THE STATUS OF THE WORD *hây* IN THAI

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1. INTRODUCTION[1]

There has long been controversy about the word *hây* 'to give' in Thai: about how many homophonous words *hây* exist in Thai and to which grammatical categories they belong. This paper examines the status of the form *hây* based on distribution and meaning. Within the Lexicase version of dependency grammar, this analysis classifies the form *hây* into six homophonous variants: three ditransitive verbs, two causative verbs, and an adverb.

The form *hây* is most commonly a verb carrying the meaning 'to give'. However, there are several homophonous *hây*'s, as illustrated in the following example:

(1) *Nɔ́y bɔ̀ɔk wâa mɛ̂ɛ   hây   tɔ̌y   hây   kuncɛɛ dɛɛŋ   hây   sɔ̂ɔm*
      Noy say   that mother cause Toy give key   Dang cause repair

      rót   hây   míchanán càʔ tii   hây.
      car for   otherwise will hit   for
      Noy said that mother ordered Toy, under the threat of being hit, to give the key to Dang to fix the car for (mother).

The forms pronounced as *hây* in the example above differ in distribution and meaning. The purpose of this paper is to classify the Thai form *hây* into different categories based on their distribution and meaning. The syntactic framework used in this analysis is Lexicase, a version of dependency grammar developed by Stanley Starosta in the early 1970s. While the first part of this paper is an introduction, the second part is a review of previous analyses of *hây*. Sections 3–5 provide a reanalysis of the form *hây*: §3 discusses the ditransitive verbs *hây* 'to give'; §4 discusses the causative verbs *hây*; and §5 discusses the adverb *hây*. The last part of the paper presents a conclusion.

2. PREVIOUS ANALYSES

2.1 PANUPONG 1970

Vichin Panupong's work *Inter-sentence relations in modern conversational Thai* is a detailed structuralist analysis of spoken Thai based on the use of test frames. Panupong

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(1970:122) proposes the two test frames (a) and (b) for ditransitive verbs, as shown in example (2).

(2) a.   n   2   n n *léɛw*
    b.   n   *kamlaŋ* 3 n n   (where n refers to NP *léɛw* is an adverb of completion
                                      and *kamlaŋ* is an adverb of progression)

Panupong states that any words which may replace 2 in (a) and 3 in (b) are to be labelled as ditransitive verbs. Since *hây* in (3) fits in either position, it is an instance of a ditransitive verb in Panupong's classification.

(3) a.   *Mɛ̂ɛ   hây   taŋ   nít   léɛw.*
          mother give money Nit   already
          Mother has already given Nit some money. (Panupong 1970:122)

    b.   *Mɛ̂ɛ   kamlaŋ   hây   taŋ   nít.*
          mother in.progress give   money Nit
          Mother is giving Nit some money. (Panupong 1970:122)

However, Panupong does not state how she would treat *hây* in (4) below, in which the third NP of pattern (a) is replaced by a prepositional phrase.

(4)   *Mɛ̂ɛ   hây   taŋ   kɛ̀ɛ nít.*
       mother give money to Nit
       Mother gave some money to Nit.

Panupong analyses *hây* in (5) and (6) in terms of its function and considers it to be a "verbal linker" because it links two verbs. However, she does not state to which grammatical category (i.e. a noun, a verb, a preposition, or an adverb) this verb linker *hây* belongs.

(5)   *Còtmǎay chabàp níi   tɔ̂ŋ   ʔàan   hây   dii.*
       letter issue   this must   read   linker good
       This letter must be read carefully.

(6)   *Khruu sàŋ   hây   ʔàan   náŋsǐi.*
       teacher order linker read   book
       The teacher ordered us to read a book. (Panupong 1970:164–165)

2.2 DEJTHAMRONG 1970

Orathai Dejthamrong (1970), Panupong's student, investigates the grammatical function of *hây* and finds five syntactically distinct but orthographically and phonemically identical forms of *hây*. These forms are: a ditransitive verb, a preposition, a causative transitive verb, a clause linker, and a postverb functioning as part of the nucleus.

Dejthamrong defines ditransitive verbs in accordance with Panupong's (1970) ditransitive verb test frames. However, Dejthamrong notes that there are three types of ditransitive verbs: those that require a preposition, such as *sòŋ* 'to send', as in (7); those that do not allow a preposition, such as *tɔ̀ɔp* 'to answer' in (8); and those that may or may not have a preposition, such as *hây* 'to give' in (9).

(7) a. *Lék sòŋ còtmǎay ɔrathay.*
Lek send letter   Orathai
Lek sent the letter to Orathai.

   b. *Lék sòŋ còtmǎay kɛ̀ɛ ɔrathay.*
Lek send letter   to Orathai
Lek sent the letter to Orathai.

(8) a. *Kháw tɔ̀ɔp khamthǎam khɔ̂ɔ níi khruu.*
he   answer question   bunch this teacher
He answered this question for the teacher. (lit. He answered this question the teacher.)

   b. **Kháw tɔ̀ɔp khamthǎam khɔ̂ɔ níi kɛ̀ɛ khruu.*
he   answer question   bunch this to teacher
He answered this question for the teacher. (lit. He answered this question to the teacher.)

(9) a. *Dɛɛŋ hây náŋsɨ̌ dèkdèk.*
Dang give book children
Dang gave the children some books.

   b. *Dɛɛŋ hây náŋsɨ̌ kɛ̀ɛ dèkdèk.*
Dang give book to children
Dang gave some books to the children.

Verbs which require prepositions do not fit in Panupong's verb test frame. Dejthamrong's explanation for treating such verbs as ditransitive verbs is based on their overlapping distribution. They are included, according to Dejthamrong (1970:43), only because they may replace ditransitive verbs like *hây* 'to give' and *cɛ̀ɛk* 'to distribute' when such verbs are followed by a preposition.

Hây in (10) and (11) is considered to be a preposition, since it fits in a preposition test frame, while *hây* in (12) is identified as a causative transitive verb followed by a clause.

(10) *Dɛɛŋ yím hây chán.*
Dang smile give I
Dang smiled at me.

(11) *Dɛɛŋ kwàat bâan hây mɛ̂ɛ.*
Dang sweep house give mother
Dang swept the house for her mother.

(12) *Dɛɛŋ hây nɔ́ɔŋ   kwàat bâan.*
Dang cause younger.sibling sweep house
Dang had his younger sibling sweep the house.

Dejthamrong considers *hây* in (13) and (15)–(18) to be instances of *hây* functioning as a "clause linker", which "introduces" a noun clause or an adverbial clause. For example, in (13a), *hây* is analysed as a clause linker, introducing a noun clause, because *hây chán maa* may be replaced by a noun *náŋsɨ̌* 'book', a direct object of the transitive verb *tɔ̂ŋkaan* 'to want', as in (13b) (Dejthamrong 1970:100).

(13) a. *Dɛɛŋ tɔ́ŋkaan hây chán maa.*
      Dang want   I   come
      Dang wants me to come.

  b. *Dɛɛŋ tɔ́ŋkaan náŋsɨ̌.*
      Dang want   book
      Dang wants a book.

When *hây* occurs with the ditransitive verb *bɔ̀ɔk* 'to tell, to order', as in (14a), Dejthamrong treats the clause introduced by *hây* as a direct object of the verb because it may be replaced by the noun *khàaw* 'news', as shown in (14b), despite the meaning difference of the verb *bɔ̀ɔk*. However, according to Dejthamrong, "unlike other ditransitive verbs", which require a direct object to precede an indirect object, the indirect object *dɛɛŋ* 'Dang' precedes the direct object noun clause in (14a). To accommodate this fact, Dejthamrong (1970:101) stipulates that when the direct object is a noun clause, it appears after an indirect object.

(14) a. *Kháw bɔ̀ɔk dɛɛŋ hây klàp bâan.*
      he   order Dang   return home
                 IO   DO
      He ordered Dang to return home.

  b. *Kháw bɔ̀ɔk khàaw dɛɛŋ.*
      he   tell news Dang
              DO   IO
      He told Dang the news.

In Dejthamrong's analysis, the clause linker *hây* may introduce an adverbial clause modifying a verb, as in (15a) and (16a). *Hây* and the words that follow it constitute an adverbial clause because one could replace thē clause with the adverb *yàaŋray* 'how', as in (15b), and *thammay* 'why', as in (16b) (Dejthamrong 1970:120–121).

(15) a. *Chán càʔ nɔɔn hây sabaay.*
      I   will sleep   comfortable
      I will sleep comfortably.

  b. *Chán càʔ nɔɔn yàaŋray?*
      I   will sleep how
      How will I sleep?

(16) a. *Nít yók kâwʔi hây khὲɛk nâŋ.*
      Nit lift chair   guest sit
      Nit got a chair for the guest to sit on.

  b. *Nít yók kâwʔi thammay?*
      Nit lift chair why
      Why did Nit lift a chair?

Dejthamrong also considers the *hây* which can appear only at the beginning of a sentence to be a clause linker introducing an adverbial clause, as in (17a), because *hây* plus the words which accompany it may be replaced by *yaŋŋay yaŋŋay* 'whatever happens' in (17b) (Dejthamrong 1970:123).

(17)a.   *Hây fǒn tòk chán kɔ̌ɔ càʔ pay rooŋrian.*
       rain fall I   then will go   school
       Even if it rains, I will still go to school.

    b.   *Yaŋŋayyaŋŋay chán kɔ̌ɔ càʔ pay rooŋrian.*
       whatever.happens I   then will go   school
       Whatever happens, I will still go to school.

Finally, Dejthamrong also sets up a category called postverb for the form *hây* which appears after a transitive verb. The postverbal *hây* functions as part of the nucleus, as illustrated in (18). However, she does not state to which syntactic category (e.g. noun, verb, adverb) this *hây* belongs.

(18)   *Mǎa kàt khâw hây.*
      dog bite he
      The dog bit him.

2.3 KULLAVANIJAYA 1974

Pranee Kullavanijaya (1974), working within an early version of the Lexicase framework, discusses the ditransitive verb *hây*, the causative verb *hây*, and the derived preposition *hây*. According to her analysis, a sentence like (19) is ambiguous. Read in one way, *hây* is considered to be a preposition, a benefactive case assigned to its following noun.

(19)   *Mɛ̂ɛ   yép sîa   hây lûuk.*
     mother sew shirt for   child
     +N   +P   +N
     +NM^2 +B   +AC
     +AGT   +BEN
     A mother sewed a dress for her child. (Kullavanijaya 1974:85)

Example (19) also has another reading, in which *hây* is a non-finite ditransitive verb. The sentence is interpreted as 'Mother sewed the dress and gave it to the child', as illustrated in (20).

(20)   *Mɛ̂ɛ   yép sîa   hây   lûuk.*
     mother sew shirt give   child
     +N   +V   +N
     +NM   -finite +AC
     +AGT   +BEN

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2 The lexicase abbreviations for case markers used by Kullavanijaya (1974) are as follows:
     Case Forms   Case Relations
     AC   Accusative   AGT   Agent
     B   Benefactive   BEN   Benefactive
     C   Commitative   DAT   Dative
     NM Nominative

By treating *hây* in (20) as a ditransitive verb, Kullavanijaya can account for sentences like (21), in which *hây* is followed by the preposition *kàp*.

(21)   *Mɛ̂ɛ   yép   sîa   hây kàp   lûuk.*
    mother   sew   shirt   give to   child
                         +V   +P   +N
                         +C   +AC
                              +DAT
    Mother sewed the dress and gave it to the child. (Kullavanijaya 1974:87)

Kullavanijaya explains that if *hây* in this example were considered to be a preposition, there would be two case markers for one actant: *hây* as a benefactive case marker and *kàp* as a dative case marker. The question would remain as to which case should be assigned to the following noun *lûuk*. If *hây* is analysed as a verb, however, one does not encounter this problem, and *lûuk* would receive, as expected, an ordinary dative case.

In Kullavanijaya's analysis, *hây* in a sentence like (12) above and in (22) is considered to be a causative transitive verb, which takes a verb complement. Further, she points out that the ditransitive verb *hây* 'to give' and the causative verb *hây* are different lexical items which are not derivationally related in a synchronic sense (Kullavanijaya 1974:269–273). Her claim is based on two unique characteristics of the causative *hây*. First, only *hây* 'to cause', but not causative verbs such as *sàŋ* 'to command', may be embedded under non-causative verbs. For example:

(22)   *Dɛɛŋ cà? kin khâaw   hây   ʔìm.*
    Dang will eat rice   cause   full
    Dang will eat to make himself full. (Kullavanijaya 1974:272)

(23)   **Dɛɛŋ cà? kin   khâaw   sàŋ   ʔìm.*
     Dang will eat   rice   command   full
    Dang will eat to make himself full.

Second, only *hây* may occur with process verbs. For example:

(24)   *Thəə cà? hây   chán taay rew rə̌ə?*
    you   will   make   I   die   fast   is.that.so
    Do you want to make me die soon? (Kullavanijaya 1974:272)

(25)   **Thəə cà? sàŋ   chán taay rew rə̌ə?*
    you   will   command   I   die   fast   is.that.so
    Will you command me to die soon? (Kullavanijaya 1974:273)

2.4 THEPKARNCHANA 1986

In her study of verb serialisation in the Government and Binding framework, Kingkarn Thepkarnchana (1986) claims that *hây* in (26), as well as other words which have corresponding verbs, synchronically are verbs, not prepositions or coverbs. A coverb is defined, according to Thepkarnchana (1986:197), as a function word or a grammatical particle which has a nearly synonymous verb corresponding to it. However, this definition contradicts her claim that such forms are not coverbs, but verbs. Her claim for verbs is based on both semantic and syntactic arguments, although in her discussion of (26) she applies only a semantic criterion to the classification of the word *hây*.

(26) *Surii   khàprȯt   hây   sudaa.*
      Suri   drive   for   Suda
      Suri drives for Suda. (Thepkarnchana 1986:200)

Coverbs are "semantically depleted". According to Thepkarnchana (1986:201), *hây* in (26) does not lose its semantic properties; it only loses its literal sense – to give something to Suda. However, it maintains the metaphorical interpretation, namely a favour that *Suri* bestows on *Suda*. From this interpretation, Thepkarnchana concludes that *hây* in this construction is a verb. However, her claim seems to contradict itself. If a word which loses its literal sense is not a coverb, what is semantically depleted?

Thepkarnchana advances two syntactic arguments for claiming that all words which have corresponding verbs are verbs. First, these words have the potential to occur as full verbs in isolation, while maintaining the same meaning. Thus, they can be analysed as verbs in other contexts as well. For example, the word *khâam* 'to cross' in (27a) may appear as a full verb in (27b) and is thus regarded as a verb rather than a preposition.

(27) a. *Kháw   dəən   khâam   saphaan   pay.*
         he   walk   cross   bridge   go
         He walked across the bridge.

    b. *Kháw   khâam   saphaan   pay.*
        he   cross   bridge   go
        He crossed the bridge. (Thepkarnchana 1986:205–206)

However, applying the same test to (26), we find that *hây* cannot appear as a free verb without changing the meaning from 'for' to 'to give', as shown in (28). Hence, by Thepkarnchana's own criterion, *hây* in this instance is not a verb.

(28) *Surii   hây   sudaa.*
      Suri   for   Suda
      *Suri for Suda.
      Suri gave Suda (something).

Second, if a word can be negated, it is a verb. Thepkarnchana exemplifies this claim with *khâam* 'to cross'.

(29) *Kháw   kradòot   mây   khâam   rúa.*
      he   jump   not   cross   fence
      He jumped, but failed to hurdle the fence. (Thepkarnchana 1986:206)

Since *khâam* 'to cross' in (30) may be negated, Thepkarnchana concludes that all words in Thai which have corresponding verbs have verbal status synchronically. However, Thepkarnchana has neglected to note that some adverbs, such as *bɔ̀y* 'often', may also be negated, as shown in (30b). *Bɔ̀y* is clearly not a verb, since it never appears as a free verb in Thai, as illustrated in (30c). It is evident that the negation test cannot reliably distinguish a verb from an adverb when the word in question occurs after another verb.

(30) a. *Kháw   maa   thîi   nîi   bɔ̀y.*
         he   come   at   here   often
         He comes here often.

b. *Kháw maa thîi nîi mây bɔ̀y.*
    he come at here not often
    He does not come here often.

c. **Kháw bɔ̀y.*
    he   often
    *He often.

3. DITRANSITIVE VERBS *hây*

Hây meaning 'to give' always functions as a verb. I claim that there are three ditransitive verbs *hây* 'to give'. *Hây*$_1$ requires two bare noun phrases as its complements, as in (31). *Hây*$_2$ requires, as its complements, a bare noun phrase followed by a prepositional phrase, as in (32). *Hây*$_3$ differs from *hây*$_1$ only in that it requires an additional verb complement and forbids a PP, as shown in (33).

(31)   *Lék hây$_1$ còtmǎay dɛɛŋ.*
        Lek give letter   Dang
        Lek gave Dang a letter.

(32)   *Lék hây$_2$ còtmǎay kɛ̀ɛ dɛɛŋ.*
        Lek give letter   to Dang
        Lek gave a letter to Dang.

(33)   *Chán hây$_3$ náŋsɨ̌ dèkdèk ʔàan.*
        I   give book children read
        I gave a book to the children to read.

In Thai, the nominal case forms, that is the case markings without a preposition, are found to be limited to the Nominative, Accusative, and Locative case forms. The Nominative marks a Patient (PAT) of an intransitive finite verb and an Agent (AGT) of a transitive finite verb. The Locative marks the locational noun of a locational verb as Locus case relation (LOC).[3] Patient of transitive verbs and Correspondent actants are realised as the Accusative case form. The Locus actant of a non-locational verb and a Means actant, on the other hand, always occur as an immediate dependent of a preposition and carry the Accusative case form assigned by the regent preposition (Indrambarya 1994:62). The Patient Centrality Hypothesis, together with the One per Sent constraint, ensures that every verb must have a Patient in its case frame and that a clause may carry only one Patient (Starosta 1988:128,138). Since the ditransitive verb *hây*$_1$ in (34) has two accusative nouns, only one of them will be assigned as Patient. The other must be a Correspondent actant. The question is which noun is assigned Patient and which Correspondent.

In a passive construction, an object (Patient) of a transitive verb is omitted and is interpreted as the Patient of the verb *thùuk* or *doon* (see P2P Control Rule in Appendix IV). Since only a transitive verb may be passivised in Thai, a passive construction may serve as

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3   Locational verbs are verbs which expect a dependent which is lexically marked as [+lctn]. These verbs are, for example, *pay* 'to go' and *yùu* 'to stay' (Indrambarya 1994:53).

a test for the Patient case relation. Unfortunately, this process is not very productive in Thai and is subject to certain semantic constraints, so that neither of the two objects of *hây₁* nor those of other ditransitive verbs may occur as Patient of *thùuk*, as shown in (34b) and (34c). In this paper, I will assume that the semantically transferred object of the ditransitive verb *hây₁*, such as *còtmǎay* 'letter', is assigned PAT in the same way that the bare transferred object of the ditransitive verb *hây₂*, which is the only accusative actant of the verb, is assigned PAT. Hence, in (34), *còtmǎay* 'letter' is PAT and *dɛɛŋ* 'Dang' is COR.

(34) a.

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                           |
               hây₁
               give
    |              |        |         |
    Lék          +trns    còtmǎay   dɛɛŋ.
    Lek                   letter    Dang
    Nom                   Acc       Acc
    AGT                   PAT       COR
    Lek gave Dang a letter.
```
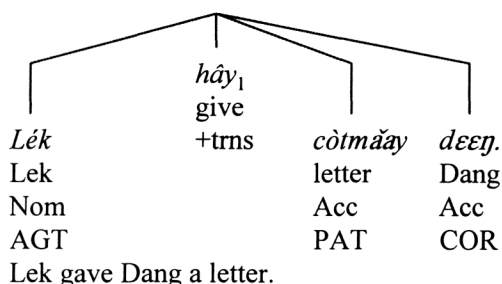
b. **Còtmǎay thùuk   lék hây₁ dɛɛŋ.*
    letter   undergo   Lek give Dang
    A letter was given to Dang by Lek.

c. **Dɛɛŋ thùuk   lék   hây₁ còtmǎay.*
    Dang   undergo Lek   give letter
    Dang was given a letter by Lek.

Before arguing whether a form belongs to two separate lexical entries, one first needs to distinguish a complement, an argument that subcategorises a verb, from an adjunct, which by general rule may optionally occur with that verb. The distinction is tested here in two ways: by the Question Pull test and by the head substitution criterion.

Since Thai is a 'pro-drop language' (Cole 1987:606–607), that is a language which makes significant use of zero anaphora, any of the three arguments of *hây₁* may be omitted contextually. When the arguments of verbs are omitted, the Question Pull test (Hasagawa 1988) may help to determine whether a verb is transitive or ditransitive. According to Hasagawa, given an utterance consisting of a verb with few or no other accompanying words, an addressee is expected to ask What-Who-questions about obligatory arguments, that is, complements, which are not clear in a conversation. Questions introduced by 'why', 'where', and 'when', which extract adjuncts, will be asked only after all required arguments are retrieved. Consider example (35):
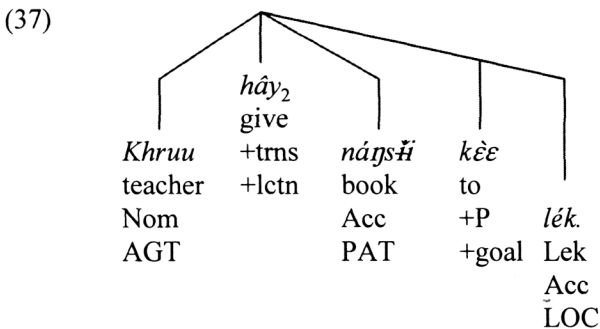
(35)   Speaker A: *lék   hây   còtmǎay*
                      Lek   give   letter

        Speaker B: *hây   khray*
                      give   who

        Speaker A: *hây   dɛɛŋ*
                      give   Dang

Because speaker A gave insufficient information about the word *hây* 'to give' to speaker B, speaker B is expected to inquire as to whom *lék* 'Lek' gave a letter. This shows that *hây* in (35) is looking for three arguments and must be interpreted as the ditransitive verb *hây₁*.

The head substitution test is another criterion for complement and adjunct distinction. Heads may differ in their ability to cooccur with a particular complement type, while an adjunct may occur freely with any head, subject to pragmatic considerations. Taking *kɛ̀ɛ dɛɛŋ* 'to Dang' in (36) as an example, when the head *hây₂* is replaced with one or another verb denoting a transfer meaning, *kɛ̀ɛ dɛɛŋ* 'to Dang', if it is a complement, should not be able to occur with such verbs, subject to pragmatic constraints. Example (36) shows that this is in fact the case. Since *tɔ̀ɔp* 'to answer' may not appear with *kɛ̀ɛ dɛɛŋ*, I conclude that *kɛ̀ɛ dɛɛŋ* in (36) is a complement of *hây₂*.

(36)   *Lék   hây₂/*tɔ̀ɔp   còtmǎay   kɛ̀ɛ dɛɛŋ.*
        Lek   give/answer letter   to   Dang
        Lek gave/*answered the letters to Dang.

Hây₂ is a locative ditransitive verb requiring three arguments. In (37), the subject *khruu* is AGT, and *hây₂* takes only one accusative actant. If a verb expects only one object, that object must be assigned Patient according to the Patient Centrality Hypothesis. Hence *náŋsɨ̌* must be PAT. *Lék* 'Lek' is assigned the LOC case relation since it is the accusative actant of the locative preposition *kɛ̀ɛ* 'to'.

(37)

Khruu	*hây₂* give	*náŋsɨ̌*	*kɛ̀ɛ*	
teacher	+trns	book	to	
Nom	+lctn	Acc	+P	*lék.*
AGT		PAT	+goal	Lek
				Acc
				LOC

The teacher gave a book to Lek.

The head substitution test below illustrates that *ʔàan* 'to read' in example (33) is a complement of *hây₃*. Only *hây* but not *cɛ̀ɛk* 'to distribute' may occur with the embedded clause containing *ʔàan*, as shown in (38).

(38)   *Chán   hây₃/*cɛ̀ɛk   náŋsɨ̌   dèkdèk   ʔàan.*
        I   give/distribute book   children read
        I gave/distributed books to the children to read.

In Lexicase grammar, a form is considered to be two distinct lexical entries if it occurs in two distinct GRAMMATICALLY SIGNIFICANT ENVIRONMENTS A and B and there is a word X which may appear in pattern A but not in B and/or there is a word Y which may appear in B but not in A (Starosta 1988:98). Consider (39) and (40):

(39) a.   *Nít   tɔ̀əm   námman   rót   khan   níi   lɛ́ɛw.*
          Nit   fill   oil   car   vehicle this already
          Nit has already filled this car with gas.

   b.   *Nít   tɔ̀əm   námman   kɛ̀ɛ rót   khan   níi   lɛ́ɛw.*
          Nit   fill   oil   to car   vehicle this already
          Nit has already filled the gas into this car.

(40) a.   *Kulayaa   mɔ́ɔp   còtmǎay   chabàp   nán   khruu.*
       Kulaya   deliver   letter   issue   that   teacher
       Kulaya delivered that letter to the teacher.

   b.   *Kulayaa   mɔ́ɔp   còtmǎay   chabàp   nán   kɛ̀ɛ   khruu.*
       Kulaya   deliver   letter   issue   that   to   teacher
       Kulaya delivered that letter to the teacher.

Tɔɔm 'to fill' in (39) and *mɔ́ɔp* 'to deliver' in (40) can each appear in only one of the two constructions. *Tɔɔm* 'to fill' may appear only in (39a) but not in (39b), while *mɔ́ɔp* 'to deliver' may appear in (40b) but not in (40a). The distribution shows that the two patterns exemplify two grammatically significant environments.

By this criterion, if a single form appears in both environments, it must belong to two separate verb classes and constitute two distinct lexical entries, since if two forms differ in either pronunciation, meaning, or distribution, they must be learned and stored separately. Thus, from the observation that the form *hây* can appear in both of the frames (a) and (b), as shown in examples (31) and (32), we can conclude that they are two distinct lexical items. $H\hat{a}y_1$ belongs to the same verb class as *tɔɔm* 'to fill' in (39a), and $h\hat{a}y_2$ belongs to the same verb class as *mɔ́ɔp* 'to deliver' in (40b).

The grammatically significant environments criterion also shows that $h\hat{a}y_1$ in (31) and $h\hat{a}y_3$ in (33) belong to two different classes. Consider (41):

(41) a.   *Chán   cɛ̀ɛk$_1$ nánsɨ̌   dèkdèk.*
       I   distribute   book   children
       I distributed the books to the children.

   b.   *Chán   cɛ̀ɛk$_2$ nánsɨ̌   kɛ̀ɛ   dèkdèk.*
       I   distribute   book   to   children
       I distributed the books to the children.

   c.   *Chán   cɛ̀ɛk   nánsɨ̌   dèkdèk   ʔàan.*
       I   distribute   book   children   read
       I distributed the books to the children to read.

Again, while the form *hây* may appear in both constructions (31) and (33), the form *cɛ̀ɛk* 'to distribute' can be used in (41a) but not in (41c). Unfortunately, an example of a ditransitive verb other than *hây* which could occur in (41c) but not in (41a) has not been found. Nevertheless, the distribution exemplified in (41a) and (41c) is sufficient to show that the forms *hây* in the two patterns are two different lexical entries.

The words A and B are related by the synchronic derivational rule if they are distinct lexical items which are etymologically related and if (A:B) is a member of an analogical set {X:Y} which contains other pairs of lexical items related in the same way (Starosta 1988:63). Example (41) demonstrates that $h\hat{a}y_1$ and $h\hat{a}y_2$ are derivationally related, since there is the form *cɛ̀ɛk* which may appear in both the (a) and (b) patterns of (41). However, since no other ditransitive verbs may appear in the same environment as $h\hat{a}y_3$, there is no derivational relationship between $h\hat{a}y_1$ and $h\hat{a}y_3$ or $h\hat{a}y_2$ and $h\hat{a}y_3$. The derivational rule which relates $h\hat{a}y_1$ to $h\hat{a}y_2$ may be formulated as follows (see abbreviations in Appendix I):

(42)
$$
\begin{vmatrix} +\text{crsp} \\ +\text{trns} \\ -\text{lctn} \\ -\text{xtns} \\ \text{n[+COR]} \end{vmatrix} \quad : \quad \begin{vmatrix} +\text{goal} \\ +\text{lctn} \\ +\text{trns} \\ -\text{crsp} \\ \text{n[+LOC]} \end{vmatrix}
$$

The derivational rule in (42) says that the ditransitive verb $hây_1$ is related to the locative ditransitive verb $hây_2$. The contextual features n[+COR] in the left column and the contextual features n[+LOC] in the right column illustrate that the Correspondent actant in $hây_1$ corresponds to the Locus actant in $hây_2$.

I consider the embedded verb *ʔàan* 'to read' in (33) (repeated as (43a) below) to be a transitive verb, the object of which is missing. This conclusion is based on the fact that *ʔàan* can be followed by an object which refers to part of the higher object, as shown in (43b).

(43) a. *Chán   hây₃   náŋsɨ̌   dèkdèk   ʔàan.*
        I   give   book   children read
        AGT +trns PAT   COR   +trns
        I gave a book to the children to read.

    b. *Chán   hây₃   náŋsɨ̌   dèkdèk   ʔàan   nâapòk.*
        I   give   book   children read   cover
        AGT +trns PAT   COR   +trns PAT
        I gave a book to the children to read the cover.

The reason that I do not consider *ʔàan* in (43a) and (43b) to be two separate lexical items, an intransitive and transitive pair, is that I cannot find verbs which may occur in one of the two constructions but not the other. By the grammatically significant environments criterion, *ʔàan* in the two examples must therefore be regarded as a single lexical item.

In (43a) the missing object of the transitive verb *ʔàan* 'to read' is interpreted as *náŋsɨ̌* 'book', which is the higher Patient (PAT). This relationship between the missing lower object and the higher object is stated informally in Pagotto's account of English 'Tough' movement (Pagotto 1985:42). In Thai, I find that a similar relationship holds in verbs which carry the feature [+cntn] (continuing). The feature [+cntn] shows the continuation of actions between the regent verb and its dependent verb. I will formulate this relationship in terms of Lexicase control chaining rules, rules which state the relationship between words in different domains.[4] Furthermore, the relationship between a lower direct object in (43b), which refers to part of the higher object, and the higher direct object could be accounted for by a similar rule which will not be formulated in this paper. The coreference between a missing Patient of an infinitival verb complement and the Patient of a regent continuing verb in example (43a) is accounted for by the Patient-to-Patient Control Chaining Rule,

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4 Domain: direct and indirect relationship between a lexical head and its dependent. Y is in the domain of X if X is the regent of Y.

hereafter called the P2P Control Rule (Indrambarya 1994:299–301), as shown in (44).[5] This rule applies only to a subset of verbs taking infinitival complement clauses.

(44)

    a. $\begin{vmatrix} \text{-fint} \\ ?[\text{+PAT}] \\ \text{nndex} \end{vmatrix}$ --> $[m[\text{+PAT}]]$ \ $\begin{vmatrix} \text{+cntn} \\ m[\text{+PAT}] \\ n[\text{-fint}] \end{vmatrix}$

    b.   The actor of the non-finite verb is interpreted as the closest available noun-headed dependent of a regent verb to the left of the embedded verb. (Indrambarya 1994:300)

As shown in (44), the P2P rule consists of two parts, one looking for a missing Patient of the lower clause in (44a) and another looking for an actor of the lower clause in (44b), only the first of which is formulated. A non-finite verb with nndex is looking for a Patient shown by $[?[\text{+PAT}]]$.[6] The non-finite verb will find its Patient by copying the index m from $[m[\text{+PAT}]]$ of the regent. The relationship between the non-finite verb and its regent is shown by the feature $[n[\text{-fint}]]$ on the regent. That is, a regent is looking for a non-finite verb with an index n. The feature [+cntn] restricts this rule to apply only to continuing verbs and shows the continuation of actions between the regent verb and its dependent verbs (Indrambarya 1994:299–304). Moreover, the Redundancy Rule 1 (RR–1) states that the feature [+cntn] expects a non-finite transitive verb as its dependent, indicated by question mark in front of the features. When the requirement is fulfilled, each question mark is replaced by an index number (see Appendix II for members of continuing verbs in Thai).
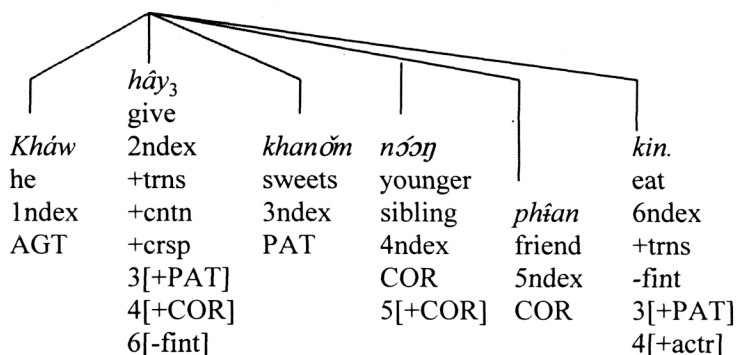
    RR–1   [+cntn]   -> $\begin{vmatrix} \text{+V} \\ ?[\text{-fint}] \\ ?[\text{+trns}] \end{vmatrix}$

The missing actor of the infinitival complement verb, on the other hand, is interpreted as the closest available noun-head dependent of a regent verb to the left of the embedded verb (see Pagotto 1985:44–45). The term 'available nominal' refers to a noun which is free in its governing category following Principle B of the Binding theory (Chomsky 1981:181). A governing category is defined here as the domain of the verb containing the missing Patient. In other words, to satisfy the binding requirement, an implied actor to the left of the embedded verb must not be coreferential with the missing Patient. As an example, consider (45).

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5 This rule is a revision of the Patient-to-Patient Control Rule proposed in Indrambarya (1990:43).

6 The first letter *n* in *nndex* denotes the number for the index which specifies a given word's position in a sentence.

(45)

Khǎw	hây₃ give 2ndex	khanǒm	nɔ́ɔŋ		kin.
he	+trns	sweets	younger		eat
1ndex	+cntn	3ndex	sibling	phîan	6ndex
AGT	+crsp	PAT	4ndex	friend	+trns
	3[+PAT]		COR	5ndex	-fint
	4[+COR]		5[+COR]	COR	3[+PAT]
	6[-fint]				4[+actr]

He gave his friend's younger sibling sweets to eat.

According to the P2P rule in (44), the missing Patient of the verb *kin* 'to eat' is coreferential with the higher Patient *khanǒm* 'sweets'. This implied coreferentiality is shown by [3[+PAT]] on the lexical matrix of *kin*. To search for the actor of the embedded verb *kin*, one looks to the left of *kin* to find two noun-headed dependents of the regent verb *hây₃*, namely *khanǒm* 'sweets' and *nɔ́ɔŋ phîan* 'friend's younger sibling'. If *khanǒm* were chosen as an implied actor for *kin*, the Binding Principle would be violated. Since *khanǒm* is already selected as a coreferential Patient, it is not an available noun. Hence, *nɔ́ɔŋ phîan* 'friend's younger sibling' is the implied actor for *kin* because it is the available noun closest to the embedded verb *kin*. This fact is shown by the implied feature 4[+actr] on the lexical matrix of *kin*.

Similarly, when the ditransitive verb *hây₃* appears in an embedded clause, as in (46), the missing Patient of *hây₃* is chained to the Patient *khanǒm* 'sweets' of the higher verb *sɯ́* 'to buy', while *dɛɛŋ* 'Dang', the first available noun phrase to the left of *hây₃*, is the actor. However, if the closer nominal *khanǒm* were the actor, *hây₃* would have 3[+PAT] as both actor and Patient, violating the Binding Principle. Likewise, the Patient of the lower verb *kin* 'to eat' is interpreted as *khanǒm* 'sweets' by the feature 3[+PAT] in the same way as is the object of *hây₃*. The actor of *kin* is the closest available nominal, *dèkdèk*.

(46)

Dɛɛŋ	sɯ́₂	khanǒm	hây₃	dèkdèk	kin₁.
Dang	buy	sweets	give	children	eat
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
AGT	+trns	PAT	+trns	COR	+trns
	+cntn		+cntn		-fint
	+crsp		+crsp		3[+PAT]
	3[+PAT]		-fint		5[+actr]
	4[-fint]		3[+PAT]		
			5[+COR]		
			1[+actr]		
			6[-fint]		

Dang bought sweets to give to the children to eat.

The embedded clause containing *hây₃* is considered to be a complement. In applying the head substitution test in (47), the heads *mɔɔŋ* 'to look' and *duu* 'to search' cannot occur with the embedded *hây* clause, while *hǎa* 'to search' can.

(47)   *Dɛɛŋ   *duu/*mɔɔŋ/hǎa   khanǒm   hây₃   dèk   kin₁.*
        Dang   search/look/search   sweets   give   child   eat
        Dang looked for sweets to give to the child to eat.

The ditransitive verbs *hây₁* and *hây₂*, as in (48) and (49), may appear in an embedded clause with a missing Patient, and undergo the P2P rule in the same way as *hây₃* does. The index 3[+PAT] on *hây₁* and *hây₂* comes from the index 3[+PAT] of the higher verb *sɨɨ₂* 'to buy', showing that the Patients of both verbs are coreferential. *Dɛɛŋ* 'Dang', the first available NP to the left of the *hây* clause, is the actor of *hây₁* as well as *hây₂*.

(48)   *Dɛɛŋ   sɨɨ₂   náŋsɨɨ   hây₁   lék.*
        Dang   buy   book   give   Lek
        1ndex   2ndex   3ndex   4ndex   5ndex
        AGT   +trns   PAT   +trns   COR
                +cntn   +cntn
                3[+PAT]   +crsp
                1[+actr]   -fint
                4[-fint]   3[+PAT]
                                1[+actr]
        Dang bought a book to give to Lek.

(49)   *Dɛɛŋ   sɨɨ₂   náŋsɨɨ   hây₂   kɛ̀ɛ   lék.*
        Dang   buy   book   give   to   Lek
        1ndex   2ndex   3ndex   4ndex   5ndex   6ndex
        AGT   +trns   PAT   +trns   +P   LOC
                +cntn   +cntn   +goal
                3[+PAT]   +lctn
                1[+actr]   -fint
                4[-fint]   3[+PAT]
                                1[+actr]
        Dang bought the book to give to Lek.

The forms *hây* in (48) and (49) are considered to be verbs (as opposed to the adverb *hây₆*, to be discussed in §5 for the following reasons. First, as shown in (50a) and (50b), the forms *hây* in examples (48) and (49) above may appear as finite verbs independently, preserving the meaning of *hây₁* and *hây₂*, respectively, and omit an understood object.

(50)a.   *Dɛɛŋ   hây₁   lék.*
        Dang   give   Lek
        Dang gave (it) to Lek.

    b.   *Dɛɛŋ   hây₂   kɛ̀ɛ   lék.*
        Dang   give   to   Lek
        Dang gave (it) to Lek.

Second, the auxiliary adverb *càʔ* 'will' may precede a verb, but not an adverb or a preposition (Noss 1964, Indrambarya 1994). For example:

(51)a.   *Chán   càʔ   pay   duu   nǎŋ   phrûŋníi.*
        I   will   go   look   movie   tomorrow
        I will go to see a movie tomorrow.

b. *Chán tâŋcay càʔ pay duu nǎŋ phrûŋníi.*
    I   intend will go look movie tomorrow
    I intend to go to see a movie tomorrow.

c. **Chán pay duu nǎŋ càʔ bɔ̀y.*
    I   go look movie will often
    I go to see movies often.

d. **Chán pay duu nǎŋ càʔ kàp phîan.*
    I   go look movie will with friend
    I go to see movies with a friend.

Hây₁ and *hây₂* in an embedded clause may be preceded by *càʔ*, which shows them to be verbs. Another piece of supporting evidence is based on a semantic test, namely the number of actions implied by the sentence. Acording to Li and Thompson (1973:267), if a sentence contains more than one action, there must be more than one verb. Since (48) and (49) contain two actions, to buy a book and to give it to *lék*, the evidence suggests that each sentence has two verbs, *síi* 'to buy' and *hây* 'to give'.

(52) a. *Dɛɛŋ síi₂ náŋsɨ̌ càʔ hây₁ lék.*
         Dang buy book   will give Lek
         Dang bought a book to give to Lek.

    b. *Dɛɛŋ síi₂ náŋsɨ̌ càʔ hây₂ kɛ̀ɛ lék.*
        Dang buy book   will give to Lek
        Dang bought a book to give to Lek.

4. CAUSATIVE VERBS *hây*

This section discusses two causative verbs *hây*: the personal causative verb *hây₄* and the impersonal causative verb *hây₅*.

4.1 PERSONAL CAUSATIVE VERB *hây₄*

The causative verb *hây₄*, which carries the meaning of 'to order, to cause or to allow', is a non-verbal causative transitive verb which requires a sentential complement.[7] Consider (53a) and (53b):

(53) a. *Nít hây lék càt dɔ̀ɔkmáay.*
         Nit cause Lek arrange flower
         Nit had Lek arrange the flowers.

    b. **Nít khɔ̌ɔrɔ́ɔŋ lék càt dɔ̀ɔkmáay.*
        Nit plead   Lek arrange flower
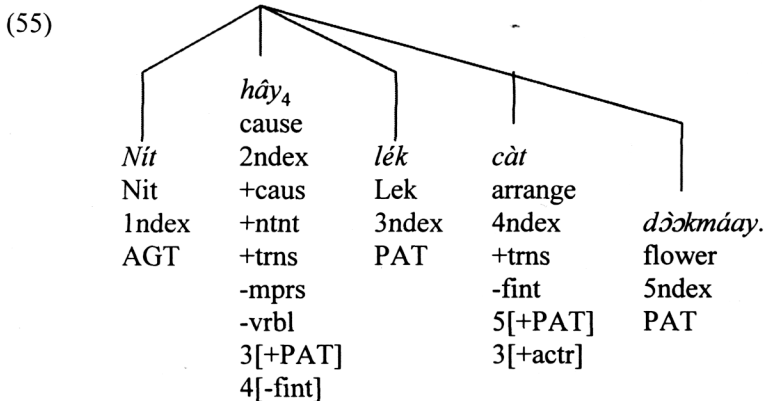   Nit pleaded with Lek to arrange the flowers.

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7 Two major types of causative verbs are non-verbal and verbal causative verbs. *Hây₄* and *thamhây* are instances of non-verbal causative verbs. Verbal causative verbs are, for example, *khɔ̌ɔrɔ́ɔŋ₂* and *sàŋ₂* (Indrambarya 1994:279).

The head substitution test tells us that the embedded clause is a complement, because only *hây* but not *khɔ̌ɔrɔ́ɔŋ* 'to plead' may appear with the embedded clause.

The verb *thùuk* 'to undergo' marks passive construction in Thai. Its subject is coreferential with the missing Patient object of the embedded transitive. Only transitive verbs, though not all transitive verbs, may occur in the *thùuk* passive construction. Since *hây₄* in (53) may occur in the *thùuk* passive construction, as illustrated in (54), *lék* 'Lek' as subject with *hây₄* is analysed as transitive verb in this study. This evidence eliminates the possibility that *hây₄* might be an intransitive verb taking a finite complement. In the Lexicase framework, a finite verb, by definition, is a verb which allows a subject.

(54)   *Lék   thùuk   mɛ̂ɛ   hây₄   càt   dɔ̀ɔkmáay.*
        Lek   undergo   mother   cause   arrange   flower
        Lek was ordered by her mother to arrange the flowers.

The tree structure for (53a) is shown in (55). The personal causative transitive verb *hây₄* is marked in its lexical matrix with the feature [+caus,+ntnt,+trns,-mprs,-vrbl] (causative, intentional, transitive, non-impersonal, and non-verbal) to be distinguished from other causative verbs in Thai (Indrambarya 1994:281). According to the Regular Actor Control Rule for infinitival complements (Starosta 1988:133; see Appendix IV), *lék* 'Lek' is a Patient of the higher verb *hây* as well as the actor of the lower clause.

(55)

	hây₄ cause			
Nít	2ndex	*lék*	*càt*	
Nit	+caus	Lek	arrange	
1ndex	+ntnt	3ndex	4ndex	*dɔ̀ɔkmáay.*
AGT	+trns	PAT	+trns	flower
	-mprs		-fint	5ndex
	-vrbl		5[+PAT]	PAT
	3[+PAT]		3[+actr]	
	4[-fint]			

        Nit had Lek arrange the flowers.

As with other Thai transitive verbs, the Accusative Patient of the causative transitive verb *hây* may be omitted. In this case, the Patient of the matrix verb is contextually bound and may be recovered by the index x in the lexicase external linking rule. The simplifed version of the external linking rule is shown in (56). On the other hand, the actor of the lower non-finite complement verb is accounted for by the Regular Actor Control Rule. In other words, there are two types of missing constituents: one is a null anaphor which can be replaced by an overt noun and recovered by a widely applicable external linking rule; the other cannot be replaced by an overt noun and must be accounted for by a control chaining rule.

(56) | +trns | -->   [x[+PAT]]
        | ?[+PAT] |

(57)   *Mɛ̂ɛ   hây₄   càt   dɔ̀ɔkmáay.*
        mother   cause   arrange   flower
        Mother had someone arrange the flowers.

In (57), the missing object of a transitive verb *hây* is not grammatically recoverable at the sentence level and so is given an arbitrary index x, as [x[+PAT]]. The index x is also assigned to the actor of the lower clause yielding [x[actr]] in (57), according to the Regular Actor Control Rule for infinitival complements.

The causative verb $hây_4$ may appear in an embedded clause as a complement of a manipulative verb. One reason for identifying this form *hây* as a verb is that it may also appear as a main verb with the same syntactic frame and semantic reading, as shown in (58b) and (59b).

(58) a. *Phɔɔ̌ sàŋ₂ manít hây₄ klàp bâan.*
         father order Manit cause return house
         Father ordered Manit to return home.

   b. *Phɔɔ̌ hây₄ manít klàp bâan.*
         father cause Manit return house
         Father had Manit return home.

   c. **Phɔɔ̌ sàŋ₂ manít phɔɔ̌ hây₄ klàp bâan.*
         father order Manit father cause return house
         Father ordered Manit to return home.

(59) a. *Khǎw yùt rót khan nán hây₄ dèk khâam thanǒn.*
         he stop car vehicle that cause child cross street
         He stopped that car to let a child cross the street.

   b. *Khǎw hây₄ dèk khâam thanǒn.*
         he cause child cross street
         He let a child cross the street.

   c. **Khǎw yùt rót khan nán khǎw hây₄ dèk khâam thanǒn.*
         he stop car vehicle that he cause child cross street
         He stopped that car to let a child cross the street.

The unacceptability of (58c) and (59c) when a subject is inserted shows that the embedded $hây_4$ in (58a) and (59a) is non-finite.

I will apply the head substitution test to (58a) and (59a) to see whether the embedded clause introduced by $hây_4$ is a complement. Consider (60) and (61):

(60) *Phɔɔ̌ *hây₄/bɔɔ̀k/*tham manít hây₄ klàp bâan.*
      father cause/order/make Manit cause return house
      Father caused/ordered/made Manit (to) return home.

(61) *Khǎw yùt/cɔɔ̀t/hâam rót hây₄ dèk khâam thanǒn.*
      he stop/park/halt car cause child cross street
      He stopped/parked/physically halted the car to let a child cross the street.

The unacceptability of $hây_4$ and *tham* in (60) shows that the embedded clause containing $hây_4$ is a complement. On the other hand, the embedded clause in (61) is an adjunct because all of the three verbs *yùt*, *cɔɔ̀t*, and *hâam* can occur with the embedded clause.

The following subsection discusses the characteristics of $hây_4$ in an embedded clause. Verbs which require the presence of the causative $hây_4$ as their verb complement are referred to as manipulative verbs in this study. Semantically, manipulative verbs may be

divided into two subclasses: manipulative verbal causative verbs and manipulative resultative verbs.

4.1.1 PERSONAL CAUSATIVE VERB *hây* EMBEDDED UNDER MANIPULATIVE VERBAL CAUSATIVE VERBS

The personal causative transitive verb *hây₄* may be embedded under manipulative verbal causative verbs. Manipulative verbal causative verbs are verbs which show the intention of speakers to cause a Patient to undergo certain processes or actions, and which require the presence of the *hây₄* clause as their dependent. There are three classes of manipulative verbal causative verbs: non-correspondent manipulative verbal causative intransitive verbs, Correspondent manipulative verbal causative intransitive verbs, and manipulative verbal causative transitive verbs.

4.1.1.1 NON-CORRESPONDENT MANIPULATIVE VERBAL CAUSATIVE INTRANSITIVE VERBS

Non-correspondent manipulative verbal causative intransitive verbs are intransitive verbs which require only a Patient in their case frame. They include *anúʔyâat* 'to allow', *wǎŋ* 'to hope', *yàak* 'to want', *khɔ̌ɔ* 'to ask', *khɔ̌ɔrɔ́ɔŋ₁* 'to plead', *sàŋ₁* 'to order', and so forth. In example (62), the actor of *hây₄* is interpreted as the upper Patient *dɛɛŋ* 'Dang' in accordance with the Regular Control Rule for infinitival complements (P2a).
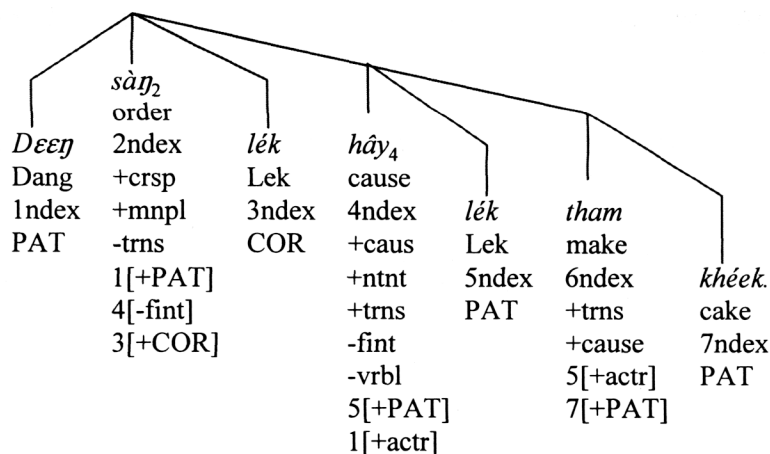
(62)

Dɛɛŋ	*khɔ̌ɔrɔ́ɔŋ₁*	*hây₄*	*lék*	*tham*	*khéek.*
Dang	plead	cause	Lek	make	cake
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
PAT	+caus	+caus	PAT	+trns	PAT
	+mnpl	+ntnt		-fint	
	+vrbl	-fint		4[+actr]	
	-trns	-mprs		6[+PAT]	
	1[+PAT]	+trns			
	1[+actr]	-vrbl			
	3[-fint]	4[+PAT]			
		1[+actr]			
		5[-fint]			

Dang pleaded with Lek to make a cake.

4.1.1.2. CORRESPONDENT MANIPULATIVE VERBAL CAUSATIVE INTRANSITIVE VERBS

Correspondent manipulative verbal causative intransitive verbs require both Patient and Correspondent case relations in their case frames. They are, for example, *sàŋ₂* 'to order', *khɔ̌ɔrɔ́ɔŋ₂* 'to plead', *waan₂* 'to ask', *bɔ̀ɔk₂* 'to order', and so forth. The object of the embedded verb *hây* is obligatory for these verbs. These verbs have manipulative verbal causative transitive verb homophones. Again, by the P2a Control Rule, *hây* finds its actor from the higher Patient *lék.*

(63) a.

	$sàŋ_2$ order					
Dɛɛŋ	2ndex	lék	$hây_4$			
Dang	+crsp	Lek	cause	lék	tham	
1ndex	+mnpl	3ndex	4ndex	Lek	make	
PAT	-trns	COR	+caus	5ndex	6ndex	khéek.
	1[+PAT]		+ntnt	PAT	+trns	cake
	4[-fint]		+trns		+cause	7ndex
	3[+COR]		-fint		5[+actr]	PAT
			-vrbl		7[+PAT]	
			5[+PAT]			
			1[+actr]			

Dang ordered Lek to make a cake. (lit. Dang ordered Lek to cause Lek to make a cake.)

(63) b.   *Lék nàʔ dɛɛŋ sàŋ₂ hây lék tham khéek.
Lek TOP Dang order cause Lek make cake
As for Lek, Dang ordered Lek to make a cake. (lit. Lek, Dang ordered to cause Lek to make a cake.)

(63) c.   *Lék thùuk₅ dɛɛŋ sàŋ₂ hây lék tham khéek.
Lek undergo Dang order cause Lek make cake
Lek was ordered by Dang to make a cake.

(63) d.   *Dɛɛŋ sàng lék.
Dang order Lek
Dang pleaded with Lek.

The verb $sàŋ_2$ is analysed as a correspondent intransitive verb rather than a transitive one, because the noun phrase *lék* may not be topicalised, as shown in (63b), in contrast to an Accusative Patient of the homophonous transitive verb $sàŋ_3$, as shown in (64b), in §4.1.1.3.

Supporting evidence for treating $sàŋ_2$ as a correspondent intransitive verb is the fact that the verb $sàŋ_2$ may not occur as the dependent of a continuing verb, such as $thùuk_5$, which are interpreted by the P2P rule, as shown in (63c) (as opposed to $sàŋ_3$ in (64c) in the next subsection).
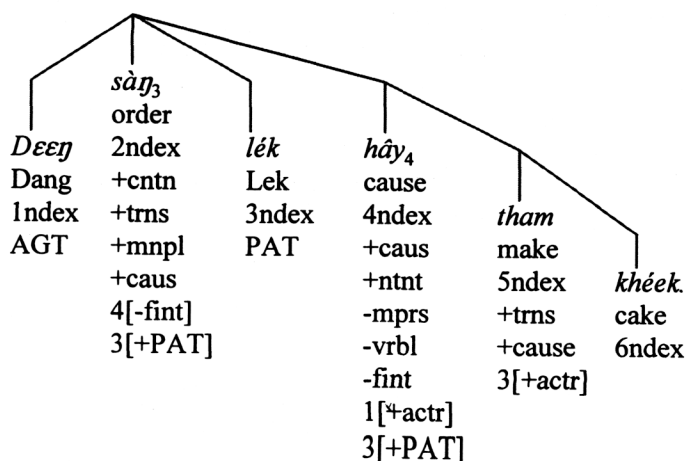
The embedded clause headed by *hây* is considered a complement because it is obligatory, as shown in the unacceptable (63d) without context.

4.1.1.3 MANIPULATIVE VERBAL CAUSATIVE TRANSITIVE VERBS

Manipulative verbal causative transitive verbs require both Agent and Patient in their case frames. They include $sàŋ_3$ 'to order', $khɔ̌ɔrɔ́ɔŋ_3$ 'to plead', $waan_3$ 'to ask', $bɔ̀ɔk_3$ 'to order', and so forth. The evidence for treating these verbs as transitive verbs stems from the fact that the missing object of *hây* is recovered by the P2P Control Rule, that the noun phrase *lék* can be topicalised, as in (64b), and that there is a related *thùuk* passive construction, as in (64c).
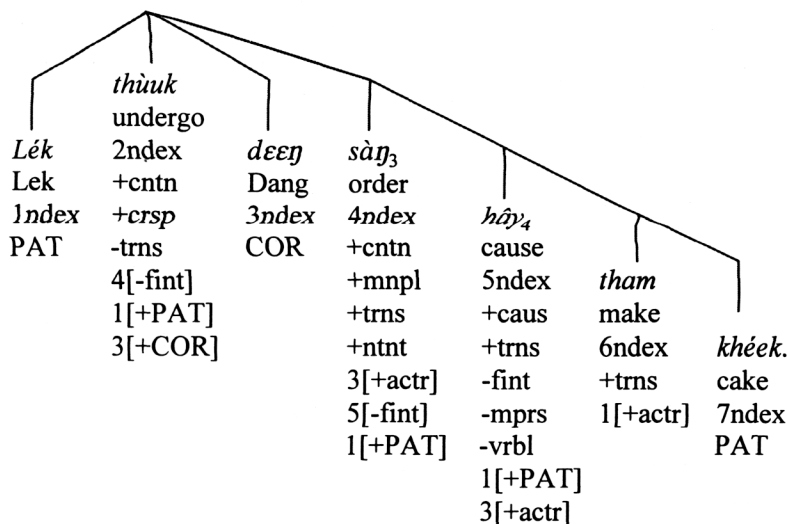
(64) a.

	sàŋ₃				
	order				
Dɛɛŋ	2ndex	lék	hây₄		
Dang	+cntn	Lek	cause		
1ndex	+trns	3ndex	4ndex	tham	
AGT	+mnpl	PAT	+caus	make	
	+caus		+ntnt	5ndex	khéek.
	4[-fint]		-mprs	+trns	cake
	3[+PAT]		-vrbl	+cause	6ndex
			-fint	3[+actr]	
			1[+actr]		
			3[+PAT]		

Dang ordered Lek to make a cake. (lit. Dang ordered Lek to cause (Lek) to make a cake.)

(64) b. Lék nà? dɛɛŋ sàŋ₃ hây tham khéek.
Lek TOP Dang order cause make cake
As for Lek, Dang ordered (her) to make a cake. (lit. Lek, Dang ordered to cause to make a cake.)

(64) c.

	thùuk		sàŋ₃			
	undergo		order			
Lék	2ndex	dɛɛŋ	4ndex	hây₄		
Lek	+cntn	Dang	+cntn	cause		
1ndex	+crsp	3ndex	+mnpl	5ndex	tham	
PAT	-trns	COR	+trns	+caus	make	
	4[-fint]		+ntnt	+trns	6ndex	khéek.
	1[+PAT]		3[+actr]	-fint	+trns	cake
	3[+COR]		5[-fint]	-mprs	1[+actr]	7ndex
			1[+PAT]	-vrbl		PAT
				1[+PAT]		
				3[+actr]		

Lek was ordered by Dang to make a cake.

The Patient of the embedded $hây_4$ is always coreferential with the higher accusative Patient of the transitive manipulative verbal causative verb, in accordance with the P2P Control Rule demonstrated earlier in (44). Thus in (64a), the missing Patient of $hây_4$ must be coreferential with the higher Patient *lék* 'Lek'. *Dɛɛŋ* 'Dang', the closest available NP to the left, serves as its actor. The Regular Control Rule applies to the lower verb *tham* 'to make', since the higher verb $hây_4$ does not match the description of the P2P rule. Thus, *lék* 'Lek' is the actor of the lower verb. The fact that the noun phrase *lék* may be topicalised in example (64b) illustrates that the verb $sàŋ_3$ is transitive.

This P2P Control Rule still applies correctly in the related passive construction in (64c). First of all, by the chaining rule linking the upper Patient and lower Patient in the passive construction (see Appendix IV), *sàŋ₃* 'to order' finds its missing Patient by copying the 1[+PAT] index from the regent verb *thùuk*. The actor of *sàŋ₃* is *dɛɛŋ* 'Dang', the Correspondent actant of *thùuk*. Then, again in accordance with the P2P rule, the feature [?[+PAT]] in the lexical matrix of the embedded *hây₄* copies the index of [1[+PAT]] from *sàŋ*. The other NP, *dɛɛŋ* 'Dang', is the actor of *hây₄*, since there are only two actants in this sentence and *dɛɛŋ* 'Dang' is again the closest available NP to the left, which is a dependent of the regent verb *thùuk*. As in (64a), *lék* 'Lek', which is the actor of the lower verb *tham* 'to make', is identified as the higher Patient of its regent verb *hây₄* by the Regular Actor Rule.

When the object of *hây₄* is different from the patient of the higher verb, the sentence is unacceptable. As shown in (65), the object of *hây* is *dɛɛŋ* 'Dang', while the object of the higher verb *khɔ̌ɔrɔ́ɔŋ₂* 'to plead' is *phɔ̂ɔ* 'father'. The sentence hence is ungrammatical because it violates the P2P rule.

(65)   **Púk   khɔ̌ɔrɔ́ɔŋ₂ phɔ̂ɔ   hây₄   dɛɛŋ   pay   thîaw.*
       Pook   plead   father   cause   Dang   go   travel
       AGT   +trns   PAT   +trns   PAT
       Pook pleaded with her father to allow Dang to go out.

Unlike the case of manipulative verbal causative intransitive verbs, the application of the Regular Actor Control Rule to a manipulative verbal causative transitive verb such as *khɔ̌ɔrɔ́ɔŋ₂* in (66a) would give the wrong interpretation. Such a case would allow *chán* 'I', which is the object of *khɔ̌ɔrɔ́ɔŋ₂*, to be interpreted as the actor of the embedded *hây₄*. The unspecified object of *hây₄* would be recovered contextually by the external linking rule, yielding an incorrect interpretation in which *chán* 'I' is causing some unspecified person to make a cake. The correct interpretation is that *dɛɛŋ* 'Dang' pleaded with *chán* 'I' and hence causes *chán* to make a cake.

(66) a.   *Dɛɛŋ   khɔ̌ɔrɔ́ɔŋ₂   chán   hây₄   tham   khéek.*
       Dang   plead   I   cause   make   cake
       1ndex   2ndex   3ndex   4ndex   5ndex   6ndex
       AGT   +cntn   PAT   +trns   +trns
           +mnpl   -fint   -fint
           +trns   *3[+actr]   *x[+actr]
           3[+PAT]   *x[+PAT]
           4[-fint]
       *Dang pleaded with me to cause somebody to make a cake. (lit.)

(66) b.   *Dɛɛŋ   khɔ̌ɔrɔ́ɔŋ₂   chán   hây₄   tham   khéek.*
       Dang   plead   I   cause   make   cake
       1ndex   2ndex   3ndex   4ndex   5ndex   6ndex
       AGT   +cntn   PAT   +trns   +trns
           +mnpl   -fint   -fint
           +trns   1[+actr]   3[+actr]
           3[+PAT]   3[+PAT]   6[+PAT]
           4[-fint]
       Dang pleaded with me to make a cake. (lit. Dang pleaded with me to cause (me) to make a cake.)

To get the proper rule to apply for the correct interpretation, we need the convention that a more specific rule (the P2P rule) applies before a more general rule (the P2a rule). That is, if a form is eligible to undergo either the Regular Control Rule or the P2P rule, the latter, which specifically applies to continuing verbs, should apply first.

In (66b), the application of the P2P rule yields the correct coindexing. The missing Patient of *hây* is coreferential with the upper Patient *chán* 'I' according to the P2P Control Rule. The actor of *hây₄*, on the other hand, is *dɛɛŋ* 'Dang', the closest available NP to the left of *hây*. The actor of the lower verb *tham* 'to make' is *chán*, the Patient of *hây₄*, in accordance with the Regular Actor Control Rule.

4.1.2 PERSONAL CAUSATIVE VERB *hây* EMBEDDED UNDER MANIPULATIVE RESULTATIVE VERBS

Hây₄ 'to cause, to make' may appear to be embedded under manipulative resultative verbs which designate a change in the state of the Patient. Verbs of this class may be divided into two subclasses: correspondent manipulative resultative intransitive verbs, as in (67), and manipulative resultative transitive verbs, as in (68). The verb in the lower clause is a stative verb. However, it is questionable whether this *hây* is even a verb and, if so, whether it is the same as the causative verb *hây₄*.

(67) *Kháw   cà?   kin₃   kúaytĭaw   hây₄   kúaytĭaw   mòt.*
      he   will eat   noodles   cause noodles   use.up
      PAT   +crsp COR
                   +caus
                   +mnpl
                   -trns
      He will finish the noodles.

(68) *Kháw   cà?   kin₄   kúaytĭaw   hây₄   mòt.*
      he   will eat   noodles   cause use.up
      AGT   +caus PAT
                   +mnpl
                   +trns
      He will finish the noodles.

Assuming that all verbs in Thai may appear as main verbs, if *hây* in (67) and (68) is a verb, then the embedded clause containing *hây* should be able to occur independently. Consider (69) and (70):

(69) **Kháw   hây   kúaytiaw   mòt.*
      he   cause noodles   use.up
      He finished the noodles.

(70) **Kháw   hây   mòt.*
      he   cause use.up
      He finished the noodles.

The forms *hây* in (69) and (70) may not appear as main verbs without context. Hence one might conclude that *hây* is not a verb in these constructions. However, this analysis in fact does consider *hây* in (67)–(68) to be a verb, not an adverb, for two reasons. First, *hây* in

(68) is similar to the causative *hây* discussed in the previous section in that it may take its own complement, namely *kuaytĭaw* 'noodles'. This is a major characteristic of a verb. An adverb, on the other hand, does not allow any dependent. Moreover, if *hây* were treated as an adverb, one would not be able to explain the presence of the second noun phrase *kúaytĭaw* in (67), which is also a dependent of the regent verb *kin₃*.
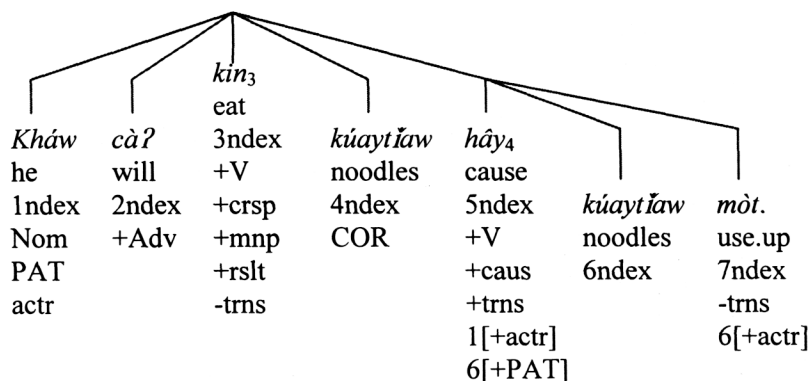
Second, the control rules for infinitival clauses, namely the upper and lower actor control rule (P2a) and the P2P rule, are applicable to the *hây* clause in these two constructions. These control chaining rules are applicable only to a verb and not to an adverb. As in the case of manipulative causative intransitive verbs, *hây* in (67) finds its missing actor from a higher Patient, following the P2a Control Rule. *Hây* in (68), on the other hand, allows its missing object to be coreferential with the Patient of a higher verb in accordance with the P2P rule, as in the case of manipulative causative transitive verbs. Moreover, since these rules are control rules for infinitival complements, this analysis suggests that the *hây* clauses in (67) and (68) are complements.

Because of the similarities between *hây* in (67) and (68) and the causative transitive *hây₄* discussed in §4.1.1, this analysis concludes that *hây* in (67) and (68) and the causative verb *hây₄* discussed in §4.1.1, are the same lexical entry, namely the personal causative transitive verb. This conclusion is determined by the ability of *hây* in (67) and (68) to take its own complement and to undergo the control rules for complements. However, the fact that *hây* in these constructions may not appear in a corresponding main verb position, while all other embedded verbs can, remains unexplained. Further study of this construction may shed some light on the matter.

In parallel to the analysis of manipulative verbal causative verbs, manipulative resultative verbs can be syntactically divided into two classes: correspondent manipulative resultative intransitive verbs and manipulative resultative transitive verbs, depending on which control rule is applied to each construction. The tree structures of (67) and (68) are shown in (67'a) and (68'a), respectively.

Correspondent Manipulative Resultative Intransitive Verbs

(67')a.

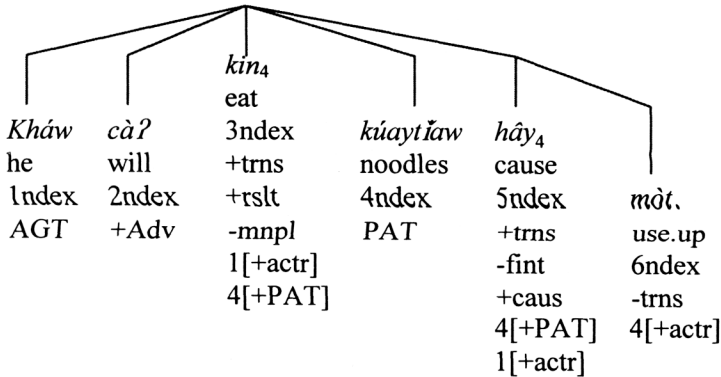| *Kháw*	*cà?*	*kin₃* eat	*kúaytĭaw*	*hây₄*		
he	will	3ndex	noodles	cause		
1ndex	2ndex	+V	4ndex	5ndex	*kúaytĭaw*	*mòt.*
Nom	+Adv	+crsp	COR	+V	noodles	use.up
PAT		+mnp		+caus	6ndex	7ndex
actr		+rslt		+trns		-trns
		-trns		1[+actr]		6[+actr]
				6[+PAT]		

He will finish the noodles.

b.   **Kúaytĭaw   nà?   kháw   cà?   kin   hây   kúaytĭaw   mòt.*
        noodles   TOP   he   will   eat   cause   noodles   use.up
     As for noodles, he will finish them.

In (67'a), the verb *kin* is analysed as a corresponding manipulative resultative intransitive verb because its object *kúaytǐaw* cannot be topicalised. The embedded verb *hây* finds its missing actor from the higher Patient *kháw* according to the Regular Actor Control Rule (P2a). Similarly, the lower verb *mòt* finds *kúaytǐaw* as its higher Patient. Now consider the manipulative resultative transitive verb *kin* in (68'a) and (68'b).

Manipulative Resultative Transitive Verbs

(68')a.

Kháw	càʔ	kin₄	kúaytǐaw	hây₄	
he	will	eat	noodles	cause	
Index	2ndex	3ndex	4ndex	5ndex	mòt.
AGT	+Adv	+trns	PAT	+trns	use.up
		+rslt		-fint	6ndex
		-mnpl		+caus	-trns
		1[+actr]		4[+PAT]	4[+actr]
		4[+PAT]		1[+actr]	

He will finish the noodles.

b. *Kúaytǐaw nàʔ kháw càʔ kin₄ hây₄ mòt.*
noodles   TOP he   will eat cause use.up
As for noodles, he will finish them.

Unlike *kin₃* in (67'a), *kin₄* in (68'a) can occur in a topicalised construction, as shown in (68'b). Therefore, this study considers *kin* in (68'a) to be a transitive verb. The embedded verb *hây* finds its missing Patient from the higher Patient *kúaytǐaw* 'noodles', written as [4[+PAT]], in accordance with the P2P Control Rule. The NP *kháw* 'he' is interpreted as the actor of the causative verb *hây* because *kháw* 'he' is the closest available nominal to the left.

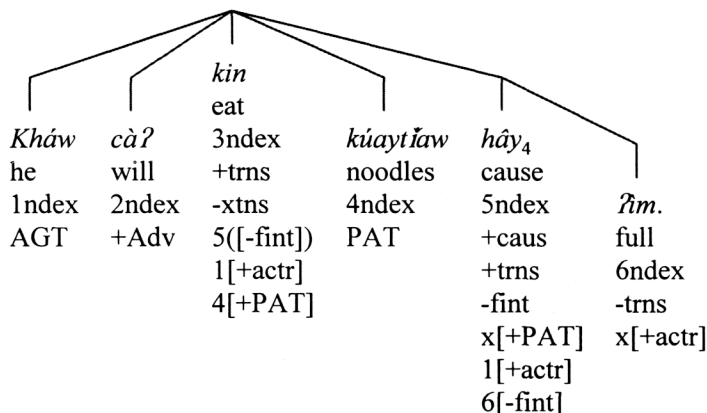Now consider the *hây* clause in the following sentences.

(71)   *Kháw càʔ kin₁ kúaytǐaw hây₄ ʔìm.*
he   will eat   noodles cause full
He will eat the noodles until he is full.

(72)   *Kháw càʔ kin₁ kúaytǐaw hây₄ tuaʔɛɛŋ ʔìm.*
he   will eat   noodles cause self   full
He will eat the noodles until he is full.

The verb *kin₁* in (71) and (72) is a non-extension transitive verb. It does not require the presence of a dependent non-finite verb complement. Hence, the clauses introduced by *hây₄* in (71) and (72) are infinitival adjuncts. The actor of *hây₄* in (71) and (72) is interpreted as the higher actor *kháw* 'he' in accordance with the control rule for infinitival adjuncts.

The missing Patient of *hây₄* in (71) is a null anaphor recovered by the external linking rule in (56), which assigns the arbitrary index x to [?[+PAT]]. Grammatically, the x index which is written as 'xndex' could be interpreted as anyone; however, one cannot make anyone else full by eating food. Pragmatic considerations thus narrow the interpretation of the subject of *ʔìm* to *kháw*. Then if *kháw* is the actor of *ʔìm*, it must, by the Regular Actor

Control Rule, be coreferential to the object of *hây*. Since the actor and the Patient of *hây* are coreferential with the same word, the object can be expressed only as a reflexive. This interpretation is supported when the reflexive pronoun *tua?een* 'self' is present, as in (72). Example (71) is rewritten with the tree structure in (71'). The optionality of a non-finite clause introduced by *hây* is shown by the parentheses [5([-fint])] on the lexical matrix of *kin₁*.

(71')

		kin			
		eat			
Kháw	*cà?*	3ndex	*kúaytĩaw*	*hây₄*	
he	will	+trns	noodles	cause	*?im.*
1index	2ndex	-xtns	4ndex	5ndex	full
AGT	+Adv	5([-fint])	PAT	+caus	6ndex
		1[+actr]		+trns	-trns
		4[+PAT]		-fint	x[+actr]
				x[+PAT]	
				1[+actr]	
				6[-fint]	

He will eat the noodles until he is full.

An alternative analysis for *hây* in (67), (68), (71) and (72) could be that *hây* is an adverb, which would explain why *hây* may not appear as a main verb. In such an analysis, *hây* and the following noun in (67) and (72) could not form a constituent in Lexicase. However, the second *kúaytĩaw* 'noodles' in (67) could then not occur as a sister of the head verb *kin* 'to eat', since that would make it a clausemate of a coreferential noun, the first *kúaytĩaw*, violating the binding requirement that a noun must be free. The second *kúaytĩaw* 'noodles' would instead have to be treated as the subject of the lower verb *mòt* 'use up'. That is, the lower verb would be a finite verb. However, the reflexive pronoun *tua?een* in (72) cannot be treated in the same way. A reflexive in Thai, as in most languages, needs an antecedent in the same clause; and therefore *tua?een* cannot be the subject of the lower verb *?im* 'to be full'. It must occur as a sister dependent of the verb *kin* 'to eat' in order to be bound with the subject *kháw* 'he'. The drawback of this alternative analysis is that not only does one need two different structures for the two sentences, but also one more often finds cognitive verbs such as *rúu* 'to know' and *bɔɔk₁* 'to tell', rather than action verbs such as *kin* 'to eat', followed by a finite verb. Thus, the verb analysis is preferable.

In short, I have demonstrated that there is a single personal causative transitive verb *hây₄* which may appear in an embedded clause as a complement or as an adjunct. As in Kullavanijaya (1974), the analysis presented here treats the causative *hây₄* and the ditransitive verbs *hây* 'to give' as distinct lexical entries because of their differences in meaning and distribution.

4.2 IMPERSONAL CAUSATIVE TRANSITIVE VERB *hây₅*

Impersonal verbs are verbs which do not allow referential subjects in their subcategorisation frame. In this paper *hây₅* 'to let' is analysed as an extension impersonal causitive transitive verb requiring a non-finite verb complement. This section discusses two

functions of the impersonal causative verb $hây_5$: as a marker for the third person imperative construction and as a complementiser.

4.2.1 IMPERSONAL CAUSATIVE TRANSITIVE VERB $hây_5$ FUNCTIONING AS AN IMPERATIVE FOR THE THIRD PERSON

Semantically, $hây_5$ 'to let' shows a speaker's indifference regarding the performance or non-performance of a third person's act. Consider (73a) and (73b).

(73) a. *Hây₅*   *khruu*   *maa*   *ciŋciŋ*   *thə̂ʔ.*
      let   teacher come true   PRT
      +caus   +V
      +mprs   -fint
      +trns
      +xtns
      Let the teacher really show up.

    b. **Thəə hây₅ khruu   maa   ciŋciŋ thə̂ʔ.*
       you let   teacher come true   PRT
       You let the teacher really show up.

$Hây_5$ in example (73a) implies indifference or defiance. Whether or not the action indicated in the *hây* clause takes place will have no effect on the speaker. The insertion of the second person pronoun subject *thəə* changes the grammaticality of the sentence, as illustrated in (73b). This incidence suggests that $hây_5$ in example (73a) is an impersonal causative verb. Now consider the same $hây_5$ in another example:

(74) *Hây₅*   *kháw*   *khɔɔy*   *pay*   *sìʔ.*
      let   he   wait   thither PRT
      +trns
      +caus
      +mprs
      Let him wait!

Sentence (74) may have another interpretation in which *hây* is the personal causative transitive verb $hây_4$ (see §4.1). In this case, it allows a subject insertion, as shown in (75).

(75) *Thəə*   *hây₄*   *kháw*   *khɔɔy*   *pay*   *sìʔ.*
      you   cause he   wait   thither PRT
             +caus
             +trns
             -mprs
      You let him wait.

In other words, the impersonal causative $hây_5$ and the personal causative $hây_4$ differ only in that the latter allows a referential subject and the former does not. Another piece of supporting evidence for positing the impersonal causative $hây_5$ as a separate lexical entry is the fact that only $hây_5$, and no other Thai verb, allows third person imperatives. Consider (76).

(76)   *Khɔɔy dĭaw   ná?.*
        wait   soon   how.about
        How about (you) waiting for a moment?

This sentence has only one interpretation: a speaker asks the hearer to wait. There is no interpretation such that the speaker would ask the second person to cause a third party to wait. The difference between *hây*, in (74) and (75), and other verbs, leads us to the conclusion that *hây₅* in (74) is lexically marked as impersonal and deserves a separate lexical entry.

4.2.2 IMPERSONAL CAUSATIVE VERB *hây* FUNCTIONING AS A COMPLEMENTISER

Hây₅ 'to let' may introduce a clause in complex sentences, which suggests that this *hây* is a conditional complementiser.

(77) a.   *Hây₅   khruu   maa   ciŋciŋ chán kɔ̂ɔ   mây klua.*
           let   teacher   come   really I   also not   fear
           Given the teacher really showing up, I am not afraid.

     b.   **Thəə hây₅   khruu   maa   ciŋciŋ   chán   kɔ̂ɔ   mây   klua.*
           you let   teacher   come   true   I   also not   fear
           Given the teacher really showing up, I am not afraid.

This analysis considers the form *hây* in (77a) to be the impersonal verb *hây₅* functioning as a complementiser, not as a personal verb or a preposition. This decision is based on the following arguments. As with a verb in general, *hây* in (77a) may appear as a free verb in a root causative sentence, as shown earlier in (73a). Moreover, *hây* in (77a) does not allow the insertion of a subject, as shown in the ungrammatical (77b).

Note that (77b) would be acceptable if the form *hây* were the personal causative transitive verb *hây₄* 'cause' cooccurring with the complementiser *mɛ̌ɛwâa* 'even if', as shown in (78).

(78)   *Mɛ̌ɛwâa   thəə hây₄   khruu   maa   ciŋciŋ chán kɔ̂ɔ   mây klua.*
        even.if   you cause   teacher   come   true   I   also not   fear.
        Even if you really make the teacher show up, I am not afraid.

The contrast in the ability of (77a) and (78) to allow the presence of a subject shows that the form *hây* in (77) and in (78) are two separate lexical items. While *hây₄* in (78) is a personal verb, *hây₅* in (77) is an impersonal verb functioning as a complementiser, introducing a concessive clause in a complex sentence.

Due to this parallel in interpretation between (73) and (77), the form *hây* in these two constructions is considered to be the same impersonal causative *hây₅*. This semantic evidence however, does not provide conclusive evidence that *hây* in (77a) is an impersonal verb. An alternative analysis might be that it is a preposition functioning as a complementiser. The preposition *mɛ̌ɛwâa* 'even if' in (79), like *hây* in (77a), allows the main clause to take a consequence aspect such as *kɔ̂ɔ* 'also'. Since *mɛ̌ɛwâa*, which occurs in the same syntactic position, is a preposition, by analogy one might analyse *hây* as a preposition. The possibility that *hây* in constructions such as (77a) might better be analysed as a preposition is left open for further study.

(79)   *Mɛ́ɛwâa   khruu   maa   ciŋciŋ   chán kɔ̂ɔ   mây   klua.*
      even.if   teacher   come   true   I   also   not   fear
      Even if the teacher shows up, I am not afraid.

5   ADVERB *hây₆*

This section will investigate the form *hây₆* which appears in the frame:

      NP   V [+trns]   NP   __   (NP)

in which the regent verb is a transitive verb and the noun following *hây* may be omitted contextually, as shown in the (a) and (b) examples of (80) and (81).

(80) a.   *Nídaa thɨ̌ɨ   krapǎw hây₆ wiinaa.*
        Nida carry   bag   for   Weena
        Nida carried a bag for Weena.

   b.   *Nídaa thɨ̌ɨ   krapǎw hây₆.*
        Nida carry   bag   for
        Nida carried a bag for (someone).

(81) a.   *Nídaa khǎay krapǎw hây₆ dɛɛŋ.*
        Nida sell   bag   to   Dang
        Nida sold a bag to Dang.

   b.   *Nídaa khǎay krapǎw hây₆.*
        Nida sell   bag   to
        Nida sold a bag to (someone).

Hây in (80) carries a benefactive meaning 'for'. In (81), *hây* is interpreted as a direction towards a goal, which may be equivalent to the English 'to'. In the following sections, different tests are applied to determine the status of the form *hây₆*.

5.1   TESTS FOR THE SYNTACTIC CATEGORY OF *hây₆*

Various tests may be applied to determine the status of the form *hây₆*, which may appear in the frame: NP V NP __ NP, in comparison with the characteristics of a verb, a preposition, and an adverb. To begin, let us examine verbs, prepositions, and an adverb representing each category. The two verbs taken as verb models are *tòk* 'to fall' and *cɛ̀ɛk* 'to distribute', as shown in (82) and (83).

(82)   *Kháw plàk dèk   tòk lǔm   nán.*
      he   push child   fall pit   that
      He pushed a child down into that pit.

(83)   *Dɛɛŋ sɨ́ɨ₂   khanǒm cɛ̀ɛk   dèkdèk.*
      Dang buy   sweets   distribute   children
      Dang bought sweets to distribute to the children.

Two of the least controversial prepositions, *kàp* 'with' and *phɨa* 'for', have been selected to represent the characteristics of prepositions, as shown in (84) and (85). These two prepositions synchronically do not have corresponding verbs in the language.

(84)   *Dɛɛŋ khuy rîaŋ níi kàp lék.*
       Dang talk story this with Lek
       Dang talked about this matter with Lek.

(85)   *Phɔ̌ɔ thamŋaan nàk phîa lûuk.*
       father work   heavy for offspring
       A father works hard for his children.

Most adverbs in Thai are not followed by a noun. However, there exists an adverb *wáy* 'lying', which may or may not be followed by a locational noun, as shown in (86a) and (86b).

(86) a.   *Kháw thíŋ   náŋsɨ̌ wáy.*
        he   abandon book   lying
        He left a book.

    b.   *Kháw thíŋ   náŋsɨ̌ wáy bâan nán.*
        he   abandon book   lying house that
                           +lctn
        He left a book at that house.

The status of the word *wáy* 'lying' is controversial. It could be argued that *wáy* is a preposition. However, I consider *wáy* to be an adverb for the reason that it fails to show the characteristics of verbs and prepositions in the tests presented in this paper (to be illustrated in the next section). Therefore, I treat *wáy* as an adverb coocurring with the regent verb *thíŋ* 'to abandon'.

The four tests used to examine the status of *hây* in (80a) and (81a) are: the free-verb test, the number-of-actions test, the topicalisation of *hây* together with the following NP, and the topicalisation of the NP after the form *hây*.[8] Since *hây* in (80b) and (81b) is not followed by a noun, only the first two tests are applicable.

If *hây* in these constructions is a verb, it should be able to occur as a free verb while maintaining the meaning and syntactic restrictions it carried in (80) and (81). Furthermore, the NP after *hây* should be topicalisable, while *hây* together with the following NP should not. Moreover, there should be more than one action implied by the sentence. If $hây_6$ is a preposition, as claimed in previous analyses (Dejthamrong 1970, Kullavanijaya 1974), then the NP after *hây* should not be independently topicalisable, but rather *hây* with the following NP should form a PP constituent which can be topicalised. In addition, *hây* should not be stranded at the end of the sentence. If $hây_6$ is an adverb of the same class as

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8 The adverb *càʔ* test exemplified in (51) and (52) in §3 yields only a one-way implication: an element immediately dominated by *càʔ* is a verb. However, not all verbs may cooccur with *càʔ*. For example, the presence of *càʔ* before the verb *tham* is unacceptable.

      *supriya hây   chán càʔ   tham khanǒm.
      Supriya cause I   will   make sweets
                  +V
      Supriya made me make sweets.

  Since *hây* in (80) and (81) does not allow the presence of *càʔ*, this test is not a reliable criterion for determining the verbal status of *hây* in these constructions.

wáy 'lying', *hây* together with the following NP should not be topicalisable, since they do not form a PP constituent, while the NP after *hây* should be topicalisable (see §§5.1.1–5.1.4 for discussion). A summary of the results of these tests is shown in Table 1.

TABLE 1: THE RESULT OF THE TESTS FOR THE STATUS OF *hây*

	Free Verb	Number of Actions	Phrase Topicalisation	Toicalisation of NP
Preposition	-	1	+	-
Verb	+	2	-	+
Adverb *wáy*	-	1	-	+
hây in (80a)	-	1	-	+
hây in (80a)	-	1	-	+
hây in (81b)	-	1	N/A	N/A
hây in (81b)	-	1	N/A	N/A

The summary table shows that the free-verb test and the number-of-actions test agree that *hây* in (80) and (81) could be either an adverb or a preposition but not a verb. *Hây* with the following NP cannot be topicalised, as in the situation with a verb or an adverb, while the NP after *hây* may be topicalised, as with the NP occurring after a verb and after the adverb *wáy*.

5.1.1 THE FREE-VERB TEST

Only a verb, but not a preposition or an adverb, may appear as a free verb representing a valid sentence.

(87) *Dèk   tòk   lǔm   nán.*
child   fall   pit   that
A child fell into that pit.

(88) *Dɛɛŋ   cὲεk   dèkdèk.*
Dang   distribute children
Dang distributed (something) to the children.

(89) **Dɛɛŋ   káp   lék.*
Dang   with   Lek
Dang with Lek.

(90) **Phɔɔ   phîa   lûuk.*
father   for   offspring
Father for children.

(91) **Kháw   wáy   bâan   nán.*
he   lying   house that
He lying at that house.

Since *wáy* may not appear as a free verb in (91), this test supports the proposition that *wáy* is not a verb. If *hây* in the (a) and (b) examples of (80) and (81) is a verb, it should be able to appear as a free verb independently while preserving the meaning of *hây* in (80) and (81).

(92) a. *Nídaa hây₆ wiinaa.*
        Nida for   Weena
        *Nida for Weena.

   b.   *Nídaa hây₆.*
        Nida for
        *Nida for.

(93) a. *Nídaa hây₆ dɛɛŋ.*
        Nida to   Dang
        *Nida to Dang.

   b.   *Nídaa hây₆.*
        Nida to
        *Nida to.

The fact that *hây₆* in (92) and (93) cannot maintain the benefactive meaning 'for' or the directional meaning 'to' when appearing as a main verb indicates that *hây* in (80) and (81) is not a verb. *Hây* in these constructions is acceptable only when interpreted as 'to give'.

5.1.2 THE NUMBER-OF-ACTIONS TEST

Li and Thompson (1973:176) have claimed that a sentence which contains more than one action should contain more than one verb. Although such subjective tests are not always reliable, it is apparent to Thai speakers that only (82) and (83) represent two actions, since both sentences contain a pair of verbs, *plàk* 'to push' and *tòk* 'to fall', and *sɨ́ɨ₂* 'to buy' and *cɛ̀ɛk* 'to distribute', respectively. On the other hand, sentences (84) and (85), containing the prepositions *kàp* 'with' and *phɨ̂a* 'for', and sentence (86), containing the adverb *wáy* 'lying', express only one action. If *hây* in (80) and (81) is a verb, the sentences should denote more than one action. In these examples, to carry a bag for someone in (80) and to sell a bag to someone in (81) reflect only one action. Thus, the number-of-actions test provides a piece of supporting evidence that *hây* in (80) and (81) is not a verb.

5.1.3 THE TOPICALISATION OF *hây₆* TOGETHER WITH THE FOLLOWING NP

While prepositional phrases may be topicalised, as in (94) and (95), verbs plus their objects may not be topicalised together, as shown in (96) and (97).

(94)   *Kàp lék nàʔ dɛɛŋ khəəy khuy rîaŋ níi.*
       with Lek TOP Dang ever   talk story this
       With Lek, Dang talked about this matter. (lit.)

(95)   *Phɨ̂a lûuk   phɔ́ɔ thamŋaan nàk.*
       for   offspring father work   heavy
       For their children fathers work hard. (lit.)

(96)   **Tòk lum nán kháw plàk dèk.*
        fall pit that he   push child
        Into that pit, he pushed a child down. (lit.)

(97)   *Cὲɛk   dèkdèk   dɛɛŋ   sɨɨ₂   khanǒm.
       distribute   children   Dang   buy   sweets
       To distribute to the children, Dang bought sweets. (lit.)

Consider the topicalisation of *wáy* together with the following NP in (98).

(98)   *Wáy   bâan   nán   kháw   thíŋ   náŋsɨɨ.
       lying   house   that   he   abandon   book
       At that house, he left a book. (lit.)

Unlike a prepositional phrase, *wáy* with the following NP cannot be topicalised together. This supports our claim that *wáy* is not a preposition. Similarly, the unsuccessful topicalisation of *hây* plus the following NP in (99) and (100) show that *hây* in (80) and (81) does not have the characteristic of a preposition in Thai. This test shows that *hây* behaves like a verb and like an adverb.

(99)   *Hây₆   wiinaa   nídaa   thɨɨ   krapǎw.
       for   Weena   Nida   carry   bag
       For Weena, Nida carried the bag.

(100) *Hây₆   dɛɛŋ   nídaa   khǎay   krapǎw.
       to   Dang   Nida   sell   bag
       To Dang, Nida sold the bag.

5.1.4 THE TOPICALISATION OF NP AFTER *hây₆*

Examples (101) and (102) show that prepositions in Thai cannot be stranded and do not allow the following NP to be topicalised.

(101) *Lék   nàʔ   dɛɛŋ   khuy   rɨaŋ   níi   kàp   bɔ̀ybɔ̀y.
       Lek   TOP   Dang   talk   story   this   with   often
       As for Lek, Dang often talks with (her) about this matter.

(102) *Lûuk   nàʔ   phɔ̂ɔ   thamŋaan   nàk   phɨa.
       offspring   TOP   father   work   heavy   for
       As for children, fathers work hard for (them).

Examples (103), (104), and (105) show that NP occurring after verbs and the adverb *wáy* 'lying' may be topicalised. Both the verbs and the adverb *wáy* may be stranded.

(103) Lǔm   nán   nàʔ   kháw   khɘɘy   plàk   dèk   tòk.
       pit   that   TOP   he   ever   push   child   fall
       As for that pit, he once pushed a child down (into it).

(104) Dèkdèk   nàʔ   dɛɛŋ   sɨɨ₂   khanǒm   cὲɛk.
       children   TOP   Dang   buy   sweets   distribute
       As for the children, Dang bought sweets to distribute (to them).

(105) Bâan   nán   nàʔ   kháw   thíŋ   náŋsɨɨ   wáy.
       house   that   TOP   he   abandon   book   lying
       As for that house, he left a book (there).

Unlike NP after prepositions, the NP after *hây₆* may be topicalised, similar to the NP after verbs and the adverb *wáy*.

(106)   *Wiinaa nà?   nídaa thɨ̃ɨ   krapǎw hây₆.*
         Weena TOP   Nida carry   bag   for
         As for Weena, Nida carried the bag for (her).

(107)   *Dɛɛŋ nà?   nídaa khǎay   krapǎw hây₆.*
         Dang TOP Nida sell   bag   to
         As for Dang, Nida sold the bag to (her).

5.2 ANALYSIS OF *hây₆*

The results of the four tests agree that *hây* in (80) and (81) behaves like the adverb *wáy*, rather than like a verb or a preposition. Verbs and prepositions are counterindicated by two tests. The free-verb test and the semantic test show that *hây* in (80) and (81) is not a verb. Furthermore, the topicalisation of the NP after *hây₆* and the impossibility of topicalising *hây₆* with the following NP rule out the possibility that *hây₆* is a preposition.

The present analysis considers *hây* in both the (a) and (b) examples of (80) and (81) to belong to a single class of adverb, for the following reasons. First, since verbs in Thai have the potential to occur as free verbs, that is as main verbs of independent clauses, the inability of *hây₆* to appear as a free verb, demonstrated in (92) and (93), provides a strong piece of evidence that *hây* in (80) and (81) is not a verb. This claim is supported by the number-of-actions test. Second, in Lexicase, a preposition always needs a dependent cohead in an exocentric construction. If *hây₆* were a preposition, then *hây₆* together with the following NP should form a PP constituent and permit topicalisation. In contrast, examples (99) and (100) illustrate that *hây* and the following noun phrase cannot be topicalised together. Third, although a preposition cannot be stranded, as shown in (101) and (102), *hây* in (80) and (81) may be left stranded, as shown in (106) and (107), indicating that *hây* is not a preposition. Finally, all of the four tests demonstrate that *hây* exhibits the same characteristics as the adverb *wáy*.
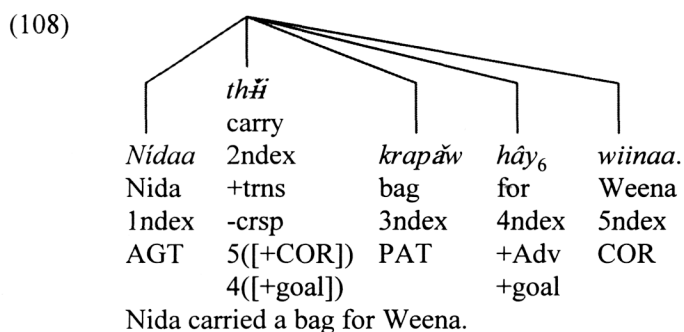
Furthermore, our claim that *hây* in (80) and (81) is an adverb also allows us to explain why the NP after *hây* may be left out when the context is given, in contrast with the NP after a preposition in Thai, which may not be omitted. This claim is further supported by the analysis of the benefactive *gei* 'for' in Chinese, *cho* 'for' in Vietnamese, and *hir* 'for' in Tai Nung, which have the corresponding verb 'to give' and which have been analysed as derived adverbs when they appear without the presence of a following noun (Starosta (1985:224) for Chinese, and Clark (1992:146–147) for Vietnamese and Tai Nung).

Hây in (80) and in (81) shows similarities in distribution, as discussed. I shall claim further that the form *hây* in these two constructions belongs to a single lexical entry *hây₆*, despite the differences in interpretation. The difference in interpretation between (80) and (81) is governed by the difference in the classes of the regent verbs.[9] When *hây₆* appears with correspondent ditransitive verbs such as *khǎay₂* 'to sell', *sɔ̌ɔn₂* 'to teach', and *mɔ̌ɔp* 'to

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[9]   This is analogous to the analysis of case inflection systems. The same case inflection may encode different meanings, depending on the verb or preposition with which it cooccurs, and no one would propose setting up distinct case inflection categories for different functions.

deliver', it is interpreted as a direction towards a goal, corresponding to the English 'to'. Conversely, when it appears with non-correspondent transitive verbs such as *súi₁* 'to buy', *thíi* 'to carry', *khǎay₁* 'to sell', and *sɔ̌ɔn₁* 'to teach', it carries the meaning of a benefactive action towards a goal and is interpreted as 'for'. Thus the adverb *hây₆* is represented by the localistic feature [+goal]. Moreover, as illustrated in (99) and (100), *hây* and the following noun phrase do not form a constituent which can be topicalised together. This analysis hence considers the two elements to be grammatically independent of each other.

Since *hây₆* behaves similarly in the two examples for each group (80) and (81), I will discuss only the constructions (80a) and (81a) in this section. Illustration (108) shows the tree structure of the clause containing the non-correspondent transitive verb *thíi* 'carry'. *Thíi* allows but does not require the presence of the adverb *hây* 'for' and the following correspondent noun *wiinaa* 'Weena', shown by the parentheses [4([+goal])] and [5([+COR])] on the governing verb *thíi*. That is, *hây* and *wiinaa* are both considered to be independent adjuncts of *thíi*.

(108)

	thíi			
	carry			
Nídaa	2ndex	*krapǎw*	*hây₆*	*wiinaa.*
Nida	+trns	bag	for	Weena
1ndex	-crsp	3ndex	4ndex	5ndex
AGT	5([+COR])	PAT	+Adv	COR
	4([+goal])		+goal	

Nida carried a bag for Weena.

Unlike other adjuncts, *hây₆* 'for' is needed to disambiguate a benefactive interpretation from a possessive interpretation. *Hây₆* cannot be omitted if the benefactive interpretation is to be maintained, as illustrated in (109). In other words, *hây₆* in (80a) and (108) is obligatory due to semantic interference.

(109)   *Nídaa* *thíi*   *krapǎw* *wiinaa.*
         Nida   carry   bag   Weena
         *Nida carried a bag for Weena.
         Nida carried Weena's bag.

The tree structure of a sentence containing the correspondent ditransitive verb *khǎay₂* 'to sell', which expects the cooccurrence of *hây₆*, is shown in (110). In other words, *hây* and the following NP in this structure are complements of *khǎay₂* 'to sell'. [10]

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[10] Besides this correspondent ditransitive verb *khǎay₂*, there is another correspondent ditransitive *khǎay₃*, which may cooccur with the preposition *kɛ̀ɛ* 'to' and an optional adverb *hây₆* indicating goal, as shown in the following examples (a) and (b).

(110)

Nídaa	*khǎay₂* sell 2ndex +crsp +trns 5[+COR] 4[+goal]	*krapǎw*	*hây₆*	*dɛɛŋ.*
Nida		bag	to	Dang
1ndex		3ndex	4ndex	5ndex
AGT		PAT	+Adv +goal	COR

Nida sold a bag to Dang.

There are two pieces of evidence supporting the claim that *hây₆* and the following NP cooccurring with correspondent ditransitive verbs are complements, while *hây* and the following NP cooccurring with non-correspondent transitive verbs are adjuncts.

First, the goal adverb *hây₆* cannot appear with the non-correspondent verb *sɨ₁* 'to buy' to give the interpretation 'to'. This is shown in the unacceptable interpretation of (111).

(111)   *Nídaa yìp₁   krapǎw hây₆ dɛɛŋ.*
        Nida   pick.up bag   to   Dang
        *Nida picked up a bag to Dang.

Second, only the directional *hây₆* may occur closer to the head, as in (112). Sentence (113) shows that the first *hây* can only be interpreted as the goal direction and not as the benefactive. This analysis suggests that the directional *hây₆* is a complement, while the benefactive *hây₆* is an adjunct.

(112)   *Chán mɔ́ɔp   dɔ̀ɔkmáay chɔ̌ɔ   nán   hây₆ khruuyày   hây₆ khruu lɛ́ɛw.*
        I   deliver flower   bunch   that to   principal for   teacher already
        I have already delivered that bouquet of flowers to the principal for the teacher.

(113)   *Chán mɔ́ɔp   dɔ̀ɔkmáay chɔ̌ɔ   nán   hây₆ khruu   hây₆ khruuyày lɛ́ɛw.*
        I   deliver flower   bunch   that   teacher for   principal already
        *I have already delivered that bouquet of flowers *for* the teacher *to* the principal.
        I have already delivered that bouquet of flowers *to* the teacher *for* the principal.

Furthermore, the goal adverb *hây₆* may occur with non-correspondent non-causative affect transitive verbs, such as *dùʔ* 'to reproach', and *tii* 'to hit', as in (114). In this case, the

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a.

Nídaa	*khǎay₃* sell 2ndex +trns +crsp 5[+goal] 6[+COR] 4([+goal])	*krapǎw*	*hây₆*	*kɛ̀ɛ*	*chán.*
Nida		bag	to	to	I
1ndex		3ndex	4ndex	5ndex	6ndex
AGT			+Adv +goal	+P +goal	COR

Nida sold a bag to me.

b.   *Nídaa khǎay₃ krapǎw kɛ̀ɛ chán.*
     Nida   sell   bag   to   I
     Nida sold a bag to me.

sentence has a malefactive interpretation. The form *hây* does not precede a noun, and can be omitted, as shown in (115).

(114) *Dǐaw   chán   cà?   tii   thǝǝ   hây₆.*
      soon   I   will   hit   you
      Any minute now, I will hit you.

(115) *Dǐaw   chán   cà?   tii   thǝǝ.*
      soon   I   will   hit   you
      Any minute now, I will hit you.

When *hây* in (114) is followed by a noun, it is interpreted as benefactive, as in (116).

(116) *Dǐaw   chán   cà?   tii   thǝǝ   hây₆   mɛ̂ɛ.*
      soon   I   will   hit   you   for   mother
      For mother's sake, I will hit you any minute now.

Because of the complementary distribution between the interpretation of the form *hây* in (114) and (116), the form *hây* in both sentences is considered to be the same lexical item *hây₆*. The differences in meaning may be attributed to pragmatic usage of the verb in each sentence. The goal adverb *hây₆* is interpreted as malefactive when it occurs with verbs which are perceived as unfavourable. Such verbs are, for example, *kàt* 'to bite', *tii* 'to hit', *dù?* 'to reproach' *dàa* 'to scold', *kròot* 'to be angry', and *yɛ̂ɛŋ* 'to snatch'. *Hây₆* may also occur with verbs which do not carry unfavourable meanings by themselves, such as *cùup* 'to kiss', if the action is perceived as threatening or destructive.

In short, the form *hây* in (80) and (81) is shown to be a single word, namely an adverb *hây₆* indicating a goal. This *hây₆* may appear with non-correspondent transitive verbs to carry the benefactive meaning, as in (80) and (116), or the malefactive meaning, as in (114), in which case it marks an adjunct. When *hây₆* cooccurs with a correspondent ditransitive verb, it carries a directional meaning and is a complement. *Hây₆* cooccurring with correspondent ditransitive verbs may carry the benefactive meaning only if there is an additional form *hây* bearing the directional interpretation.

Claiming that *hây₆* cooccurring with an optional noun is an adverb is somewhat counterintuitive when seen from the perspective of English grammar. However, as shown in earlier tests, the form *hây* in (80) and (81) fails to exhibit the prominent characteristics of prepositions and verbs. Thus, the adverb analysis is the most preferable one, linguistically. It is, however, possible that this adverb *hây₆* is derived from prepositions (Clark: pers. comm.). An alternative analysis which assumes that *hây* could be a transitive preposition when it is followed by a noun and an intransitive preposition when the following noun is not present (see Emonds 1976:172) is ruled out here, because to formalise such an analysis within the constrained theory of Lexicase is not possible.

6. CONCLUSION

This study concludes that there are altogether six different homophonous forms of *hây* in Thai. There are three homophonous ditransitive verbs *hây*: *hây₁* requires two bare noun phrases as complements; *hây₂* takes a bare noun phrase and a prepositional phrase as complements; *hây₃* requires two bare noun phrases and a verb complement. The two causative verbs, namely the personal causative verb *hây₄* and the impersonal causative verb

hây₅, differ in their ability to allow a subject. Moreover, *hây₅* implies the speaker's indifference to or defiance of the action of a third person. Finally, *hây₆*,of the benefactive meaning 'for' and of the directional meaning 'to', is considered to be a single lexical entry of the adverb category because it fails to exhibit the characteristics of either verbs or prepositions, a finding which contrasts with Dejthamrong (1970) and Thepkarnchana (1986). Differences in interpretation in the different uses of *hây₆* are governed by the different classes of the regent verbs.

APPENDIX I: ABBREVIATIONS

Acc	Accusative	lctn	location	PAT	Patient
actr	actor	lit	literal translation	PP	prepositional phrase
Adv	adverb	LOC	Locus	PRT	particle
afct	affect	mnpl	manipulative	rslt	resultative
AGT	Agent	mprs	impersonal	TOP	topic marker
caus	causative	N	noun	trns	transitive
cntn	continuing	ndex	index of	V	verb
COR	Correspondent	Nom	Nominative	vrbl	verbal
crsp	correspondent	NP	noun phrase	xtns	extension
fint	finite	P	preposition		

APPENDIX II: CONTINUING VERBS IN THAI

Continuing verbs are verbs which are interpreted by the Patient-to-Patient Control Rule (P2P). The following lists exemplify members of continuing verbs in Thai, based on Indrambarya's (1994) analysis.

1. Correspondent Continuing Intransitive verbs:

thùuk₅ 'to undergo'   *doon₄* 'to undergo'

2. Non-manner Continuing Non-manipulative Transitive Verbs:

hàn₃ 'to chop'   *sàŋ₆* 'to order (food)'   *yìp₃* 'to pick up'
tii₅ 'to hit'   *sɨ̵̀₃* 'to buy'   *yép₂* 'to sew'

3. Non-manner Continuing Manipulative Transitive Verbs:

a. Verbal causative continuing transitive verbs
chəən₅ 'to invite'   *khɔ̌ɔrɔ́ɔŋ₃* 'to plead'   *waan₄* 'to ask'
sàŋ₇ 'to order'   *bɔ̀ɔk₇* 'to order'   *cháy₇* 'to order'
plàk₅ 'to push'   *nɛ́ʔnam₄* 'to suggest'   *chuan₅* 'to persuade'

b. Resultative Continuing Transitive Verbs
tii₆ 'to hit'   *khîan₆* 'to whip'   *yìk* 'to pinch'
sɨ̵̀₄ 'to buy'   *kin₄* 'to eat'   *thɔ̌ŋ* 'to memorise'
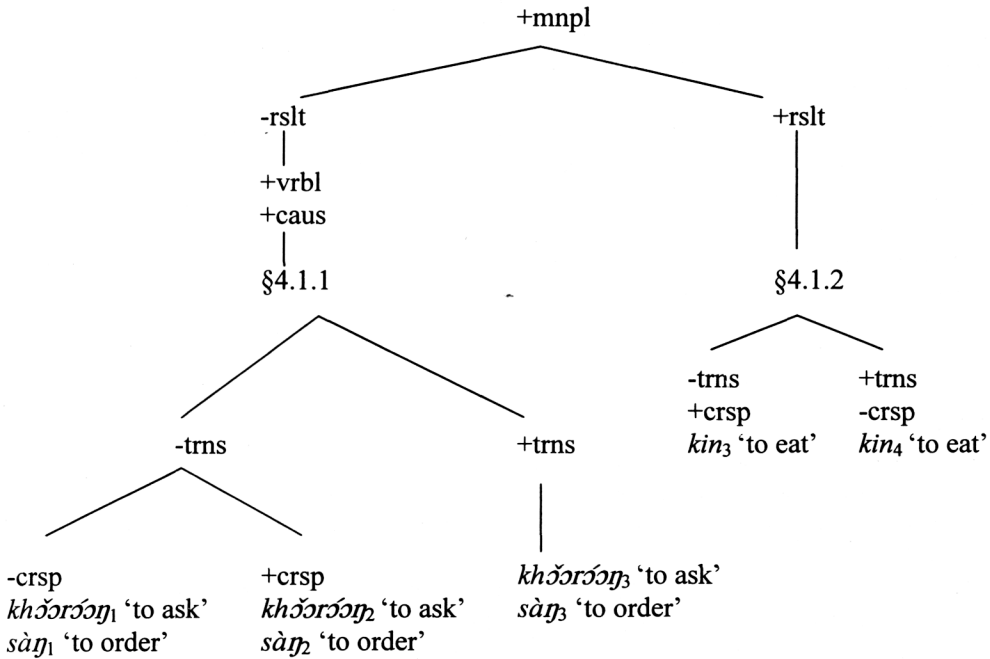
4. Correspondent Non-benefactive Transitive Verbs:

hây₃ 'to give'

5. Correspondent Benefactive Transitive Verbs:

cὲεk₅ 'to distribute'   *ʔúat* 'to show'   *lâw* 'to relate'
pɔ́ɔn 'to feed to somebody's mouth'

APPENDIX III: SUBCATEGORISATION OF MANIPULATIVE VERBS

Manipulative verbs are verbs which require the presence of the causative verb *hây* in the embedded complement clause. The following table illustrates the subcategorisation of manipulative verbs which can be semantically divided into verbal causative manipulative and resultative manipulative verbs

```
                              +mnpl
                    ┌───────────┴───────────┐
                  -rslt                    +rslt
                    │                        │
                  +vrbl                      │
                  +caus                      │
                    │                        │
                  §4.1.1                   §4.1.2
            ┌───────┴───────┐          ┌──────┴──────┐
          -trns           +trns      -trns         +trns
        ┌───┴───┐           │        +crsp         -crsp
      -crsp   +crsp    khɔ̌ɔrɔ́ɔŋ₃    kin₃          kin₄
   khɔ̌ɔrɔ́ɔŋ₁ khɔ̌ɔrɔ́ɔŋ₂  'to ask'   'to eat'     'to eat'
   'to ask'  'to ask'    sàŋ₃
   sàŋ₁      sàŋ₂        'to order'
   'to order' 'to order'
```

APPENDIX IV: CONTROL CHAINING RULES

1. Regular Actor Control Rule:

$$\begin{vmatrix} ?[+actr] \\ -fint \\ nndex \end{vmatrix} \quad \text{-->} \quad [m[+actr]] \quad \backslash \quad \begin{vmatrix} m[+PAT] \\ n[-fint] \end{vmatrix}$$

(Starosta 1992:47)

2. PAT-to-PAT Control Rule (P2P):

a. $$\begin{vmatrix} -fint \\ ?[+PAT] \\ nndex \end{vmatrix} \quad \text{-->} \quad [m[+PAT]] \quad \backslash \quad \begin{vmatrix} +cntn \\ m[+PAT] \\ n[-fint] \end{vmatrix}$$

b. The actor of the non-finite verb is interpreted as the closest available noun-headed dependent of a regent verb to the left of the embedded verb (Indrambarya 1994:300).

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