Spatial Prepositions in Motion-Related Events: A Case Study of English and Thai

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Abstract

This paper discusses how motion events are coded in the two languages, namely English and Thai, in the presence of spatial prepositions. Meanwhile it offers evidence to substantiate the claim that a movement reading is derived from other sentential elements rather than the conventional meaning of a preposition. The study focuses on a marginal case where prepositions of containment in English and Thai *"in"* and *"naj"*, albeit denoting primarily a location of an action, are deliberately used in a sentence expressing a motion event. It is found in both languages that a movement reading is not arbitrary but, rather, is assigned by some sentential elements specific to each language, emphasizing the way a particular language has for its meaning representation.

Keywords: spatial prepositions, containment, motion, goal, English, Thai

1. Introduction

As spatial particles, prepositions are one of the most widely studied in cognitive linguistics. Several studies focus on the polysemy structures of prepositions, especially in English, such as the case of *over* in Lakoff (1987), Brugman (1988), Brugman and Lakoff (1988), and Tyler & Evans (2001); the study of *through* in Martín (2000), etc. All these studies reveal some semantic networks associated with each spatial preposition. Lakoff (1987), for example, has illustrated six distinct senses or schemas associated with *over* as a radial category, and also claims that spatial interpretation in each sentence is due to the contribution of the distinct senses associated with the preposition. However, this analysis of Lakoff's has been criticized by some scholars (Sinha & Kuteva, 1995; Sandra, 1998; Tyler & Evans, 2001, 2003; Evans & Tyler, 2005) who argue that spatial meaning may not result from the preposition itself but rather is assigned by sentential contexts, i.e, sentential elements. In this paper, I will

present evidence to support the latter argument that spatial meaning is derived not from the preposition but from other sentential elements, which could differ from one language to another language. The English preposition *in* and Thai equivalent preposition ใน /naj/ (henceforth *naj* in this paper) will be analyzed to show different linguistic means in coding spatial meaning. In English, movement reading is evoked from the use of motion verbs, while in Thai, movement reading can be evoked from a specific verb when occurring in a serial verb construction. Debates on meanings of prepositions and basic meanings of spatial prepositions in English and Thai are presented in Section 2. The study includes an overview of functional concepts related to the notions of containment and movement in Section 3, and the findings from an analysis of the two prepositions of containment *in* and *naj* in Sections 4 and 5 respectively. An English-Thai parallel corpora of the famous novels "Harry Potter #1 - #3" and its Thai translation was used to extract sentences containing the prepositions *in* and *naj*. Each sentence which contains *in* is put against its Thai translation and vice versa, so as to see how the same spatial scene is represented in each language.

2. Spatial Prepositions and their Conventional Meaning

One major criticism of Lakoff's analysis of *over* and such like Brugman (1988), Brugman and Lakoff (1988), Kreitzer (1997), and Lakoff (1987 as cited in Evans & Tyler, 2005) is the point about "dynamic" prepositions, or prepositions of movement, whose meaning denotes motion. Since prepositions sometimes appear in spatial scenes involving dynamism, many scholars presumably assert some movement readings as part of conventional meaning of that preposition in question. Take Lakoff's work on the English preposition *over* in Lakoff (1987) for example, in which the claim of motion reading is apparent in the following sentences:

(1) a. The bird flew over the yard. *"Above-Across Sense"* (Lakoff, 1987, p. 421)
b. Roll the log over. *"Reflexive Schema"* (Lakoff, 1987, p. 433)

Based on the spatial configurations in the above two sentences, Lakoff argues that the conventional spatial meaning of *over* incorporates a "dynamic" sense, which implies a "path" along which the trajector moves in relation to the landmark, as in (1a), above-across sense, and in (1b), reflexive sense. However, Lakoff's claim of movement sense in prepositions has been discussed in some recent studies. One of these is Evans and Tyler (2005), which argues that prepositions all by themselves do not encode motion. Rather, a motion reading results from the sentential context, i.e. the nature of the activity being engaged in, the nature of the trajector, and/or the landmark. Therefore, the elements that

contribute to a dynamic sense are not purely exclusive to prepositions but are integrated in parts across the sentence.

According to Evans and Tyler (2005), the information relating to motion and trajectory is derived from the sentential context, which basically is the verb. The case of *to* in the following examples illustrates this claim:

(2) a. He ran *to* the shop.
b. As Jim was being verbally attacked in the morning, he looked *to* his line manager (for support). (Evans & Tyler, 2005)

While *to* in both sentences marks the notions of orientation and goal, in (2a), a sense of motion is evoked as a consequence of the interaction between sentential elements, in this case the functional element of goal in the landmark together with the motion verb *ran*, which results in the scene being conceptualized as the trajector has moved to the landmark's location. On the other hand, in (2b), no sense of motion has been detected since the trajector has no physical contact with the landmark, and thus, in this case, only the notion of path can be observed. Therefore, the concept of movement may not necessarily be integrated in the conventional meaning of a preposition, and therefore the notions of trajectory, path, motion, goal, and orientation must be treated as distinct concepts rather than being classified under the category of movement or dynamism as many cognitive semanticists have always conflated them.

The notion of motion, together with other functional concepts, should thus be taken into consideration when studying prepositions and their spatial configuration, in order to understand to what extent prepositions, in conjunction with other sentential elements, contribute to the spatial scene in terms of information in each utterance. The case of preposition of movement *to* in Evans and Tyler (2005) has illustrated this point in the foregoing explanation of (2a), and (2b).

Following the recent argument against the assumption that a movement reading is coded by the conventional meaning of prepositions, the analysis presented in this paper will thus focus on the elements of spatial scenes involving dynamism. For this study, following Tyler and Evans' arguments, the preposition together with other sentential elements or the context surrounding that preposition will be considered in order to understand what each preposition can denote by its conventional meaning and what other elements in the context can provide for spatial configuration in the sentence. In this case, prepositions of containment from two languages, i.e., *in* and *naj* are selected to offer evidence to substantiate the argument. Moreover, this will illustrate the different ways how a specific kind of meaning is coded in each language, which may then reflect the system a particular language has for its meaning representation.

While the notion of containment is one of the most common elements in the spatial sense of prepositions in many languages, there are some specifics pertaining to English in the use of its spatial particles. English obviously has two prepositions for its two distinct senses related to the state of the trajector's being contained in the landmark. For the most part *in* is used to denote a place as a container in which the trajector is being contained, while *into* indicates that the trajector moves from its source to the inside of a container as its destination, from which, in this case, a movement reading is evoked. In other words, *in* functions as a place preposition while *into* as a preposition of movement in its sense. However, there are also cases where *in* is used to convey the movement reading in addition to the notion of containment as in "*When the custard is cold, put it in the freezer."* "*Get in the car*.", which illustrate the use of *in* incorporating a sense of movement as found in the use of *into.* This is not frequent though and it should be considered a marginal case whether *in*, with its conventional meaning as a static preposition, can normally be used in the contexts where the concept of path and/or goal is apparent.

Thai, on the contrary, seems to have a different way with its spatial particles when coding the notion of containment with and without a sense of motion. Only one preposition, *naj*, is used to describe the state of the trajector's being contained in the landmark, whether it be for a static or dynamic sense. However, the utterance may acquire a sense of motion from other sentential elements, and this will further be explored in the following sections in this study.

3. Related Notions and Functional Concepts: Bounded Landmarks, the Property of Containment, Path and Goal

This section focuses on some key concepts related to the notions of containment and movement as the basis for understanding the semantic properties of both spatial prepositions *in* and *naj*, including the components of movement reading arising in the context of spatial prepositions.

In the previous studies on English prepositions, particularly those appearing in spatial scenes involving movement, the notions of path and goal often contribute to the movement reading in the sentence. The nature of bounded landmarks, on the other hand, evokes the concept of containment, which generally does not relate to any movement senses. However, in this study of English and Thai prepositions of containment, it is found that both prepositions can appear in some spatial scenes describing motion events. While sharing some similarities in their semantic components, both display a significant difference in their collocating with other sentential elements when denoting a goal-related motion. In the case of English, Tyler and Evans (2003) has noted some functional elements related to the semantics of *in,* i.e., the notion of boundedness of the landmarks, and the property of containment. A bounded landmark, as defined by Tyler and Evans (2003, p. 178), is "one that possesses an interior, a

boundary and an exterior", in other words, a three-dimensional object. The notion of bounded landmarks is often associated with the concept of containment. This is because the interaction of humans with bounded landmarks is a consequence of our conceptualization of being contained. According to Tyler and Evans, containment is a complex relation with numerous functional consequences and these are reflected in the conventional meaning of some spatial particles, i.e., *in, into, out, out of* and *through.* However, there are some arguments regarding the property of containment. While Lakoff (1987) characterizes the containment schemas as having three structural properties: interior, boundary, and exterior, which implies that the containment relation entails spatial elements related to these three properties, Tyler and Evans argue against this view with the claim that containment can be related to some other notions as well, despite the foregoing three structural properties. There are many cases in which the notions of delimitation, opacity, protection, safety and support, etc. arise along with the property of containment, and these different aspects of the experience of containment can be observed in the various uses of English spatial particles *in* and *out.* In Vandeloise (1991, 1994), for example, the sentence *"The bulb is in the socket"* illustrates that the spatial components associated with the structural properties of containment claimed by Lakoff (1987) are not noticeable in the sentence's interpretation. First of all the socket has no property of boundedness, and while the socket holds the bulb and determines its position, the socket also prevents the bulb from falling down. Thus the sense of a constraining or supportive element is evoked from the interpretation of the sentence. Another example is raised by Herskovits (1986, 1988), in which *in* can apply to a spatial scene that depicts the trajector not enclosed by the landmark. For example, the sentence *"The pear is in the bowl."* depicts the scene in which the bowl is filled up with many pieces of fruit and the pear is placed on top of the pile, which exceeds the rim of the bowl. According to Herskovits, this case indicates that the explanation on the basis of spatio-geometric relations is not adequate, and that functional elements must be involved.

Another instance which illustrates the use of *in* that does not occur in the context of a bounded landmark is *"the crack in the bowl"* (Evans & Tyler, 2004, p. 247). A native speaker of English would interpret this phrase as the crack appears as part of the interior or exterior of the bowl, not an entity located inside the bowl. In this case, Evans and Tyler suggest that our interpretation of the spatial relation is constrained by the context, or the elements in the sentence, which can be the characteristics of the actions or entities, such as the crack. In this way, it can be said that the properties of the trajector and the landmark are factors that affect the interpretation of the preposition.

From the three instances above, it is obvious that the meaning assigned to a preposition, when combined with other elements in the context, is

influenced by some significant factors, which, in this case, are functional elements found in the sentential context.

Regarding the notions of "path" and "goal", these concepts are distinct from motion. According to Tyler and Evans (2003), motion is associated with the change of location of the trajector, while "path" is a functional concept arising as a result of a source and a goal of a direction (course of motion) being connected. In practical terms, the notion of path requires two places involved, i.e., the source and the goal. As paths correlate with motion they are necessarily linear. To have a clear understanding of these concepts, let us take some examples from Radden and Dirven (2007) in the following sentences:

(3)	a. We drove to Bristol.	[goal]
	b. We drove via Oxford.	[path]
	c. *We drove from Bristol.	[source]
	d. *We drove from Dover via Bristol	[source and path]
	e. We drove 200 miles from Dover.	[length of path and source]

Radden and Dirven (2007, p. 291)

In Radden and Dirven's examples, a clear distinction is made between the notions of path, source and goal. The notion of path, as noted above, calls for the concepts of source and goal as a starting point and an endpoint of a path respectively. Radden and Dirven have made a remark that in a self-motion schema the notions of goal and path are salient, as in (3a) and (3b), while the notion of source alone, as in (3c), or in combination with a path, in (3d), rarely exists in an utterance unless the focus is on the length of path or a particular point as a source, as in "*we flew from Edinburgh."* (Radden & Dirven, 2007, p. 291)

The concept of path can be achieved without motion or dynamic sense as in *"The tunnel through Vale Mountain was finished in the 1980's."* (Tyler & Evans, 2003, p. 218) in which Tyler and Evans claim the concept of path as a result of the passage by virtue of a tunnel through the mountain being facilitated, with or without the trajector moving along. While there is no claim about path with the use of spatial particles of containment and bounded landmarks in Tyler and Evans (2003), the case is found in some other languages in which spatial particles entailing the notion of containment collocate with some specific sentential elements and then create a path along with motion reading in the utterance. Sardaraz and Ali (2017), for example, illustrates how the Arabic preposition **فِي** *(fī)*, as a place preposition denoting the position of an object within a bounded space, has acquired its dynamic sense when co-occurring with a verb involving a bodily movement concept. In the research presented in this paper, it is also found that the notion of path arises along with the motion-related

context of prepositions of containment, which will be elaborated and discussed later in Sections 4 and 5.

Related to the notion of "path" is the functional concept of "goal". According to Evans and Tyler, "goal" is a functional consequence of the highlighted landmark, which may be a spatial location or an entity occupying the spatial location being conceptualized as a highlighted endpoint. Being a highlighted endpoint indicates that the notion of goal is associated with a spatial location that is particularly salient, the subject of intentional attempts to reach (Evans & Tyler, 2005).

The following cases of English and Thai preposition of containment *in* and *naj* illustrate how the notion of path and goal arises in the context of "place" prepositions. To be precise, it is found that some special types of verbs have a significant role in substantially contributing to a movement reading in both languages, which gives rise to a dynamic sense in the prepositions of containment.

In the case of English, it involves a particular type of motion verbs called "verbs of inherently directed motion" (Levin, 1993). In Thai, on the other hand, there are some types of verbs typical to the Thai language that, when occurring in some serial verb constructions, will evoke the notion of path and goal as part of the utterance interpretation. This point will be elaborated in Sections 4 and 5, along with some related examples and discussions provided.

4. English Preposition *In* and Motion Events

In this section, it will be shown that dynamic sense of spatial meaning in some uses of *in* is derived from other elements in the sentence rather than encoded in the conventional meaning of *in*. Senses of movement, goal, and path can be derived from the use of some motion verbs i.e., Bring and Take verbs (e.g. *bring*), verbs of putting (e.g. *put*), and aspectual verbs (e.g. *end up*) in combination with a prepositional phrase. All these verbs share some common characteristics in that they imply a change of location of the trajector towards or away from the landmark, which evokes the notions of direction and path from the context. Deictic terms also contribute to the sense of goal and path in motion verbs. A detailed explanation is given below.

As noted above about the property of containment and some spatial particles that entail elements related to this concept, one of the most significant prepositions that illustrate this point is the preposition of containment *in*. This is because the spatial meaning associated with *in* designates a relation in which the trajector is enclosed by a landmark that is conceived as having an interior, a clear boundary and an exterior. Related to its conventional meaning, *in* normally appears in the context of bounded landmarks, though sometimes it is found to collocate with landmarks that are not typically conceived as having an interior or a clear boundary as well. Nevertheless, regardless of the property of the

landmark, *in* primarily functions to describe the location or the place of an object (the trajector), that is, where the trajector is located. In other words, it appears in the context with a "place" reading as a static preposition. However, far too little attention has been paid to the fact that *in* also appears in the scene of motion event, and this is the point to be discussed in this paper.

According to Taylor (2007), prepositions, though restricted to their spatial uses only, are very polysemous still. One crucial factor for this is that most prepositions, despite their conventional static meaning, often have place and goal interpretations. This is true for the case of *in* as Taylor illustrates his point through the following examples:

(4) a. The money is *in the box*. [place]
b. You put the money *in the box*. [goal]
(Taylor, 2007, p. 158)

Taylor's examples above support his claim about the polysemy between place and goal of the preposition *in*. A "place preposition" in his sense can also occur in the context of a motile trajector (a motile figure), but in a different way from what he terms a "dynamic preposition". Taylor has illustrated this claim in the following example.

(5) "drive around *in the city*" a static use of *in*
(Taylor, 2007, p. 169)

Although there is a sense of motion from the action of driving, Taylor claims that because the driving is located in the city, there is no implication for goal reading from the context as a result of no change of location from out of the city into the city. Therefore the preposition phrase "*in the city*" marks the place for the action "driving", that is, it indicates where the action of driving takes place.

In fact, a movement reading in an utterance may result from some other elements in the sentence rather than the preposition itself. This point has been widely discussed in some recent works on English prepositions. Evans and Tyler (2005), for example, argues against the previous studies (Lakoff, 1987; Brugman, 1988; Brugman & Lakoff, 1988; Kreitzer, 1997), which claim that the conventional spatial meaning of a preposition may incorporate a "dynamic" sense. Evans and Tyler assert that the interpretation associated with a preposition is constrained and nuanced by other elements in the sentence rather than by the conventional meaning of the preposition itself.

Likewise, in this study some special types of verbs are found to contribute significantly to a movement and goal reading in both English and

Thai when accompanying the prepositions of containment, giving rise to a dynamic sense in the utterance.

As for the case of *in* being discussed in this paper, it is found that *in* is used in the sentential context of motion events. This point will be elaborated in the following examples (from an English-Thai parallel corpus of Harry Porter novels) in which items (6)-(14) describe the scenes depicting motion events or changes of location on the part of the trajectors.

(6) Come *in here*.
(7) I am sorry to say that from the moment you have arrived *in this class*, my dear, it has been apparent that you do not have what the noble art of Divination requires.
(8) The book tried to bite, but Hagrid ran a giant forefinger down its spine, and the book shivered, and then fell open *in his hand*.

In (6), (7), (8) the scenes involve a specification of the direction (path) of motion, in which the goals of the motion are expressed by prepositional phrases. Notice that the verbs in all three sentences are motion verbs, or more specifically, "verbs of inherently directed motion" in Levin's terms (Levin, 1993, p. 263). This suggests that motion reading, including goal expression in each sentence, is derived from the properties of the verbs (come, arrive, fall). To illustrate this point, let us try the same prepositional phrase as in (6) "*in here*" with another context "*Stay in here.*" in which the verb of the sentence is changed from "*come*" (6) to "*stay*". It is obvious that the sense of motion is missing, and the expression of goal by the prepositional phrase *"in here"* has changed to a place reading in this context. That is, it assumes the function of locating the activity of staying, instead of indicating the goal of the activity as in "*come*" of that in (6). This corresponds to what John Taylor has suggested about the place and goal interpretations, which make prepositions polysemous in their semantic properties. In this case, it can be argued that the element in the sentential context, i.e., the verb of inherently directed motion, has played an important role in determining the dynamic or static senses of the whole utterance, including contributing to the goal reading in the context. This is due to the properties of the verbs, which imply the direction of the motion, either in deictic or nondeictic terms. The verbs can express the goal, source, or path of motion, depending on their sense, via a prepositional phrase as a direct object. The fact that the three verbs of inherently directed motion in (6)-(8) imply direction and movement, including some constraints on their uses in the sentences, makes the prepositional phrases that follow assume the functional consequence of goal in this context. It can be argued here that the semantic properties of the verbs are crucial factors that determine their uses as Levin suggests.

(9) Don't bring him *in here*.

The sentence in (9) illustrates the case in which the sense of motion occurs with the verb of "Bring and Take" (Levin, 1993, pp. 134-135). Both verbs have been described as "verbs of continuous causation of accompanied motion in a deictically-specified direction" (Groupen et al., 1989 as cited in Levin, 1993, p. 135). In (9), *bring* involves causing the object (him) to change location to the speaker's location. In this way, it relates to the direction from the point where the object of the verb is located towards the speaker's reference point as a goal or destination of the activity of bringing.

(10) Stick it back *in the trunk*.
(11) Harry packed his Invisibility Cloak *in his bag*.
(12) They stowed Hedwig and Crookshanks *in the luggage rack*.

Another group of verbs that appear in the motion reading context with a sense of direction is the verbs of putting (Levin, 1993, pp. 111-118). Levin describes the verbs of this group as relating to putting things at some location or into containers, and she claims that the location is expressed via a prepositional phrase headed by one of locative prepositions, but not by the goal preposition *to* or the source preposition *from*. Based on Levin's explanation, it can be assumed that these verbs typically evoke a sense of "place" interpretation in the context with locative prepositional phrases. However, there are cases where they may appear with the notion of goal as well, though not with the goal preposition *to*. In sentences (10), (11) and (12), the interpretation of the whole utterance of each can be read with a change of location of the object of the verb from somewhere as a starting point to the landmark of the preposition as a goal or destination of the direction.

The sense of motion and a change of location here corresponds to what Taylor (2007) has suggested as a goal interpretation in (4b) in which the verb *put* (verb of putting in Levin's terms) can evoke a sense of movement in the context, resulting in the interpretation of the landmark as a goal or destination.

(13) Harry and Ron, wandering off by themselves, have ended up *in the Forbidden Forest* twice.

Sentence (13) illustrates another type of contextual elements that contribute to the motion reading in the sentence. The verb *end up* which is classified under the category of aspectual verbs (Levin, 1993, p. 274) describes the termination of the activity. When combined with the sentential complement as a prepositional phrase specifying the location where the activity has ended, the landmark can be construed as the goal or destination. Again, this can be

conceived as an activity starting somewhere not mentioned and ending at the location specified as the landmark in the prepositional phrase, which evokes the notion of direction and path along which the subject travels.

All the examples in (6)-(13) illustrate sentential contexts of motion events entailing direction with various uses of different types of verbs. While verbs of motion are significant in contributing to a movement reading in the utterance, another kind of sentential element, a deictic term, is found to incorporate a dynamic sense as well, as seen in sentence (14).

(14) What if we - we just run *in there*, and grab Pettigrew?

In sentence (14), the notion of path and goal arises from a spatial-deictic word *there*, which refers to a location far from the speaker. In this way, it implies a path from the speaker's location as a source to the reference point at the destination. The prepositional phrase *in there*, when collocating with *run*, indicates the direction of motion of the TR *we*. This is because the meaning of the verb *run*, as a verb in the Manner of Motion group, contributes to a movement reading, while the prepositional phrase *in there* specifies the goal of the motion. Therefore, the goal interpretation in this case is acquired from the demonstrative sense in the spatial deictic term *there*, and not from the semantic properties of the verb *run* which does not imply any inherent direction. For example, there is no sense of path and goal in "*run in the park"* although the same motion verb *run* is used here.

The case in which the notion of goal arises in the context of Manner of Motion verbs is not frequent since, according to Levin, the verbs in this group generally describe motion without specifying an inherent direction as part of their meaning. Thus they can assume the notion of direction only when collocating with an explicit directional phrase, and this explains why they are not as common as those denoting direction in (6)-(8) in the path and goal reading context.

Sentences in (6)-(14) illustrate the case in which sentential elements are crucial in contributing to the notion of path and goal in the context of the spatial preposition *in*. This suggests that a directional sense arises as a result of the interaction between the meaning of the verb and that of the prepositional phrase, no matter what is significant in that case. All in all, it should, however, be noted that verbs are sentential elements crucial to the components of motion events. The conventional meaning associated with each verb has contributed substantially to the sentence interpretation and conceptualization with the interaction of the semantic properties of the landmark as a spatial endpoint. It can be seen that the verbs existing in this context are verbs that imply some senses of direction, either those of inherently directed motion which clearly specify direction in their meaning, or other types of motion verbs, i.e., Bring and

Take verbs, verbs of putting, and aspectual verbs. All these verbs share some common characteristics in that they imply a change of location of the trajector towards or away from the landmark, which evokes the notions of direction and path from the context.

The case of English preposition *in* being discussed implies the notion of polysemy in prepositions between their static and dynamic senses. It is evident that the meaning of a preposition can be modified by other coexisting sentential elements. A preposition may have its meaning varied according to the context in which it appears. A "dynamic preposition" in Taylor's terms as in "*You put the money in the box"* acquires its dynamic sense from the element in the sentential context, the verb *put*, which implies the change of location of the money. Therefore, the components of motion event or dynamic sense may not be purely exclusive to the preposition but are integrated in parts across the sentence.

5. Thai preposition "ใน" /*naj*/ and motion events

This section illustrates a similar case in which the Thai equivalent preposition of "in", "ใน" *naj*, acquires its dynamic sense when co-occurring with a motion verb in a serial verb construction in which directional verbs associated with landmark and participant's perspective are a crucial part of directional sense.

naj is probably the closest Thai equivalent to English spatial particle *in*. This is due to some similarities that the two lexical entries in both languages share in many aspects. The notion of containment is one significant feature associated with the conventional meaning of *naj*. Like *in*, as a spatial preposition, *naj* designates a relation in which the trajector is enclosed by a landmark that is conceived as having an interior, a clear boundary and an exterior. Besides the notions of containment and enclosure associated with the entry, *naj* can denote a sense of support as well. Moreover, *naj* can appear with landmarks that are not typically conceived as a three dimensional object in a similar way as does *in*. For example, in Thai, /naj nâa sìp/ 'in page 10', *naj* is used as a two-dimensional preposition to locate the trajector being attached to the landmark's surface. However, there is a big difference in the sentential context between *in* and *naj*, which is mainly the kind of elements they collocate with, and the structure of verb phrases that is typical of the Thai language.

While the dynamic sense of *in* requires verbs denoting motion or a change of location as part of their meaning, the case of *naj* is rather more complicated. In brief, *naj* also requires motion-related verbs as the main component of motion event, but in most cases it involves a particular type of construction of verb serialization. A serial verb construction (henceforth SVC) refers to "a grammatical structure in which two or more verbs or verb phrases appear together without a marker of coordination or subordination" (Iwasaki & Inkhapirom, 2005, p. 231), which is common in isolating languages like Thai.

Thepkanjana (1986) has claimed the functions of Thai serial verbs as complementing the initial verb with the semantic implications of causative, passive and resultative; indicating direction and aspect; acting as grammatical markers and/or case markers, or in her terms, "coverbs"; and indicating purposive and simultaneous actions. In the case of Thai preposition *naj*, it is found that in describing path-and-goal related motion events, *naj* always collocates with some patterns of SVCs, consisting of at least one directional verb[1] in the string, from which the directional meaning is acquired. The following sentences in (15)-(20) illustrate the verb strings with locomotion verbs as the initials, followed by directional verbs.

(15) แต่อาจารย์ลูปินกำลังจะวิ่งเข้ามา<ใน>ป่า ตรงมาหาเรา!"

tɛ̀: ʔa:-tɕa:n lu:-pin kam-laŋ tɕàʔ wîŋ khâw ma: naj pà: troŋ
but Professor Lupin PROG IRR run enter come in forest straight
ma: hă: raw
come reach us
'But Lupin's going to run into the Forest, right at us!'

(16) เขาขึ้นขี่ไม้กวาดแล้วถีบเท้าเหาะขึ้นไปจากพื้น บินสูงขึ้นไป<ใน>ท้องฟ้า

khăw khû̂n khì: má:j-kwà:t lɛ́:w thì:p thá:w hɔ̀ʔ khû̂n paj tɕà:k
he mount ride broomstick then kick feet soar rise go from
phú:n bin sŭ:ŋ khû̂n paj naj thɔ́:ŋ-fá:
ground fly high rise go in sky
'He mounted his broomstick and kicked at the ground, soaring up into the air.'

(17) แฮร์รี่ดำดิ่งลงไป<ใน>หมอกขาวอันหนาทึบอีกครั้ง

hɛ:-rî dam-dìŋ loŋ paj naj mɔ̀:k khă:w ʔan nă: thúp ʔì:k khráŋ
Harry dive descend go in fog white which thick dense more time
'Harry was falling again through thick white fog.'

(18) แฮกริดหันหลังเดินกลับเข้าไป<ใน>กระท่อม

hɛ:-krìt hăn lăŋ də:n klàp khâw paj naj kràʔ-thô̂m
Hagrid turn back walk return enter go in cabin
'Hagrid turned around and headed back into his cabin.'

(19) เฟร็ดปีนกลับเข้าไป<ใน>รถเพื่อช่วยรอน

frét pi:n klàp khâw paj naj rót phû:a tɕhû:aj rɔ:n
Fred climb return enter go in car for help Ron
'Fred climbed back into the car to pull with Ron.'

In Sentences (15)-(19), the initial or main verbs: *wîŋ* "run", *bin* "fly", *damdìŋ* "dive", *dən* "walk" and *pi:n* "climb" are verbs denoting manner of motion or locomotion verbs[2], however, the goal interpretation is apparent. The sense of motion here results from the semantics of the directional verbs in the

string ,which include *khâw* "enter", *klàp* "return", *khûn* "mount", *loŋ* "descend", *paj* "go", *ma:* "come". This case in which the elements typical to the Thai SVCs convey the notion of movement with path and goal suggests that the sentence interpretation is derived via the interaction of the elements in the verb string, which is due largely to their particular semantic properties. That is, verbs of different semantic types may denote varying degrees of manners and directions of motion. However, some parts of the serialized verbs may mark a particular type of aspect or direction while modifying the main verb of the string, giving various additional senses.

Regarding the Thai SVCs, Diller (2006) has made an interesting remark about the elements in the verb string of the Thai SVCs, that is, an allative or goal nominal cannot directly follow a manner verb, or locomotion verbs as termed in Thepkanjana (1986). Therefore in SVCs with locomotion verbs as main verbs, the verb *khâw* "enter" is required after the main verb in order to increase the valence to admit a goal nominal to complement the verb string. In this way, the SVCs with goal arguments will be structured as "[V_1 + V_2] + goal prepositional phrase", in which V_1 is an open class of locomotion verbs and V_2 belongs to a limited set of directional verbs which can accept a goal nominal in the form of prepositional phrase. Directional verbs in the V_2 position of SVCs can thus be said to have valence-increasing properties when modifying the locomotion verb in the V_1 position.

The members of V_2 position in directional SVCs with goal prepositional phrases as appearing in the set of data in this study (*khâw* "enter", *klàp* "return", *khûn "ascend", loŋ* "descend", *paj* "go", *maa* "come") have some semantic properties that give different additional directional aspects to the main verb being modified. The verbs *khâw* "enter", *klàp* "return", *khûn "ascend",* and *loŋ* "descend" denote the direction associated with the landmark's position while *paj* "go" and *maa* "come" signify direction associated with speech act participants' perspective, or in Thepkanjana (1986), "direction with respect to the outside world" and "direction with respect to speech act participants" respectively.

All these verbs involve direction and path of motion, and therefore, when modifying the main verb denoting motion, they give additional meaning concerning direction and path to the main verb.

In Thai SVCs, directional verbs as modifying verbs to the main verb can multiply in the context. In (15)-(19), the verbs serialized in a string contain one locomotion verb as the main verb, followed by two or three directional verbs before the goal prepositional phrases[3]. Note that the pattern of collocation in the verb string is also consistent, i.e., the first verb, or the main verb, is verb of manner or locomotion; the second (and third one if exists) is a verb denoting direction associated with the landmark's position (khâw "enter", khûn "ascend", klàp "return") and the last one in the string is paj "go" or maa "come" which are verbs denoting direction associated with speech act participants' perspective.

The linear order of the serialized verbs as found in this study corresponds to what is proposed in Thepkanjana (1986) in which each type of directional verb is regulated by a constraint on linear order. Therefore the structure of SVCs with prepositional phrases as goal arguments proposed in this study is "[V1 + V2 (+ V3…) + the last V] + goal prepositional phrase" in which

V_1 = locomotion verb (open class)
V_2,($V_{3...}$) = directional verbs associated with the landmark's position (*khâw* "enter", *khûn* "ascend", *klàp* "return")
the last V = directional verb associated with speech act participants' perspective (*paj* "go" or *maa* "come")
goal argument = prepositional phrase

(20) เขาโกรธมากเลยที่พวกนั้นเข้ามา<ใน>บริเวณโรงเรียน
khăw krò:t mâ:k lɔ:j thî: phû:ak nán khâw ma: naj bɔ:-rí?-we:n ro:ŋ-ri:an
he mad much PRT COMP people DEM enter come in area school
'He was furious they'd come into the grounds.'

(21) "ทุกคนกลับขึ้นข้างบน!" เพอร์ซี่รีบลงมา<ใน>ห้องนั่งเล่นรวม
thú?k khon klàp khûn khâ:ŋ-bon" phɔ:-sî: rî:p loŋ ma: naj hôŋ-nâŋ-lên-ru:am
every person back rise upstairs - Percy rush descend come in common-room
'Everyone back upstairs!' said Percy, hurrying into the common room.

(22) แล้วเขาก็เร่งให้ลูกทีมออกไป<ใน>สนามก่อนที่คนอื่น ๆ จะรับประทานเสร็จเพื่อจะได้ดูสภาพสนาม
lɛ́:w khăw kô: rêŋ hâj lû:k-ti:m ʔɔ̀:k paj naj sàʔ-nă:m kɔ̀:n
then he PRT rush for team go-out go in playground before
thî: khon ʔùn:-ʔùn:n tɕàʔ ráp-pràʔ-tha:n sèt phû:a tɕàʔ dâ:j
COMP people other AUX eat finish for IRR get
du: sàʔ- phâ:p sàʔ-nă:m
see condition playground
'Then he hurried them off to the pitch before anyone else had finished, so they could get an idea of the conditions.'

(23) "ฉันจะลงไป<ใน>นั้น" เขาบอก
tɕhăn tɕàʔ loŋ paj naj nán khăw bɔ̀:k
I will descend go in there he say
'I'm going down there,' he said.

The next set of sentences in (20)-(23) is the case where verbs inherently denoting direction associated with the landmark's position, or directional verbs in the V_2 slot of (15)-(19), function as the main verb (V_1) of the string. Similar to those in (15)-(19), the sequence after these verbs is the slot of that associated

with speech act participants' perspective (*paj* "go" and *maa* "come"), followed by a goal prepositional phrase. The sentence's predicate here is structured as [V_1 + V_2 + goal prepositional phrase]

V_1 = directional verbs associated with the landmark's position (*khâw* "enter", *ʔɔ̀:k* "exit", *loŋ* "descend")
V_2 = directional verb associated with speech act participants' perspective (*paj* "go" or *maa* "come")
goal argument = prepositional phrase

(24) สเนปสาดผงนั้นเข้าไป<ใน>เปลวไฟ
sàʔ-né:p sà:t phŏŋ nán khâw paj naj ple:w-faj
Snape throw powder DEM enter go in flame
'Snape threw the powder into the flames.'

(25) รอนยัดสแคบเบอร์ลงไป<ใน>กระเป๋า
rɔ:n ját sàʔ-khɛ́p-bɔ̂: loŋ paj naj kràʔ-păw
Ron stuff Scabber descend go in pocket
'Ron stuffed Scabbers into his pocket.'

(26) เขาลากพวกเธอสองคนเข้ามา<ใน>ต้นวิลโลว์จอมหวด
khăw lâ:k phû:ak thɔ: sɔ̌:ŋ khon khâw ma: naj tôn wil-lô: tɕɔ:m hù:at
he pull COL you two CLASS enter come in CLASS Willow MANNER hit
'He pulled two of you into the Whomping Willow.'

(27) ลูปินโยนหนังสือสองสามเล่มสุดท้ายลง<ใน>กระเป๋า
lu:-pin jo:n năŋ-sŭ: sɔ̌:ŋ-săm lêm sùt-tá:j loŋ naj kràʔ-păw
Lupin throw book a-few CLASS last descend in case
'Lupin threw his last few books into his case.'

(28) ฉันไม่ได้ใส่ยาพิษไว้<ใน>ช็อกโกแลตหรอกนะ
tɕăn mâj-dâ:j sàj ja:-pít wáj naj tɕɔ́k-ko:-lɛ́t rɔ̀:k náʔ
I not put poison ASP in chocolate PRT PRT
'I didn't put the poison in the chocolate.'

Sentences (24)-(28) illustrate the case in which the elements of the SVCs are different from the foregoing examples. The main verbs (V_1) in this set of sentences are not themselves motion verbs but somehow relate to the change of location, and all of them are transitive verbs followed by an object. Thus, the SVC pattern of this set is [V_1 + NP (object) + V_2 + V_3] + goal prepositional phrase.

V_1 = verbs relating to the change of location (open class)
V_2 = directional verbs associated with the landmark's position (*khâw* "enter", *loŋ* "descend")

V_3 = directional verb associated with speech act participants' perspective (*paj* "go" or *ma:* "come")
goal argument = prepositional phrase

The verbs in the V_1 slot, which relate to the change of location, are fairly similar to the verbs of putting in Levin's terms (Levin, 1993). These verbs relate to putting things at some location or into containers, and thus involve the change from the source location to the destination. Due to the characteristics of implying manners of motion in their meaning, they call for verbs denoting direction associated with the landmark's position (*khâw* "enter", *loŋ* "descend") in the V_2 position before the goal prepositional phrase. The exception is the verb *sàj* "put" in sentence (28), which, based on the data in this study, is found to be followed by *wáj* "store", an aspectual verb indicating that the action is completed and will be kept for later use (Thepkanjana, 1986, p. 174). Thus, sentence (28) *"ฉันไม่ได้ใส่ยาพิษไว้<ใน>ช็อกโกแลตหรอกนะ"* "tɕăn mâj dâ:j sàj ja:-pít wáj naj tɕɔ́k-ko:-lét rɔ̀:k náʔ" will be interpreted as the event in which the trajector (the object *ja:-pít*) is transferred and already placed in the landmark (chocolate), waiting to be picked up for use. The difference between sentences (28) and (24)-(27) can be argued in terms of how the event is conceptualized. In (24)-(27), the action and the path of the action are highlighted from the semantics of the main verb and the directional verb, while in (28), with the presence of aspectual verb instead of directional one, the salient point is shifted to the state resulting from the action denoted by the main verb, although the sense of motion is still implied but not accentuated in the context.

From the Thai data being investigated, it is crucial to note that the patterns of SVCs are significant factors in determining how the prepositional phrases as arguments will be interpreted. In describing physical motion, the semantics of the main verb involving motion contributes to the dynamic reading of the scene while the other elements as modifying verbs provide additional meanings. Directional verbs, as modifiers to the main verb, indicate the path and direction of the action conducted by the trajector towards a landmark; the landmark in this case will be conceived as the destination or goal of the action. However, it must be noted here that directional verbs with different semantic types may yield a variety of shades of additional meaning. But whatever the case, directional verbs, either in the V_1 or V_2 positions, have a major role in modifying the sense of the motion, resulting in the interpretation of the co-occurring prepositional phrase as the goal of the action.

6. Conclusion

This paper focuses on the dynamic reading arising along with the context of prepositional phrases headed by *in* and *naj*. As prepositions of containment, they both involve a spatial configuration in which the trajector is enclosed by the

landmark that is conceived as having an interior, a boundary and an exterior, in other words, a three dimensional object. In this way the associated scene will rather be conceptualized as static, i.e., the situation is conceived as taking place in a particular location. However, there are cases in which *in* and *naj* are found associated with motion-related events.

Despite the view proposed by some scholars that prepositions designate motion, others who argue against this view suggest that motion reading is attributed to the integration of some elements in the sentential context, especially motion verbs. This is true for the case of the two spatial prepositions in this study. However, there are both similarities and differences between the cases of each. While dynamic reading in English utterances is primarily based on the semantics of the verbs denoting motion or change of location, the case of the Thai language is far more complicated. Like many isolating languages whose verb serialization is one of the most distinctive characteristics, the Thai SVCs do have a significant role in the utterance's interpretation. Motion-related verbs or other verbs expressing change of location as the main verb of the string (V_1) contribute to the dynamic sense in the sentence while other verbs as modifying verbs in the V_2 or V_3 positions provide additional meanings in terms of directional or aspectual properties. The most significant difference between the two spatial prepositions is found in the case of prepositional phrases expressing goal. While in the English language only the main verbs inherently directed motion or verbs implying a change of location are required, which can be directly followed by goal prepositional phrases, in the Thai sentences, prepositional phrases headed by *naj* will be interpreted as goal arguments only when they appear after SVCs that contain at least one directional verb. Thus, with respect to the cases of *in* and *naj* in this study, it is argued that some sentential elements in the context, particularly verbs denoting motion or change of location, when integrated with the semantic properties of a preposition of containment *in* or *naj* as enclosure, the scene will be conceptualized as a motion event, in which the trajector is moving from the source location crossing into the boundary of the destination location. Thus, it is argued here that a dynamic reading in an utterance does not result from the conventional meaning of both prepositions of containment *in* and *naj*, but is evoked as a consequence of the integration of sentential elements in the context, particularly motion verbs.

In this study, the uses of *in* and *naj* are examined independently to support the argument that dynamic sense is not a part of conventional meaning of spatial preposition, but derived from other sentential elements which could be different from one language to another language. However, it would also be interesting to compare the conceptual differences between equivalent prepositions like *in* and *naj* as evident in a parallel corpus in which the use of *in* is not always translated to *naj*, and vice versa. This would be an interesting topic for further research.

Notes

1. Thepkanjana (1986, p. 135) defines "directional verb" as a verb which occurs in a verb string and modifies the first verb of the string in terms of path, manner, and direction of motion. More than one directional verb may be serialized and the whole SVC denotes only one action. In her recent work (Thepkanjana & Uehara, 2008), a distinction between directional verbs and directional markers has been made and they have termed directional verbs as "verbs which denote movements described in terms of their directionality with respect to a Landmark, being directed towards or away from it.", while "directional markers" are defined as grammaticalized forms of directional verbs in which the movement aspect is depleted and in which the directional one is retained. (Thepkanjana & Uehara, 2008, p. 500) In this paper, I will employ the notion of directional verbs as suggested in Thepkanjana (1986) for the term "directional verb" in a broad sense in order to refer to any verbs denoting path and direction of motion which occur after the first verb in the verb string. Thus the term "directional verb" used to describe the data in this study will refer to the lexical form and may include those that are grammaticalized forms of the lexical sources functioning to modify the main verb as directional markers as in Thepkanjana and Uehara (2008)

2. In Thepkanjana (1986), the terms used for describing types of verbs that can be modified by directional verbs include locomotion verbs, travel verbs, take verbs, communication verbs, transactional verbs, destruction verbs, disappearance verbs, stative verbs and change verbs. Thepkanjana (1986) claims that there are some restrictions on the linear order of directional verbs when co-occurring in a verb string, and that violations of this order may result in ill-formed as well as well-formed sentences. The well-formed sentences are always interpreted as denoting separate motions, not as a single complex movement.

3. Thepkanjana (1986) claims that there are some restrictions on the linear order of directional verbs when co-occurring in a verb string, and that violations of this order may result in ill-formed as well as well-formed sentences. The well-formed sentences are always interpreted as denoting separate motions, not as a single complex movement.

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