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EVENT COMPOSITION, PATH AND DELIMITEDNESS^{*}

1 INTRODUCTION

The relation between lexical meaning and its surface realization has been a main target of linguistic studies. Since Chomsky (1970), lexical entries have been assumed to be independent of syntactic structure and to remain unchanged by composition of them. However, recent studies on lexical meanings have revealed that the combination of words affects overall meaning and syntactic realization. One such phenomenon, which is the focus of the present study, is the phenomenon known as 'conflation' (Talmy 1985). Specifically, we will deal with manner conflation in Japanese, contrasting it with its English counterpart.

It is now widely recognized that Japanese manner of motion verbs do not allow so-called goal expressions, as illustrated in (1) (cf. Yoneyama 1986, Kageyama and Yumoto 1997, Levin and Rappaport Hovav 1995).¹

(1) a.	*?Taro wa	gakko	ni	aruita			
	Taro TOP	school	NI-LOC	walk-PAST			
	(Lit.) Tare	o walked	to school.	,			
b.	*?Taro wa	gakko	ni	hasitta			
	Taro TOP	school	NI-LOC	run-PAST			
'(Lit.) Taro ran to school.'							

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(i) Taro wa shujii o yobu-tameni byooin ni hasitta

Taro TOP main doctor-ACC call -for hospital-GOAL run-PAST

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¹ Some Japanese native speakers might judge (1a,b) as acceptable, especially when the action is executed with a specific purpose. Consider (i).

^{&#}x27;Taro ran to the hospital, in order to call his doctor (to his home)'

Note that even in this, ni does not specify the terminal point of the action, but a direction. Thus, (i) does not imply that Taro reached the hospital. We exclude this 'directional' meaning of ni in this paper.

This situation is often contrasted with its English counterpart, where the attachment of goal phrases to manner of motion verbs does not induce ungrammaticality, as the English translations above suggest. However, this means that Japanese does not have manner conflation at all. In Japanese, we have another expression *made* 'until/as far as', which seemingly marks a goal. *Made* phrases can be used with the manner of motion verbs, as in the following (cf. Tsujimura 1991):

(2) a.	Taro Taro	wa TOP	gakko school	made until/not-beyond	aruita walk-PAST	'Taro walked to school.'
b.	Taro Taro	wa TOP	gakko school	made until/not-beyond	hasitta run-PAST	'Taro ran to school.'

As we will show in the next section, the examples in (2) have the same features as the English sentences *Taro walked to school* and *Taro ran to school*. This suggests that the ungrammaticality of the sentences in (1) is not due to the typological difference with respect to the conflation, but to the difference in the semantics of locatives. Thus, the aim of the present paper is to elucidate why the difference in grammaticality in (1) and (2) arises. In the course of discussion, we would like to show that the difference between them lies in the semantics of the two locatives, and in a constraint on event composition.

This paper is organized as follows: In the next section, we will first show that the construction in (2) and English manner of motion verbs with prepositional phrases behave similarly both syntactically and semantically. This similarity between *made* and goal expressions leads us to the question why *ni*, which is generally treated as a goal marker, cannot function in the same way as *to* phrases, and what the exact difference is between *made* and *to* phrases on one hand and *ni* phrases on the other. Before going into this, we will first discuss in section 3 the licensing condition of the *ni* phrase, and explain why it cannot appear in (1), based on the proposed generalization over the distribution of *ni* locative.² In section 4, we will explicate the semantic difference between *ni* and *made*, which determines the grammaticality in (1) and (2). We propose that under the theory of the Generative Lexicon (Pustejovsky 1995), there is a constraint on a lexical operation which explains this correlation between semantics and grammaticality. Section 5 will conclude.

2 ENGLISH GOAL EXPRESSIONS AND MADE

This section points out the similarities between the frame [manner of motion verb + goal] in English and the frame [manner of motion verb + made] in Japanese.

In the succeeding two subsections, we will show that the two constructions in English and Japanese exhibit the same aspectual property (2.1), and they both behave as syntactically unaccusative (2.2).

² The content of this section is a revised version of section 2 in Tanaka (2002).

2.1 Aspect

It has been pointed out that there are aspectual differences between sentences like *John walked* and *John walked to school* (Tenny 1994). Manner of motion verbs such as *walk* and *run* are Activity verbs, in the sense of Vendler (1957), and thus, they are aspectually atelic. Atelic verbs are verbs that do not have an intrinsic endpoint or terminal point. On the other hand, the presence of a goal phrase shifts their atelic nature to telic. The shift is evidenced by one of the most common tests for telic-atelic contrast, *for/in X minutes* test (cf. Dowty 1979, Tenny 1994).

- (3) a. John walked {for 30 minutes/*in 30 minutes}.
 - b. John ran {for 30 minutes/*in 30 minutes}.
 - c. The bottle floated {for 30 minutes/*in 30 minutes}.
- (4) a. John walked to school {*for 30 minutes/in 30 minutes}.
 - b. John ran to school {*for 30 minutes/in 30 minutes}.
 - c. The bottle floated into the cave {*for 30 minutes/in 30 minutes}.

The frame adverbial *in 30 minutes* can only go with a telic event, while the durational adverbial *for 30 minutes* usually modifies an event that does not have a terminal or culminating point. According to this adverbial test, English manner of motion verbs in isolation are, as observed in (3), atelic; however, when they are with goal phrases, the durational adverb is excluded in this context as in (4), and thus, they are telic.

Although Japanese does not allow ni 'to/in' to co-occur with manner of motion verbs, *made* 'until/as far as' can co-occur, and, interestingly, they show the same aspectual alternation as English goal phrases.

- (5) a. Taro wa {30 punkan/*30 pun-de} aruita Taro TOP {30 minutes for/30 minutes-in} walk-PAST
 - b. Taro wa {30 punkan/*30 pun-de} hasitta Taro TOP {30 minutes for/30 minutes-in} run-PAST
 - c. bin ga {30 punkan/*30 pun-de} nagareta bottle NOM {30 minutes for/30 minutes-in} float-PAST
- (6) a. Taro wa gakko made {*30 punkan/30 pun-de} aruita Taro TOP school until/as far as {30 minutes-for/30 minutes-in} walk-PAST
 - b. Taro wa gakko made {*30 punkan/30 pun-de} hasitta Taro TOP school until/as far as {30 minutes-for/30 minutes-in} run-PAST
 c. bin ga kisi made {*30 punkan/30 pun-de} nagareta
 - bottle NOM shore until/as far as {30 minutes for/30 minutes-in} float-PAST

In Japanese, X kan adverb functions as a durational adverb, which can accompany an atelic verb, and X-de adverb serves as a frame adverb. As observed in the contrast in (5) and (6), manner of motion verbs without made phrase are atelic, and the events described in (6) are telic.

2.2 Unaccusativity

The Unaccusative Hypothesis (UH) (Perlmutter 1978, Levin and Rappaport Hovav 1995) states that intransitive verbs do not form a syntactically homogeneous class, but split into two classes, according to the position where their subjects base generate.³

- (7) a. Unaccusative verbs: $__ [_{VP} V NP]$
 - b. Unergative verbs: NP [vP V]

This hypothesis states that the subject of an unaccusative verb behaves in the same way as the object of a transitive verb. In English, phenomena such as resultative constructions, *one's way* constructions, and transitive-intransitive alternation serve as unaccusative diagnostics (cf. Levin and Rappaport Hovav 1995).⁴

The transitive-intransitive alternation is typically observed in change of state verbs, as illustrated in (8).

- (8) a. The window broke.
 - b. The door opened.
 - c. The ice melted.
- (9) a. John broke the window.
 - b. John opened the door.
 - c. John melted the ice.
- (10) a. The bottle broke open.
 - b. The door opened grumbled.
 - c. The ice melted into water.
- (11) a. John broke the window open.
 - b. John opened the door grumbled.
 - c. John melted the ice into water.

The verbs in (8) are unaccusative intransitive verbs, where a causer argument can be added to form their transitive counterparts as in (9). The verbs in (8) can occur in resultative constructions, with result XPs predicating of the subject, as shown in (10). The transitive counterpart of these verbs can occur in this construction, but this time the result XPs predicate only of object NPs (the Direct Object Constraint (DOR), Levin and Rappaport Hovav 1995). The existence of the DOR on resultatives strongly supports the claim that the resultatives are a syntactic realization of unaccusativity.

Levin and Rappaport Hovav (1995) point out that when a manner of motion verb takes a goal expression, it shows transitive-intransitive alternation, and thus, it is unaccusative (the following data are cited from Rosen 1996:197).

(Rosen 1996:196)

³ Languages like English and Japanese exhibit 'deep' unaccusativity. Kageyama (1993) observes that Japanese also shows 'surface' unaccusativity like some Romance languages.

⁴ However, for the status of resultative constructions as unaccusative diagnostics, see also the recent study by Rappaport Hovav and Levin (2001).

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- (12) a. Sue danced.
 - b. The horse jumped.
 - c. Bill walked.
- (13) a. *Bill danced Sue.
 - b. ??The trainer jumped the horse.
 - c. *Sue walked Bill.
- (14) a. Sue danced across the room.
 - b. The horse jumped over the fence.
 - c. Bill walked home.
- (15) a. Bill danced Sue across the room.
 - b. The trainer jumped the horse over the fence.
 - c. Sue walked Bill home.

As shown in (13), the verbs in (12) usually do not have transitive counterparts. However, prepositional phrases expressing a path or a goal cause the verb phrases to take an additional external causer, as in (15).

Rosen (1996) argues that the above alternation between transitive and intransitive uses of verbs is predictable from the aspectual features. The verbs in (8) and (9) are aspectually telic, and cannot be modified by a durational adverb (e.g. John opened the door {*for three minutes/in three minutes}. The door opened {*for three minutes/in three minutes}. Basically, Activity verbs are mapped to unergative verbs, and change of state/location verbs (i.e. subcategories of telic verbs) are mapped to unaccusative. In the cases of (14) and (15), the addition of the prepositional phrases makes them telic, as shown in the previous section. If this correlation has to some extent universality, the same will be true of Japanese.

In Japanese, the phenomena serving as unaccusative diagnostics include quantifier floating (Miyagawa 1988, Kageyama 1993, Takezawa 2000), the interpretation of aspectual forms (Takezawa 1991), and the availability of *kake* constructions (Kishimoto 2000, Tsujimura 1991) argues that using quantifier floating and the interpretation of aspectual *-teiru* and *-tearu* forms, *made* constructions in Japanese are unaccusative events.

Let us take examples from the quantifier floating test.⁵ In (16a,b), it is shown that only the object of the verb *waru* 'break' can be modified by a numeral quantifier. The subject, as an external argument, cannot be predicated of, as the ungrammaticality of (16b) shows. The verb in (16c) is the intransitive counterpart of *waru*, which is morphologically changed into *wareru* 'break'. In this sentence, the modification to the surface subject is allowed.

(16) a. kodomo ga kabin o batto de mittu watta children NOM vase ACC bat with three-CL break-PAST 'Children broke three vases with the bat.'

⁵ We will not deal with the other two tests for unaccusativity here. Kishimoto (2000) claims that *kake* constructions (e.g. *sini-kake no inu* 'a dying dog') are trustworthy diagnostics for unaccusativity, but this test picks up a subset of unaccusative verbs. One reason for this is that this test is sensitive to intentionality or agentivity, and thus, it cannot be applied to *made* constructions here.

- b. ??kodomo ga kabin o batto de san-nin watta children NOM vase ACC bat with three-CL break-PAST '(intended) Three children broke the vase with the bat.'
- c. kabin ga jisin de mittu wareta vase NOM earthquake by three-CL break-PAST 'Three vases broke because of the earthquake.'

The ungrammaticality of (17) suggests that they are, unlike (16c), not unaccusative verbs, but unergative verbs:

(17) a. ?*gakusei ga kodomo to san-nin hasitta student NOM children with three-CL run-PAST
'Three students ran with the children.'
b. ?*gakusei ga kodomo to inukaki de san-nin oyoida student NOM children with dog paddling by three-CL swim-PAST
'Three students swam with the children by dog paddling.'

(Tsujimura 1991:102)

However, if we add *made* phrases to unergative verbs, the numeral quantifier *sannin* 'three (people)' can predicate of the subject.

(18) a.	gakusei student	ga kisi NOM shore	made as far as	inukaki dog paddling	de g by	san-nin three-CL	oyoida swim-PAST
	'Three st	tudents swam	to the sl	hore by dog	g padd	lling.'	
b.	gakusei student	ga kooen NOM park	made as far as	san-nin three-CL	hasitta run-PAS	i ST	
	'Three st	tudents ran to	the park	ς.'			(ibid.)

This suggests that Japanese has also unergative-unaccusative alternation based on the aspectuality of the event. In English, manner of motion verbs are delimited by goal expressions, which explicitly mark the endpoint of a motion. In Japanese, the delimiter is provided by *made* 'until/as far as', not by the so-called goal phrase *ni*. Then, the problem is how we should consider the status of *made* and *ni* in Japanese. Regarding this, at least two claims have been made. Tsujimura (1991) states that *made*, not *ni*, is a goal marker, and it marks the endpoint of the motion much more clearly than *ni*. However, Kageyama and Yumoto (1997) claims that *ni* IS a true goal marker. Since it is true that *ni* phrase serves as a goal expression in other contexts than (1), why only *made* can serve as a delimiter is worthy of careful scrutiny.

3 LICENSING NI LOCATIVE

3.1 Telicity and Locatives

Before going into a discussion on the difference between *made* and *ni*, let us first examine the condition that allows the locative *ni* phrase. We limit our attention here to the verbs which can be felicitously associated with locational meaning. Thus, we do not include in our discussion an agent marker *ni* in passive constructions, as in *Taro wa Hanako ni nagurareta* 'Taro was hit by Hanako'. In the passive construction, *ni* can be replaced by a periphrastic expression *ni yotte* 'by', which is not possible for locative *ni*.

The distribution of the locative ni phrase is often contrasted with that of the other locative, -de (e.g. Nakau 1998, Takezawa 2000. See also Jacobsen 1992). Nakau (1998) states that from a syntactic standpoint, ni prototypically marks an argument of a predicate, while a de marked phrase serves as an adjunct. Thus the following contrast arises:

(19) a.	Taro Taro	wa TOP	kooen park	{de/*ni} {DE-LOC/NI-LOC}	asono play-P	da AST	
	'Taro p	olaye	d at the	park.'			
b.	Taro	wa	kooen	{de/*ni}	hon	0	yonda
	Taro	TOP	park	{DE-LOC/NI-LOC}	book-	ACC	read-PAST
	'Taro r	ead a	ı book i	n the park.'			
с.	Taro	wa	tukue	{*de/ni}	hon	0	oita
	Taro	TOP	desk	{DE-LOC/NI-LOC}	book-	ACC	put-PAST
	'Taro p	out a	book oi	n the desk.'			
d.	konoha	a ga	jimen	{*de/ni}		otita	
	leaf	ŇŎ	M grou	ind {DE-LOC/NI-J	LOC} :	fall-PA	AST
	'A leaf	f has	fallen o	on the ground.'			

The predicates in (19a,b) do not require location arguments, which explains the ungrammaticality of ni phrases in these examples. On the other hand, the verb oku 'put' in (19c) takes three arguments, including a locative. *Otiru* 'fall' in (19d) is an intransitive verb which is morphologically related to its causative transitive counterpart *otosu* 'make something/someone to fall', which requires a locative.⁶

- (i) a. Taro wa kabin o yuka ni otosita Taro TOP vase ACC floor NI-LOC fall_{tran}-PAST
 - 'Taro dropped a vase onto the floor.'
 - b.Kabin ga yuka ni otita vase NOM floor NI-LOC fall_{intras}-PAST
 - 'A vase fell onto the floor.'

⁶ This is an instance of the widely acknowledged transitive-intransitive alternation in Japanese. Japanese has a rich morphological alternation between transitive and intransitive verbs (Jacobsen (1992)). In one productive type of the alternation pattern, the accusative marked element in a transitive sentence is realized as the subject of its intransitive counterpart, leaving other arguments unchanged, which is exemplified in (i).

The following lists some verbs that take ni:

(20) iku 'go', oku 'put', kasu 'lend', okuru 'send', otosu 'drop', otiru 'fall', kuru 'come', suwaru 'sit down', tsuku 'arrive', tsukeru 'attach' tsuku 'attach_{intr}.', deru 'go/come out'; umareru 'be born', haeru 'come out/up', arawareru 'appear',etc.

From the aspectual point of view, these verbs are classified into telic verbs.⁷

(21) a.	#Taro Taro	wa TOP	tukue desk	ni NH.OC	hon o book ACC	oita put-PAST	ga, but	
	hon book	wa TOP	tukue desk	no u of or	e ni 1 NI-LOC	nakatta be-not-PA	i AST	
	'Taro	put a	book or	n the de	sk, but th	e book w	as not on	it.'
b.	#Taro Taro	wa TOP	kabin vase	o y ACC fi	vuka Ioor	ni NI-LOC	otosita drop-PAST	ga, but
	kabir vase	n wa TOP	yuka floor	ni NI-LOC	nakatta be-not-PA	ST		
	'Taro	dropp	ed a vase	onto the	e floor, but	the vase	was not on	the floor.'
c.	#Konc leaf	oha ga N	a jim OM grou	en ni 1d NI-LA	otita OC fall-PA	. ga, ST but		
	kono leaf	ha w T(ra jimer DP ground	ni NI-LOC	nakatt be-not-P/	a AST		
	'A le	af fell	on the	ground,	but the le	eaf was n	ot on the	ground.'

In the sentences in (21), the second sentences are intended to cancel the result of the action, which fails to do so. This implies that the events described by the first sentences have to reach some endpoint. In these examples, the endpoints are equivalent to the goals of the themes of the motion, and they are marked by *ni*. In the verbs of appearance such as *umareru* 'be born', *haeru* 'come out/up' and *arawareru* 'appear', *ni* marked locatives describe not only the location where the subject entities emerge but also the goal of the appearing event. For example, a sentence like *zasso ga niwa ni haeta* 'Weeds appeared in the garden' describes how the weeds start growing above the ground and as a result, the weeds appear in the garden. Thus, we can say that *ni* phrase marks the final location of an event.

In the above examples, de and ni appear to be distributed complementarily. There are, however, some verbs that do allow both de and ni locatives. The following lists examples of such verbs (cf. Nakau 1998, Jacobsen 1992):⁸

⁷ Although the most common test for telic-atelic contrast is the X kan/-de adverbial test which we carried out in section 2, we have given the test for the implication of a terminal point here. The reason why we do not offer the test for these examples is that for oku 'put' and otiru 'fall _{intr}', X kan phrase can co-occur with them, specifying their resultant states. For details of the ambiguity of X kan, see the discussion below.

⁸ These examples are data which I have modified from data in Jacobsen (1992:189).

(22) a.	Taro	wa	futon	{de/ni}	neta
	Taro	TOP	futon	{DE-LOC/NI-LOC}	sleep-PAST
	'Taro	slept	on the fu	ton.' / 'Taro lied o	n the futon.'

- b. Kodomo ga yabu no naka {de/ni} kakureta child(ren) NOM bush of inside {DE-LOC/NI-LOC} hide-PAST 'Children hid themselves in the bush.'
- c. Taro ga ano mise no kado {de/ni} tatta Taro NOM that shop of corner {DE-LOC/NI-LOC} stand-PAST 'Taro stood the corner of that shop.'

What is interesting here is that the selection of the locatives contributes to the semantic property of the verbs. With the *ni* locatives, the sentences in (22) describe 'changes (of location)', rather than 'actions/motions'. This is reflected in the interpretation with regard to the aspectuality.

(23) a.	Taro wa futon ni {5 funkan/5 byoo-de} neta
	Taro TOP futon NI-LOC {5 minutes-for/5 seconds-in} sleep-PAST
	'Taro fell on the futon {for 5 minutes/in 5 seconds}.'
b.	Taro wa futon de {5 funkan/*5 byoo-de} neta
	Taro TOP futon DE-LOC {5 minutes-for/5 seconds-in} sleep-PAST
	'Taro slept on the futon {for 5 minutes/in 5 seconds}.
(24) a.	Kodomo ga yabu no naka ni {5 funkan/5 byoo-de} child(ren) NOM bush of inside NI-LOC {5minutes-for/5seconds-in}
	kakureta hide-PAST
	'Children hid themselves in the bush {for 5 minutes/ in 5 seconds} '
b.	Kodomo ga vabu no naka de {5 funkan/*5 byoo-de}
	child(ren) NOM bush of inside DE-LOC{5 minutes-for/5 seconds-in}
	kakureta
	hide-PAST
	'Children hid themselves in the bush {for 5 minutes/ in 5 seconds} '
(25) a.	Taro ga ano mise no kado ni {5 funkan/5 byoo-de}
	Taro NOM that shop of corner NI-LOC{5minutes-for/5seconds-in}
	tatta stand-PAST
	'Taro stood up at the corner of that shop {for 5 minutes/ in 5 seconds}.'
b.	Taro ga ano mise no kado de {5 funkan/*5 byoo-de}
	Taro NOM that shop of corner DE-LOC {5minutes-for/5seconds-in}
	tatta stand-PAST

'Taro stood at the corner of that shop {for 5 minutes/in 5 seconds}.'

The (a) sentences above, where ni locatives are used, allow X-de adverb. These sentences also allow a durational adverb (i.e. X kan), which modifies the resultant state of some telic verbs (see footnote 1). It is known that this phenomenon is also observed in English. For example, in (26a), the *for* phrase modifies the period of

time when the book is on the desk.

- (26) a. He put the book on the desk for an hour.
 - b. John walked home for 3 hours.

The same kind of reading is available for examples (23a), (24a) and (25a). This is why these sentences allow not only the time-bounded (frame) adverb, but the durational adverb.

On the other hand, (b) examples above only allow the durational adverb, and do not tolerate the time-bounded adverb, which suggests that they have only atelic uses. Ahn (2000:227) also points out that the verb *neru* 'go to bed/ sleep' cannot take a *ni* phrase to express location when it is modified by a manner adverb, such as *guuguu* 'sleep snoring'.⁹

(28) Taro wa futon {*ni/de} guuguu ne-teiru Taro TOP futon {NI-LOC/DE-LOC} snoring sleep-ASP-PRES 'Taro is sleeping on the futon snoring.'

The manner adverb modifies an activity, not a state, and thus the incompatibility with the ni locative results.

A tentative generalization from the above observations is stated in (29).

(29) Ni locative, not de locative, is allowed in verbs that are aspectually telic.

3.2 Existentials and Locatives: Toward Event Decomposition

We have shown so far that ni is consonant only with telic verbs. However, the distributional contrast between ni and de is not restricted to the telic-atelic contrast. Other context in which ni and de behave differently is the existential constructions. In existential constructions, the locative is usually realized as ni, not de, as in (30).¹⁰

(30) a.	Kodomo	ga	kooen	{ni/*de}	iru
	child(ren)	NOM	park	{NI-LOC/DE-LOC}	be-PRES
	'There ar	e child	lren in the	park'	
b.	Kabin	ga	genkan	{ni/*de}	aru
	_{vase}	NOM	entrance hall	{NI-LIC/DE-LOC}	be-PRES
	'There is	a vase	in the entr	ance hall.'	

It should be noted that Nakau (1998) offers an apparent counterexample to this

⁹ Guuguu is onomatopoeic, which serves as a manner adverb. The gloss I have given here is not fully correct, due to the lack of a corresponding expression in English.

 $^{1^{10}}$ Japanese has two existential verbs, *iru* and *aru*. *Iru* is for animate subjects, and *aru* is for inanimate subjects.

generalization: when the subject is an event nominal, such as *sotugyoosiki* 'graduation ceremony', only *de* locative can co-occur with the verb:

(31) Sotugyoosiki ga koodoo {*ni/de} aru graduation ceremony NOM hall {NI-LOC/DE-LOC} be-PRES '(Lit.) The graduation ceremony is at the hall.'
 'The graduation ceremony will be held at the hall.'

However, the uses of aru in (30b) and (31) should be distinguished, as Nakau (1998) argues. He claims that the former aru is a stative verb, while the latter is a process verb, presenting the following as supporting evidence.

(32) a.	*Asu, tomorrow	hondana bookshelf	ni NI-LOC	chikyuugi ^{globe}	ga NOM	aru be-PRES	
	(Lit.) To	morrow,	there is a	a globe on	the bo	okshelf.'	
b.	Asu, tomorrow	koodoo hall	de so DE-LOC	tugyoosik graduation c	i eremony	ga y NOM	aru be-PRES
	'(Lit.) To	morrow,	the grad	uation cere	mony	is at the I	hall.'
'Tomorrow, the graduation ceremony will be held at the hall.'							the hall.'
						(Na	kau 1998:13)

Stative verbs in the present tense refer to a present event; on the other hand, active verbs in the present tense refer to a future event. This property induces the above contrast: aru in (32a) cannot describe a future event, which implies the verb is a stative. In contrast, aru in (32b) does refer to a future event, and thus, it is a process verb.

In the preceding section, we have produced a generalization (29) to describe the occurrence of *ni* locative in terms of telicity. The fact that *ni* can co-occur with existential verbs is problematic for this generalization, since they are naturally atelic. It can be argued that the *ni* phrases in existential sentences and other non-stative sentences should be distinguished, because the former merely specifies a location, and the latter identifies a goal. Note, however, that the latter sense of *ni* entails the former: *Taro wa tukue ni hon o oita* ' Taro put a book on the table' entails *hon ga tukue ni aru* 'There is a book on the table.' In light of this, we would like to argue that the ambiguity of *ni* between 'location' and 'goal' is due to the semantics of the verb it co-occurs with, not to that of the locative itself. Given a single meaning for *ni*, then, what is the common feature that enables these verbs to license the occurrence of *ni*?

To explicate this, we have to introduce a set of event types. We assume here the linguistic level of event structure, as a level to represent the aspectual information of events. At this level of representation, at least four aspectual categories are distinguished: Activity, Accomplishment, Achievement and State. These terms are originally from Vendler (1957), which is the leading work on this area. Although Vendler's (1957) verbal classification is based on the 'length' of events, which leads him to grouping Achievement and State in one class. However, as the succeeding works show, 'delimitedness' (i.e. telicity) is now considered to be a linguistically relevant feature (cf. Dowty 1979, Bach 1981, Tenny 1994, among others). From this point of view, we classify Accomplishment and Achievement on one hand, and Activity and State on the other.

Telic events (i.e. Accomplishment and Achievement) form complex events, since they have a process part and a (resultant) state part. We assume event decomposition for these classes of predicates, following Grimshaw (1990) and Pustejovsky (1995a, 1995b). Based on this idea, Pustejovsky (1995a) proposes three types of event: Transition, Process, and State. Transition is a complex event, which comprises Process and State. In this system, the difference between Accomplishment and Achievement is represented by the placement of headedness on subevents.

Following Pustejovsky's (1995a) notation, we roughly represent in (33) the verbal types discussed above:



The event marked by '*' functions as a 'head' (prominent component) of the structure. Accomplishments are 'left-headed', and Achievements are 'right-headed', as in (33b), and (33c), respectively.

Given this typology of event structure, it can be said that ni locative is allowed in (33b,c,d). It is now clear that all the contexts licensing the ni locative have a State component in its meaning. The final version of the ni licensing context may be thus stated:¹¹

(34) If a Japanese locative -ni is allowed in an expression describing an event, the event contains a state component in its event structure.

By utilizing the decompositional analysis of event structure, we can capture the common property that *ni* licensing context possesses. One point, however,

- (i) Koto ni asobu
 - old-capital NI-LOC play

¹¹ A possible counterexample to this generalization is when an activity verb takes a ni locative, as in (i).

^{&#}x27;(Lit.) (I/Someone) play(s) in the old capital (namely Kyoto, Nara...)'

This kind of expression sounds stale, and is rather a fixed expression. Moreover, the meaning of the sentence is different from 'usual' one; (i) means that the person is staying at Kyoto (or Nara), rather than just gallivanting.

should be added to this generalization. The statement in (34) does not imply that all telic verbs allow the *ni* locative. For example, *sinu* 'die' in *Taro wa niwa* $\{*ni/de\}$ sinda 'Taro died in the garden' does not allow *ni*.¹² The anomaly of the locative in this sentence is due to the fact that the verb describes a change of state, not a change of location: the final state of the verb cannot be a locational goal. Thus, the complete generalization of the distribution of *ni* phrase should refer to this restriction. This information will be represented in a FORMAL quale in Qualia structure along the lines of Pustejovsky (1995).

A possible support for the description in (34) is provided by Nakajima (2001), where locative constructions in Japanese are claimed to be the counterparts of locative inversion constructions in English (see also Nakau 1998). Nakajima (2001) proposes a necessary condition for verbs in the locative inversion construction, which requires that the lexical representations for verbs include a headed subeventual structure designating a result state, the quale for which means that something is at some place. This is the same condition on *ni* locative which we gave in (34). Schematically, Japanese locative constructions are represented as in (35). (36) is data from Nakajima (2001:52).

(35)	$\begin{bmatrix} PP & NP - ni - wa \end{bmatrix} \begin{bmatrix} NP - ga \end{bmatrix} \begin{bmatrix} V & V - te - iru \end{bmatrix}$ NI TOP NOM TE-be-PRES
(36) a.	kouen– ni– wa takusanno kodomotachi-ga asonde-iru park LOC TOP many kids NOM play
b.	'In the park are playing many kids.' kono biru —no nikai -ni-wa koureisha —ga this building GEN second floor LOC TOP senior persons NOM
	hataraite-iru work
c.	'On the second floor in this building are working senior persons. kyoushitsu –ni - wa shin-nyuusei-ga matte-iru classroom LOC TOP new pupils NOM wait
	'In the classroom are waiting new pupils.'

It is interesting to see that *ni*, not *de*, is used in this construction, since the main verbs in (36) designate activities, neither accomplishments nor achievements. The word order of the construction is fixed, and thus, we cannot say *takusanno* kodomotachi ga kooen ni asondeiru 'A lot of children are playing in the park'.

- (i) a. * Neko ga niwa ni sinda cat NOM garden NI-LOC die-PAST 'A cat died in the garden.'
 - b. Neko ga niwa ni sin-deiru cat NOM garden NI-LOC die-ASP-PRES

'A cat is dead in the garden (or There is a cat dead in the garden).'

According to Ahn (2000), this type of phenomenon is less productive in Japanese than in Korean.

¹² Ahn (2000) points out that *sinu* 'die' may allow *ni* when it is attached by the aspectual form – *teiru*, froming *sin-deiru*.

Moreover, the locatives cannot be replaced to *de* locatives without any drastic change in meaning (cf. Nakajima 2001).

kodomotachi-ga (37) a. kouen-de- wa takusanno asonde-iru park DE TOP a lot of kids NOM play-Asp-PRES 'A lot of children are playing in the park.' kono biru – no nikai - de- wa koureisha- ga b. building of second floor DE TOP senior persons NOM this hataraite-iru

work-Asp-PRES

'(Some) old people are working on the second floor of this building.' kyousitsu de wa shin nyuusei-ga matte-iru

c. kyousitsu de wa shin nyuusei-ga matte-iru classroom DE TOP freshmen NOM wait-Asp-PRES 'Freshmen are waiting at the classroom.'

The difference in meaning is observable in the interpretation of V-te-iru. V-teiru is formed by a main verb, an infinitival suffix te, and existential iru 'be'. It may be used as an aspectual suffix, and when it is used as such, it has (at least) two interpretations, depending on the lexical aspect of the attached verb.¹³ With Activities, it induces a progressive meaning. In (37), the interpretation of V-teiru is an aspectual one, that is, a progressive. On the other hand, V-te-iru in (37) remains in its original existential meaning, and it seems that it does not serve as an aspectual suffix. Thus, in (36), ni is considered to be licensed by iru 'be'. The interesting point is that for some unidentified reason, the construction forces V-te-iru not to be interpreted aspectually.

Let us now go back to the discussion on the ungrammaticality presented in (1), repeated here as (38).

(38) a.	*?Taro Taro	wa TOP	gakko school	ni NI-LOC	aruita walk-PAS	'(Lit.) Taro walked to school.'
b.	*? Taro ^{Taro}	wa TOP	gakko school	ni NI-LOC	hasitta run-PAST	'(Lit.) Taro ran to school.'

It is now clear why these sentences are ungrammatical in Japanese. *Aruku* 'walk' and *hasiru* 'run' are Activity verbs, which means that they do not include a State component in their structure. The fact that they are atelic activity verbs is evidenced by the following:

(39) a.	Taro Taro	wa TOP	{30 punkan/*30 pun-de} {30 minutes-for/30 minutes-in}	aruita walk-PAST
	'Taro	walk	ed {for 30 minutes/in 30 m	inutes}.'
b.	Taro	wa	{30 punkan/*30 pun de}	hasitta
	Taro	TOP	{30 minutes-for/30 minutes-in}	walk-PAS I
	'Taro	walk	ed {for 30 minutes/in 30 m	inutes}.

¹³ See Shirai (2000) for interpretations of -teiru and its relation to lexical meaning and syntax.

The intended situation in (38) can be realized with the help of compound verbs such as *arui-te-iku* 'go by walking', and *hasit-te-iku* 'go by running'.

(40) a.	Taro	wa	gakko	ni arui-te-iku			
	Taro	TOP	school	NI-LOC	walk-TE-go-PRES		
	'Taro w	alks to s	school.'				
b.	Taro	wa	gakko	ni	hasit-te-iku		
	Taro	TOP	school	NI-LOC	run-TE-go-PRES		
	'Taro r	uns to sc	hool.'				

The verb *iku* 'go' is a telic verb, as implied by example (41), and it takes the *ni* locative to indicate its goal. The compound verbs in (40) have inherited the telic property from *iku*, as shown in (42), and as a result, they can co-occur with a *ni* locative.¹⁴

(41)	Taro wa gakko ni {?30 punkan/30 punde} itta Taro TOP school NI-LOC {30 minutes-for/30 minutes-in} go-F	PAST
(42) a.	Taro went to school {for 30 minutes/ in 30 minutes}.'Taro wa gakko ni{??30 punkan /30 punde}Taro TOP school NI-LOC {30 minutes-for/ 30 minutes-in}	ł
	arui-te-itta walk-TE-go-PAST	
	'Taro walked to school {for 30 minutes/in 30 minute	es}.'
b	Tarowagakkoni{??30punkan/30punkan/30TaroTOPschoolNI-LOC{30minutes-for/30minutes	de} es-in}
	hasit-te-itta run-TE-go-PAST	
	'Taro ran to school {for 30 minutes/ in 30 minutes}.	,

To summarize this section: we have shown that the ungrammaticality of ni locatives in manner of motion verbs in Japanese can be reduced to the aspectual property. Only verbs with a State component in the event structure can allow ni phrases. We have relied on the subeventual (i.e. decompositional) analysis of Vendler's aspectual classes, and show that we can draw a proper generalization for the ni licensing under this analysis.

4 DELIMITING EVENTS AND EVENT COMPOSITION

4.1 Made as a Goal Expression?

Let us review the questions we posed in section 1 and 2.

¹⁴ For a detailed discussion of the event composition of V-te-iku, see Tanaka (2002).

- (I) Why cannot a locative marked by *ni* be used with manner of motion verbs?
- (II) Why can (only) *made* be used with manner of motion verbs, exhibiting the same behavior as English goal expressions?

The first question was resolved by the condition (34). We have shown that the ungrammaticality is captured by the general condition on the locative. However, this condition is just an observational generalization, and does not fully 'explain' the existence of such a generalization. To let our steps forward to the 'deeper' understanding of this phenomenon, let us then turn to the second question.

English allows prepositional phrases to co-occur with manner of motion verbs, in contrast to Japanese, as noted above.

- (43) a. John walked to school.
 - b. John ran to school.
 - c. The bottle floated to the bank.
 - d. The rat ran under the table.

As we have shown in section 2, these sentences describe telic events. Recall here that a telic event is a complex event, which comprises two subevents, a process and a state. The events in (43) are also considered to subsume two events to form telic events. Pustejovsky (1995a, 1995b) proposes that the events in (43) are formed by a lexical operation called 'co-composition', which is defined as follows:

 (44) Co-composition: where multiple elements within a phrase behave as functors, generating new non-lexicalized senses for the words in composition. (Pustejovsky 1995b:61)

The verbs in (43) fall within an Activity class, which does not have a state component. Through a co-compositional operation, the semantic representation of an atelic process event shifts to a telic event, with a complex event structure. The aspectual alternation is due to this change in the event structure.

It is apparent that Japanese *ni* locative does not induce this co-compositional operation, since it is not even allowed in the context of activity verbs. Since *ni* marks a goal in the context of (34), it is suggested that an event composition may not be a merely conjunctive operation. Then, we can now posit a more specific question: in what context or condition is the co-composition available? To answer this question, we will first discuss the semantic differences of two locatives.

There have been at least two positions with regard to what is marked by these locatives. As noted above, one is supported by Tsujimura (1991), which claims that *made* is a goal marker. The other claims that *ni*, not *made*, is a true goal phrase (Kageyama and Yumoto 1997).

Kageyama and Yumoto's (1997; K&Y, hereafter) claim is based on the observation that the location marked by ni implies that the activity ends at that point, while the location marked by *made* does not have the same implication.

Thus, the following contrast arises (cited from K&Y 1997:141):

(45) a.	Gogoome the fifth point	made until	basu ^{bus}	de by	itta go-PAST	ga, but	sokokara there-from	wa, TOP
	aruite walk-TE	noboti climb-F	ta PAST					
	'(I) climbed	up to th	e fifth	point	by bus bu	t from	there climbe	d on foot.'
b.	#Gogoome 1	ni	basu	de	itta	ga, s	sokokara	wa,
	the fifth point 1 aruite	NI-LOC nobotta	bus	by	go-PAST	but t	here from	TOP
	walk-TE o	climb-PAS	ST					
	'(I) went to	the fif	th poi	nt by	bus but f	rom t	here climbe	d on foot.'

In (45b), the implication induced by ni blocks the addition of the second sentence: climbing the mountain ends at the fifth point, because it is the goal of the climbing. On the other hand, in (45c), the mountain climbing means a base of the

climbing. On the other hand, in (45a), the mountain climbing may go beyond that point, because *made* simply specifies the distance gone so far. Thus, the second sentence can be added. Following K&Y (1997), we regard *made* as a marker for 'scope' of motion: it specifies the distance of a path. *Made*, as a marker for a scope, serves as a modifier of a path. In this sense, *made* bears the same function as a quantity expression such as *l kirometoru* '1 kilometer'.

(46) a.	Kono this	michi street	0 ACC	eki station	made as far as	aruita walk-PAST						
	'(Lit.) (I)	(Lit.) (I) walked this street until the station.'										
	'I walked	down th	is stre	et to the	station.'							
b.	Kono this	michi street	0 ACC	1 kiron 1 kilome	netoru ter	aruita walk-PAST						
	'(Lit.) (I) walked this street 1 kilometer.' 'I walked down this street for 1 kilometer.'											

Given that *made* gives a specification on the length of a path, there must be a path to be modified by it, for the sentence including *made* to be grammatical. This prediction seems to be borne out. *Made* can modify some of the motion verbs that have endpoints (i.e. telic verbs), which means that these verbs show an alternation between *made* and *ni*.

(47) a.	Taro	wa	gakko	{made/ni}	itta/kita/modotta
	Taro	TOP	school	{until/NI-LOC}	go/come/return-PAST
	'Taro	went/c	ame/returned	d to school.'	
b.	Taro	wa	nikai	{made/ni}	agatta/nobotta
	Taro	TOP	second floor	{until/NI-LOC}	go up/climb-PAST
	'Taro	went u	p to the seco	nd floor.'	

These verbs can take path expressions marked by the accusative marker o.

- (48) a. Taro wa kono michi o (gakko made) itta/kita/modotta Taro TOP this street ACC (school until) go/come/return-PAST 'Taro went back to school along this street.'
 - b. Taro wa kono kaidan o (nikai made) agatta/nobotta Taro TOP this step ACC (second floor until) go up/climb-PAST 'Taro went up to the second floor by these stairs.'

On the other hand, other telic motion verbs do not take *made* as a marker for a goal (cf. K&Y 1997, Kitahara 1998).¹⁵

(49) a. Ie {*n house {unt		lade/ni} t il/NI-LOC} a		tuita/haitta arrive/enter-PAST			
	'(I) a	rrive	d/ente	red hom	ie.'		
b.	Dens	ha	{*ma	de/ni}	notta		
	train		{until/	NI-LOC}	get on	-PAST	
	ʻ(I) g	got or	n the tr	ain.'			
(50) *	* Taro	wa	kono	michi	0	tuku/hairu/noru	
	Taro	TOP	this	street	ACC	arrive/enter/get no	
	'Taro	arriv	es/ente	rs/gets	on this :	street.'	

Events described by such verbs as tuku 'arrive', hairu 'enter' and noru 'ride/get on' do not include a path in its meaning, as confirmed by the ungrammaticality of (50), and this property excludes the use of *made* in (49). On the other hand, a true goal expression *ni* can code a goal whenever the verbs have an endpoint, regardless of the existence of a path. Rather, it highlights the resultant state of the motion, and its semantics does not show conformity with a path concept. Thus,

¹⁵ Kitahara (1998) suggests that *made* may be an argument, based on the observation that it can be interpreted either as a terminal point or a scope. When it is interpreted as a terminal point, it is an argument, but it is an adjunct when it specifies the scope. In his theory, the argumental *made* is a realization of AT which is in the scope of ACT in the lexical conceptual structure (LCS). This predicts that accomplishment verbs always show the alternation between *made* and *ni*. However, consider the following:

(i)	a.		Taro	wa	kaato	0	koko	{*made/ni}	oita
			Taro	TOP	cart	ACC	here	{as far as/NI-LOC}	put-PAST
			'Taro pu	t a cart	here.'				
	b.		Taro	wa	kabin	0	yuka	{??made/ni}	otosita
			Taro	TOP	vase	ACC	floor	{as far as/NI-LOC}	drop-PAST
			'Taro dro	opped	a vase	onto the	floor.'		
(ii)	a.	*	Taro wa	kaa	to o	kon	o michi	o oita	
			Taro TO	P cart	A	CC this	street	ACC put-PAST	
			'Taro pu	t this c	art alo	ng this st	treet.'		
	b.	*	Taro wa	kabin	0	kuukichu	u o	otosita	
			Taro TO	Р	vase	ACCair-	in AC	C drop-PAST	
			'Taro dro	opped	a vase	through	the air.'		

Note that so-called 'double accusative constraint' does not exclude (iv), for it is usually not operative for an accusative marked 'path' object. Thus, what is closely related to the distribution of *made* is, as we claimed here, the compatibility of a path concept with the lexical semantics of a verb.

the modification to a path cannot be provided by a ni phrase, as shown in the following:¹⁶

(51) * Taro wa kono michi o eki ni itta/kita/modotta Taro TOP this street ACC station NI-LOC go/com/return-PAST 'Taro went/came/returned down this street to the station.'

A path is compatible with the notion of (on-going) activity, but a goal is associated with the notion of result (of motion). Given that the locatives highlight the compatible phases of the motion, it is apparent that ni and o cannot co-occur. In other words, ni cannot serve as an adjunct as *made* does. Let us summarize the observations here together with the compatibility with adverbials, as Table 1 and 2 below:

Table 1	
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Telic verbs

		Path iku, kuru, ma	no Path tuku, hairu, noru	
		explicit	implicit	
made [PATH]		OK	OK	.*
<i>ni</i> [no]	ni [no PATH]		* ОК	
Adverb	X kan	OK	with ni *	*
			with made OK	
	X de	OK	OK	OK

Table 2

Atelic verbs

		Path aruku, hasiru, nagareru, tobu				
		explicit	implicit			
made [PA]	[H]	OK	OK			
ni [no PA]	ni [no PATH]		*			
Adverb	Adverb X kan		OK			
	X de	OK	*?			

It is now clear that *made* does not serve as a goal, contrary to Tsujimura (1991), but as the specification of the distance of a path given by a verb. On the other hand, ni is purely a marker of a goal argument. In the next section, then, we discuss the issue why only *made* can delimit an event and induce co-composition.

¹⁶ Given a directional reading of ni, this sentence will be grammatical, with the meaning that Taro walked this road toward the station. In this case, no implication of accomplishment of the activity is induced.

4.2 A Necessary Condition for Delimiting an Event

The discussion in section 4.1 has revealed that the *made* phrase in Japanese is not a pure goal phrase, but a scope, which modifies a path of motion. We have also pointed out that *made*, as a scope expression, can delimit an atelic event. Given that *made* does not mark a goal, the question can be raised as to why it has the same ability as English goal phrases have. This section will deal with this problem.

In the preceding section, we observed that *made* requires a path to be contained in the semantics of a verb. Although the paths in the above examples are provided by the *o*-marked arguments of the verb, we find that *made* itself includes in its meaning a path concept. On the other hand, *ni* only describes a (final) point, and cannot refer to an entity which has some span. Consider the following:

(52) a.	Kono this	kaidan stens	wa, TOP	nikai second floor	made	nan how many	dan stens
	ari-ma be-HON	su-ka I-Q	101		untin		
	'How	many ste	ps are t	here to the	second f	loor?'	
b.	#Kono l this s	kaidan w steps T(a, nik DP seco	ai ni ond floor NI-L	nanc OC how i	lan a nany steps l	ari-masu-ka be-HON-Q
	'How	many ste	ps are t	here on the	second f	loor?'	
(53) a.	Kono s this doo	shorui (D ge ACC M	etuyoobi n onday u	n ade ni ntil NI	teishutu ^{submit}	suru koto do IMPER
	'Subm	it this do	cumen	t by Monda	у.'		
b.	Kono this	shorui document	0 ACC	getuyoobi Monday	ni te NI su	ishutu sui bmit do	ru koto IMPER
	'Subm	it this do	cumen	t on Monda	у.'		
which	implies	the exist	ence o	fanath ca	an he use	ed to ask i	the number o

Made, which implies the existence of a path, can be used to ask the number of steps to the second floor, while (52b), where ni locative is used instead, is simply judged to be anomalous. Since ni does not imply a path to the second floor, we cannot count the number of the steps up to there. In the examples in (53), *made* and ni are in the temporal domain, and specify the location of temporal objects. There arises a significant difference in meaning between (53a) and (53b). In (53a), one can submit the document any day before Monday, while in (53b), the document should be submitted exactly on Monday. The meaning contrast here supports the observation that only *made* includes a path concept (both at a concrete and abstract level).

English to phrase has the same function as made does, as shown in (54).

- (54) a. How many steps are there to the top?
 - b. Gratings can differ both in terms of how many stripes there are to the centimetre and the differences between the brightness of the light and dark parts. [BNC]

Based on these observations, we present the following generalization on locatives to delimit an event.

(55) To delimit an event, a locative must entail a path.

Generalization (55) states that a path concept in the semantics of a locative is a necessary condition for the event to be delimited. It is important to note here that the fact that verbs can independently take a path is not sufficient: the combined locative also must have a path concept in its meaning. This requirement recalls the closely related Tenny's (1994) *The Terminus Constraint on indirect internal arguments* (TC, for short), which is stated below.

- (56) The Terminus Constraint on indirect internal arguments
 - (i) An indirect internal argument can only participate in aspectual structure by providing a terminus for the event described by the verb. The terminus causes the event to be delimited.
 - (ii) If the event has a terminus, it also has a path, either implicit or overt.
 - (iii) An event as described by a verb can have only one terminus. (Tenny 1994: 68)

Our main concern here is mainly on (ii) of the TC, which guarantees that the existence of the terminus entails the existence of the path and vice versa.¹⁷ Path and terminus may be realized either implicitly or explicitly as in (57). In (57a), the path is provided by a direct internal argument and the terminus remains implicit, however, in (57b,c), the path is implicit and only the terminus is specified.

- (57) a. John walked the trail in an hour.
 - b. John walked to school in an hour.
 - c. John pushed the car to a gas station.

In these examples, terminus expressions (i.e. to school, to a gas station) delimit the paths by explicating their distance. In this sense, made can be said to have the same function as the terminus expressions in (57b, c) above.¹⁸

If (ii) in the TC applied to the locative itself, it would explain the incompatibility of ni with manner of motion verbs: Ni does not contain a path, and thus, it cannot serve as a terminus by modus tollens. Given that the path that may be associated with some telic verbs is suppressed by the use of ni locative,

¹⁷ The precise conditions on aspectuality should be stated in terms of aspectual roles (Tenny 1994). Thus, terms such as 'path' and 'terminus' do not always coincide with thematic roles. For details, refer to Tenny (1994).

¹⁸ One problem for the identification of *made* with the terminus is that it is no way an (indirect) argument of a verb, and moreover, an indirect argument is usually marked by *ni*. This problem, however, is out of the scope of this paper, and will be a further research issue.

this reasoning might hold for these verbs. For atelic manner of motion verbs, however, the path may be supplied by the verb, and thus for the event as a whole, the path may be present.

The difference between the TC and (55) emerges here: (55) is NOT a generalization over events, but a generalization over locatives. On the other hand, TC in (56) is a generalization over events as a whole. To capture the difference between *made* and *ni*, what is needed here is the constraint that requires that the semantics of a verb and the semantics of a locative should 'accord' with each other. To explicate this idea, in the next section, we propose an analysis exploiting the unification in qualia structure in Generative Lexicon (GL, for short; Pustejovsky 1995).

4.3 The Unification and Event Composition

In the GL, the semantics of a lexical item is represented in qualia structure, argument structure and event structure. Qualia structure bears a particular importance in this theory, for it specifies the 'generative' ability of the item and determines the mapping to other structures. Qualia structure consists of a set of qualia roles, telic, agentive, formal, and constitutive, each of which expresses the purpose and function of the lexical item, factors involved in its origin, the distinguished property within a larger domain, and the relation between an object and its constituents or proper parts, respectively.

As we have noted, the alternation between John walked and John walked to the station is captured by 'co-composition' in the GL. Our observation is that while in the case of the composition of [made + manner of motion verbs], cocomposition is operated on, in the case of [ni + manner of motion verbs], the operation does not work. The descriptive generalization of the availability of cocomposition is stated in (55), as a constraint on delimitedness. Moreover, we have shown that the constraint entails that the semantics of a verb and a locative should have something in common (i.e. a path), when they are built into one event. This requirement is stated as a requirement for the qualia unification as follows:

(58) To composite lexical structures via co-composition, the structures have at least one common quale structure.

This requirement is motivated by the qualia unification defined by Pustejovsky (1995), which produces the derived sense of the composite structure formed by co-composition. (58) also states that co-composition is not a mere conjunction of two structures, but an 'elaboration' of each other's structure.

Now, let us assume the semantics of walk and aruku as follows:

(59) walk, aruku

$$\begin{bmatrix} ARGSTR = \begin{bmatrix} ARG1 = 1 \end{bmatrix} [physobj] \\ D-ARG1 = 2 \end{bmatrix} [path] \\ EVENTSTR = [E1 = e1: process] \\ QUALIA = [AGENTIVE = walk_act_through(e1, 1, 2)] \end{bmatrix}$$

As we have observed above, *walk* and *aruku* both describe an atelic process which is going on along a path. Since the path may not be explicitly realized, it is mapped onto a default argument in the argument structure.¹⁹ The event that specifies the agentive quale is mapped to E1 of the event structure. The semantics of *to school* and *gakko made* may be represented by the following:



The path argument is present in this representation as an argument indexed 3. This argument, again, is mapped to a default argument. In the case of *gakko made* 'to/until school', the formal role should be 'not_beyond', which is the only difference between *to school* and *gakko made*. The event specifying the agentive quale is mapped to E1 in the event structure, and the one specifying the formal role is mapped to E2 in the event structure. In the event structure, e1 temporally precedes e2, which is represented as '<_{\alpha}'. The head of the event is assumed to be underspecified, following Isono (2001).^{20,21}

b. *To this room ran a number of boys.

¹⁹ We follow Pustejovsky(1995) here, who distinguishes three types of arguments, depending on their syntactic and semantic behavior. For details, see Pustejovsky(1995).

 $^{^{20}}$ Isono (2001) claims that the semantics of prepositions affect the possibility of locative inversion in English. He observed the contrast between two prepositions, *to* and *into*, with regard to the availability of locative inversion (Isono 2001:460):

⁽i) a. Into this room ran a number of boys.

His claim is that the difference in the grammaticality is due to the specification of the head event: to does not have its head specified, while the head of *into* is invariably placed on the state subevent (e2). Crucial evidence for this claim comes from the interpretive variability of the to phrase, as observed in the following (Isono 2001:471):

⁽ii) a. *Maria ran to the next town for an hour.

b. John ran to the station for ten minutes, but he walked the rest of the way.

 $^{^{21}}$ In Japanese, the placement of the head may be determined by the interpretation of V-*teiru*. V-*teiru* is an aspectual form which has at least three senses: progressive, resultant state, and perfect (see

When the VP is formed by combining the two phrases, which is realized as *walk to school/gakko made aruku*, the semantic structures are also unified, and the resultant composite structure will be represented as in (61).

(61) walk to school/ gakko made aruku

$$\begin{bmatrix}
ARGSTR = ARG1 = 1 [physobj] \\
ARG2 = 2 [school] \\
D-ARG1 = 3[path]
\end{bmatrix}$$
EVENTSTR = E1 = e1:process
E2 = e2:state
RESTR = \circ_{α}
HEAD = e1
QUALIA = FORMAL = at (e2, 1, 2)
AGENTIVE = walk_through(e1, 1, 3)
\end{bmatrix}

As a result of the composition, the event as a whole changes into a telic event, which is evidenced by the existence of the additional subevent e2. As is clear from the representation, the head is placed on the process subevent, which is inherited from the semantics of *walk/aruku*.

The representation of ni locative is crucially different from the one of made (or to) in that it has only a state event, and lacks the agentive quale.

(62)
$$X ni$$

$$\begin{bmatrix} ARGSTR = \begin{bmatrix} ARG \ 1 = 1 \end{bmatrix} [physobj] \\ ARG \ 2 = 2 \end{bmatrix} [location] \\ EVENTSTR = [E1 = e1: state] \\ QUALIA = [FORMAL = at (e1, 1, 2)] \end{bmatrix}$$

The composition of (62) and (59) cannot be completed via co-composition, because of the restriction by (58). In other words, the simple conjunction of two structures is excluded.

In contrast to the above cases, the structure in (62) can be a part of a telic event. Assume that telic events have the following structure:

Shirai 2000). The contrast between the first two senses can be the test, for accomplishment verbs in V-*teiru* usually have a progressive meaning, and achievement verbs usually have a resultant state reading. This test can be a test for unaccusativity in Japanese (see Tsujimura 1991, Takezawa 1991). For details on the determination of headedness in Japanese and the relation between the interpretation of this aspectual form and unaccusativity, see Tanaka (2002, section 3 and 4).

Another test for headedness is manner modification, as in *Taro wa yukkurito gakko made aruita* 'Taro slowly walked to school.'

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(63) telic verbs (e.g. iku 'go', tuku 'arrive'...etc.)

\begin{bmatrix} ARGSTR = \begin{bmatrix} ARG \ 1 = 1 \end{bmatrix} \\ ARG \ 2 = \boxed{2} \end{bmatrix}
EVENTSTR = \begin{bmatrix} E1 = e1: \text{ process} \\ E2 = e2: \text{ state} \\ RESTR = <_{\alpha} \\ HEAD = e2 \end{bmatrix}
QUALIA = \begin{bmatrix} FORMAL = at (e2, \boxed{1}, \boxed{2}) \\ AGENTIVE = act (e1, \boxed{1}) \end{bmatrix}
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With telic verbs, the formal role specifications of the locative and the verbs are identical, and thus, the two structures are composed into one.

The composite event structures resulting from co-composition are the representation of telic events, that is, they have a (resultant) state component. This explains the aspectual alternation we have observed in 2.1.

5 CONCLUSION

We have shown in this paper that in Japanese, contrasting with English, a locative that expresses a goal does not induce co-composition, since it does not imply a path as its English counterpart. This suggests that not only the verbal semantics but also the semantics of locatives affect the availability of event composition. Specifically, we have proposed that co-composition is constrained by the requirement on qualia unification.

We have also claimed that *made* in Japanese is not a marker for a goal, and it serves as an adjunct, not an argument. If we accept Tenny's (1994) Aspectual Interface Hypothesis, a delimiter (TERMINUS aspectual role) should be mapped to an indirect argument. Although the function of made is similar to English *to* phrases as we have observed in section 2, it is not an indirect argument, given that our discussion here is right. To resolve this apparent problem, we suggest that *made* phrases (and *to* phrases) be treated as a specification of the 'difference value' along the lines of Hay, Kennedy and Levin (1999). This is consistent with the claim here, because we have identified the function of *made* and that of a quantity expression such as *l kilometer*. The latter will never be an argument, but it is apparent that it serves as a delimiting expression. We, however, leave these issues for further research.

REFERENCES

- Ahn, Pyeong-Ho (2000) "Kekkaso o Arawasu Hyogen to Kukan Hyogen tono Kyokikankei [On the Co-occurrence Relation between Expressions for Resultant Aspect and Spatial Expressions]," in S. Aoki and K. Takezawa (eds.), Kukan Hyogen to Bunpo [Spatial Expressions and Grammar], 215-248, Kuroshio Publishers, Tokyo.
- Bach, Emmon (1981) "On Time, Tense, and Aspect: an Essay in English Metaphysics," in P. Cole. (ed.), *Radical Pragmatics*, 63-81, Academic Press, New York.
- Chomsky, Noam (1970) "Remarks on Nominalization," in R. Jacobs and P. Rosenboum (eds.), *Readings in English Transformational Grammar*, 184-221, Ginn, Waltham, MA.
- Grimshaw, Jane (1990) Argument Structure, MIT Pres, Cambridge, MA.
- Hay, Jennifer., Chris Kennedy, and Beth Levin (1999) "Scalar Structures Underlies Telicity in 'Degree Achievements'," *The proceedings of SALT 9.*
- Isono, Tatsuya (2001) "Meanings of Prepositions and Inversion in English," English Linguistics 18, 460-481.
- Jacobsen, Wesley (1992) The Transitive Structure of Events in Japanese, Kuroshio Publishers, Tokyo.
- Kageyama, Taro (1993) Bunpoo to Gokeisei [Grammar and Word Formation], Hituji Shobo, Tokyo.
- Kageyama, Taro and Yoko Yumoto (1997) *Gokeisei to Gainenkoozoo* [Word Formation and Conceptual Structure], Kenkyusha, Tokyo.
- Kishimoto, Hideki (2000) "Hitaikakusei Saikoo [Unaccusativity Revisited]," in T. Maruta and K. Suga (eds.), Nichi-Eigo no Zita no Kootai [Transitive-Intransitive Alternation in Japanese and English], 71-110, Hituji Shobo, Tokyo.
- Kitahara, Hiroo (1998) "Idoo Doosi to Kyooki suru Ni-kakuku to Made-kakuku: Suuryoo Hyoogen tono Kyooki Kankei ni Motozuita Goi-imironteki Koosatsu. [Ni and Made Phrases that Co-occur with Motion Verbs: A Lexical Semantic Analysis based on the Compatibility with Quantity Expressions]," Kokugogaku 195, 15-29.

Levin, Beth. and Rapoport, T. R (1988) "Lexical Subordination," CLS 24, 275-289.

- Levin, Beth. and Rappaport Hovav, Malka. 1995. Unaccusativity, MIT Press, Cambridge, Mass.
- Nakajima, Heizo (2001) "Verbs in Locative Constructions and the Generative Lexicon," *The Linguistic Review* 18, 43-67.
- Nakau, Minoru (1998) "Kuukan to Sonzai no Koozu [Configurations of Space and Existence]," in M. Nakau and Y. Nishimura (co-authers.), Koobun to Zishookoozoo [Constructions and Event Structure], 1-106, Kenkyuusha, Tokyo.
- Perlmutter, David (1978) "Impersonal Passives and the Unaccusative ypothesis," *BLS* 4, 157-189.
- Pustejovsky, James (1995a) "The Syntax of Event Structure," in B. Levin et al. (eds.), *Lexical and Conceptual Semantics*, 47-81.
- Pustejovsky, James (1995b) The Generative Lexicon, MIT Press, Cambridge,

MA.

- Rappaport Hovav, Malka and Beth Levin (2001) "An Event Structure Account of English Resultatives," *Language* 77, 766-797.
- Rosen, Sara Thomas (1996) "Events and Verb Classification," Linguistics 34, 191-223.
- Shirai, Yasuhiro (2000) "The Semantics of the Japanese Imperfective -teiru: An Integrative Approach," Journal of Pragmatics 32, 327-361.
- Takezawa, Koichi (1991) "Judobun, Nookakubun, Bunrihukanoo-shoyuukobun to 'teiru' no Kaishaku [Passives, Ergatives, Inalienable Possession Constructions and the Interpretation of *teiru*]," in Y. Nitta (ed.), *Nihongo no Boisu to Tadoosei* [Voice and Transitivity in Japanese], 59-81, Kuroshio Publisher, Tokyo.
- Takezawa, Koichi (2000) "Kuukan Hyoogen no Toogoron [The Syntax of Spatial Expressions]," in S. Aoki and K. Takezawa (eds.), Kukan Hyogen to Bunpo [Spatial expressions and grammar], 163-214, Kuroshio Publishers, Tokyo.
- Talmy, Leonard (1985) "Lexicalization Patterns: Semantic Structure in Lexical Forms," in T. Shopen (ed.), Language Typology and Syntactic Description 3: Grammatical Categories and the Lexicon, 57-149, Cambridge University Press, Cambridge.
- Tanaka, Eri (2002) "A Japanese Compound Verb V-te-iku and Event Composition," Proceedings of the 16th Pacific Asia Conference on Language, Information and Computation (PACLIC 16).
- Tenny, Carol (1994) Aspectual Relations and the Syntax-Semantics Interface, Kluwer Academic Publishers, Dordrecht.
- Tsujimura, Natsuko (1991) "On the Semantic Property of Unaccusativity," Journal of Japanese Linguistics 13, 91-116.
- Vendler, Zeno (1957) "Verbs and Times," The Philosophical Review 66, 143-160.
- Yoneyama, Mitsuaki (1986) "Motion Verbs in Conceptual Semantics," Bulletin of Faculty of Humanities, Seikei University 22, 1-15.

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