion verbs co-occurring with the *-made* phrase, stem from. One set of facts seems to be relevant to the above question: focused adjuncts in the preverbal position, which I will explore in what follows.

It should be noted at first that the improved example in (22b) includes a *-made* phrase between the floated NQ and the verb, which bears focus. The following example in (30) is based on Kizu's otherwise degraded sentence in (ia) in footnote 8; the PP *inu-to* 'with a dog' is inserted in the same position as the *-made* phrase in (22b):

- (30) Gakusee-ga kooen-de awatete san-nin inu-to hasit-ta.
 student-NOM park-in hastily three-CL dog-with run-PAST
 'Three students ran in the park hurriedly with a dog.'

I conjecture that the improved grammaticality of (22b) and (30) is related to Miyagawa and Arikawa's (2004) analysis of non-standard judgments of floated NQs in adjunct-focus environments. They argue that in Japanese, the subject is exceptionally allowed to scramble over the object, which is also considered to be scrambled, given an environment where a focused element appears to the left of the floated NQ:

- (31) a. Subj Obj adjunct_{FOCUS} NQ_{Subj} V [non-standard judgment]
 b. *Subj Obj NQ_{Subj} V [standard judgment]

It appears from the sentences in (22b) and (30) that focused adjuncts, which induce non-standard judgments of floated NQs, can appear in the position at issue in unergative sentences.¹¹ Given limitations of space, I leave further investigation of this issue for future research.

3. Consequences of the Proposed Analysis

The proposed analysis of the *-made* phrase has two desirable consequences. First, provided that the *-made* phrase occupies a different position from directional *-ni* and *-e* phrases, it would follow that the *-made* phrase should be able to appear with either the *-ni* phrase or the *-e* phrase in the same clause. (32) shows that this

¹¹ (i) sounds as good as (23b) to me. If my judgment is correct, then the contrast in (23) is due to some other factor than the alleged verb-class change.

- (i) Gakusee-ga puuru-de kodomo-to inukaki-de san-nin oyo-da
 student-NOM pool-in children-with dog.paddling-by three-CL swim-PAST
 'Three students swam in the pool by dog paddling with the children'.

prediction is borne out and that my analysis is on the right track.¹²

- (32) Taroo-ga Hanako-o uti-**ni**/**-e** mon-no-tokoro-**made** okut-ta.
 Taroo-NOM Hanako-ACC home-to/-to gate-GEN-place-until send-PAST
 'Taroo took Hanako home as far as the gate.'

The second consequence concerns the stacking of the postpositions *-made* and *-ni*. Consider (33).

- (33) a. Tokyo-**made-ni**-wa saiten-o oe-tai.
 Tokyo-until-to-TOP marking-ACC finish-want
 '(I) want to finish marking by the time I reach Tokyo (by train).'
 b. Taroo-ga syukudai-o 5-zi-**made-ni** sumase-ta.
 Taroo-NOM homework-ACC 5-hour-until-to finish-PAST
 'Taroo finished the homework by five o'clock.'

The present analysis can readily account for the reason why *-made* and *-ni* can stack. As has been shown, *-ni* is a directional postposition and *-made* is an event modifier. Because of their different syntactic properties, stacking is allowed.

4. Conclusions

I have shown in this paper that unergative motion verbs in Japanese do not participate in the unaccusative-unergative alternation, but rather remain unergative. Since *-ni* and *-e* phrases and their antecedents are required to be under VP to meet the locality condition, they cannot appear with unergative motion verbs. The present study has also revealed that what seem to be cases of unaccusative mismatches in Japanese stem from the fact that the *-made* phrase is not a secondary predicate, and is not subject to the locality constraint. Lastly, desirable consequences have been shown to result from the proposed analysis of the *-made* phrase, as it correctly predicts (i) its co-occurrence with the *-ni* phrase or the *-e* phrase in a single clause and (ii) the availability of postposition stacking.

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¹² Beavers (2004:14) provides a similar example:

- (i) Gakko-**ni**-wa genkan-**made**-sika hair-anakat-ta.
 school- to-TOP main.gate-to-only enter-NEG-PAST
 '(He) entered the school only as far as the main gate.'

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