



DEVELOPMENT OF THE PERIPHRASTIC CAUSATIVE CONSTRUCTION WITH A CAUSATIVE MARKER THĀM IN THAI

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Abstract

Periphrastic causative constructions have been extensively studied in linguistics. However, earlier explorations have predominantly concentrated on their characteristics from a synchronic perspective. This research aims to enhance previous investigations by employing a constructionist approach to analyze the developmental trajectory of the Thai analytic causative construction with the causative marker *t^hām* and to discuss the constructional pathway it follows. Contexts with the lexical item *t^hām* were gathered from three distinct sources: The Princess Maha Chakri Sirindhorn Anthropology Centre, Vajirayana Digital Library, and Thai National Corpus. The analysis reveals that the serial verb construction encompassing *t^hām* was the source of development. This construction evolved into the transitive resultative construction through the lexical aspect extension of the verb following *t^hām*. Eventually, the analytic causative construction emerged in the mid-20th century, characterized by an increased schematicity and a decreased semantic compositionality. The trajectory adheres to an elaboration pathway, where the simpler constructions with a higher degree of event and syntactic integration developed into more intricate ones with a lower degree of event and syntactic integration. The present study lays the groundwork for typological research into periphrastic causative constructions with a causative marker originally denoting ‘to make’, which are widespread in Southeast Asian languages.

Keywords: causative constructions, constructional change, schematicity, semantic compositionality

ISO 639-3 codes: tha, cmn

1 Introduction

Describing a causal event, a circumstance in which one subevent (a causing subevent) brings about another (a caused subevent), is one of the most fundamental human experiences (Lakoff & Johnson 1980; Podlesskaya 1993; Shibatani 2002). Depending on the degree of coalescence between the causing and caused subevents, language users employ various linguistic strategies to describe this relationship. These include employing a lexical causative in which the causing and caused subevents are combined into a single verbal lexeme (as in (1) from Korean (Song 2015:100)), attaching a bound morpheme to a verbal root (as in (2) from Turkish (Aissen 1974, as cited in Kroeger 2005)), or using a causative verb within syntactic constructions (as in (3) from Lao (Bohnenmeyer et al. 2010)). The last strategy exhibiting the lowest degree of compactness between the subevents (Dixon 2000) is the focus of this study.

- (1) *yenghi-ka kiho-lul hakkyo-ey ponay-ss-ta.*¹
 Yonghee-NOM Keeho-ACC school-LOC send-PST-IND
 ‘Yonghee sent Keeho to school.’
- (2) *Mehmet Hasan-i öl-dür-dü.*
 Mehmet Hasan-ACC die-CAUS-PST
 ‘Mehmet caused Hasan to die, killed Hasan.’
- (3) *man² hêt¹ kèw⁴ tèk⁵/sia³*
 3SG.M make glass break/be.lost
 ‘He broke/lost the glass.’

The periphrastic or analytic causative construction, characterized by a main clause containing a causative verb and a complement clause with a lexical verb, has received scholarly attention in linguistic studies. Synchronic studies (García-Miguel 2007; Gilquin 2010; Bouveret 2022; Moretti 2022; Deng & Li 2023) have explored this construction within specific languages. Comparative and typological studies (Verhagen & Kemmer 1997; Dixon 2000; Levshina 2012; Soares da Silva 2012; Levshina, Geerarets & Speelman 2014; Song 2014; Levshina 2022) have examined the construction across languages. Furthermore, diachronic studies (Hollman 2003; Chappell & Peyraube, 2006; Villanueva 2010) have investigated its historical development. The analytic causative constructions from various languages such as English, Dutch, French, Chinese, and Spanish were taken into consideration. Nevertheless, scholarly investigations into the same construction in Kra-Dai languages (e.g., Thai) remain scarce despite the prevalence of the caused event introduced through verbs denoting ‘to do’ or ‘to make’ in this language family (Pittayaporn 2021).

The present study focuses on exploring the periphrastic causative construction with a causative marker *t^hām* in Thai (henceforth, *t^hām* periphrastic or analytic causative construction) as exemplified below. It traces the developmental trajectory of the construction, complementing earlier studies that have mainly examined it from a synchronic perspective.

- (4) *k^hǎw t^hām t^hɛ̃: rɔːŋ.há:j*
 3SG.M CAUS 2SG cry
 ‘He made her cry.’ (Thai National Corpus)
- (5) *tɛ^hǎn t^hām krà.pǎw.sà.tā:ŋ hǎ:j*
 1SG CAUS wallet lost
 ‘I lost my wallet.’ (Thai National Corpus)

Previous investigations of the *t^hām* analytic causative construction have primarily focused on describing its syntactic and semantic features using Modern Thai data. This construction contains four to five schematic slots: NP₁ + *t^hām* + NP₂ + VP (+NP₃). In this schematic pattern, NP₁ denotes the causer, while the word *t^hām*, a causative verb, carries the grammatical meaning of causing an action that leads to another event. These components form a main clause, whereas the remaining elements (NP₂ and VP) create a complement clause, with NP₂ referring to the causee and VP conveying the resulting event that NP₂ encounters or initiates (Wongsantiwanich 1983; Iwasaki & Ingkaphirom 2005; Pothipath 2018; Bandhumedha 2022). According to a core tenet of Construction Grammar, which posits that a specific syntactic pattern is mapped onto a schematic constructional meaning (Diessel 2019; Hilpert 2021; Hoffmann 2022; Perek 2023), the syntactic

¹ The verb *ponay-* meaning ‘send’ can be interpreted as ‘cause someone to go.’ Song (2015:100) identifies this verb as an example of a lexical causative, corresponding to a basic or non-causative verb *ka-* meaning ‘go.’

pattern in question corresponds to a constructional meaning in which an event participant (NP₁) triggers an unspecified event that directly affects another participant (NP₂). The caused event can be non-agentive or non-movement agentive actions, as illustrated by *ró:ŋ.hâ:j* ‘to cry’ and *hă:j* ‘to be lost’ in (4) and (5), respectively (Vichit-Vadakan 1976; Jarida 1978; Pothipath 1999).

Diachronically, the hypothesis regarding the development of analytic causative constructions is that they stem from pre-existing constructions. In other words, the periphrastic causative construction is not the origin from which other constructions emerge (Moreno Cabrera 1993; Kemmer & Verhagen 1994; Malchukov, Hasplemuth & Comrie 2010; Bouveret 2021). Kemmer and Verhagen (1994) point out that basic argument structure constructions (e.g., intransitive, transitive, and ditransitive constructions) form the foundation for more complex analytic causative constructions. This process is considered an elaboration.

While Kemmer and Verhagen’s investigation concentrates on the elaboration process in the synchronic data of Dutch, which has a rich morphological system, it is less directly applicable to Thai, an isolating language with a different linguistic structure. The developmental trajectory of *t^hām* periphrastic causative construction may be similar to that of Dutch, as Kemmer & Verhagen point out. Alternatively, it may undergo a process known as reduction, whereby the more intricate structure is simplified. In this process, causative constructions can be formed by constituting clause integration from two (basic) clauses (Kulikov & Sumbatova 1993).

Investigations into how a specific construction in Thai adapts its internal linguistic features to develop into the *t^hām* analytic causative construction are scarce. Additionally, exploring whether the pathway of the *t^hām* periphrastic causative construction adheres to reduction or elaboration requires further examination. If the constructional development follows an elaboration pathway, establishing connections between simpler and more complex constructions is essential for a comprehensive understanding.

The aims of this research were to analyze the development of the *t^hām* analytic causative construction and ascertain its developmental trajectory, whether through reduction or elaboration, from a constructional change perspective.

This study demonstrated that the serial verb construction was the foundation of the entire developmental trajectory. The source construction is defined as a syntactic pattern in which multiple verbs are concatenated without linguistic linkers, except for a nominal element that serves as an argument for one of the verbs in the series. In this configuration, the verbs do not exhibit dependency relations, such as predicate-argument relationships, among themselves. This syntactic arrangement expresses a sequence of temporally successive subevents perceived as a single event. Serial verb constructions are monoclausal, as all verbs in the series share a common nominal argument and fall under the same grammatical scope for categories such as tense, aspect, modality, polarity, and illocutionary force (Bisang 2009:801-810; Hasplemuth 2016:296-305; Aikhenvald 2018:3-7; Lovstrand 2021:111-119). The finding that the serial verb construction was a constructional source of the emergence of the *t^hām* analytic causative construction was motivated by similarities in structural patterns and overlapping constructional meanings between the serial verb construction containing the verb *t^hām* and the *t^hām* analytic causative construction.

The serial verb construction containing the verb *t^hām* evolved in its structural properties, semantic attributes, and the correspondence between these characteristics, leading to the emergence of the transitive resultative construction in later periods. This developed construction served as a foundation for further constructional development until the *t^hām* analytic causative construction was established. The research provided evidence of increased schematicity and decreased semantic compositionality, supporting the proposed developmental trajectory of the *t^hām* analytic causative construction. Additionally, the observed development follows an elaboration process, as evidenced by gradual changes in degrees of event and syntactic integration.

Research findings will provide valuable insights for cross-linguistic studies on the periphrastic causative construction with a causative verb originally denoting ‘to make,’ which is particularly relevant for Southeast Asian languages (such as Lao, Mon, Vietnamese, Javanese, Patani Malay, Cambodian, and Burmese) (Moreno Cabreba 1993; Enfield 2007; Iamdanush & Pittayaporn 2014; Jenny & Tun 2016; Kuteva et al. 2019). Further, these findings could offer another insightful perspective on grammaticalization and functional extension, demonstrating how constructional changes at the sentential level may influence the functional extension of lexical items.

The organization of this research paper is as follows: in Section 2, the theoretical foundation of constructional change will be provided. Research methodology, including the sources from which the data was drawn, and the methods employed for data analysis, will be presented in Section 3. Section 4 will account for the development of the *t^hām* periphrastic causative construction. The constructional source of the entire developmental trajectory, along with syntactic and event integrations from the previous section, will be thoroughly discussed in Section 5 to elucidate the process of constructional development. Finally, Section 6 will summarize the main findings and potential areas for further research.

2 Analytical framework: Constructional change

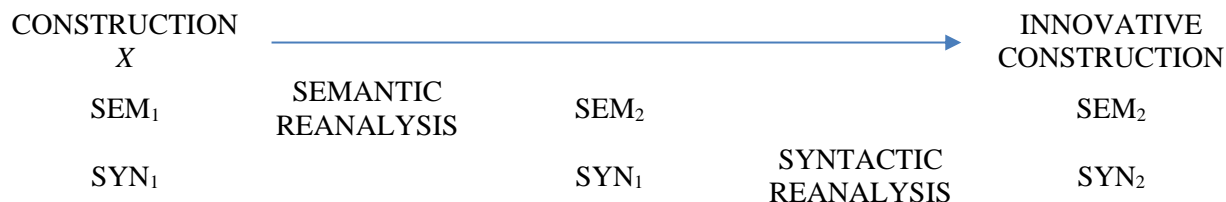
Over the past thirty years, Construction Grammar has gained substantial popularity for investigating linguistic systems of various languages (Boas 2013; Goldberg 2019; Hoffmann 2022). One of the fundamental underpinnings of the constructionist approach is that constructions are the essential ‘building blocks’ of the lexical and grammatical system. Constructions, in this sense, do not refer to a string of lexical items hierarchically organized to form a larger grammatical unit as defined in Traditional Grammar, but they refer to holistic pairings or correspondences between form (including phonological, morphological, and syntactic properties) and meaning (covering semantic, pragmatic, and discourse properties) (Croft 2001; Goldberg 2013; Diessel 2019:4; Hilpert 2021; Hoffmann 2022:4; Perek 2023:217). Constructions occur at varying levels of complexity, ranging from morpheme, lexeme, phrase, clause, and sentence; the latter being the main focus of the present study. For instance, a transitive construction in English follows a syntactic pattern, namely NP₁ + V + NP₂, which is associated with a schematic constructional meaning, X ACTS ON Y, where X and Y correspond to NP₁ and NP₂, respectively: *John kissed Mary* and *Bob sang a song* are instantiations or ‘constructs’ of English transitive constructions.

Notably, the schematic meaning is not solely derived from the individual meanings of its lexical items. Rather, it largely depends on the meanings of highly frequent, general verbs as Goldberg (1999:202) describes. These verbs convey meanings fundamental to everyday human experiences; for example, the verb *go* typically denotes intransitive motion (X MOVES), *do* corresponds to a transitive event (X ACTS ON Y), and *give* conveys a ditransitive event (X CAUSES Y TO HAVE Z). Since these verbs frequently appear in specific syntactic patterns (e.g., *go* in NP *go*, *do* in NP₁ *do* NP₂), their use helps language users recognize comparable syntactic expressions. When other verbs replace these verbs in their respective slots, the overall constructional meaning remains similar. For instance, *ate* in *She ate pizza* occupies the same syntactic position as *did* in *She did housework*. Both sentences describe an event where one participant, the ‘agent,’ initiates an action that directly affects another participant, the ‘patient.’ Thus, constructional meaning emerges from generalizing over common lexical instances, particularly verbal heads, in specific syntactic patterns (Goldberg 1999:199). When language users consistently adopt a certain combination of words and structures to communicate a specific idea or function, this pattern becomes a recognized construction. Over time, the meaning associated with the specific syntactic arrangement becomes conventionalized and is understood by the language community. In addition to the descriptive meanings previously described, constructional meanings include non-descriptive elements such as information structure, presuppositions, speaker’s attitudes, and contextual information (Perek 2023:219).

Sentence-level constructions can change their internal syntactic and semantic properties, as well as the correspondence between these two characteristics. Once the interconnectedness between formal and conceptual properties shifts, innovative constructions emerge. To illustrate, a presumed construction X initially comprises a specific pattern (SYN₁) and a corresponding constructional meaning (SEM₁). If either the form or the meaning undergoes internal modifications due to the replication of innovative features within a speech community, the remaining component adjusts its property accordingly. The schematic representation below depicts the reanalysis of an existing constructional meaning (SEM₁), resulting in the emergence of an innovative constructional meaning (SEM₂) that proves incompatible with the previous syntactic structure (SYN₁). With the conventionalization of the innovative meaning, it triggers a structural reanalysis of SYN₁. Ultimately, a new syntagmatic relation between elements (SYN₂) arises in accord with the current conventionalized meaning. Should this pairing be employed with greater frequency, indicating increased entrenchment in the perception of language users, the construction assumes the role of a new

building block within the grammatical system (Barðdal & Gildea 2015; Traugott 2019). Traugott and Trousdale (2013) refer to this process as constructionalization while Hilpert (2018) labels it constructional change (see Barðdal & Gildea 2015; Flach 2020; Hilpert 2018; 2021 for further discussion).

Figure 1: The change of syntactic pattern and constructional meaning of a sentence-level construction



Constructional change is a multifaceted phenomenon that extends beyond alterations in syntactic patterns, constructional meanings, and the correspondence between these two characteristics. It encompasses a wide array of adjustments, including function, frequency, distribution, schematicity, and semantic compositionality (Hilpert 2013; 2018; Traugott & Trousdale 2013). The current research highlights specific aspects of constructional change: an increase in schematicity of constitutive slots and a decrease in semantic compositionality.

Schematicity refers to a characteristic specific to particular slots within a syntactic pattern and is closely intertwined with the concept of abstraction (Traugott & Trousdale 2013). In the construction *X* provided above, it is assumed that this construction comprises three slots, each defined by a set of abstract features—specific grammatical or semantic attributes—that impose constraints on the occurrence of elements (Bybee 2013). In other words, the schematicity of slots within a construction significantly influences the attributes and limitations of elements suitable for each position, contributing to the structural pattern and meaning of the construction. Elements lacking relevant or congruent properties do not occupy a particular slot. Schematicity can adjust its properties, marking a significant stage in the construction’s developmental process. For example, the initial slot in the construction *X* might be designated for an animate nominal lexical item. As the construction evolved, this slot became more accommodating for other elements with differing properties, including inanimate nominals. Over time, more flexibility ensued, enabling a range of nominal categories—whether animate or inanimate—to occupy the slot. This evolutionary process may signify a gradual increase of the schematic properties within a specific slot as the construction changes.

In stark contrast to the increasing schematicity, there exists a decrease in the semantic compositionality of the elements within the construction. The Principle of Compositionality asserts that the meanings of syntactic constructs derive from their individual elements (Fried 2013; Traugott & Trousdale 2013). A high degree of semantic compositionality occurs when the meaning of a linguistic expression is directly derived from the meanings of its parts. For instance, the meaning of the sentence *John hit Mary* is constructed by combining the meanings of its lexical elements: the referent *John*, the action *hit*, and the referent *Mary*. Conversely, when a construction accommodates elements with differing properties, when the meaning of an expression is not solely derived from its components, or when there is an additional constructional meaning alongside the literal ones, it indicates a lower degree of semantic compositionality or non-compositionality (Evans 2019:366; Hilpert 2019:16). Non-compositionality allows constructional meaning to override the conventional meaning of a lexical item. This process, known as constructional coercion (Michaelis 2004; Langacker 2009), occurs when a lexical item adopts the meaning conveyed by the construction, as it deviates from its conventionalized meaning.

The current research utilizes the concept of constructional change to examine the emergence of new sentence-level constructions. While former studies (Barðdal & Gildea 2015; Narrog & Heine 2021) propose that semantic change typically precedes structural change, it is not straightforward to determine explicitly, based on historical evidence, which component of the construction changes first. It can be the formal aspect, the semantic aspect, or both sides simultaneously. Isolating change in each constitutive part does not adhere to the fundamental principles of the constructionist framework, which recognizes that these changes involve

not only structural modifications but also shifts in meaning, corresponding to the notion of the dynamic coevolution of meaning and form (Bybee et al. 1994). By adopting a constructionist approach, researchers can equally focus on formal and semantic changes of the construction throughout the stages of grammatical change. This framework also accounts for nuanced linguistic adjustments and incremental changes, such as mismatches between grammatical patterns and the meanings of constituents, transitional stages between compositional and non-compositional patterns, and the syntactic contexts that either facilitate or impede the grammatical changes (Fried 2013; Coussé et al. 2018; Hilpert 2018).

3 Data and analysis

3.1 Data

Data under investigation were collected from three sources as illustrated follows:

- The Princess Maha Chakri Sirindhorn Anthropology Centre (<https://db.sac.or.th/inscriptions/inscribe>)
- Vajirayana Digital Library (<https://vajirayana.org/>)
- Thai National Corpus (TNC) (<https://www.arts.chula.ac.th/ling/tnc3/>)

The text genres encompassed both informative and imaginative categories. While imaginative texts were considered in this investigation, poetic ones were excluded because the use of poetic license could restrict natural language expressions.

The 95 collected texts from the Princess Maha Chakri Sirindhorn Anthropology Centre and Vajirayana Digital Library were categorized based on their time of composition. The researcher divided the periods into 14 intervals, each spanning 50 years.

Table 1: Periods of the texts under investigation

Periods	BE	AD
1	1851-1900	1308-1357
2	1901-1950	1358-1407
3	1951-2000	1408-1457
4	2001-2050	1458-1507
5	2051-2100	1508-1557
6	2101-2150	1558-1607
7	2151-2200	1608-1657
8	2201-2250	1658-1707
9	2251-2300	1708-1757
10	2301-2350	1758-1807
11	2351-2400	1808-1857
12	2401-2450	1858-1907
13	2451-2500	1908-1957
14	2501-2520	1958-1977

Data were also collected from the Thai National Corpus, which comprises around 33 million words. The texts in the corpus were published between AD 1998 and 2007. The researcher filtered contexts that exhibited the specific syntactic pattern of interest from 1,000 contexts randomly provided by the corpus from

various genres, including fiction, newspaper articles, academic texts, non-academic documents, legal materials, and miscellaneous sources.

The analysis in this study was based on a limited dataset and may be further constrained by the nature of the textual registers examined. Most of the texts collected from the Princess Maha Chakri Sirindhorn Anthropology Centre and the Vajirayana Digital Library—including inscriptions, memoirs, and chronicles—focused on Royal affairs. These texts employed a distinctive style that contrasted with the imaginative literature of the 19th century, such as novels and non-fiction works. As a result, the compiled data may lack certain historically significant lexical, grammatical, and semantic information necessary to illustrate clear transitions and stages in developmental trajectories.

3.2 Analysis

In this current study, contexts with *t^hām* from the three distinct sources were compiled and manually selected for analysis. To preprocess the data, a syntactic pattern, NP₁ + *t^hām* + NP₂ (+ VP), was employed for filtration. For example, the sentence *k^hǎw t^hām k^hà.nǒm k^hǎ:j* ‘he made snacks for sale,’ encompasses four slots with a fixed element in the second position (the item *t^hām*) and other remaining constructs belong to distinct phrasal categories: noun phrase (*k^hǎw* ‘3SG’ and *k^hà.nǒm* ‘snack’) and verb phrase (*k^hǎ:j* ‘to sell’). Contexts with *t^hām* that did not adhere to the designated syntactic pattern were excluded from the study, except in cases where the omitted noun phrase could be inferred from the context, such as in *k^hrāj t^hām hǎ:y* (‘Who lost it?’). Although this example contains only three constituents: NP₁, verb *t^hām*, and VP, the NP₂ argument is inferable from the context.

The noun phrase in the NP₁ slot is the subject performing the action expressed by *t^hām*. This noun phrase, in some circumstances, does not need to be juxtaposed before the lexical item *t^hām* as exemplified in (6). In this sentence, the noun phrase *teâ:w.mù:n.t^hê:p.nē:.rá.mít* ‘Chaomuenthepneramit’ performed successive actions, one of which was the creation of a flat stone (*t^hām hǐn p^hīŋ p^hèn nùŋ*). In the actual data analysis, verbs preceding the item *t^hām* (*mī: sàt.t^hā:* ‘to have faith’ in the example (6)) were not taken into consideration.

- (6) *teâ:w.mù:n.t^hê:p.nē:.rá.mít mī: sàt.t^hā: t^hām hǐn p^hīŋ p^hèn nùŋ*
 Chaomuenthepneramit have faith make stone lean CLF one
mā: tâŋ wáj tēŋ kè: p^hrá.sǒŋ p^hīŋ
 come place TAM prepare for monk lean
 ‘Chaomuenthepneramit had faith, having a stone crafted for monks to lean on.’ (Wat Khema Inscription 1539)

Filtered contexts containing the word *t^hām* were systematically classified based on the constructions in which *t^hām* appeared. To categorize the sentence-level constructions where the lexical item *t^hām* was present, three linguistic criteria from Hilpert (2019) were utilized: structural deviation from a canonical pattern, unpredictability of constructional meaning, and linguistic constraints imposed by the construction.

If the item *t^hām* in texts from one period appeared within a context exhibiting a specific schematic pattern and constructional meaning, it would be categorized as belonging to a particular construction. For example, in (7), *t^hām* was part of a transitive construction characterized by the pattern NP₁ + VP[*t^hām* + NP₂] and the constructional meaning X ACTS ON Y. Conversely, if the same word in texts from another period was found within a construction with linguistic properties different from those in the previous period, it would indicate that *t^hām* occurred in a dissimilar construction. For instance, in (8), *t^hām* was part of a serial verb construction, where the structure NP₁ + VP[VP[*t^hām* + NP₂] + VP] conveys consecutive subevents. These characteristics differ from those of the transitive construction.

The classification revealed that the item *t^hām* occurred in four constructions as exemplified in (7-10), each of which possesses contrastive features (see Table 2).

- (7) *nān māj.k^h̄j t^hām ʔà.rāj.sàk.jà:ŋ*
 Nan never make INDF
 ‘Nan never does anything.’ (Adapted from Thai National Corpus)
- (8) *k^hōn jī:pùn t^hām kāp.k^hâ:w ʔē:ŋ t^hī: bâ:n*
 people Japanese make food self at home
 ‘Japanese people prepare their own food at home.’ (Thai National Corpus)
- (9) *k^hăw t^hām kâ:n.bâ:n sèt*
 3SG.M make homework finish
 ‘He finished his homework.’ (Adapted from Thai National Corpus)
- (10) *p^hôm t^hām tē^hô:n tòk p^hú:n*
 1SG.M CAUS spoon fall floor
 ‘I dropped the spoon.’ (Thai National Corpus)

4 Development of *t^hām* periphrastic causative construction

Constructions containing the lexical item *t^hām* were identified and chronologically organized according to the periods in which the texts were composed. The following subsections will demonstrate how the syntactic patterns and constructional meanings of *t^hām* constructions from specific periods evolved, ultimately contributing to the establishment of the *t^hām* periphrastic causative construction.

4.1 Transitive construction and serial verb construction

The lexical item (*krà*) *t^hām* ‘to make’ was found with considerable frequency in two distinct constructions: the transitive construction (as provided in (11)) and the serial verb construction (as exemplified in (12) and (13)).

- (11) *fū:ŋ k^hōn [...] jôm tēāk krà.t^hām bà:p.kām*
 group people generally IRLS make bad.deed
 ‘Humans generally do bad deeds.’ (Nakhon Chum Inscription 1357)
- (12) *tēâ:w.mù:n.t^hê:p.nē:rá.mít mī: sàt.t^hâ: t^hām hñ p^hīŋ p^hèn nùŋ*
 Chaomuenthepneramit have faith make stone lean CLF one
mā: tâŋ wáj tēŋ kē: p^hrâ.sōŋ p^hīŋ
 come place TAM prepare for monk lean
 ‘Chaomuenthepneramit had faith, having a stone crafted for monks to lean on.’ (Wat Khema Inscription 1539)
- (13) *p^hú:jàj.p^hú:nó:j 22 k^hōn t^hām rûaŋ.râ:w krà.p.t^hū:n p^hrâ.kà.rú.nā:*
 subordinate 22 CLF make story impart.to Royal.Highness
 ‘Twenty-two ministers prepared a report to impart to His/Her Royal Highness.’ (Army Daily Letters during the Thonburi Period 1771)

In (11), the transitive construction is composed of the verb *krà.t^hām*, and two noun phrases with distinct grammatical functions. The noun phrase preceding the lexical verb *krà.t^hām* (*fū:ŋ k^hōn* ‘humans’) functioned as the subject, while the noun phrase following that verb (*bà:p.kām* ‘bad deeds’) served as the direct object. This construction conveyed a specific constructional meaning, in which an animate agent (*fū:ŋ k^hōn* ‘humans’) intentionally performed an action that directly impacted another participant, the patient (*bà:p.kām* ‘bad deeds’). The patient may undergo either a change in material integrity or a state change. In this instance, the patient was brought into existence.

Table 2: Contrastive features of four constructions in which the item *t^hām* occurred
(Square brackets represent syntactic boundaries.)

TYPES OF CONSTRUCTION	SYNTACTIC PATTERN				CONSTRUCTIONAL MEANING	EXAMPLE
transitive construction	NP ₁ + VP[<i>t^hām</i> + NP ₂]				An agent instigates some actions directly affecting a patient.	(7)
serial verb construction	NP ₁ + VP[VP[<i>t^hām</i> + NP ₂] + VP]				Two subevents occur in chronological order.	(8)
transitive resultative construction	NP ₁	VP[<i>t^hām</i>	NP ₂] CL[NP ₂]	VP]	The second subevent is a result of the first subevent.	(9)
periphrastic causative construction	CL[NP ₁ + <i>t^hām</i>] + CL[NP ₂ + VP]				The first subevent is the cause of the second subevent.	(10)

The syntactic pattern and constructional meaning in (12) and (13) exhibit notable differences compared to those of (11). A salient grammatical characteristic observed in examples (12) and (13) is that all the verbs within the verbal series shared one argument, which functioned as the subject. In (12), the noun phrase *teā:w.mù:n.t^hē:p.nē:rá.mít* ‘Chaomuenthepneramit’ functioned as the subject for three predicates: *mī:sāt.t^hā:* ‘to have faith,’ *t^hām hīn p^hīŋ p^hèn nùŋ* ‘to have a stone crafted,’ and *mā:tāŋ wáj* ‘to place a crafted stone’. Similarly, in example (13), the noun phrase *p^hū:jāj.p^hū:nó:j 22 k^hōn* ‘twenty-two ministers’ served as the subject for the verb phrases: *t^hām rûaŋ.rā:w* ‘to prepare a report’ and *krà:p.t^hū:n p^hrá.kà.rú.nā:* ‘to impart to His/Her Royal Highness’.

The presence of these shared subjects in the verbal series signifies a cohesive constructional structure in both (12) and (13), wherein the described actions are linked to a mutual agent. This structural arrangement conveys the specific constructional meaning: a continuous sequence of actions performed by the same agent where the subevent of creating something, expressed by *t^hām* + NP, occurs before another subevent. In (12), the subevent *t^hām hīn p^hīŋ p^hèn nùŋ* ‘to have a stone crafted’ took place before *mā:tāŋ wáj* ‘to place a crafted stone’. Similarly, in (13), the subevent *p^hū:jāj.p^hū:nó:j 22 k^hōn t^hām rûaŋ.rā:w* ‘Twenty-two ministers prepared a report’ happened before the subevent *krà:p.t^hū:n p^hrá.kà.rú.nā:* ‘to impart to His/Her Royal Highness’. Notably, the occurrence of the second subevent is contingent upon the completion of the first one. Thus, explicit mention of the temporal condition implies the presence of a noticeable time span between these two actions.

Analysis of texts from the 15th century revealed the constraints on the lexical verbs that can follow the verb phrase headed by the lexical item *t^hām*. This particular slot was reserved for verbs denoting dynamic actions. For instance, in examples (12) and (13), the action verbs *mā:tāŋ wáj* ‘to place a crafted stone’ and *krà:p.t^hū:n p^hrá.kà.rú.nā:* ‘to impart to His/Her Royal Highness’ were found to occupy this slot. As the lexical meaning of the verb in the second slot extended its scope to other semantic domains, there existed a corresponding change in the syntactic pattern and constructional meaning of the construction.

The first constructional change occurred through the semantic extension of the verb following the *t^hām* verb phrase, while other elements in the clause remained unchanged. This alteration could be observed in texts composed during the 19th century, wherein there was a shift in the semantic property of the second verbal head from indicating dynamic events to conveying state as exemplified below:

- (14) [...] *t^hām dāŋ ní:pēn kù.sǒn jà:ŋ.dī:jà:ŋ.prà.sò:t*
 make like DEM COP merit well excellently
 ‘[...] performing such a deed was commendable and virtuous.’ (The Modern Buddhist; List of Common Trees, Shrubs, etc. in Siam 1865)
- (15) *t^hām t^hō:ŋ.dē:ŋ rú:ŋx̄n pēn ŋá:m*
 make copper or silver COP fork
 ‘Making a fork from copper or silver’ (The Modern Buddhist; List of Common Trees, Shrubs, etc. in Siam 1865)

In the earlier period, the verb phrase after the verb phrase headed by *t^hām* typically conveyed a dynamic subevent. However, examples from the subsequent periods displayed that the verb describing a state of being or becoming was the head of the verb phrases following *t^hām* (such as *pēn* ‘to be’ in *pēn kù.sǒn* ‘to be commendable and virtuous’ and in *pēn ŋá:m* ‘to be a fork’ in the examples above). This usage revealed the weakening of the previous semantic restriction, allowing verbs from different semantic domains to appear within the serial verb construction and resulting in the broadening of the verbal range that can be accommodated within the construction.

The observed semantic extension in the construction not only highlights a temporal relationship between the constitutive subevents but also reveals a causal connection. This latter aspect underscores the interdependence between the subevent of creating something and the subsequent subevent of stative change, whereby the states are the direct outcomes that follow the completion of the dynamic actions denoted by the lexical verb *t^hām*. Without the occurrence of the preceding dynamic actions, these stative changes could not have taken place. In (14), the state of being commendable and virtuous (*pēn kù.sǒn*) emerged as a direct

result of the action *t^hām dāη ní*: ‘to act in this manner’. Similarly, in (15), the state of being a fork (*pēn ηā:m*) arose because of the physical action *t^hām t^hō:η.dē:η rú: ηñ* ‘to transform copper or silver’.

However, the causal interpretation between these two subevents was not explicitly conventionalized. Instead, it was a backgrounded constructional meaning, as the interpretation was derived through pragmatic inference based on the evident temporal distance between the subevents. By contrast, the temporal relation, where subevents within the macro event were chronologically related in that one took place before another, was more prominent and thus a foregrounded constructional meaning. According to (14) and (15), the subevent of becoming commendable and virtuous (*pēn kù.sǒn*) and the subevent of being a fork (*pēn ηā:m*) would logically occur after the completion of the physical subevent expressed by *t^hām*, which would typically require a considerable amount of time.

The extension of semantic domain from action to state in verbs following the *t^hām* verb phrase gives rise to ambiguity, as illustrated in the example (16) below. The first interpretation suggests that a group of King Angwa remained in Rangoon city and performed a ceremony where they raised the royal umbrella at the top of Phramahachedikettat. Eventually, this group succeeded in completing the ceremony. This interpretation implies that the noun phrase *fà:j prà.teā:w.ʔāη.wá?* ‘a group of King Angwa’ performed three distinct subevents, including *sām.rèt* ‘to succeed’. Alternatively, the second interpretation indicates that the group remained in Rangoon city and conducted the ceremony of raising the royal umbrella at the top of Phramahachedikettat, with the ceremony ultimately being accomplished. In this reading, the subject noun phrase was involved in only two subevents, with *sām.rèt* ‘to succeed’ functioning as the predicate of the noun phrase *kā:n.jók.te^hàt jō:t p^hrà.má.hǎ:.teē:.dī:.kè:t.t^hā:t* ‘raising the royal umbrella on top of Phramahachedikettat’.

- (16) *fà:j prà.teā:w.ʔāη.wá?* *jāη* *jù:* *ná?* *mūaη* *jā:η.kūη*
 group King.Angwa still stay at city Rangoon
t^hām *kā:n.jók.te^hàt* *jō:t*
 make raising.the.royal.umbrella topmost
p^hrà.má.hǎ:.teē:.dī:.kè:t.t^hā:t *sām.rèt*
 Phramahachedikettat accomplish
 (The Royal Chronicle of Ayutthaya: Dan Beach Bradley’s Version 1864)

These two interpretations depend on different syntactic constituencies: the resulting verb could be either a predicate of the noun phrase *fà:j prà.teā:w.ʔāη.wá?* ‘a group of King Angwa’ in the first interpretation or of the noun phrase *kā:n.jók.te^hàt jō:t p^hrà.má.hǎ:.teē:.dī:.kè:t.t^hā:t* ‘raising the royal umbrella on top of Phramahachedikettat’ in the second interpretation. The former interpretation is made by the existing constructional meaning of the serial verb construction, wherein a temporal relation between subevents is predominantly highlighted. On the other hand, the latter interpretation emphasizes the causal relation, profiling it as a foregrounded constructional meaning rather than a temporal relation. This semantic and structural ambiguity provides linguistic evidence of a transitional period between the existing construction and the newly developed construction.

4.2 Transitive resultative construction

In the late 19th century, an accomplishment verb denoting a new resulting state, such as *sèt* ‘to finish’ in (17), appeared after the verb phrase headed by the lexical verb *t^hām*. This instance represents a case of a transitive resultative construction.

- (17) *lú:k* *pāj* *ʔāw* *pʰrá.sòp* *klàp* *mā:* *dâ:j* *tʰām* *pʰrá.sòp*
 child go take dead body back come TAM make cremation
sèt *lé:w* *teùŋ* *sâ:ŋ* *wát* *ní:*
 finish TAM so build temple DEM
 ‘The child took the deceased body back, conducted the cremation, and had this temple built.’ (H.R.H Prince Maha Vajirunhis, the Prince Uncle’s Diary 1883)

As an accomplishment verb could appear after the *tʰām* verb phrase due to a change in collocational preference, there was a noticeable shift in the prominence of subevents. In the serial verb construction, where all subevents are dynamic actions, it is not straightforward to determine which subevent receives greater focus. However, in the resultative construction, the two verbal predicates with distinct semantic properties do not share the same level of attention. The resulting phrase or predicate, as described by Boas (2003), carries new information and is closely tied to the overall meaning of the utterance. Consequently, the resulting predicate takes precedence over the main predicate.

In (17), the predicate *tʰām pʰrá.sòp* ‘to conduct a funeral ceremony’ represents the grounding action, while the resulting predicate *sèt* ‘to finish’ marks the endpoint of the preceding dynamic action and receives primary focus. These two subevents are in a dynamic-and-result relation: *tʰām* and the noun phrase *pʰrá.sòp* ‘a funeral ceremony’ indicates an act of conducting a funeral ceremony, while the verb phrase *sèt* ‘to finish’ refers to a specific result stemming from that previous physical action. These subevents are interdependent, as the mentioned result could not occur without the completion of the first subevent.

Even though the main and resultative predicates are closely dependent, each verb phrase serves as a predicate of a certain subject noun phrase. The accomplishment verb *sèt* ‘to finish,’ in (17) functions as a predicate of the noun phrase *pʰrá.sòp* ‘a funeral ceremony,’ not as a predicate of the noun phrase *lú:k* ‘child/children’ which is the subject of the verb *tʰām*.

The resultative phrase not only signifies a clear outcome of a specific dynamic action but also provides additional information about whether the action is successful or not. In cases where the creation of something results in a successful outcome, the resulting predicate would be *sèt* or *săm.rèt* as exemplified in (16) and (17). Conversely, if the dynamic action does not succeed, unsuccessful results are expressed through either a lexical strategy (such as *pʰé:* in (18)) or a syntactic strategy (inserting a negative marker *māj* ‘not’ before the resultative phrase as illustrated in (19)).

- (18) *mūaŋ* *tʰáŋ* 2 *nán* *dâ:j* *kʰɿ:j* *tʰām* *sǒŋ.kʰrā:m* *pʰé:* *teī:n*
 city both 2 DEM TAM used.to make war lose China
 ‘Both cities were once defeated by China.’ (The Royal Chronicle of Rattanakosin during the Reign of King Rama II 1916)

- (19) *tʰá:* *rí:pʰōn* *ʔit.rō:j* *nák* *hěn* *teàʔ* *tʰām* *kā:n*
 if military exhausted PTCP EVI TAM make affair
pāj *māj* *săm.rèt*
 TAM NEG succeed
 ‘If the military was too exhausted, continuing battling would be unsuccessful.’ (The Royal Chronicle of Ayutthaya: Dan Beach Bradley’s Version 1864)

The *tʰām* and resultative predicate in (19) does not share the same polarity item: the former has a positive polarity item, while the latter has a negative one. This contrast highlights that the dynamic action either failed to produce a successful result or remained incomplete. The disparity in polarity item between the verbal predicates underscores the syntactic and semantic distinctions between serial verb construction and transitive resultative construction because a characteristic feature of prototypical serial verb construction is that all verbs within the verbal series exhibit similar grammatical information, one of which is polarity (Hasplemath 2016; Aikhenvald 2018). Consequently, example (19) cannot be considered an instance of prototypical serial verb construction.

The change of verb associated with the lexical *t^hām*, from an action to accomplishment verb, not only led to a dynamic-and-result relationship between subevents but also resulted in changes to the shared nominal argument and the constituency structure.

In the serial verb construction, the subject and agent noun phrase of consecutive dynamic subevents acts as a shared argument for both predicates. The other noun phrase (NP₂) functions as a direct object and patient of the verb phrase headed by the lexical verb *t^hām*. In this construction, NP₂ is not a direct argument of the verb phrase following *t^hām*. As the serial verb construction gradually evolved into the transitive resultative construction, the second noun phrase performed dual grammatical roles: an object of the *t^hām* verb phrase and a subject of the resulting predicate. The noun phrase *p^hrá.sòp* ‘a funeral ceremony’ in (17) acts as both the direct object of the verb *t^hām* and the subject of the verb *sèt* ‘to finish’. Despite their distinct grammatical functions, this noun phrase was a patient in argument role terms since it directly received the effect of the creation and subsequently underwent a change of state. The shift of the shared nominal argument from the first noun phrase in the serial verb construction to the second noun phrase in the transitive resultative construction contributed to a transition from a monoclausal to biclausal construction.

The serial verb construction is considered monoclausal as it involves a sequence of dynamic actions carried out by the same event participant, with the verbs concatenated without any linguistic linker. By contrast, the transitive resultative construction represents a biclausal structure: NP₁ + *t^hām* + NP₂ and NP₂ + VP₂, where NP₂ combines these two different clauses into one pivotal construction. A comparative schematic structure of serial verb construction and transitive resultative construction is illustrated in Table 3 below.

Table 3: Constituency change from serial verb construction to transitive resultative construction (An arrow indicates the direction of change while the shaded areas highlight the dual grammatical functions of the NP₂ argument.)

syntactic pattern of serial verb construction			syntactic pattern of transitive resultative construction			
subject	predicate 1	predicate 2	subject	predicate 1 (main predicate)		predicate 2 (resulting predicate)
NP ₁	<i>t^hām</i> + NP ₂	VP	NP ₁	<i>t^hām</i>	NP ₂	
					direct object of <i>t^hām</i>	subject of resulting predicate
					V _{ACCOMPLISHMENT}	

In the early 20th century, a significant semantic extension was evident in the following three slots: the noun phrase preceding the lexical *t^hām* (NP₁), the noun phrase following that item (NP₂), and the verb phrase after NP₂ (VP).

Firstly, the range of verbs in the VP slot broadened from their limits of being accomplishment verbs to including achievement verbs. Accomplishment verbs are characterized as having durability ([+DURABLE]), while achievement verbs lack this semantic property ([-DURABLE]). Thus, these two types of verbs differ in terms of the durability of the event.

When a construction allowed an achievement verb expressing a change of state or physical entity (e.g., *hǎ:j* ‘to be lost’ *hà:k* and *tê:k* ‘to be broken’) or a change of location (e.g., *hò:k* ‘to spill’ *lóm* and *tò:k* ‘to fall’) to appear in the construction, the temporal distance between the dynamic subevent expressed by *t^hām* and the resulting event headed by an achievement verb became less noticeable. This was in contrast to the earlier stages of constructional development, where the duration between subevents was more apparent. The following examples illustrate this change, where the subevent *ná:m hò:k* ‘the water spilled’ in (20) and the subevent *k^há:w.k^hǎ:ŋ k^hǎ:ŋ t^hū:n.mòm lóm* ‘His/Her Royal Highness’s belongings fell’ in (21) occurred immediately after the physical actions initiated by the subjects *p^hi: ʔàt* ‘elder brother Ut’ and *jǐj tɛà.ràt* ‘Charat,’ respectively.

- (20) *p^hi:* *ʔàt* *t^hām* *ná:m* ***hòk*** *rót* *p^há:múaŋ* *k^hǝ:ŋ* *rāw*
 ADDR Ut CAUS water spill pour silk.garment POSS 1SG
 ‘Elder brother Ut spilt water on my silk garment.’ (H.R.H Prince Maha Vajirunhis, the Prince Uncle’s Diary 1883)
- (21) *jǐŋ* *tɛ̀.à.ràt* *pāj* *t^hām* *k^há:w.k^hǝ:ŋ* *k^hǝ:ŋ* *t^hū:n.mòm* ***lóm***
 ADDR Charat go CAUS belonging POSS 3SG fall
 ‘Charat made His/Her Royal Highness’s belongings fall.’ (H.R.H Prince Maha Vajirunhis, the Prince Uncle’s Diary 1883)

Another observed semantic extension was the change in the animacy property of the noun phrase in the NP₂ slot. In earlier stages of constructional development, this noun phrase was typically inanimate. However, in the extended construction, the NP₂ slot accommodated animate noun phrases such as *tɛ^hǎn* ‘1SG,’ *nǔ:* ‘2SG,’ and *p^hǝm* ‘1SG.M’ in (22-24).

- (22) *kē:* *t^hām* ***tɛ^hǎn*** *sǐa* *wē:lā:*
 2SG CAUS 1SG waste time
 ‘You wasted my time.’ (*Nueng Nai Roi* (One in a Hundred) 1929)
- (23) *lūŋ* *t^hām* ***nǔ:*** *sǐa.dèk*
 1SG.M CAUS 2SG spoil
 ‘I spoiled you (so much that you were overly dependent.)’ (*Nueng Nai Roi* (One in a Hundred) 1929)
- (24) *lūŋ* *t^hân* *t^hām* ***p^hǝm*** *sǐa*
 3SG.M 3SG.M.FOC CAUS 1SG.M spoil
 ‘(He was afraid that) he would spoil me.’ (*Chak Nueng Nai Chiwit* (One Scene in the Life) 1964)

The extension from inanimate to animate noun phrases in the NP₂ slot led to interpretations that were incompatible with the Principle of Compositionality, which posits that the meaning of a sentence is a combination of the meanings expressed by each lexical item. The lexical head *t^hām* did not strictly convey its lexical meaning of creating something. Moreover, these animate noun phrases in the NP₂ slot were not entities resulting from the creation of the respective subject noun phrases, *kē:* ‘you’, *lūŋ* ‘uncle’, and *lūŋ t^hân* ‘3SG.M’. Similarly, even though the noun phrase *ná:m* ‘water’ in example (20) was inanimate, it did not directly receive a result from the creation of the subject noun phrase *p^hi:* *ʔàt* ‘elder brother Ut’.

In addition to the semantic extensions observed in the resulting predicate and the noun phrase in the NP₂ slot, the semantic property of the noun phrase functioning as the subject in the NP₁ slot was also extended. Previously, it was a requirement for the noun phrase in the NP₁ slot to be animate, as it referred to a volitional agent instigating the act of creation and directly perceiving the action and its effects. However, during the early 20th century, this constructional restriction regarding the animacy of the subject of the lexical verb *t^hām* became less stringent as the weakened restriction allowed inanimate entities such as *sǐaŋ rá.k^hāŋ ŋà:ŋ* ‘bell ringing’ or *kì.rí.jā: krà.būŋ.krà.bō:n* ‘abrasive manner’ to appear in the NP₁ position as illustrated in the examples (25) and (26) below. It is noteworthy that these noun phrases cannot be labeled as agents, as some of them lack the animate property. Therefore, other argument role terms are necessary to specify the role of the noun phrases when they serve as the subject of this construction.

- (25) *sīaŋ r̄á.kʰāŋ ŋà:ŋ tʰām kʰá:pʰá.teá:w sà.dùŋ*
 ringing bell ONOM CAUS 1SG shudder
 ‘The bell ringing made me shudder.’ (Vendetta! or The Story of One Forgotten 1900-1901)
- (26) *kì.rí.jā: krà.būŋ.krà.bō:n [...] tʰām kʰōn jù: klāj māj*
 manner abrasive CAUS person stay far NEG
jà:k kʰāw klāj
 want.to enter near
 ‘The abrasive manner pushed people away.’ (Nueng Nai Roi (One in a Hundred) 1929)

The changes in collocational preferences in the three different slots of the construction, with the lexical verb *tʰām* as the head or central element, as described by Gyselinck (2020) from a verb-based viewpoint, were consequences of constructional change; specifically, an increase in schematicity. This perspective highlights how the construction becomes more abstract and schematic over time.

During increased schematicity in the construction, the collocational preferences in each slot become more flexible and less constrained. Non-human subject noun phrases without volitionality, animate or inanimate referents that cannot be created, and achievement verbs without durability could be observed in the NP₁, NP₂, and VP slots, respectively. This departure from the specific semantic restrictions previously imposed on each schematic slot demonstrates the generalization of semantic requirements and the overall increase in abstraction. Moreover, the increased schematicity in the NP₁ and NP₂ slots led to a semantic clash between the constructional meaning and the lexical meaning of the verb *tʰām*.

In the serial verb construction and the transitive resultative construction, the verb *tʰām* originally referred to an event in which an animate referent (acting as the agent and subject) volitionally created specific entities, resulting in a change from nonexistence to existence in the real world. However, when the constructional meaning changed its profiled elements from X ACTS ON Y to Y DIRECTLY RECEIVES SOME EFFECTS FROM X along the developmental pathway, semantic incompatibility between the constructional meaning and the lexical meaning of the verb *tʰām* emerged. This incompatibility was evident in that inanimate referents in the NP₁ slot could not create something or perceive the dynamic action performed by themselves. Further, animate referents in the NP₂ slot could not experience the physical manipulation exerted by the NP₁.

Even though semantic incompatibility between the constructional meaning and the lexical meaning of *tʰām* arose, the verb *tʰām* still appeared as a predicate of the NP₁, due to constructional coercion, where the constructional meaning ‘override’ that of the specific lexical item occurring in that construction. When the lexical item *tʰām* co-occurred with noun phrases that may have conflicting semantic features, this item was desemantized, absorbed part of the constructional meaning, and conveyed a broad sense of physical activity that could be interpreted as a cause of a subsequent event. This transition from a dynamic-and-result reading to a causative interpretation corresponds to the views of Baron (1997, as cited in Ziegeler 2007) and Levin (2020), who suggest that a concealed causative meaning can be inferred from the transitive resultative construction.

In terms of grammatical structure, the noun phrase in the NP₂ slot of the transitive resultative construction functioned as a shared argument of the verb *tʰām* and the resulting predicate. However, as a result of a shift in the syntactic boundary, this noun phrase became exclusively an argument of the resulting predicate, resulting in the formation of one clausal constituent as represented in Table 4 below.

Table 4: Constituency change from transitive resultative construction to analytic causative construction
(Shaded areas highlight grammatical functions of NP₂ argument.)

subject	predicate 1 (main predicate)		predicate 2 (resulting predicate)		subject 1	predicate 1	subject 2	predicate 2
NP ₁	<i>tʰām</i>	NP ₂		V _{ACCOMPLISHMENT}	NP ₁	<i>tʰām</i>	NP ₂	Clause
		direct object of <i>tʰām</i>	subject of resulting predicate					VP
								V _{ACHIEVEMENT}

4.3 Periphrastic causative construction

By the mid-20th century, the *tʰām* periphrastic causative construction had reached its full development, with well-defined syntactic patterns and established constructional meaning. The expansion of lexical aspect expressed by the resulting predicate, the frequent occurrence of inanimate subject noun phrases, and a decrease in semantic compositionality serve as linguistic evidence highlighting the complete development of the *tʰām* analytic causative construction.

In modern Thai, the resulting phrase of the *tʰām* periphrastic causative construction is not limited to accomplishment or achievement verbs. It has expanded the scope of lexical aspect to include stative verbs, in addition to *pēn* ‘to be’, as illustrated below:

- (27) *nā:j tʰām tēʰǎn tḕp.sè:p mâ:k*
 2SG CAUS 1SG painful much
 ‘You made me feel pain.’ (Adapted from Thai National Corpus)

- (28) *kʰǎw tʰām kʰōn ʔù:n dùat.ró:n*
 3SG.M CAUS people other be.in.trouble
 ‘He caused trouble to others.’ (Adapted from Thai National Corpus)

Stative verbs *tḕp.sè:p* ‘to feel pain’ and *dùat.ró:n* ‘to be in trouble’ do not describe a physical change comparable to accomplishment and achievement verbs. Instead, they convey a specific state of the noun phrases *tēʰǎn* ‘1SG’ and *kʰōn ʔù:n* ‘other people’, respectively. Since stative verbs are not the predicates of the subject noun phrase NP₁, a close syntagmatic relation between the noun phrase in the NP₂ slot and the resulting predicate is established, constituting a single clausal constituent termed a complement clause. The remaining elements, namely the noun phrase in the NP₁ slot and the causative verb *tʰām*, form another clausal constituent. For example, *kʰōn ʔù:n dùat.ró:n* ‘other people get in trouble.’ in (28) is a complement clause while *kʰǎw tʰām* [something] ‘He did [something]’ is a main clause. The explicit syntactic boundary between the two clauses classifies the periphrastic causative construction with the marker *tʰām* as a biclausal construction.

While *tʰām* in the analytic causative construction is considered a predicate of the subject noun phrase, it does not retain all verbal properties. This is because the argument structure changes, shifting from subcategorizing two nominal arguments (as shown on the left side of Table 5) to one nominal argument and one clausal argument (as depicted on the right side of the same table).

Table 5: Argument structure of the lexical verb *t^hām* and the causative verb *t^hām*

argument structure of the lexical verb <i>t^hām</i> in the transitive construction				argument structure of the causative verb <i>t^hām</i> in the periphrastic causative construction							
NP ₁		<i>t^hām</i>		NP ₂	NP ₁		<i>t^hām</i>		NP ₂	+	VP
subject		lexical verb		direct object	subject		causative verb		complement clause		
argument 1	+			argument 2	argument 1	+			argument 2		
<i>k^hǎw</i> '3SG'			<i>t^hām</i> 'make'		<i>k^hǎw</i> 'toy'	<i>k^hǎw</i> '3SG'			<i>t^hām</i> 'CAUS'		<i>tēā:n tē:k</i> 'a dish broke'

Furthermore, inanimate subject referents (e.g., utterance) are notably more frequent as displayed in (29). These referents, when considered in terms of argument roles, are categorized as causers rather than agents due to the lack of animacy. The prevalence of inanimate causers appearing in the subject slot (NP₁) indicates a decrease in the semantic compositionality of the *t^hām* periphrastic causative construction.

- (29) *t^hǎj.k^hām* *tēā:k* *pà:k* *t^hú:mú:* *k^hǎw* *ǎ:* *tā:*
utterance from mouth unfriendly POSS ADDR ADDR
dīw *t^hām* *tē^hǎn* *sà.dùt*
Dew CAUS 1SG shudder
'Dew left me speechless with his words.' (Thai National Corpus)

Examples (27-29) illustrate that *t^hām* cannot be solely interpreted based on the Principle of Compositionality. This principle is evident in the serial verb construction and the transitive resultative construction, where the verb phrase headed by *t^hām* denotes the dynamic action of creating something. However, as the periphrastic causative construction reached its completed development, the semantic compositionality of the elements decreased because the lexical item *t^hām* no longer retained its original meaning. Instead, it conveys an action that brings about a subsequent result. The unspecified action expressed by *t^hām* is the cause of *tē^hǎn tēp.sè:p* 'I feel pain' *k^hǎw ǎ:n dùat.ró:n* 'other people get in trouble' and *tē^hǎn sà.dùt* 'I shuddered,' respectively.

In addition to its specific syntactic properties, the *t^hām* analytic causative construction also encompasses a distinct constructional meaning.

The causative situation is considered a macro event, despite comprising two subevents as previously described. To demonstrate the macro-event property, Bohnemeyer et al. (2010) propose the insertion of a temporal or durational adverb in the sentence under investigation. If all subevents are modified by the selected adverb, indicating a temporal scope that encompasses all separate events, then the subevents are construed as a macro event, as illustrated in examples (30-31). Conversely, if the temporal adverb only modifies some of the predicates, it signifies that the events in the sentence are perceived as distinct.

- (30) *múa.wā:n.ní:* *t^hǎ:* *t^hām* *t^hǎj.ná:m.mān* *k^hwām* *rǎ:*
yesterday 2SG CAUS oil.barrel fall Q
'Did you make the oil barrel fall yesterday?' (Adapted from Thai National Corpus)
- (31) *tē^hǎn* *t^hām* *krà.pǎw.tāj* *hǎ:j* *tō:n* *prà.mā:n* *bà:j.mō:η*
1SG CAUS wallet lost when around 1 P.M.
'I lost my wallet around 1 P.M.' (Adapted from Thai National Corpus)

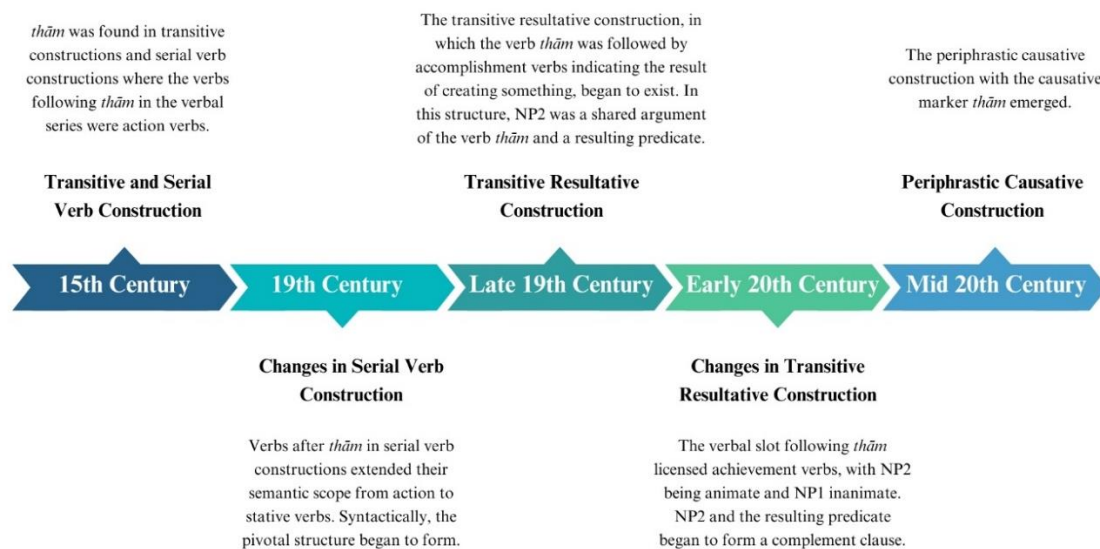
Two different adverbs, *múa.wā:n.ní:* 'yesterday' and *tō:n prà.mā:n bà:j.mō:η* 'around 1 P.M.', are utilized to determine the macro-event property. The temporal adverb *múa.wā:n.ní:* 'yesterday' modifies both the causing subevent (*t^hǎ: t^hām* [something] 'You did [something]') and the resulting subevent (*t^hǎj.ná:m.mān*

k^hwām ‘the oil barrel fell’), indicating that the resulting subevent occurred immediately after the causing subevent was completed. Similarly, the durational adverb *t̄:n pr̄.ā.mā:n b̄.ā.j.mō:ŋ* ‘around 1 P.M.’ modifies the two subevents: *t̄^hān t̄^hām* [something] ‘I did [something]’ and *kr̄.ā.p̄.āw.t̄.āŋ h̄.ā.j* ‘my wallet lost’, which represent the causing and resulting subevents, respectively. These examples demonstrate that all subevents in the causative situation which occur consecutively at a specific time are tightly ‘packaged’ within a particular syntactic pattern.

However, although the subevents in causation are considered a macro event, they do not receive equal attention: one subevent may gain more prominence than another. The cause subevent, expressed by the causative predicate *t̄^hām*, is typically suppressed and portrayed as a non-specific action, while the resulting subevent is highlighted as the verbal predicate carries a more specific and detailed lexical meaning. For example, in the interrogative sentence *t̄^hā: t̄^hām t̄^hāŋ.ná:m.mān k^hwām r̄.ú:* ‘Did you make the oil barrel fall?’, the verbs *t̄^hām* and *k^hwām* ‘to fall’ differ in terms of specificity. The former implies an underlying, less visible causing action, while the latter describes the observable result of the oil barrel falling.

In summary, the constructional development of the *t̄^hām* periphrastic causative construction can be illustrated by the following timeline. The developmental trajectory originated with changes in the syntactic pattern, constructional meaning, and their interrelationship within the serial verb construction. These changes ultimately led to the emergence of the transitive resultative construction in the late 19th century, which was regarded as a precursor to the subsequent development of the *t̄^hām* periphrastic causative construction in the mid-20th century.

Figure 2: Timeline of the constructional development of the periphrastic causative construction with a causative marker *t̄^hām*

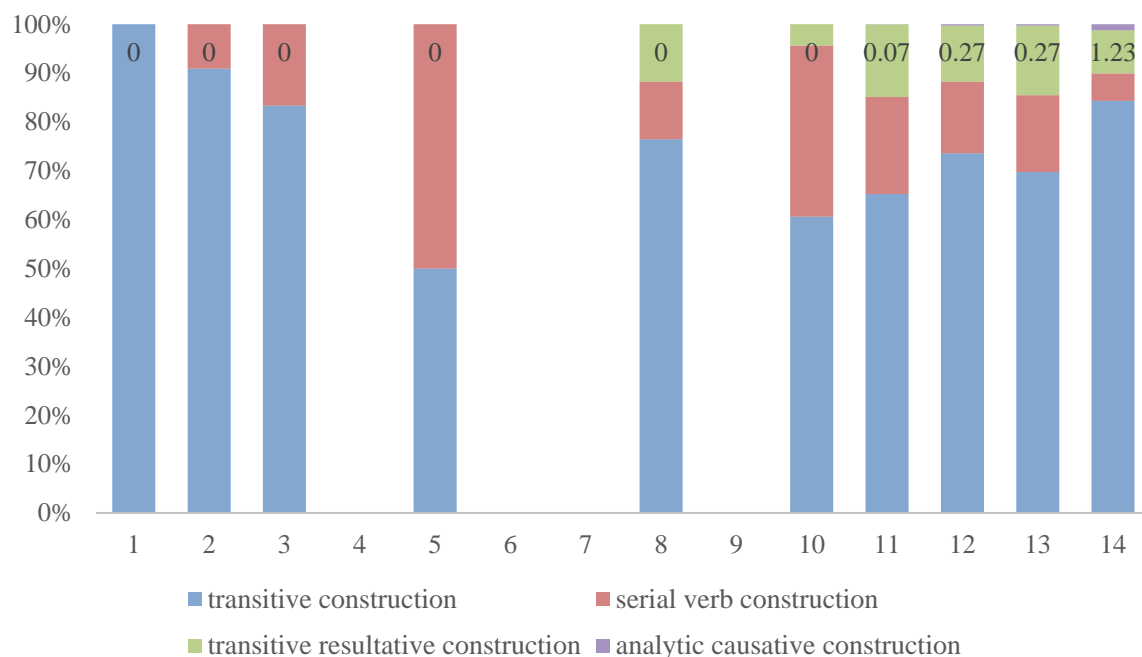


To further elaborate on the findings, Table 6 below illustrates the distribution of sentence-level constructions containing the lexical item *t̄^hām*. This table shows the proportion of constructions with the verb *t̄^hām*—including the transitive construction, serial verb construction, and transitive resultative construction—as well as the analytic causative construction with a causative marker *t̄^hām*.

Table 6: Proportions of sentence-level constructions with the lexical verb *t^hām* and analytic causative construction with the causative verb *t^hām*

Periods	AD	Proportion (%)			
		constructions with the verb <i>t^hām</i>			analytic causative construction with the causative marker <i>t^hām</i>
		transitive construction	serial verb construction	transitive resultative construction	
1	1308-1357	100	0	0	0
2	1358-1407	90.91	9.09	0	0
3	1408-1457	83.34	16.66	0	0
4	1458-1507	No Data			
5	1508-1557	50	50	0	0
6	1558-1607	No Data			
7	1608-1657	No Data			
8	1658-1707	76.48	11.76	11.76	0
9	1708-1757	No Data			
10	1758-1807	60.62	35	4.38	0
11	1808-1857	65.28	19.83	14.82	0.07
12	1858-1907	73.58	14.63	11.52	0.27
13	1908-1957	69.74	15.73	14.26	0.27
14	1958-1977	84.31	5.63	8.83	1.23

As seen in Table 6, the periphrastic causative construction with the causative marker *t^hām* first emerged at the beginning of the 19th century. Although initially rare, its usage gradually increased, as illustrated in Figure 3 below. The numbers in the bar graph represent proportions of the *t^hām* periphrastic causative construction found in each period.

Figure 3: Proportions of the lexical item *t^hām* in four sentence-level constructions in different periods

Prior to transitioning to the discussion section, it is essential to address the limitations of this study. This analysis is subject to certain limitations due to the scarcity of available data. Specifically, the textual registers in which the *t^hām* analytic causative construction frequently appears were relatively limited. This construction was predominantly found in imaginative texts, which became more prevalent in the 20th century, rather than in informative texts. Consequently, the data may lack certain historically significant constructional changes necessary to evidently illustrate developmental trajectories. Additionally, specific constructional changes could have occurred before the period examined in this research.

Despite these limitations, the research has utilized the available data and attestations to propose the most plausible pathway of constructional development, providing detailed insights into the emergence and growth of the *t^hām* analytic causative construction.

5 Discussion

According to the chronological development of the periphrastic causative construction with the causative marker *t^hām* discussed in the preceding section, the serial verb construction is considered the foundational source of this developmental trajectory. However, it is worth questioning whether the proposed constructional development accurately represents genuine syntactic change, given that the research relies on certain genre constraints and limited datasets. To validate the realistic development of the periphrastic causative constructions, it is necessary to identify a connection between serial verb construction and periphrastic causative construction as well as to observe similar developmental patterns in other languages.

Previous investigations (Aikhenvald 2000:159-161; Dixon 2000:34-35; Aikhenvald 2006:14, 16; Aikhenvald 2018:46-48, 75-78) have demonstrated that serial verb construction in various languages (such as Khmer (Bisang 2009), White Hmong (Jarkey 2015:125) and Paames (Crowley 1987:48)) is used to convey a cause-and-effect relationship between subevents. In this construction, the verbs are iconic: the first verb conveys the cause, while the subsequent one indicates the effect. Notably, this semantic relationship is considered constructional, as each verb retains its specific lexical meaning. Serial verb construction in Thai is also utilized to communicate such semantic relationships. For example, in (32), the initial verb (*pā*: 'to throw') signifies the cause and the subsequent one (*tè:k* 'to be broken') represents the effect (Thepkanjana 2008).

- (32) *dèk pā: krà.tèòk tē:k*
 child throw mirror be.broken
 ‘The child broke the mirror.’

In addition to conveying cause-and-effect relationships, serial verb construction is used as a valency-increasing mechanism to express causative situations (Aikhenvald 2018). The valency-increasing mechanism involves changes to the argument structure of the base verb, as a new participant, the causer, is introduced. For example, *The students left* is an instance of an intransitive construction, whereas *We made/let the students leave* is an example of a causative construction. In the latter sentence, the pronominal *we* functions as the causer, and the causative verb *make* indicates an unspecified cause. This semantic valency change affects the assignment of grammatical relations. The introduced causer functions as the subject of the periphrastic causative construction, while the causee, formerly functioning as a subject is demoted and serves other grammatical roles, such as primary object, secondary object, or oblique argument, depending on the language (Kroeger 2005:193-200; Tallerman 2020:258-262).

Aikhenvald (2018:62-64) provides an example of a causative serial verb construction containing the causative verb ‘make’ from the Lolovoli dialect of north-east Ambae (Hyslop 2001:303).

- (33) *mo vai ngure dolegi ra-mo inu-e*
 RLS make 3SG all 3SG.A-RLS drink-3SG.O
 ‘He made all of them drink it.’

This synchronic account suggests a possible connection between the serial verb construction and the analytic causative construction. However, these constructions are not directly linked. Diachronically, another sentence-level construction serves as the precursor to the emergence of the analytic causative construction, bridging the gap between the two.

Li and Thompson (1976:477-492) account for the development of causative constructions in Mandarin Chinese. In Mandarin, causation is expressed through a compound causative consisting of two verbal constituents: the first indicates the cause, while the second denotes the result. Each concatenated verb belongs to distinct subcategories: an action verb and a stative verb, respectively, as demonstrated in specific examples (34) and (35). Further, serial verb construction is used to describe causative situations exemplified in (36) and (37)

- (34) *lā-cháng*
 pull-long
 ‘lengthen’

- (35) *zuò-tā*
 sit-collapse
 ‘sit and then fall down’

- (36) *Yòu shè zhī sǐ.*
 then shoot him dead
 ‘Then, (he) shot him dead.’

- (37) *Shí jiǎo gōu yī pò.*
 rock corner hook cloth torn
 ‘The rock corner hooked the cloth and caused it to be torn.’

The causative serial verb construction, as defined by Li and Thompson (1976:483), corresponds to *the transitive resultative construction* in this research. However, their work does not provide a diachronic

account showing that the causative serial verb construction developed directly from the serial verb construction conveying simultaneous actions. Instead, they categorize the causative serial verb construction as a subtype of the broader serial verb construction category. Li and Thompson's findings support the initial phase of the developmental pathway, suggesting that serial verb construction was the original source of analytic causative construction.

In this study, the serial verb construction was gradually adjusted in both form and meaning, leading to the emergence of the periphrastic causative construction. The investigation demonstrates that this developmental trajectory follows an elaboration pathway, whereby a simpler serial verb construction transformed into more complex forms: transitive resultative and analytic causative constructions, respectively. This finding is supported by changes in the degree of event integration and of syntactic complexity observed at each stage of this developmental process.

5.1 Event integration

Although the constructional meanings of serial verb construction, transitive resultative construction, and analytic causative construction are pertinent to more than one subevent, the semantic relations between subevents of each construction are not comparable. This presents a varying degree of event integration. Two criteria—spatial contiguity and relatedness between subevents—were used to validate the degree of event integration for the three constructions.

Spatial contiguity was applied to determine whether event participants have physical contact with another one. In this context, physical contact is limited to manual manipulation, excluding unintentional touch. Physical contact was observed in subevents expressed through serial verb construction and transitive resultative construction. Among these subevents, one indicated by the verbal head *t^hām* involves the act of manually creating something, reflecting a high degree of event integration. For the other one, although the causer in the causative situation physically contacts the causee or affectee, the causer does not have direct control over them in the act of creation. Instead, the causer performs an unspecified action that directly affects these participants, indicating a low degree of event integration. For instance, the noun phrases *tēā:n* 'plate' and *tē^hān* '1SG' in examples (38) and (39), respectively, do not result from creation but changes in material integrity (*tē:k* 'be broken') or state (*sà.dūŋ* 'to shudder') due to the nonspecific physical action *t^hām*. Consequently, the periphrastic causative construction with the causative verb *t^hām* is classified as direct causation.

(38) *k^hǎw t^hām tēā:n tē:k*
 3SG.M CAUS plate break
 'He broke the plate.' (Thai National Corpus)

(39) *sǎŋ rá.k^hāŋ t^hām tē^hān sà.dūŋ*
 sound bell CAUS 1SG shudder
 'The bell's sound made me shudder.' (Thai National Corpus)

In addition to spatial contiguity, shared event components were adopted as another criterion to determine the level of event integration. Within a macro situation, multiple subevents can possess common elements such as event participants or grammatical information. If subevents involve similar event participants or grammatical information within the same timeframe, they demonstrate a high degree of event integration. In this study, the serial verb construction exhibits the highest level of interrelatedness between subevents, as two dynamic actions are performed by the same agent. Moreover, all subevents share identical grammatical information. Similarly, the dynamic action and the resulting state in the transitive resultative construction share a mutual event participant: the patient being directly affected by the creation and undergoing a change of state as encoded by the verb *t^hām* and the resulting predicate. However, these two predicative verbs do not always carry the same grammatical property, as evidenced by cases where they differ in polarity item: the verb *t^hām* is positive while the resulting predicate indicates a negative outcome, signifying an unsuccessful dynamic action. By contrast, the causative construction exhibits the lowest level of interrelatedness between

its subevents, as they lack shared event elements. Although the causee could be understood as a shared argument between the two verbal predicates, that would be an erroneous conclusion from this observation. When the periphrastic causative construction is divided into two combining clauses, the noun phrase bearing a causee role, accompanied by a resulting predicate, forms a clausal constituent. This argument is not an integral part of the main clause, which consists of the subject and the causative verb *t^hām*.

Combining these two criteria, the analysis revealed that the serial verb construction exhibited the highest level of event integration, with the resultative construction ranked second. On the contrary, the periphrastic causative construction demonstrated the lowest degree of event integration, as evidenced by the macro event test, which highlighted its temporal continuity.

5.2 Syntactic integration

A criterion for assessing syntactic integration is the number of clauses: constructions with a single clause exhibit a higher degree of syntactic integration than those with multiple clauses. Syntactic structures of serial verb construction, transitive resultative construction, and periphrastic causative construction considerably differed in this respect.

Considering two distinguishing characteristics: a single way for constructing negative serial verb sentences and the scope of negation extending to all verbs in the verbal series, Haspelmath (2016) classifies serial verb construction as a monoclausal construction. This classification applies to serial verb construction in Thai, wherein a negative marker, *māj(dā:j)*, is positioned before the initial verb within a verbal series to form a negative sentence. While the position of the negative marker remains fixed, each verb shares a negative polarity item. For instance, in the sentence *k^hǎw māj(dā:j) t^hām k^hà.nǒm k^hǎ:j* ‘he did not make snacks for sale’, the action verbs *t^hām* ‘to make’ and *k^hǎ:j* ‘to sell’ both carry a negative polarity item marked by *māj(dā:j)* ‘NEG’. When the negative marker is placed in other syntactic positions, such as before the last verb in the verbal series *k^hǎw t^hām k^hà.nǒm *māj(dā:j) k^hǎ:j*, it results in an ungrammatical sentence.

Conversely, the transitive resultative and periphrastic causative constructions consist of two clauses labeled as biclausal constructions. However, their internal structures exhibit notable differences. In the transitive resultative construction, the two clauses are connected through a shared argument that serves dual grammatical functions: the direct object of the verb *t^hām* and the subject of the resulting predicate. On the other hand, the periphrastic causative construction comprises separate clauses without a mutual argument; one functions as the main clause, while the other is a complement clause. Consequently, the latter construction is considered biclausal to a higher degree than the former. Soares da Silva (2012) explains that the focus of attention in the resultative construction lies in the direct interaction between the agent and the patient, a reference point for the resulting state. By contrast, the periphrastic causative construction emphasizes a causal relationship between two circumstances and a forceful interaction between two energy sources: from the causer to the causee and from the causee to the affectee. This distinction is why the two subevents in the analytic causative construction are noticeably more discrete than those in the resultative construction.

In conclusion, there has been a gradual decrease in syntactic integration throughout the constructional development. Serial verb construction, characterized as a monoclausal structure, exhibits the highest degree of syntactic integration. On the other hand, periphrastic causative construction, classified as a biclausal construct, displays the lowest degree of syntactic integration. Transitive resultative construction falls in between these two.

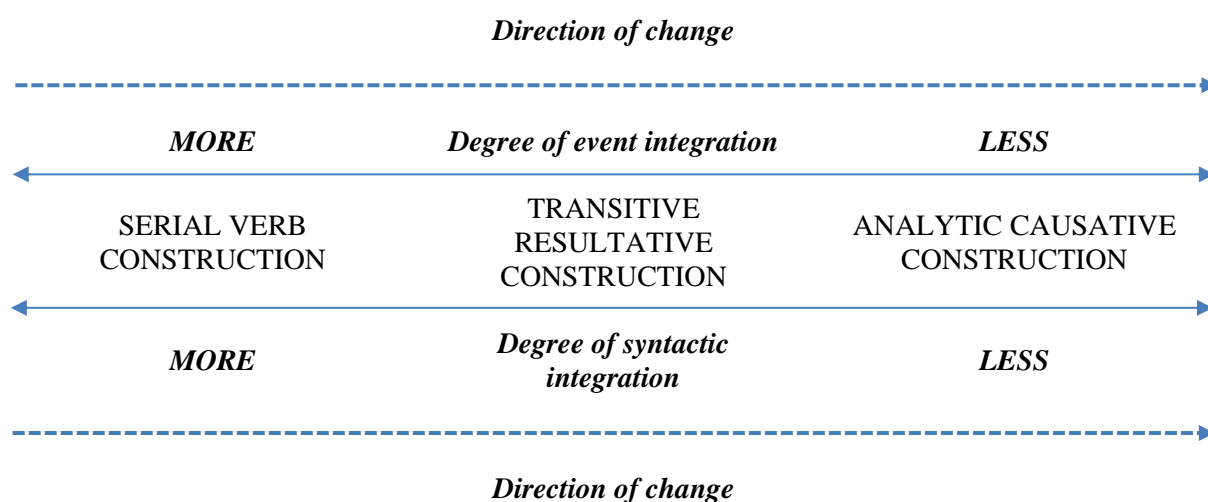
5.3 Correspondence between event and syntactic integration

This study presents a historical analysis of an isolating language, offering evidence that supports the findings of Kemmer and Verhagen (1994) regarding the formation of causative constructions. Contrary to the notion of reduction, which suggests a simplification of a complex construction, the current findings demonstrate that the periphrastic causative construction evolves through elaboration, whereby a simpler construction develops into a more complex one. The initial construction, serial verb construction, demonstrated the highest degree of both event and syntactic integration, indicating its relatively simpler characteristics. As this construction evolved into the periphrastic causative construction, the degree of both event and syntactic

integration decreased, as depicted in Figure 4. In the target construction, the subevents were distinguished into causing and caused subevents, resulting in a lower level of event integration. Moreover, these subevents were expressed through a main clause and a subordinate clause, respectively, leading to a lower level of syntactic integration.

Event and syntactic integrations are two sides of the same coin: event integration concerns meaning, while syntactic integration pertains to form or structural pattern. Both components are inherent characteristics of sentence-level constructions (the same coin, in this sense). When one of these components changes, whether in form or meaning, the other adapts accordingly. Moreover, event and syntactic integrations exhibit a parallel directional shift: from a higher degree of event integration manifested in monoclausal serial verb constructions to a lower degree expressed through biclausal analytic causative constructions. The adjustment of inherent properties within a sentence-level construction and a congruent directional shift in the event and syntactic integrations emphasizes their interconnection, demonstrating that these aspects are intertwined rather than isolated.

Figure 4: The correspondence between changes in event and syntactic integration



The overall constructional change, along with the emergence of the $t^h\bar{a}m$ analytic causative construction, resulted in another significant outcome: the functional extension of the lexical item $t^h\bar{a}m$. Initially, this item, in the transitive construction, serial verb construction, and transitive resultative construction, served as a predicate of the subject argument. Once the periphrastic causative construction reached its full development, the lexical item $t^h\bar{a}m$ extended its grammatical function from a lexical verb to a causative verb.

This functional extension can be seen as a consequence of grammaticalization, as the morphosyntactic and semantic properties of this item shifted from more lexical to more grammatical through processes of decategorization and desemanticization, which Narrog and Heine (2021:67-78) identify as parameters of grammaticalization. This research offers another perspective by suggesting that the functional extension, or grammaticalization, of the lexical item $t^h\bar{a}m$ can be viewed as an epiphenomenon of constructional change. This is evidenced by changes in event and syntactic integration. Without the initial constructional change, the lexical item $t^h\bar{a}m$ would not have undergone such shifts in its lexical properties.

In addition to the functional extension of $t^h\bar{a}m$, the constructional development of the $t^h\bar{a}m$ periphrastic causative construction also highlights the dynamic nature of linguistic change. Notably, while the $t^h\bar{a}m$ periphrastic causative construction evolved gradually from both the serial verb construction and the transitive resultative construction, these original constructions using the lexical verb $t^h\bar{a}m$ remain prevalent in modern Thai.

The coexistence of both the original constructions and the newly emerged one strongly reinforces the constructionist perspective, suggesting that linguistic change is not always systemic. In this context, the emergence of a new grammatical construction (or procedural construction, as per Traugott and Trousdale's

(2013) framework) does not inevitably lead to the disappearance of others, especially the original sources of development. Instead, changes are often interconnected, with one construction playing a pivotal role in shaping and evolving another (Hilpert 2021:39).

The proposed constructional development is thus viewed as a constructional change, consistent with Hilpert's (2021:55) definition. This process selectively modifies a conventionalized form-meaning pair of linguistic units, altering its syntactic pattern, constructional meaning, function, frequency, and distribution in the linguistic community, or any combination of these aspects. Moreover, it includes constructional extensions that are considered steps in the overall developmental trajectory.

6 Summary

This research aimed to analyze the developmental trajectory of the periphrastic causative construction with the causative marker *t^hām* in Thai by adopting a constructional change framework. The article also discussed whether the diachronic evolution of the analytic causative construction followed a trajectory of reduction or elaboration. Analyses revealed a gradual change of the *t^hām* periphrastic causative construction from the serial verb construction and the transitive resultative construction, respectively. This constructional development is evidenced by increased schematicity within the subject, direct object, and resulting predicate schematic positions. As the *t^hām* periphrastic causative construction completed around the mid-20th century, the item *t^hām* in this construction shifted from indicating the action of creating something to denoting a non-specific causing physical event, resulting in a decreased level of semantic compositionality.

The findings correspond to Kemmer and Verhagen's (1994) contention that analytic causative constructions adhere to an elaboration process whereby an initial construction with higher degrees of event and syntactic integration gradually developed into more complex forms characterized by lower levels of both integration.

This study illuminates the relationship between serial verb constructions and analytic causative constructions, complementing prior findings from a synchronic perspective. The former acts as a developmental precursor to the latter, corresponding to Bisang's (2021) observation that basic verb serialization functions as a bridge for innovative grammatical markers and constructions. However, these connections are mediated through the transitive resultative construction.

This research additionally highlights the necessity of investigating the change of sentence-level constructions including modifications in syntactic patterns, constructional meanings, their interconnections, increased schematicity, and decreased semantic compositionality. This exploration is crucial for delineating the grammaticalization process in that a grammaticalized item could be an outcome of constructional change. Further, this inquiry contributes to the examination of syntactic change and the typological investigation of periphrastic causative constructions with a causative marker of which original meaning was 'to do' or 'to make,' which are prevalent in Southeast Asian languages.

This study utilized limited available material. To further validate the proposed developmental pathway and investigate other potential instances of constructional change or functional extension in Thai and other Southeast Asian languages, future research should explore additional data sources, including diachronic corpora. Incorporating fieldwork or comparative studies on other Kra-Dai languages will also be essential for gaining a more comprehensive understanding of the emergence, development, and usage of specific or various sentential constructions.

List of Abbreviations

ACC	accusative	CAUS	causative
PST	past	1, 2, 3	grammatical person
SG	singular	CL	clause
TAM	tense-aspect-mood	CLF	classifier
INDF	indefinite	Q	question
FOC	focus	NP	noun phrase
VP	verb phrase	M	masculine
DEM	demonstrative	COP	copula
A	agent	O	object
EVI	evidential	NEG	negative
POSS	possessive	ONOM	onomatopoeia
NOM	nominative	RLS	realis
LOC	locative	IND	indicative
IRLS	irrealis	ADDR	addressive
PTCP	particle		

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