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A TAGMEMIC APPROACH TO CERTAIN THAI CLAUSES

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TO MY MOTHER AND FATHER

PREFACE

The aim of this study is to demonstrate the major linguistic patterns of Thai clauses using the analytic approach of tagmemics.

The completion of this analysis was made possible with the help of the following, to each of whom I would like to express my gratitude:

To the Rockefeller Foundation, whose financial support enabled me to pursue my studies and to do the necessary research for this dissertation.

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TABLE OF CONTENTS

I. INTRODUCTION

A. The Model

The tagmemic model is one of a number of models used in linguistic analysis. It is a form of grammatical analysis developed by some of the significant members of the Summer Institute of Linguistics, an organization which was founded in 1934 at Arkansas for the training of missionaries, and hence has a strong practical orientation. The tagmemic system of analysis has been successfully applied to many languages of the world and is becoming increasingly important. Since it has not been applied on a large scale to Thai, the present attempt to do so may prove a useful addition to current linguistic knowledge of the language.

The present dissertation takes as the central explication of tagmemics the research of Kenneth L. Pike and Robert E. Longacre. According to the tagmemic model, language is analyzable simultaneously into three hierarchies--lexical, phonological, and grammatical, each of which consists of units on separate levels. The tagmeme is the minimum unit of the grammatical hierarchy. Tagmemes combine to form constructions which occur at various levels in the grammar, one of these being the clause which is the subject under consideration. However, since some overlap is unavoidable, other levels such as sentences and phrase level will enter into the discussion whenever it becomes important or necessary to point out their relationships to the clause.

In the Introduction to his book "On Tagmemes and Transforms," Walter A. Cook gives the following outline of the development of tagmemic grammar:

> The notion of the tagmeme as a grammatical unit is most clearly given in an article by Kenneth L. Pike, 'On Tagmemes nee Gramemes' (International Journal of American Linguistics, 1958). The trimodal features of this unit were a later development, and are first suggested in an article by Pike of broader scope, 'Language as Particle, Wave, and Field' (The Texas Quarterly, 1959). The notion of the tagmemic construction, as opposed to IC analysis, is found in an article by Robert E. Longacre, 'String Constituent Analysis' (Language, 1960). Various construction types are described in the beginners' textbook, An Introduction to Morphology and Syntax by Benjamin Elson and Velma Pickett (1960). But for the system of tagmemic analysis as a whole, the fundamental reference work is Pike's three volume study, Language in Relation to a Unified Theory of the Structure of Human Behavior, Part I (1954), Part II (1955), and Part III (1960). This monumental work represents the mainstream of tagmemic thought, and brings us into contact with the opinions of many other workers from the Summer Institute of Linguistics.
>
> The most recent work in tagmemic analysis which reflects the influence of (Chomsky's) Syntactic Structures upon tagmemics is the work of Robert E. Longacre, Grammar Discovery Procedures: A Field Manual (1964).[1]

In this same work, Cook explains that the discovery process in tagmemic grammar is: "the simultaneous perception of the grammatical functions within a specific

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[1] Walter A. Cook, S.J., On Tagmemes and Transforms (Washington, D.C.: Georgetown University Press, 1969), pp. 2-3.

construction, as manifested by the members of the various form-classes which occur in the utterance."[2]

Although intuition and guess-work are required in the discovery procedure, tagmemic grammar in its final form is given a formal presentation. The procedures are based upon the patterns evident in language; the analyst's task is to find, state, and check, these formal patterns. The underlying system can be seen as one of induction, hypothesis, and verification. Of the first two elements of the system, Cook says:

> The process of induction is a mental process by which the mind abstracts an element of unity from the analogous sequences which fill a particular slot in contrastive utterances.
>
> The only sufficient reason for such regular, patterned occurrence, is a unifying principle in the speaker who produced the regular patterns. Not from the single items, then, nor from any finite combination of items, is this hypothesis formed, but from the need to explain the 'why' of the regular which he experiences in language.[3]

It is clear that in this type of analysis, the most important thing for the analyst to remember is that he has to try to view the structure as a whole and to perceive the analogies between similar statements.

Today, more emphasis is being placed on verification (the third phase in the tagmemic approach) as a result of the advent of transformational models which

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[2] Ibid., p. 59.

[3] Ibid., p. 61.

greatly stress consistency as a criterion. But this novel emphasis has not changed the tagmemic theory in any essential way. In fact, another reason for the choice of this model is that modern transformational insight has been incorporated into tagmemics. Tagmemes and transforms are not as incompatible as they may seem at first glance; rather, it has been found that the notion of transforms as developed by recent generative grammarians can be used as supplementary apparatus to tagmemic grammar: "Generative grammar has brought forcibly and commendably to our attention the usefulness of grammatical transforms as one means of expressing relations between sentences."[4]

B. The Use of Transforms in Tagmemics

In the section on transforms in his book "On Tagmemes and Transforms," Walter A. Cook makes the following statement:

> Granted that transforms were developed within the framework of a unique type of generative grammar, the true significance of this discovery lies in the fact that most linguists could find immediate use for the transformational idea, even apart from that framework. . . .
>
> The interpretation of transforms as supplementary is based upon the fact that Chomsky uses the formulations of IC analysis as the terminal strings upon which transforms operate.[5]

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[4] Robert E. Longacre, <u>Grammar Discovery Procedures: A Field Manual</u> (The Hague: Mouton & Co., 1964), p. 16.

[5] Cook, <u>op. cit.</u>, p. 40.

Cook points out that although tagmemics differs from IC analysis "both in its unit, a function form composite, and in its constructions, made up of string constituents," such differences are nevertheless "not so great as to render the application of transformations impossible."[6]

To clarify his discussion, Cook gives an outline of the three levels in Chomsky's transformational grammar as follows:

1. the phrase structure level, where terminal strings are derived from initial strings by the application of rewrite rules;
2. the transformational structure level, where sentences are produced from the terminal strings by the application of transforms;
3. the morphophonemic structure level, where the sentences obtained by transformations are, by the application of morphophonemic rules, converted into utterances in phonemic notation.[7]

For our purposes, we shall here consider only: "the phrase structure rules which generate abstract terminal strings, or strings of morpheme classes; (and) the transformations which operate upon abstract terminal

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[6] Ibid., p. 41.

[7] Ibid., pp. 44-45.

strings to produce sentence formulae for the morpheme substitution rules."[8]

The above are the rules which correspond to the grammatical hierarchy in tagmemics. First, it is important to note that the initial strings in transformational grammar are paralleled by clause level formulas in tagmemics, since sentence level in tagmemics consists of clause base plus intonation. Thus, one equivalent of S $\longrightarrow$ NP + VP in tagmemics is Cl = +S:N + P:V + O:N, so that aside from the difference in the number of constituents Chomsky's rewrite symbol parallels the equals sign in tagmemics.

Turning our attention to transforms, we are told that:

> Transforms are, in general, changes made in the strings. A change is specified completely by the structural analysis of the string before the change, the rules of transformation, and the structural analysis of the string after the change. Transforms consist, then, of: input strings, transform rules, output strings. . . . Tagmemic analysis, however, working directly from the data, has expressed the same transformations implicitly, by describing both the input and output strings, without specifying the rules of transformation. For example, statements and questions, active and passive constructions have all been described, but there was, up to this point, no convenient way of stating the relationships between these constructions. What is important to tagmemics is not the way in which such rules are stated, but the fact of relationships between constructions, a point which has far reaching consequences in tagmemics, as in other grammars.[9]

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[8] *Ibid.*, pp. 45-46.

[9] *Ibid.*, pp. 48-49.

Because only a start has been made in this direction, we lack actual examples of tagmemic-transformational techniques at present. In this study, the symbol will be used mainly to indicate that the construction to the right of the symbol has been derived from the construction to the left, so that "what is being exploited is not the rewrite rule of the transform as such, but the relation between constructions which transform rules have brought so forcefully to the analyst's attention."[10]

With the publication of Longacre's "Grammar Discovery Procedures," tagmemic analysts became aware of how their model could be thus supplemented by a "transformational" apparatus.

According to Longacre's approach, transforms can be used to show the relations between constructions, and transform potential can be used as the distinguishing feature in constructions, the constructions being made up of string constituents with tagmemes as the grammatical units. Tagmemic formulae give map-like summaries of constructions. Once constructed, these formulae may be operated on in various ways, so that a set of tagmemic formulae has considerable generative power and the generation of constructions from such formulae can be made quite explicit. However, operations of the sort suggested by Longacre in the introduction to his book, although

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[10] *Ibid.*, p. 49.

implicit in tagmemic grammars, are not usually made explicit, nor will they be so employed in the present work. The important point to notice is the fact that a tagmemic grammar can employ such operations without obscuring the linguistic patterning. Such operations, being applicable to any tagmemic formulae in any language anywhere, have more universality than specific rules applicable to only one language, so that in this way tagmemic grammar has much to commend it. The model has been shown by Longacre to be not just a purely taxonomic model but one which possesses generative potential as well.

C. The Thai Language

Thai belongs to the Thai-Chinese group of the Sino-Tibetan linguistic family (one which is "of great importance for its present distribution and for the antiquity of its documents.")[11] It is the national language of Thailand, a country in South East Asia with a population of about thirty-five million. The Thai language makes use of pitch levels and tone contours like Chinese, but is written in an alphabet derived from the ancient devanagari script of India. The vocabulary also

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[11] Winfred P. Lehmann, Historical Linguistics: An Introduction (New York: Holt, Rinehart, and Winston, 1962), p. 45.

shows considerable influence by the ancient Indic languages Sanskrit and Pali. The dialect known as standard Thai (on which this study is based) is spoken by most of the people of Thailand and also has some speakers in neighboring countries and beyond. Thai is one of those languages in which members of the same class of items often perform more than one function. The tagmemic model with its unique slot-class correlation in which both function and form are always explicit seems to be a particularly useful one in dealing with such languages.

D. The Corpus

In this investigation of Thai clause types I have primarily made use of the written form of the language. Spoken features such as intonation and emphasis have been excluded, although besides using written material I have sometimes made use of my intuition as a native speaker to supply additional data where information in the corpus was lacking. The material for investigation has been taken mainly from the first chapter of a recent Thai novel by a well known writer.[12] This has provided over a thousand clauses for analysis, a number large enough to provide the necessary clause patterns with enough repetitions to make this survey tend toward being

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[12] Boonlua Debyasuvarn, Dutiyawiset (Bangkok: Prae Pittaya Co., 1968).

an exhaustive one. The focus of the investigation has been directed toward clauses because the clause level in tagmemics has been termed "the heart of the analytic process."[13] However, the structure of Thai verb phrases (which are the most important constituents in the clauses) will also be given to some degree. The text incorporates various aspects of the language (for example, dialogue by different characters, descriptive passages, etc.) so that randomization is achieved to a large extent.

However, although it is to be hoped that the chosen corpus reflects the total language situation in relation to Thai clauses, this study does not claim to give a complete account of these. It is quite likely that certain clause types may not have appeared in this corpus, but it is also reasonable to predict that they will not belong to the major clause types which are to be found in the language. Another limitation lies in the actual form of the data. The clauses which have been isolated for analysis are often complicated by what I have determined to be expansions irrelevant to the matter at hand. I have accordingly shortened some of these for convenience. I have also, as discussed earlier, supplied additional examples to fill in the gaps left by the inadequacy of the corpus, particularly with reference

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[13] Walter A. Cook, S.J., Introduction to Tagmemic Analysis (New York: Holt, Rinehart and Winston, Inc., 1969), p. 67.

to imperative clause types. Differences in examples quoted will be indicated as follows:

1. those examples quoted directly from the corpus will be preceded by the superscript ^{c};
2. those examples which are modified forms of clauses found in the corpus will be preceded by ^{m};
3. examples supplied by the writer's intuitional manipulation of the corpus will be left unmarked; and
4. examples of non-occurring (i.e., non-grammatical) clauses will be preceded by the symbol *.

II. CLAUSE ISOLATION PROCEDURES

A. General Discussion

In the section on Grammatical Universals in Charles F. Hockett's "The Problem of Universals in Language," we find the following generalization: "Every human language has a common clause type with bipartite structure in which the constituents can reasonably be termed 'topic' and 'comment.'"[1]

Thai manifests such a clause type, for example:

1. Kǎw yím — He's smiling. (<u>or</u> He smiled.)
   he smile

2. Cǎn Plia — I'm tired.
   I tried

In identifying the "topic" and "comment" sections of the clause, we are basically employing semantic criteria. When we speak, we usually speak <u>about</u> something, and "topic" here stands for the thing we are speaking about. The "comment" part is the <u>predication</u>. It is the most important part of the clause since it is where the information of the utterance lies. In Thai, the topic or subject of discourse is often not explicitly referred to but left to be understood, so that the minimal form of an utterance might be:

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[1] Charles F. Hockett, "The Problem of Universals in Language," in <u>Universals of Language</u>, ed. by Joseph H. Greenberg (Cambridge, Massachusetts: The M.I.T. Press, 1966), p. 23.

sǔay pretty	You (he, she, it, they) are pretty.

The topic as manifested in examples nos. 1 and 2 can be regarded as filling the function of "subject" in those clauses. We see that Thai, like other languages, manifests a subject-predicate construction, but differs from some languages in that the occurrence of the subject is optional. The class of words occurring as subject differs from the class of words occurring as predicate. For instance, words which can occur as predicate can also occur together with certain words (such as aspect markers and auxiliaries) which are never found in combination with words filling the subject function, and vice versa. If we call the class of words filling the subject function "nominals" and those filling the predicate function "verbals" we can say that the most common simple clause type in Thai takes the form:

$$\mathrm{Cl} = \pm\ \mathrm{S}\text{: nom} + \mathrm{P}\text{: Verbal}$$

(that is, one kind of clause in Thai consists of an optional subject slot filled by nominals and an obligatory predicate slot filled by verbals).

Basing my analysis on the tagmemic model of slot: class relationship (each grammatical unit or tagmeme being the correlation of a grammatical function or slot with a class of mutually substitutable items occurring in that slot) and following the basic assumption that clauses can be broadly categorized into declarative, interrogative and imperative types, where interrogative and imperative clauses tend to exhibit certain characteristic differences as compared to declarative ones, I shall propose in the following chapters a tagmemic classification of all the Thai clauses which were found in the corpus.

B. Procedures

Following the definition of Benjamin Elson and Velma Pickett, a <u>clause</u> construction is "any string of tagmemes which consists of or includes one and only one predicate or predicate-like tagmeme among the constituent tagmemes of the string, and whose manifesting morpheme sequence typically fills slots on the sentence level."[2]

One feature to note here is that clauses consist of or include one and only one predicate. This predicate tagmeme typically consists of a predicate slot filled by either a verb or verb phrase. Since it is possible for a single clause to have a compound verb form in the predicate slot, it becomes of the utmost importance to be able to distinguish between auxiliaries and the main verb (or "head" of the predicate construction) in any verb sequence in order to be able to determine the number of clauses in the sequence. The defintion of "clause" in Thai can then be modified to "a string of tagmemes consisting of one

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[2] Benjamin Elson and Velma Pickett, <u>An Introduction to Morphology and Syntax</u> (Santa Ana, California: Summer Institute of Linguistics, 1962), p. 64.

and only one main verb."

A useful criterion for distinguishing auxiliaries in Thai has been suggested by Kanchana Sindhavananda. By putting each clause into the question test frame:

Cl + QM: rɨ̌ɨ plàaw

we can specify as an *auxiliary* that verb form which "cannot occur independently but must be preceded or followed by a main verb to produce a grammatical response."[3]

From using this test frame, Kanchana Sindhavananda concludes further that a verb which *can* occur alone in a short answer to the question is a "main verb." However, not all verbs thus isolated behave in the same way, and we find that some verbs which can occur alone in short answers do not occur alone elsewhere. In this regard it will be useful to adopt Charles C. Fries' distinction between situation utterance units (i.e., those that *begin* conversations) and response utterance units (those that occur as responses to preceding utterance units)[4] to separate these forms into two further groups: (1) those that can occur independently in both situation and response utterances; and (2) those that can occur independently in response utterances but occur dependently in situation utterances. In this study, only forms of group

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[3] Kanchana Sindhavananda, "The Verb in Modern Thai" (unpublished Ph.D. dissertation, Georgetown University, 1970), p. 33.

[4] Charles C. Fries, *The Structure of English* (New York: Harcourt, Brace and Company, 1952), p. 37.

(1), the group with the greatest independence, will be considered *main verbs*, those in group (2) will be here called *aspect markers*.

Combining the question test frame criterion of Sindhavananda and the situation-response distinction as presented by Fries, we arrive at the following procedure for distinguishing Thai main verbs:

Step I. Application of the question test frame. This has *two* possibilities:

(a) If the clause has a *simple* verb from, e.g.,

Statement 1. Kǎw *pay* Tîi nân bɔ̀y-bɔ̀y
he go place that often
He goes there often.

then application of the question test frame should yield that verb in the response, thus:

Question 1. Kǎw *pay* Tîi nân bɔ̀y-bɔ̀y *rɨ̌ɨ plàaw*
Response 1. *pay*

This shows that the verb is a *main verb*. Clauses with simple verb forms thus should need no further analysis. Any verb forms in this category which deviate from this rule are exceptions which must be put aside for further investigation.

(b) If the clause has a *compound* verb form, e.g.,

Statement 2. Kǎw *Kuan pay* Tîi nân bɔ̀y-bɔ̀y
he should go place that often
He should go there often.

Statement 3. Kǎw *cà pay* Tîi nân bɔ̀y-bɔ̀y
he will go place that often
He will go there often.

there are two possible types of responses, viz:

(i) a single component of the verb sequence occurs in the response:

Question 2. Kǎw *Kuan pay* Tîi nân bɔ̀y-bɔ̀y *rɨ̌ɨ plàaw*
Response 2. *Kuan*

(ii) the response consists of a compound form:

Question 3. Kǎw *cà pay* Tîi nân bɔ̀y-bɔ̀y *rɨ̌ɨ plàaw*
Response 3. *ca pay*

In either case, a further step in the analysis is necessary:

Step II. Application of the situation-response criterion (necessary only in the case of clauses with *compound* verb forms).

(a) When the question test frame yields a single verb in the response (as in Step I(b)(i) above), *reconstruct the statement using that component of the verb alone*, e.g.,

Statement 2'. *Kǎw *Kuan* Tîi nân bɔ̀y-bɔ̀y

If the utterance thus produced is grammatical without overtly changing the original meaning (which is not the case here), then we have a main verb, and the whole utterance may consist of more than one clause. However, forms like the one in our example, of the type here called *aspect markers*, are the ones most generally found in this connection: they cannot occur independently in situation utterance units.

Our next step is to give the same situation utterance test to the other component(s) of the verb sequence, in this case the component *pay*, which yields:

Statement 2". Kǎw *pay* Tîi nân bɔ̀y-bɔ̀y

which is a grammatical sequence.

That component of the verb sequence which by itself yields a grammatical situational utterance is a main verb. We can now go back to Step I(a) if we wish to recheck our conclusions.

(b) When the response to the question test frame consists of a compound form, we must *reconstruct the statement using one part of the compound at a time* in the verb slot. From the response in I(b)(ii) we reconstruct the following situation utterance units:

Statement 3'. *Kǎw *cà* Tîi nân bɔ̀y-bɔ̀y

Statement 3". Kǎw *pay* Tîi nân bɔ̀y-bɔ̀y

The first utterance above is ungrammatical. The form *cà* cannot occur independently in either response or situation type of utterance and is therefore an *auxiliary*. The verb *pay* in Statement 3" yields a grammatical utterance. Application of Step I(a) will confirm our conclusions that *pay* is a main verb.

Edward M. Anthony has aptly used the situation-response dichotomy in classifying Thai verb forms in his article "Verboid Constructions in Thai." The three groups discussed above (viz. main verbs, aspect markers, and auxiliaries) correspond with his AB, BC, and CD categories respectively.[5]

The following chart shows the three corresponding groups and their various properties:

Type of verb	EMA's categories	Independence		Properties
		S	R	
1. Main Verbs	AB	+	+	Can occur alone in both response and situation utterances.
2. Aspect Markers	BC	-	+	Can occur alone in response utterances but always with a member of group 1 otherwise.
3. Auxiliaries	CD	-	-	Can never occur alone in either questions, statements, or short answers.

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[5] Edward M. Anthony, "Verboid Constructions in Thai," in Studies in Languages and Linguistics, ed. by Albert H. Marckwardt (Ann Arbor: The English Language Institute, The University of Michigan, 1964), pp. 69-70.

III. PRINCIPAL CONTRASTIVE CLAUSE TYPES

A. Independent Clause Types

Clauses can generally be divided into two classes: independent versus dependent. It this section we will consider the Thai independent clauses. For the purposes of this analysis, an independent clause is defined as a clause that can stand alone in a situation type utterance in the language. Following Cook, it is assumed that "this capacity to stand alone must be judged according to its acceptability by a native speaker of the language."[1]

It is further assumed here that grammaticality must also be judged according to acceptability by a native speaker. One of the points made by Richard B. Noss in a recent paper was the following:

> What is, or is not, 'grammatical' in a given language at a given time is decided by people, not by formulae, and in questions of grammaticality it is still my word against yours.[2]

In the conclusion of his paper, Noss stresses the importance of data, both spoken and written, collected, as he puts it, "by some real person from actual sources,"[3]

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[1] Walter A. Cook, S.J., Introduction to Tagmemic Analysis, p. 67.

[2] Richard B. Noss, "The Transformer in the Woodpile" (paper delivered at the Siam Society, Bangkok, Thailand, May 12, 1971), p. 5.

[3] Ibid., p. 14.

so that more of the total range of possibilities of the syntactic surface structures of a language such as Thai can be learned. This study is an attempt in such a direction, with identification of the clause structures (including the more unusual ones) found in the corpus regarded as the central part of the analysis.

As was pointed out in the last chapter, clauses are strings of tagmemes which include one and only one predicate in the string. The tagmemes in such a string can be identified as either nuclear or peripheral.[4] The nuclear tagmemes are generally diagnostic of the construction in which they occur although they may be obligatory or optional. Peripheral tagmemes, on the other hand, are always optional, being typically adverbials which fill in details of time, place, and manner, etc.

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[4] This study mainly follows the criteria for distinguishing nuclei from peripheries as outlined by Longacre, 1964, pp. 48-51. Of the six diagnostic criteria of nuclear tagmemes given by Longacre, the following four are most relevant to Thai clause level tagmemes: Longacre's (1) all obligatory tagmemes are nuclear; (3) nuclear tagmemes tend to occur contiguously to each other; (4) some nuclear tagmemes are limited to particular clause types; and (5) nuclear tagmemes may be affected by transformations between clause types or between a clause type and some other construction; peripheral tagmemes are not. As a consequence of criterion no. (5), a transform of a nuclear tagmeme is also considered to be nuclear. By definition, therefore, any tagmeme not conforming to at least one of the above criteria is a peripheral tagmeme.

1. Procedures for Separating Clause Types

According to Longacre, in order for two constructions to be regarded as different they must differ in at least two ways, one of which must affect the nuclear tagmemes: "For two patterns (syntagmemes) to be in contrast they must have more than one structural difference between them; at least one of these differences must involve the nuclear of the syntagmemes."[5]

Under "structural difference" Longacre includes transform potential[6] and a difference such as obligatory versus optional in the same nuclear tagmeme of the contrasting constructions.[7]

This necessity for identifying minimal contrast between constructions was demonstrated by Longacre in an earlier work, "String Constituent Analysis."[8] Pike commended this part of the mentioned work as "a crucial theoretical contribution" on the part of Longacre, and called it a "theoretical breakthrough."[9] However, it is noteworthy that besides Longacre's requirements of a

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[5] Robert E. Longacre, Grammar Discovery Procedures, p. 18.

[6] Ibid., pp. 52-53.

[7] Ibid., pp. 56-57.

[8] Robert E. Longacre, "String Constituent Analysis," Language, 36 (1960), p. 75.

[9] Kenneth L. Pike, "Dimensions of Grammatical Structure," Language, 38 (1963), p. 231.

difference of two tagmemes or of one tagmeme plus a transformation potential for establishing contrast between clause types, Pike added a further distributional criterion:

> A difference in the distribution of two constructions in higher-layered constructions may, like a transform difference, count as one of two required differences provided this distributional difference is paralleled by a substantial difference in structural meaning (such as 'declarative' versus 'interrogative').[10]

Although Longacre does not agree with Pike on the above question and rules out external distribution as a countable contrastive feature,[11] this study will follow Pike's suggestion where difference in external distribution seems to be a useful feature in separating clause types.

2. Primary Declarative Clause Types

Of the three broad categories of clauses (declarative, interrogative and imperative) which will be shown to have distinct contrastive characteristics, the declarative clause is by far the most frequent in occurrence. Therefore, although any one type of clause can actually be derived from either of the other two, we shall for convenience set up the declarative (or statement) clause

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[10] Ibid., p. 232.

[11] A summary of "countable structural differences" between two constructions (syntagmemes) is given in Longacre, 1964, p. 19.

as the "primary" clause type and regard interrogative (or question) and imperative (or command) clauses as clause types derivable from declarative clauses, giving the latter the label "derived" clauses. The primary clause types will be found to contrast with each other (and with all other clause types) in at least two ways, one of which involves their internal nuclear tagmemic construction.

Notice that, in tagmemics, verbs that occur sometimes with and sometimes without objects are all classified as transitive verbs, transitivity being defined as "the capacity to take one or more objects."[12] Intransitive verbs, on the other hand, are those verbs which can never take an object. Such a definition prevents any ambiguity or overlapping between fillers of intransitive versus transitive slots, so that difference in fillers of predicate slots can be posited as a structural difference between clause types.

In the listing of primary clause types which follows, the tagmemic structure of their nuclei is given first, followed by a list of features which will be found to contrast with the other clause types.

Formula 1. Intransitive Clause Nucleus

$$iCl = \pm S_a : nom + P : iv$$

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[12] Walter A. Cook, S.J., Introduction to Tagmemic Analysis, p. 70.

(that is, an intransitive clause consists of an optional subject-as-actor slot filled by a nominal and obligatory predicate slot filled by an intransitive verb).

Contrastive features of iCl.

1. An intransitive clause has only two nuclear tagmemes whereas transitive and equational clause types have three.
2. The fillers of the intransitive predicate slot are different from those of the predicate slots of the other primary clause types.
3. It is not possible to transform intransitive clauses into passives.[13]
4. The situational role[14] of the subject of intransitive clauses is different from that of the subject of descriptive clauses.

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[13] See section on the passive clause.

[14] Pike discusses situational and grammatical roles in the function slot in "Discourse Analysis and Tagmeme Matrices," Oceanic Linguistics, 3 (1964), 5-25.

Examples of Intransitive Clauses:

S	P	
	^{c}yím yàaŋ sanùk smile as if happy	(He/she) smiled gayly.
^{m}Cǎn I	maa càak bâan come from house	I came from the house.
	^{m}yɨɨn yùu nâa kâo-îi stand (aux) ↓ chair in front of	(He/she) is standing in front of a chair.
	^{m}nâŋ Kiaŋ Kǎw sit beside him	(She) is sitting beside him.
	^{m}ɔ̀ɔk càak bâan go out from house	(She) went out of the house
	^{c}lǎy Tûam-Tón flow flood-like	(It) flowed plentifully.
	^{c}nɔɔn kàp mæ̂æ sleep with mother	(He) slept with Mother.
^{m}Tân he	Kəəy pay kruŋTêep (am) go Bangkok	He has been to Bangkok.
^{c}lɔ̀n She	klàp càak rooŋrian return from school	She returned from school.
^{m}lɔ̀n she	yùu Tîi bâan nán stay at house that	She lives in that house.

Formula 2. Transitive Clause Nucleus

$tCl = \pm S_a : nom$[15] $+ P : tv \pm O : nom$[16]

(that is, a transitive clause consists of an optional subject-as-actor slot filled by a nominal, an obligatory

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[15] Does not occur when the filler of the transitive predicate is the impersonal use of the verb mii (see next section on sub-types).

[16] Always occurs with certain transitive verbs, otherwise optional (see next section on sub-types).

predicate slot filled by a transitive verb, and an optional object slot filled by a nominal).

Contrastive features of tCl.

1. A transitive clause has three nuclear tagmemes whereas intransitive and descriptive clauses have two.
2. The fillers of the transitive predicate slot are different from those of the predicate slots of the other primary clause types.
3. Some types of transitive clauses can be transformed into the passive. None of the other primary clauses can be so transformed.
4. The situational role of the subject of the transitive clauses is different from that of the subject of equational clauses.

Examples of Transitive Clauses:

S	P	O	
	^{m}Kít think	lǎay rɨ̂aŋ many thing	(She) thought of many things.
^{m}lɔ̀n she	yìp pick up	wæ̌æn ring	She picked up the ring.
	^{c}sǒncay interested in	kaan rian education	(She) is interested in studying.

S	P	O	
mæ̂æ mother	Tam make	Kanǒm yùu candy (aux)	Mother is making candy.
	^{c}Kayàp move	mɨɨ hand	(She) moved her hand.
	^{m}càp touch	tônkæ̌æn Kǎw upper-arm his	(She) touched his arm.
^{c}Kǎw he	bɔ̀ɔk say		He said.
	^{c}Kâwcay understand	Kwammǎay meaning	(She) understood the meaning.
^{m}lɔ̀n she	kæ̂æ correct	KwaamKít Kɔ̌ɔŋ Kǎw thinking of him	She corrected his thinking.
^{m}Kǎw he	dây hěn (am) see	lôok maa mâak world (aux) much	He has had the opportunity to see much of the world.

Formula 3. Equational Clause Nucleus

$$\mathrm{eqCl} = \overbrace{\pm S_{i} : \mathrm{nom} \pm}^{+} P : \mathrm{eqv} + PA : \mathrm{nom/adjl/advl}$$

(that is, an equational clause consists of an optional subject-as-item slot filled by a nominal, an optional predicate slot filled by an equational or linking verb, and an obligatory predicate-attribute slot filled by a nominal, an adjectival, or an adverbial; further, in each equational clause either the subject or the predicate must occur, i.e., both cannot be absent at the same time, or both can occur together).[17]

Contrastive features of eqCl.

1. An equational clause has three nuclear tagmemes, intransitive and descriptive clauses have only two.
2. The fillers of the equational predicate slot differ from those of the predicate slots of the other primary clause types.
3. Equational clauses cannot be transformed into passives.
4. The situational role of the subject of equational clauses differs from that of the subject of transitive clauses.

Examples of Equational Clauses:

S		P	PA			
^{m}sɔ̂yKɔɔ	nán	pen	sóy	sǎam	sǎay	That necklace is a
necklace	that	be	chain	three	string	three-tiered type
		^{c}pen	râan	KônKâaŋ	lék	(It) is a somewhat
		be	figure	rather	small	small figure.

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[17] An adjectival is an expression which typically occurs in the function slot of modifier of nouns (which are heads of nominal constructions); an adverbial is an expression which typically occurs in the function slot of modifier of verbs (or heads of the predicate construction).

S	P	PA	
^{m}lɔ̀n she	pen Kon Côok dii be person luck good		She is a lucky person.
^{m}Kǎw he	Kɨɨ sǎamii Kɔ̌ɔŋ lɔ̀n is husband of her		He is her husband.
^{m}bìdaa Kɔ̌ɔŋ lɔ̀n father of her	pen naay-woŋ be master-orchestra		Her father is a (musical) conductor.
^{m}Kǎw kàp Cǎn he and I	Kon rûn diaw kan people age same together		He and I are of the same age.
	^{c}pen rɨan Tay be house Thai		(It) is a Thai house.
nîi lá this (emphatic marker)	Prɔ́ Tân taamcay because he spoil		This is because he spoils (her).
ǎn Ann	pen be	dèk child	Ann is a child.
^{m}nɔ́ɔŋ lék younger little sibling	Kɨɨ is	ǎn Ann	The youngest is Ann.

Formula 4. Descriptive Clause Nucleus

$$desCl = \pm S_i : nom + P : desv$$

(that is, a descriptive clause consists of an optional subject-as-item slot filled by a nominal, and an obligatory predicate slot filled by a descriptive verb).

<u>Contrastive features of desCl</u>.

1. A descriptive clause has two nuclear tagmemes, transitive and equational clauses have three.

2. The fillers of the descriptive predicate slot are different from those of the predicate slots of the other primary clause types.
3. Descriptive clauses cannot be transformed into passives.
4. The situational role of the subject of descriptive clauses differs from that of intransitive clauses.

Note: Fillers of the predicate slot of this type of clause often occur in the function slot of noun modifier in longer strings, where word order is usually the device for resolving the ambiguity.

For example:

náam nîi sǎy water this clear	This water is clear.
náam sǎy nîi mây sòkkapròk water clear this not dirty	This clear water is not dirty.

Examples of Descriptive Clauses:

S	P	
^{c}Kanàat size	yày kwàa Pét big than diamond	(Its) size is bigger than (a/the) diamond.
^{c}wan níi - day this	sǔay ciŋciŋ pretty truly	Today (you look) really pretty.
^{c}sǐaŋ Kɔ̌ɔŋ lɔ̀n baw voice of her soft		Her voice is soft.

S P

^{m}Pǒm Kɔ̌ɔŋ Kǎw yan Koŋ dam hair of him (aux)(aux) black	His hair is still black.
^{m}náam Tîi nîi sǎy yùu talɔ̀ɔt pii water at here clear(aux) all year	The water here is clear all year around.
^{m}ɔ̀ɔnwaan mɨ̌an mæ̂æ Kǎw sweet like mother her	(She is) sweet like her mother.
^{m}Cút níi yaaw lǔamlǔam dress this long loosely	This dress is long and loose.
^{c}Kwaamcam dii memory good	(His/her) memory is good.
Kun sǒm plæ̀æk càak Pîinɔ́ɔŋ Miss Som different from siblings	Miss Som is different from her brothers and sisters.
^{c}son mɨ̌an dèk PûuCaay naughty like child male	(She) is naughty like a boy.

Summary of Nuclear Tagmemes of Primary Clause Types

Clause Type	Subject	Predicate	Object
Intransitive	± S_a:nom	+ P:iv	∅
Transitive	± S_a:nom	+ P:tv	± O:nom
Equational	± S_i:nom	± P:eqv	+ PA:nom/adjl/advl
Descriptive	± S_i:nom	+ P:desv	∅

a. Sub-types of primary clauses. Of the four primary clause types, only the transitive clause type lends itself most readily to further sub-classification as follows:

Transitive Clause Sub-types

Formula 2a. Transitive Clause with one object.

1. $\mathrm{tCl} = \pm S_a : \mathrm{nom} + P : \mathrm{tv} \pm O : \mathrm{nom}$[18]

(This is the same as the nuclear formula given above and represents the most common manifestation of this clause type).

2. $\mathrm{impers.tCl} = \emptyset + P : \mathrm{mii}$[19] $+ O : \mathrm{Cl/nom}$

(that is, an impersonal clause consists of an obligatory predicate slot filled by the impersonal verb mii and an obligatory subject slot filled by another clause[20] or a nominal).

Formula 2b. Transitive Clause with more than one object.

1. $\mathrm{di\text{-}tCl} = \pm S_a : \mathrm{nom} + P : \mathrm{di\text{-}tv} \pm O_1 : \mathrm{nom}$
$\pm O_2 : \mathrm{nom}$

(that is, a di-transitive clause consists of an optional subject-as-actor slot filled by a nominal, an obligatory

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[18] The object always occurs with tv "mii" and certain other transitive verbs.

[19] As an ordinary transitive verb, mii means "have." In its impersonal function it takes on the meaning of "exist" and can be translated as "there is/are." In its impersonal use mii cannot take a subject.

[20] See section on Dependent Clauses.

predicate slot filled by a di-transitive verb, and two optional object slots filled by nominals).

2. caus.tCl = $\pm S_a$: nom + P : hây[21] $\pm O_2$: nom + O_1: partial Cl[22]

(that is, a causative clause consists of an optional subject-as-actor slot filled by a nominal, an obligatory predicate slot filled by the causative verb hay, an optional object slot filled by a nominal and an obligatory subject slot filled by a partial clause structure). Note: The order of objects in causative clauses differs from that in di-transitive clauses (the slots marked O_2 in each contain the same class of fillers). Further, when a causative clause fills the O_1 slot in di-transitive clauses which it often does, the order of objects in the di-transitive clause is changed to follow the causative clause pattern. For example:

di-tCl:	Kǎw sàŋ ŋaan Cǎn			He gave orders concerning the work to me.
	he order work me			
but:	Kǎw sàŋ	Cǎn	hây Tam ŋaan	He ordered me to work.
	he order	me	caus. do work	
	S P	O_2	O_1	

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[21] hay has many uses in Thai. One of its functions is as a di-transitive verb meaning "give." In causative expressions it means "to make (or let) someone do something." It also functions as a preposition meaning "for."

[22] See section on Dependent Clauses.

Examples of Transitive Clause Sub-types:

Impersonal Clauses

P	O	
^{m}mii	tôn-máy troŋ Tîi klay Krua	There is a tree near the kitchen.
exist	tree at place near kitchen	
^{c}mii	Kon wîŋ maa	Someone ran up/ came running.
exist	person run (aux).	
mii	sǐaŋ sàtrii lǎay sǐaŋ	There were many women's voices
exist	voice woman many voice	

Di-transitive Clauses

S	P	O_1	O_2	
	^{c}sòŋ	samùt	hây KunPɔ̂ɔ	(She) handed the book to her father.
	give	book	to father	
Kǎw	bɔ̀ɔk	rɨ̂aŋ nán	Cǎn læ̂æw	He has already told me that.
he	tell	story that	me already	
nákrian	Tǎam	panhǎa	Kǎw	The student asked him a question.
student	ask	question	him	

Causative Clauses

S	P	O_2	O_1	
^{m}Cǎn	cà hây	Kǎw yùu	Tîi nîi	I shall allow him to stay here.
I	(aux) let	him stay	here	
^{m}Kǎw	hây	Cǎn pay	rooŋrɨan	He let me go to school.
he	make	me go	school	
Cæ̌ w	hây	mæ̂æ lâw	nitáan	Joa got mother to tell a story.
Joa	make	mother tell	story	

b. The Passive: a derived sub-type. The type of passive clause in Thai which is formally marked by a passive verb form is derived from a limited group of transitive clauses (those where fillers of the predicate consist of verbs of punishment or verbs implying some degree of unpleasantness)[23] and as a consequence have few manifestations in the language. However, if we define passivity as the placing of focus on the recipient of an action by putting it in the position usually occupied by the actor or performer of the action (i.e. where the object of the active transitive clause becomes the subject of the passive clause and the subject of the active clause becomes the agent of the passive), then Thai manifests other types of passive which are derivable from transitive clauses, and these will be discussed below. Nevertheless, since the normal active transitive clause type is generally preferred wherever possible, and since the unmarked "passives" to be discussed closely resemble either the active transitive clause or the descriptive clause in pattern, it was decided to present the passive clause here with other sub-types rather than with the interrogative and imperative clauses which can be derived from all varieties of primary declarative clause types.

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[23] See Kanchana Sindhavanandha, "The Verb in Modern Thai," p. 203.

Formula 5a. Marked Passive Clause Nucleus.

marked pCl = $\pm S_o$: nom + pm : Tùuk[24] $\pm$ Ag : nom + P : tv_u

(that is, a marked passive clause consists of an optional subject-as-recipient-of-action slot filled by a nominal, an obligatory passive marker slot filled by Tùuk, an optional agent slot filled by a nominal, and an obligatory predicate slot filled by a transitive verb of unpleasantness).

Example (showing relationship between an active transitive clause and its passive transform):

	S	P	O
tCl:	Kǎw	tii	lûuk
	he	beat	son

He beat (his) son.

	S	pm.	Ag.	P
pCl:	lûuk	Tuuk	Kǎw	tii
	son	(pm)	he	beat

His son was beaten by him.

It is seen that in this type of transform the object of the active transitive clause becomes the subject of the passive clause, and the subject of the active clause becomes the agent in the passive clause.

Other examples of Marked Passive Clauses are:

S	pm.	Ag.	P
^{m}lɔ̀n	Tùuk		Cák Cuan hây pen Kruu
she	(pm)		persuade caus. be teacher
She was persuaded to become a teacher.			
Cǎn	Tùuk	mæ̂æ	dù
I	(pm)	mother	scold
I was scolded by (my) mother.			
	^{c}mây Tùuk		hàk ŋan raaydây Kɔ̌ŋ lɔ̀n
	neg (pm)		reduce money income of her
(She) did not have her income reduced.			

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[24] An alternative form of the passive marker is doon which however did not occur in the corpus.

Other instances of passivization are as follows:

Formula 5b. Unmarked Passive Clause.

1. pCl with inan. S = $\pm S_o$: inan. nom + P : tv
+ M : aux/adjl/advl

(that is, one type of unmarked passive clause consists of an optional subject-as-recipient-of-action slot filled by a transitive verb, and an obligatory manner slot filled by an auxiliary, an adjectival or an adverbial).

Examples:

	S P O aux		S tv aux.
tCl:	Kon kway plee yùu[25]	pCl:	^{m}plee kway yùu
	person rock cradle		cradle rock
	Someone is rocking the cradle.		The cradle is being rocked.

	S P O Adj.		S tv adj.
tCl:	Kon duu Pét ŋaam	pCl:	^{m}Pét duu ŋaam
	person see diamond beautiful		diamond see beautiful
	Someone sees the beautiful diamond.		The diamond is (seen to be) beautiful.

	S P O M
tCl:	Kon prakɔ̀ɔp sǎay níi dûay TápTim
	person make string this with rubies
	Someone made this string with rubies.

	S | tv | M (advl)
pCl:	^{m}sǎay níi | prakɔ̀ɔp | dûay TápTim
	string this make with rubies
	This string is made with rubies.

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[25] yùu is a progressive marker (see section on the Predicate).

Note: The patterning in this type of passive closely resembles the descriptive clause since the whole predicate can be regarded as forming the same function as that of a descriptive verb, in which case the situational role of the subject becomes that of item described rather than receiver of the action.

2. pCl with dâyráp = ± S_o: nom + P : dâyráp
+ O : nom ± Ag : RA

(that is, one type of unmarked passive clause consists of an optional subject-as-recipient-of-action slot filled by a nominal, an obligatory predicate slot filled by dayráp, an obligatory object slot filled by a nominal (often a nominalized construction), and an optional agent slot filled by a relator-axis or prepositional phrase).

Examples:

	S P O		S P O Ag.
tCl:	Kǎw Com lɔ̀n	pCl:	lɔ̀n dâyráp KamCom càak Kǎw
	he praise her		she receive praise from him
	He praised her.		She was praised (by him).
	S P O_1 O_a		S P O Ag.
di.tCl:	Kǎw hây ŋən lɔ̀n	pCl:	lɔ̀n dâyráp ŋən càak Kǎw
	he give money her		she receive money from him
	He gives money (to) her.		She is given money (by him).

Most transitive clauses with transitive verbs which do not imply unpleasantness can be transformed into the patterns given above. Without considering the situational role of the grammatical subject, these "unmarked passives" would not seem to differ from the transitive clause types. However, it is my feeling that the verb *dâyráp* is reserved mainly for this type of transformation, and that the transitive verb *ráp*[26] is the one generally found in straight transitive clauses not derived from other active transitive clauses as in the above examples. Unfortunately there were very few cases of *dâyráp* in the corpus, so that further investigation may well discover evidence to disprove as well as support this hypothesis.

It is worth noting that of the thousand or more clauses which were isolated, only about twenty belong to the passive type as analyzed here, so that it seems clear that Thai makes very little use of this type of construction. Moreover, since it seems that any classification of "passive" clauses in Thai must involve lexical or semantic distinctions rather than formal ones, it might be questioned whether a real formal passive clause type actually exists in the language. Further investigation should provide interesting answers to this problem.

3. Derived Clause Types

Interrogative and imperative clause types are related to and derivable from each of the primary clause types discussed above.

a. *Interrogative clause types*. An interrogative or question type utterance is used by a speaker

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[26] Kanchana Sindhavanandha has shown conclusively that *dây* is not a past tense marker in Thai, so that *dâyráp* here is not simply the past tense of *ráp*. See "The Verb in Modern Thai," pp. 42-44.

when he wishes to request information or verification on a certain subject matter and expects to receive a reply from the person he addresses. The distribution of interrogative utterances is thus characterized by occurrence before a reply, and classification can be based on the type of expected response. A common type of interrogative is the type where the speaker expects a yes-no (or right-wrong) type of response. In Thai this type of utterance is formed by adding a question marker to a declarative clause which remains otherwise unchanged, forming the following patterns:

Formula 6a. Yes-No Interrogative Clause Types

1. Yes-No Q-iCl = + Nucleus of iCl + QM : Q-particle/Q-tag[27]
2. Yes-No Q-tCl = + Nucleus of tCl + QM : Q-particle/Q-tag
3. Yes-No Q-eqCl = + Nucleus of eqCl + QM : Q-particle/Q-tag
4. Yes-No Q-desCl = + Nucleus of desCl + QM : Q-particle/Q-tag

Each of the above interrogative clauses differs from its primary declarative counterpart in the following ways: (1) in the number tagmemes; and (2) in external

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[27] The various restrictions in connection with the forms of response to these interrogatives are outside the scope of this investigation and will not be dealt with here.

distribution (see the discussion on procedures for separating clause types in section A.1. of this chapter). Each interrogative or question clause differs from the others in the same way that declarative clause types contrast with each other.

<u>Examples</u>:

Yes-No Q-iCl	Kǎw pay lǽæw rɨ̌ɨ he go already Q-prt	Has he gone?
Yes-No Q-tCl	^{c}hěn │mǎy see │Q-prt	(Do you) see?
Yes-No Q-eqCl	^{m}aay Câay mǎy shy is-that-right	(You are) shy, aren't you?
Yes-No Q-desCl	nîi bâan Kǎw │mây Câay rɨ̌ɨ this house his │not so prt.	Isn't this his house?

Another type of interrogative involves changes in the slot fillers of the primary declarative clauses. In this type of interrogative, which we shall call the "information" interrogative clause type, a question word takes the position of one of the fillers in the corresponding declarative clause, changing that tagmeme into a question tagmeme, with no change in the original position of tagmemes. The question words used in this type of interrogative fill slots of all nuclear and peripheral tagmemes excepting the predicate tagmeme. The following chart shows the question words which appeared in the corpus and their positions of occurrence. Each question tagmeme performs both an interrogative function and the function of the tagmeme which it replaces:

(Q)[28]	Q	P	Q	Q
± F : Tammay why	± S : Kray/ who	+P:iv/	± O : Kray/ who	± F[29]:Tammay why
± T : mɨ̂arày when	aray/ what	tv/	aray what	± T : mɨ̂arày when
	(N)+Kray/ whose	eqv/	(N)+Kray whose	± M : yàaŋray how
	Konnǎy which one	desv	Konnǎy which one	± L : Tîinǎy where

Since it is difficult to give a detailed structural formula for each information interrogative clause type, a collapsed clause formula[30] will be given instead, and the structures illustrated by examples.

Formula 6b. Information Interrogative Clause Types.

Info. Q-Cl = + Nucleus of declarative clause (minus any tagmeme replaced by a question tagmeme) + Q:question word

The differences between each primary declarative clause type and its information interrogative transform are:

1. difference in internal structure of nuclear tagmemes; or
2. difference in the number of nuclear tagmemes; and

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[28] This is an alternative position for these tagmemes.

[29] F = purpose slot.

[30] Ruth M. Brend made effective use of this technique in her study: A Tagmemic Analysis of Mexican Spanish Clauses (The Hague: Mouton & Co., 1968). My solution here is based on her treatment of the interrogative, p. 32.

3. difference in external distribution.

Examples:

Declarative iCl.	Kǎw nâŋ Kâŋŋɔ̂ɔk he sit outside	He's sitting outside.
Info. Q-iCl.	Kǎw nâŋ Tîinǎy he sit where	Where is he sitting?
Delcarative tCl.	lɔ̀n Tam sǐaŋ daŋ she make noise loud	She's making a lot of noise.
Info. Q-tCl.	lɔ̀n Tam aray she do what	What is she doing?
Declarative eqCl.	dææŋ pen PûuCûay Kǎw Dang be helper his	Dang is his assistant.
Info. Q-eqCl. (1)	Kray pen PûuCûay Kǎw who be helper his	Who is his assistant?
(2)	dææŋ pen PûuCuay Kray Dang be helper whose	Dang is whose assistant?
Declarative desCl.	sɔ̂yKɔɔ sǔay necklace beautiful	The necklace is beautiful
Info. Q-desCl.	aray sǔay what beautiful	What is beautiful?

b. Imperative clause types. Imperative clauses differ in distribution from declarative and interrogative clauses by occurring before an action type of response (i.e., a person using an imperative or command type of utterance expects to have his instructions carried out by the person he addresses). In Thai, imperative clauses can be derived from all primary declarative clause types except the impersonal sub-type of the transitive clause.[31]

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[31] Although this is the theoretical possibility, it is quite likely that some imperative transforms of certain individual declarative clauses are never found in the actual language situation.

The main difference in internal structure between an imperative clause and its declarative counterpart is that the form of the negative found in imperative clauses differs from that found in declarative clauses (imperative *yàa* "don't" versus declarative *mây* "not").[32] In addition to the above features, imperative clauses also sometimes have a final imperative marker. An over-all formula of imperative clauses is as follows:

Formula 7. Imperative or Command Clause Types

C-Cl = + Nucleus of primary declarative clause (with change in the predicate tagmeme to imperative) ± C : imperative particle(s)[33]

To summarize, imperative clause types differ from other clause types in

1. filler of the negative predicate slot;
2. presence of an optional imperative marker slot; and
3. external distribution.

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[32] See also the section on constituents of the predicate (chapter IV).

[33] The two most common imperative particles are *sí* or combinations with *si* (which were the only ones found in the corpus) for positive imperative clauses, and *na* or combinations with *na* for negative imperative clauses. When *sí* occurs in negative or *na* in positive imperative clauses, the utterance seems to have added emphasis or persuasiveness.

Examples[34]

C-iCl:	(dææŋ) ɔ̀ɔk maa nîi sí[35] come out here prt.	(Dang!) Come out here.
C-tCl	yàa Tam yàaŋ nán ná neg. do like that prt.	Don't do that!
C-di-tCl	bɔ̀ɔk rɨ̂aŋ nán Kǎw sí tell story that him prt.	Tell him about that.
C-caus.tCl	yàa hây man nǐi-pay ná neg. let it escape prt.	Don't let it get away.
C-eqCl	(Kun) pen tuaTææn Cǎn Tii sí you be substitute me once prt.	Be my substitute (for a while).
C-desCl	Kayǎn nɔ̀y sí diligent a bit prt.	Be a bit more hard working!

B. Dependent Clause Types

In contrast to independent clauses, a dependent clause can never stand along in a situation type utterance in the language, but always occurs within another structure. Dependent and independent clauses combine to form larger units. That level of construction which includes clauses among its constituents is the sentence level. As a unit, the sentence has been defined as "an independent linguistic form, not included by virtue of any grammatical

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[34] Since few imperative clauses occurred in the corpus with no examples of imperative equational or imperative descriptive clauses, I have provided further examples of these other types.

[35] According to Richard B. Noss, sí (and varieties of it) "is used most commonly to urge action on the part of someone who is not acting, or to change the course of action of someone who is." From Thai Reference Grammar (Washington, D.C.: Foreign Service Institute, Dept. of State, 1964), p. 210.

Construction in any larger form."[36]

Since a sentence usually consists of one or more clauses, it often happens that "sentence" and "clause" will coincide. However, a sentence may also consist of a non-clause or an incomplete clause structure as its constituent.[37] Non-clause and incomplete clause sentences are minor sentences. Major sentences contain at least one independent clause as a constituent. The three main types of major sentences are: (1) simple sentence, having the overall structure of a single independent clause; (2) compound sentence, containing two or more independent clauses; and (3) complex sentence, containing one independent and at least one dependent clause which do not combine to form the overall structure of a single clause. The last type of major sentence just mentioned does not coincide in structure with clause level constructions.

In the rest of this section, dependent clauses will be primarily classified according to their internal structure. Within each class thus isolated further classification according to the distribution and function of each type of dependent clause will be made, with particular attention given to those dependent clauses which

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[36] Leonard Bloomfield, Language (New York: Holt, Rinehart and Winston, Inc., 1933), p. 170.

[37] As Ruth M. Brend has pointed out: "One major difference between clause and sentence is the inclusion of an obligatory predicate for the clause but not for the sentence." From A Tagmemic Analysis of Mexican Spanish Clauses, p. 21.

can occur as fillers of clause level slots.

1. Subordinated or Relator-Axis Clause Types

This type of dependent clause has an overt relator marking dependency and can be analyzed as a bipartite relator-axis type of structure, consisting of a clause subordinator and a clause as axis. The axis may be manifested by any of the primary clause types, so that the formula for this type of clause is as follows:

Formula 8. Subordinated or Relator-Axis Clause Types

RA-Cl = + R : relator + Ax : Nucleus of primary clause[38]

Note: Relator-axis clauses were the only dependent clause types found to occur in combination with independent clauses in complex sentence types (see discussion of sentence types above).

Since dependent clauses cannot stand alone as independent entities, they always fill subordinate positions. The process of subordination is called an embedding process. Relator-axis clauses are embedded at (1) the sentence level, and (2) the clause level. In the first instance, they function as adverbials only, and this type of embedding is termed marginal embedding (i.e. they fill marginal slots in the complex sentence structure).

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[38] Clause constructions occurring in this slot are less extensive and elaborate than those occurring in independent situations.

Relator-axis clauses which are embedded at this level form the only true complex sentences (consisting of multiple clause structures in what Longacre calls a "patterned dependency" type of combination). This type of sentence structure with its restrictions concerning connecting particles, order and type of clauses used, etc., would provide material for an interesting and absorbing study. However, it lies outside the scope of the present investigation which is more concerned with identifying dependent clauses which are embedded within clause constructions.

When dependent clauses are embedded at the clause level, the structure has the over-all structure of a single clause, with the dependent clauses taking the place of entities such as single words[39] or phrases[40] filling parallel slots in order clause constructions. Their typical use at this level is as adverbials filling peripheral slots of time, place (location) or manner, each function being specified by the use of a subordinating

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[39] I am taking as my working definition of "word" the following: "a construction in which the constitute is a minimally free form in the language, and whose constitutents are morphemes (these being the minimum meaningful forms in the language)"--adapted from Walter A. Cook, Introduction to Tagmemic Analysis, p. 117. In tagmemic analysis, words typically fill slots at the phrase level.

[40] A phrase has been defined as "a unit composed of two or more words potentially, which do not have the characteristic of a clause, and typically, but not always, fills slots on the clause level" (Elson and Pickett, An Introduction to Morphology and Syntax, p. 73).

particle. Typical relators of this class include compounds with Tîi and wâa (without restrictions in connection with other elements obligatorily introduced into the clause: relator-axis clauses introduced by relators which require the introduction of additional particles into the string will be regarded as sentence level embeddings). The following table shows some of the temporal, locational and manner relators to be found in this connection:

T relators	L relators	M relators
mɨ̂a .... (when) con (until) con-kraTâŋ ráwàaŋTîi (while)	Túk hæ̀æŋ Tîi... (wherever)	taam Tîi....(like/ following..) mɨ̌an kàp Tîi.... (like/in the same way as...) mɨ̌an kàp wâa... (as if)

Locational relator-axis clauses occurred very rarely in the corpus, location slots being generally filled by locational phrases. No relator-axis clauses were found at the phrase level.

Examples

Temporal Clauses

^{c}mɨ̂a lɔ̀n yaŋ pen dèk .... when she (aux) be child	When she was still a child....
^{c}mɨ̂a mæ̂æ klàp lǽæw .... when mother return (aux)	When mother returns/ has returned....

...^{m}con Kon dəən Kâam dây until people walk across (am)	...until people are able to walk acoss it.
...con-kraTâŋ lɔ̀n Kâwcay until she understand	...until she understood.
^{m}ráwàaŋTîi lɔ̀n lɨ̂ak sɨ̂aPâa while she choose clothes	While she was choosing her clothes

Locational Clause

Túk hæ̀æŋ Tîi Kǎw pay.... every place that he go	Wherever he went ....

Manner Clauses

^{m}taam Tîi Kon rîak kan following people say (plural marker)	...following what people say.
mɨ̌an kàp Tîi Kǎw rîak nɔ́ɔŋ like he call younger sibling	...like he calls his younger brother/ sister....
^{c}mɨ̌an kàp wâa lɔ̀n dây klàp pay as if she (am) return (aux)	...as if she were able to go back...

2. Subordinate Clause Types

Subordinate clauses have no overt relator like in the relator-axis type of dependent clause. The only exception to this rule in Thai is the relator <u>wâa</u> (that) which sometimes precedes this type of dependent clause when it occurs in the object slot of a clause construction. Since <u>wâa</u> is optional, the clauses which it precedes are not relator-axis type clauses because relators in the latter type of clause are always obligatory. Instead of an overt relator, subordinate clauses generally have an internal relative or indefinite pronoun which is a portmanteau representation[41] acting both as a constituent of the clause and as a subordinator.

Formula 9. Subordinate Clause Type

Sub-Cl = + Subordinator : rel pn/indef pn + Nucleus of primary clause minus any tagmeme replaced by subordinator.

Subordinate clause types are embedded both at the clause and at the phrase level.

a. Subordinate clause types embedded at clause level. At this level subordinate clauses function as nominals. The following are some of the subordinators found at this level of embedding:

wâa (followed by complete primary clause ...(that) with optional occurrence of subject)

Kray (replaces the subject of the included clause) .... (whoever)

The above were found only in subordinate clauses occupying the object slot in the main clause.

The following subordinators were all found to act simultaneously as subject of the subordinate clause. Clauses with these subordinators function as either subject or object in the main clause construction:

Kon Pûu	....	(person who...)
dèk	....	(child who....)
Kɔ̌ɔŋ	....	(thing which....)

The last subordinator above can be replaced by any common noun referring to an inanimate object.

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[41] In a portmanteau representation, two tagmemes are simultaneously represented by a single form.

Examples:

Kǎw bɔ̀ɔk wâa Kǎw yùu bâan yày he say that he live house big	He said that he lived in a big house.
^{m}Kǎw bɔ̀ɔk wâa klìat Cɨ̂ɨ nán mâak she say that hat name that much	She said that she disliked that name very much.
^{m}mây mii Kray rîak Cɨ̂ɨ Tân not exist one call name her	There isn't anyone who calls her by name.
^{m}KunPɔ̂ɔ pen Kon mii Kwaam-rúu father be person have knowledge	Father is a person who has been educated.
^{m}Kun cǎo tɔ̂ŋ pen Kon ŋɔ́ɔ lɔ̀n Miss Jao must be one ask forgiveness her	Miss Jao has to be the one who makes up with her.
^{m}ǎn pen dèk yùu nay oowâat Pûuyày Ann be child stay in teachings adults	Ann is a child who obeys her elders.
sôy níi pen Kɔ̌ɔŋ mii raaKaa mâak	This necklace is something which is very valuable.

b. Subordinate clause types embedded at phrase level. At this level, subordinate clause types function mainly as adjectivals, occurring after the head noun and filling identifier slots in the phrase construction. Subordinate clauses found in this connection are relative clauses with relative pronouns as subordinators. The following pronouns acting as subordinators were found to act simultaneously as subject of the dependent clause:

an (occurs with descriptive clause only).... (which)
sɨ̂ŋ (does not occur with des-Cl nucleus) .... (which/who)[42]
puu (occurs with any primary clause nucleus)...(who)

The following subordinator acts either as subject or object of the dependent clause and has more frequency of occurrence than either of the above:

Tîi (occurs with any primary clause nucleus) ... (who/whom/which/that)

Note: in the case of Tîi type subordinate clauses, when the predicate of the clause consists of a transitive verb or an equational verb and no object follows, the relative pronoun functions as the object. If a subject is present in this type of clause, the order becomes

subordinator
+ O : Tîi ± S : nom + P : tv/eqv. e.g. Kon Tîi C [illegible].

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[42] The meaning given first represents the preferred use of the subordinator in question.

Examples

^{m}rót ɔ̀ɔk càak bâan an kwâaŋ-Kwaaŋ car leave from house which large	The car left the large house.
^{m}lɔ̀n mɔɔŋ râaŋ an ŋaam-saŋàa Kɔ̌ɔŋ Kǎw she look figure which princely of his	She looked at his regally built frame.
^{m}Kǎw hěn Kɔɔ an Kǎaw Pɔ̀ŋ Kɔ̌ɔŋ lɔ̀n he see neck which white clear of her	He saw her beautifully fair neck.
^{m}lɔ̀n duu rɔɔŋTáaw sɨ̂ŋ næ̂æp Táaw lɔ̀n she look shoes which fit feet her	She looked at the shoes on her feet.
^{m}lɔ̀n dâyráp kaan sɔ̌ɔn càak aacaan yày sɨ̂ŋ pen yǐn amerikan she receive teaching from headmistress who be woman American	She was taught by the headmistress who was an American lady.
^{m}Kǎw hǎn pay Taaŋ KunPɔ̂ɔ sɨ̂ŋ nâŋ yùu bon Pɨ́ɨn he turn (aux) toward father who sit (aux) on floor	He turned toward father who was sitting on the floor.
^{c}Tam hây lɔ̀n Pûu fàycay nay kaan lâorian rúu Paasaa aŋkrìt do make she who interested in learning know language English	(It) made her who was already interested in studying understand the English language.
^{m}Kon Tîi yɨɨn yùu nâa tɨ̀k wîŋ maa person who stand (aux) in building run (aux)	The person who was standing in front of the building ran up.
^{c}KunPɔ̂ɔ Cûay ŋaan Tîi Kuan Cûay father help party that should help	Father gives (his) services at those parties that (he feels) he ought to help.
^{m}lɔ̀n cam Túk yàaŋ Tîi Kəəy dâyyin she remember everything that (am) hear	She remembers everything that (she) has heard.

Subordinate clause types also occur as objects of prepositions, e.g.

sǎmràp Kon nâŋ-lên "for people to
for people sit-play sit around on"

in which case the subordinators are the same as those which occur with subordinate clauses functioning as nominal subject or object at the clause level (i.e., Kon, Puu, dèk, etc.)

3. Partial Clause Types

Partial clauses are restricted in the following ways:

1. There is neither an overt relator nor a portmanteau representation of relator+subject/object occurring with this type of clause;
2. subject omission is an obligatory feature of this type; and
3. partial dependent clauses always occur either as objects within another clause structure or as objects of prepositions.

Formula 10. Partial Clause Types

Partial Cl = + Nucleus of primary clause minus the subject tagmeme.

a. *Partial clause types embedded at clause level.* This function of partial dependent clauses is seen mainly in the causative construction where it occurs as filler of the O_1 slot. All primary clause types (with deleted subject) except the impersonal transitive type can occur in this situation.

b. Partial clause types embedded at phrase level. Partial clause types occurred in the corpus as objects of the following prepositions (types of primary nucleus are given on the right):

Pɨ̂a/sǎmràp (for the purpose of	iCl/tCl
dooy (by means of, in the manner of).	iCl/tCl/ desCl
yàaŋ (in the manner of)	eqCl/desCl
pay/maa (to)	iCl/tCl/eqCl

Examples

^{m}lɔ̀n lɨ̂ak sɨ̂aPâa sǎmràp sǔam nay wan nán
she choose clothes for wear in day that
She chose the clothes to wear on that day.

^{m}sǎmii Kɔ̌ɔŋ lɔ̀n Kɨ̂n rót dooy mây rɔɔ lɔ̀n
husband of her ascend car by not wait for her
Her husband got in the car without waiting for her.

^{c}lɔ̀n dâyráp ŋɔndɨan yàaŋ nâa plàap-plɨɨ̂m
she receive pay in manner should be pleased
She received the kind of pay to be pleased about.

^{m}ŋuu nán plìan càak ŋuu Tammadaa pay pen ŋuu Pan Píseèt
snake that change from snake ordinary to become snake kind special
That snake changed from an ordinary snake to a special kind.

Kǎw aw Kâaw maa pɔ̂ɔn hây lûuk
she bring rice to feed for child
She brings rice to feed her child.

Note that constructions with pay and maa functioning as prepositions are similar to infinitive expressions in English.[43]

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[43] For prepositional and other uses of "pay" and "maa," see Kanchana Sindhavananda, "The Verb in Modern Thai," pp. 29-30, fn. 1.

Another point I would like to mention here is that there were several subjectless constructions with the equational verb Kɨɨ in the corpus whose function remains somewhat ambiguous. In these examples, Kɨɨ seems to have the meaning "which is/ which means/that is/ meaning . . ." The construction occurs in appositive position to either the subject or the predicate of an independent clause, so that one solution might be to analyze it as a partial clause occurring in the appositive slot of an item-appositive type of construction. However, this was felt to be too tentative a solution to warrant inclusion in the section on partial dependent clause types. Two typical examples of this function of the Kɨɨ clause are:

Tân aTíkaan Kɨɨ sǎmii Kɔ̌ɔŋ lɔ̀n kamlaŋ rɔɔ
The rector, meaning her husband, was waiting.

lɔ̀n mii kaan sɨ̀ksǎa Pɔɔ Kuan Kɨɨ àan ɔ̀ɔk Kǐan dây
She has education enough, meaning (she is) able to read and write.

IV. CONSTITUENTS OF THE PREDICATE

Of all clause level tagmemes, the predicate tagmeme is by far the most important in the Thai clause. The structure of the Thai verb phrase is more complex than any other type of phrase structure in the language. Predicate constituents will be indicated here so that the reader may have a better understanding of the Thai clause. An important feature of the predicate which affects the clause as a whole is that of negation. Thai clauses are negated by introducing a negative into the verb phrase, although a general picture of the optional negative transformation in Thai clauses can be shown in the following way:

$$\text{Cl} = \pm S + P \pm O \Longrightarrow \text{neg Cl} = \pm S + \text{Neg}^{1} + P \pm O$$

Predicates of all types of clauses can be negated in this manner. A more detailed explanation of the positions of the negative marker will be found in the next section.

A. Expanded Formulas for the Predicate Slot

The following is a list of some of the more typical fillers to be found in the predicate slot and includes formulas giving the structure of the verb phrases.

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[1] This is <u>yàa</u> for imperative, <u>mây</u> for all other clauses.

1. Fillers of the Intransitive Predicate Slot

These consist of: (1) intransitive verbs; (2) coordinate intransitive verbs;[2] and (3) intransitive verb phrases.

Formula 11. Intransitive Verb Phrase

$$iV = \pm \text{ aspect } \overline{\text{marker}_1 \pm \text{pre-verb}}\ \text{aux}_1 \pm \text{pre-verb aux}_2 \pm \text{aspect marker}_2 \pm \text{pre-verb aux}_3 + \underline{\text{intransitive verb}} \pm \text{post-verb aux}_1 \pm \text{post-verb aux}_2/\text{post-verb aspect marker} \pm \text{post-verb aux}_3$$

2. Fillers of the Transitive Predicate Slot

These consist of: (1) transitive verbs; (2) coordinate transitive verbs; (3) transitive verb phrases.

Formula 12. Transitive Verb Phrase

$$tV = \pm\ \overline{\text{am}_1 \pm \text{pre-v}}\ \text{aux}_1 \pm \text{pre-v aux}_2 \pm \text{am}_2 \pm \text{pre-v aux}_3 + \underline{\text{transitive verb}}\ (\pm \text{ object/objects}) \pm \text{post-v aux}_1 \pm \text{post-v aux}_2/\text{post-v am} \pm \text{post-v aux}_3$$

Note: In negative transitive and intransitive clauses the general rule is that when the verb phrase contains an aspect marker (whether pre-verb or post-verb) the

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[2] Coordinate structure is "the coordination of two whole constructions to form a single coordinate construction at that level" (Cook, *Introduction to Tagmemic Analysis*, p. 33).

negative marker *mây* occurs before the aspect marker, otherwise it precedes the main verb. A negative marker never precedes an auxiliary. When there is more than one aspect marker in the verb phrase, the position of the negative is usually determined on semantic grounds but it is quite possible to have more than one negative in a verb phrase of this type, for example:

Kǎw mây Kəəy Tam mây dây He has never not suc-
he neg. (am) do neg (am) ceeded in doing (it).

Note also that the two entities connected by the sign ┌────┐ are mutually exclusive.

3. Fillers of the Equational Predicate Slot

These consist of: (1) equational verbs; (2) coordinate equational verbs; (3) equational verb phrases.

Formula 13. Equational Verb Phrase

eqV = ± neg ± equational verb + PA ± post-v aux

Note: 1. The presence of the negative in this type of verb phrase requires the presence of the equational verb.

2. When the equational verb is *Kɨɨ*, it is changed to *Cây* in the negative, so that instead of •neg.eqCl = ± S + mây + Kɨɨ + P we have neg.eqCl = ± S + mây + Cây + PA

3. No aspect markers occurred with equational or descriptive verb phrases in the corpus, but this is due to the limitation of the data. Aspect markers can occur in all types of verb

phrases (with the important exception of the equational verb phrase with Kɨɨ as the main verb). When aspect markers do occur in these types of verb phrases, the pattern of negation follows that given above for intransitive and transitive verb phrases.

4. Fillers of the Descriptive Predicate Slot

These consist of: (1) descriptive verbs; (2) coordinate descriptive verbs; (3) descriptive verb phrases.

Formula 14. Descriptive Verb Phrase

$$\text{desV} = \pm\ \text{pre-v aux}_1 \pm \text{pre-v aux}_2 + \underline{\text{descriptive verb}}$$
$$\pm\ \text{post-v aux}_1 \pm \text{post-v aux}_2$$

B. Word Order in the Verb Phrase

There are various restrictions governing the co-occurrence and positions of forms occurring in the verb phrase, some of which I shall tentatively systematize below. The aspect markers and auxiliaries which I shall refer to are those which occur most frequently in the language. First, a list of aspect markers will be given, followed by a chart showing their positions of occurrence. Auxiliaries will then be presented in the same manner. Finally, some tentative suggestions concerning their co-occurrence relationships will be supplied.

1. Aspect Markers (pre-verb)

Kuan (should, ought to ...)

tɔ̂ŋ (must, have to ...)

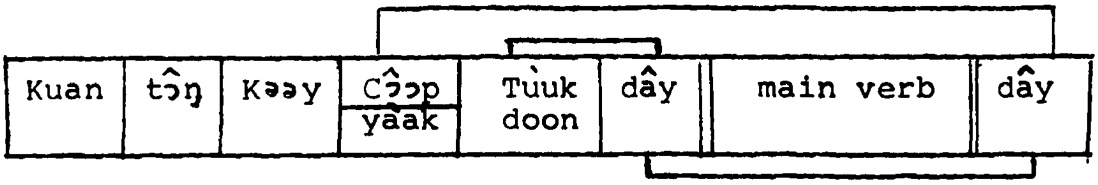
Kəəy (have experience of ...)

Cɔ̂ɔp (like to ...)

yàak (3ish to ...)

dây (have opportunity to ...)

Of the above, only dây can occur in post-verbal position, when the meaning becomes "be able to . . .". The two positions of dây are mutually exclusive (i.e. dây never occurs twice in the same clause). Note also that the two passive markers Tùuk and doon share the characteristics of aspect markers and will be listed in the chart below. It is rare for a clause to contain more than two pre-verb aspect markers although grammatically that is quite possible. The post-verb dây does not occur with pre-verb aspect markers Cɔ̂ɔp. The chart shows the typical ordering of these constituents in a verb phrase. Note that pre-verb dây and the passive markers are mutually exclusive. Mutually exclusive entities will again be indicated by the sign ┌──┐ or └──┘.



Kuan	tɔ̂ŋ	Kəəy	Cɔ̂ɔp yàak	Tùuk doon	dây	main verb	dây

From this chart, and using the verb càp "catch" in clauses with a passive marker and the verb lên "play" in the others, the following clauses with two aspect markers can be generated:

(Kǎw)	Kuan tɔ̂ŋ	lên	(He)	really ought to play.
"	Kuan Kəəy	"	"	should have played before (or He should have had an opportunity to play)
"	Kuan Cɔ̂ɔp/yàak	"	"	should like/want to play.
"	Kuan Tùuk/doon	càp	"	should get caught.
"	Kuan dây	len	"	should have a chance to play.
"	Kuan	" dây	"	should be able to play. (or He should know how to play)
(Kǎw)	tɔ̂ŋ Kəəy	lên	(He)	must have played before. (or He must have had an opportunity to play)
"	tɔ̂ŋ Cɔ̂ɔp/yàak	"	"	must like/want to play.
"	tɔ̂ŋ Tùuk/doon	càp	"	will certainly be caught.
"	tɔ̂ŋ dây	len	"	will certainly have an opportunity to play.
"	tɔ̂ŋ	" dây	"	must be able to (i.e. know how to) play.

(Kǎw)	Kəəy Cɔɔp/yàak	lên	(He)	used to like/want to play.
"	Kəəy Tùuk/doon	càp	"	has been caught before.
"	Kəəy dây	lên	"	has had an opportunity (or used to have opportunities to play.
"	Kəəy	lên dây	"	used to be able to play.
(Kǎw)	Cɔ̂ɔp Tùuk/doon	càp	(He)	likes to get caught.
"	Cɔ̂ɔp dây	len	"	likes to have the chance to play.
(Kǎw)	yàak Tùuk/doon	càp	(He)	wants to get caught.
"	yàak dây	len	"	wants to have an opportunity to play.
"	yàak	" dây	"	wants to be able to play.
(Kǎw)	Tùuk/doon	càp dây	(He)	has been caught.

2. Auxiliaries

For a detailed and enlightened discussion of Thai auxiliaries the reader should see Kanchana Sindhavananda's treatment of the problem in chapter two of her dissertation "The Verb in Modern Thai." Her presentation provided valuable reference for this part of my investigation. The following list will include the complete list of auxiliaries given on page 38 of "The Verb in Modern Thai" with the exception of nâa which I do not regard as an auxiliary, although there were too few occurrences of it in my corpus for me to be able to assign a definite role to it.[3] I have added two other auxiliaries to the list, namely Kɨ̂n and loŋ, which seem to parallel pay and maa in usage, the latter occurring mainly with action type verbs (transitive or intransitive) while the former occur in this function only with descriptive and equational verbs. Pre-verb auxiliaries are as follows:

Assertion markers:	cà
	Koŋ
	àat
Progressive markers:	yaŋ
	kamlaŋ
Perfective markers:	Pâŋ

The following are auxiliaries which occur in post-verb position:

Benefactive marker:	hây
Progressive marker:	yùu
Perfective markers:	maa
	pay
	lǽæw
Comparative markers:	Kɨ̂n
	loŋ

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[3] Edward M. Anthony, Deborah P. French and Udom Warotamasikkhadit in Part 1 of their book Foundations of Thai (Ann Arbor: The University of Michigan Press, 1968) suggest that "nâa + transitive verb functions as a descriptive verb and means 'to be worthy of ____.'" (p. 315). The construction is reminiscent of the kind of clause which I have called the "unmarked passive" (formula 5b(1)), only in this case the subject can be an animate noun and no manner tagmeme in the active clause is required. Compare

(1) Kǎw kin Kâaw arɔy   Kâaw Kin arɔy
(2) Kǎw kin Kâaw   Kâaw nâa kin

Word order among the auxiliaries is more complicated than among the aspect markers. I have found that dividing the material into two separate charts takes care of the problem better than attempting to show all the relationships in one chart. Note that cà has many positions of occurrence. However, it never occurs more than once in any single clause so that any one of the various positions of this auxiliary excludes all the others. Note also that yaŋ often occurs with the negative marker mây. When this is the case kamlaŋ and yùu cannot occur, so that:

*V = yaŋ + kamlaŋ + neg + verb + yùu is not possible.

Instead, the verb phrase is reduced to:

V = yaŋ + mây + verb.

The following charts show relative positions of occurrence of the auxiliary markers:

I	Koŋ (cà) àat (cà)	yaŋ	kamlaŋ	cà	main verb	hây	yùu	lǽæw

Note: kamlaŋ and cà do not co-occur when yaŋ is present in the verb phrase.

II	Koŋ (cà) àat (ca)	Pə̂ŋ(cà)	kamlaŋ(cà)	verb	Kɨ̂n/pay/Kɨ̂n pay loŋ/maa/loŋ maa Kɨn maa/loŋ pay	hây	yùu	lǽæw

The above charts show near maximum potential occurrences of aspect markers and auxiliaries, each of which were separately investigated. It would be too complex a task to attempt to put the two sets of constituents together in any coherent fashion here. Only a few remarks can be made at this point. One is that *Kuan* does not co-occur with either *Koŋ* or *àat*. Another is that *tɔ̂ŋ*, *dây*, *Tùuk* and *doon* are not found in positions preceding the auxiliary *cà*. The post-verb entities are fewer and lend themselves more easily to systematization then pre-verb ones. The post-verb aspect marker *dây* cannot be preceded by a negative marker if it co-occurs with *Tùuk* or *doon*. It also seems that *dây* combines with post-verb auxiliaries in the following way:

V +	Kɨ̂n/pay/Kɨ̂n pay/Kɨ̂n maa loŋ/maa/loŋ maa/loŋ pay	hây	yùu	dây	lǽæw

Since the reader can easily see that such auxiliary charts contain the same type of generative potential as was demonstrated for aspect markers, further illustration is not offered.

It should be noted that this particular approach to the systematization of the Thai verb phrase was begun, as noted on page 19, by Edward M. Anthony in his article "Verboid Constructions in Thai." His work was instrumental in helping me to gain a better insight into the organization of these forms within the predicate phrase structure.

It is to be hoped that the work done so far will provide the starting point for future investigations into this very interesting area of the Thai language.

V. CLAUSE EXPANSIONS AND VARIANTS

A. Expanded Formulas for Primary Clauses

Compared to the complexity of the predicate tagmeme, the other tagmemes in the Thai clause construction reveal relatively simple constituent structures. The clauses which occurred in the corpus were generally short, consisting of few tagmemes without many changes in order. The temporal tagmeme was the only one clearly found to have an optional differing position of occurrence. Changes in the order of tagmemes is therefore not an important feature in clause variation for the Thai language. Clause variation can be achieved to a greater extent by means of optional expansion in the number of tagmemes.

The following formulas give the maximum number of tagmemes found in the corpus for each of the primary clause types. Only the function slot labels will be given here. The class of fillers for each tagmeme will be discussed in the next section. Nuclear tagmemes will be underlined. It should be noted that predicates of all clause types may be discontinuous, with object or manner tagmemes occupying the position between the main verb and post-verb auxiliaries.

Formula 15. Expanded Intransitive Clause

± Time ± Subject-as-actor + Intransitive Predicate
± Manner ± Benefactive ± Location ± Time
± Purpose

Formula 16. Expanded Transitive Clause:

± Time ± Subject-as-actor + Transitive Predicate
± Object(s) ± Manner ± Benefactive ± Instrument
± Location ± Purpose ± Time

Formula 17. Expanded Equational Clause:

± Time ± Subject-as-item ± Equational Predicate
+ Pred. Attribute

Formula 18. Expanded Descriptive Clause:

± Time ± Subject-as-item + Descriptive Predicate
± Manner ± Degree ± Purpose ± Location ± Time

Note: Variation in the order of tagmemes is probably a stylistic feature with each person using a certain preferred order from among the possibilities. Although the corpus does not indicate this, the order ± T ± L + Cl Nucleus are quite common among some Thai speakers.

B. Fillers of Optional Tagmemes

Variants of clauses are also formed by means of different fillers of functional slots. The following is a list of some of the typical classes of fillers which can be found in the optional clause level slots in the Thai language. The list is merely representative and is not intended to be exhaustive. Where phrases occur as manifesting items, their consistuent structures will be indicated so that the reader may be able to make better use of the sample lexicon listed in Appendix B at the end of this paper.

Fillers of the Subject Slot:

nouns;

pronouns;

noun phrases (+ H : n ± Mod : demonstratives/ possessive pns./ numerals/adjectives;

subordinate dependent clauses.

Fillers of the Object Slot:

These are the same as fillers of the subject slot with the following differences:

1. The object slot of impersonal clauses is often filled by a non-dependent type of clause.
2. Causative clauses contain partial clauses as fillers of the O_1 slot.
3. Fillers of the O_2 slot include prepositional phrases.

Fillers of the Predicate Attribute Slot:

nouns;

noun phrases;

subordinate clauses (without wâa...);

adjectives or adjective phrases (+ H : adj ± Mod: intensifier);

adverbs or adverb phrases (+ H : adv ± Mod: intensifier).

Fillers of Slots of Peripheral Tagmemes:

Time : temporal words/prepositional (relator-axis) phrases/ RA-clauses.

Manner : adverbs/ adverb phrases/ RA-clauses.

Location : mainly location words or relator-axis phrases.

Other peripheral tagmemes occurring less frequently have less variety in filler classes:

Purpose : mainly relator-axis phrase.

Degree : adverb or adverb phrase of degree.

Agent : Ra-phrase (± R : dooy + H : nom (animate)).

Instrument: Ra-phrase (± R : dûay/dooy + H : inan. nom).

VI. SUMMARY AND CONCLUSIONS

The purpose of this study has been to investigate the structure of Thai clauses according to the tagmemic approach. The principal contrastive clause types in Thai were analyzed as follows:

Independent Clause Types

Primary Clauses

Declarative Clause Types

iCl $= \pm S_a : \text{nom} + P : \text{iv}$

tCl $= \pm S_a : \text{nom} + P : \text{tv} \pm O : \text{nom}$

eqCl $= \overbrace{\pm S_i : \text{nom} \pm}^{+} P : \text{eqv} + PA : \text{nom/adjl/advl}$

desCl $= \pm S_1 : \text{nom} + P : \text{desv}$

Sub-types of Transitive Clauses

impers.tCl $= \emptyset + P : \text{mii} + O : \text{Cl/nom}$

di-tCl $= \pm S_a : \text{nom} + P : \text{di-tv} \pm O_1 : \text{nom} \pm O_2 : \text{nom}$

caus.tCl $= \pm S_a : \text{nom} + P = \text{hây} \pm O_2 : \text{nom} + O_1 : \text{partial Cl}$

Passive Clauses

marked pCl $= \pm S_o : \text{nom} + \text{pm} : \text{Tùuk} \pm \text{Ag} : \text{nom} + P : \text{tv}_u$

pCl with inan. S $= \pm S_o : \text{inan. nom} + P : \text{tv} + M : \text{aux/adjl/advl}$

pCl with dâyráp $= \pm S_o : \text{nom} + P : \text{dâyráp} + O : \text{nom} \pm \text{Ag} : \text{RA}$

Derived Clauses

Interrogative Clauses

Yes-No Q-Cl $= + \text{Nucleus of primary clause} + \text{QM} : \text{Q-particle/Q-tag}$

info. Q-Cl = + Nucleus of primary clause (minus any
tagmeme replaced by question tagmeme)
+ Q : question word

Imperative Clauses

C-Cl = + Nucleus of primary declarative clause (with
change in predicate tagmeme to imperative)
± C : imperative particle

Dependent Clause Types

Subordinated or Relator-Axis Clause Types

RA-Cl = + R : relator + Ax : nucleus of primary clause

Subordinate Clause Types

Sub-Cl = + Sub : rel pn/indef pn + Nucleus of primary
clause minus any tagmeme replaced by subordinator

Partial Clause Types

Partial Cl = + Nucleus of primary clause minus the
subject tagmeme

I have attempted to show relationships between derived clauses and the primary clauses through the use of illustrative examples in which the notion of transforms was utilized to a considerable extent. Transformational techniques may also prove useful in handling the complex problem in connection with the combination of auxiliaries and aspect markers within the verb phrase.

In the course of the analysis several promising areas for further investigation were discovered. Among the more interesting possibilities are passivity, response type utterances, co-occurrence restrictions within the verb phrase, and the use of imperative markers in Thai, especially the combinations of particles which signify various shades of meaning. It was also found that a combined tagmemic and transformational approach can provide an effective tool of research into language structures; more effective, perhaps, than a purely transformational type of approach which too often is not based on a sound taxonomic foundation. I share the belief with Archibald A. Hill that such a foundation is "the necessary basis for all the more operative types of scientific analysis."[1]

It is hoped that by making a clear distinction between main verbs and aspect markers a great deal of unnecessary complexity within the Thai clause has been eliminated or at least reduced. Many verbal strings which were usually treated as "complex" in earlier studies have been shown to be analyzable as simple clause types. This difference in approach may perhaps be utilized to advantage in pedagogical situations. In fact, the strong pragmatic basis of tagmemics should make the model appealing to most teachers, and as a teacher I hope that this analysis or some part of it may indeed prove to

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[1] Archibald A. Hill, "Summary and a Peek at the Future," in Linguistics Today, ed. by A. A. Hill (New York: Basic Books, Inc., 1969), p. 277.

have some useful application in the practical classroom situation.

Finally, since tagmemics makes full use of the notion of contrastive differences (often considered to be the principal investigative tool contributed by the structuralist school of linguists) as well as incorporates the findings of transformational grammar in its framework, the approach in this way seems to have an advantage over a purely structural or a purely transformational type of approach. The model was found to be a most suitable medium for this investigation, providing a well-organized method of analysis and a useful grammatical unit which combines the explanation of both form and function (including the real-world function shown through subscripts symbolizing the situational roles of the units). Therefore it is to be hoped that this attempt at analysis of the clause structure of Thai through the tagmemic approach may contribute in some measure to a better understanding of the nature of language as a whole, and perhaps also be of some value to those wishing to learn something of the Thai language.

APPENDIX A

PHONEMIC SYMBOLS

Consonants

			Labial	Apical	Palatal	Velar	Glottal
Stops	vl.	unaspirated	p	t	c	k	
		aspirated	P	T	C	K	
	vd.	unaspirated	b	d			
Spirants:	vl.		f	s			h
Resonants	vd. Nasals		m	n		ŋ	
	vd. Laterals			l			
	vd. Retroflex			r			
	vd. Semivowels		w		y		

Vowels

	Front	Central	Back
High	i	ɨ	u
Mid	e	ə	o
Low	æ	a	ɔ

Note: Double vowels indicate length

Tones

Mid	(no mark)
Low	ˋ
Falling	ˆ
High	ˊ
Rising	ˇ

The phonemic symbols used in this study are based on those employed by Kanchana Sindhavanada in "The Verb in Modern Thai" with modifications adopted from the notational system used by Edward M. Anthony, Deborah P. French, and Udom Warotamasikkhadit in Foundations of Thai.

APPENDIX B

A SAMPLE CLASSIFIED LEXICON OF THAI

The following is a classified list of the major lexical items which were used in this study:

A. The Noun System

1. Nouns and Pronouns

(form)	(class)	(gloss)
àTíkaan	n.	"rector"
bâan	n.	"house"
bìdaa	n.	"father"
Cǎn	pn.	"I/me"
dèk	n.	"child"
kaansɨ̀ksǎa	n.	"education"
KamCom	n.	"praise"
Kanǒm	n.	"candy"
Kǎw	pn.	"he/him/she/her/ they/them"
Kon	n.	"person/people"
Kon	pn.	"someone"
Kɔ̌ɔŋ	n.	"thing"
Kray	pn.	"whoever"
Krua	n.	"kitchen"
Kun	pn.	"you"
KunPɔ̂ɔ	n.	"father"
lɔ̀n	pn.	"she/her"

(form)	(class)	(gloss)
lôok	n.	"world"
lûuk	n.	"child"
man	pn.	"it"
mæ̂æ	n.	"mother"
naay-woŋ	n.	"conductor (of orchestra)"
ŋaan	n.	"work"
ŋən	n.	"money"
plee	n.	"cradle"
Pét	n.	"diamond"
Pîinɔ́ɔŋ	n.	"siblings"
PûuCûay	n.	"assistant"
rɨ̂aŋ	n.	"story/matter"
rooŋrian	n.	"school"
rûn	n.	"age group"
sǎay	n.	"string"
sǎamii	n.	"husband"
samùt	n.	"book"
sǐaŋ	n.	"voice"
sɔ̂yKɔɔ	n.	"necklace"
Tân	pn.	"he/she/you (polite)"
tôn-máy	n.	"tree"
tuaTææn	n.	"substitute"
TápTim	n.	"ruby"
Tîi	n.	"place"
Tîi	pn.	"who/whom/which/that"

2. Noun Modifiers

(form)	(class)	(gloss)
baw	adj.	"soft/light"
daŋ	adj.	"loud"
diaw	adj.	"same"
nán	dem.	"that"
níi	dem.	"this"
ŋaam	adj.	"beautiful"
sanùk	adj.	"happy/gay"
sǔay	adj.	"pretty"

B. The Verb System

1. Verbs and Markers

a. Main Verbs:

àan (ɔ̀ɔk)	tv.	"(able to) read"
bɔ̀ɔk	di-tv.	"tell"
Com	tv.	"praise"
dâyráp	pv.	"receive"
hây	di-tv.	"give"
hây	caus.tv.	"make/let (someone do something)
hěn	tv.	"see"
Kayǎn	desv.	"diligent"
Kǐan (dây)	tv.	"(able to) write"
Kɨɨ	eqv.	"be"
lên	tv.	"play"
maa	iv.	"come"

(form)	(class)	(gloss)
mii	tv.	"have"
nâŋ	iv.	"sit"
nǐi	iv.	"escape"
ɔ̀ɔk	iv.	"go out/leave"
pen	eqv.	"be"
plæ̀æk	desv.	"different/ strange"
rɔɔ	tv.	"wait for"
sòŋ	di-tv.	"hand (something to someone)"
Tam	tv.	"do/make"
wîŋ	iv.	"run"
yím	iv.	"smile"
yùu	iv.	"stay/be there"

b. Aspect Markers and Auxiliaries:

Since these have been listed together in Ch. IV.B. they will not be given here.

2. Verb Modifiers

kan	adv.	"together"
Kâaŋ-nɔ̂ɔk	"	"outside"
mâak	"	"much"
nîi	"	"here"
nɔ̀y	"	"a little bit"
Pɔɔ Kuan	"	"enough"
Tii	"	"one time"
Tîi-nîi	"	"here"

C. Other Items

1. Particles

mây	negative
mǎy	Q-particle
ná	imperative particle
sí	" "
yàa	imperative negative

2. Prepositions

càak	"from"
dooy	"by means of"
dûay	"with"
hây	"to/for"
kàp	"with"
klây	"near"
Kɔ̌ɔŋ	"of"
maa	"to"
pay	"to"
Pɨ̂a	"for the purpose of"
sǎmràp	"for"
troŋ	"at"

Note: Question words, clause relators and subordinators which were discussed as groups have been omitted from this list. Please refer to the pertinent sections in the paper for them.

GLOSSARY OF TERMS

adj	adjective
adjl	adjectival (word/word group functioning as adjective)
Ag:	agent slot
am	aspect marker
aux	auxiliary
adv	adverb
advl	adverbial (word/word group functioning as adverb)
Ax:	axis slot (in relator-axis clause)
C	command/command slot
Cl	clause
caus.tCl	causative transitive clause
desCl	descriptive clause
desv	descriptive verb
desV	descriptive verb phrase (word group with descriptive verb head)
di-tCl	di-transitive clause
di-tv	di-transitive verb
eqCl	equational clause
eqv	equational verb
eqV	equational verb phrase (word group with equational verb head)
H:	head slot (phrase level)
iCl	intransitive clause
impers.tCl	impersonal transitive clause
inan.	inanimate

Info. Q-Cl	information question clause
iv	intransitive verb
iV	intransitive verb phrase (word group with intransitive verb head)
L:	location slot
M:	manner slot
Mod:	modifier slot (phrase level)
n	noun
nom	nominal (word or word group functioning as a noun)
neg	negative
O:	object slot
P:	predicate slot
PA:	predicate attribute slot
pCl	passive clause
pm	passive marker
pn	pronoun (class of words used in place of nouns)
prep	preposition
Q	question/question slot
QM:	question marker slot
R:	relator slot (in relator-axis clause)
RA-Cl	relator-axis clause
Ra	relator-axis phrase
rel	relative
S:	subject/subject slot
S_a:	subject-as-actor slot
S_i:	subject-as-item slot

S_o:	subject-as-recipient-of-action slot
Sub	subordinate/subordinator slot
T:	temporal slot
tCl	transitive clause
tv	transitive verb
tv_u	transitive verb of unpleasantness
tV	transitive verb phrase (word group with transitive verb head)

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