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Tai Verbal Structures and Some Implications for Current Linguistic Theory

A dissertation submitted in partial satisfaction of the requirements for the degree Doctor of Philosophy in Linguistics

by

Rosa Needleman

1973
The dissertation of Rosa Rosenstein Needleman is approved, and it is acceptable in quality and in form for publication on microfilm:

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Sandra A. Thompson, Chairman
To My Parents
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ACKNOWLEDGEMENTS

With great gratitude I wish to acknowledge the help, patience and willing cooperation of my invaluable informant and teacher, Rasami Karnchanachari Vichit-Vadakan. Even more, I am grateful for her friendship—which made my study of Tai a wholly enjoyable endeavor. My thanks also to Dr. Vibun Vichit-Vadakan and to all my other Tai informants for their help, indeed for their very interest in this work.

My thanks go also to the UCLA Department of Linguistics for happy years as a student; to the faculty and the students who taught and inspired me and especially to Professors Stockwell, Campbell and Fromkin for their encouragement and for more tangible support. I want to express my very deepest gratitude to Professor Sandra Thompson, the Chairman of my Doctoral Committee, for her unfailing assistance and her unfailing kindness. Always available for consultation or conversation, she guided this material into its present form; its shortcomings, however, are all my own.

I am grateful to Renee Wellin, Anna Meyer and Teddy Graham for many favors, for their concern and encouragement and to Teddy for her fine typing.

Finally, my sincere thanks to all my friends for their understanding and support—always.
I also acknowledge the following sources of support during my years at UCLA: from 1968 through 1970 I held a Research Fellowship granted by the Ford Foundation for International and Comparative Studies; in 1970-1971 I held a Title VI Fellowship under the National Defense Education Act; in 1972 I was awarded a National Science Foundation Traineeship.
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ABSTRACT OF THE DISSERTATION

Tai Verbal Structures and Some Implications for Current Linguistic Theory

by

Rosa Needleman

Doctor of Philosophy in Linguistics

University of California, Los Angeles, 1973

Professor Sandra A. Thompson, Chairman

In this dissertation, Tai verbal structures are examined within the framework of an "Aspects"-type of generative-transformational model of Linguistics. Where linguists have proposed modifications to that model, these have been considered in the light of their relevance to the data presented here.

The criteria significant for determining members of the category verb are introduced in Chapter 2 and various structures are tested to determine whether they are "verbal". Chapter 3 is an analysis of several types of complex sentences: the indirect object construction, causative sentences, the passive in Tai and complement constructions. The topic of Chapter 4 is "serial verbs". The surface structure of strings of verbs is shown to be unrevealing of the different deep structures from which such strings are actually derived. The analysis shows some verb series to be compound words, others are derived by phrase structure
rules and others by conjunction or embedding. Suggestions are also made regarding the kind of rules a lexical component must have if the data presented here is to be satisfactorily explained. In the Concluding Remarks some questions are raised regarding co-occurrence restrictions for verb series and the general process of negation in Tai is considered.
Chapter 1

1. The purpose of this study is two-fold; to re-examine aspects of Tai grammar in the light of modern theories of linguistics; to contribute knowledge of the particular characteristics of this language to a more viable hypothesis of linguistic universals. I think it can be shown that the deep structure of Tai and the phrase structure rules necessary to generate that deep structure—differ significantly from other languages (English, for one) so that the possible "universality" of the base structure is a notion linguists must abandon. I believe, also, that Tai demonstrates that the goal of defining syntactic function ("subject of the sentence") universally by configuration of the base is equally misguided. Although I have given it less attention than other questions raised here, I hope to show that whatever semantic "classes" (or individual features) which may be shown to influence or govern syntactic phenomena (such as complement types, for example) will not normally be universal in nature. I think the data analyzed here will support those conclusions.

Tai has been studied for some time by scholars—usually within the framework of tradition Latin-based grammar—and more recently by linguists interested in tracing its genetic relationships. There seems to be, however, very little
written on the structure of the modern language and therefore some of the most interesting features of its syntax have been ignored by theoreticians actively involved in developing explanatory theories of universal language phenomena. There is little doubt that information about Tai should be valuable in constraining or revising aspects of linguistic theory.

In the main, the framework in which I will discuss Tai syntax is Chomsky's *Aspects of the Theory of Syntax* (1965). Where suggested modifications to the theory, such as Lakoff (1965, etc.) and Ross (1970) or extensions to it such as Fillmore (1968) seem relevant or more "explanatory" of the data, I have made separate reference to them. I shall assume at the outset that there is a well-defined level of deep structure, syntactically motivated. At this level lexical insertion takes place; the syntactic information necessary to semantic interpretation is present in the structure; transformations take place following lexical insertion (with some exceptions) and are meaning-preserving. This is essentially the most conservative position one might take—but is one which I wish to use as a basis for analysis because it is the most constrained. I shall then discuss evidence from Tai which, independently, indicates that the highly constrained and conservative position is untenable in several respects. I shall also show where suggested revisions of the *Aspects* model also fail to explain Tai data.
I have chosen to present a study of Tai verbal structures, partly because some limitation of scope to a reasonable size is a necessity, partly because the verbal structures seem to me to be of particular interest theoretically. Tai is unusually rich in verbal phenomena, it would seem. In Chapter 2 I develop some criteria to determine the presence of a true verb in numerous constructions—not altogether a self-evident matter in Tai. Chapter 3 deals with a number of embedding constructions: the indirect object, causative sentences, the Tai passive structure and complement sentence types. Chapter 4 is a study of "serial" verbs. In analyzing each structure I have attempted to describe and explain first within a conservative framework; where some solution was within reach by an extension or modification of that framework, I chose that solution. There are, however, some problem areas in Tai syntax for which current theories would seem to provide no good solution at all. In those instances I have indicated a suggested approach to revision where possible. Finally, there are a number of remaining questions which I have made explicit and must leave open for further investigation and study.

2. The Tai languages are spoken from the Assamese plain in India to the island of Hainan and from China's Kweichow Province to the Malay Peninsula. Thus it includes languages and dialects spoken over most of Southeast Asia. It is
generally believed that the Tai people migrated from their home in lowland central and south China from around 800 A.D. through 1300 A.D. In, roughly, 1280 A.D. a basically phonemic alphabet was designed by a Tai king. (There are other languages in the Tai family which have individual alphabets.) A considerable amount of descriptive analysis—for comparative purposes—has been done on many of the Tai languages and a tentative three-way branching of the family has been postulated by Li Fang Kuei. He postulates Southwestern, Central and Northern languages; there are, of course, many dialects/languages which have not yet been studied and which may radically alter the picture when they are better known.

There is still an unanswered question as to whether the Tai people were really Chinese (Han), speaking a Chinese language originally or whether they were really a separate people. Surprisingly enough, it is also an open question still, as to whether Tai and Chinese are related genetically. For many years it was generally held that both families were members of a larger grouping. More recently this assumption has been challenged by a number of eminent scholars, among them Haudricourt and Benedict. The languages of Asia have been in contact for centuries and large numbers of lexical items have been borrowed. We often cannot tell the loans from cognates; worse, we cannot always determine the direction of borrowing when a loan word does seem to be indicated. For this and for other reasons the classic comparative method, when applied to Tai and Chinese, has proven
severely deficient. There may well be no formal way at all to demonstrate the relationship—if it exists. For example, attempts to formally relate the tones of both languages by establishing a proto-tone system from which the development could be traced have always proven unsuccessful. The lack of morphonemic alternations and a complex morphological system (for reconstructing earlier forms) is a serious handicap in applying the method. A. Meillet has claimed that the relationships between languages can be demonstrated only if they do have complex morphologies. Isidore Dyen (1962) insists on the absolute necessity for the linguist to distinguish between cognate and loans:

since even borrowed words can show systematic correspondences and only the elements tightly involved in morphology are not likely to be borrowed.

Apparently a great part of the Tai vocabulary may consist of Chinese loans.

Benedict (1942) has proposed that rather than look for a genetic relationship between Tai and Chinese, linguists should regard Tai as part of a Tai-Kadai-Indonesian family. His claim is that the lexical resemblances in Tai and Chinese are of a restricted range—numbers, words for parts of the body and animal names—and therefore not indicative of a common ancestral source. He uses other lexical resemblances to support his hypothesis; unfortunately, they are quite limited in number. More importantly, inasmuch as the Indonesian languages are di-syllabic while Tai is
mono-syllabic, Benedict is comparing whole words to parts of words (in no necessary order) with the same theoretical status. His theory is also unable to account for the origin of tone in Tai and the loss of affixes—if the origin of the Tai family is indeed to be traced to a Proto-Indonesian source. Most unfortunately a number of texts have, uncritically, assumed that his hypothesis is valid, including it as material needing no further comment.

It may well be that the best hope for establishing the relationships between Tai and Chinese and Tai and Vietnamese (also undemonstrable, so far) lies in typological comparisons and syntactic patterning. At the present time we have no established method for this kind of comparison nor can we distinguish significant from trivial similarities. We can merely examine the kind of structure each language exhibits in detail, develop the most explanatory rules for the data possible, and then examine the similarities and differences in the analyses of the languages being compared—and hope, ultimately to find some conclusive evidence. We will, at least, have succeeded in separating surface phenomena—as, for example, the differing word orders in the noun phrase of these languages—from deep structures (such as the structure of causative or passivized sentences). At best, we will be able to suggest hypotheses about "typological" or "familial" language structures which will be of use in deciding what can or cannot be considered linguistically universal. I hope this study will be a contribution to that goal.
3. The few generative studies of Tai which have been done recently (e.g. Warotamasikkhadit (1963)) have presented a body of phrase structure and transformational rules very closely modeled on those for English structure and, accordingly, very unrevealing of Tai. Inasmuch as most linguists are motivated these days by the desire to "find" universal structures in language this is perhaps an understandable, but nevertheless, unfortunate and incorrect picture of Tai. I would prefer to give an overview of the language--without rules. Within the remainder of this study I will propose those rules which I believe more accurately represent the structure of Tai. In many instances those rules will differ markedly from any proposed for English. They will be justified, however, by the facts themselves.

The surface word order is normally Subject-Verb-Object; however, when present, an expression indicating time is most often found at the beginning of the sentence, preceding the subject:

\[
\begin{array}{cccc}
tcoon & cha'aw & khaw & pay \\
N & N & Pro & V \\
part morning & 3rd & go & school \\
\end{array}
\]

"In the morning he goes to school"

When no other constituents (than possibly an indirect object) follow the verb, the expression of time may be extrapolated to the end of the verb phrase.

Other constituents of the sentence include words of "aspect" such as \( \text{lawaw} \) (indicating that something has been
done "already") or same ("always"), particles—including sentential modalities (command, interrogation, doubt) and particles of status, sex, degree of intimacy. These constituents are outside the verb phrase and also have a fixed order in the surface string. The particles may be considered not merely sentence-final elements but utterance final. Although other constituents may be preposed to the end of a higher sentence in one embedding construction (waa embeddings), particles only appear once at the end of an utterance—no matter how many embedded or conjoined sentences it consists of.

The noun phrase consists of a noun, a "specifier" (noun, verb or quantifier), a possible number (or "number word" which may itself be a noun, verb or quantifier) a classifier and a demonstrative (either a simple demonstrative or a demonstrative-adjective or demonstrative-interrogative). Examples are the following:

$\text{dek suk s'am khon}$ "merely three children"
$\begin{array}{llll}
 N & Sp & Nm & C. \\
 N & Q  & \text{child} & \text{merely} & \text{three} & \text{people} & \text{about}
\end{array}$

$\text{dek no'oy khon nii}$ "these few children"
$\begin{array}{llllll}
 N & V & Cl & Dem & \text{child} & \text{to be} & \text{people} & \text{this} & \text{less}
\end{array}$

$\text{dek s'am khon nay}$ "which three children?"
$\begin{array}{lllllll}
 N & Nm & Cl & Dem-Inter & \text{child} & \text{three} & \text{people} & \text{which}
\end{array}$
The specifier differs from a "number word" in that the former occurs with—and preceding—numbers, while the latter occurs in place of some number. If a number is present in the noun phrase it must be accompanied by a classifier. Classifiers are themselves nouns and most can occur independently as the head noun of a noun phrase; there are a few, however, which have no function as independent nouns. The choice of classifier is governed by the head-noun. It can indicate a collective unit such as a group—klum; or it can indicate an individual unit—khon "person", chin "piece", tua "body". A number plus classifier and demonstrative can be permuted to the end of a complex NP:

\[ māt thîi kat khaw sām tua nī wiŋ pay \]

N  Rel  V  Prep  Nm  Cl  Dem  V  V

dog  bit  3rd  three  body  this  fun  go

"The three dogs that bit him ran away"

If there is no demonstrative present, a number plus classifier can move, not merely to the end of a complex NP but to the end of a simple sentence:

\[ dēk māt kap dichân sām khon "\text{Three children came with me}" \]

N  V  Prep  Pro  Pro  Nm  Cl

child  come  with  1st  three  people

It does not appear that a complement clause is ever embedded in a noun phrase, though relative clauses do, of course, occur. They consist of a relative marker (thîi, ʂ$h$, phû$\ddot{u}$) at the head, replacing the constituent in the lower sentence deleted on identity with a constituent in the upper
one. These relative markers cannot be considered pronouns inasmuch as they show none of the usual characteristics of Tai pronouns—that is, an indication of either status, sex or degree of familiarity. Several unpublished papers by R. McCord deal with a detailed analysis of relative clauses in Tai.

Nominalization in Tai is a fairly straightforward process. Verbs may be nominalized with kaan—resulting in a noun of activity:

\(^\wedge\) ch\(^\wedge\)va — "to believe"

\(^\wedge\) kaan \(^\wedge\) ch\(^\wedge\)va — "believing"

or by khwaam—connoting an abstract or stative noun:

\(^\wedge\) khwaam \(^\wedge\) ch\(^\wedge\)va — "belief"

An entire sentence—even a complex sentence—may be nominalized by either kaan th\(^\wedge\)ii or khwaam th\(^\wedge\)ii. The difference between these two sentence nominalizers is subtle and appears to concern a cause and effect relationship possible with khwaam th\(^\wedge\)ii only. The evidence for this comes from the optional occurrence of a verb \(\sim\) (which must be glossed "therefore") in sentences with the latter element:

\(^\wedge\) kaan \(^\wedge\) th\(^\wedge\)ii \(^\wedge\) kh\(^\wedge\)aw th\(^\wedge\)am \(^\wedge\) hay pr\(^\wedge\)atuu \(^\wedge\) po\(^\wedge\)et \(^\wedge\) th\(^\wedge\)am \(^\wedge\) hay

Nomin Pro V V N N V V
3rd make give door close make give

Mary k\(^\wedge\)root \("His closing the door made Mary"

\(^\wedge\) N V
angry

angry
khwaam thii khàw pen khon dìi khàw lèaj

Nomin  Pro  V  N  V  Pro  V
3rd  be  person good 3rd  therefore

mày tii khun  "Because he is a good person he
doesn't hit you"

Neg  V  Pro
hit 2nd

It is interesting to note that the "boundary" of the string
being nominalized is easily discovered; it is grammatical to
immediately follow the nominalized sentence (or verb or verb
phrase) with an indication of "possession": khàòñy NP "be-
longing to NP" ("of NP"). This is interpreted to mean that
the "possession" is of all the preceding:

khwaam thii khàw pen khon dìi khàòñy khàw khàw...

Nomin  Pro  V  N  V  Poss  Pro  Pro

"His being a good person, he..."
(literally--"the being a good person of him..."

The constituents of the verb phrase and other sentence
types are examined at length in the following chapters.

4. A modified "phonemic" notation adapted from one
developed by Údom Warotamasikkhadit is used. The only spe-
cial symbols which may require explanation are the following:

a  -  a low front unrounded vowel
o  -  a low back rounded vowel
u  -  a high central unrounded vowel
e  -  a mid central unrounded vowel
1
V - a low even tone
\^ V - a contoured--falling--tone
\+ V - a contoured--rising--tone
/ V - a high, abrupt tone with glottal constriction
- no mark indicates a mid even tone
Footnotes to Chapter 1

1. It has become current informal practise to refer to the
dialect known as Standard (or Bangkok) Thai while
reference to the language generally is to Tai. The cru-
cial differences between the two are in vocabulary and
pronunciation. Inasmuch as I am primarily concerned
with structure— which does not differ radically (if at
all) from language to language within the family, I use
the word Tai, suggestively, throughout.
Chapter 2

In the first chapter I chose to give a "word picture" of Tai structure rather than an explicit set of phrase structure rules. It will be the burden of the following chapters to explicate and justify that choice and finally to remedy the omission of rules. Basically, my argument is the following: although it would be possible to write rules for Tai which would a) generate grammatical utterances and b) would greatly resemble proposed phrase structure and transformational rules for English and other Indo-European languages--thus preserving the hypothesis of a universal base--such rules, closely constrained by current syntactic theory, would not capture a great many of the characteristic general processes of Tai syntax and semantics. Thus they would actually fail at a level of explanatory adequacy in spite of their formal and generative nature. In addition, the tendency to use certain established criteria which have proved useful in analysis of English to analyze other languages may actually be a hindrance in the search for genuine insights into those languages. I feel this may well be the case for Tai. It would be a pity if the syntactic and semantic criteria which are inextricably woven into the model of linguistic theory we use degenerate into a set of rigid discovery procedures.
In this chapter and in Chapter 3, I will be presenting various Tai structures, a justification for their analysis as verbal and an indication of where familiar criteria fail to reveal the unique characteristics of the language.

There are in Tai an extremely large number of different types of verbal constructions. This statement in itself is a conclusion of analysis which will, I hope, be adequately verified in the discussion but it will serve here to introduce two major topics: the lexical categories of Tai; the relationship between lexical category and function in a sentence. A construct of the generative hypothesis is that a universal "vocabulary" of lexical categories exists (i.e. that they constitute substantive universals); further, it has been stated that all languages select their syntactic categories from this vocabulary whose members, incidentally, are all quite familiar: nouns, verbs, adjectives, adverbs, etc. They are, of course, the traditional parts of speech of Western grammatical theory dating back to the Greek's analysis of Greek with modifications from Roman analyses of Latin. In early studies of the uses of human language—Aristotelian, Scholastic, Renaissance—definitions of the parts of speech were based on semantic notions such as "substance", "quality" vs. "action" and "state". The major parts of speech were seen as signifying the objects of thought which constituted the matter of discourse. In the "structural" approach to language analysis, semantic definitions
of category were replaced by wholly formal definitions
(position in sentence, substitutability for other structures
of items, inflectional possibilities, etc.). However, in
his review of "Syntactic Structures" by Noam Chomsky, Robert
Lees wrote:

The theory of universal grammatical categories,
like Ptolemaic astronomy, while quite wrong, was
more in need of revision than of repudiation...

Replacing erroneous semantic notions with
strictly specified 'formal' categories...was
an advance, especially where those categories
correspond well to intuitive notions of struc-
tural equivalence...But merely specifying the
membership of a class by means of more explicit
notation, such as a diagnostic environment or
an exact list does not provide any deeper under-
standing of the category involved.1

Essentially, there the matter still stands. Within current
theory there has been an attempt to "redefine" the parts of
speech not as classes of words in surface structures but as
deep structure constituents of the abstract "patterns" of a
language. "Definition" is not quite the correct term inasmuch
as the theory and practice of linguistic analysis in
this regard consists of simply assigning a feature specifi-
cation, e.g. [+noun, +verb to a lexical item. Thus, a noun
is any lexical item which has as its feature specification
[+noun]. This is equivalent--quite clearly--to a simple
listing.

It is essential to take note of two more aspects of
the question of lexical categories. First, in current
theory, when a lexical item has been analyzed as a verb (for
example) it is regarded as a verb in all its manifestations. Secondly, for the most part the analysis of a lexical item as belonging to one category or another is intuitive and arbitrary. Recent attempts have been made to demonstrate category membership of certain lexical items or classes of items which do not receive the same intuitive response from all the people all the time--John Ross's "Auxiliaries as Main Verbs", "Adjectives as Noun Phrases", are examples. In the first Ross establishes a number of syntactic criteria based on behavior in transformations for assigning modals to the category Verb (more exactly Main Verb of a sentence). George Lakoff presents, in his dissertation and subsequent writings, different criteria in arguing that the category Adjective is not a basic lexical category in English syntax. Emmon Bach, in "Nouns and Noun Phrases" states that

the distinctions between such parts of speech as nouns, adjectives, and verbs have no direct representation in the base but are the results of transformational developments in one or another language.²

The arguments and analyses in these works have not met with universal acceptance among linguists by any means, and indeed there are serious deficiencies within them for English itself. To the present then, the problem of defining the universal lexical categories proposed by the theory has been largely ignored. The general trend would seem to be to ignore the whole question as theoretically uninteresting and to rely wholly on "general intuition" and on differentiations based on syntactic usage.³
In contrast, Chinese grammarians, both past and present, have treated the issue as one of major importance and a long-standing controversy exists over the possibility of establishing major lexical classes for Chinese. Grammatical studies of Tai, however, have followed the Western models rather than the Chinese and have been greatly influenced by classical grammars—primarily Latin and Sanskrit. The seven parts of speech: nouns, pronouns, conjunctions, interjections, prepositions, verbs and modifiers; subclasses of each, have been described without regard for the actual structure of the Tai language in many instances and assignment of words to one or another category has often proceeded on the basis of translation possibilities. Other, more recent studies are either pedagogical and attempt to relate Tai structure closely to English or else they adhere rather arbitrarily to a rigid structural analysis.

Chaiyaratana (1961) is an example of the pedagogical approach to analysis and Warotamasikhadit (1963) represents an unsatisfactory attempt to provide great numbers of rules, both phrase structure and transformational, but without sufficient regard to true explanatory adequacy. One brief paper by Edward Anthony (1964), "Verboid Constructions in Tai", does grapple with the question of categorizing elements in Tai by syntactic criteria relevant to the Tai language, although his is basically an "item and arrangement" view and does not delve deeply enough to provide a satisfactory analysis.
The problem of word classes is not a trivial one. Word classes act as constituents of a grammatical meta-language by which one expects to describe the basic syntactic relationships of a language. The interrelations between word classes and their functions in sentences is, in all grammatical theories, a primitive out of which all considerations of analysis—syntactic and semantic—derive.

It is the interrelationships between word classes and their function in helping to formalize transformations...which is the really important issue arising out of a consideration of word classes and not the establishment of a set of isolated classes as an end in itself.\(^5\)

As research into the structure of the lexicon progresses the problem will undoubtedly become more crucial. There are also implications for and from a theory of performance. V. Fromkin (1971) says that mistakenly selected words are usually from the same word class, and she indicates that this would have some considerable bearing on how a lexicon might be accessed.

In regard to Tai the question of word class membership has particular relevance. I do not propose to definitively and exhaustively isolate the lexical categories of Tai, but I hope to: 1) establish that there exists a problem related to the proposed substantive universals of the theory, 2) that complex (and, indeed, "simple") Tai structures cannot be correctly analyzed without a thorough understanding of the Tai verb, 3) that interesting theoretical consequences are raised by such analyses.
1. The simplest type of Tai sentence would appear to consist of a noun and a verb.

1) ดมอง ภูต \{"ดมอง speaks"  
  N   V  "ดмотр is speaking"  
  proper name  to speak "ดмотр spoke"

The factors which distinguish nouns from verbs are clear in this case:

a. The noun only may be followed by a relative clause:

2) ดมอง ที่ I ดิACES  ชอง ภูต \{"ดмотр who I like is speaking"
  N  relative pronoun  V  V
  proper name  to like to speak

b. The noun cannot be negated:

3) ไม่ดมอง ต่าวิป ... "not ดмотр but Vip..."
  Neg  N  conj  N
  name  name

c. Common nouns can be quantified:

4) ภูวยิง + สวาย สาม ก่อน "three pretty girls"
  N  adj  Num  class
  girl  pretty  3  people

and modified:

5) ภูวยิง + สวาย นัน "that pretty girl"
  N  adj  dem
  girl  pretty

and possessed:

6) คว้าตี ก่อน ดิACES  "my chair"
  N  N  pronoun
  chair  thing  I
There are other criteria such as restricted types of compounding and occurrence before or after particular criterial lexical elements but I will discuss other such criteria in relevant sections to follow.

7) ดา￿ง  ﾝay  "ดา￿ง is pretty"

\[N \quad V\]
name to be pretty

2. This sentence indicates the necessity for an examination of the status of adjective as a basic lexical category in Tai. It must be noted here that the status of this word-class has been a matter of controversy in generative theory (and in earlier theories) for English and other languages as well. In his dissertation, George Lakoff makes the claim that adjectives and verbs are members of a single category and are differentiated by a single syntactic feature. This follows from his observation that the English adjective, like the verb, can be divided into statives and actives. He presents some nine points in support of this claim which encompass arguments from distributional evidence, selectional restrictions, semantics and transformational behavior. The foregoing types of criteria are, of course, equally relevant in analysis of Tai; for example, the argument that there are selectional restrictions common to adjective and verb, i.e. they require or exclude the same kinds of subjects and objects, they occur with the same type of adverbials—is valid also for Tai. In addition, there is no question of the same
grammatical relations occurring in pairs of sentences nor
of similarly understood sentences (as is the case in English)
inasmuch as there is only one way to express what is so of-
ten paraphrasable in English:

8) dichañ klua maa  
   prounoun V N
   I fear dog

9) dichañ siacay
   prounoun V
   I to be sorry

Of course the major syntactic difference between verb and
adjective which exists in English does not exist in Thai;
the copula is only followed by a noun phrase:

10) khaw {pen} khruu "He is {a} teacher"
    prounoun V N
    he, she to be teacher

11) *khaw {pen} siacay "He is sorry"
    prounoun V
    he, she to be to be sorry

There is also a body of arguments one can marshall to show
that not only are verbs and adjectives members of one cate-
gory but that no category feature is needed to subdivide
them further:

a. Only verbs are negated directly:

12) khaw mây maa "She isn't coming"
    prounoun Neg V
    he, she to come
    they
13) khāw may suāy "She isn't pretty"
   pro. Neg. V to be pretty

b. A full range of auxiliary elements occur with both verbs and with what sound like adjectivals when translated in precisely the same way:

14) khāw \{khāey\} thamoan "He \{used to\} work"
   \{tāon\} \{āat că\} "He \{must\} might \{should\} be sorry"
   \{khuan\} \{sīacay\}

c. The same degree adverbs can co-occur with both:

15) khāw wiŋ maāk "He runs a lot" ("very")
   pro. V to run very

16) khāw dii maāk "He is very good"
   pro. V is good very

d. Complement structures—to be discussed more fully in a subsequent section—overlap the categories. (Note that in Tai, nouns do not permit complement structures of the same sort as are permitted by verbs.)

e. Commands may occur with active verbs or "adjectives":

17) wiŋ sī "Run!"
   V to run particle command

18) rew sī "Be fast/Hurry!"
   V to be fast
19) yaa wîn si’ “Don't run!”
   neg. V to run

20) yaa cha’ si’ “Don't be slow!”
   neg. V to be slow

f. There are no syntactic constraints on the Imperative Transformation which can be stated wholly in terms of a difference between verb and "adjective"; but as one might suspect, there are semantic constraints in regard to e.g. conditions of "stativity" of verb and others which may be peculiar to Tai conceptual values and which are reflected in idiosyncratic behavior of some items.

g. An argument based on transformational behavior has to do with the fact that both verbs and "adjectival-sounding verbs" may be—by transformational rule—nominalized in the same way by either a "stative nominalizer"—khwaam or an "active nominalizer"—kaan. This process is completely regular and predictable in Tai. The range and variety of form and meaning of English nominalizations which lend support to Chomsky's lexical solution are not present in Tai; compare the regular Tai construction with the irregular English translations:

21) khít = V = "to think"
    khwaam khít = "the thought"
    kaan khít = "thinking"
22) \( \text{sams}^1 \text{on} = \text{V} \) = "to be indiscriminate, mixed, promiscuous"
   \( \text{khwaams}^1 \text{ams}^1 \text{on} \) = "promiscuity"
   \( \text{kaams}^1 \text{ams}^1 \text{on} \) = "being promiscuous"

As far as I know at present, only one transformational rule must distinguish between a verb that is "adjectival" and one which is not. As one might expect, that is the rule which creates noun attributes. Thus, it is possible to delete a "relative marker" to yield a noun attribute in the former case but not in the latter:

23) \( \text{phuuy}^1 \text{yin} \text{thi}^1 \text{ su}^4 \text{y} \Rightarrow \text{phuuy}^1 \text{yin} \text{ su}^4 \text{y} \ldots " \text{The pretty girl:} \\
N \text{ rel. V} \\
\text{girl} \text{ is pretty}

24) \( \text{phuuy}^1 \text{yin} \text{thi}^1 \text{ wi}^4 \text{ } \Rightarrow \# \text{phuuy}^1 \text{yin} \text{ wi}^4 \ldots " \text{The running girl} \\
N \text{ rel. V} \\
\text{girl} \text{ to run}

Sentence 24 can only mean "the girl is running (runs, ran)" and cannot be a noun phrase.

I conclude then, that there is no justification for an adjective category in Tai and I will refer, henceforth, to verbs alone.

3.1. In her invaluable dictionary, "Thai-English" Student's Dictionary", Mary Haas outlines a "class" of words she calls adverb-auxiliaries. Elsewhere this class of elements is referred to as "pre-verbs". I find this surprising in analyses that are framed in generative terms, such as Udom Warotamasikkhadit's 1963 dissertation and Thomas Scovel's 1970 thesis. The fact is that the most diverse elements are
joined in this "class" on the basis of whether they can occur before a main verb of a sentence—which verb is itself undefined. Scovel, for example, discusses the expansion of a "pre-verb phrase"; he does recognize a need to differentiate the various types of elements in it but neglects tomarshall criteria which might do so. He says, quite correctly, I believe (p. 135):

Perhaps the most vexing problem facing anyone attempting to analyze verbal phrases in Tai systematically is how to distinguish between those constituents that should be explained as elements of the kernel sentence and those elements that should be analyzed as elements of an embedded sentence.

The following sentences illustrate the range of elements generally included in the "pre-verb" class, but this is by no means an exhaustive list. Generally, these elements are glossed by English adverbs or modals; this is a particularly fruitful area for mis-analysis if one adheres closely to such glosses.

25) a. khaw cā deen
   b. khaw cyu deen
   c. khaw aāt cā deen
   d. khaw khuan deen
   e. khaw yaak sām deen
   f. khaw sānamaat deen
   g. khaw hēn cā deen
   h. khaw máy kheey deen
   i. khaw mak cā deen
   j. khaw thēap (cā) deen
   k. khaw khoŋ deen

"He will walk"
"Consequently he walks"
"He might walk"
"He should walk"
"He wants greatly to walk"
"He can walk"
"He seems to walk"
"He never walked"
"Usually he walks"
"He almost walked"
"Probably he walks"
Because the word order of these elements in a surface string is fairly rigidly circumscribed it has been tempting to use position as a defining criterion. In longer utterances, where two or more of them concatenate, there are some possible alternations. Even so, were this not the case, to rely on word order alone to define a class of elements surely leaves great gaps in the understanding of the syntactic properties and functions of items.

Edward Anthony's "Verboid Constructions", previously referred to, gave me my first clues as to the nature of some of these elements and Ross's "Auxiliaries as Main Verbs" was suggestive, but quite clearly, the tests and criteria to be used in analyzing "verbness" in Tai must be a) internal to the language; b) fairly numerous and non-contradictory; c) explanatory. I propose the following, no one of which is definitive on its own:

1. As mentioned previously, only true verbs can be negated directly, that is by a negative element, māv, placed directly in front of the verb (or preceding dāy, a verb meaning to "obtain", "get" and which construction sometimes serves to signal past time).

2. The foregoing correlates with the fact that a response to a yes-no question can consist of the verb of the question alone (to indicate the affirmative) or the verb with preceding negative element (to indicate the negative); for example:
26) khun cá maa máy | maa "yes"
   pro. tense V quest. | máy maa "no"
   and per. come
   "Will you come?"

27) khun khuan cá maa máy | khuan "yes"
   pro. "should" V quest. máy khuan "no"
   and per. come
   "Should he come?"

28) khun iat cá maa máy | iat cá maa "yes"
   pro. "might" V quest. iat cá máy maa "no"
   and per. come
   "Are you possibly coming?"

3. There is an element, cá, which is used to un-
   ambiguously signal future time (more correctly it is the
   only tense element in Tai). It is generally regarded as
   a member of the "pre-verb" class and has been the cause
   of much confusion over its occurrence in sentences where
   no future implication is possible and also over its posi-
   tional relationship to other pre-verbal and verbal
   elements:

29) khaw ná cá pay "He should have gone"

30) khaw khuan cá kamlaŋ pay "He should be on his

   way"

The confusion arises, I believe, because we are dealing
with either homophonous forms, or two separate uses of
one element. In the following sentence, where there is
only one verb and ca precedes it, the interpretation can
only be of an action to take place in the future:
31) khaw ca pay "He will go"
pro. tense V
go
However, the element ca often appears post-verbally (rather
between two verbs) as in khoŋ ca V and this has been
generally regarded as evidence against the verbness of
the item preceding ca. Interestingly enough, the appear-
ance of ca post-verbally does not change the meaning of
the sentence, for example:
a) NP yaak pay
b) NP yaak ca pay
c) NP yaak thii ca pay
V V
to want to go
all mean precisely the same thing, "I want to go" with the
c) version reflecting a high degree of formality of style.
Although ca before a word is a very dependable criterion
of "verbness" of that word, the post-word ca does not
bear evidence against verbness. I would claim that this
homophonous form is a transformationally derived marker
of sentential embedding, the full form of which is thii ca.
It can certainly be a corroborative piece of evidence for
verbness since in Tai sentences are embedded under verbs.
We have both evidence from other structures that this is
correct, and it provides an explanation for certain facts.
a. Pronouns in Tai are generally marked for sex and/or status—at the very least for "humanness" (man is a pronoun for both inanimate objects and animals). Relative clauses are preceded by an element, thii, which is called in all the studies of Tai that I have seen a relative pronoun. The element differs from all other pronouns in Tai in that it serves for all degrees of status, for both sexes, for inanimates, etc. I can see no justification for considering this thii as a pronoun or anything but an indication of embedding.

32) to thii dichan tɔŋkaan... "The table I need..."

  N rel. pro. V
table I to need

b. In footnote 8 of this chapter I noted the difference between nominalization of a verb or verb phrase and nominalization of a sentence in Tai. The latter only is nominalized with khwaam or kaan followed by thii.

33) kaan thii ca pay naasɔncay. "That (The fact that) he nominal V V
  to go to be inter- is going is
  esting"

c. A number of sentence connectives clearly have this indication of embedding:

1. dooy can mean "by" plus a noun phrase as in

34) khaw phaa dooy kaanvin "He lost by running"

  pro. V N    he to lose by running

but when followed by a sentence it is dooy thii.
35) khâw phâm dooy thîi lûm pay "He lost by forgetting to go"  
pro. V V V  
he to lose by to forget to go  

2. phâ means "for" or "for the benefit of" when followed by a noun phrase.

36) dichân thamqăn phâ khun "I'll work for you"  
pro. V N pro.  
do work for  
but when followed by a sentence it is best translated "so that", "in order to" and it becomes phâ thîi cā.

37) dichân thamqăn phâ thîi raw cā dêy qen "I'll work so that we have money"  
pro. V V pro. V N  
I do work so that we get money  

3. Other connectives are tháng tháng thîi meaning "in spite of the fact that..." ("although", "even though") and thâm thîi meaning "instead of..." ("rather than"); dooy heet thîi "because" ("for the reason that...").

I will have more to say about thîi cā and embeddings in subsequent sections. It should be noted here, however, that cā is obligatorily deleted when a noun or pronoun follows it in the surface string.

4. I do consider one criterion sufficient by itself and that is the appearance of any of these "preverbs" elsewhere functioning as a main verb with the same or a similar meaning. 

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5. Another criterion is the possibility of nominalizing with khwaam or kaan. How do "pre-verbs" behave with regard to these criteria? For the most part a fairly consistent correlation emerges; there are some clear cases of words being true verbs—satisfying all the criteria; there are some less clear cases where, for example, the word never functions as the only verb of a sentence and cannot be nominalized but satisfies all the other criteria; lastly, there are cases where 1, 2, 4 and 5 are not met. But perhaps it would be informative to examine a few members of the "class" of pre-verbs individually.

a. ca' satisfies none of the criteria at all and I conclude that it has independent status (pre-verbally) as a tense and is homophonous with another item that functions as an embedding marker.

b. sām functions adverbially when pre-verbal and can best be glossed as "awfully" as in "awfully big" or "greatly". However, sām does not satisfy criteria for verbness; elsewhere sām is a noun (or numeral) for 100,000 (of something) and like nouns can be followed by a demonstrative, e.g. sām nān "those 100,000".

c. cvn "so", "therefore", though it may be followed by ca (or less commonly, by thi ca) satisfies none of the other criteria and furthermore it does not

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participate in responses to questions even with another verb. There is no actual evidence that it is anything but a conjunctive element.

d. saamàat "can", tɔŋkaan "to need", yàak "want to" are all clear cases of true verbs.

e. hēn, followed by a verb is "appears to", "seems to", as a main verb it is "to see". It satisfies the criteria for verbs and I would consider hēn and hēn ca  V one item.

f. thàm (and a synonym, cuan) "almost", "nearly" are also used as main verbs of sentences with the meanings "close to" for the former and "at the point of...(being overcome by something)" for the latter. Again I think the semantic constancy is easily felt between the two uses. It should also be noted that when followed by a noun as, for example:

mæaw thàm thàw dichàn+ "A cat is near my feet"

\[
\begin{array}{lll}
N & V & N \\
\text{cat} & \text{to be feet} & \text{I}
\end{array}
\]

ca or thií ca are not permissible but when used preverbally these elements can occur with no change in meaning.

g. khuan "should" and khéey "accustomed to", "ever" do not appear as main verbs elsewhere and cannot be nominalized but they do satisfy all the other criteria for verbness.
h. mák cā, mət cā and khoŋ, glossed respectively as "usually", "might" (or "possibly") and "probably" are examples of words which do not get negated directly, require a following verb (or negative plus verb) and cannot co-occur with the overt future tense.

It seems to me that the conclusion of this analysis must be that there is no "pre-verb" class; that no auxiliary node is the source of all these elements. Instead, we have at least one noun, a conjunction and verbs which may take embedded sentences (or possibly verb phrases) and a class of verbs which must be sub-categorized for this configuration. Where the order of elements is fixed, the entry in the lexicon for the item in question must indicate this as well. That there are a considerable number of problems inherent in this analysis will be quickly apparent. They will be further discussed in subsequent chapters.

3.2 This seems a good place to briefly mention other sub-categorization of verbs. The classification is mainly based on syntactic behavior, i.e. co-occurrence restrictions, selectional restrictions (non-animate subject) applicability of specific Complement Transformation, etc.; however, I think a case could be made for--at the least--a viable semantic correlation. Because the remainder of this dissertation will take up some of the criteria and semantic considerations in various sections and chapters, I will content myself with a listing here of the sub-classes which have
proven useful. It goes without saying that these very broad classes can undoubtedly be further divided according to differing semantic and syntactic criteria but that is not my purpose here:

1. obligatory embedding verbs—discussed above

2. transitive verbs (object deletion is possible)

   \[
   \begin{align*}
   \text{kin} & \quad \text{"to eat"} \\
   \text{chozp} & \quad \text{"to like"}
   \end{align*}
   \]
   \[
   +[-N] \\
   +[-\{N\}] \quad +[-\{S\}]
   \]

3. intransitive verbs

   active - \[
   \begin{align*}
   \text{tok} & \quad \text{"to fall"} \\
   \text{kruu} & \quad \text{"to throng"}
   \end{align*}
   \]

   \[
   \text{stative - } \begin{align*}
   \text{tamk} & \quad \text{"to break" ("be shattered")} \\
   \text{hok} & \quad \text{"to spill" ("be spilled")}
   \end{align*}
   \]

4. intermediate verbs (may be both transitive and intransitive-active)

   \[
   \begin{align*}
   \text{kread} & \quad \text{"to scatter, be scattered"} \\
   \text{sadman} & \quad \text{"to show or display, be shown"} \\
   \text{saaq} & \quad \text{"to build, be built"}
   \end{align*}
   \]

5. status verbs

   \[
   \begin{align*}
   \text{baw} & \quad \text{"to be light (in weight)"} \\
   \text{siaqay} & \quad \text{"to be sorry"}
   \end{align*}
   \]

   \[
   -[-S] \quad +[-S]
   \]

4. Adverbs, as a single lexical category, have been the subject of linguistic inquiry since—at least—the Port Royal Grammers. In "Cartesian Linguistics" (Chomsky 1966, p. 242) a reference is made to the Port Royal analysis of adverbs as "elliptical forms of preposition-noun constructions" and the claim that "for the most part, adverbs do
not, properly speaking constitute a category of deep structure”. Recently George Lakoff (1968) has made this claim in regard to English manner and instrumental adverbs.

The case for an adverb category in a Tai base structure is clearly negative--as it most likely is for any other language; the case for derivation, of adverbial phrases, therefore, from a FS rule of the sort: $\text{ADV} \rightarrow \text{Prep NP}$ cannot be supported and I shall try to show the Tai facts which lead to this conclusion. Certainly the adverbial function is not to be denied; it is a false generalization, however, to claim a single derivation from one rule (or more) when there must be several kinds of sources for items acting adverbially as there are in Tai. I will be especially concerned with items functioning adverbially but which are actually true verbs.

In the following sections I will be more specific in examining adverbial sources but I want to first acknowledge that other linguists involved with analysis of Tai have denied a basic category status to adverbs as well. Mary Haas (1964, p.xxii) states:

"words corresponding to adjectives and adverbs in English are true verbs in Tai"

and in a very interesting and suggestive unpublished paper, Rasami Karnchanachari (1969) tends toward the same conclusion. Unfortunately, there have been no in-depth studies of Tai adverbs and I shall, necessarily, be giving only a brief sketch here leaving many questions unanswered and
making, for the most part, qualified statements. The follow-
ing facts would seem to emerge from my tentative study of
adverbs.

1. **Time** adverbials are most often found at the be-
ginning of a sentence (in contrast to place adverbials which
may occasionally move to the front but are then felt to be
"dislocated" for some special purpose—and in contrast to
all other adverbials). Time adverbials are made up of
noun plus noun or noun plus determiner constructions. That
they—and adverbials of duration—are overwhelmingly nominal
may be seen from the following examples:

a) weelaa ní ’í  "at this time", "nowadays"
   N  dem
   time  this

b) wan ní ’í  "today"
   N  dem
   day  this

c) dìaw nán ’í  "then"
   N  dem
   moment  that

d) samaay  patchuban  "currently", "at present"
   N  N
   time  present
   period

e) tcoon baay  "in the afternoon"
   N  N
   part  afternoon  (a specifically defined period
   of hours)

f) ravaŋ  phií nán  "during the year"
   N  N  dem
   interval  year  that
There are some expressions of time which consist of a preposition plus a noun phrase:

g) mûa khvn nîi "last night"

prep N dem
when night this

Adverbial expressions of time do not yield reduced forms of the kind I will be considering in subsequent sections so I will be content with just noting them here.

2. Adverbial expressions of place are also nominal in large part, consisting of a noun meaning "place" of one meaning "side" and usually another attributive noun—occasionally some other part of speech:

a) khaâng tayy "under"

N N
side south

b) khaâng laâng "behind"

N N
side the back

c) khaâng khaâng "next to"

N N
side side

d) thîi N "at..."

N
place

e) thîi nay "where", "somewhere"

N inter-dem
place

Khaâng may be deleted when another noun phrase completes the expression:
taay to  "under the table"

N  N
south table

and thi\^i is deletable when it co-occurs with the verb y\'uu
"to be located at/is". These place adverbials, like time
adverbials, do not participate in the verbal constructions
which is the concern of this study and I have included them
only to demonstrate a contrast with other adverbial expres-
sions.

3. In English, directional words are usually analyzed
as particles (or as prepositions) and except for various idi-
omatic expressions, e.g. "see the job through" they co-occur
only with verbs of motion. In both these respects Tai is
different. There are no directional particles (adverbs or
prepositions) in Tai; instead all expressions of direction
are headed by one or more overt verbs of motion. These di-
rectional expressions are "adverbial" in the sense that the
main verb is complete without them and they add semantic in-
formation of a spatial, temporal or incremental or direc-
tional nature. This is true whether or not an NP follows
the (initial) verb. The constructions, "transitive" and
"intransitive" directionals are, in fact, intimately related;
other than the presence or absence of a "object" NP there is
no reason to distinguish two separate types of adverbial
constructions here:

a) pay kh\^u  "to go up"

  V  V
  go  ascend
b) yók namsv khvñ "lift the book (up)"
   (i.e. to the top of a pile
   of books)
   lift book ascend/increase

In Chapter Four the directional verb, as "adverbial",
will be discussed further. There does seem to be a differ-
ence, however, between a wholly productive process of append-
ing a verb of direction to either a verb of motion or a
stative verb as:

\[ \text{svay khvñ} \] "to get prettier"

\[ V \quad V \]
to be pretty ascend/increase

and an adverbial expression headed by a verb:

\[ \text{deen khaw hco nán} \] "walked into"

\[ V \quad V \quad N \quad \text{Dem} \]
to walk to enter room that

Besides the difference in productivity there is one of pos-
sibility of negation whereby it is grammatical to negate
most directional verbs when they are the second of two verbs
but it is not grammatical to negate the (verb) head of an
adverbial phrase.

\[ \text{khaw yók máy khvñ} \] "he couldn't walk"

\[ \text{pro} \quad V \quad \text{Neg} \quad \text{V} \]
3rd per. lift ascend/increase

\[ *\text{khaw deen máy khaw hco nán} \]

It is also obvious that stative verbs must be quite re-
stricted as to the "directional" expressions which may fol-
low them. Lastly, while the directional words add semantic
information to the motion (or stative) verb, an adverbial
directional expression specifies a place and functions therefore as a unit.

a) khaw ?cock pay "he came out"
   pro V V
   3rd per. to leave/ to go
   issue/ create

b) khaw ?cock pay caak rogriorian "he came out of the school"
   pro V V V N
   3rd per. to leave/ to go come out school
   issue

c) *khaw ?cock pay caak

I conclude that directional and "place" adverbial phrases are probably generated by some PS rule like:

\[ VP \rightarrow \ldots \ldots \ (Adv \ Ph) \]
\[ Adv \ Ph \rightarrow \{N\} \ NP \]

but I will not pursue the justification for this any further here.

4.1 Adverbials of means and adverbials of manner are introduced together because of an overlap in their senses and occasionally in their realization in Tai syntax. There are, however, differences sufficient to require that they be kept as two separate categories. Both types of expressions may be introduced by prepositions—either by duay or dowy—and as both these prepositions can be glossed variously as "by", "with", "of", "by means of", this has contributed to
some confusion. Duay and dooy have been regarded\textsuperscript{12} as synonymous, perhaps even variants of one item (they are phonetically very close), but closer examination suggests this is not the case.

Duay can be used only with inanimate nouns (prepositionally); dooy can co-occur with animate as well as inanimate nouns although the former seems to be preferable. It is duay, however, which carries the instrumental or "means" sense while dooy is genuinely "manner". In the negative, the following situation exists:

38) a) khaw tät náa duay miít "He cut the meat with a knife"

\begin{verbatim}
V N prep N
to cut meat with knife
\end{verbatim}

b) khaw mây tät náa duay miít "He didn't cut the meat with a knife"

Sentence 38b) denies the entire act.

c) \*khaw tät náa duay mây cháy miít
d) \*khaw tät náa mây duay miít

Since duay is not a verb (for example, it cannot be negated as the d) sentence indicates) it should be possible to negate a following verb cháy "to use" but this is unacceptable.

e) \*khaw mây tät náa dooy miít

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f) khàw tát n'á dooy mây cháy míít "He cut the meat without a knife"

Sentence 38 f) does not deny the act of cutting the meat; instead it is apparently felt that to do something—not employing a particular instrument for the purpose—is to do it in another way or in another manner because there is no way to merely deny the use of the instrument named; that is the sense of sentence 38 f), i.e. to imply some other manner.

Except for this special type of "negative-instrumental" dooy is not found in "means" sentences and there is justification for postulating two separate adverbial constructions with unique prepositions.

Further examples:

39) ba'n nîi tham duây mây "This house is made of wood"

\[\text{N} \quad \text{dem} \quad \text{V} \quad \text{N} \quad \text{house} \quad \text{to make} \quad \text{wood}\]

In sentence 39) duây carries the implication that the house was made using wood.

40) khàw chaná duây kaan wîn "He won by running"

\[\text{V} \quad \text{N} \quad \text{Nomin} \quad \text{to win} \quad \text{running}\]

This sentence indicates not the manner of his winning but the means by which he won.
41) khâw phûât duây cay "He speaks sincerely"

V to speak N heart

From the literal translation the "instrumental" sense is clear: "He speaks with (or using) the heart".

Duây shares many of the same privileges of occurrence with the preposition kap meaning "with". The sentence

42) dichân tii khâw kap maây "I hit him with a stick"

V prep N to hit with wood

is wholly grammatical but indicates that in some fashion "he" and the stick were brought together, one against the other. The sentence is semantically odd; to indicate that the stick was used as an instrument duây must be used.

Duây NP, the instrumental adverbial phrase, must be generated by the PS rules. The suggestion (Lakoff, 1966) that instrumental adverbs be derived from a higher abstract "use" verb has been effectively rebutted by Chomsky (1970) and various other linguists who deny its correct analysis of the facts of English syntax. Here, it is inappropriate for the Tai facts as well.

A confusion has arisen and become fairly widespread in current linguistic practice. It is a construct of generative theory that if two sentences have the same deep structure they have the same meaning; it is not the case,
however, that standard generative theory ever claimed that if two sentences have the same meaning they have the same deep structure. In fact this latter claim was even explicitly denied at one point by Frederick Newmeyer (1968), who works in the framework of generative semantics. Yet this is often the implicit—even explicit—basis for proposing deep structures purporting to "explain" and "generalize" different surface structures with the "same meanings". Although duay NP is paraphrasable by sentences with cháy "to use" and with dooy cháy, there are still different constraints which need to be stated, e.g. the restriction on the negative. The various paraphrases cannot all be presumed to come from the same deep structure.

4.2 Manner adverbials

43) a) khaw wiŋ rev (dooy rev, yánŋ rev)
    \[ V \quad V \]
    V to run V to be quick
    "He runs quickly"

b) khaw wiŋ diŋ
    \[ V \quad V \]
    V to be good
    "He runs well"

c) khaw wiŋ keŋ
    \[ V \quad V \]
    V to be clever
    "He runs cleverly"

d) khaw keŋ diii
    "He is quite clever"

e) khaw dii nőcy
    \[ V \]
    V to be little, less
    "He is less good"
f) khaw rey may noy "He is quite fast ("not a little")"

neg

The foregoing are examples of "manner" adverbials, a category which could not have been derived from any kind of adverbal node within the base rules at all. Almost any Tai verb can be used to modify a VP in a "mannerial" sense; the co-occurrence restrictions are almost entirely semantic. Unfortunately there would seem to be no way to prevent great numbers of semantically anomalous sentences from being generated by the grammar because there is, for the most part, no way to state any general constraints on their free syntactic combinations. It is not clear whether any generality would be achieved by sub-categorizing those verbs which can appear as adverbials or by negatively sub-categorizing those which cannot. In the former case, however, we could state whatever selectional restrictions do exist.

Although adverbial use of verbs is usually paraphrasable by the preposition dooy plus Verb or by yaan plus Verb (yaan is a noun meaning "way" or "manner") neither construction can be taken as the underlying source of adverbials:

a) there are some adverbial-verbs which cannot be paraphrased by one or the other of these constructions:

\[ \begin{align*}
    \text{la'iat} & \quad \text{"to be fine", "to be meticulous"} \\
    \text{dooy la'iat} & \quad \text{"meticulously"} \\
    *\text{yaan la'iat} &
\end{align*} \]
dåŋ "to be loud"

*dooy dâŋ' "loudly"

yáŋ dâŋ

So far, investigation has revealed no basis for this behavior and it must be presumed to be idiosyncratic.

b) when either one—dooy or yáŋ may be used with a verb in its adverbial function there may be a slight difference of meaning:

44) a) khâw wî̊ rew "He runs quickly" (usually)
    b) khâw wî̊ dooy rew "He runs quickly" (one action)
    c) khâw wî̊ yáŋ rew "He runs quickly" (either)

Lastly, there are also some words which function adverbially (but not as "manner adverbials") and which might be candidates for true adverb status on the basis of position in sentence or because their usual glosses are misleading. (It should be remembered that adverbial use of verbs is positionally post-main verb.) The following list is only an indication of the problematic cases:

a) boy "often"

b) same "always"

c) rvây "continuously"

d) noôy "somewhat, a little, less"

e) måak "very, a lot, much, many"

f) kheey "ever, accustomed to"

g) lêmw indicates completion, change of state, "already"
Where other Tai verbs used adverbially clearly function as main verbs elsewhere with no real change of meaning, that kind of evidence is much harder to discover for the words in the list above. Generally they do not function that way with the exception of ḥ.ByteArraye (previously considered under "pre-verbs"). It is common to find sentences like:

45) khaw ḥ ByteArraye kap man "He is used to it"
    pro V prep pro
    be accustomed 3rd pers.
    to non-human

All of these words, however, are independent in response to questions and, with the exceptions of ḥ ByteArray, may be directly negated.

BitConverter is very occasionally found as the main verb of a sentence with the meaning "to be completed">

46) khaw ḥ ByteArray pay "He has completed it"
    pro V
    to be to go
    complete

and in this use it could be negated. It should, therefore, be considered a verb in its underlying category status.

Karnchanachari's paper suggested an interesting test for the "verbness" of ḥ Nāŋ and ḥ Nāŋ. She stated that ḥ "to have", "there is/are" adds no significant semantic reading to sentence strings which contain other verbs:

47) a) ḥ Nāŋ khon ḥ Nāŋ ḥ ByteArray aam khon "Three people are coming"
    V N V number N-class
    have to people to three people
    come

b) khon ḥ Nāŋ aam khon
Where there is no verb in the string, a phrase becomes a sentence with the addition of mii:

48) a) nānsuv+ bon to  "A book on the table..."
     N    prep    N
     book   on   table

b) mii nānsuv+ bon to  "There is a book on the...

however, a string without mii is just as acceptable and sentential as one with mii if māk or nōy are present:

49) (mii) khon māk   "There are a lot of people"
50) (mii) khon nōy   "There are few people"

In addition, we must note that—as is the case for true verbs used adverbially—these words may be preceded by the negative, by other modal verbs and may answer a question even when another, main verb, is in the sentence. It seems, therefore, quite reasonable to regard them also as verbs.

In Chapter 4 I will return to these constructions, comparing them with compound and conjoined verbal constructions.

5. John Ross (Ross, 1970, p. 258) hypothesized that

the deep structure of all languages resemble each other in having a performative clause containing a verb of saying as their highest clause.

Under this highest clause would be embedded all declarative utterances. Jerrold Sadock (Sadock, 1968) independently proposed a possible hierarchy of embeddings of performative sentences and various other linguists have adopted these proposals. Among the advantages claimed for this analysis
are:  a) the elimination of personal pronoun specifications in deep structure since the topmost sentence would always define the notions "first person" (subject of performative) and "second person" (indirect object of performative); b) it would generalize the syntactic and semantic characteristics of—for example—an abstract performative verb of command and overt verbs with the force of commands.

I will not attempt to summarize the arguments advanced in performative analyses, especially as the evidence is drawn from English in most instances. However, Ross, in the work cited, specifically mentions the "polite particles" khrap and kha as evidence from Tai in support of his hypothesis and it is in that light that I wish to examine the possibility that the particles are either overt verbs or verbal reflexes of some abstract performative.

Informally, one can characterize the particles of Tai as reflecting the mood, attitude or intention of a speaker as to his immediately foregoing utterance. They invariably appear utterance final and there may be several such particles at the end of one utterance. Ross suggests regarding khrap as a

morpheme which agrees in semantic gender with the superordinate I to the right of the sentence (p. 260)

and which is placed at the end of the sentence by a copying rule. However attractive this proposal might be there are a number of facts which mitigate against it.
1. It is very likely that khráp is a collapsed and frozen relic of a formulaic polite statement kхо́ rά́p "beg receive" literally (probably "I beg you to receive my words" in meaning). The origin of the female particle kʰά is more problematic as to origin.\footnote{11} For khráp, however, the source is probably not pronominal but verbal.

2. Ross states in a footnote that further support for his position comes from the fact that of the many first person pronouns in Tai some are male and some female. Quite true; but he neglects to mention that they are restricted in use to properly reflect kinship relations, status in society, age, degree of respect for hearer, etc. This kind of information is not formally representable in current linguistic theory and has usually been regarded as extra-linguistic. It is very unlikely, then, that Tai pronouns can be satisfactorily specified at all but if they could it would be strange to consider khráp the product of a copying rule because all features (except male-ness) would have to be deleted before the rule was applied.

3. Another argument against the performative analysis of khráp is simple and telling. It would be a strange claim to insist that questions are embedded under a declarative-type of performative; e.g. I declare to you are you leaving? That is, however just what one would have to do for the polite particle because khráp occurs with questions as well as with statements and some commands.
Besides the polite particles, there are a number of other particles to consider, all of which reflect the attitude of the speaker. These include *kramañ* indicating supposition, *sí*, a command form, *ná*, which indicates intent when it occurs with a first person subject and entreaty with second person subjects; *ná* urges, requests or softens a command; *ná* indicates that agreement is expected or requests repetition of a statement or mildly reproaches. There are others. I think there are good reasons for not considering particles as verbs or as verbal reflexes of performatives.

1. They exhibit no verbal characteristics whatsoever.
2. They do not even share properties with—for instance—overt verbs whose import is to command or request:

a) The negative command form is *yaa Verb sí*  
(or other command particles) while a negative in statements is *máy*

51) *yaa pay sí* "Don’t go!"

52) *dichán sáñ háy khun máy pay "I order you not to go"

b) Overt verbs whose meaning is "tell", "say", "relate" have selectional restrictions and must be subcategorized as to type of complement they permit

*ваа "to say"* [−{(N)}]
book "to say, to tell (a short tale...)"
[...NP(ñąy S)]

ląw "to relate a fairly long story"
[...NP Vlisten]

c) Because ną (which can request affirmation) has no verbal properties it is syntactically quite different from the kind of "tag" which semantically may do the same thing, i.e. the particle can't be negated (e.g. --mąy chąy ruję "Isn't it so").

If the motive for proposing abstract performatives is to relate, generalize and explain syntactic properties of certain classes of verbs and to replace arbitrary non-semantic triggers like IMP, then I feel Tai gives little support to such a proposal. One would not want to generalize the syntactic properties just discussed.

3. Nor do the particles bear any simple semantic relationship with overt verbs of "command", "say" "ask" classes. Instead they must also reflect relationship of speaker and hearer in a way which is not isomorphic to the use of overt verbs in this context.

4. The semantic value of a particle, furthermore, derives in part from the context in which it is spoken. Since its meaning is not absolute it cannot be a reflex of any one abstract source. Note that in most instances there is no ambiguity because the context dictates only one interpretation.

Although one may substitute the notion of a hyper-sentence (performative) for a performative verb, this would be no
more satisfying for the analysis of Tai data. It would still make the claim that generalities existed—ignoring the diverse syntactic behavior of verbs within the class—and it would require an amount of extra-linguistic knowledge we cannot represent even in a sentence. Whatever the origin of Tai particles, they cannot be considered verbs (or verbal) in a synchronic grammar.
Footnotes to Chapter 2

1. Lees (1957).


3. The assumption that there are two completely distinct lexical items in:
   1) circle - noun He drew a circle on the paper
   2) circle - verb He circled the camp

   in spite of the undeniable "semantic sameness" we sense in both words in both usages. Quick reflection will reveal the circularity in defining word classes by syntactic function and then using membership in a word class to make claims about syntactic functions.

4. An exception is a short work by Rajadhom (1963), who felt any word in Tai might become a noun or verb simply through position in the sentence.


6. Briefly the difference between pen and khvû may be analyzed as follows: Khvû must be understood semantically to indicate an equational relationship or an existential characteristic of an element. From this follow the syntactic facts that; a) khvû cannot be negated directly but instead one must say the equivalent of "it is not the case that"--mây chây \{S\} --; b) that time

   qualifications of any sort may not be used with khvû; c) that qualifying elements as modals, tense may not co-occur with khvû.

   \textit{kň\textsuperscript{h} w pen khruu} "He is a teacher"

   \textit{pro. V N to be a teacher (a job)}

   \textit{kň\textsuperscript{h} w khvû khruu} "He is the teacher" (title)

   \textit{V to be}

   \textit{wan ní kň\textsuperscript{h} w ca khvû khruu} "Today he will be the teacher"

   \textit{day this tense}\n

8. There are other reasons for preferring a transformational analysis of nominalization processes in Tai: a) assuming that a negative transformation can precede
nominalization, one could then relate instances of Neg + Verb as a nominal, e.g.

khwaam mày phoc "insufficiency"
nom. neg. V
to be enough
to ordinary nominalization; b) one would also want to relate instances of whole sentence nominalizations to instances of verb nominalizations where only the insertion of the element thií (ca) to indicate sentential embedding differentiates them.

a) kaan thií kháw wîj pay róɔŋrían
nom. pro. V V N
3rd pers. to run school
to go

"that he ran to school..."

b) kaanwîj khôɔŋ kháw
nom. N
thing

"his running..."

9. One may consider evidence from Tai orthography as supportive here. Tai has an alphabet of 76 symbols, affording various ways to spell homophones and often reflecting etymology. In cases, then, where my informant claimed a semantic "sameness" in different uses of a word (or if my own intuition claimed this) and yet I found two spellings for the different uses, I considered that I had two separate items.

10. Here as well as elsewhere I have been influenced by Y. R. Chao's A Grammar of Spoken Chinese, (Chao 1968).

11. Scoval (1970) has some interesting suggestions and observations about the origin of various polite particles.

12. Mary Haas (1964) regards them as synonyms.
Chapter 3

1. There are in Tai a number of complex constructions in which a true verb has a syntactic function that poses problems of analysis. In this chapter I will examine several of these verbal constructions. It should be understood that reference to a lexical item as a verb indicates that the item satisfies a substantial number of the verbal criteria enumerated in Chapter 2.

The first verbal construction to be discussed is one which is the least expectedly complex: the indirect object. The modification to the standard theory which was proposed by Charles Fillmore (1968) assumed the possibility of defining—universally—a limited number of grammatical cases to reflect semantic functions of noun phrases. The case which has perhaps been most widely accepted by linguists is the dative, the case of animate indirect objects and of some animate direct objects as well. Originally, the dative was defined as:

the animate being affected by the state or action of the verb.

Under that definition the following Tai sentences would have necessarily been analyzed as having the underlined nouns in the dative case:

(53) John tii Mary "John hit Mary"

V to hit
There are good reasons for rejecting the validity for Tai of a dative case. First, note that the occurrences of the noun Mary in three very dissimilar constructions are all to be subsumed under one case label. Sentence (53) is a simplex sentence; (54) and (55) are complex but distinct from each other. While it may be that languages do, in fact, express one semantic relationship by diverse constructions that is surely a question requiring empirical investigation; suspicion would not be out of place here. Second, if the analysis were to link sentences (53), (54) and (55) together, it would be at the expense of a much more significant generalization, as sentence (55) is causative in type and should be related in the grammar to other causative sentences where the object is not animate and therefore could not be a dative.

More recently Fillmore (1971) has redefined his cases and has proposed some of the following:

Experincer - where there is a genuine psychological event or mental state verb

Object - where there is a non-psychological verb which indicates a change of state

Goal - used to indicate the later state or end result of some action or change, or where there is a transfer of movement of something to a person, the
receiver as destination is Goal. A sentence embedded as Goal identifies the resulting state or event in a causative construction.

In this section, I first want to take up sentence (54) and others like it in the framework of these new definitions:

(54) \( \text{John} \ xî\text{â} \ xî\text{côm\text{a}y} \ xî\text{thu} \) "John wrote a letter to Mary"

\( \text{V} \) \( \text{N} \) \( \text{V} \) to write letter to reach

(56) \( \text{dichân} \ xî\text{côm\text{a}y} \ {\{\text{hây} \ (kâm)\}} \) John

\( \text{pro} \) \( \text{V} \) \( \text{N} \) \( \text{V} \) prep I to write letter \{give\} \{send\}

"I wrote a letter to John"

(57) \( \text{dichân} \ xî\text{hây} \ xî\text{nâng\text{v}} \ xî\text{thu} \) John "I gave the book to John"

\( \text{pro} \) \( \text{V} \) \( \text{N} \) \( \text{V} \) I give book reach

(58) \( \text{dichân} \ xî\text{sô\text{v}} \ xî\text{sô\text{a}} \ xî\text{mâa} \ {\{\text{fâak} \ (hây)\}} \) John "I bought a shirt for John"

\( \text{pro} \) \( \text{V} \) \( \text{N} \) \( \text{V} \) \( \text{V} \) I buy shirt give

In sentences (56)-(58) we have an object--\( \text{côm\text{a}y} \) ("letter"), \( \text{nâng\text{v}} \) ("book"), \( \text{sô\text{a}} \) ("shirt") and a goal John--the receiver. Preceding John in each sentence we have a selection of words, each of which carries distinct semantic information and each of which is a true verb. \( \text{hây} \) has as its basic meanings "to give", "to allow" and can also be glossed "so that", "in order to" in some utterances. It fits all verbal criteria and moreover it often manifests those criteria in constructions where it doesn't seem to be the main verb of the sentence.
The suggestion might be made that we have a case of homophonous lexical items but there are several facts which argue against this; one is the retention of verbal characteristics such as possibility of negation in overtly non-verbal functions; another is the extreme pervasiveness in the language of different syntactic functions for one lexical item; still another is the strong feeling of the native speaker that in all manifestations it is the same word; in Chapter 2, footnote 9, I point out the peculiarity of Tai orthography which can often support or deny the possibility of homophony.

To return to the sentences above, we see that there is actually a choice of verbs in this construction: thêu, which may be used instead of hay, means "to reach" (a place, an event...); sôn which can occur as well means "to send". In sentence (56) with hay there would be no indication of how John got his letter--by having it directly handed to him or through the mails; with thêu a degree of distance would be indicated and sôn would be specific as to method of delivery.

Kam, an optional preposition (glossed "to" but actually duplicating the meanings of hay) only occurs with hay; it is important to note that without one of these verbs, however, the sentence is ungrammatical:

*John khlian colmaay kə Mary "John wrote a letter to Mary"

Sentence (58) is "dative" in one of its possible senses (or in the newer formulation, John is again goal), and here
again the syntax is of a complex construction.  \(^{\wedge}\) may be
the second verb or \textit{faak}--meaning "to deposit" or "to give
something to someone else"--may function this way.\(^2\)

In all the foregoing sentences there is an object
which is being transferred and an animate receiver of that
object.  In all of them we must presume, because there are
two main verbs, that the deep structure actually contains
two separate sentences.  There is, moreover, no one semantic
relationship being expressed--as there is in the case of
benefactives, and there is, therefore, no abstract verb under
which the clauses may be joined.  In fact there is no evi-
dence even as to whether the clauses are in a subordinate or
conjunct relationship.  As Fillmore says in regard to sen-
tences of "event causation" they are:

complex in a way which requires some sort of
association between clauses that cannot be thought
of as compounding the two together or as embedding
one into the other.  (1971, p. 19)

I can find no syntactic tests which would give a principled
reason for preferring one or the other possibility.

1) No conjunction marker like \textit{k\=ap} "with" or \textit{l\=ae} "and"
can be inserted without changing the meaning:

\[^{\wedge}\text{John h\=ay c\textit{\'o}tma\text{\'a}y \{l\=ae\} th\=u\text{\'o}}\text{\{k\=ap\} Mary "John gave a}
letter to Mary"

2) \textit{th\=i\=i c\=a} cannot be inserted between the "clauses"
nor can any other evidence of embedding be found:

\[^{\wedge}\text{\textit{h\=ay c\textit{\'o}tma\text{\'a}y th\=i\=i c\=a th\=u\text{\'o}} Mary}

To add to the problem, there are probably even several
syntactic relationships underlying the surface string; in
sentence (57), for example, it must be naŋsų'v ("book") which is the subject of thvq, not dichañ ("I"). For this reason we cannot say that the structure of such sentences is NP VP VP as we would not be able to indicate the differences in relationships in deep structure.

Conceptually, there are two notions of equal "rank" involved— one concerning the action (specified by the first sentence) and the recipient of the action (specified in the second). There is no really satisfactory formal notation to represent these facts but possibly the structure below does not contradict them.

```
S₀
/   \\
|   |   \\
NP₀ VP₀ S₁
/   |   |   |
dichañ V NP₁ NP₂ V NP₃
/   |   |
hay naŋsųv naŋsųv dichañ
{thvq} {dichañ}
{thvq} {John}
```

This structure would underlie sentences (54), (56), (57), (58)— and many others, of course. Actually, we need a principle that would permit a transformation schema to combine the two sentences by:

1. obligatorily deleting the subject NP in S₁ on identity with either the subject or object NP of S₀
2. removing the nodes S₁ and NP₂
3. deleting tense in S₁ (not represented in the tree here)
4. moving any V to a position as last daughter [+adv]

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5. moving neg to a position before the verb of $S_o$.

These processes are required, in full or in part, in relation to several different constructions—all of which require two sentences to be combined. One would like, therefore, to consider them "persistent rules" or a "persistent schema"; I shall have more to say about this later.

2. In a grammar which assumes the correctness of a dative case (as previously defined) sentence (55) above provides another counter-example.

(55) John tham (hây) Mary pralâatcay "John surprised Mary"

\[\text{V} \quad \text{V} \quad \text{V}\]

to make to give to be surprised

In this sentence, representative of a considerable number of similar sentences, we again have a complex construction but one which is unlike the type just discussed. Among the many other verbs which act like pralâatcay "to be surprised" are:

- k\`oot "to be angry"
- ?ay "to be embarrassed"
- phîtwan+ "to be disappointed"
- mây sabaaycay "to be upset"

There is a semantic consistency to the verbs of the pralâatcay class; they are definable as a sub-class of [+V] predictably requiring a particular syntactic construction in regard to their noun phrase objects (when there is both agent and object). All of these verbs indicate that a change of emotional state has occurred in the animate object due to
some action of the agent. Structurally these sentences are causatives. None of the new case definitions Fillmore proposes apply to the underlined NP objects in the following sentences. Fillmore would assign the underlined NPs to the Experiencer case and causative sentences with non-psychological predicates to the Goal case (as embeddings). Just as with the previously defined dative, we are then unable to make a generalization which requires combining the characteristics of two existing cases into one "case".

(59) John tham (hay) Mary phocay Mary "John pleased Mary"
    V V V to { make to give to be pleased
    do }

(60) John tham (hay) Mary klua Mary "John frightened Mary"
    V V V to { make to give to be frightened
    do }

(61) kaanroc haay kho koot dek tham (hay) Mary kroot
    nom V N N V V N V crying thing child to to be
    (make give angry
    do }

"The crying of the child angered Mary"

There is a significant contrast in construction of the foregoing with:

(62) John ?awcay Mary "John tried to please Mary"
    V try to please

The crucial difference is semantic--verbs of the pralaatcay class tell us what the effect on the object's emotional
state actually is while verbs like ʔawcʌy tell us only what the agent did and not the resultant effect.

Actually sentences (55), and (59) through (61) are causative sentences differing from other causatives only in the animateness of the object. If of course, with inanimate objects one could not talk of emotional states but one could talk of physical states, which seems to be precisely what is relevant in these sentences:

(63) a. krač̥ok tʌɔk

N V
mirror be broken

b. kʰaw krač̥ok tʌɔk

(64) kʰaw tham (hây) krač̥ok tʌɔk  "He broke the mirror"

pro. V N V
3rd prs. to mirror be broken

make/do

(65) kʰaw tham (hây) sʰa kʰaɪt  "He tore the blouse"

(66) kʰaw tham (hây) miɪt bʰɪn  "He chipped the knife"

(67) kʰaw tham (hây) phaā pʰən  "He stained the cloth"

in each an agent did something (unspecified) to bring about a change in the physical state of the object.

A distinction should be made between this causative relationship which is reflected in a particular syntactic construction we can call a causative, and the semantic characteristic (or feature) of verbs like kʰâ  "to kill". Independently a language may lexicalize a causative feature or not (Tai does not). 5

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To hypothesize an abstract predicate CAUSE underlying all verbs like ḷhān—as suggested by Lakoff (1965) does not correctly represent the Tai causative constructions, as will become clear in the discussion. Nor does the Fillmore suggestion—embedding causative sentences under a Goal case—seem correct here, although the relationship aspect of causatives is more evident in this approach. The concept of causation as a relationship necessitates two (or more) clauses of equal rank which are combined in some fashion (not unlike the problem of indirect objects in Tai). In this instance a way to represent the structure formally does suggest itself but the full picture is quite complex.

In Tai some verbs are only used intransitively—when an agent is present they must be embedded in a causative expression as we have seen in sentences (59)-(66). As I stated previously, these verbs form a semantic sub-class. Other verbs have the privilege of occurring as a simple transitive construction or embedded in a causative expression:

(68) a. ḷhān peêt pratuu

\[
\begin{array}{cc}
V & N \\
to open & door
\end{array}
\]

b. ḷhān tham (hāy) pratuu peêt "He opened the door"

\[
\begin{array}{cc}
N & V \\
to make/do & door open
\end{array}
\]

In (68.a) the sentence is simple; the implication is that the action was direct and deliberate. There is no reason to consider a tree other than:
In (68.b), however, the presence or absence of $\hat{h}^{\hat{a}}$ supplies additional information about the accidental or deliberate circumstances of the cause as follows: if $\hat{h}^{\hat{a}}$ is present the agent may or may not have acted deliberately but if $\hat{h}^{\hat{a}}$ is not present, the act must have been the accidental cause of the result. In other words:

- c. $\hat{h}^{\hat{a}}$ tam pratuu pe\'et "He opened the door"

implies that something he did—unspecified and accidental—caused the door to open, while

- d. $\hat{h}^{\hat{a}}$ tam $\hat{h}^{\hat{a}}$ pratuu pe\'et "He opened the door"

implies that he did something—unspecified and either accidental or deliberate—which caused the door to open.

There are different possibilities for negation depending on the presence or absence of $\hat{h}^{\hat{a}}$; if $\hat{h}^{\hat{a}}$ is not present only one negative form exists:

(69) a. $\hat{h}^{\hat{a}}$ may tam pratuu pe\'et "He didn't open the door"

b. *$\hat{h}^{\hat{a}}$ tam pratuu may pe\'et

Sentence (69.a) denies the act in its entirety. If $\hat{h}^{\hat{a}}$ is present, there are three negative forms possible:

- c. $\hat{h}^{\hat{a}}$ may $\hat{h}^{\hat{a}}$ tam pratuu pe\'et

- d. $\hat{h}^{\hat{a}}$ tam $\hat{h}^{\hat{a}}$ may pe\'et

- e. $\hat{h}^{\hat{a}}$ tam $\hat{h}^{\hat{a}}$ pratuu may pe\'et

"He didn't open the door"

67
Although the gloss is the same for all three the implications are different: the c sentence simply denies the entire act (like the a sentence); sentences d and e do not deny the commission of some action but they both deny the effect clause; i.e. he did something and/but the door didn't open as a result. Furthermore, both d and e may also mean that the intent was to prevent the effect.

I hypothesize that both the ambiguity as to the deliberalteness or accidental aspect of the action when hati is present and the ambiguity of the negative senses of (69) d and e (for example), is attributable to the various senses of hati itself, which range from "allow" to "so that". It is probable that one meaning of hati has a semantically active sense (translatable as "to give", "for") while another possible reading is semantically passive, that correlates with both possible interpretations of deliberate (active) versus accidental (passive) involvement: i.e.:

\[
\begin{align*}
\text{John } & \hat{\text{h}y} \text{ man} \quad \{ \text{"John gave it"} \\
N & \text{V pro.-3rd pers.} \quad \text{John allowed it"} \\
& \text{give } \text{it} \\
& \text{allow} \\
\end{align*}
\]

There is no other syntactic basis one can postulate for this ambiguity.

It seems to me that the facts are best represented by some abstract label (possibly a feature on the sentence node itself) representing the semantic relationship of causation and which is superordinate to the two clauses it would link.
I can see no justification, unfortunately, for a more conservative (theoretically) "embedded" analysis. My proposed structure would look like this in the case where the feature "causation" has no overt verbal realization:

\[
S_0
\]

[CAUSATION]

\[
\begin{array}{c}
S_1 \\
\text{NP} \\
\text{John} \\
V \\
\text{tham} \\
VP \\
?aray
\end{array} \quad \begin{array}{c}
S_2 \\
\text{NP} \\
\text{pratuu} \\
V \\
\text{poet}
\end{array}
\]

A transformation combining the two sentences must delete the lexical item ?aray "something/anything" which is present in the deep structure because tham is transitive and because it accords with the native speaker's intuition regarding the accidental (possibly indirect) act which caused the second sentence's "effect". With ?aray left in the surface string (and no \(^\wedge\)hay), we retain two perfectly good but separate sentences glossed:

"He did something"

"The door closed/is closed"

Where \(^\wedge\)hay is present to realize the relationship overtly, I conclude that it is the main verb of a combined structure. In Tai, then, causation (whether a feature or abstract semantic node) is realized by a predicate. It is perfectly feasible to assume realizations occurring in other languages--prepositions, conjunctions or no overt connector.
at all. The following tree would account for sentences with hay.

If we generalize this tree by allowing V to dominate other verbs and NP-other nouns, we have a structure which also underlies another type of "causative" sentence which we will look at next. As I said previously, although we might choose to adopt a Lakoff-type analysis of underlying CAUSE in verbs like khaa "to kill" ("cause to die", presumably) there could be no justification for claiming that a verb like te "to kick" also contains such an abstract predicate; yet the following sentences are clearly related to the tham sentences. Actually they differ only in that the specific action (which resulted in the effect of the second sentence) is described by the verb:

(70) a. khaw te pratuu hay pratuu pit

V
kick

V
close

b. khaw te pratuu hay pit

c. khaw te hay pratuu pit

70
There are a number of ways to gloss all three versions:

"He closed the door by kicking it"

"He kicked the door to close it (to make it close)"

"He kicked the door closed"

All three glosses correspond to only one sense, however—the specific action of kicking resulted in the door's closing. The a sentence is the one closest to the underlying structure with b and c derived from it by the optional deletion of the identical noun phrase. Note that the identical noun phrase may be deleted from either one of the sentences:

\[
\begin{array}{cccccc}
\text{NP} & \text{V} & \text{NP} & \text{hay} & \text{NP} & \text{VP} \\
1 & 2 & 3 & 4 & 5 & 6 \\
\Rightarrow & 1 & 2 & 4 & 5 & 6 \\
\Rightarrow & 1 & 2 & 3 & 4 & 6 \\
\end{array}
\]

Cond 3 = 5

In particular, precisely the same negation possibilities exist with this type of sentence with the same underlying implications:

\[\text{khaw} \, \text{may té} \ldots \]  "He didn't kick the door closed"

denies the entire act

\[\text{khaw té} - \, \text{may hay} \ldots \]

\[\text{khaw té} - \, \text{hay} - \, \text{may pit} \]  "He didn't kick the door closed"

indicates intent to prevent the result (or denies the result).

In these latter sentences, \text{hay} is invariably present and probably it accounts for the understood direct relationship of the actions. Other verbs may occur in both clauses and as long as they are semantically compatible (here
expressing logical possibilities of cause and effect) the sentences will not be semantically anomalous. How to formally state the selectional restrictions (if that, indeed, is what they are) across two sentences remains unformalizable at this time. I think we may not need to state such intra-sentence restrictions inasmuch as one's knowledge of possible cause and effect is a "real-world" understanding not to be made a formal element in a grammar.

The tree at the bottom of page underlies sentence (69) a,b,c (and similar sentences) as well as the tham hay sentences. The question then arises: why isn't the same structure assumed to underlie sentences without hay? If one proposes an analysis with hay in the deep structure of the latter, to be deleted subsequently, there are at least three serious consequences which argue against that proposal:

1) hay, as a main verb with full lexical meaning, cannot be deleted ad hoc; there is no principled reason to account for why it must be present in deep structure yet never realized on the surface in a whole class of sentences. Note, too that this would be an unrecoverable deletion.

2) Deleting hay would cause the meaning of the sentence to change from accidental causation, unambiguously, to a sentence ambiguous as to deliberate or accidental causation.

3) Deleting hay puts constraints on the order of Neg Placement (and Tense) which were unnecessary previously--
or, alternatively, would require extra transformations to adjust Neg and Tense again after hay deletion had taken place (i.e. if Neg were originally placed before hay or before the second verb it would have to be moved to a position before tham after deletion of hay).

The weight of these factors inclines me to an analysis where hay is not present in the deep structure of sentences where it is not realized on the surface. Unfortunately, the status of the sentence "feature" (or "label") CAUSATION is quite undefined in this analysis.

3. The passive construction certainly merits consideration in an analysis of complex verbal structures—in Tai syntax this is particularly so because of the unique problems it presents. Generally speaking, the passive is a very restricted sentence type in Tai and one encounters it far less often than active counterparts. It is interesting to note, however, that this is becoming less and less true especially among younger Tai people. Part of the reason for the non-occurrence of many true passive sentences is that the language has an extremely large number of verbs which—with no syntactic change in structure—may be used either passively or actively.

(71) a. khaw klapcay "He changed his mind"

\[ V \]

\[ \text{to change one's mind} / \]

\[ \text{be changed or converted} \]
b. khaw klapcey duay phra
prep N
priest

(72) a. khaw kraden phaa
V N
throw off/ cloth
be thrown off

b. khaw kraden maal
V N
throw off/ horse
be thrown off

There is a unique sentence type, however, involving
the verb thuuk, which is usually regarded as a syntactic
passive, and about which there has always been considerable
controversy. It has been traditionally claimed (and is
still claimed by some linguists) that only verbs which con-
ote unpleasant activities may be passivized—e.g.

(73) mvaal thuuk thamlaay "The city was destroyed"
N V V
city to touch to destroy

(74) John thuuk tii "John was hit..."
V V
to touch to hit

If a passivized verb was encountered which did not, in it-
self, have any unpleasant associations, the claim was then
made that the recipient of the action considered the action
unwelcome or unpleasant:

(75) Mary thuuk koost "Mary was embraced..."
V to embrace
So, in sentence (75) the passivized form is claimed to carry the implication that Mary didn't want to be embraced.

At one point in time this may have been the case but among today's speakers of Tai the passive is no longer constrained in this fashion. My informants did not infer that any unpleasantness was indicated in sentences like (75), nor did they restrict their use of passive sentences to events of an unpleasant nature; nevertheless their use of the construction was restricted in yet another way. For the most part native speakers today passivize verbs of physical contact; that is, a sentence like:

(76) \(\text{nang}\)\(^{*}\) thuuk\(^{\dagger}\) pl\(^{\dagger}\) "The book was translated..."

\(\downarrow\)

to translate

is not found in general use while one like:

(77) \(\text{nang}\)\(^{*}\) thuuk\(^{\dagger}\) kh\(^{\dagger}\) "The book was moved..."

\(\downarrow\)

to move

is felt to be acceptable Tai.

(If I appear to be somewhat reluctant to use terms concerning grammaticality, well-formedness, etc. it is because this is one area of syntax where change is visibly underway and clear judgments are just not possible.)

In examining the passive, an explanation for the constraint on its use comes to light. \(\text{thuuk}\), the "passivizing element" is actually a true verb in Tai whose meaning is "to touch" or "to come in contact with". It seems reasonable to assume that it is semantics which dictates what kind
of a verb can co-occur with \( I \text{thuuk} \). Even though there is no clear evidence that \( I \text{thuuk} \) itself also can mean something like "was affected by" the facts are best described by an analysis of passives as two-sentence constructions with \( I \text{thuuk} \) as the verb of the first and the canonical form of Tai sentences \((S \rightarrow NP \ VP)\) maintained in both.

\[
\begin{align*}
S_0 & \\
\text{NP}_0 & \rightarrow \text{VP}_0 \\
\text{V}_0 & \rightarrow S_1 \\
\text{thuuk} & \rightarrow \text{NP}_1 \rightarrow \text{VP} \\
& \rightarrow \text{NP}_2
\end{align*}
\]

\([+\text{physical contact}]\)

\(\text{NP}_0 = \text{NP}_2\)

\(\text{V}_0 = \text{thuuk}\)

(The many questions about the passive construction in general—which still plague linguists, I have not attempted to answer here. The reader will find a full discussion in Stockwell et al (1968) and references all through the literature. My interest in this section is to present the particular characteristics of the Tai passive which must find explanation within a comprehensive and generative syntactic theory.)

To negate the passive, only \( I \text{thuuk} \) can be preceded by \( \text{may} \):

(78) a. Mary \( \overset{\text{may}}{\text{thuuk}} \) John cuup

"Mary wasn't kissed by John"

b. *Mary \( \text{thuuk} \) John \( \overset{\text{may}}{\text{cuup}} \)
Transformations are needed to:

1) Delete the (lower) object NP on identity with the subject of the embedding sentence. This kind of Equi-NP deletion is not as well established as subject-subject identity deletion but there is no reason, in principle, to reject it as a universal process; it appears to be quite common in Tai.

2) Place or move Neg up to the top-most sentence.

No special explanation is required for: the ungrammaticality of:

(79) *m̄uᠭ thuuk lu.ukkraboэт thamlalay "The city was destroyed by bombs"

\[ \text{N} \quad \text{N} \quad \text{V} \quad \text{to destroy} \]

Sentences which have "instrumental" subjects are not grammatical in Tai, so that the lower sentence, by itself, does not occur:

(80) *lu.ukkraboэт thamlalay m̄uγ "Bombs destroyed the city"

We can have the following sentence, however:

(81) Hitler thamlalay m̄uγ důy lu.ukkraboэт "Hitler destroyed the city with bombs"

and also:

(82) m̄uγ thuuk Hitler thamlalay důy lu.ukkraboэт "The city was destroyed by Hitler with bombs"

We can assume that the presence of thuuk—followed by a sentence—"triggers" a set of transformations which erase
sentence embedding, and perform Identity Deletion and Neg Placement. The alternative, to move the object NP to subject position and insert thuuk as a passive marker, is surely less preferable. That would require the insertion of a meaning-bearing element, in fact, a main verb.

4. Undoubtedly, the subject of complementation in any language is sufficiently weighty and complex to merit an entire dissertation in itself. In analyzing complementation in Tai we are once again faced with a paucity of morphological evidence to use as criteria and, not unexpectedly, with the inappropriateness of criteria developed for the analysis of English complementation. Tai has no real cleft or pseudo-cleft sentences, no abstract noun "fact", no object-expletive "it" and a very restricted passive form—all of which syntactic phenomena have been used in significant ways to study complementation (Kiparsky (1970), Rosenbaum (1967), and Bresnan (1970)). In particular, these syntactic parameters have been cited in support of arguments for analyses of utterances as involving either VP complements (VP → S) or NP complement structures (NP → S). I will state at the outset that there is no evidence that any Tai complement structure must be regarded as an NP complement while there is some slight evidence in favor of an analysis of all complementation in Tai as VP → S. While interesting parallels between Tai and English complementation do arise, it will be
seen from the following sections that the linguist cannot extrapolate too hastily from his knowledge of one language.

4.1 On the face of it there is no reason to expect a complement type marked as "infinitival" in Tai inasmuch as Tai has no inflection of verbs whatsoever; and, at first look, there does not seem to be such a type:

(83) dichān chɔɔp riannaŋsvv "I like to study"

NP V V
I like study

does not differ from:

(84) dichān chɔɔp khun "I like you"

NP V NP
I like 2nd per.

or from:

(85) khun riannaŋsvv "You are studying"

NP V
2nd per. study

However, the fact is that for all complement structures, where there is subject identity in the lower and higher sentences, the full form most likely is:

NP VP thī cā VP

so that sentence (83) is, in its full form, dichān chɔɔp thī cā riannaŋsvv.

In Chapter 2 the element thī cā was introduced in connection with its use as a criterion for verbness. What I am claiming here is that for all verbs in Tai which can embed another sentence with the same deep structure subject,
The phrase is always present as a mark of such sentential embedding. This will, of course, be precisely the class of sentential embeddings which are English infinitival embeddings. For some verbs this is obligatorily present on the surface as well:

(66) dichan phrjom thisi ca riannasv 'I am ready to study'

For many other verbs it may be deleted with no change in meaning except that its presence adds a more formal note to an utterance. Apparently there is no way to predict which verbs must retain it in the surface string, so that one must mark such verbs. (There are fewer verbs which cannot permit thisi deletion than there are verbs which do permit its deletion.) In such complement structures—as in English—the lower subject NP is always deleted on identity.

4.2 In addition to thisi, which all classes of verbs may select, there are other complementizers which may be selected by some verbs. One occurs with both transitive and intransitive verbs—what Rosenbaum called oblique and direct verb complementation. In this case hay functions as the complementizing form. Essentially (and impressionistically) it joins two different psychological focii: verbs taking hay all express the intent, desire, request of the utterer—to have another perform some action or achieve some state. Consequently, there are always two different underlying
subject NPs. Sentence (87) is an example of oblique or transitive complementation:

(87) dichăn khûc hûy khun pay  "I ask you to go"
      NP    V    NP    V
      I     ask    you    go

That this must be a transitive construction is shown by the grammaticality of the alternate sentences with precisely the same meanings as sentence (87):

(88) a. dichăn khûc khun hûy pay

b. dichăn khûc khun hûy khun pay

The underlying structure of these sentences is probably closest to sentence (88.b).

Hay, although it has the function here of complementizer, must still be regarded as a verb. This is clear from the following possible negations of the foregoing sentences:

(89) dichăn mây khûc hûy khun pay  "I am not asking you to go"
      NP    Neg V Comp NP    V
      I     not ask    you    go

(90) dichăn khûc (khun) hûy khun mây pay  "I ask you not to go"
      NP    V    NP    Comp NP    Neg V
      I     ask    you    not    go
(91) dichăń khō̂ (khun) māy hāy khun pay "I ask you not to go"

I  V  NP  Neg  Comp  NP  V
I  ask  you  not  you  go

Sentence (92) is the direct, intransitive complement with hāy:

(92) dichăń yaak hāy khun pay "I want you to go"

I  V  Comp  NP  V
I  want  you  go

In this type of sentence khun cannot appear following the topmost verb (here yaak); no noun, pronoun or any nominal element may directly follow, which fact is also evidence that these complements are VP complements

\[
(V \rightarrow \text{NP would be ungrammatical}).
\]

Nor can these complement sentences be found as subject of a sentence—which reduces the possibility of their being nominalizations. A third factor of note is the ungrammaticality of cā (Tense) as an element of the lower sentence of hāy complements.

(93) khun cā pay prũnniī "You are going tomorrow"

I  T  V  NP
you  will  go  tomorrow

(94) dichăń yaak hāy khun cā pay prũnniī "I want you to go tomorrow"

It would appear that this is a syntactic—not semantic—constraint. Although I feel that a principled explanation is to be found in additional facts about Tai structure that I have not been able to uncover, at present only an obligatory deletion of cā will insure the generation of grammatical
sentences. This deletion process would have to be a neces-
sary and predictable concommitant of the selection of ḃhay.

4.3 The next complementizer we will examine, thīi, has no
such restrictions.

(95) dīchān sīacay thīi khun pay "I regret that you
    ṛ
    v
to regret

(96) dīchān rōncay thīi khāw pay "I am anxious about
    ṛ
    v
to be anxious

(97) dīchān kroot thīi raw cā pay "I am angry that
    ṛ
    v
we are going to
go"

It would be economical to combine this complement type with
the thīi cā "infinitival" complementizer—allowing cā to be
deleted with the subjects are different—but the actual
facts prevent such a solution. thīi cā is a very general
construction occurring with different classes of verbs while
thīi complements are much more restricted, occurring with
emotive verbs for the most part. 9

There are some significant differences between ḃhay and
thīi complement sentences; first, thīi cannot be negated
itself:

(98) a. dīchān sīacay thīi khun ṛ pay "I am sorry that
    ṛ
you are not
    v
 going"

b. #dīchān sīacay ṛ ṛ thīi khun pay

From this it must be assumed that thīi is not a verbal ele-
ment as it never is negated in any of its functions. A
second difference is that the lower sentence under thii may have Tense. It may, in fact, have any additional modal-like verb without restrictions:

(99) díchăn si capítulo thii khun \(\left\{ \text{cả} \atop \text{khoảng (cả)} \right\}\) pay "I regret that you will go might go just went"

(100) *díchăn cáo capítulo hay khun \(\left\{ \text{cả} \atop \text{khoảng (cả)} \right\}\) pay

Although some modal-like verbs in the lower sentence are semantically incongruous with the class of verbs taking the hay complementizer (i.e. "I want you to might go"), as I commented previously, this is surely not the entire story and the restriction may have a syntactic source. There is, incidentally, an obvious parallel with the English "for-to" and "that" complementizers, where the constraints are similar:

\[
\text{I know that John} \left\{ \begin{array}{c}
\text{can} \\
\text{should} \\
\text{will}
\end{array} \right\} \text{go.}
\]

\[
*\text{I want John to} \left\{ \begin{array}{c}
\text{can} \\
\text{should} \\
\text{will}
\end{array} \right\} \text{go.}
\]

4.4 There is a third type of complementizer which constrains the lower sentence even less; the ways in which this construction differs are so significant there may be justification for calling this complement type a subordinate conjunction—a term which is basically undefined but meant
to be maximally general here. In this construction the COMP
is also a verb—waa—"to say"—and the verbs which select
waa are those describing mental states (excluding the emo-
tives which require thii):

(101) dichan waa waa khun c'a maa "I hope that you
     V Comp NP T V
     I hope you will come

(102) dichan khit waa khaw c'a maa "I think he will
     V Comp NP T V
     I think he will come

To indicate how this type differs crucially from the
other complements I must refer to some other areas of Tai
syntax:

1) The usual way to express ability or possibility is
with the verb day which can appear only at the end of a
sentence (possibly followed by a few other special morphemes
i.e. question words, particles). Similarly, a very few
verb-adverbials only appear at the end of a sentence:

(103) dichan phuut phaasaa thay day "I can speak
     V NP V
     I speak language Tai am able

(104) khun phuut phaasaa thay day lamew ruw "Were you
     V NP V V V Prt
     you speak language Tai able already ?

2) In a relative clause construction day (and lamew)
must still occur at the end of the entire sentence:
(105) dichän khâwcay khruu thîi phûut mây ñay

NP   V      NP   Rel   V  Neg   V
I   understand teacher   speak not able

The foregoing sentence is actually ambiguous because of the placement of ñay; it can mean either "I understand the teacher who can't speak" or "I can't understand the teacher who speaks." There must always be this ambiguity because there is no other grammatical location for ñay.

3) In hây and thîi complements these sentence final morphemes like ñay are also obligatorily found only at the end of the surface string, which may, of course, render the sentences ambiguous:

(106) dichän khot hây khâw pay mây ñay laêw "I couldn't ask him to go"

NP   V  Comp  NP   V   Neg   V  V
I   ask  he go not able already

(107) dichän siacay thîi khâw ña pay mây ñay

NP   V  Comp  NP   T   V   Neg   V
I   regret  he will go not able

"I am sorry he can't go"
"I can't be sorry he will go"

4) The following wâa sentences, however, will be seen as notably different:

(108) dichän hên ñay wâa khun pay "I can see that you are going"

NP   V  V  Comp  NP   V
I   see able  you go

(109) khun khit ñuâ wâa khâw ña maa "Do you think he will come?"

NP   V  Prt  Comp  NP   T   V
you think   he will come
In sentence (108) and sentence (109) the syntactic elements which are always sentence-final in the language appear before the complementizer. The logical explanation would seem to be that  \( \wedge \) subordinates (or conjoins) sentences without wholly amalgamating them into one surface string, as is the case with  \( \hat{\hbox{h\text{ay}}} \) and  \( \hat{\text{thii}} \) complements. Some support for  \( \wedge \) as a subordinating conjoiner is seen in the existence of such forms as:

\[
\begin{align*}
\text{phró } \wedge S & \quad \text{"because" } S \\
\text{thá } \wedge S & \quad \text{"if" } S \\
\text{thv\v{a}máñ } \wedge S & \quad \text{"although" } S
\end{align*}
\]

Here too  \( \wedge \) would appear to introduce subordinate clauses.

4.5 There are verbs which may take more than one of these complementizing morphemes:

\[
\begin{align*}
\wedge \left\{ \begin{array}{l}
\text{thii } \wedge \text{ ca} \\
\text{wáñ }
\end{array} \right\} & \quad \text{"hope to"} \\
\text{"hope that"} \\
\text{themcay } \begin{array}{l}
\text{thii } \wedge \text{ ca} \\
\text{háñ} \\
\text{thii}
\end{array} & \quad \text{"willing to"} \\
\text{"willing that"}
\end{align*}
\]

In the latter case differences in meaning apparently are attributable in part to the syntactic structure of the complement sentence itself--i.e., the presence or absence of modal-like elements or specified Tense--and in part to the complementizer itself. This last statement is quite hard to make precise but what I wish to indicate is that the basic "meanings" of  \( \hat{\text{h\text{ay}}} \) ("to give," "to allow") are still
present in its function as complementizer as is the basic meaning of wā. Thus, wā joins two discrete "psychological units" (1) the speakers intent, desire or request (as evinced by the top verb) and 2) the action to be performed (or state achieved) by someone else; wā complements require two different deep structure subjects. Wā may be thought of as "meaning" "the following" although it cannot always be glossed that way. What follows wā is often an expressed opinion or a comment—loosely:

\[
\begin{align*}
\text{dichān} & \quad \{ \begin{array}{l}
\text{chā} \\
\text{khit} \\
\text{wā} \\
\text{rv} \\
\end{array} \end{align*}
\]

\[
\{ \begin{array}{l}
\text{believe} \\
\text{think} \\
\text{hope} \\
\text{know} \\
\end{array} \}
\]

"I { the following..."

Significantly, wā complement sentences are formally indistinguishable from direct quotations:

(110) John phūt wā khāw ya’k kin ?ahān "John said that he was hungry"

\[
\begin{align*}
\text{NP} & \quad \text{V} \quad \text{Comp} \\
\text{John spoke} & \quad \text{he want eat food} \\
\end{align*}
\]

(111) John phūt wā: phōm ya’k kin ?ahān "I am hungry"

\[
\begin{align*}
\text{NP} & \quad \text{V} \quad \text{Comp} \\
\text{John spoke} & \quad \text{I want eat food} \\
\end{align*}
\]

In sentence (110) and sentence (111) the subjects of the complement sentence have different grammatical "person" though they have the same referent; however, both sentences could equally well have had "John" as the complement subject instead of the pronouns khāw or phōm. In that case only an
entire discourse analysis would have indicated if one was a direct quotation.

In summation then, the facts are these:

1) There is some evidence that Tai complement sentences all have the form VP → COMP S--and no evidence that there is any NP complementation.

2) Following Bresnan, we can say that COMP is not a "semantically empty syntactically trivial particle" but instead is probably best regarded as a deep structure node.

3) Verbs must be subcategorized for the type of complement(s) they take for the following reasons: a) it is not theoretically sound to insert--via a complementizer insertion transformation--a meaning-bearing element; b) although semantically definable classes of verbs seem to select one particular complementizer, this is not an invariant and wholly predictable process; there are exceptions and overlaps. (It may be, of course, that I have been unable to define the crucial classes sufficiently well.) The association of complementizer with lexical item seems to be, therefore, as much a syntactic as a semantic phenomenon and one which is appropriately described by subcategorizing verbs for this feature.

4) The rather ad hoc device of deleting modal-like verbs and tense from ^hay complement sentences is required at present.
5) To allow for the special structure of waa complements, it is probably necessary to assure that the transformation which actually amalgamates the higher and lower sentences leaves a set of internal sentence boundary markers in the surface string so that transformations which move sentence-final morphemes like dəv to their alternate location (before waa) can operate properly.
Footnotes to Chapter 3

1. I am in advance of the data here as other complex constructions are yet to be discussed, but as a complementizer and in causatives ḤAY can be negated:

Dichān ḤAY ḤA khun pay  "I want you to go"
V Pro want you

Dichān ḤAY ḤAY khun pay  "I want you not to go"
Dichān ḤAY ḤAY khun ḤAY pay  "I don't want you to go"

2. There is a contrast with the benefactive sense, where the construction consists of a preposition pUA "for the sake of" plus a noun

Dichān sū sū pUA maae "I bought a shirt for"
V N N my mother
buy shirt mother

3. An entirely different construction would be used to express "being" and still another is used to express "becoming"--without agent

Mary kluA maa  "Mary is afraid of dogs"
V N fear dog

Mary kluA khun  "Mary became (more)
V go up frightened"

4. The verbs in these sentences are not simply intransitive:

*John tham (ḤAY) Mary tok lōn  "John made Mary fall
nor are they simply stative:

*John tham (ḤAY) Mary suun  "John made Mary tall"

but the verbs which must be embedded in causative constructions (with an agent) are all verbs of emotion experienced--or with inanimate objects--of physical change.

5. I refer to the linguistic phenomenon whereby the notion of causation is made lexically overt--so that a verb like "kill" would be expressed as "CAUSE-DIE".

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6. In referring to "transitive" and "intransitive" complements, I adopt the terms as used by Rosenbaum (1967):

\[
\begin{align*}
\text{Transitive} & = VP \\
& \quad \downarrow \\
& \quad \text{VB NP S} \\
\text{Intransitive} & = VP \\
& \quad \downarrow \\
& \quad \text{VB S}
\end{align*}
\]

7. A nominalization as a complement object is the following:

\[
\begin{align*}
\text{Dichan} & \text{ choop kaan} & \text{ thi} & \text{ khun} & \text{ ca} & \text{ pay} & \quad \text{ "I like it} \\
\text{NP} & \text{ V} & \text{ NOMIN} & \text{ NP} & \text{ T} & \text{ V} & \quad \text{ that you} \\
\text{I like} & \text{ you will go} & \quad \text{ will go} \\
\end{align*}
\]

8. This makes Tai another one of the languages that "uses" the same morpheme as complementizer and to introduce relative clauses:

\[
\begin{align*}
\text{Phuuyiq} & \text{ thii maa pen phvan dichan} & \quad \text{ "The girl who} \\
\text{NP} & \text{ Rel} & \text{ V} & \text{ V} & \text{ NP} & \text{ NP} & \quad \text{ is coming is} \\
\text{girl} & \text{ come is friend I} & \quad \text{ my friend} \\
\end{align*}
\]

9. Verbs which require the thii complementizer are partly co-extensive with English predicate adjectives.
Chapter 4

1. In this chapter I will look at the general problem of multiple verbs in a surface string. This is a characteristic feature of Tai, of Chinese and also of many African languages (where this phenomenon is usually referred to as serial verb construction in the literature). Various analyses of the underlying structures of such multiple verb strings have been suggested: Williamson (1965) and Stahlke (1970) deal with the facts in several African languages; Thompson (forthcoming) and Hashimoto (1971) present alternative analyses for a more restricted phenomenon—"resultative verbs"—in Chinese.

In Tai it is the case that the occurrence of several verbs in one surface string, often with no other intervening lexical items, is far more common than the occurrence of a sentence with only one "main verb". To express what might be expressed by several adverbial or nominal phrases in English, Tai often has verbs in series—possibly seven or more:

\[ 112) \text{dichán khọ́ ḥ̃ thōorasap pay ḥ̃a khāw rew ciŋ} \]
\[ \text{pro } V \text{ comp } V V V \text{ pro } V V \]
\[ \text{I ask } (+V) \text{ to phone go seek he be be quick true} \]

"I ask (that someone) telephone him very quickly"

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113) dìchān khēey nōn làp lùnm rīan nāngōn mōt

pro V V V V N /V
I be ac-
lie sleep for-
customed
down
get
study book be com-
plete

+sìa nāan

V V
lose be a long
waste/spoil time

"I used to fall asleep for a long time and forget completely to study"

It is no trivial matter to analyze sentences like the fore-
going within any current linguistic theory. That there will
be only one verb per verb phrase is an assumption in all
models and the occurrence of only one verb per deep structure
sentence is also assumed by most linguists working within a
generative framework. Whether both these assumptions can
be maintained in the light of Tai data (and data from other
languages) is doubtful. If we start, however, by accepting
this view we are confronted at the outset with the questions:

1. Since sentence 112) and 113) are well formed
single sentences with more than one verb, are the
underlying structures embedded or conjoined?

2. Are any of the verb combinations complex
lexical items?

Within current theories these are really the only alterna-
tive sources for such strings.

In the analysis of Tai syntax, the uniquely opaque
surface structures makes finding viable criteria for deter-
mination of the underlying structures especially difficult.
and crucial. There are no morphological clues to depend on, and word order, while it can be indicative, is rarely definitive. For example, in sentence 112) and 113) above there is not a single overt difference between the verbs to distinguish tense, person, function or derivation. Rather than consider a long string of verbs at one time, then, it would be useful to examine minimum strings of two verbs to see if some criteria can be established. Anticipating the conclusions somewhat, the following pairs of verbs represent different kinds of syntactic behavior:

1) phét rón  "to be hot"; "to be acrimonious"
   be hot be hot
   be peppery

2) hàa phó  "to find"; "to come upon"
   seek meet

3) ṭông rew  "to run quickly"
   run be quick

4) deën khün  "to walk up"
   walk ascend/increase

5) ?uân khün  "to get fatter" ("fatten up")
   fat ascend/increase

6) deën pay  "to walk away"
   walk go

7) deën rò́nhaáy  "to walk and cry"
   walk cry
8) ?aan sêt
   "to finish reading"
read be finished
9) ?aan dêy
   "to be able to read"
read be able

2. Current syntactic theories presume either a conjunctive or embedding source for strings with more than one verb; it seems logical therefore, to look at the behavior of these verb pairs when la "and" is inserted between them (testing for conjunction). One would not expect to find any change of meaning whether a conjunctive element is overtly present or has been deleted— if the underlying source is, in fact, conjoined sentences. What we actually find is that when la is present, the strings manifest different possibilities.

1. phêr roçon becomes semantically anomalous (meaning "hot and hot").
2. hâa phôp, vîn rev, dêen khûn, ?uan khûn, dêen pay are all of doubtful grammaticality with la inserted and furthermore the meanings of all are changed from what is essentially a description of one action to one of two discrete actions.
   ? hâa la phôp "(he) sought and found..."
   ? vîn la rev "(he) ran and (he) was fast"
3. *?aan la sêt
   *?aan la dêy
are ungrammatical.
4. *deën rōnhaây* does not change its meaning with *lê* present ("walked and cried") and both forms are equally grammatical.

Another criterion one can use as a test of a conjunctive source for these strings is the possibility of permuting the pairs with the only resulting change of meaning directly related to that permutation. In almost every instance the results of permuting them are ungrammatical strings. Inasmuch as the possibility of formally constraining the underlying order of conjoined sentences from one which could derive these strings is remote, their source must be other than conjunction. The results correlate with the possibility of inserting *lê*; without *lê*, permutation results in unacceptable forms—except for *deën rōnhaây*, where it is marginally acceptable; with *lê* present, the permuted order may be acceptable but the meaning change discussed above will occur or the string may become semantically anomalous. The one exception is again *deën rōnhaây* which may be permuted with *lê* present and does not appear to be any less acceptable; furthermore the permutation would entail only the change of meaning associated with the exchange of verbs.

2.1 The only string, then, which can reasonably be presumed to be derived from conjunction is *deën rōnhaây*, but if we cannot generalize the syntactic behavior of this particular pair of verbs in order to both predict and explain
an aspect of Tai syntax, we have not accomplished much. The
generalization we are looking for is to be found along these
lines: of all the verb strings presented here only deen
roṣānāy consists of two "activity verbs"—verbs which de-
scribe discreet physical actions; furthermore, any verbs of
this semantic set may be substituted for the ones we have
considered and the criteria we have applied—lē insertion
and permutation—will give the same positive results. I
conclude, therefore, that:

a) If a surface verb string consists of two verbs
which are both [+activity
[−direction]] the string is derived
from two underlying sentences, and lē can be deleted.
b) A strongly preferred order is for the verb in-
volving more motion to precede one involving less, if
lē is deleted. (As there can be no constraint on the
order of deep structure sentences a condition on the
transformation might be utilized to establish the sur-
face order. Alternatively some kind of semantic out-
put condition is a possibility.)
c) The actions represented will be interpreted as
simultaneous (as the preferred interpretation).
d) The only condition for deleting the conjunctive
word would seem to be a) above.

Thus win kradoot is "ran and jumped" (but not necessarily
simultaneously) and yun roṣānāy is "stood and cried".
deen khun, on the other hand, cannot be "walk and go up" be-
cause khun is [+direction].
2.2 There are some general conclusions and a caveat which can be deduced from the foregoing. It appears that: a) the verb strings enumerated here are not all derived in the same manner; b) that to determine their underlying sources we must consider semantic information; c) that to state grammatical rules that have explanatory power we must refer to semantic classes. Unfortunately, it is almost a certainty that the real semantic classes operative in the language will require very precise defining and cannot be assumed to relate to semantic classes in any other language.

3. We have no reason to suspect that the underlying source for all the other strings is conjunction; in fact, it is contra-indicated. The next reasonable hypothesis, according to current theory, is that they are derived from embedded sentences. In the two preceding chapters I used the possible presence of an "embedding marker", thii ca to verify embedding with Equi-NP Deletion (of subject NP) of modal-like verbs plus main verbs; I postulated embedded sentences also as the base structure of surface strings with double objects (which also contain series of verbs). The verb strings considered in this chapter--like the modal + main verb strings--all appear to have a single surface structure subject. Unlike the transitive sentences with double objects the verbs in these
strings do not signal different semantic or grammatical relationships. Nor are these verbs (vito "run", ?an "read", ?an "be fat") the kind that normally take sentential complements. It is not surprising, therefore, that insertion of thi i ca or waa, both of which were seen to be grammatical in other embedded constructions are, in all the remaining strings, wholly ungrammatical. The insertion of hay is possible in aan set but changes the meaning by adding an element of purpose; i.e. "(he) read in order to finish" or ".(he) read so that he finished".

While it is not a wholly conclusive argument against derivation from complement structures of some sort, it would be odd to postulate underlying strings containing lexical material which had to be deleted in the surface string—hay or waa, for example. This is all the more suspect inasmuch as ordinary complements always have these elements present in the surface string, and thi i ca, while not obligatorily present, can always be inserted in strings of embedded verbs with Equi-NP Deletion:

114) dichan\(^\ddagger\) chop (thi i ca) doen "I like to walk"
     pro.  V  1st per.  like V  walk

Since we have no overt indication of embedded sentences underlying the verb strings we must look for other clues in their syntactic behavior.
3.1 The class of strings represented by phet rōn ("hot") presents some striking differences from all the others:

a) The combination is ungrammatical if a negative element is inserted between the verbs.

b) The combination is ungrammatical if any element is inserted between the verbs (i.e. an object NP).

c) The class is a closed and unproductive class.

Some other examples are:

\[\text{suāy} \quad \text{ηαam} \quad \text{"to be beautiful"}\]

be pretty be beautiful

\[\text{plian} \quad \text{plæŋ} \quad \text{"to change"; "to alter"}\]

to change to change

\[\text{khon} \quad \text{kuu} \quad \text{"to intimidate"}\]

press down to threaten suppress

\[\text{rīap} \quad \text{rośy} \quad \text{"to be neat, tidy, in good order"}\]

be smooth to string be even

From the first two verb strings one can see that the individual meanings of the verbs are similar or the same and that the meaning of the compound string is no different essentially. The third example is one where the individual meanings are "related" in some undefined manner and the compound meaning is perhaps best regarded as "cumulative". The last string has a "metaphorical meaning".

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Among other omissions, current work in semantic analysis has neglected to consider metaphor generally;¹ in particular, no guidelines have ever been suggested (to my knowledge) to separate "extended meanings" of a lexical item from metaphorical use. Thompson says:

...the rules representing the creative processes of language should reflect the ability of a speaker to use expressions metaphorically...

She then points out two types of verb compounds in Mandarin, one of which has a "metaphorical sense predictable from the literal senses of its component parts" and one "whose meaning is not a metaphorical extension" of the meanings of the individual verbs. She says further:

The borderline between the cases represented by these two verbs is no doubt fuzzy but the distinction...must be made.

That is also true of Tai; however I differ with Thompson in my understanding and use of the term "metaphorical". If the speaker has a given verb string in his active vocabulary certain extensions of their primary meaning are "logical" (or even predictable) individually or when they are combined as a surface string. If this is so, then native speakers with command of those verbs would understand the extensions (and use them) in the same way regularly. This is not true of a metaphoric extension; in fact logic and predictability are antithetical to metaphoric use of a lexical item or utterance. In that case an individual's intuition about the closeness and clearness of the relationship between the basic

¹
and extended (here truly metaphoric) meaning should differ considerably from the intuition of another speaker. The compounded meaning of \textsuperscript{^\textdagger}riap r\text{\textacute{o}{\textprime}y} may be metaphoric (Thompson's use)—but only to a linguist doing an analysis of Tai. If the original use of \textsuperscript{^\textdagger}riap and r\text{\textacute{o}{\textprime}y} together resulted in metaphor, checking with a native speaker reveals that it is now understood without conscious reference to the individual meanings, i.e. with a fixed meaning of its own in the language. (Nor does it differ in its syntactic behavior from other verb strings of this class.) That \textsuperscript{^\textdagger}riap r\text{\textacute{o}{\textprime}y} is not regarded by the speaker of Tai as having a truly metaphoric meaning is certainly a factor in considering its structure.

In regard to verbs of this class, there is an aspect of genuine unpredictability for both the analyst of the language and the native speaker—that is which verbs are "similar" enough in meaning to combine. At present similar is a term without definition and it will be a task of immense difficulty for a native speaker of Tai to crack that particular nut and make it a precise and formal element of a theory of Tai. Another problem will be to specify the order in which the combined elements may occur. It appears to be wholly unpredictable and idiosyncratic; note the following ungrammatical strings:

\begin{itemize}
  \item *k\text{\textacute{e}{\textprime}n} f\'e\'e (also *f\text{\textacute{e}{\textprime}e} k\text{\textacute{e}{\textprime}n}) from k\text{\textacute{e}{\textprime}n} and f\text{\textacute{e}{\textprime}e} be in excess fe in of, exceed excess of
  \item plian pl\text{\textacute{e}{\textprime}n} but *pl\text{\textacute{e}{\textprime}n} plian (both glossed "to change")
\end{itemize}
For all the foregoing reasons, it is quite clear that verb strings of this type must be listed in the lexicon as complex lexical items. The suspicion remains, however, that attendant on a complete semantic analysis one would be able to formulate some rules for combining items insofar as the process—for this type of string—is productive. 2

3.2 I must point out that, although I have singled out a class of verbs needing to be listed in the lexicon as "complex words", I do not mean to imply that the phenomena of compound verbs as complex lexical items is rare in Tai. What distinguishes the particular class here discussed is its semantic characterizability. There are, however, any number of verb-verb compounds (as there are verb-noun, noun-noun and noun-verb "words") which must be listed in the lexicon because their "compoundability" is wholly unpredictable even though the meaning of the resulting compound form may be predictable from the individual meanings of the verbs. In this they do not differ from the English words "railroad", "lighthouse", "madman". There is no apparent syntactic, lexical or semantic feature which precludes "madchild" or "railtrolley" from being English words yet they are not. The derivational process of compounding is common in Tai but which two verbs of the entire lexical class Verb may combine is idiosyncratic in the main.
What is to be noted here—in contrast to the verb series which remain to be discussed—is that all the complex lexical items share with phet rōn ("hot") the negative characteristic that:

no insertion of lexical material may intervene between the halves of the compound; e.g. khít thungeon "to think about"

115) a. dichăn khít thungeon Rasamii "I think about Rasami"
   pro V V Noun
   I think reach proper name

b. *dichăn khít Rasamii thungeon

c. dichăn mây khít thungeon Rasamii "I don't think about Rasamii"

d. *dichăn khít mây thungeon Rasamii

3.3 There is another class of verb strings which bears a strong resemblance to the phet rōn class but which reveals striking differences when the criteria used here are applied to them; that is the class represented by haa phóp "to find". In terms of frequency, this would appear to be a smaller class than compounded "same/similar" verbs and a somewhat less productive process. It is, however, also a class of verb strings whose generation is semantically based. The syntactic differences from the previous strings are these:

a) a negative marker (mây) may be inserted between the verbs:

\[ \text{haa mây phóp NP} \] "didn't (couldn't) find NP"

\[ V \text{ Neg } V \] look for meet

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b) in the case of a transitive series, an object NP may be interposed between the verbs:

\[ \text{hàa phăn khâu phổp} \quad "\text{found his friend}" \]

\[ V \quad N \quad \text{Pro} \quad V \]
look for friend 3rd per meet

c) a negative element before the first verb of the series is ungrammatical:

\[ \text{*mây hà phổp NP} \]

Semantically, there is a discernible difference here too. It can be expressed roughly as a requirement that the two verbs of the string must be related in such a way that the second is a possible logical result of the first. (The compounded meaning is thus also essentially a result of the two together.) This relationship poses enormous difficulties for incorporation in a grammar in that there is no obvious formalism available which would enable the inter-dependence or selectional restrictions between the verbs to be explicitly stated—either for individual pairs or generally. The following points should make clear the extent of the problem:

First—what actions are possible logical results of other actions encompasses all knowledge of the world possessed by a speaker of the language. There is no way to include such knowledge in a grammar—nor would we ever want to.

Second—not all the possible pairs of verbs expressing this notion are grammatical; in fact, the class is
constrained but without any apparent motivating regularity and the lexical items which can participate in this type of construction are unpredictable:

\[ \text{hàa hén} \]

look for see

Third—since the restrictions on which verbs can co-occur with other verbs are item-specific, there is no general explanatory way to capture the whole notion of a "result string".

Fourth—there are no general semantic feature(s) which can be singled out for any two verbs of this class of verb strings.

Their syntactic analysis is likewise exceedingly problematic. From the semantic evidence one might be inclined to consider hàa phọp ("find") a complex word and list it as such in the lexicon—as I suggested for the phèt rón ("not") type. Unless it (and the others of the class) were specially marked for its unique characteristics, it would be indistinguishable from a "word" like phèt rón or from ordinary mono-unit verbs when, clearly, it differs from both significantly. It would seem that we need to "mark" such series by rule features (to effect Object Insertion and to prevent the Negative Placement Transformation from operating normally on the string) although such rule features are the least desirable devices current syntactic theory provides. It is particularly unfortunate that a device justified perhaps for
an individual idiosyncratic item would have to be used here for a class of lexical items but not stated as a general fact. In other words each individual member of this class would have to be so marked separately instead of the entire class being described in terms of its properties. In addition, we will see that this necessary marking would miss a generalization which applies to negation in Tai. The explanation for the negative restriction has a principled basis still to be discussed.

There is an alternative to listing these strings in the lexicon and that is to derive them by lexical rule. Essentially what is occurring in ḥāa phōp (and in faŋ dāyyin "to hear", ncoon láp "to go to sleep" and others) is a process of word building and, properly speaking this is a function of the lexicon. There are, unfortunately, arguments which militate against the possibility of this solution. Lexical rules are, for the most part, an unknown quantity at present. We know very little about the different kinds of rules we might need in this component of a grammar and we know nothing at all about the form of such rules (to say nothing of the uncertainty about how they might interact with the other components). It is considerably beyond the scope of this work to speculate on this aspect of the grammar. More importantly, without the overall framework a coherent model of the lexicon and its processes would provide, any special rule-type a linguist suggests to create
just the strings under discussion can scarcely be well moti-
vated, yet at this point in the development of the theory of
the lexicon each difference in string-type might well lead
to the positing of a different rule-type.

Since we cannot satisfactorily account for these
strings as complex lexical items in a principled way and,
in fact, since there may be considerable weight to the
criterion of insertability of additional lexical material
as a contra-indication of true "wordness", we consider next
a different source for them. Assuming, then, that this
class of serial verbs is transformationally derived—and con-
fronted with a lack of direct evidence as to sources of that
derivation—we can look for the best and closest paraphrase.
There are the following possibilities:

a) NP ḡₚ̃ₚ l̀́ phòp NP        "look for and find"
b) NP ḡₚ̃ₚ NP pĥₚ̃ₚ phòp NP  "look for in order to
                                           find"
c) NP ḡₚ̃ₚ NP ḡₚ̃ₚ phòp NP     "look for so that (he)
                                           finds"

None of these are close enough semantically to be good para-
phrases of ḡₚ̃ₚ phòp; more specifically both b) and c) con-
tain an element of purpose which need not be present in the
reduced string. Furthermore, while a) is true—as a seman-
tically delimiting element of the meaning of the string—it
cannot be the syntactic source for the reasons outlined pre-
viously. (Phòp alone means to "encounter", "find", but the
presence of ḡₚ̃ₚ adds another element. More clearly this can
be seen in noon lap "to go to sleep" where noon is "to lie down" and lap "to sleep". One conceivably can "sit down and sleep" ṅáŋ lá́ lap, or even "stand and sleep" yụn lá́ lap but the noon in the only grammatical string limits the possibilities while not necessarily adding any purposive meaning.)

There is another semantic element of all strings like those--and that is an assumption of "possibility"/"ability". The aspect shows up more clearly in negation, where the English gloss is usually given simply as:

> hàa mà́y phóp NP "didn't find"

and the understood assumption is that NP didn't find NP because for some reason it wasn't possible to or NP wasn't able to. This added semantic element does not exist in the simple negation:

NP mà́y pay "NP didn't go"

Other examples are:

NP fáŋ mà́y dáyin NP "NP didn't hear" (possibly because the words were unclear...)

NP noon mà́y lap "NP didn't go to sleep" (possibly because he was too tense...but not because he didn't try to)

There is really no principled deep structure string, therefore, to claim as the underlying source of these serial verbs because:

a) We cannot legitimately choose between a contra-indicated conjoined string and a contra-indicated embedded string.
b) To account for the reduced derived string we would have to posit the deletion of meaningful elements (i.e. day "to be able" is such a possibility) in the surface string while claiming to retain their meanings in some covert way; there would be no other way to establish the added meaning of ability.

In addition, the selectional restrictions, and constraints on the order of elements and specific occurrences of lexical items across sentences would be mind-boggling—if one could hope to state them at all.

The latter are only slightly less difficult to handle in the alternative source I shall propose, but I feel that the most reasonable and explanatory hypothesis within the means available is to view these verb strings as the product of a phrase structure rule:

\[ VP \rightarrow V \ (NP) \ (Neg) \ V \]

By now it should be evident that, given the diverse syntactic behavior and various semantic ramifications of the different types of verb strings, we cannot possibly expect a sameness of source for them. This rule, then, claims that "result strings" are distinct from the others being considered. If this derivation is the correct one, then the claim that we need to keep track of derivations for the later application of transformational rules is supported; the Negative Transformation, however it is formulated, must be prevented from placing Neg in front of the first verb of the series in just
this class of verb strings. Although formally indistinguishable from other verb series at the time of Neg Placement only the "result string" is so restricted.

There is no compelling reason to generate an object NP between the verbal elements of the string, merely the intuitive feeling that, in Tai, it is more natural in some sense to move a nominal element to the right and out of a constituent than to the left and into one. Note:

116) khaw sâv sâ sâc^n tua "he buys two shirts"

   Pro V N # Class N
   he buy shirt two

117) khaw sâv sâ sây phôc sâc^n tua "he buys two shirts for father"

   Pro. V N V N # Cl
   he buy shirt give father two

As for privileges of occurrence, selectional restrictions and order of elements, this can all be partially accounted for by the specification of the individual verbs which participate in the construction—via their configurational properties:

\[
\text{fân} + [ \underline{(NP) (V)} ]
\]

\[
\text{dâyyn} + [ V \text{ NP } \underline{\text{NP}} ] \quad \text{"listen to-heard the music"}
\]

\[
\text{[+V]} 
\]

Since the class is a limited one there will be few verbs which will be specified in just this way and which can be inserted, therefore, in a tree with the appropriate structure. The semantic restrictions on which verbs can occur with which, insofar as they reflect "world-knowledge" will
not be specified at all. It is clear, however, that we are missing the semantic generalization about this class of verb strings mentioned previously, i.e. that the second verb is always a logical possible result of the first, as is the total meaning—with the added semantic ingredient of "ability/possibility". This remains a defect in the analysis and points to the necessity for semantic rules which can extend the meaning of items and compounds, e.g. "when a verb denoting some process or action is juxtaposed to a verb which is a logical result of that action, the meaning of the compound string of verbs implies possibility/ability".

4.1 In one critical way the two types of serial verbs just discussed (pet rón and haa phop) differ from dœn khûn ("walk up") tûn khûn ("get fatter") and, in fact, from all the other series. The former two are semantically item-dependent; that is, the selectional restrictions are between specific verbs and they are apparently semantically based. The remainder of the series types are participants in a wholly productive process whereby any first verb (or a characterizable class) may combine quite freely with one of a number of possible second verbs whose syntactic and semantic characteristics are also specifiable. The resultant meanings are "metaphorical" (Thompson's usage, but at least logical extensions of a primary meaning). All of the possible second members of the series (as well as the first)
appear as main verbs with the same (or very closely related) meanings:

118) a. kháw khùn rótìây "he entered (ascended) the train"
   3rd ascend train
   Pro V N

b. kháw yûn khùn "he stood up"
   V V
   stand ascend increase

c. kháw ìûn khùn "he got fatter" (he fattened up)
   V V
   be fat ascend increase

119) a. kháw taam màm "he followed mother" "he accompanied mother"
   V N
   follow mother

b. kháw dèen taam kap dichàn "he walked along with me"
   V V prep Pro
   walk follow with 1st per.

Other verbs of direction and some of motion (caak "to leave, depart") have the same properties. Pay "to go" and maa "to come" are two ubiquitous verbs of direction with a range of possible semantic interpretations truly formidable. Neither translation nor gloss nor extended paraphrase can always capture the meaning but they serve to place speaker, event and participants in a temporal and/or spatial relationship:

120) a. kháw ca ?aw nàngstu maa "he will bring the book"
   3rd will take book come
   Pro T V N V

114
where the direction is toward the speaker (or speaker's location)

b. \text{khāw Canceled}  \text{ca}  \text{?aw}  \text{naŋsuŋ}  \text{pay}  \text{"he will take the book"}

Pro T V N V  
3rd will take book go

where the direction is away from the reference point

c. \text{khāw Canceled}  \text{ca}  \text{taay}  \text{pay}  \text{"he will die"}

Pro T V V  
3rd will die go

the meaning may be a temporal exit

d. \text{khāw Canceled}  \text{CANCEL}  \text{?aŋ}  \text{naŋsuŋ}  \text{māa}  \text{"he has been reading"}

Pro V N V  
3rd read book come

the "direction" is again temporal; i.e. from some time coming toward this point of time...

e. \text{khāw Canceled}  \text{pralaatcyay}  \text{pay}  \text{"he was completely surprised"}

Pro V V  
3rd be surprised go

(-my guess-) the state of his mind was toward surprise; if it is possible in English, the gloss may often be given as "completely" for pay while māa would not be glossed at all

The peculiar characteristics of pay and māa are, first—that it is very possible no Tai sentence is unacceptable because of the presence of one of the two verbs. Even a simple sentence like the Tai equivalent of "I am reading" is well-formed with the verb for "go" or "come" attached and will receive a non-anomalous semantic reading. Second—as the second verb of a series they may not be negated; in fact, only as main verbs can they be negated. Logically this would follow from their wholly positive semantic function in the sentence.

115
Considered as a class, the meaning of this verb series type is clearly of one action or state rather than two. There seems to be no reason to separate ʔuan kʰun from those items which can receive a more "motional-sounding" gloss. In one sense ʔuan kʰun represents direction toward a state--of "fatness"--as ʔoŋpʰiia loŋ "became weaker" is regarded as motion away from a state--of strength. Syntactically, the characteristics of the class are the following:

1. The first verb of the series is unrestricted.
2. The second verb is one of "direction".
3. An object NP may intervene between the two verbs when the first is a transitive verb:

121) kʰaw ʔaw naŋsuy saam lem maa "he brought three books"
   Pro V N # Cl V
   3rd take book three bring

4. A negative marker may appear before the second verb (except for pay and maa) with the meaning "can't X" rather than "doesn't X":

122) a. kʰaw ʔay naŋ loŋ "he doesn't sit down"
   Pro Neg V V
   3rd sit descend

   b. kʰaw naŋ ʔay loŋ "he can't sit down"

At the beginning of this chapter I noted that a transformational source based on conjunction or complementation for verb series was extremely unlikely. To recapitulate: permutation of elements is not possible; ʔaŋ insertion is not possible--ruling out conjunction. The arguments against an
embedded configuration are basically the following: given the surface string \textit{khāw luk khūn} and the presumed deep structure string $s[[\textit{khāw luk}][\textit{khāw khūn}]]_s$ with this configuration,

![Tree diagram]

we note that Equi-NP Deletion would have to apply here, yielding the embedding marker \textit{thii ca}. No \textit{thii ca} appears, however, in these verb series; no embedding or complement word is ever present in the string. If it did, the string would have the meaning "he arises to ascend", a meaning almost semantically anomalous and surely indicating two actions. I conclude that the tree above does not underly \textit{khāw luk khūn}.

In addition, for series of the form V NP V, the tree below might underly a string like \textit{khāw yōk nāsū khāy khūn} "he lifts the book to ascend" (if this were a possible sentence) but it cannot be the deep structure configuration for \textit{khāw yōk nāsū khūn} "he lifts up the book" for the same reasons given above. In general, where the first verb is transitive, even though the meaning of the second (directional) verb is consistent with its meaning as a main verb, underlying sources represented by this tree:

117
An alternative deep structure:

has a semantically deviant embedded sentence which would
never occur independently: naŋsuy khun "the book ascended".

Another problem lies in the area of negation; there is
a difference in the meaning of a negative series depending
on the placement of Neg:

123) a. NP maŋ lũk khun "NP doesn't get up"
    b. NP lũk maŋ khun "NP can't get up"

Normally maŋ day must be used to express inability:

124) khaw lũk (khun) maŋ day "he can't get up"

Pro V V Neg V
3rd arise ascend be able

It is hardly feasible to assume sentence 124) as the basic
underlying form for sentence 123)b, with a subsequent dele-
tion of the verb day and a movement of the Neg.

118
In this regard, the series with a second--directional--verb differs from the "result" series which can only be negated with may between the verbs (and, of course from the compound verbs which can only be negated with may preceding the first verb). The "result" verbs derived from the PS rule \( (VP \rightarrow V (NP) (\neg) V) \) must be marked in respect to this \( \neg \) restriction but a slightly different solution must be found for the "directional" series.

4.2 It is clear that it is the productivity and perverseness of the process of verb serializing which is not captured by a transformational hypothesis. Again a lexical solution suggests itself. With directional verbs we can specify the process in a way impossible to formulate for "result strings" and, in fact, Thompson has rules for Mandarin which would probably do as well for Tai.\(^5\) She sketches the following:

a) \( V \) motion \( + \) \( V \) direction \( [V - V]_{RV} \) transitive

Along these lines, we would also need for Tai:

b) \( V \) motion \( + \) \( V \) direction \( [V - V] \) intrans

c) \( V \) stative \( + \) \( V \) direction \( [V - V] \) intrans

We would need, furthermore, a special transformational rule to move the directional verb around the object \( NP \) for all transitive verbs (e.g. \( \text{yāk} NP \) "lift the \( NP \)"), after the lexical rule had effected the concatenation of the two verbs. Clearly the need for a transformation directly resulting
from the operation of a lexical rule argues against the proposed rule. I certainly do not intend to assert that this must be the form of the rule in its details and neither, I think, does Thompson; the point is that lexical rules do reflect processes of word-building and for these series (in Mandarin and Tai) the process can be specified in terms of features of the verbs. Furthermore the meaning of the compound is (mostly) predictable from the meaning of the parts. For Tai, however, an optional lexical rule would be necessary to create the potential meaning of inability with negation. The sense of ability is not present in positive strings either by virtue of an overt form or by inference.

There are other individual verbs which lend themselves to this analysis but which do not constitute a definable class such as [+dir], one notable example is  McIntosh meaning "to come out, issue, create, produce, accomplish". This verb can be the second of a series, following—in the main—transitive verbs: with no change in meaning:

125) khaw rooŋ māy McIntosh "he couldn't cry out" (produce a cry)
   Pro V Neg V
   3rd cry issue

There are still a few other verbs which occur in series with all the foregoing characteristics of +directional V but one—when Neg appears between members of the compound the simple negative meaning remains constant; there is no added sense of inability. These verbs can be classified as V[ +completion] and V[+continuation]:

120
126) khāw ʔa’ān (nasnu) tō "he kept on reading"

Pro V N V
3rd read book continue

127) khāw ʔa’ān (nasnu) sēt "he finished reading"

Pro V N V
3rd read book finish

For these verbs as well, only one activity or state exists, the meaning of the series is predictable, the same syntactic facts prevail, no satisfactory transformational source can be postulated—and I feel a general solution for all of them is to be desired.

The basic argument against a lexical source for these verb series—as mentioned above with respect to the "result series"—is the necessarily ad hoc character of lexical rules in the absence of a coherent theory of the lexicon. It is not the purpose of this dissertation to make up for that lack but it may be hoped that the Tai data presented here add to our knowledge of what that theory must account for. Insofar as these verb series are compound lexical items, their productive derivation should most probably occur in the lexicon. Their analysis as lexically derived then suggests the need for:

a) Word-building rules—such as those postulated by Thompson—to combine both discrete items and whole classes of items.

b) Assignment of a "degree of true wordness" to such compounds.

121
c) Marking one of a set of related (or logically possible extended meanings) as the appropriate meaning of a word when it enters into combined forms.

4.3 There is room for doubt regarding the justification of a lexical source, however. Thompson's strongest argument for lexical derivation of Mandarin verb series is the existence of a unique and overt "potential" form, productively related to the "non-potential" form:

\[ [V - de - V]_{RV} \quad \text{potential} \\
\text{"can"
}

\[ [V - V]_{RV} \quad \text{non-potential} \]

This argument is considerably weaker for Tai in both respects:

1) There is no positive "potential" form at all, nor

2) Is there any non-overt but understood sense of "ability" (؟؟؟) ("create") may be an exception to this).

It is not really possible to claim, therefore, that any special lexical derivational rule must account for the data.

An independent argument against the lexical rule solution for the Tai strings is the possibility of lexical material between the two verbs, as was illustrated with the stitución. This must be considered in the light of the other Verb-Verb compounds which do not permit insertion of any lexical material and therefore function as genuine "words". It would be less then general to postulate one
solution (lexical) for the intransitive series (yəyən kʰən
"stand up") and another for transitive verbs (yók NP kʰən
"lift (up) NP").

The last alternative is to hypothesize the derivation of these strings, too, from phrase structure rule(s), perhaps such as:

\[
VP \rightarrow \begin{cases} 
V(NP) \ (Neg) \ Compl \ Ph \\
V(NP) \ \begin{cases} \text{pay} \\
\text{maa} \end{cases}
\end{cases}
\]

\[
\text{Compl Ph} \rightarrow V \begin{cases} \text{direction} \\
\text{completion} \\
\text{continuation} \\
\text{creation} \end{cases} \begin{cases} \text{pay} \\
\text{maa} \end{cases}
\]

Pay and maa would be obligatory since no sentence seems to be unacceptable solely on their presence. Stylistically, they may be deleted or they may be deleted in discourse when the "directional" context has been clearly established. The circumstances under which they are deletable are, in part, extra-sentential and beyond our abilities to state in a transformational grammar as presently conceived.

It seems not beyond reason that a convention for a special interpretation of Neg (as "inability") when it is found generated in inter-verb position, could be established.

Note, too, that pay and maa are not marked with the feature [+dir] and their presence, in addition to a verb so marked, is neither ungrammatical nor necessarily redundant. If the main verb were either one, however, the second
occurrence of that verb could be deleted by a surface structure output rule of the type postulated by Perlmutter ( ).

The expansion of the complement phrase is unfortunately incomplete at this time. Presumably a number of other possible second verbs participate in just this construction type but their feature characterizations still need to be established and the "predictability" of the compound meanings need to be tested. It is to be expected that for all the possibilities, the combined inherent and contextual feature specifications of the individual verbs (with the configuration of the tree) would account for the selectional restrictions.

The PS hypothesis for large numbers of verb strings thus avoids the counter-intuitive aspects of a transformational solution and accounts for the facts at least as well as a lexical solution. It does fail to deal with the semantic "material" of individual words (which, of course, is not the function of PS rules at all) but which seems to be relevant and "operative" in the compounding process. This would be better captured in lexical processes, generally. Nevertheless, the current state of syntactic theory leaves no room for a principled choice of solution.
4.1 The category "manner adverb" was discussed somewhat cursorily in Chapter 2, where the "verbness" of representatives of this category was under consideration. To recapitulate, it was shown that:

1) All lexical items which can function semantically and syntactically as "manner adverbs" are true verbs and most function as the main verb of a sentence;
2) "Intensifiers" (\textit{maak} "a lot", "very", "to be many") of such "manner adverbs" (as well as words indicating some measure of "degree of manner", i.e. \textit{dii} which glosses as "good", "well", and "quite") are also true verbs;
3) A deep structure source from either of two possible paraphrases was shown to be untenable; "manner adverbs" cannot be derived from the following:

\begin{center}
\begin{tabular}{c}
\textit{yaaŋ} \textit{V} \\
\textit{V} \\
\textit{dooy} \textit{V} \\
\textit{V}
\end{tabular}
\end{center}

("kind", "way, manner" in a \underline{_____} manner)

("by means of, with" by \underline{Ving} \textit{V})

When a verb functioning as adverb modifier is preceded by either \textit{yaaŋ} or \textit{dooy}, the meaning may differ depending on which one is present. Furthermore, some verbs may be preceded by one but not the other.

We must now return to these "manner adverbs" in the light of their participation in serial verb strings such as:
a) NP wiŋ rew (māak) "NP runs (very quickly)"
   "NP runs quickly a lot"
   V V run be quick very a lot
b) NP suay keŋ "NP is pretty in a clever way"
   "skillfully pretty"
   V V be pretty be clever

These strings raise a number of questions at the outset; the ambiguity of a) would seem to stem from the various meanings of the word māak; however, the meanings correlate with two different functions which māak may serve in the sentence: adverbial modifier of degree ("very") and adverbial modifier of frequency ("often", "a lot"). The latter use of māak would appear to be less frequent but it is exemplified in the following sentence:

(128) khaw khian naŋuŋ keŋ "He often writes quite cleverly"
   Pro V N
   3rd to write book be clever
dii māak
   V V be good often

For the most part, what is true of "manner adverbs" is also true of "intensity" or "degree" adverbs. I will not distinguish between them in the discussion except where it is necessary. (The crucial difference is, of course, semantic; the "degree" words qualify or modify the preceding "manner" word only.)
The term "manner adverb" is a useful one here—as long as it is clear this refers to a syntactic and semantic function of verbs; I shall use it in the following without further qualification. "Manner" as a term is perhaps less of a misnomer for this function in Tai sentences than it is in English but even in Tai the term is not to be construed (nor can it be glossed) too literally; dīi, for example cannot be thought of as "he does something in a well manner" when it is functioning as a manner adverb (nor as "he does something to a "quite" degree when it functions as a "degree adverb").

The latter raises yet another point: no general constraint can be placed on the verbs which may function as manner adverbs inasmuch as almost any verb may be so used; some few general constraints may be stated for the co-occurrence restrictions with stative or active verbs:

a) wiŋ kradoot "run and jump"
   *run jumpingly

two active verbs bearing the feature [+motion] will be interpreted as conjoined
b) ?aan too "continue reading"
   *read continuously

verbs which concatenate in a Complement Verb Phrase and are marked with features such as [+create] or [+continue] etc. are not interpreted as manner adverbs.

The range of verbs which will be mannerial in meaning when concatenated with another verb is quite surprising to an English speaker, for example:

127
(129) khāw suāy ?uān "she is pretty in a fat way"

Pro V V
be pretty be fat

It should be noted that the sentence is not semantically anomalous; it is, of course, well-formed in Tai.

Although the manner adverb occurs alone when juxtaposed to the verb it modifies there is one class of verbs which is an exception in this respect: verbs derived with a bound prefix nā always are preceded by yān when they are adverbial in function. (These verbs all contain the semantic element "worthy of" or "leading to"; e.g. naačvā is "worthy of belief", "worth believing" or simply "to be believable". Nā is most likely the same word as the modal verb nācā, which, when not a bound prefix but a modal, has the meaning of "ought to" or "should have".) Before pursuing the question of the adverbials when not immediately juxtaposed to another verb (and what this may indicate about their derivation) it would be helpful to note the similarities and differences of this type of serial construction in relation to the others.

1. As previously stated verbs may occur freely as the second member of the string.

2. Like the other series types—except for the phet roon type—the second verb may be negated directly:

(130) a) khāw wiŋ may rev "he doesn't run quickly"

Pro V Neg V
Unlike negation in the complement phrase, however, no inference of inability accompanies negation of the manner adverbial. Instead the negation is directly upon the manner of the action, not the action itself. In other words the foregoing sentence does not deny the running but denies that the subject runs quickly. The other possible negation is upon the action:

130) b) khaw maı̊ wiŋ rew

This would be glossed the same way but the meaning is that "he isn't running" (or doesn't run), quickly or otherwise.

3. An object NP may intervene between the two verbs; this is also true of the "result series" and complement phrases.

131) a) khaw suv saå̊̊̊ saam tua "She quickly bought three shirts"

Pro V N No. Cl.
3rd buy shirt three

rew laaw

be quick already

or

b) khaw suv saå̊̊̊ rew saam tua

Sentence 131)a is stylistically awkward because the full object NP contains considerable lexical material and the verb rew stands by itself with a resulting "unbalanced" feeling. It would probably be reduplicated for better balance.
Unlike the other series types, however, more than the object NP may intervene between the verbs; this is a point to which I will return subsequently.

4. Semantically there is a major difference between a string of verb plus adverbially-functioning verb and the other types. The verbs now under discussion add new semantic information regarding the state or action of the preceding verb (or verb phrase); the predication (or comment or proposition) is quite complete without this second verb. Thus, they are much less closely linked, both semantically and syntactically, to the verb with which they concatenate than are the other series types discussed previously.

A fact mentioned in Chapter 2 regarding the semantics of manner adverbs bears repeating here. Tai manner adverbs do not receive sentential interpretations; the equivalent sentence in Tai of "clumsily, I dropped the book" ("I was clumsy in that I dropped the book") could only be interpreted as "I dropped the book clumsily" (not gracefully). The equivalent of "unfortunately he will not stay long" is expressed in two sentences along the lines of: "He will not stay long." "I am sad." (For the latter sentence another alternative is "it is sad" in a Tai construction still to be discussed.) Inasmuch as the interpretation of these strings is so clearly a modification of the verb (verb phrase) they
cannot be derived from a sentential manner adverb with the structure:

```
   S
  /  \
NP  VP  ADV
```

nor are they sentential verbs of the following configuration:

```
   S
  /  \
NP  VP
     \  
   S
     /  \
NP  VP
```

4.2 What makes the analysis of Tai manner adverbs particularly problematic is their behavior in the surface structure string when it contains more than a minimum number of elements. The sentence has a relatively rigid order, and, although consideration of that order takes us somewhat afield of the topic of this Chapter, its relevance to these particular strings cannot be ignored.

The manner adverbial has its fixed place in the order within the verb phrase directly preceding any adverb of "degree". Outside the VP are words connoting "frequency" (same "always") or "aspect" (læm "already"). (Time adverbial phrases are usually sentence-initial.) Particles and a serial string not yet discussed follow, as do question words, in this order:

- Sentential verb
- Question word
- Polite particle.
Within the verb phrase itself the following details are crucial:

1. The simplest VP, consisting of either:
   a) a verb (or compound verb, lexically or otherwise derived)
   b) a verb plus object NP
   c) a verb plus complement phrase (e.g.  деэн к hüн "walk up")

may be followed by a verb functioning as manner adverb and need not have any additional element preceding the adverb (in fact, it rarely has any such added element):

(132) कहवा आन नांसूव रेव "He reads quickly"
    Pro V N V
    3rd read book be quick

(133) कहवा तो तुआ सूय "She dresses beautifully"
    Pro V N V
    3rd adorn body be pretty

(134) कहवा देऊन क hüन रेव "He walked up quickly"
    Pro V V V
    3rd walk ascend be quick

2. If the object NP has embedded within it another sentence, the manner adverb can only appear in the usual position in the lower sentence. In addition, the verb itself must either be reduplicated or must be preceded by  यान or दूवः.
(135) \( ^{+} \text{khaw} \, ^{+} \text{?aam} \, ^{+} \text{naŋaŋ} \, ^{+} \text{thii} \, ^{+} \text{dichan} \) "He quickly read several books that I like"

Evidence that the manner adverb has moved into the lower sentence comes from the possibility of extraposing (a stylistic option) the number plus classifier around the adverb. It is impossible for this constituent (Nm + Classifier) to move out of the embedded structure.

3. The other nodes in the VP are (optionally) an adverbial phrase (location), a prepositional phrase, and a sentence node. In all occurrences of the manner adverb with any of these nodes present in the utterance, \( \text{yaŋaŋ} \) (or \( \text{dooy} \) must precede the verb or the verb is reduplicated.

(136) \( ^{+} \text{khaw} \, ^{+} \text{deen} \, ^{+} \text{(taam} \, \text{thanon)} \) "He walks quickly along the street with his friend"

(137) \( ^{+} \text{khaw} \, ^{+} \text{soŋ} \, ^{+} \text{naŋaŋ} \, ^{+} \text{hay} \, ^{+} \text{dichan} \) "He sends the book to me quickly"
(138) \[ \text{dichăn khọ \text{g}} [\text{hay khaw pay \{dooy rew\}}]_g \text{g} \]

Pro V V Pro V
1st ask Comp 3rd go

Sentence 138) is ambiguous and may mean either:

"I quickly asked him to leave" or:

"I asked him to leave quickly"

The ambiguity is the result of the two possible sources of \text{rew}; i.e. either as modifier of the verb of the top sentence (\text{khọ \text{g}}) or of the embedded sentence (\text{pay}). It must be presumed that, if the manner adverb starts out in the topmost sentence, it then moves to a fixed position in the surface string—acquiring added elements, since in either sentence, occurring independently, \text{rew} alone would have been well-formed.

4.3 Inasmuch as both a lexical source and a transformational source for manner (and degree) adverbs are contra-indicated, it seems quite clear that they must be generated in the verb phrase by a PS rule. It seems reasonable to suppose, too, that the location (in the deep structure order) is immediately following the object NP or complement phrase:

\[ \text{VP} \rightarrow \text{V} \left\{ \begin{array}{l}
\text{(NP)} \\
\text{(Neg)} \\
\text{(Complement Ph)} \\
\text{(Manner Ph)} \\
\text{(pay)} \\
\text{maa} \\
\end{array} \right. \]

For mnemonic value, I am calling it a "manner phrase":

Manner Phrase \rightarrow (V) (V°degree)
This rule should not be considered complete as written above. What I wish to indicate by it is that:

a) the verb acting as manner adverb may be "any" Tai verb

b) the verb acting as manner adverb may itself be modified and followed directly by one of a much smaller class of Tai verbs (marked with the feature [+degree]). It is possible for some verbs to be used in either function (dii "to be good", "well" is an example). The major difference, besides the number of "degree" verbs, is that the latter do not take yaaŋ etc. Degree verbs may modify the main verb directly and in that case there will be no verb expressing manner in the sentence:

139) khaw suay nitnoy "she is a little bit pretty"

Pro V V pretty to be little

In sentence 139) nitnoy indicates a "degree" of prettiness.

c) The manner adverb phrase must be generated without yaaŋ or dooy (as was indicated also in Chapter 2).

If either yaaŋ or dooy or the reduplicated form of the verb is considered to be an element of the underlying structure, we have the problems of: 1) accounting for these verbs which must or must not co-occur with some element; 2) the fact that it must be deleted from surface structures in which the verb occurs by itself. On the other hand, when the manner adverb is moved, it acquires either a meaningful
element or undergoes the "grammatical process" we call reduplication. Since the meaning remains constant, however, we may not be on such shaky theoretical ground with the second approach.

Note that if the Manner Phrase is generated at just the right location in the VP it can be claimed that any time it moves it acquires these elements and it needs no alternation in just the event that it does not move (that is, when only a minimum VP is being modified):

\[ VP \rightarrow V(NP)(V)(MANNER\ Ph)(ADV\ Ph)(PREP\ Ph)(S) \]

Generating the Manner Phrase elsewhere in the VP would involve knowing which nodes of the VP were also present; however, since the manner adverb is most often found located in the surface string as follows, movement must have taken place in each instance:

a) ..... ADV Ph \(\left\{ \begin{array}{c} \text{yaa} \\
\text{docy} \\
\text{reduplic} \\
\end{array} \right\} V (V)...
MANNER Ph

b) ..... PREP Ph \(\left\{ \begin{array}{c} \text{yaa} \\
\text{docy} \\
\text{reduplic} \\
\end{array} \right\} V (V)...
MANNER Ph

c) S..... S..... \(\left\{ \begin{array}{c} \text{yaa} \\
\text{docy} \\
\text{reduplic} \\
\end{array} \right\} V (V)...
MANNER Ph

Additional evidence of the correctness that the movement of the adverb correlates with the added elements (\text{yaa}, etc.) comes from the following argument:
a) the indirect object must be an embedded sentence (as must relative clause constructions)
b) a manner adverb must move into the embedded sentence
c) even though there may be no other VP nodes in the top sentence the manner adverb must acquire either yaan or dooy or be reduplicated.

The explanation does--intuitively--relate to the physical distance of the manner adverb to its main verb. Unfortunately the notion of physical distance cannot be defined simply by the number of nodes intervening; the indirect object construction (V S) may have fewer nodes involved than the ordinary direct object (V NP V) but it is apparent that the sentence node is somehow significant in evaluating distance and is "weightier" than the number of nodes. Some slight evidence for the importance of "distance", however defined, comes from the "stylistic" reduplication of the manner adverb when a long NP object intervenes between it and the transitive verb. Regrettably, this whole area of Tai syntax (and of syntactic theory generally) is insufficiently understood.

The problem of the class of verbs with naa which require yaan when adverbial is a separate issue. Prefixation of a bound, derivative element with a fixed meaning is most likely a lexical process. (One thinks of the suffix "-able" in English in these terms.) Thus, verbs like nāacha^nā
("believable") would not be listed in the lexicon but derived by rule and there would be no possible marking on them to require one "adverbial" element or exclude the others. How do we account for the restriction, then? Again there seem to be two alternatives:

1. We can assume yet another type of lexical rule—one which will add some "feature" indicating the necessity for acquisition of yaan. A transformation would supply yaan even if no movement of the adverbial occurred.

2. We can assume the same type of rule that adds naa also operates to add yaan, creating a separate adverbial form of the lexical item. An exception feature will still be needed to prevent a transformation from adding any element in the surface string.

There are a few reasons for preferring the view that yaan is added by lexical rule, in fact, that for all the manner adverbs the elements yaan, dooy or reduplication of the verb is added by lexical rule. Reduplication of words, so common in Tai, may not really be a grammatical process at all. In poetry, for instance, whole words or syllables may be reduplicated (or wholly intrusive syllables added) for metre. In nouns reduplication may have a grammatical function—indicating plurality; there the reduplicated form would have to be supplied by either morphological ("spelling") rule or by lexical rule but surely not by transformation.
It is probable that the source of reduplicated verbs is likewise not transformational.

Still another argument against the actual insertion of one of the required adverbial elements by transformation is that there would actually have to be three separate transformations, one for each of the possible elements.

It is more likely that: 1) \( \text{yaa} \) is added to the \( \text{naa} \)-verbs in the lexicon; 2) that the movement of other verbs acting adverbially (by a transformation) necessitates a second pass in the lexicon. Very little has been written about a "second lexical look-up". The following quote is from the Stockwell-Schachter-Partee "The Major Syntactic Structures of English" (1973):

The present grammar utilizes a second lexical insertion procedure which follows the last rule of the transformational component. The function of the second insertion process is to attach phonological matrices to clusters of semantic-syntactic features that have resulted from operations of the transformational component. Such an operation is not unique to this grammar; the suggestion of some such operation has been made informally many times before."

In particular they utilize the operation for insertion of the surface form of pronouns. The suggestion here is that in some cases, at least, those matrices must be the result of a second pass through a subset of the lexical rules of derivation. Again, the need for a coherent model of the lexicon and its relationship to the syntactic component proper is apparent.
5. The last serial verb type I will consider is exemplified by the following sentences:

140)  ♦ ḍek khon nāh khian day ♦ "That child can read"

NP  V  V
child  that  read  can

141) ♦ khaw suay ciŋ a) "She is truly pretty"
Pro  V  V
3rd  pretty  be  true

b) "It is true that she is pretty"

142) ♦ khaw ca pay nāw ♦ a) "Certainly he will go"
Pro  T  V  V
3rd  will  go  be  sure

b) "It is certain he will go"

143) ♦ khaw deēn too ♦ pay sia ♦ "He continued to walk"

Pro  V  V  V
3rd  walk  continue  go  waste
lose  spoil

144) ♦ khaw kep dookmaŋg too ♦ pay way ♦ "We continued picking the flowers to keep"

Pro  V  N  V  V
3rd  pick  flower  continue  go  keep

145) ♦ dichan ca pay (day) ñaŋ ♦ "It will be easy to go"

Pro  T  V  V
1st  will  go  be  able  be  easy

Although these sentences must receive glosses in which the corresponding meaning is expressed by a variety of English sentence types—the underlined elements in the Tai sentences are, themselves, all sentential subjects of the last verb of the string. Thus, in sentence 140), ability is predicated of the entire (preceding) sentence. In sentence 143), the verb sia ("to waste, lose, spoil") indicates that, by the
action described in the preceding sentence, something was "lost" or "removed from the scene". This meaning can only be rendered in an English gloss by discursive explanation. Sentence 144) can be paraphrased: "So that he might have them to keep, he continued picking the flowers". Sentence 141) is ambiguous because there are two deep structure sources for cin "be true": as a manner adverb generated in the VP; as the verb of the sentential subject. It is, nevertheless, the characteristics of the verbs +sia, +day, et al, in this particular construction, that argue for the analysis, regardless of the diversity of equivalent English sentences.

1. Semantically they are predications about the entire sentential subject; no NP alone, either [+definite] or [-definite] can be singled out as the subject of the predication.

2. They are a small class of verbs which occur as "sentence-final" elements11 (followed only by a highly restricted number of elements: "aspect" (lwa6w) question words and particles.

In a stricter sense these verbs are themselves semantically quite diverse; they may be predicing "purpose": way in sentence 144); "manner", nahy in sentence 145); they may perform the same semantic functions as English modals, day "can" or sentential adverbs, cin in sentence 141)b or adverbial phrases, sia can also indicate "for some time" or "a time ago". There is no evidence, however, to postulate 141

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different deep structures (different grammatical relations) to correlate with the specific types of predictions.

When they occur immediately juxtaposed to a verb in a series, these sentential verbs share the following similarities with the other series types:

1. No embedding or conjunction marker intervenes.
2. Permutation is not possible.
3. An object NP may be interposed.
4. The second verb may be negated directly; the semantic import here will be of negative predication, i.e. \( \overline{S \text{ may cin}} \) is "it is not true that \( S \)",
\( \overline{S \text{ may dby}} \) "NP is not able VP".

They differ from other serial types in the following ways (in addition to semantically differing):

1. All nodes of the VP must precede the second verb, leaving only the last sentence final elements to follow. In fact, most of the elements which may follow these verbs may more properly be termed "utterance final" since, in the case of embedded sentences, they may only occur once at the end of the entire surface string.
2. Any modifying elements which follow—and are not "utterance-final—are of two types:
   a) they are part of the sentential verb phrase itself and modify the sentential verb alone:
khw ay  ciŋ ciŋ  "It is quite true that..."
Pro  V  V
3rd be pretty be true

b) they are themselves higher sentential verbs taking
the lower sentence plus sentential verb as subject:
khaw  ca  pay  ʰ  naŋ  "It is certain that
he will be able to
Pro  T  V  V  V  go"
3rd will go be able be sure

3. Since they are main verbs in their syntactic function,
they may themselves be preceded by modal verbs:
khw  maa  aat  ca  ʰ  "He might be able
to come"
Pro  V  V  V
3rd come might be able

Sentential verbs do differ from each other in one way; if
the verb is [+stative], a Complementizing Transformation which
prepases the verb to the front of the sentence, making the
whole lower sentence the complement, is possible for speakers
with less conservative dialects. Thus the following sen-
tence is acceptable to some speakers:
yak  thii  ca  haɨ baan  "It is difficult to
V  Comp  V  N
find a house"
to be hard to find house

The strong semantic evidence and syntactic facts outlined
do lead to the conclusion that this last class of verb series
is actually from the following deep structure:
"It will be easy to go in the morning"

This concludes the examination of verb series in Tai. I think it is clear that the presence of more than one verb in a surface string does not necessarily indicate the presence of more than one deep structure sentence, nor even of more than one underlying verb phrase. On the contrary, it must be concluded that "serial verbs" are not to be regarded as a monolithic construction type but are derived from several kinds of deep structure configurations as well as by a "compounding process". In accounting for the latter we are handicapped by the fact that current theory fails to provide any formalism. While a formalization of data cannot be
equated with an explanation, a theory is inadequate and lacking in predictive power to the extent that some phenomenon cannot be described formally and explicitly within the means and with notations provided by the theory; an analysis fails to be maximally explanatory if the theory itself is inadequate. To capture the intuition of the speaker of Tai we need the formal means to state the semantic dependencies that govern the juxtaposition of the "result series" verbs, the "same (similar)" series and probably the complement phrases, and we need a model of the lexicon within which non-ad-hoc rules of compound verb formation can be stated.
Footnotes to Chapter 4

1. With the notable exception of U. Weinreich.

2. An interesting characteristic of these words--notable but not exceptionless--is that both members of the compound are similar in sound, as can be noted in:

\[
\begin{align*}
\text{plian} & \quad \text{plam\ng} \\
\text{khem} & \quad \text{khuu} \\
\text{ruap} & \quad \text{ruan} \\
\text{tid} & \quad \text{tan} \\
\end{align*}
\]

Nevertheless, if there is any possibility of predicting which verbs of semantic identity (or sufficient "closeness") may combine, such a prediction will probably be dependent on this phonological aspect with exceptions (unlike in sound) marked in some way.

3. Much like the possibility/ability dichotomy of the verb "can" dày.

4. When any object NP--or larger unit--is displaced to the left, it appears to be topicalized and marked with ní or nán, literally "this" and "that":

\[
\begin{align*}
\text{dichàn} & \quad \text{chöp} \\
\text{phuùchay} & \quad \text{"I like the boy"} \\
\text{Pro} & \quad \text{V} & \quad \text{N} \\
\text{I} & \quad \text{like} & \quad \text{boy} \\
\text{phuùchay} & \quad \text{nán} & \quad \text{dichàn} & \quad \text{chöp} & \quad \text{"That boy I like"} \\
\end{align*}
\]

5. In particular she wants to account for the relationship between the "potential" and non-potential form of resultative verb compounds which involves the presence or absence of elements meaning "be able" and "be unable". She hypothesizes 1) that the "potential" form is created by lexical derivational rule and 2) that the input to this rule must also be derived in the lexicon--i.e. by creating a resultative verb compound.

6. There may well be argument as to whether some compounded meaning is predictable (or a predictable logical extension) or genuinely metaphorical and therefore unpredictable. For example, I would be tempted to include the Mandarin:

\[
\begin{align*}
\text{xiang} & \quad \text{chulai} & \quad \text{"think of a solution"} \\
\text{V} & \quad \text{V} \\
\text{think} & \quad \text{come out} \\
\end{align*}
\]

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in the former category just as I see the Tai sentence following in that category:

\[
\text{khit (coot) } \text{?̣ok} \quad \text{"solve a problem (in math)"}
\]

\[
\begin{array}{ccc}
V & N & V \\
\text{think} & \text{math} & \text{issue, come} \\
\text{problem} & \text{out, produce}
\end{array}
\]

Beware the gloss!
It is interesting to note that a good number of the possible second verbs of these compounds have the same meanings in Mandarin and Tai: "finish", "keep on", "go up", "go down", "come out"—and others.

7. I am assuming derivational rules in the lexicon which have the property of adding affixes which may change nodes (not necessarily) such as:

\[
V \text{ plus } \text{-able } \rightarrow \text{Adj (for English)}
\]

This seems the logical place to capture the productivity of morphological processes with semantic interpretation rules associated with the output.

8. There will be a need for other surface structure output rules to allow for the insertion of redundant and often meaningless lexical material to "balance" a sentence which a Tai speaker feels is top or bottom heavy—where the subject NP is quite long and the VP short or vice versa.

9. Sentence 137) is an example of a sentence with an embedded "Indirect Object Sentence". Confirmation of that "embeddedness" comes from the necessity for the manner adverb to acquire \text{yaan}, \text{dooy} or to reduplicate. If there is no other verb (than the "main" verb), no Adv Phrase and no Prepositional Phrase in the utterance, and inasmuch as the adverb alone would be acceptable with just a direct object, the only explanation for the required addition of \text{yaan}, etc. is the presence of another S node.

10. Very occasionally (and in the absence of a "degree" verb)

\[
\left\{ \begin{array}{c}
\text{yaan} \\
\text{dooy} \\
\text{reduplic.}
\end{array} \right\} \rightarrow V
\]

may precede the Adv Ph or Prep Ph. Again, this is a stylist variant and can be presumed to result from a right-ward movement of the Adv Ph (or Prep Ph) around the Manner Ph.
11. They occur also as main verbs with the same or very similar meaning:

\[ \text{khaw} \quad \text{way} \quad \text{dockmaay} \]

"He keeps the flowers"

Pro V N
3rd keep flower
Concluding Remarks

From the discussion in the foregoing chapters I hoped to make the reader aware of some areas of general syntactic theory which do not adequately account for syntactic structures met with in Tai—the multiple syntactic functions of lexical items; the lack of a formalism to represent certain facts (such as the structure of the "indirect object"). In these pages I want to summarize briefly and point out a few more areas of theory that need reconsideration in the light of data from the Tai language.

The syntactic categories of Tai are nouns, verbs, some few prepositions and quantifiers, conjunctions and particles. I have been concerned with the category verb primarily and in Chapter 2 I proposed some criteria to distinguish members of that category from members of the others—not necessarily a trivial matter. A question that develops out of the succeeding chapters is—what kind of syntactic category is verb? It is essentially still undefined. A Tai verb may occur syntactically in a number of grammatical positions and in a number of deep structure grammatical relations: one lexical item—way "to keep", for example—may be the following:

1. only verb of a sentence; thus the "main" verb

\[
\begin{array}{ccc}
\text{khaw} & \text{way} & \text{dookmaay} \\
\text{Pro} & \text{V} & \text{N} \\
3rd & \text{keep} & \text{flower}
\end{array}
\]

"He keeps the flowers"
2. the second (completive) verb in a complement phrase
   \[
   \begin{array}{cccc}
   k\text{haw} & kha\text{ŋ} & maa & \text{way} \\
   \text{Pro} & \text{V} & \text{N} & \text{V} \\
   \text{3rd} & \text{confine} & \text{dog} & \text{keep} \\
   \end{array}
   \]
   "He pens up the dog"

3. a verb with a sentence as subject
   \[
   \begin{array}{cccccc}
   k\text{haw} & f\text{aak} & \eta\text{en} & h\text{ay} & p\text{hoɔ} & \text{dich\text{a}n} & \text{way} \\
   \text{Pro} & \text{V} & \text{N} & \text{V} & \text{N} & \text{Pro} & \text{V} \\
   \text{3rd} & \text{entrust} & \text{money} & \text{give} & \text{father} & \text{1st} & \text{keep} \\
   \end{array}
   \]
   "He gives the money to my father to hold"

Another lexical item may function as both a predicating verb and a complementizer (the latter with no independent semantic value in the sentence). Thus, verbs may perform several semantic and syntactic functions; they may express a predication, complete a predication, modify or qualify a predication, specify a location, and so on.

It would appear that, in Tai, we have the analogue of the situation for which Fillmore proposed Case Grammar; where case grammar attempts to account for the deep structure relationships of one verb and its associated nouns, in Tai we are faced with the deep structure relationships of various verbs to each other and to the nouns present. I suggested in my analysis that the use of "sub-categorial features" might go some way toward specifying the various constructions into which verbs enter; however, it is to be noted that this does not capture the relevant deep structure relationships—that is, one could not define "indirect object of the sentence" in these terms, nor "main verb" of the sentence.

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Moreover, the use of such features really extends their original conception in two ways: first—sub-categorial features were those contextual features stated in terms of surrounding categories; second—the purpose to which they intended was to permit valid lexical insertions. To this end most linguists have attempted to adhere to the narrowest theory of contextual features, for example the principle of strictly local subcategorization. In this analysis I use these features to define functions insofar as they will allow this. A verb functioning as a sentential verb as well will be specified in the lexicon with a sub-categorial feature. While, in practice the feature specifications do not differ radically from what is normally done, theoretically the approach attempts to compensate for a basic lack and at the cost of relying on a defective area of developed theory. In effect the subcategorization of a verb in the lexicon duplicates the structure which is relevant to its insertion; furthermore this must be done time and time again for numerous verbs since there are no redundancy rules available to state that verbs with some property may be inserted into some given structure, say a locative adverbial phrase. The second respect in which this represents an extension of the theory of features is that it requires the broadest interpretation of context. These verbs, for example, which can participate in the embedding of the indirect object must be subcategorized with a structure involving two sentences; in other cases the

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entire verb phrase is the relevant context. Finally we will still need—in addition to contextual features—as yet undiscovered semantic features to prevent the collocation of items which are semantically anomalous.

There is no way, either, to capture the relevance of the surface structure order of elements (nor of deep structure order, for that matter) to the scope of their "influence". Manner phrases "modify" only the verb phrase and are generated inside the VP. Degree verbs, which are part of the manner phrase, "modify" only the manner verb, however. This is neither implied nor specified by the theory. A decision to generate manner phrases inside the VP, therefore, can be justified by external (syntactic) factors, but does not derive from any theoretical principle. This leaves the scope of the modification undefined on both deep and surface structure levels.

One more point must be made; there is no necessary relation between order of deep structure elements and surface structure elements. This has, of course, been pointed out before and is often considered an advantage to the theory. Nevertheless, I believe most linguists find themselves looking for deep structures which mirror as closely as possible the order of elements in the surface; I have justified the order of nodes in the deep structure (in part) on the minimum number of necessary reordering transformations; those needed are for the most part stylistic.
The negative is another problem area in Tai, as it is elsewhere. Although I have mentioned facts about the negative in various sections of this work, I would like to outline here the general phenomenon of negation.

A striking fact about Tai negation is that there exists no negation of nominals at all; the only negative marker (\(\overline{\text{\textsuperscript{\textdagger}}}\)) is never attached to any element other than a verb.\(^1\) Inasmuch as verbs function as qualifiers and quantifiers, some of the problems encountered in the analysis of English negation are simplified in analyzing Tai; problems do remain, however.

There are clear cases of sentence negation—those sentences which have the semantic import of "it is not the case that" S:

\[
\text{Pro} \quad T \quad \text{Neg} \quad V \\
3\text{rd} \quad \text{will} \quad \text{come}
\]

For those sentences one would normally like to assume a Neg node as daughter of the sentence. There are many other instances of negation where, equally clearly, the meaning cannot be "it is not the case that..."

\[
\text{Pro} \quad V \quad \text{Neg} \quad V \\
3\text{rd} \quad \text{run} \quad \text{be quick}
\]

In this sentence the negation is on the manner of running only (\(\text{rew}\)). In the following sentence, only the "degree" of quickness (\(\overline{\text{\textsuperscript{\textdagger}}}\text{maak}\)) is being negated:
For these sentences, sentence negation is surely not a reasonable analysis. In Tai then, there are a number of possible surface locations for the negative marker (each immediately preceding a verb) and each location correlates with a difference in what is being denied; in other words each correlates with a different scope. If the different possibilities were represented in the base by optional Neg nodes we would be incorrectly stating that more than one instance of constituent negation can occur in a sentence. We would, furthermore, miss the generalization stated before—that where the Neg marker is located in the surface string determines its scope; i.e. all that follows the Neg is denied:

khon maa may maak "Not many people came"
N V Neg V
people come to be many

khon laay khon may maa {"Many \{Several\} people
N nm N Neg V didn't come"
people several class come

An interesting and crucial case is that of complementation (and of causatives as well):

dichan kho^+ \{may hay khun pay\} "I ask you not\{hay khun may pay\} to go"
Pro V \{Neg Comp Pro\} V
1st ask \{Comp Pro Neg\} go

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Both constructions must be glossed the same way, indicating that the verb *pay* ("go") is included in the scope of the negative even when it occurs before *hay*. (*hay* in these examples has no independent meaning.) These examples also argue that there is more reason to effect negative placement by a transformation than to generate numbers of optional nodes—some of which would be redundant (for both the complementizing verb and the embedded main verb) and others contradictory.

A second reason to place a Neg marker comes from the fixed surface order of such elements as adverbials generally. If they must be moved by a transformation—for instance into a relative clause embedded in the object NP—a separate Neg movement transformation may also be necessary.

A third argument results from those rare cases of negation before a "quantifier" (where that quantifier does not meet any other criterion for verbiness and does appear to be associated with a noun phrase):

```
  dek  phuuchay  ^  ^  kii  khon  choop  dek  phuuyiŋ
N   N   Neg   N   V   N   N
child  male  how  class  like  child  female
many
```

"Not many boys like girls"

(This sentence is the equivalent in meaning to a reading for the following:

```
  dek  phuuchay  choop  dek  phuuyiŋ  ^  ^  ^  ^  ^  ^  ^  ^
N   N   V   N   N   N   Neg   V
child  male  like  child  female  Neg  very
```

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The possibility of negation within the NP is restricted to these very few words (other quantifiers such as ٔلاي "several" are not negated) and an optional Neg node for the NP would not reflect the real facts. The Neg marker must, therefore, be moved into place in the surface structure by a transformation.

Of course we cannot then maintain the theoretical position that transformations do not change meaning—about which there is a difference of opinion generally. Even so, we will need several "rules of interpretation": one for constituent negation (other than for quantifiers)—where the surface order elements following the Neg marker are all being denied; one for quantifier negation—where, regardless of order, only the quantifier itself is negated; one for sentential negation—where the entire statement is denied.

There are two instances where the structure of the utterance precludes constituent negation; the negative, if present, must precede the first non-modal verb and the interpretation must be that of sentential negation. Both cases involve embedding of a non-complement lower sentence. Indirect objects in Tai have the form:

\[
\text{NP} \quad \text{VP} \quad \text{S}_1
\]

Passives have the following structure:
(in contrast to complements, which are:

Any modal verb, tense or Neg generated in the lower sentence must be moved up to the top sentence and relocated before the verb of that sentence. These two types of embeddings effectively never contain a full VP in the lower sentence. Some "persistent schema" must be present within the transformational rules to effect this change when the relevant structures are met with.
Footnotes to Concluding Remarks

1. There are a very few words which can also be negated but which do not pass any other "test" for verbness. They also seem to be un-analyzable as nouns; they may be within the NP, located where a number word would appear:

\[ \text{dek} \quad \text{saam} \quad \text{khon} \quad \text{"three children"} \]

\[ N \quad \text{nm} \quad N \quad \text{three class} \]

\[ \text{dek} \quad \text{kii} \quad \text{khon} \quad \text{"How many children?"} \]

\[ N \quad \text{Qnt} \quad N \quad \text{child how many Class people} \]

\[ \text{dek} \quad \text{may} \quad \text{kii} \quad \text{khon} \quad \text{"Not many children"} \]

Other items are associated with verbs, however:

\[ \text{dek} \quad \text{suum} \quad \text{kh Naomi} \quad \text{"How tall is the child?"} \]

\[ N \quad V \quad \text{child be tall how much} \]

\[ \text{(more literally -- "what level")} \]

\[ \text{dek} \quad \text{suum} \quad \text{may} \quad \text{kh Naomi} \quad \text{"The child is not very tall"} \]

2. It is interesting to note that in "quantifier negation" and negation of degree verbs, it is not the entire constituent which is being denied.
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