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Chapter 4

Syntactic and semantic structures of Thai motion expressions

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Thai expressions for a single motion event usually take the form of a single clause that is typically composed of serial verb phrases encoding sub-events (semantic components) of the motion event. The present chapter aims to show that the syntactic and semantic structures of such expressions can be adequately formulated based on the 'force-dynamic' structures (cf. Talmy 1988, 2000a) of motion events and 'aspectual' types (cf. Vendler 1967) of motion verbs. The event structures and verb types that are relevant to the syntactic patterns of the expressions reflect Thai speakers' conventional construals for expressing motion events in the Thai language.

Keywords: aspectual types, event structures, serial verbs

1. Introduction

Talmy's (1991, 2000b: 213–288) typology of motion expressions assumes that a clause representing a 'macro-event' of motion consists of a verb root (main verb) and a 'satellite' to the verb.[1] It categorizes languages into two main types on the basis of where the path of motion (the path alone or the path together with its ground locations) that delimits the motion event is encoded in a motion expression. Languages that characteristically express the path with the verb are named 'verb-framed' languages (e.g. Spanish) and languages that characteristically express the path with the satellite are

[1] A 'macro-event' is defined as a fundamental and recurrent type of complex event that "consists of a pair of cross-related Figure-Ground events"; it "can be conceptualized as composed of two simpler events and the relation between them" (Talmy 1991: 482, 2000b: 213). A 'satellite (to the verb)' is defined as the "grammatical category of any constituent other than a noun-phrase or prepositional-phrase complement that is in a sister relation to the verb root" (Talmy 2000b: 102). See also Talmy (2016) for the view that adpositions are satellites in their broader sense.

termed 'satellite-framed' languages (e.g. English). However, Croft (2003) has pointed out the incompleteness of such a binary typology. He observed that both verb-framing and satellite-framing are asymmetric strategies (i.e., one component is the main verb and the other is a satellite or a form that does not function as a main verb) but there is a range of symmetric strategies found in the world's languages such as serial, compounding, double coding, and coordinate strategies (Croft 2003: 222–224). Thai is arguably a language with the typical serial strategy (i.e. co-predications in a single clause) as shown by the following analysis. Slobin (2004: 228) set forth a ternary typology with a third type named 'equipollent-framing'. In equipollently framed languages, both the cause/manner and the path of motion are expressed by equipollent grammatical forms (e.g. serial verbs that can independently function as a main verb). Thai has been considered an equipollently framed language (e.g. Slobin 2004). As is the case with Talmy's idea of satellite- vs. verb-framing, Slobin's idea of equipollent-framing relies on a postulation that motion verbs are dichotomized into the path verbs and the co-event verbs (representing cause and manner). However, I do not take up this two-way classification of verbs. I will argue that Thai descriptions of motion events require a finer categorization of verbs (see the discussion in Section 3).

In typical verb-serializing languages like Thai, motion verbs of different types can co-occur in a clause expressing a single motion event. Those co-occurring motion verbs may encode somewhat specific categories of the semantic components of motion. When examining the semantic structures of motion expressions in a verb-serializing language, therefore, we need to deal with special, less general categories of motion components (such as deictic path and terminative path), and we cannot deal only with general, superordinate categories of motion components (such as cause/manner and path).

The present chapter accounts for the syntactic and semantic structures of Thai motion expressions. It argues for the following. First, the event structures of Thai motion expressions are rather complex. A self-controlled or spontaneous motion expression profiles either a simplex structure with only the process phase or a bipartite structure with the phases of process and change (plus state), whereas a caused motion expression profiles either a bipartite structure with the phases of causation and process or a tripartite structure with the phases of causation, process, and change (plus state).

Second, the adequate classification of Thai motion verbs on the basis of their syntactic behaviors as well as semantic properties is, in part, language-specific. While the aspectual properties of most classes of Thai motion verbs are common properties found across languages, some classes exhibit peculiar aspectual properties. For example, one class of path verbs express 'prestadial' motion events (for the definition of 'prestadial', see Section 3.1), that is, an achievement motion event with its terminal boundary highlighted, such as dropping onto the ground or sinking down to the bottom of the sea. The present chapter demonstrates the kinds of variation that languages can exhibit in the syntactic patterning of motion event descriptions.

The data of Thai motion expressions, on which this study is based, are from a number of relevant studies including my own (Kessakul 2005; Muansuan 2002; Takahashi 2009b, 2009c, 2017a, 2017b, 2018a, 2018b; Thepkanjana 1986; Zlatev 2003; Zlatev and David 2003; Zlatev and Yangklang 2004). The present study also makes use of empirical data of Thai motion expressions obtained in three video-based speech elicitation experiments (as a part of a NINJAL-Kobe project on motion event descriptions), in which fifteen (for Experiment A, conducted in 2012 and 2018), eighteen (for Experiment B, conducted in 2011), and forty-three (for Experiment C, conducted in 2016) Thai native speakers participated.[2] The elicited speech data from these experiments corroborate my argument for the fine system of Thai motion expressions elaborated in this chapter.

The analysis presented in this chapter builds upon my earlier work on Thai arrival expressions (Takahashi 2009c) and my preliminary description of conspicuous characteristics of Thai motion expressions in general (Takahashi 2017a). The present chapter provides a clearer explanation of the force-dynamic structures of motion events that Thai speakers verbalize as well as a more elaborated classification of Thai motion verbs by considering fundamental aspectual values with regard to: dynamics (dynamic

[2] The three production experiments were created by Yo Matsumoto and his colleagues with grants from JSPS (the Japan Society for the Promotion of Science) and NINJAL (the National Institute for Japanese Language and Linguistics). Experiment A aims to elicit descriptions encompassing three different motion components, that is, the combination of (a) manner (walking, running, or skipping), (b) path (TO, TO plus IN, or UP), and (c) deixis (toward the speaker, away from the speaker, or neutral) (cf. Kawachi, and Morita in this volume). Experiment B concentrates on the deictic component and aims to elicit descriptions of deictic motion (cf. Matsumoto, Akita and Takahashi 2017). Experiment C focuses on the non-deictic path components and aims to elicit descriptions of motion with diverse path types (cf. Takahashi 2018b).

vs. static), durativity (durative vs. punctual), and boundedness (bounded vs. unbounded), which are recognized in motion represented by each force-dynamics-related and aspectual class of verbs.[3]

The remainder of this chapter is organized as follows. Section 2 describes Thai motion expressions in general. Section 2.1 reviews three previous studies and compares them with the present study, and Section 2.2 looks at typical examples of various types of motion expressions in Thai. Section 3 examines the syntactic and semantic structures underlying Thai expressions for motion macro-events as well as aspectual properties of verbs used in the expressions. Section 4 clarifies the nature of path-related morphemes in Thai. The main purpose of this chapter is to delve into the compositional systems of the expressions' basic constituents, namely, verb phrases (verbs and their objects or complements).[4] However, the demarcation between path-related verbs (a variety of path verbs and deictic verbs), on the one hand, and functional morphemes derived from the verbs (path prepositions and aspectual/modal satellites), on the other hand, is important in analyses of Thai motion expressions. Therefore, Section 4 elucidates the differences among those path-related morphemes.[5] Section 5 briefly concludes this chapter.

2. Thai motion expressions: General descriptions

2.1. Review of previous studies

Prior research on Thai motion expressions has postulated different syntactic and semantic structures underlying the expressions. This subsection briefly examines three

[3] Vendlerian categories of lexical aspects of verbs (viz. state, activity, achievement, and accomplishment) suffice for the syntactic patterning of Thai motion event descriptions. A finer classification (e.g. Van Valin 2005, Ch.2; Croft 2012) is not necessary for that purpose.

[4] 'Verb phrases' are defined differently depending on linguistic theory. Some theories doubt whether the 'verb phrase' is a crosslinguistic category. In this chapter, however, I conventionally use the term 'verb phrase' to refer to 'a syntactic unit consisting of a verb and its object or complement noun phrase', for there are no other terms adequate for referring to such a unit.

[5] The crucial difference between the original motion verbs and the derived functional morphemes is that in actual use, the former lexical morphemes can, while the latter functional morphemes cannot, have a particular lexical aspect. Lexical morphemes (motion verbs) may exhibit neutrality in lexical aspect (see Section 3.1), but functional morphemes (aspectual/modal markers) are irrelative to such neutrality (see Section 4).

previous studies with proposals of the underlying structures that are somewhat similar to this study's proposal—i.e. Thepkanjana 1986, Zlatev and Yangklang 2004, and Kessakul 2005—and clarifies the commonalities and differences between their proposals and that of this study.

2.1.1. Thepkanjana (1986)

Thepkanjana (1986) is an early seminal work on Thai serial verb constructions. In her analysis of the constructions containing directional verbs (or motion verbs), Thepkanjana (1986: 135–142) expounds on possible syntactic patterns for expressing a single motion event, as shown below. Her claim is that when more than one motion verb is used to encode a single motion event, the verbs should be serialized in this order.

$_{\text{initial verb}}[\text{A}] + {}_{\text{serial verbs}}[\text{B} + \text{C} + \text{D1} + \text{D2} + \text{E}]$

- A: verbs for locomotion (e.g. *dəən* 'walk'); verbs for travel (e.g. *dəən thaaŋ* 'travel'), accompanying motion (e.g. *bɛ̀ɛk* 'carry'), or ballistic motion (e.g. *yoon* 'throw'); verbs for communication (e.g. *bɔ̀ɔk* 'tell'), transaction (e.g. *súɯ* 'buy'), or change (e.g. *plìan* 'change'); verbs for destruction (e.g. *thamlaay* 'destroy'), disappearance (e.g. *hăaj* 'disappear'), or excess state (e.g. *phɛɛŋ* 'be expensive')
- B: verbs for geometric shape of the path (e.g. *won* 'circle', *khót* 'zigzag')
- C: verbs for direction with respect to the previous path (e.g. *yɔ́ɔn* 'reverse, turn back', *thɔ̌j* 'retreat, start to move backward')
- D1: verbs for direction with respect to an object located in the outside world (e.g. *phàan* 'pass', *khâam* 'cross', *càak* 'leave')
- D2: verbs for direction resulting from interaction between the path and the outside world (i.e. *khâw* 'enter', *ɤɔ̀ɔk* 'exit', *khûn* 'ascend', *loŋ* 'descend')[6]
- E: verbs for direction with respect to speech act participant (i.e. *paj* 'go', *maa* 'come')

An array of serial verbs (i.e. non-initial verbs) from the classes B to E vary according to the semantic types of the initial verb from class A, as follows (Thepkanjana 1986:

[6] Normally, these four verbs are mutually exclusive and only one of these verbs can be used in a given clause.

142–154).[7]

a. [A: locomotion] + [B + C + D1 + D2 + E]

b. [A: travel, accompanying/ballistic motion] + [C + D1 + D2 + E]

c. [A: communication, transaction, change] + [E]

d. [A: destruction, disappearance, excess state] + [E: *paj* ‘go’]

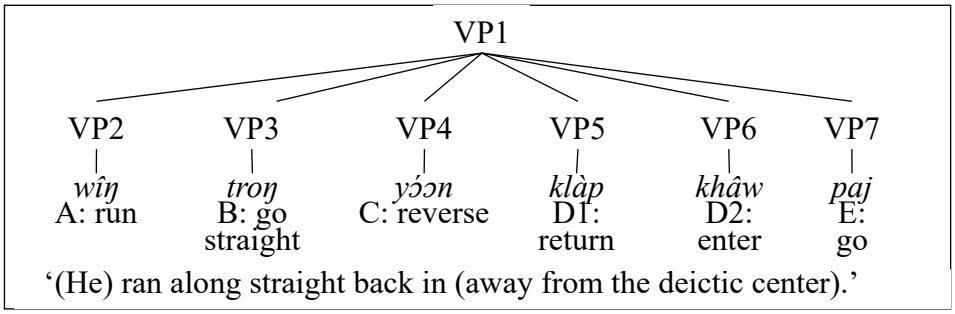

Figure 1. Thepkanjana’s (1986) exemplification of the syntactic structure including different types of motion verbs

Figure 1 depicts the syntactic tree structure posited by Thepkanjana (1986: 155). In this flat tree structure, a verb phrase (VP1) binds all the verb phrases from the six classes (VP2 through VP7) together. From this structure, we can see that she considers the co-occurring verb phrases to form a coordinate structure. I share her view in this respect (see Section 3.2).

In my view, however, her generalizations regarding verb types and verb order restrictions are not accurate. There are some examples that do not conform to the generalizations (e.g. *wîŋ yɔ́ɔn troŋ maa* ‘A: run + C: reverse + B: go straight + E: come’). I consider verbs from class B such as *troŋ* ‘go straight’, *khót* ‘zigzag’, and *chěe* ‘veer’ (except for the verb *won* ‘circle’) to be inherently stative verbs, since they by themselves cannot express a motion event (e.g., *man troŋ* ‘It was straight.’ does not mean ‘It went straight.’). When used in motion expressions, they function as adverbials

[7] When the initial verb expresses locomotion, non-initial verbs from any of the classes B to E can occur. When the initial verb expresses travel, accompanying motion, or ballistic motion, a non-initial verb from class B cannot occur. When the initial verb expresses communication, transaction, or change, only a non-initial verb from class E can occur. And when the initial verb expresses destruction, disappearance, or excess state, only the verb *paj* ‘go’ can occur.

specifying particular path configurations, whose syntactic position is relatively free (Takahashi 2009b: 33). In addition, I consider the demarcation between classes D1 and D2 as dispensable (see Section 3.1). Although it is true that the degree of versatility of verbs from class D2 is much more remarkable than that of verbs from class D1 (see Section 4.2), the ordering between verbs from these two classes is, in fact, not fixed. A verb from class D2 may precede a verb from class D1, e.g. *ɤɔ̀ɔk phón* 'D2: exit + D1: pass' (Takahashi 2009b: 34); *kradòot khûn càak klɔ̀ɔŋ paj bon kâwɤ̂i* 'A: jump + D2: ascend + D1: leave + E: go' (Takahashi 2018b: 439).[8]

2.1.2. Zlatev and Yangklang (2004)

Zlatev and Yangklang (2004) is an influential work within the field of typological studies of motion expressions. Their work draws on narrative production data. Slobin's (2004) concept of the 'equipollent framing' was inspired by their claim that Thai should belong to 'a third class'. They argue that path verbs and manner verbs in Thai are of equal status, and that neither type of verbs is subordinate to the other in a mono-clausal motion expression (Zlatev and Yangklang 2004: 161, 163, 188). I concur with this view (see Section 3.2).

Of particular note is that they set up a novel class of motion verbs, viz. 'Manner + Path (MP) verbs' which arguably occupy an intermediate position between typical manner verbs and typical path verbs (Zlatev and Yangklang 2004: 167–168).[9] This means that they deny the currently pervasive dichotomous view with respect to motion verbs (the view that divides motion verbs into two categories, i.e. path verbs and co-event verbs). I agree with them on the need to recognize more types of verbs. However, their classification of motion verbs is not precise enough to encompass the considerably complex system of Thai motion expressions (see Section 3.1).

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[8] A reviewer maintains that *càak klɔ̀ɔŋ* in this example and in (5) is a path prepositional phrase meaning 'from the box', and argues against my claim that *càak* occurring before a deictic verb in a mono-clausal serial verb construction expressing a single motion event is a motion verb meaning 'leave, get away from'. I regard *càak* in this example and in (5) as a verb, but not as a preposition, for it may or may not take a noun phrase (e.g., *kradòot khûn càak klɔ̀ɔŋ paj* or *kradòot khûn càak paj*); if it is a preposition, it must take a noun phrase (see Section 4.1). However, I do not pretend that my analysis is totally convincing; in this study, I try to carefully account for the empirical data gathered thus far in order to prove that my analysis is at least as plausible as the others'.

[9] I do not share this view, however. In my opinion, manner verbs are syntactically and semantically distinguishable from path verbs, and so there is no need to set up a class of 'MP verbs'.

There is another issue on which they hold a different opinion from me. They regard expressions ending with an arrival verb (such as *thŭŋ* 'reach, arrive' and *khâw* 'enter') as bi-clausal (Zlatev and Yangklang 2004: 164), but I consider such expressions to be mono-clausal (see Section 3.2).

2.1.3. Kessakul (2005)

Kessakul (2005) is the most in-depth and wide-ranging study of Thai motion expressions. She collected motion expressions from speech-like narrative texts in seven chapters of a Thai translation of *Harry Potter and the Chamber of Secrets* (J. K. Rowling 1999 [Publishers: Scholastic], translated by Sumalee 2001 [Publishers: Nanmee Books]), and identified 'preferred patterns' of the expressions, as below (Kessakul 2005: 318, 359). Kessakul (2005) considers these patterns 'preferred' in terms of usage frequency.[10]

a. Preferred pattern for self-controlled and spontaneous motion:
   manner verb + path verb + deictic verb
b. Preferred pattern for caused motion:
   cause verb + path verb + deictic verb

A classification of motion verbs by Takahashi (2009c), which is the foundation of the analysis presented in this chapter, is similar to that by Kessakul (2005). However, the details of verb classes and the underlying structures of motion expressions that the two studies posit differ from each other. The most significant difference between them lies in their treatments of arrival verbs (e.g. *thŭŋ* 'reach, arrive', *hăa* 'seek, approach and meet', *sùu* 'arrive and stay'). Kessakul's classification of motion verbs does not include a class of arrival verbs. She considers the path verbs *càak* 'leave, get away from' and *thŭŋ* 'reach, arrive', for example, as members of the same class, even though the two verbs occur at different syntactic positions in a mono-clausal motion expression.

[10] To be specific, in Kessakul's (2005) data of self-controlled and spontaneous motion expressions, the serialization of a manner verb, a path verb, and a deictic verb (pattern a) appears with the highest frequency (51 types, 82 tokens); in her data of caused motion expressions, the serialization of a cause verb, a path verb, and a deictic verb (pattern b) occurs with the highest frequency (38 types, 48 tokens).

That is, when combined with a deictic verb (e.g. *paj* 'go'), *càak* 'leave, get away from' occurs before, while *thŭŋ* 'reach, arrive' occurs after, the deictic verb (*càak paj* 'leave, go'; *paj thŭŋ* 'go, arrive'). She neither mentions such irregular syntactic behavior of arrival verbs, nor posits that the event structure of Thai motion expressions subsumes the change (plus state) phase encoded by arrival verbs. In contrast, my classification of motion verbs includes a class of arrival verbs. On the basis of their syntactic behaviors and semantic properties I postulate that arrival verbs form an independent verb class that encodes the change (plus state) phase of the event structure.

2.2. Typical examples

As an initial illustration, several samples of Thai motion expressions are given in (1) to (5).

(1) *kháw* *paj* *kruŋthêep*
PRON[11] go Bangkok
'He went to Bangkok.'

(2) *kháw* *khûn* *bandaj* *paj* *chán bon*
PRON ascend steps go upstairs
'He went up the steps to the next floor up.'

(3) *lûuk pòoŋ* *khoŋ* *lɔ̀ɔj* *khûn* *paj* *càak* *klɔ̀ɔŋ*
balloon probably float ascend go from box
'The balloon probably went floating up from the box.'

(4) *kháw* *plɔ̀j* *lûuk pòoŋ* *khûn* *paj* *lέɛw*
PRON release balloon ascend go PFV
'He has released the balloon up away.'

(5) *mûa kîi níi* *kháw* *plɔ̀j* *lûuk pòoŋ* *lɔ̀ɔj*
a.short.while.ago PRON release balloon float
càak *klɔ̀ɔŋ* *khûn* *paj* *chon* *pheedaan*
leave box ascend go bump ceiling

[11] The pronoun system of Thai has not been entrenched as a fixed paradigm. The pronoun *kháw*, for example, does not specify its number, gender, and grammatical relations to other constituents of a clause. Sometimes it is also ambiguous between the third and the first person. It can be translated multiply into English unless the context is clear. In this chapter I use the plain gloss 'PRON (= pronoun)' and translate each pronoun in a default-like manner.

'He released the balloon, which floated up from the box and bumped on the ceiling, just now.'

Examples (1) and (2) express a self-controlled motion (an animate being's relocation); Example (3) a spontaneous motion (an inanimate being's relocation); and Examples (4) and (5) a caused motion (an inanimate being's relocation caused by an animate being). These motion expressions are all mono-clausal. Thai single clauses may consist of only one verb phrase, e.g. (1), or of more than one verb phrase, e.g. (2)–(5). In addition, if a clause contains path prepositional phrases besides motion verb phrases, the prepositional phrases follow the verb phrases, e.g. (3).[12] They are more or less independent structures for each predicate with a high degree of pragmatic assertiveness and structural coherence. The structures' high degrees of assertiveness and coherence are verified by the fact that when a modal marker (e.g. *khoŋ* 'probably' in (3)), an aspectual marker (e.g. *lέɛw* 'PFV' in (4)), or a time-positional adverbial (e.g. *mûa kîi níi* 'a short while ago' in (5)) is included in the structure, the whole structure is under the scope of its modification (unless there is a pause between adjacent verb phrases).

Apart from manner verbs that normally take only a noun phrase representing a self-controlled or spontaneous mover, motion verbs in Thai are capable of taking other noun phrases to explicitly name a reference point for determining a path or an entity moved by some external force. The verbs *paj* 'go' in (1) and (2) and *chon* 'bump' in (5) take a goal noun phrase; the verb *khûn* 'ascend' in (2) takes a route noun phrase; the verb *càak* 'leave, get away from' in (5) takes a source noun phrase; and the verb *plɔ̀j* 'release' in (4) and (5) takes a noun phrase for the entity set in motion. Verbs co-occurring in a motion expression represent sub-events (or semantic components) of the whole motion event denoted by the expression. For instance, the three verbs in (3) specify the following three types of motion sub-events (or motion components) viewed in different perspectives: (i) the manner of motion (*lɔ̀ɔj* 'float'), (ii) the path of motion (*khûn* 'ascend'), and (iii) the relative relation between the mover and the deictic center

[12] Notice that *càak klɔ̀ɔŋ* in (3) is a prepositional phrase meaning 'from the box', while in (5) it is a verb phrase meaning 'to get away from the box'. See Section 4.1 for discussions on the differences between the two.

that is typically the speaker's vantage point (*paj* 'go').[13]

Endorsing Bohnemeyer et al.'s (2007) idea of the 'macro-event property',[14] I consider Thai motion expressions such as (1)–(5) to be constructions with the macro-event property. The term 'macro-event' in Bohnemeyer et al.'s sense is different from Talmy's (1991, 2000) notion of macro-event (see footnote 1). In Bohnemeyer et al. (2007: 497, 524), macro-event expressions present a single event in terms of a unique initial and/or terminal boundary, a unique duration, and a unique position on the time line. A piece of evidence in support of this view is as follows. If a time-positional modifier occurs at the beginning or the end of expressions like (1) to (5) (and no pause is made mid-clause), the expressions are understood to denote a single motion event (i.e. a motion macro-event). As demonstrated in (6) and (7), a single event reading is much more pertinent to a usual, natural motion event than a two- or three-event reading.

(6) *thîaŋ* *kháw* *wîŋ* *khûn* *maa* *chán bon*
at.noon PRON run ascend come upstairs
'At noon he came upstairs running.' [single event reading]
?? 'At noon he ran (and then he) came upstairs.' [two-event reading]
?? 'At noon he ran (and then he walked) up (and then he) came upstairs.' [three-event reading]

(7) *kháw* *wîŋ* *khûn* *maa* *chán bon* *thîaŋ*
PRON run ascend come upstairs at.noon
'He came upstairs running at noon.' [single event reading]
?? 'He ran (and then he) came upstairs at noon.' [two-event reading]
?? 'He ran (and then he walked) up (and then he) came upstairs at noon.' [three-event reading]

[13] A motion event can be described differently depending on the speaker's perspective in viewing it and the construal of it, as well as other pragmatic factors. The motion event in (3) can be described from an alternative perspective, e.g., 'It went up slowly.'; 'It floated away.'; 'He released it away.'; and so forth. Thus, the speaker's perspective and construal would determine which motion sub-events (motion components) constitute the motion event in question. In other words, the types and number of sub-events which constitute the event in question would hinge on the speaker's perspective and construal at the time of speaking (see Section 3.2).

[14] According to Bohnemeyer and Van Valin (2017) and in the Role and Reference Grammar's terms (Van Valin 2005), constructions with the macro-event property usually have a single verbal core, which consists of the nucleus and its arguments, but can have multiple verbal cores that together behave like a single core, if they are integrated by a cosubordinate nexus.

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Thai speakers largely express motion macro-events with a single clause, but they sometimes use macro-event expressions consisting of more than one clause, especially in written discourses. The co-occurring two or more clauses depict concurrent or concatenated events that are independent of, albeit closely related to, each other. Consider the bi-clausal expressions (8) and (9).

(8) *phûan* *dəən* *loŋ* *bandaj* *maa* *hăa*
friend walk descend steps come approach.and.meet
phŏm *phlaaŋ* *thák* *phŏm*
PRON at.the.same.time greet PRON
'(My) friend came down the steps to me walking, simultaneously greeting me.'

(9) *phûan* *plɔ̀j* *lûuk pòoŋ* *hâj* *man*
friend release balloon IRR.COMP PRON
khûn *paj* *chon* *pheedaan*
ascend go bump ceiling
'(My) friend released the balloon for it to float up and bump on the ceiling.'

In (8), the friend's approaching the speaker (motion event) and greeting the speaker (communication event) are, respectively, described with the former and the latter clauses linked by the temporal adverbial *phlaaŋ* 'at the same time' indicating the simultaneity of the two events. In (9), the former main clause represents the action event of the friend letting the balloon go, while the latter subordinate clause led by the irrealis complementizer *hâj* 'IRR.COMP' signifies the friend's intention in releasing the balloon, i.e. for the balloon to float up and bump on the ceiling. Note that (9) is not a motion expression proper, since what the main clause designates is the friend's action but not the balloon's motion. Compared with mono-clausal expressions, e.g. (1) to (7), bi- or multi-clausal expressions, e.g. (8) and (9), are not frequently used to encode a plain event of motion in Thai. This chapter exclusively examines mono-clausal expressions of motion macro-events.

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3. Syntactic and semantic structures of Thai motion expressions

3.1 Thai verbs of motion

Verbs used in Thai motion expressions (motion verbs and change-of-state verbs) can be classified into six main classes—namely, cause verbs, manner verbs, punctual path verbs, durative path verbs, deictic verbs, and arrival verbs— based on: (i) types of event structure represented by syntactic patterns of the expressions (i.e. combinations of causation, process, and change (plus state) phases) and (ii) types of lexical aspect or *aktionsart* denoted by the verbs (i.e. activity, achievement, accomplishment, resultative (achievement plus state), and neutral types) (cf. Table 1). What is important is that the path of motion verbalized by Thai speakers comprises the process phase and/or the change (plus state) phase of the event structure that one or more path verbs represent. It is also important that different characteristics of the path are reflected in different aspectual types of path verbs.

Representative members of each verb class are listed in (10)–(15). The short glosses for the verbs listed may be misleading. In fact, many of the verbs are neutral in terms of the animacy or agentivity (intentionality and volitionality) of the moving entity and/or the motion-initiator. Generally, a motion verb's agentivity value is indeterminate as long as its argument structure in usage and its discourse context are unknown. Path verbs and deictic verbs in Thai can be used to express both an intentional and volitional motion (i.e. an animate being's self-controlled motion) and a non-intentional and non-volitional motion (i.e. an animate or inanimate being's spontaneous motion). The achievement path verb *càak* 'leave, get away from' and the deictic verb *paj* 'go', for instance, may encode a self-controlled motion (e.g., *kháw càak paj* 'He left') or a spontaneous motion (e.g., *thɔ́ɔŋ fáa mâj khəəj càak paj nǎj* 'The sky never went anywhere'). The same applies to some manner verbs and some cause verbs in Thai. For example, the manner verb *dəən* 'walk' may express a self-controlled motion (e.g., *chán dəən* 'I walked') or a spontaneous motion (e.g., *khěm naalikaa dəən* 'The hand of the watch was going'), and the cause verb *thíŋ* 'throw away, drop' can represent not only an intentional and volitional causation (e.g., *chán thíŋ khayàʔ* 'I dropped off my trash') but also a non-intentional and non-volitional causation (e.g., *tôn thíŋ baj* 'The tree shed its

leaves').

We may also note that six common motion verbs—namely, *khâw* 'move more and more inside, enter', *ɾɔ̀ɔk* 'move more and more outside, exit', *khûn* 'ascend', *loŋ* 'descend', *paj* 'go', and *maa* 'come', which are often called 'versatile' motion verbs (cf. Matisoff 1973; see Section 4.2)—are neutral in lexical aspect. For the sake of convenience, however, they are each categorized as more than one type in the list below. This might lead to a misunderstanding that they are polysemous. The reality is that without the discourse context, these verbs are uncertain in aspectual meaning. By appearing in a specific syntactic position, they are interpreted as expressing a particular lexical aspect. The verb *khâw* 'move more and more inside, enter' may be taken either as a durative path verb (13) (to travel along a route crossing a boundary into an enclosed space) or as an achievement terminative path verb (15aA) (to cross a boundary into an enclosed space) (Takahashi 2009c).[15] Likewise, the verbs *ɾɔ̀ɔk* 'move more and more outside, exit', *khûn* 'ascend', and *loŋ* 'descend' may be interpreted either as punctual path verbs (12) (to start moving outward, upward, or downward) or durative path verbs (13) (to travel along a route crossing a boundary out of an enclosed space, to travel upward along a route, or to travel downward along a route) (Takahashi 2018b). Furthermore, the deictic verbs *paj* 'go' and *maa* 'come' (14) do not have any typical lexical aspects, and therefore they can be used either as durative or punctual verbs.

[15] For further clarification, compare the two contrastive examples below.

(i)	*lûuk bɔɔn*	*klîŋ*	*khâw*	*paj*	*naj*	*koo*
	ball	roll	enter	go	in	goal
	'The ball went into the goal, rolling.'					
(ii)	*lûuk bɔɔn*	*klîŋ*	*paj*	*khâw*	*naj*	*koo*
	ball	roll	go	enter	in	goal
	'The ball went into the goal, rolling.'					

Examples (i) and (ii) exemplify, respectively, a durative reading and a punctual reading of the verb *khâw* 'move more and more inside, enter'. The former durative path concept concerns the ball's continuous movement in an inward direction, while the latter punctual path concept is pertinent to the ball's final inward motion that instantly delimits its relocation. We may say the following. In (i), all three verbs (*klîŋ*, *khâw*, and *paj*) describe the whole relocation path. In (ii), on the other hand, the first two verbs (*klîŋ* and *paj*) express the whole relocation path while the last verb (*khâw*) denotes the terminative path.

(10) Cause verbs

a. activity

khŏn 'load, transport, carry', *cuuŋ* 'pull, lead by hand', *nam* 'lead, carry', *phaa* 'guide someone', *lâak* 'drag', *ʔaw* 'take'[16]

b. achievement

phlàk 'give a push', *dìit* 'flick', *tèʔ* 'kick', *lûan* 'slide (vt.)', *yoon* 'throw, toss', *paa* 'throw, hurl', *khwâaŋ* 'throw, fling', *thíŋ* 'throw away, drop', *phát* 'blow', *plòj* 'release, let go'

c. accomplishment

waaŋ 'manually place', *yìp* 'pick', *yók* 'lift', *sàj* 'manually put in', *dɯŋ* 'pull', *chùt* 'pull', *krachâak* 'jerk', *ʔaw* 'take, seize, grasp'

(11) Manner verbs

klîŋ 'roll', *khlaan* 'crawl', *khûup* 'move inch by inch, creep', *dəən* 'walk', *bin* 'fly', *lɔ̀j* 'float', *wîŋ* 'run', *lăj* 'flow, glide', *kâaw* 'step', *kraden* 'hurtle', *tàj* 'clamber', *thalák* 'spurt out', *phèn* 'rush out of', *phûŋ* 'spout', *traween* 'wander', *bùŋ* 'speed', *fàa* 'break through', *hèɛ* 'parade', *dân dôn* 'make one's way through', *lúaj* 'ramble', *trèe* 'stroll', *yôŋ* 'tiptoe', *pliw* 'flutter'

(12) Punctual path verbs[17]

a. inceptive

rûaŋ 'drop off', *tòk* 'fall off', *yɔ́ɔn* 'turn back', *thɔ̌j* 'start to move backward, recede', *càak* 'leave, get away from', *ʔɔ̀ɔk* 'start to exit', *khûn* 'start to ascend', *loŋ* 'start to descend'

b. prestadial

lòn 'drop onto', *com* 'sink onto'

(13) Durative (accomplishment) path verbs

khâw 'move more and more inside, enter', *ʔɔ̀ɔk* 'move more and more outside, exit', *khûn* 'ascend', *loŋ* 'descend', *klàp* 'return', *khâam* 'cross, pass over', *phàan* 'pass through, pass by', *phón* 'pass, escape', *lôɔt* 'pass through, move

[16] The verb *ʔaw* 'take' may be used as an activity cause verb (10a) meaning 'to take something to a place' or an accomplishment cause verb (10c) meaning 'to take hold of something and draw it near to oneself'.

[17] Some of the glosses given to the punctual path verbs here may seem strange (e.g. 'start to move backward'). Those verbs cannot be straightforwardly translated into English, because there are no corresponding English verbs. In general, the categorization of lexical aspects of verbs in a language is conventional. Put differently, such categorization hinges upon the language speakers' conventional construals of events.

under', *lát* 'cut across', *lám* 'move off a boundary', *ləəj* 'move beyond', *sŭan* 'pass each other', *ɾɔ̂ɔm* 'take a roundabout way', *taam* 'follow', *lîap* 'move along, skirt, hug', *won* 'circle'[18]

(14) Deictic verbs

paj 'go', *maa* 'come'

(15) Arrival verbs

a. terminative path verbs

A. achievement

thŭŋ 'reach, arrive', *khâw* 'enter', *chon* 'bump', *tôŋ* 'meet', *thùuk* 'touch', *doon* 'hit', *pathá*ʔ 'collide', *krathóp* 'strike against'

B. accomplishment

hăa 'seek, approach and meet'

C. resultative

yùt 'halt, stop and stay', *sùu* 'arrive and stay', *càp* 'catch and hold', *thâap* 'lie flat against, cover'

b. change-of-state verbs

A. achievement

tèɛk 'break', *phaŋ* 'tumble down, fall to the ground'

B. resultative

kɔɔŋ 'pile up, stack up', *pen pùk* 'form a compact mass'

Change-of-state verbs (15b), such as *tèɛk* 'break' and *kɔɔŋ* 'pile up, stack up', are not motion verbs. They alone do not represent motion in the proper sense (i.e. change in place or position).

One may wonder how punctual path verbs (12) (e.g. *yɔ́ɔn* 'turn back') and durative path verbs (13) (e.g. *phàan* 'pass') are distinguishable. Though both are path verbs that describe an event of motion with some path information, they differ in terms of the aspectual types of motion they represent. More precisely, motion events described by the former path verbs and those by the latter path verbs differ in terms of the necessary time span for the event in question to be realized. The definitions of punctual path verbs and durative path verbs from this viewpoint are as follows.

[18] The verb *won* 'circle' may be used as a manner (activity) verb (11) meaning 'to continuously move in a circle' or as a durative (accomplishment) path verb (13) meaning 'to circle around and get back to the original place' (Takahashi 2020).

Punctual path verbs are defined as verbs that denote an event of motion along a path relative to the starting point or the endpoint. The realization of such a motion event entails an 'achievement' aspect in Vendler's (1967) terminology that can be characterized by the distinctive features of [dynamic, punctual, bounded]. It is either inceptive or prestadial. The term 'prestadial' is taken from Bisang (2003: 48), and means 'the situation before the terminal boundary highlighted'.[19] Punctual path verbs of the inceptive type (12a) include *càak* 'leave, get away from' and *rûaŋ* 'drop off' and those of the prestadial type (12b) include *lòn* 'drop onto' and *com* 'sink onto'. Punctual path verbs represent a punctual motion event, and so they cannot take an adverbial indicating duration of motion on their own (e.g., *cɛɛnkan tòk* (**sɔ̌ɔŋ wínaathii*) 'The vase fell off (*for two seconds)') except in cases in which an iterative reading is possible (e.g., *fŏn tòk sɔ̌ɔŋ chûa mooŋ* 'The rain fell for two hours; It rained for two hours'). Last, some of the 'Manner + Path (MP) verbs' posited by Zlatev and David (2003: 34) and Zlatev and Yangklang (2004: 178) (e.g. *tòk* 'fall off', *rûaŋ* 'drop off', *lòn* 'drop onto', *com* 'sink onto') belong to my category of punctual path verbs. Unlike their classification of Thai motion verbs, my classification is based on the aspectual properties of the verbs.

Durative path verbs are defined as verbs that denote an event of motion along a path relative to the passage or a path arising from interaction with a reference entity other than the source and the goal. The aspectual category of such a motion event falls into 'accomplishment' in Vendler's (1967) terminology that can be characterized by the distinctive features of [dynamic, durative, bounded]. Accomplishment path verbs (13) include *klàp* 'return' and *khâam* 'cross, pass over'. With the perfective marker *lɛ́ɛw* 'PFV', an accomplishment path verb (e.g. *khâam* 'cross, pass over') must have a completive reading (e.g., *kháw khâam mɛ̂ɛ nám lɛ́ɛw* 'He has crossed the river') and cannot have an inceptive reading. It is likely that due to the salient terminal boundary of an accomplishment motion event (e.g. crossing a river), the terminal boundary, rather than the initial boundary, comes into focus in a perfective description of the event. In contrast, when the perfective marker follows a manner verb (e.g. *wîŋ* 'run'), the

[19] Put more simply, inceptive path verbs denote punctual (non-durative) motion away from a starting point, and prestadial path verbs denote punctual motion to an endpoint. These are aspectual construals of motion events by Thai speakers.

perfective motion event described is either completive or inceptive (e.g., *kháw wîŋ maaraathɔɔn lέεw* 'He has run the marathon race' or 'He has begun to run the marathon race'). As a motion event of the activity type with the distinctive features of [dynamic, durative, unbounded] (e.g. running a marathon race) does not entail any salient boundary in the event, either the terminal or the initial boundary of the event can be highlighted.

It is interesting to note that terminative path verbs (15a) subsume achievement, accomplishment, and resultative[20] verbs. These terminative path verbs all depict the end of translocation, that is, an arrival or stopping at a goal. The arrival or stopping event may be of the achievement type (e.g. arriving), of the accomplishment type (e.g. approaching and meeting), or of the resultative type (e.g. stopping and staying).

3.2. Syntactic patterns of Thai motion expressions

(16) and (17) show the syntactic patterns of macro-event expressions for self-controlled and spontaneous motion and for caused motion, respectively.

(16) Patterns for self-controlled and spontaneous motion

a. Frequently used[21]

$_{process}$[manner verb, durative path verb, deictic verb], e.g. (18)

b. Maximum

$_{process}$[manner verb$^{\sharp}$,[22] punctual path verb$^{\sharp}$, durative path verb$^{\sharp}$, deictic verb] $_{change\ (+state)}$[arrival verb], e.g. (19)

(17) Patterns for caused motion

a. Frequently used

$_{causation}$[cause verb] $_{process}$[durative path verb, deictic verb], e.g. (21)

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[20] The resultative aspect is a synthesis of (i) the achievement aspect with the distinctive features of [dynamic, punctual, bounded] and (ii) the state aspect with the distinctive features of [static, durative, unbounded].

[21] The 'frequently used pattern' corresponds to Kessakul's (2005) 'preferred pattern'. Thai native-speaker participants in Experiments A, B and C (see footnote 2) most frequently used this pattern in their responses.

[22] The sharp ($^{\sharp}$) means that one or more verbs of the type may appear.

b. Minimum

$_{\text{causation}}$[cause verb] $_{\text{process}}$[durative path verb]

$_{\text{causation}}$[cause verb] $_{\text{process}}$[deictic verb], e.g. (20)

c. Maximum

$_{\text{causation}}$[cause verb$^{\sharp}$] $_{\text{process}}$[manner verb$^{\sharp}$, punctual path verb$^{\sharp}$, durative path verb$^{\sharp}$, deictic verb] $_{\text{change (+state)}}$[arrival verb], e.g. (5), (22), and (53)

Drawing on the theoretical notions in the semantic category of 'force dynamics' (Talmy 1988, 2000a: 409–470), the three phases included in the event structure of Thai motion expressions—viz. causation, process, and change (plus state) phases—are roughly rendered as the following. The causation phase is the phase in which a stronger Antagonist impinges on an Agonist so that the Agonist starts to move (in other words, a causer triggers a translocation of a mover). The process phase is the phase during which the Agonist's motion lasts (put differently, the mover moves along a path). Finally, the change (plus state) phase is the phase in which the Agonist's motion changes into rest (to be precise, the mover stops at a goal and may stay there for a while).

The frequently used pattern for self-controlled and spontaneous motion (16a) profiles the process phase; the maximum pattern (16b) profiles the process and the change (plus state) phases. The frequently-used and minimum patterns for caused motion (17a) and (17b) profile the causation and the process phases; the maximum pattern (17c) profiles all of the causation, the process, and the change (plus state) phases. Notice that the combination of the causation phase and the change (plus state) phase fails to form the event structure of a motion macro-event. Without the process phase as an intervenient, the two phases cannot constitute a well-formed event structure.

The frequently used pattern for self-controlled and spontaneous motion (16a) comprises three types of verbs: manner verb, durative path verb, and deictic verb, e.g. (18). The maximum pattern (16b) contains five different types of verbs: manner verb, punctual path verb, durative path verb, deictic verb, and arrival verb, e.g. (19).

(18) *lûuk pòoŋ* *lɔ̀ɔj* *khûn* *paj*
balloon float ascend go
'The balloon went up floating.'

(19) *lûuk pòoŋ* *lɔ̀ɔj* *càak* *klɔ̀ɔŋ* *khûn* *paj* *chon*
balloon float leave box ascend go bump
pheedaan
ceiling
'The balloon floated up from the box and bumped on the ceiling.'

The minimum pattern for self-controlled and spontaneous motion requires only one manner verb, one punctual path verb, one durative path verb, one deictic verb, or one arrival verb. In contrast, to express caused motion, one cause verb must be combined with at least one durative path verb or one deictic verb, as indicated in (17b), e.g. (20).[23] The frequently used pattern for caused motion (17a) includes three types of verbs: cause verb, durative path verb, and deictic verb, e.g. (21). The maximum pattern (17c) has six verb slots, and a maximum of six types of verbs may co-occur: cause verb, manner verb, punctual path verb, durative path verb, deictic verb, and arrival verb, e.g. (22). When all six types of verbs co-occur, their linear order is that indicated in (17c) (and Table 2).

(20) *kháw* *plɔ̀j* *lûuk pòoŋ* *paj*
PRON release balloon go
'He released the balloon away.'

(21) *kháw* *plɔ̀j* *lûuk pòoŋ* *khûn* *paj*
PRON release balloon ascend go
'He released the balloon up and away.'

(22) *cháaŋ* *dan* *rót* *lăj* *thɔ̌j* *klàp* *paj* *cɔ̀ɔt*
elephant push car glide recede return go stop
naj *ɾùu*
in garage
'The elephant pushed the car, which glided back and stopped in the garage.'

One may wonder why an arrival verb (e.g. *chon* 'bump' in (19), *cɔ̀ɔt* 'stop' in (22)) is part of a serial verb phrase construction for a motion macro-event. To put it

[23] There is an exceptional case: an accomplishment cause verb may be followed by an arrival verb without a durative path or deictic verb intervening between the two. See discussions below for details.

another way, one may wonder why it forms the final verb phrase of a clause, rather than a separate clause. Recall that, as shown in (5), when a motion macro-event expression including the arrival phase contains a modal, aspectual, or time-positional modifier, the scope of the modification covers all the constituent verb phrases. (23), (24) and (25) are additional examples.

(23) *lûuk pòoŋ* *mâj dâj*[24] *lɔ́ɔj* *khûn* *paj* *chon* *pheedaan*
balloon NEG.REAL float ascend go bump ceiling
'The event that the balloon floats up and bumps on the ceiling is not realized.'

(24) *lûuk pòoŋ* *khoŋ* *lɔ́ɔj* *khûn* *paj* *chon*
balloon probably float ascend go bump
pheedaan *lɛ́ɛw*
ceiling PFV
'Probably the balloon has floated up and bumped on the ceiling.'

(25) *mûa kîi níi* *kháw* *khoŋ* *plɔ̀j* *lûuk pòoŋ*
a.short.while.ago PRON probably release balloon
lɔ́ɔj *khûn* *paj* *chon* *pheedaan*
float ascend go bump ceiling
'Probably he released the balloon, which floated up and bumped on the ceiling, just now.'

These sentences are taken as representing a single motion macro-event. It follows that they are an ordinary type of Thai expressions of motion macro-events, and that the change (plus state) phase expressed by an arrival verb is not an irregular portion of a motion macro-event.

Takahashi (2009c: 182) claimed that an arrival verb is a constituent of a single clause for motion macro-events, relying on the fact that, as exemplified in (26), an allative prepositional phrase (*yaŋ thâa rua plaay thaaŋ* 'to the final stopping port') can occur after an arrival verb (*thŭŋ* 'reach, arrive') and would then indicate a goal place at

[24] I consider the lexical item *mâj dâj* to be a modal marker, or more specifically, the negative realization marker. The affirmative realization marker (*dâj*) and the negative realization marker (*mâj dâj* or *míʔ dâj*) express the modal meanings that 'a situation is realized' and that 'a situation is not realized', respectively. Expressions with such a realization-related marker have the connotation that 'the described emerging (or not emerging) situation is a desirable or expected one' (Takahashi 2008: 126).

which the moving entity arrives after translocation (the final stopping port at which the ferry arrived after traveling across).

(26) *fəərîi* *dəən thaaŋ* *khâam* *maa* *thŭŋ* *yaŋ*
ferry travel cross come arrive to
thâa rua plaaj thaaŋ
the.final.stopping.port
'The ferry came across, traveling, and arrived at the final stopping port.'

This word order is in accordance with a syntactic principle of Thai grammar, namely, in a clause containing a verb phrase (or a series of verb phrases) and a path prepositional phrase, the prepositional phrase follows the verb phrase(s) expressing a single event. However, like noun phrases, a prepositional phrase can appear as the topic phrase at the beginning of the clause containing it (see (40)–(42)).

It is noteworthy that a cause verb and a manner verb can co-occur in a clause expressing a motion macro-event, e.g. (27) and (28), because, as shown in (17c), different syntactic slots are provided for them.

(27) *phɯ̂an* *plɔ̀j* *lûuk pòoŋ* *lɔ̀ɔj* *khûn* *paj*
friend release balloon float ascend go
'(My) friend released the balloon up away floating.'

(28) *cháaŋ* *dan* *rót* *lăj* *thɔ̌j* *klàp* *paj*
elephant push car glide recede return go
'The elephant pushed the car, which glided back away.'

The causation phase of (27) is punctual and bounded, and it is denoted by the achievement cause verb *plɔ̀j* 'release'. In this ballistic caused motion event, the friend releasing the balloon does not change his position; only the balloon does. In contrast, the causation phase of (28) is durative and unbounded, and it is represented by the activity cause verb *dan* 'push'. In this co-motional caused motion event, not only does the car change its position but so does the elephant pushing it. The elephant is the motion-initiator and the mover at the same time. At any rate, in both (27) and (28), a

manner verb follows a cause verb.

It should also be noted that more than one cause verb, more than one manner verb, more than one punctual path verb, and more than one durative path verb can each occur in a Thai expression of a motion macro-event, e.g. (29)–(32). Example (29) includes two cause verbs (*ʔaw* 'take, seize, grasp', *sàj* 'put in'); Example (30) two manner verbs (*dəən* 'walk', *fàa* 'break through'); Example (31) two punctual path verbs (*rûaŋ* 'drop off', *lòn* 'drop onto'); and Example (32) two durative path verbs (*lɔ̂ɔt* 'pass through', *khâw* 'move more and more inside, enter').

(29) *kháw* *ʔaw* *náŋsɯ̌ɯ* *sàj* *loŋ* *paj* *naj* *krapăw*
PRON take book put.in descend go in bag
'He took the book and put it into the bag.'

(30) *kháw* *dəən* *fàa* *fŏn* *klàp* *maa*
PRON walk break.through rain return come
'He came back walking and facing his way through the rain.'

(31) *lom* *phát* *dɔ̀ɔk máy* *rûaŋ* *lòn*
wind blow blossom drop.off drop.onto
loŋ *bon* *phúuun*
descend on the.ground
'The wind blew the blossoms, which fell off down onto the ground.'

(32) *kháw* *tèʔ* *fút bɔɔn* *lɔ̂ɔt* *tây*
PRON kick soccer.ball pass.through below
máa nâŋ *khâw* *paj* *naj* *koo*
bench enter go in goal
'He kicked the soccer ball, which passed through under the bench into the goal.'

In (31), *lòn* 'drop onto' which indicates the endpoint of a path (punctual, prestadial path verb) precedes *loŋ* 'descend' which signifies the whole path (durative path verb). This ordering (*lòn loŋ*) is good evidence that a strict iconicity-based rule on the formation of serial verbs for motion components is not tenable. Without assuming lexical-aspectual classes of Thai motion verbs, we cannot explicate the whole picture of the verbs' order restrictions. The verb classes that are based on their lexical aspect types are thus crucial for the syntactic system of Thai motion expressions. Having said that, I

would like to emphasize that 'iconicity' in itself is a reasonable and useful notion. In fact, the ordering among punctual path verbs co-occurring in a single clause reflects 'diagrammatic iconicity', that is, a systematic arrangement of signs (two types of punctual path verbs in series), none of which necessarily resembles its referent (corresponding punctual motion events), but whose relationships to each other (the order of the verbs) mirror the relationships of their referents (the order of the events) (cf. Haiman 1980: 515). As such, the two punctual path verbs in (31) (the inceptive path verb *rûaŋ* 'drop off' and the prestadial path verb *lòn* 'drop onto') are usually serialized as *rûaŋ lòn* (but not *lòn rûaŋ*). What is more, the restriction that an activity or achievement cause verb cannot be directly followed by an arrival verb (see explanations below Table 1) is also attributable to the principles of diagrammatic iconicity: The linear order of verbs mirrors that of events denoted by the verbs. The event structure shown in Table 1 partially, if not totally, reflects people's experiences of actual motion events.

The use of more than one cause, manner, punctual path, or durative path verb in a Thai expression of motion macro-event is not uncommon, because the components 'the cause of motion', 'the manner of motion', 'the inceptive or prestadial aspect of motion', and 'the durative aspect of motion' can be richly described from more than one perspective. Put differently, they may be multi-dimensionally described. By contrast, only one deictic verb and only one arrival verb can appear in each expression, because only one value of the components 'the relative relation between the mover and the deictic center' and 'the completion of motion' can be specified for a single motion event. One exception is the combination of the two deictic verbs, *paj* 'go' plus *maa* 'come', which may be added to motion verb(s) to idiomatically signify moving back and forth in a more or less confined space, as in (33).

(33) *kháw* *dəən* *won wian* *paj* *maa*
PRON walk circle go come
'He walked back and forth from one place to another.'

In sum, Thai motion verbs in series can express as many as six main components for motion macro-events: (i) cause, (ii) manner, (iii) punctual path, (iv) durative path, (v) deixis, and (vi) arrival. As Table 1 indicates, the cause component includes the

activity cause (e.g. carrying), the achievement cause (e.g. throwing), and the accomplishment cause (e.g. placing). The punctual path component encompasses the inceptive path (e.g. dropping off) and the prestadial path (e.g. dropping onto). The durative path component comprises the accomplishment path (e.g. crossing). The arrival component embraces the terminative path and the change of state. The terminative path, in turn, subsumes the achievement terminative path (e.g. arriving), the accomplishment terminative path (e.g. approaching), and the resultative terminative path (e.g. stopping). The change of state subsumes the achievement change (e.g. becoming broken) and the resultative change (e.g. piling up).

Table 1. Types of motion components and their aspectual categories

Types of motion components		*Types of aspect*
(a) Causation phase		
(i) cause	activity cause	activity
	achievement cause	achievement
	accomplishment cause	accomplishment
(b) Process phase (= translocation phase)		
(ii) manner		activity
(iii) punctual path	inceptive path	achievement
	prestadial path	achievement
(iv) durative path	accomplishment path	accomplishment
(v) deixis (deictic path, reference-point-particular path)		neutral in aspect
(c) Change (+State) phase		
(vi) arrival		
terminative path	achievement terminative path	achievement
	accomplishment terminative path	accomplishment
	resultative terminative path	resultative
change of state	achievement change	achievement
	resultative change	resultative

In terms of the event structure of motion macro-events, (i) the cause component constitutes (a) the causation phase; (ii) the manner, (iii) the punctual path, (iv) the durative path, and (v) the deixis components constitute (b) the process (or translocation) phase; and (vi) the arrival component constitutes (c) the change or change plus state phase. A caveat is in order here. Although the accomplishment cause is listed only in the column of (a) the causation phase for convenience's sake, it actually refers not only to

(a) the causation phase but also to (b) the process phase. An accomplishment cause verb phrase, unlike an activity or achievement cause verb phrase, may immediately precede an arrival verb phrase (e.g., *kháw* {*waaŋ* / **yoon*} *phâa thâap bon tóː* 'He {placed / *threw} the cloth which covered the table'). Such a macro-event expression consisting of an accomplishment cause verb (e.g. *waaŋ* 'place, put') and an arrival verb (e.g. *thâap* 'lie flat against, cover') dispenses with a verb referring to the process phase, because the accomplishment cause verb involves not merely the causation phase (e.g. bringing about an entity's motion, such as causing a cloth's relocation) but also the process phase (e.g. making an entity under control continuously relocate until reaching a goal, such as putting a cloth over a table). In spite of that, syntactic patterns for caused motion preferably contain verb(s) for the process phase (e.g. *loŋ* 'descend') that explicitly express motion along a certain path in a certain direction (e.g., *kháw waaŋ phâa loŋ thâap bon tóː* 'He placed the cloth down over the table').

The point is that the aspectual values of motion components indicated in Table 1 have to do with the classification of Thai motion verbs. Takahashi (2009b: 42) suggested that an adequate description of Thai basic clausal patterns for encoding a single motion macro-event should be in the form of aspect-type-specific constructions, since the aspectual restrictions imposed on those constructions are truly necessary conditions for the formation of Thai expressions of motion macro-events. (For more details, see the discussion in Section 3.3.)

As mentioned earlier in this section, Thai caused motion expressions must be composed of, at least, one cause verb and one durative path or deictic verb (with the exception of those with an accomplishment cause verb). The combination of a cause verb and a punctual path verb, however, is unacceptable.[25] This is simply because durative path verbs are durative and deictic verbs are neutral in aspect and can be interpreted as durative, but punctual path verbs are by no means durative. Punctual path verbs designate the actuating or the pre-completing stage of translocation, such as dropping off and dropping onto, which is punctual. Punctual path verbs by themselves cannot properly express the whole course of translocation of a moved entity, which is

[25] While this is not acceptable for caused motion expressions proper, it is acceptable for expressions of cause-and-consequence events or so-called resultative events (e.g., *kháw tii kêɛw tòk* 'He hit the glass (and the glass) fell off').

the core meaning of caused motion expressions.

3.3. Acceptable vs. unacceptable linear order

The linear order of verbs encoding the six motion components is fixed, as shown in Table 2.

Table 2. The linear order of motion verbs

(i) cause verb e.g. *tèʔ* 'kick'	(ii) manner verb e.g. *klîŋ* 'roll'	(iii) punctual path verb e.g. *yɔ́ɔn* 'turn back'	(iv) durative path verb e.g. *phàan* 'pass'	(v) deictic verb e.g. *maa* 'come'	(vi) arrival verb e.g. *hăa* 'approach and meet'

To express a single complex motion event with more than one type of motion verb, the verbs must be serialized in this order. A clause with verbs serialized in the wrong order cannot express a single motion event.

In Table 2, *yɔ́ɔn* 'turn back' is given as an example of a punctual (inceptive) path verb (iii), and *phàan* 'pass' as an example of a durative path verb (iv).[26] These two verbs occur in (34) and (35) below.

(34) *kháw* *tèʔ* *lûuk bɔɔn* *klîŋ* *phàan* *pratuu*
PRON kick ball roll pass door
yɔ́ɔn *maa* *hăa* *raw*
turn.back come approach.and.meet PRON
'He kicked the ball, which passed through the door, rolling, (and then) turned back to us.'

(35) *kháw* *tèʔ* *lûuk bɔɔn* *klîŋ* *yɔ́ɔn*
PRON kick ball roll turn.back
phàan *pratuu* *maa* *hăa* *raw*
pass door come approach.and.meet PRON

[26] As evidence, *yɔ́ɔn* 'turn back' is incompatible with a durative adverbial (e.g., *man yɔ́ɔn* (**sɔ̌ɔŋ wínaathii*) 'It turned back (*for two seconds)'), while *phàan* 'pass' is compatible with a durative adverbial (e.g., *man phàan sɔ̌ɔŋ naathii* 'It passed (through a certain space) for two minutes').

'He kicked the ball, which came back through the door to us, rolling.'

In (34), the durative path verb *phàan* 'pass' precedes the punctual path verb *yɔ́ɔn* 'turn back' and therefore two separated, though continuing, routes (to pass through the door, rolling, and then come back toward us) are expressed. In this case, it makes more sense to put the perfective marker *léɛw* between the two verbs *phàan* and *yɔ́ɔn* ([*klîŋ* <u>*phàan*</u> *pratuu*] *léɛw* [<u>*yɔ́ɔn*</u> *maa hăa raw*]). To express a single motion event (to come back through the door toward us, rolling), the two verbs must be reversed, as in (35). If the two verbs *yɔ́ɔn* and *phàan* are of the same type, either of the two orders (*phàan yɔ́ɔn*, *yɔ́ɔn phàan*) would be acceptable as a macro-event expression. On this basis, it is reasonable to say that the two verbs encode different motion components. In Thai speakers' conceptualization, the punctual path is a motion component distinct from the durative path.[27]

To depict a mover's journey-like long translocation following a complicated route composed of two or more successive routes, one may multiply the unit for the process phase (consisting of manner, punctual path, durative path, and deictic components) by making some part of the unit recurrent (Kessakul 2005: 140–141, 147–156), e.g. (34). Kessakul is right in saying that:

> [T]he order of [motion verbs in] Thai SVC [i.e. serial verb phrase construction] only seems to be flexible because of the possible omission [of verbs for certain components depending on the speaker's window of attention] and the recurrence of a basic SVC schema [composed of manner verb, punctual path verb, durative path verb, and deictic verb]. (Kessakul 2005:

[27] The following examples provide additional evidence that *yɔ́ɔn* and *phàan* have different lexical aspects.

(i)	*kháw*	*tɛ̀ʔ*	*lûuk bɔɔn*	<u>*phàan*</u>	*pratuu*
	PRON	kick	ball	<u>pass</u>	door
	'He kicked the ball, which passed through the door.'				
(ii)	*kháw*	*tɛ̀ʔ*	*lûuk bɔɔn*	<u>*yɔ́ɔn*</u>	
	PRON	kick	ball	<u>turn.back</u>	
	'He kicked the ball, which turned back.'				

Both expressions sound a bit odd as they do not contain a deictic verb. Yet expression (i) is relatively more felicitous than expression (ii). This is because the durative path verb *phàan* in (i) expresses the kicked ball's relocation along a certain path (a proper caused motion), but the punctual path verb *yɔ́ɔn* in (ii) does not.

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In addition, Example (36) serves as evidence to show that the terminative path should also be differentiated from the durative path. The sentence in (35) with the terminative path verb *hăa* 'approach and meet' in the final position felicitously denotes a single motion macro-event. However, the expression in (36), where the terminative path verb is placed after the durative path verb *phàan* 'pass' and before the deictic verb *maa* 'come', is not acceptable. If the two verbs *phàan* and *hăa* were in the same category, the ordering of the three verbs (*phàan hăa maa*) in (36) would be acceptable as a macro-event expression.

(36) **kháw tèʔ lûuk bɔɔn klîŋ yɔ́ɔn*
PRON kick ball roll turn.back
phàan pratuu hăa raw maa
pass door approach.and.meet PRON come
(intended meaning) 'He kicked the ball, which came back through the door to us, rolling.'

The linear orders of motion verbs indicated in Table 3 are not acceptable as macro-event expressions. They all deviate from the right order, as given in Table 2: C + M + Pun + Dur + Dei + Ar.

Table 3. Examples of unacceptable orders of serial verbs for motion macro-event

a.	*	**Pun** + C + M + Dur + Dei + Ar	
b.	*	C + **Pun** + M + Dur + Dei + Ar	
c.	*	C + M + Dur + **Pun** + Dei + Ar	e.g. (34)
d.	*	C + M + Dur + Dei + **Pun** + Ar	
e.	*	C + M + Dur + Dei + Ar + **Pun**	
f.	*	**Ar** + C + M + Pun + Dur + Dei	
g.	*	C + **Ar** + M + Pun + Dur + Dei	
h.	*	C + M + **Ar** + Pun + Dur + Dei	
i.	*	C + M + Pun + **Ar** + Dur + Dei	
j.	*	C + M + Pun + Dur + **Ar** + Dei	e.g. (36)

Punctual path (Pun) verbs (e.g. *yɔ́ɔn* 'turn back') cannot precede cause (C) and manner (M) verbs (e.g. *tèʔ* 'kick' and *klîŋ* 'roll', respectively) and cannot follow durative path (Dur), deictic (Dei), and arrival (Ar) verbs (e.g. *phàan* 'pass', *maa* 'come', and *hăa* 'approach and meet', respectively) in a motion macro-event clause, cf. (a)–(e) of Table 3. Arrival (Ar) verbs cannot precede any other verbs in a motion macro-event clause, cf. (f)–(j) of Table 3.

As such, the linear order of Thai verbs appearing in clauses expressing motion macro-events is fixed (Table 2). Nonetheless, there are various syntactic patterns for motion macro-events. Figuratively speaking, the pattern can become shortened or expanded. Specifically, the six slots (i) to (vi) in the pattern may or may not be occupied by a verb and also more than one verb may occur in each of the slots (i) to (iv). It is also true that a verb of any type has the potential to become the initial verb in a clause because it is not obligatory that a verb of every type be present. However, a pair with a cause verb and a durative path or deictic verb—'C +Dur' or 'C + Dei'—is indispensable to the expression of caused motion (with the exception of expressions including an accomplishment cause verb), and the initial verb in a caused motion expression is always a cause verb.

Hence, the structure of Thai expressions for motion macro-events is quite elastic and fluid. We therefore cannot posit generalized and fixed semantic categories for constituents of the expressions (such as 'V1: cause/manner verb' and 'V2: path verb') in Thai, unlike in languages like Mandarin Chinese (Lamarre 2007, Peyraube 2006, Talmy 2016, among others) and Japanese (Matsumoto 2018).

4. The nature of path-related morphemes in Thai

4.1. Verbs vs. prepositions

The linear order given in Table 2 is based on an understanding of the distinction between verbs and prepositions, which is different from those of other analyses. My understanding is similar to that of Kessakul (2005: 108–118, 132–135, 156–158). She identified the basic unit for a motion macro-event in Thai as 'manner verb + directional

verb + path verb[28] + deictic verb', and she categorized motion verbs that occur in an irregular position of the unit as path prepositions or aspectual/modal markers. For example, *càak,* which as a verb means 'leave, get away from' (Kessakul's directional verb and my punctual path verb), occurs after the deictic verb phrase (*paj hɔ́kkaidoo* 'go to Hokkaido') in (37) and functions as an ablative preposition meaning 'from'.[29]

(37)	*kháw*	*bin*	*paj*	*hɔ́kkaidoo*	*càak*	*tookiaw*
	PRON	fly	go	Hokkaido	from	Tokyo
	'He flew to Hokkaido from Tokyo.'					

Path prepositions always take a reference-entity noun phrase (e.g. **bin paj càak* (fly go from); **càak bin paj* (from fly go)), while corresponding path verbs do not always do so (e.g. *bin càak paj* (fly leave go)) (Takahashi 2005: 115; 2017b: 49).

In a similar vein, Takahashi (2005: 116–117; 2009c: 189–190; 2017a: 136–138) proposed the following regarding the equivocal status of path prepositions in Thai. Thai prepositions for the endpoint of motion (viz. the allative preposition *yaŋ* 'to' and the comitative preposition *kàp* 'with') are prepositions proper. That is, they are no longer content words (verbs or nouns). However, Thai does not have prepositions proper for the starting point or the passing course of motion. In a simplex translocation expression, the punctual path verb *càak* 'leave, get away from' with a source noun phrase serves as an ablative preposition indicating the starting point of motion (*càak* 'from') only when occurring after a durative path verb and/or a deictic verb (e.g. *paj* 'go'), as in (37), or before an allative preposition (e.g. *thŭŋ* 'to'), as in (38). The durative path verb *taam* 'follow' with a route noun phrase serves as the preposition indicating the passing route of motion (*taam* 'along') only when appearing after a deictic verb (e.g. *maa* 'come'), as in (39).[30]

[28] Directional verbs and path verbs in Kessakul's terms approximately correspond to my punctual path verbs and durative path verbs, respectively, in this chapter.
[29] Clark (1975) referred to such case prepositions derived from verbs as 'coverbs'.
[30] For a systematic classification of Thai spatial prepositions, refer to Takahashi (2009c: 189–191) and Prasithrathsint (2010).

(38) *kháw bin paj càak tookiaw thŭŋ hɔ́kkaidoo*
PRON fly go from Tokyo to Hokkaido
'He flew from Tokyo to Hokkaido.'

(39) *kháw wîŋ maa taam thaaŋ*
PRON run come along road
'He came along the road running.'

As mentioned earlier, path prepositional phrases follow the verbal unit for motion macro-events, but they may be moved into the position in front of the unit, thereby topicalizing the particular path concepts that they denote, as in (40)–(42).

(40) *càak tookiaw kháw bin paj hɔ́kkaidoo*
from Tokyo PRON fly go Hokkaido
'From Tokyo, he flew to Hokkaido.'

(41) *càak tookiaw thŭŋ hɔ́kkaidoo kháw bin paj*
from Tokyo to Hokkaido PRON fly go
'From Tokyo to Hokkaido, he flew.'

(42) *taam thaaŋ kháw wîŋ maa*
along road PRON run come
'Along the road, he came running.'

When the morphemes *càak*, *thŭŋ*, and *taam* are used as a motion verb to dynamically express the path of motion, as in (43) and (44), the motion verb cannot move to anywhere other than its position in the fixed order of serial motion verbs for motion macro-events (Table 2).

(43) *kháw bin càak tookiaw paj thŭŋ hɔ́kkaidoo*
PRON fly leave Tokyo go arrive Hokkaido
'He flew from Tokyo to Hokkaido.'

(44) *kháw wîŋ taam thaaŋ maa*
PRON run follow road come
'He came along the road, running.'

According to the fixed order (C + M + Pun + Dur + Dei + Ar), the punctual path verb *càak* 'leave, get away from' in (43) appears between the manner verb *bin* 'fly' and the deictic verb *paj* 'go' (M + Pun + Dei); the arrival verb (achievement terminative path verb) *thŭŋ* 'reach, arrive' in (43) immediately follows the deictic verb (Dei + Ar); and the durative path verb *taam* 'follow' in (44) occurs between the manner verb *wîŋ* 'run' and the deictic verb *maa* 'come' (M + Dur + Dei).

An anonymous reviewer's Thai-speaking consultant analyzes *càak* in (43) as a preposition, but not a verb, since it is likely to have the same sense as the preposition *càak* in (38), (40), and (41). The consultant adds that *càak* could be a verb, but only if *bin* 'fly' is absent in (43). Now, we should examine if *càak* in (43) has a prepositional, static meaning and does not have a verbal, dynamic meaning; in other words, whether *càak* merely refers to a source and does not depict an inceptive motion. Compare (38) and (43), which are repeated below.

(38) *kháw* *bin* *paj* *càak* *tookiaw* *thŭŋ* *hɔ́kkaidoo*
PRON fly go from Tokyo to Hokkaido
'He flew from Tokyo to Hokkaido.'

(43) *kháw* *bin* *càak* *tookiaw* *paj* *thŭŋ* *hɔ́kkaidoo*
PRON fly leave Tokyo go arrive Hokkaido
'He flew from Tokyo to Hokkaido.'

The expression in (38) contains two path prepositional phrases (*càak tookiaw* 'from Tokyo', *thŭŋ hɔ́kkaidoo* 'to Hokkaido'), by which the distance of traveling is explicitly indicated. The expression in (38) is used to talk about the described person's traveling from Tokyo to Hokkaido, when the speaker wants to express that the person traveled by plane (as opposed to other means such as by train, car, bicycle, etc.). On the other hand, the typical use of the expression in (43) would be to answer a general question, without any presupposition on the part of the questioner, such as 'What did he do?'. That is, (43) is the most natural depiction of the person's movement (cf. Takahashi 2017a: 137). This difference in usage between (38) and (43) can be seen as a diagnostic to show that *càak* and *thŭŋ* function differently in the two contexts. In (38), *càak* and *thŭŋ* function as prepositions to refer to the source and the goal, respectively. They collaboratively specify the distance of the traveling. In contrast, in (43), *càak* and *thŭŋ* function as

verbs to depict the inceptive and the terminative phase of the traveling, respectively.

4.2. Verbs and satellites

In relation to the proposal in Section 3, this section considers the status of non-initial verbs as full verbs. Peyraube (2006), Lamarre (2007), and Talmy (2016) among others have argued that non-initial verbs in the verb sequences in Mandarin Chinese function as satellites, and one may wonder if that is also the case with Thai.

In domains other than motion events, versatile motion verbs have acquired auxiliary-like functions in limited syntactic environments, having lost their full verb status in such cases. Specifically, the function that some Thai motion verbs have acquired is that of an aspectual/modal marker in relation to the verb that precedes it (cf. Thepkanjana 2006: 130–131).

(45) *man* *dii* *khûn*
PRON be.good INC (< ascend)
'It got better.'

(46) *chán* *khít* *ɾɔ̀ɔk*
PRON think INC (< exit)
'I came to realize.'

(47) *man* *khăaj* *mâj ɾɔ̀ɔk*
PRON sell NEG.POT (< not exit)
'They won't sell.'

For example, the morpheme *khûn* in combination with the stative verb *dii* 'be good' in (45) and the morpheme *ɾɔ̀ɔk* in combination with the cognition verb *khít* 'think' in (46) function as inceptive aspect markers. The unit composed of the negative marker *mâj* and the morpheme *ɾɔ̀ɔk* that follows the action verb *khăaj* 'sell' in (47) functions as a negative potential marker. However, even when a motion verb is used as a satellite, as in (45)–(47), its phonological weight is usually not reduced.

Besides *khûn* 'ascend' and *ɾɔ̀ɔk* 'exit', Thai has several other versatile motion verbs that are capable of functioning either as a motion verb or like an auxiliary, as

listed in (48). Such verbs are limited in number and form a closed class. These versatile motion verbs, in fact, have auxiliary-like functions.

(48) Versatile motion verbs
  a. versatile path verbs
    khâw 'enter', *ɤɔ̀ɔk* 'exit', *khûn* 'ascend', *loŋ* 'descend'
  b. versatile deictic verbs
    paj 'go', *maa* 'come'

Non-initial path verbs in motion event descriptions in Thai may also seem to be grammaticalized into satellites, as is argued for Mandarin Chinese (e.g. Lamarre 2007). In (49)–(51), for instance, the versatile motion verbs *loŋ* 'descend' and *maa* 'come' may appear to function as path satellites in relation to the previous cause verb *phát* 'blow'.

(49) *lom* *phát* *baj máj* *loŋ* *maa*
  wind blow leaf descend come
  'The wind blew the leaves down (toward us).'

(50) *lom* *phát* *baj máj* *loŋ* *bon* *phɯ́ɯm*
  wind blow leaf descend on the.ground
  'The wind blew the leaves down onto the ground.'

(51) *lom* *phát* *baj máj* *maa*
  wind blow leaf come
  'The wind blew the leaves off (toward us).'

However, I maintain that non-initial verbs in motion event descriptions largely retain their status as full motion verbs. One source of evidence is that a full range of motion verbs may occur as non-initial verbs as long as they match the order restrictions. More path verbs may occur in addition to *loŋ* 'descend' and *maa* 'come' in (49), as illustrated in (52). Example (52) contains one more path verb *rûaŋ* 'drop off'.

(52) *lom* *phát* *baj máj* *rûaŋ* *loŋ* *maa*
  wind blow leaf drop.off descend come
  'The wind blew the leaves down off (toward us).'

Furthermore, more motion verbs and/or a change-of-state verb may be added as non-initial verbs. For example, the manner verb *pliw* 'flutter' and the resultative change verb *kɔɔŋ* 'pile up' are used in (53) to specify the manner of the described leaves' relocation and the resultant state of the leaves.

(53) *lom* *phát* *baj máj* *pliw* *rûaŋ* *loŋ* *maa*
wind blow leaf flutter drop.off descend come
kɔɔŋ pen phuu khăw
pile.in.heaps
'The wind blew the leaves down off (toward us), fluttering, and (they) piled in heaps.'

Thus, unlike in Mandarin Chinese[31], non-initial verbs in Thai motion expressions do not form a closed class. This reveals that Thai path verbs have not yet formed the type of fixed paradigm that satellites usually form.

Thai expresses different motion components (motion sub-events) with serial verb phrases. In Thai motion expressions, each component (each sub-event) is represented by a verb that holds enough independence to freely take its own object or complement noun phrase, as shown in the following examples.

(54) *cháaŋ* *lâak* *suŋ* *paj*
elephant drag log go
'The elephant dragged the log away.'

(55) *kháw* *yoon* *khayàɔ* *càak* *chán bon* *loŋ* *paj*
PRON throw trash leave upstairs descend go
'He threw the trash from upstairs down and away.'

(56) *lom* *phát* *mùak* *pliw* *loŋ* *nám* *paj*
wind blow hat flutter descend water go
'The wind blew the hat, which flew down into the water.'

[31] According to a reviewer, Talmy (2016) did not reach a decisive conclusion in the case of Mandarin Chinese. In my view, Talmy (2016) still argues that Mandarin Chinese has path satellites and that normally, a Mandarin Chinese motion macro-event expression consists of a co-event verb and a path satellite, with a few exceptions (e.g., *zou*^{3} *jin*^{4} 'walk, enter').

The cause verbs in (54)–(56) (*lâak* ‘drag’, *yoon* ‘throw’, *phát* ‘blow’) take a noun phrase for the moved entity. The punctual path verb in (55) (*càak* ‘leave, get away from’) and the durative path verb in (56) (*loŋ* ‘descend’) also take a noun phrase indicating some reference place. Each verb in Thai motion expressions behaves in quite an independent manner since it has not yet lost its “verbiness”.

Verbiness is a concept different from the finiteness of a verb. Whereas verbiness is a notion of semantics and syntax, finiteness is basically a notion of morphology in the sense that the verbal distinction between finite and non-finite must be marked by some morphological means such as inflection. Verbs in Thai, a typical isolating language, lack the morphological coding of finiteness. In Thai, therefore, plain verbs each taking an object or complement noun phrase can combine to form a single clause expressing a macro-event, which has been referred to as a ‘serial verb phrase construction’ in this chapter. Most linguists (e.g. Filbeck 1975) regard the first verb in a serial verb phrase construction as the main verb, perhaps because they adopt the common theoretical assumption in linguistics that one clause must contain one main verb, which is the only finite verb in the clause. However, Thai verbs have no division between finite and non-finite, and sometimes noun phrases adjacent to a Thai verb are ambiguously classifiable as either required arguments of the verb (subject and object noun phrases) or non-arguments (complement noun phrases). What is more, Thai verbs are not necessarily accompanied by a subject or object noun phrase in every clause. For these reasons, more than one verb in a plain form with or without its object or complement noun phrase may co-occur in a clause to produce a serial verb phrase construction with a coordinate, yet mono-clausal, structure. Having examined Thai expressions for a variety of complex events (cf. Takahashi 2007, 2009a, 2009b, 2009c, 2017b, 2018a), I maintain that a complex macro-event may be composed of a main event and a subordinate event or of two or more coordinate events. In essence, my proposal is that Thai verbs that co-exist in a clause for a motion macro-event are by and large constituents of equal status. They are neither main verbs nor satellites.

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5. Conclusion

I have argued that the event structure underlying Thai expressions of motion macro-events comprises three successive phases: causation, process, and change (plus state) phases. Presumably, this force-dynamic structure of the motion macro-event is a universal construal of human beings. However, morphosyntactic patterns for motion macro-events differ from language to language. Crucially Thai expressions for motion macro-events may profile a bipartite or tripartite event structure by making use of serial verb phrase constructions. Semantic components in the event structure of motion expressions correspond to sub-events of the motion macro-event. In total, six main components of motion are recognized in Thai: components of cause, manner, punctual path, durative path, deixis, and arrival. The first two (cause and manner) are crosslinguistically common and so they are comprehensible to speakers of other languages. The others (punctual path, durative path, deixis, and arrival) seem language-particular, and other languages may not utilize such specific categories. In a Thai expression of a motion macro-event, these six components can be concurrently specified by means of serial verb phrases, and each of these components, except for the last two (deixis and arrival), may be richly described by more than one verb phrase. Of particular importance is the fact that it is possible for three path components in the process phase (i.e. punctual path, durative path, and deictic or reference-point-particular path) as well as one path component in the change (plus state) phase (i.e. terminative path) to congruously constitute the single path of a motion macro-event. These findings offer the key to a better understanding of the conceptual underpinnings of Thai speakers' verbalization of motion.

The present chapter has focused on Thai; similar studies on the details of motion event descriptions in other languages may reveal further language-specific categories employed in their systems of motion event descriptions.

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Abbreviations

INC: inceptive
IRR.COMP: irrealis complementizer (i.e. complementizer preceding complement clause for irrealis situation)
NEG.REAL: negative realization
NEG.POT: negative potential
PFV: perfective
PRON: pronoun

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