Grammaticalization paths of the Thai verb *dây*:
A corpus-based study

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1. The semantics of *dây*

The Thai verb *dây* is usually translated into an English agentive verb such as 'get', 'obtain', 'gain', 'attain', and so on. For instance, (1) below is usually translated as '(he) got money', as in (1a). But I do not consider *dây* as an agentive verb, since it cannot co-occur with a manner verb indicating an agent's volition such as *phayaayaam* 'make an effort', as exemplified in (2). It follows that the topic person of (1), which may or may not be overtly expressed, is not an agent (i.e. a conscious, willful and responsible actor with the ability to control the course of the event) but rather an experiencer (i.e. an undergoer of the event). On this basis, I regard *dây* as a non-agentive, non-volitional achievement verb describing a momentaneous event of 'emergence', as interpreted in (1c). It is worth noticing that an emergence verb in Thai, such as *kə̀ət* 'take place' and *praakòt* 'appear', is normally followed by a noun phrase naming an emerging entity, as in (3). Like *dây*, *kə̀ət* 'take place' is incompatible with *phayaayaam* 'make an effort', as in (4).

(1)   (*kháw*)   ***dây***   ŋən
        (PRONOUN)   DAY   money
        a. (He) got money.
        b. (He) came to have money.
        c. Money emerged (for him, and he got it).
(2) *   (*kháw*)   *phayaayaam*   ***dây***   ŋən
        (PRONOUN)   make an effort DAY   money
        (He) tried to get money. (intended meaning)

(3)   *kə̀ət* *panhǎa*
        occur   problem
        A problem took place.
(4) *   (*kháw*)   *phayaayaam*   *kə̀ət* *panhǎa*
        (PRONOUN)   make an effort occur   problem
        (He) tried to bring about a problem. (intended meaning)

Since I do not take it for granted that the semantics of *dây* entails the presence of a human being, I hesitate to interpret *dây* as 'come to have' (Enfield 2003), as in (1b). The lexical meaning of *dây* does not encompass the state of possession of something by a particular person. The sense of 'possession' is an implication deriving from the given pragmatic context. That is to say, when the topic person had wanted an entity denoted by the post-verbal nominal,

we naturally infer that after the entity came into existence at the locus of the person, he would take it and become its possessor. In the case of (1), if the topic person wanted money, we would readily understand that he got the money as a result of its emergence. Thus, I would rather prefer to translate (1) as 'money emerged'. This is, I think, the default verbal meaning of *dây* (Takahashi & Methapisit 2004).

In addition to the verbal meaning, *dây* has two main functional meanings which in this study I will call 'realization' and 'possibility' for the sake of convenience. Examples of expressions including *dây* as a functional morpheme are given in (5) and (6).

(5) (*kháw*)   ***dây***   *pay*
    (PRONOUN)   DAY   go
    The event of (his) going is realized.
(6) (*kháw*)   *pay*   ***dây***
    (PRONOUN)   go   DAY
    The event of (his) going is possible.

The pre-verbal *dây*, as in (5), is the marker for 'realization' (Takahashi & Methapisit 2004) or 'participant-external actuality' (van der Auwera & Plungian 1998). The linguistic concept 'realization' is a hybrid comprising an inchoative aspect and a realis-assertion. It specifies the speaker's evaluation or understanding that a situation in question has actually occurred as a result of some prior non-specific event (Enfield 2003). The basis of a realis-assertion characterized by 'realization' is the speaker's belief (or subjective certainty) that the prior event which is backgrounded but can be pragmatically retrieved from the given context should be connected with the realization of the situation in question. Take (5) for example. The realized event of the topic person's going to a certain place may result from such a prior event that the person was invited to visit the place he had wanted or expected to go to.

On the other hand, the post-verbal *dây*, as in (6), functions as the marker for 'possibility'. The linguistic concept 'possibility' subsumes a variety of subcategories such as circumstantial possibility, non-human capacity, agentive possibility (ability), probability, and permissibility (Takahashi & Methapisit 2004). The post-verbal *dây* basically denotes the most inclusive sense of possibility, which is differently called, e.g., 'possibility in a world independent of the speaker' (Traugott 1989), 'externally conditioned possibility' (Shibuya 1993), 'participant-external possibility' (van der Auewra & Plungian 1998), and 'circumstantial possibility' (Narrog 2005). Rather specific interpretations of the possibility meaning of *dây*, such as ability, probability, and the like, are achieved through our inferences in a particular pragmatic context.

Previous studies on the semantics of *dây* in Thai and Lao (Bisang 1996, Diller 2001, Enfield 2003, Matisoff 1991, Meesat 1997, Sindhvananda 1970, inter alia) assume that the original, core meaning of *dây* is 'be able' or 'get' or 'come to have', all of which presuppose the presence of a human being as an agent (actor) or an experiencer (undergoer). However, few, if any, studies have seriously tried to provide historical evidence for this assumption. This study, therefore, aims at offering a hypothesis on *dây*'s original meaning and grammaticalization paths based on empirical research dealing with historical corpus data. Thus,

this is a case study of grammaticalization using a data-driven approach.

2. Hypotheses on the mechanisms of grammaticalization

In my previous studies (Takahashi 2005, 2006a, 2006b; Takahashi & Shinzato 2005), I analyzed actual discourses in Thai inscriptions from the 13th century through the present time and reconstructed most plausible grammaticalization paths of *dây* into the two functional morphemes. In the study focusing on the 'realization' marker (Takahashi 2006b), I found that in the process that *dây* has developed into the 'realization' marker, (a) 'changes into a less specific meaning' (cf. 'semantic generalization' Bybee et al. 1994; 'depletion' Givón 1975; 'desemanticization' Heine & Kuteva 2002; 'schematization' Langacker 1991; 'semantic bleaching' Sweetser 1988) and (b) 'changes into a more specific meaning' (cf. 'specification' Kuteva 1999; 'pragmatic strengthening' Traugott 1988; 'subjectification' Traugott 1989, 1995) are both involved. (7a) and (7b) below describe the two directions of semantic change which I attested to be involved in *dây*'s evolution into the 'realization' marker.

(7) a. Changes into a less specific meaning or 'generalization': Generalization of the referential, content meaning of *dây* and its argument nominal (i.e. bleaching of the meaning of the described emergence event with an emerging entity)

 b. Changes into a more specific meaning or 'specification': Specification of the constructional, 'frame'-like meaning of *dây* constructions and a certain modal meaning associated (i.e. strengthening of the meaning of the speaker's subjective construal)

Furthermore, I hypothesized that these two types of semantic change, namely generalization and specification, interact differently at different stages of the development of grammaticalization, as explicated in (8).

(8) a. In early stages of the development of grammaticalization, a certain specification always precedes a certain generalization. In other words, the former triggers the latter. For example, forming a specific construction triggers bleaching of the meaning of an argument nominal.

 b. In late stages, on the other hand, both of the two types of semantic change occur at the same time, as if they were the two sides of the same coin. For example, bleaching of the meaning of *dây* and fixing of the pre-verbal *dây* construction occur simultaneously.

The main purpose of this study is to show that my hypotheses on the mechanisms of grammaticalization based on the examination of *dây*'s grammaticalization into the 'realization' marker, which are summarized in (7) and (8) above, are indeed applicable to *dây*'s grammaticalization into the 'possibility' marker.

3. Grammaticalization into the 'realization' marker

First, I will review *dây*'s grammaticalization into the 'realization' marker. Using the

diachronic corpus data, I reconstructed a grammaticalization path along which ***dây*** has changed from a verb for 'emergence' to the marker for 'realization', as shown in Table 1 below.

Table 1: Grammaticalization path from 'emergence' to 'realization'

CONSTRUCTION	MEANING
1. [***dây*** quantity-NP]	A quantity emerges. (9)
2. [VP] [***dây*** quantity-NP]	A quantity emerges as a result of a prior situation. (10)
3. [VP] [***dây*** NP]	Something emerges as a result of a prior situation. (11)
4. [VP] [***dây*** NP DATIVE human-NP]	Something emerges for the person as a result of a prior situation. (12)
5. topic-NP [OPTATIVE CAUSATIVE ***dây*** DATIVE human-NP]	Hope this thing will (will not) come to emerge for the person. (13)
6. preceding discourse [OPTATIVE ***dây*** (as I wish)]	May this story occur as I wish! (14)
7. [OPTATIVE ***dây*** VP]	Hope a situation will (will not) occur. (15)
8. [***dây*** VP]	A situation is realized. (16)

All the eight constructions listed in Table 1 were used in the Sukhothai period (the 13th century through the 15th century). I tried to see which constructions disappeared in earlier ages, or on the contrary, which constructions got to be frequently used in later ages. I have found that by the end of the 18th century, Constructions 1 to 5 became less used, and they, except for 2 and 3 which have diverged into other ***dây*** constructions, disappeared before the 20th century. Constructions 6 and 7 were used even into the 20th century for some time, but now are no longer seen. In contrast, Construction 8 became very common in the period of the present dynasty (since 1782). These observations lead to the following hypothesis.

Originally ***dây*** was an achievement verb designating an emergence of a quantity like the number and the period of something. I believe so owing to the fact that it was frequently followed by a noun phrase expressing a certain quantity ([***dây*** quantity-NP]). This is Construction 1 meaning that 'a quantity emerges', as in (9).

(9)　　　*sàkkaràat*　　　***dây***　　　*cèt rɔ́ɔy sǎam sǐp pὲεt*
　　　　　era　　　　　　　DAY　　　738
　　　　　As for the era, 738 years emerged. (The period of the era amounted to 738 years.) (1376)

Used as the second verb phrase, then, Construction 1　changed into Construction 2 ([VP] [***dây*** quantity-NP]) meaning that 'a quantity emerges as a result of a prior situation', as in (10).

(10)　　　*phim*　　*rûup phráʔ*　　　*dûay hǐak dûay din*
　　　　　mold　　Buddhist image　　with　tin　with　clay
　　　　　dây　　*mùɯn phan rɔ́ɔy pὲεt*　　*ʔan*
　　　　　DAY　　11,108　　　　　　　　　CLASSIFIER
　　　　　(They) molded Buddhist images with tin and clay and the number of the images amounted to 11,108. (1339)

Shifting to Construction 3 ([VP] [*dây* NP]), not only a quantity noun phrase but also a noun phrase in general became able to take place after *dây*. Construction 3 denotes that 'something emerges as a result of a prior situation', as in (11).

(11)　　*kuu　　　pay　thɔ̂ɔ　bâan　　thɔ̂ɔ　　mɯaŋ*
　　　　PRONOUN　go　attack　country　attack　country
　　　　dây　　cháaŋ　dây　　ŋuaŋ　　dây　　pùa
　　　　DAY　　elephant DAY　　elephant DAY　　man
　　　　dây　　naaŋ　dây　　ŋɯan　dây　　thɔɔŋ
　　　　DAY　　woman　DAY　　silver　DAY　　gold
　　　　I attacked countries, and elephants, people and treasures emerged (and I got them). (1292)

The important point is that *dây* in this bipartite construction does not simply express an emergence event but rather encodes a change and the resultant state.

　　　　Construction 4 ([VP] [*dây* NP DATIVE human-NP]) came from the addition of a dative prepositional phrase to the end of Construction 3. The dative prepositional phrase refers to an experiencer who is more or less affected by an emerging entity. Construction 4 represents that 'something emerges for the person as a result of a prior situation', as in (12).

(12)　　*phîi　　　　kuu　　　taay　cùŋ*
　　　　elder brother　PRONOUN　die　　CONJUNCTION
　　　　dây　　mɯaŋ　kɛ̀ɛ　　kuu　　　tháŋklom
　　　　DAY　　kingdom　DATIVE　PRONOUN　whole
　　　　My elder brother died and the whole kingdom emerged for me (and I got it). (1292)

This result-oriented meaning of Construction 4 appears to indirectly trigger an interpretation of a *dây* construction with a topic person, like (1) above, that 'the topic person eventually gets a thing emerged'.

　　　　Construction 5 (topic-NP [OPTATIVE CAUSATIVE *dây* DATIVE human-NP]) arose when the emerging entity became topicalized and *dây* with the dative prepositional phrase (*dây kɛ̀ɛ* NP) became preceded by the combination of the optative marker (the marker for wishing) (e.g. *cùŋ*, *coŋ*, *yàa*) and the causative marker (i.e. *hây*, *hɯ̂ɯ*). Construction 5 characteristically encodes the writer's wishing that 'the topic entity will (or will not) come to appear for a particular person'.

(13) a.　*bàap ...　cùŋ　　　hây　　　　dây*
　　　　sin　　　OPTATIVE　CAUSATIVE　　DAY
　　　　kɛ̀ɛ　phûu　bɔ̀ɔ　　　sɯɯ
　　　　DATIVE person　NEGATIVE　　honest
　　　　As for that sin, (I) hope it will come to emerge for the non-honest person. (1392)
　　b.　*thôot　　ʔan　　　săabaan　níi*
　　　　punishment　RELATIVIZER　swear　　this

yàa	*hây*	***dây***
NEGATIVE OPTATIVE	CAUSATIVE	DAY
kɛ̀ɛ	*pùu*	*sàk*	*ʔan*
DATIVE grandfather	just	CLASSIFIER

As for this punishment (I) swear, (I) hope it will never come to emerge for (my) grandfather. (15C)

Construction 5 developed into Construction 6 (preceding discourse [OPTATIVE ***dây*** (as I wish)]) which was a formulaic expression that was sometimes added at the end of an inscription text. In this shift, the topicalized emerging entity was replaced with a preceding discourse telling of a desirable situation, and the causative marker (*hây*, *hûɯ*) and the dative prepositional phrase (*kɛ̀ɛ* NP) disappeared. Construction 6 expresses the writer's desire that 'the hitherto described situation will occur as I wish', as in (14).

(14)
khɔ̌ɔ coŋ	***dây***	*daŋ*	*khâa*	*ʔàthîtthǎan*	*daŋ nîi*
OPTATIVE	DAY	such	PRONOUN	pray	like this

May (this story) occur as I pray like this! (1374)

Once the emerging entity began to be conceptualized as an abstract, relational one (viz. so-called 'propositional concept'), it became possible for ***dây*** to directly take a verbal complement and formed Construction 7 ([OPTATIVE ***dây*** VP]) meaning that 'I hope a situation will (or will not) occur', as in (15).

(15) a.
coŋ	***dây***	*pay*	*sawǎn*	*thəən*
OPTATIVE	DAY	go	heaven	OPTATIVE

I hope going to Heaven will occur. (11-13C)

b.
yàa	***dây***	*hǐaw*	*sàk*	*ʔan*
NEGATIVE OPTATIVE	DAY	wilt	just	CLASSIFIER

I hope no withering will occur. (14C)

In present-day Thai, an optative marker is not placed before ***dây*** and ***dây*** alone functions as the 'realization' marker, as in (16), which is Construction 8 ([***dây*** VP]) meaning that 'a situation is realized'.

(16) a.
dây	*faŋ*	*thêesanaa*
DAY	listen to sermon

Listening to the sermon was realized. (20C)

b.
bàt nîi	*mây*	***dây***	*tham*	*sǔan*	*kaafɛɛ*
now	NEGATIVE	DAY	do	field	coffee

Now growing coffee is not realized. (20C)

Although no optative marker is used, it is conventionally inferred that the described emerging situation is a desirable or expected one. This is a sample of the conventionalizing of

implicatures (or what Traugott & Dasher 2002 call 'invited inferences'). The pragmatic strengthening of the language users' inferences is behind the establishment of Construction 8.

Note that Construction 8 has been used since the Sukhothai period, though the frequency of its use in early ages was much less than that in the present time. The radical increase of the use of the pre-verbal *dây* in the present dynasty, however, shows that it must be in recent times that *dây* in Construction 8 came to be fully recognized as the 'realization' marker.

Table 2 below summarizes the semantic changes involved in the grammaticalization into the 'realization' marker. Instances of (a) 'generalization of the semantics of the verb *dây* and its argument nominal' are listed in the left column, and instances of specification, including (b) 'specification of the semantics of constructions (entrenchment of specific event structures)' and (c) 'specification of modal meanings (entrenchment of a specific mood as well as subjectification)', are listed in the right column.

Table 2: Semantic changes involved in grammaticalization into the 'realization' marker

1→2		(b) becoming used as the second verb phrase
2→3	(a) semantic generalization of the emerging entity (extension from quantity to thing)	
3→4		(b) co-occurrence with a dative prepositional phrase indicating the locus of emergence
4→5		(b) co-occurrence with the optative and the causative (b) topicalization of the noun phrase naming an emerging thing (c) entrenchment of the optative mood
5→6	(a) semantic generalization of the emerging entity (extension from thing to event)	(b) establishment of formulaic expression for wishing for the emergence of a desirable situation (disappearance of the causative and the topic noun phrase)
6→7	(a) semantic generalization of the emerging entity (extension from event to propositional concept)	(b) taking a verbal complement
7→8	(a) bleaching of the emergence sense (extension from emergence to realization)	(b) establishment of the construction for 'realization' through syntactic reanalysis rendering *dây* a functional morpheme (disappearance of the optative) (c) subjectification (becoming the 'realization' marker)

From Table 2 we can see the following two points, which I regard as empirical evidence in support of my hypotheses stated in (7) and (8) above. First, in early stages of the development of grammaticalization, a specification precedes a generalization: (i) In the shift from Stage 1 to Stage 2, *dây* followed by a quantity noun phrase ([*dây* quantity-NP]) came to be commonly used as the second verb phrase to express a change and the resultant state. With this specification, the meaning of the emerging entity extended from quantity to thing in general, which gave rise to Stage 3. (ii) In the shift from Stage 4 to Stage 5, the optative mood wishing for a certain emergence (or non-emergence) became entrenched. With this specification, the meaning of the emerging entity extended from thing to event, which gave rise to Stage 6. And, (iii) in the shift from Stage 5 to Stage 6, the causative and the topic noun phrase disappeared and formed a formulaic expression for wishing for the emergence of a desirable event. With this

specification, the meaning of the emerging entity extended from event to propositional concept, which gave rise to Stage 7.

Second, in late stages of the development of grammaticalization, a generalization and a specification occur at the same time: (i) The shift from Stage 5 to Stage 6 involved an abstraction of the emerging entity (from thing to event), and concurrently, the formulaic expression for wishing for a desirable event became fixed. (ii) The shift from Stage 6 to Stage 7 involved a further abstraction of the emerging entity (from event to propositional concept), and concurrently, *dây* came to take a verbal complement. And, (iii) the shift from Stage 7 to Stage 8 involved a bleaching of the verbal meaning of *dây* (from emergence to realization), and concurrently, the construction underwent 'syntactic reanalysis' (Langacker 1977) rendering *dây* the 'realization' marker that is always followed by a verb phrase.

4. Grammaticalization into the 'possibility' marker

We now turn to an examination of *dây*'s grammaticalization path into the marker for 'possibility' in order to further verify my hypotheses. Table 3 below shows my corpus-based reconstruction of *dây*'s grammaticalization into the 'possibility' marker.

Table 3: Grammaticalization path from 'emergence' to 'possibility'

CONSTRUCTION	MEANING
1. [*dây* quantity-NP]	A quantity emerges. (9)
2. [seek for (NP)] (CONJ.) [NEGATIVE *dây* quantity-NP]	After seeking for something, a certain quantity of it does not emerge. (17)
3. [seek for (NP)] (CONJ.) [NEGATIVE *dây*]	After seeking for something, it does not emerge. (18)
4. [VP] (CONJ.) [NEGATIVE *dây*]	After doing something, it is not achieved. (19)
5. [VP NEGATIVE *dây*]	It is not possible to do/be something. (20)
6. [VP *dây*]	It is possible to do/be something. (21)

Like the constructions listed in Table 1, the constructions listed in Table 3 were all seen in the Sukhothai inscriptions. I tried to identify which ones got to be less and less used while which ones got to be more and more used in later ages. I have found that Constructions 2 and 3, which have diverged into other *dây* constructions, disappeared by the end of the 14th century. Constructions 4 to 6 remain until now. Especially in the present dynasty (since 1782), Construction 6, which does not have the negative, is quite frequently used. These observations lead to the following hypothesis.

Shifting from Construction 1 ([*dây* quantity-NP]) to Construction 2 ([seek for (NP)] (CONJ.) [NEGATIVE *dây* quantity-NP]), the *dây* verb phrase came to be negated and follow another verb phrase including the verb *hǎa* 'seek for'. Construction 2 means that 'a certain quantity of a thing does not emerge after seeking for the thing', as in (17).

(17) *fǔuŋ khon*   *ʔan*   *càk*   *rúu*   *bun*   *tham*
      people   RELATIVIZER MODAL know   virtue right principles
      hǎa   *mîʔ*   *dây*   *lǎay*   *ləəy*
      seek for NEGATIVE   DAY   many   INTENSIVE

As for people who know the virtue and right principles in Buddhism, (we) seek for (them and) many (of them) do not emerge at all. (1357)

Construction 3 ([seek for (NP)] (CONJ.) [NEGATIVE *dây*]) arose from disappearance of the quantity noun phrase after *dây*. Construction 3 means that 'after seeking for something, it does not emerge', as in (18).

(18)   *hǎa   khon   rúu càk thɛ́ɛ   lɛɛ*
    seek for person know   true   CONJUNCTION
    mîʔ   dây   ləəy
    NEGATIVE   DAY   INTENSIVE
    (We) seek for a person knowing truly and (the person) does not emerge at all. (1357)

Then, it became possible for any verb to take place instead of the verb *hǎa* 'seek for', which gave birth to Construction 4 ([VP] (CONJ.) [NEGATIVE *dây*]), as in (19). One may say that the second verb phrase in Construction 4 ([NEGATIVE *dây*]) might indicate the sense of 'non-achievement' rather than 'non-emergence', since the construction was readily interpreted as expressing that 'after doing something, it is not achieved'.

(19)   *càk   náp   lɛɛ   mîʔ   dây*
    MODAL count   CONJUNCTION NEGATIVE   DAY
    (We) count (them) and (the total amount) does not emerge. (Counting all things is not achieved due to the large number of them.) (1361)

Construction 5 ([VP NEGATIVE *dây*]) was fixed when it became impossible to insert the conjunction *lɛɛ* 'and' between the first and the second verb phrases of Construction 4 and the two verb phrases underwent syntactic reanalysis, which lead to an interpretation of the construction as a single clause, as in (20). The latter part of Construction 5 ([NEGATIVE *dây*]) may be regarded as the 'impossible' marker in the sense that it implies that 'it is not possible to do/be something'.

(20)   *yùu   bɔ̀ɔ   dây*
    stay   NEGATIVE   DAY
    The event of staying does not emerge. (It is not possible to stay.) (16C)

Around the 20th century Construction 6 ([VP *dây*]) that excludes the negative, as in (21), came to be commonly used, and in present-day Thai Construction 6 is one of the most familiar *dây* constructions. *dây* in this construction is the general 'possibility' marker indicating that 'it is possible to do/be something.

(21)   *pay   dây*
    go   DAY
    It is possible to go. (The event of going emerges.)

The semantic changes involved in grammaticalization into the 'possibility' marker are summarized in Table 4 below.

Table 4: Semantic changes involved in grammaticalization into the 'possibility' marker

1→2		(b) becoming used as the latter verb phrase following the former verb phrase meaning 'to seek for a thing'
2→3	(a) semantic generalization of the emerging entity (extension from non-emergence of quantity to non-emergence of thing)	(b) disappearance of the numeral after *dây*
3→4	(a) semantic generalization of the former verb phrase (extension from 'seeking for a thing' to 'doing something') (a) semantic generalization of the emerging entity (extension from non-emergence of thing to non-emergence of event)	(b) entrenchment of the construction '[VP] (CONJ.) [NEGATIVE *dây*]' (implying 'non-achievement' sense)
4→5	(a) semantic generalization of the emerging entity (extension from non-emergence of event to non-emergence of propositional concept)	(b) complete disappearance of the conjunction (undergoing syntactic reanalysis which results in an interpretation of the construction as a single clause) (c) subjectification (implying 'impossibility' sense)
5→6	(a) bleaching of the emergence sense (extension from non-emergence of propositional concept, i.e. impossibility, to possibility in general)	(c) subjectification (becoming the marker for 'possibility')

From Table 4 we can see the following, which can be considered as another piece of evidence to support my hypotheses regarding the mechanisms of grammaticalization. First, a specification precedes a generalization in early stages of the development of grammaticalization: (i) In the shift from Stage 1 to Stage 2, the negated *dây* verb phrase ([NEGATIVE *dây* quantity-NP]) came to follow the *hǎa* verb phrase ([seek for (NP)]) to encode a change and the resultant state. With this specification, a particular quantity became unmentioned and the negated *dây* alone remained in the second verb phrase, which gave rise to Stage 3. (ii) In the shift from Stage 2 to Stage 3, the quantity noun phrase after *dây* disappeared and the form [NEGATIVE *dây*] was fixed. With this specification, the meaning of the first verb phrase extended from 'seeking for a thing' to 'doing something' and the meaning of the emerging entity also extended from thing to event, which gave rise to Stage 4. (iii) In the shift from Stage 3 to Stage 4, the negated *dây* verb phrase preceded by another verb phrase ([VP] (CONJ.) [NEGATIVE *dây*]) came to be conventionally used to denote the sense of 'non-achievement' of a particular event (i.e. after doing something, it is not achieved). With this specification, the meaning of the construction as a whole extended from non-emergence of event ('non-achievement') to non-emergence of propositional concept ('impossibility'), which gave rise to Stage 5. And, (iv) in the shift from Stage 4 to Stage 5, the conjunction *lɛɛ* 'and' totally disappeared and the construction underwent syntactic reanalysis resulting in an interpretation of the construction as a single clause. With this specification, the meaning of the construction as a whole extended from non-emergence of propositional concept ('impossibility') to 'possibility' in general, which gave rise to Stage 6.

Second, a generalization and a specification occur at the same time in late stages of

the development of grammaticalization: (i) The shift from Stage 3 to Stage 4 involved an abstraction of the emerging entity (from thing to event), and concurrently, the form [NEGATIVE *dây*] came to imply 'non-achievement'. (ii) The shift from Stage 4 to Stage 5 involved a further abstraction of the emerging entity (from event to propositional concept), and concurrently, the form [NEGATIVE *dây*] came to imply 'impossibility'. And, (iii) the shift from Stage 5 to Stage 6 involved a bleaching of the verbal meaning of *dây* (from propositional concept to modal concept), and concurrently, *dây* became the 'possibility' marker.

5. Conclusion

In concluding, I would like to claim the following three points.

First, in order to concretely understand the mechanisms of grammaticalization as a whole, it is necessary to pay attention to the two different directions of semantic change, namely generalization and specification. It is not enough for the purpose only to consider exactly what kinds of inference such as metaphor and metonymy would motivate a semantic change from a lexical meaning to a functional meaning.

Second, having done empirical research on grammaticalization, I claim that we have to investigate grammaticalization paths by analyzing corpus data of actual discourses in the past; otherwise, we will fail to see how the two types of semantic change interact at each particular stage of the evolution of grammaticalization. That is, in early stages a specification precedes a generalization, while in late stages both occur simultaneously.

Third, Diewald (2002: 117) is right in saying that "the decisive factors for the triggering and continuation of a grammaticalization process are not to be found exclusively in the grammaticalizing items themselves, but also in changes in related linguistic categories and subsystems" and that "the split between the older, more lexical meaning and the newly grammaticalizing meaning […] is reinforced not only by changes concerning the new meaning and function, but also by the further development of the older, lexical reading". I concur with his view, and therefore I will continue investigating changes in related linguistic categories and subsystems such as historical changes of the negative and the causative systems in Thai and also splits into other *dây* constructions (e.g. human-NP [*dây* NP], [VP] [*dây* evaluation-VP], [VP *hây dây*], [*hǎa* NP/VP *mây*], etc.), so that we can have a better understanding of grammaticalization paths of *dây*.

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