THE DEEP SYNTAX OF LISU SENTENCES
A TRANSFORMATIONAL CASE GRAMMAR
by
Edward Reginald Hope
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The Secretary,
PACIFIC LINGUISTICS,
Department of Linguistics,
School of Pacific Studies,
The Australian National University,
Box 4, P.O.
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EXPLANATION OF ORTHOGRAPHY

The orthography I have used when citing Lisu examples in this study is based on the following charts of consonant and vowel phonemes:

Consonants

<table>
<thead>
<tr>
<th>Symbols</th>
<th>Sounds</th>
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<tbody>
<tr>
<td>p</td>
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<tr>
<td>ph</td>
<td>ts</td>
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<td>kh</td>
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<td>b</td>
<td>d</td>
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<td>dz</td>
<td>g</td>
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<td>z</td>
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<tr>
<td>m</td>
<td>n</td>
</tr>
<tr>
<td>y</td>
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Vowels

<table>
<thead>
<tr>
<th>Symbols</th>
<th>Sounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td></td>
</tr>
<tr>
<td>U</td>
<td></td>
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</tbody>
</table>

In addition I have posited the following suprasegmentals:

- Palatalization (symbolized by y)
- Labialization (symbolized by w)
- Laryngealization (symbolized by _)
- Tone: High (symbolized by ')
- Mid (unmarked)
- Low (symbolized by ')
- Mid-rise (symbolized by ')
- High-fall (symbolized by ')

The phonetic realization of certain combinations of the above phonemes is affected by allophonic variation which is most simply stated as a set of informal item-and-process rules which are as follows:

(i) Any alveolar consonant phoneme, when it is followed by /-y/- is articulated in the manner specified, but the point of articulation becomes alveo-palatal or, with many speakers, palatal. With alveolar stop phonemes, the release is affricated if the stop is followed by a combination /-y/. To illustrate, /sy/a/[ja]; /ty/a/[ca]; /ty/i/[tʃʃ]i. 

(ii) The labialization suprasegmental /-w/- is articulated as a labio-dental fricative when the following vowel is either /-i/ or /-u/. To illustrate, /phw/ [phvʃ]; /bw/ [by]; /bwu/ [buv].

(iii) The vowel /-i/ is articulated with simultaneous labio-dental or palatal friction when it follows /-w/- or /-y/- respectively. To
illustrate, /twi/ [tv́i]; /tyi/ [tʃi].

(iv) The vowel /-u/ is articulated with simultaneous labio-dental friction when it follows /-w-/.
Thus /twu/ [tvú].

(v) The vowel /-e/ is articulated with lip-rounding in labialized syllables. For instance /twe/ [tø].

(vi) Laryngealization is articulated as glottalization of the nuclear vowel in low-tone syllables, and as tenseness of the nuclear vowel in mid-tone syllables. Thus /n̥a/ [n̥á]; /n̥a/ [n̥ɑ].

(vii) Either one of two adjacent syllabic vowels may lose their syllabic ity optionally if they both occur in the same breath-group. The resulting syllable has both glided vowels, and a tone glide. Thus /dye ā/ [jea̞-1] ~ [jea̞-1]. Where the syllable reduction is usual, even though not required, I have joined the two vowels by a hyphen in the Lisu transcription.

In addition to the purely phonological rules given above, there are also certain regular morphophonemic changes associated with the DECLARATIVE markers {a} and {u}. The rules governing these changes can be stated informally as:

(a) When a verb having a laryngealized final syllable with mid tone, or a final syllable with high tone, is followed by the DECLARATIVE marker {a} or {u}, the syllable reduction which occurs does not result in a tone glide, but in a syllable with high tone. The normal vowel glides occur in the reduced syllable. Thus {ba} {a} /baː/; {ta} {a} /tʃa/.

(b) When a verb having a final syllable with mid-rise tone is followed by either of the DECLARATIVE markers mentioned above, the result, after syllable reduction is a syllable with mid tone onset and high tone coda. Thus {pe} {a} /peː/.

The Lisu transcriptions in this thesis are morphophonemic rather than phonemic, with a view to keeping the syntax of the examples as transparent as possible, without having to constantly involve the reader in the unravelling of tone changes. Thus all morphemes are written with their basic phonemic shape, rather than their phonemic shape after morphophonemic rules have applied.

The above explanation of the orthography employed in the study is not to be interpreted as an attempt to describe Lisu phonology. It is rather an informal guide to the pronunciation of Lisu examples for those readers who like to be able to approximate Lisu speech when reading Lisu. For a fuller discussion of the phonology and a discussion of the impossibility of achieving a theoretically coherent phonemic description, see Hope (1970, 1971, 1973).
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<table>
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<th>Description</th>
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<td>A</td>
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<tr>
<td>Adj</td>
<td>Adjective</td>
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<tr>
<td>ADV</td>
<td>Adverb marker</td>
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<tr>
<td>anim</td>
<td>animate</td>
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<tr>
<td>Art</td>
<td>Article</td>
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<td>Aux</td>
<td>Auxiliary</td>
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<tr>
<td>C</td>
<td>Case</td>
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<td>Classifier</td>
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<td>Clf</td>
<td>Classifier</td>
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<tr>
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<td>conc</td>
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<td>Demarcation</td>
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<td>Essive</td>
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<td>Entailment marker</td>
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<td>Exclusive</td>
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<tr>
<td>F</td>
<td>Factitive</td>
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<tr>
<td>I</td>
<td>Instrumental</td>
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<td>IMP</td>
<td>Imperative</td>
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<tr>
<td>Inc</td>
<td>Inclusive</td>
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<tr>
<td>K</td>
<td>Case marker</td>
</tr>
<tr>
<td>L</td>
<td>Locative</td>
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<tr>
<td>M</td>
<td>Modal (more correctly, modal proposition.)</td>
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<tr>
<td>N</td>
<td>Noun</td>
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<tr>
<td>NP</td>
<td>Noun phrase</td>
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<tr>
<td>O</td>
<td>Object</td>
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<tr>
<td>P</td>
<td>Proposition (more correctly, non-modal proposition.)</td>
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<tr>
<td>P-marker</td>
<td>Phrase structure marker</td>
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<tr>
<td>P-rules</td>
<td>Phrase structure rules</td>
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<td>Q</td>
<td>Question</td>
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<td>Quantifier</td>
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<td>QUEST</td>
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<td>Sentence</td>
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<td>SOV</td>
<td>Subject-object-verb</td>
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<td>T</td>
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<tr>
<td>TOP</td>
<td>Topic marker</td>
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<td>Verb-subject-object</td>
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<td>WH</td>
<td>Relative PRO-article</td>
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<td>#</td>
<td>Empty verb</td>
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<td>I</td>
<td>First person</td>
</tr>
<tr>
<td>II</td>
<td>Second person</td>
</tr>
<tr>
<td>II</td>
<td>Third person</td>
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CHAPTER I

INTRODUCTION

1.1 THE LISU LANGUAGE

Lisu is a language spoken by a mountain-dwelling tribe which inhabits the border areas between China, Burma and Thailand, along with a number of other hill tribes (see map on following page). The language is a member of the Lolo-ish group of Tibeto-Burman languages, in which Lahu, Akha and I (Nosu) are also members. The Chinese census figures for 1953 give the Lisu population as 317,000, and I estimate that the figure for Burma may be as high as 200,000, although published figures are usually very much lower than this.¹ The Lisu population in Thailand is between 15,000 and 17,000.

There are at least five major dialects of Lisu which are characterized by differences in grammatical marking as well as vocabulary. The dialect spoken throughout Thailand, which is the dialect on which this study is based, is somewhat aberrant in that it is heavily Sinicised in its vocabulary and utilizes a set of grammatical markers very different in form, though not in function, from that found in other dialects. Nevertheless I have reason to believe that the grammar presented in this study is one which describes the basic structure of sentences in most other dialects too.

1.2 PREVIOUS GRAMMARS AND DESCRIPTIONS

The various early word lists by administrators and travellers, and later more formal descriptions have been summarised in Roop (1970) in the introduction and annotated bibliography. I will therefore confine myself to a few additional comments on Fraser (1922) and to an assessment of Nishida (1967) and (1968), and Roop's own work.
THE DISTRIBUTION OF THE LISU LANGUAGE

(No indication of population density is intended.)
a. Fraser (1922) This is an outstanding work, albeit a rather unsystematic one. The brief description of the phonology, and the orthography Fraser invented, present a slightly over-differentiated, but valid, phonemic analysis which is based on excellent phonetic perception. This section is followed by a short, rather latinate description of the major grammatical categories, but rather than manipulate Lisu too much to make it fit into the Latin mould, Fraser had the good sense to add a highly illuminating section on 'particles and miscellaneous idioms' in which most of the more interesting aspects of Lisu structure can be found. The rest of the book, nearly half of it in fact, is devoted to a word list which has provided a wealth of information for comparative linguists. Fraser was extremely fluent in Lisu, as the result of many years residence in Lisu villages, and his glosses and translations throughout are highly trustworthy.

The major omission of this grammar is the lack of any description of the process of topicalization. The possibility of word order changes, and the fact that nya can mark both subjects and objects are both mentioned, but not elaborated on. Despite this omission, Fraser's monograph remains one of the most illuminating and trustworthy of the descriptions produced to date.

b. Nishida (1967) and (1968) These are papers concerned with comparing a selected Lisu vocabulary with words from other Lolo-Burmese languages. The consonant and vowel analysis is virtually identical to Fraser's. The only points of departure are that Nishida posits a glottal stop initial, treats as CV-sequences what Fraser analyses as Cy- and Cw- clusters, and recognizes a free vowel versus laryngealized vowel contrast (free vowels being written with a final /h/).

This perfectly valid analysis is, however, somewhat nullified by what are in my opinion serious defects in these papers, namely that they contain a large number of internal inconsistencies, inaccurate transcriptions, and incorrect glosses. This is a great pity, because for anyone able to make the necessary emendations, Nishida's papers contain some very interesting suggestions.

c. Roop (1970) This is a full-scale structuralist description of the Thailand dialect of Lisu as spoken in Tak province. The description is detailed and is based on a collection of texts.

The phonology section introduces a somewhat unusual phonemic analysis which, on the whole, is a perfectly valid one, although counter-examples can be found to certain aspects of it. The analysis is admirably consistent internally. However, a serious omission is the lack of any mention of a tense:lax vowel contrast on mid-tone syllables.
This contrast is one of the points of major interest in Lolo-Burmese comparative linguistics, [cf. Matisoff (1970) and (1971)] and the fact that it is not recognised in Roop's analysis lessens the value of this work to comparativists. There are two aspects of the theoretical orientation of the phonology section which need to be mentioned. Firstly, presumably as the result of a reluctance to allow grammatical considerations to influence the phonological analysis, a number of diphthongs ending in /-a/ and /-u/ are posited, even though most of these diphthongs involve two morphemes, the second of which is {\-a} or {\-y}. Similarly a low-rising tone is posited, even though all of the occurrences of this tone involve two morphemes, the first a low-tone verb, and the second a particle {\-g} or {\-y}. The second theoretical aspect of the analysis to be noted is that there is no attempt made to justify the analysis in the face of possible alternatives. Any phonemic solution of Lisu phonology is a non-unique one, and since Roop's differs from all previous analyses some such discussion would seem to be called for.6

The remainder of the study deals with a variety of surface structures, and such things as substantive and verb phrase structure are on the whole well done in the normal structuralist framework, although at times, the desire to provide operational definitions for word and structural classes produces some minor anomalies.7 There are, however, two major criticisms I have of the analysis of the syntax; these concern the analysis of particles, and the description of topicalization and focus. In many cases the function and/or meaning of particles is misunderstood,8 and one result is that throughout this study there occur sentences with incorrect translations.9 The definitions given of topic and focus are insufficient to distinguish the semantic difference between them. Many of the examples mark focus where one would expect the topic to be, and in fact in section 1.44 topics are described as 'focal'. Other items marked as focus in examples are in my opinion not focal at all,10 and if my judgement is correct this indicates an inadequate description of the surface form of this feature.

1.3 RAISON D'ETRE FOR A FURTHER GRAMMAR

In a lecture to his senior students in the spring of 1971, John Haiman of the Linguistics Department, School of General Studies in Canberra, characterised descriptive linguists as belonging to one of three kinds. The Ants are those who get to personal grips with the mass made up of the languages of the world. They are concerned with
detailed descriptions of small portions of the mass, in the form of specific languages. Their interest is usually confined to the one language and its various aspects, and to them theoretical questions and generalizations about human language are secondary. They are the practical linguists. The Crows are those who sit back a little and scrutinize the work of the Ants, making generalizations of an abstract nature in terms of accepted theory, or occasionally modifying such theory where the work of the Ants indicates that modification is necessary. These are not the innovators of linguistic theory, but they are concerned with theoretical issues while keeping in touch with the mass of languages. The Hawks are the high fliers whose interests are primarily theoretical, and who from time to time make the most far-reaching theoretical modifications. They deal in abstractions and generalizations almost entirely. In these terms this study is intended to be the work of a flying Ant. No grammar of Lisu thus far produced has made any attempt to deal with the underlying abstract relationships between related Lisu sentences. These grammars have been content to catalogue the surface differences between structures of various kinds, rather than seeking to make any generalizations about such structures. This present work is the first attempt to describe the abstract underlying syntax in terms of the theory of transformational generative grammar. My purpose is to describe Lisu in a way which captures the most important generalizations about this language in a way which will possibly be of relevance to the theorists.

In particular I shall assume that there exists a universal base component of a highly abstract nature, and that Lisu surface sentences are derived from this base by a set of transformations which are at least partially language-specific. The reasons for this theoretical assumption are not based on any empirical evidence, as none exists as yet. My reasons are rather epistemological, of the sort given by Robin Lakoff (1968:214-5) who, when discussing the claim that the base component in a grammar is universal, wrote:

There is at present no empirical evidence to support such an assertion. The choice of deep structure cannot be determined in any definitive way even for English, much less for other less-studied languages. The choice of deep structure will affect the rest of the grammar, of course, but in no case at present has the nature of the transformational component forced on us a specific choice of deep structure. Hence, since the nature of the base in any language cannot be determined conclusively, the decision as to whether the base is language-specific, Indo-European, or language-universal must rest on other factors. Thus, the linguist will work on each language individually, assuming no universality of the phrase structure rules. The appearance of similarities
between unrelated languages would, of course, support the hypothesis of a universal base, but not prove it - not until all known languages have been shown, on independent grounds, to share the same deep structure will the hypothesis be proved empirically. This will probably never be done.

One reason why the linguist might wish to assume, at least tentatively, a theory in which the base is universal, is that such a theory is far more powerful and exercises far more control over the form of phrase structure rules than a theory in which the base is language-specific. It is not, of course, claimed that the stronger theory is necessarily the preferable one; rather, if we follow this stronger theory as far as we can, making the necessary assumptions, we shall learn more about the nature of language and about what is universal about language than if we assign arbitrary deep structures to individual languages. If the stronger theory is proved wrong, we can always return to a weaker one; but since there is no way to disprove the weaker sort of theory, if we use it, we may never discover much that we should like to know about linguistic universals.

By positing a highly abstract base it might be expected that one result would be a more complicated transformational component. For Lisu, however, if one adopts a theory which allows transformations which are sensitive not to syntactic environment but to semantic presuppositions, in addition to the more traditional type of rule, the transformational component can be kept extremely simple, since the abstract base resembles closely the surface sentences derived from it.

However, a number of possible bases have been suggested, and some of these need to be discussed.

1.4 FACTORS DETERMINING THE CHOICE OF A BASE REPRESENTATION

In this section I will attempt to describe certain features of Lisu sentences which raise important questions about the choice of a base component in a transformational grammar. In brief these features are:

(i) The order of NPs in a surface sentence cannot be accounted for adequately in syntactic terms. This is so because Lisu nouns are not morphologically inflected for case and yet the order of NPs is potentially unrestricted. Subject and object positions can be transposed without loss of meaning. Thus the unpredictability of subject and object positions results in ambiguity about the meaning of the sentences. Such sentences can only be completely disambiguated by reference to the context of the discourse, to the presuppositions of the sentence, to the real-world situation, or to all of these. The relevance of the notions subject and object to the empirical facts of Lisu is thus questionable.

(ii) The constraints on the order of NPs are semantic and logical in character, not syntactic. The NPs are ordered according to whether they
function as topic or focus of the sentence. The predictability of
order in these terms is what often makes possible the solution of the
inherent ambiguity, and this makes it seem likely that the notions
topic and focus are to be associated with the deep levels of grammatical
representation rather than with surface representations. This point
will be discussed more fully later in this section.

1.41 Order and the subject-object relation

Consider first the following Lisu sentences:

1. lāma nya ēnā khū -ā
tiger TOP dog bite-DEC
Tigers bite dogs.

1a. lāma nya ēnā khū -ā
tiger TOP dog bite-DEC
Dogs bite tigers.

2. ēnā nya lāma khū -ā
dog TOP tiger bite-DEC
Tigers bite dogs.

2a. ēnā nya lāma khū -ā
dog TOP tiger bite-DEC
Dogs bite tigers.

Sentences (1) and (2) are synonymous even though the relative order
of the subject and object in (1) is the reverse of what it is in (2).
On the other hand sentences (1) and (1a) have identical surface form
but have completely different meanings. While lāma is the first NP in
both sentences, in (1) it is the subject and in (1a) it is the object.

It is apparent that this type of re-ordering is very different to
any that occurs in English, where, if we exclude sentences in which
additional morphemes are introduced, only one re-ordering is possible,
and even this requires phonological marking. Consider the following
examples:

3. Tigers bite dogs.
3a. Dogs, tigers bite.
3b. Tigers, dogs bite.

Here sentence (3) can be re-ordered to produce (3a), but if the re-
ordering is taken further to produce (3b) a change in meaning results.
This is obviously related to the fact that English word order is
crucial in surface sentences in the identifying of grammatical subjects
and objects. The ambiguity of the Lisu examples on the other hand
arises out of the indeterminacy of the syntactic relation of the NPs to
the verb. Yet it is still true that in the context of a discourse many
such sentences are disambiguated. The fact that this can be done, and can be done in a unique way in many cases is due to the fact that there must be some sort of predictability about the word order, in non-syntactic terms if not in syntactic terms. We have seen that the order cannot be accounted for in the terms of subject-object ordering; however, when these sentences are viewed from a logico-semantic point of view it is obvious that all of the sentences are ordered in the same way in that all have a linear order of the form

**TOPIC** ** nya ** **COMMENT.**

All Lisu sentences are ordered in this way at some point in their derivation.

1.42 **Topic, comment, focus and presupposition**

The notions 'topic' and 'comment' are as old as the discipline of linguistics itself, but the notions have been understood by linguists in different ways. Hockett (1958:201) has given what has usually been accepted as the standard definition, in the words:

*The most general characterization of predicative constructions is suggested by the terms 'topic' and 'comment' for their ICs: the speaker announces a topic and then says something about it. Thus John / ran away; That new book by Thomas Guernsey / I haven't read yet. In English and the familiar languages of Europe, topics are usually subjects, and comments are predicates: so in John / ran away. But this identification fails sometimes in colloquial English, regularly in certain special situations in formal English, and more generally in some non-European languages.*

According to this definition the topic is that constituent of the sentence in which the subject of the conversation is identified, and then some predication about that subject is made. Hockett follows this definition with an example from Menomini and his description of the topic: comment structure of this example typifies the confusion there has been about the subject, as his description contradicts his earlier definition. The topic of the Menomini sentence is described as the 'more important entity' and the comment is said to contain an NP which is somehow 'subsidiary'. One would have expected the reverse to have been true if the comment is that element which conveys the main information or makes the main predication. The Chinese examples which follow the one from Menomini are used to demonstrate that in this language topics are often deleted. These examples support his earlier definition.

Lyons (1968:334-7) summarizes the traditional definition of topic and comment and clarifies the situation somewhat by referring to these notions in terms of contextual dispensability:
...the topic or 'subject of the discourse' is described as that element which is given in the general situation or in some explicit question to which the speaker is replying; and the comment is that part of the utterance which adds something new (and thus communicates something to the hearer). By this criterion we cannot say what is topic and what is comment in a particular utterance (or indeed whether it can be divided into topic and comment) unless we know what is contextually given...

In many languages, by the use of one word-order rather than another, or by the employment of a particular particle, the speaker can indeed make it clear that he is 'announcing a topic' (not necessarily given in the situation) and then 'say something about it'. This is only possible to a limited degree in English. [p.335-6].

Halliday (1967) specifically avoids the use of the terms topic and comment since the term topic covers what he deems to be two different notions, that of theme and given. The given in a sentence coincides with what has gone before in the discourse - what you were talking about - and the theme is defined with respect to position in the sentence. It is the first element of any sentence and while it may coincide with the given, it does not necessarily do so, as it can signify instead what I am talking about (p.212). The rhyme is everything in the sentence to the right of the theme, and includes an information focus which is marked phonologically. The treatment of theme in strictly positional terms leads Halliday to the position that in WH- interrogative questions the initial interrogative pronoun is the theme, rather than part of the rhyme of the sentence. Thus the meaning of the sentence What did John see? is said to be (As for) what I want to know (it) is the interpretation of the 'something' that John saw. However, it is extremely difficult to see in what way the interrogative what can possibly be the identification of what I am talking about. In fact if Halliday's position is accepted then a special rule would need to be formulated to explain why in the question the theme is what, but that in a reply such as John saw a platypus the theme is John. According to the characterization given by Halliday, the questioner would have one theme and the answerer another, when in fact one of the reasons why certain sentences can function as the answers to given questions is that these sentences share the presuppositions of the questions.

In the discussion of Lisu sentences I shall use the term topic in the traditional sense as defined by Lyons (op. cit.). This means that in Lisu surface sentences I will maintain no distinction between 'theme' and 'given', but will treat both as varieties of topic. This will be done because at present it appears that the rules which topicalize selected NPs can be formulated without reference to this distinction.
Rather I prefer to treat 'theme' and 'given' as two rather different kinds of presupposition associated with the base representation, either of which triggers the topicalization rules.15

I will accept Halliday's notion of information focus and call it simply focus. The focus of a sentence is thus the semantic crux of that sentence. It is always 'new information', never in any sense 'given'. This use of the term 'focus' is different from that of many linguists, particularly those who work within a stratificational grammar framework, who use the term to mean something like 'the standpoint of the speaker, the point of view from which the speaker approaches the subject' etc. Their notion often coincides with my notion of topic, in particular a topic which derives from a 'given' rather than a 'thematic' presupposition.

In Chomsky (1965:220-1) the suggestion was made that topic : comment might be the basic grammatical relation defined by the surface structure, and that it might be possible to define topic as the left-most NP which is a major category and is also immediately dominated by S in the surface structure. He gave the following examples (I have enclosed in brackets the items Chomsky identified as topic):

4. [In England] is where I met him.
5. It was [John] I saw.

If the items enclosed in brackets carry the stress, as seems normal, then Chomsky's definition of topic is totally different from that of Hockett et. al., but is closer to their notion of comment, since the bracketed items cannot be said to be the 'announcement of a topic of conversation' in their respective sentences, but are rather part of the main predications made about other topics of conversation. The placing of stress is actually crucial to the interpretation of these examples, but given the most natural reading of these (4) would appear to answer the question

4a. Where did you meet him?
and (5) would appear to answer the question

5a. Who was it that you saw?

In both cases this would indicate that the elements identified by Chomsky as topics would not normally be so designated.

Chomsky's later position (1970:70-87) is more convincing. Rather than the topic : comment dichotomy he follows Halliday's position and suggests rather the importance of the notions presupposition and focus. In his discussion he states that if the focus is to be determined directly from the deep structure then it will be the predicate of the dominant proposition in the deep structure. If, however, it is to be
treated as determined by the surface structure then it will be the phrase containing the intonation centre. In either interpretation the presupposition will be determined by replacing the focus by a variable. Thus in the sentences

6. Is it JOHN who writes poetry?
7. No, it is BILL who writes poetry.

the capitalised items are the respective foci of the sentences which both share a common presupposition, namely,

It is \( x \) who writes poetry.

These notions thus seem to be closely akin to Lyons' 'given' topic and 'new' comment.

The attempt to treat focus designation as a feature of surface structure in English by Chomsky will obviously need extensive revision. Even if we exclude problematic sentences in which extra stress or similar abnormal features complicate the description, Chomsky's rules as they stand assign focus to the wrong items in a large number of sentences. For example normal intonation would cause the final word in each of the following to be read as the intonation centre:

a. How many people DIED?
b. Who CAME?
c. What HAPPENED?
d. Where is he LIVING?
e. Which is BILL?
f. When did you ARRIVE?

In each of these sentences, however, the interrogative pronoun should be designated as focus and not the item which carries the intonational centre. This can be seen from a perusal of the natural replies to the questions. Question (a) for instance requires an answer something like Five, showing that the underlying presupposition is \( x \) people died and not how many people \( x \) as would be predicted by Chomsky's rules.

In Lisu the fact that a question and the answer to that question are both structured in a way which assigns the focus to the correct elements is crucial. The main difference between the Lisu and the English situations is that in English phonological stress plays an important part in marking focus (although Chomsky acknowledges that grammar plays some part as well), while it is linear order which is crucial in Lisu. In English the order of subject, verb and object is predictable independently of the assignment of focus. All that is predictable about the focus seems to be that it will (apart from a number of exceptions still to be specified) coincide with the element which carries the intonation centre of the sentence. If focus is viewed as
a surface phenomenon then there is no way of predicting the location of the intonation centre until focus has been assigned in some way. In Lisu on the other hand the location of the focus is completely predictable in terms of phrase-order, and it is the lineal location of the subject and object which is unpredictable. This indicates that in Lisu at least focus must be assigned at a deep level of grammatical representation.

A further difference between English and Lisu concerns the status of the verb in surface structures. In Lisu if a sentence has a verbal predicate in the deep structure, that verb (unless it be an abstract verb) must appear in the surface sentence. There are no verb deletions or gapping rules, and as a result surface sentences analogous to the English sentences John did or I like Sue, and Tom Mary do not exist in Lisu. Another restriction on deletions concerns NPs which are the focus of a sentence. Neither verbs nor focus NPs are ever deleted. Furthermore, a focus NP always occurs immediately in front of a verb, and this order can never be altered, nor can another NP intervene between the focus NP and the verb. The focus NP is thus attached to the verb in a way not found in English. Arising out of this fact is the question of whether the focus: presupposition dichotomy is adequate for Lisu. This question has to be investigated more fully, but at present it seems as though the notions topic and presupposition do not coincide, presupposition being a deep structure notion, and topic a surface feature defined as the presupposition minus the verbal. It is tempting to refer to this residual verbal with the attached focus NP as the comment of the surface sentence. Support for the exclusion of the verbal from the topic comes from the fact that in Lisu verbs may not occur as topics unless they are nominalized, or embedded in an NP as part of a relative clause. Consider the following two sentences:

8. ása nya dye-a
   Asa TOP go -DEC
   Asa is going.

9. dye-a ma nya ása
    go -DEC one TOP Asa
    The one who is going is Asa.

If synonymous sentences have identical bases, then these two sentences would appear to have the same base structure, and differ only in the presuppositions associated with them. If this is true, and I will assume it is, this is the basis for a claim that presuppositions must be part of a base representation since the difference in presuppositions is matched by a difference in surface structure in that (8) has no embedded S, and (9) does.
In Lisu the surface topics are marked by the morpheme nya. A sentence may have a number of topics, and the topicalized NPs and their markers occur as a set in front of the focus-plus-verbal string. The term 'set' is used purposely, since the order of the members of the set is free, and the various topics can occur in any order with reference to one another without any change in meaning or emphasis. In the context of a discourse some or all of the topicalized NPs can be deleted anaphorically.

Since any number of NPs in a sentence can be marked as topic, and the relative order of these NPs to one another is free, it follows that the number of permutations possible is directly related to the number of NPs in the sentence. Thus a sentence such as

10. nì'me nya ñwa nya nwu hi basyìa ása là yì nápu balàtsìha
to-day TOP I TOP you house beside Asa to he ear slap

fùì yà - ù
send give - DEC

This morning beside your house I gave Asa a slap on his ear.

which has six NPs, can be re-ordered in no less than 720 ways, all of them grammatical, all of them synonymous (but some having different foci from others).

The focus of a sentence can be an NP or the verbal itself. If the verbal is the focus, all NPs in the sentence are topicalized. Where an NP is the focus, an optional deletion of the topic marker nya can apply to the topics. In a sentence such as (10) where there are a number of topicalized NPs the deletion is not applied to the first few 'to the left'. Wherever the deletion has occurred the topicalized NPs are marked by intonational features, namely a slight fall in pitch. The nya deletion may not occur if a verbal is the focus.

Only one item can be focus in a Lisu sentence. This excludes equivalents of English sentences like

WHO did WHAT?
HELEN kissed MARTY!
Jackie LEFT, FAST.

In Lisu each of these examples would consist of two separate surface sentences.

1.43 Topicalization and discourse

Linguists have long agreed that a fact of language that must be accounted for is the fact that some sentences are synonyms of others, even though the surface forms be different. For Lisu, and probably for other languages too, a further fact must be explained, namely, that
while two sentences may be entirely synonymous in the usual sense, yet they may not substitute for one another in a discourse, if they are marked differently for topic and focus. We have already seen that sentences 1 and 2 are synonymous, but in a discourse they are not interchangeable. Thus if the first sentence in a discourse were

11. làma nya y[1] mà xa
tiger TOP custom not good
Tigers' habits are bad.

and the second sentence of the discourse were to mean tigers bite dogs, then the form of the sentence would have to be that of sentence 1, and sentence 2 would automatically be excluded from the discourse, since it has ânà dog marked as topic, and it thus violates a concord restriction which requires it to have the same topic as (11).

Similarly, in answer to the question

12. ânà nya ñy[1] na le thyg - à
dog TOP what sore become cause - Q
What made the dog sore?

then sentence 2 could be the answer (with the sense a tiger bit the dog), but sentence 1 is excluded.

In both cases the exclusion is not the result of the semantic content of the categories of the sentences, nor of the grammatical relations between those categories, but their surface order which reflects the underlying presuppositions of the sentences. Allowing for a slight oversimplification, the rule which excludes certain sentences from the discourse while permitting others on the basis of topic and focus marking can be informally stated as:

If $S_X$ and $S_{X+1}$ are the near-surface representations of two consecutive sentences in a discourse, and

$S_X = [NPa nya] \text{ topic A B C}$

and $S_{X+1} = [NPb nya] \text{ topic X Y Z}$

Then NPa and NPb have the same referent in the real world.

What this rule is intended to signify is that when two consecutive sentences contain an item marked by nya and that item is an NP, then the NPs refer to the same topic. (The situation becomes far more complex where a number of NPs in a sentence are marked as topic; in the next sentence some of the topicalized NPs may be deleted, and the order of the remaining ones can be altered, so that the only rule that can be made is the broad generalization that the two sentences share the same topics.) The rule given above is not intended to suggest that a Lisu speaker cannot change the topic of conversation or introduce new topics,
but rather the appearance of the marker nya indicates that no change is being made in the topic of conversation. A fact that I have not introduced before is that Lisu has a second topic marker xa which replaces nya when a new topic is introduced. Notice the type of semantic operation achieved by the topic markers in the following:

13. lama nya an h - a
   tiger TOP dog bite - DEC
   (i) Tigers bite dogs.
   (ii) Dogs bite tigers.

14. an xa lama kh - a
    dog TOP tiger bite - DEC
    (i) Dogs bite tigers.
    (ii) Tigers bite dogs.

Here if sentence (13) has the meaning of (i) and sentence (14) is the next sentence in a discourse, then it too must have the meaning of (1), since the xa signals a new topic. If (13) means (ii), then (14) must have meaning (ii) as well. The discourse must mean either Tigers bite dogs. Dogs bite tigers too OR Dogs bite tigers. Tigers bite dogs too. In English it is possible to conjoin these sentences, keeping tigers as the topic for both thus: Tigers bite dogs and are bitten by dogs. In Lisu this conjunction is impossible, as there are no passive constructions.

Now consider the following:

15. lama nya an la kh - a
    tiger TOP dog to bite give -DEC
    A tiger bit a dog.

16. yi nya na le - a
    he TOP sore become - DEC
    He got hurt.

17. yi xa na le - a
    he TOP sore become - DEC
    He got hurt.

Here, because of the topic marking, there is no doubt that he in sentence (16) refers to the tiger, and he in (17), to the dog. If the next sentence of the discourse were to be Asa saw it (all) this involves a further change in topic and so the sentence would have to be

18. asa xa the mu - a
    Asa TOP thus see - DEC
    Asa saw this.
1.44 Theoretical Implications

The Lisu phenomena I have outlined raise important questions about the relationship between semantic representations at a deep level and surface sentences, about the types of rule required for mapping the deep representations into surface forms, and about the need in a theory of universal grammar for Chomskyan deep structure.

In his discussion of whether phrase structure rewriting rules should generate sets of symbols or strings of concatenated symbols, Chomsky voiced a presupposition about natural languages which is widely held by linguists, namely that apart from a small number of optional stylistic transpositions word order in any language is relatively fixed.

"Suppose that for some language each permutation of the words of each sentence were to give a grammatical sentence that, in fact, is a paraphrase of the original. In this case the set-system would be more superior for the categorial component of the grammar of this language... But there is no known language that remotely resembles this description. In every known language the restrictions on order are quite severe, and therefore rules of realization of abstract structures are necessary."

It should be noted that Chomsky argues that because word order is relatively fixed in all known languages, the whole of the categorial component should be based on rules of a concatenational type. His assumption is thus that phrases within a sentence are bound by the same type of ordering restrictions as words are within a phrase. This assumption seems to be adequate for English, but it would not seem to be a necessary constraint on the categorial component of grammars of languages like Lisu (I am presuming that Lisu is not entirely unique).

Another aspect of Chomsky's position is that by imposing left-to-right ordering constraints on the strings generated by all of the rules in the base component he not only assumes that the restrictions on ordering of phrases within a sentence are of the same kind as those on the ordering of words within a phrase, but he makes the further assumption that these ordering constraints are syntactic in nature, rather than say logical or semantic.

The Lisu data I have presented would appear to constitute a strong counter-example to the universality of much of the above argument of Chomsky's. If, as Chomsky says, free word order can be represented best by a base component consisting of rules which generate sets, then surely this type of rule best represents the phenomenon of free phrase order at this deep level of representation. It follows then that the constraints on order may be of a different type for phrases than they
are for elements further 'down' the scale. For Lisu it seems plain that the order of phrases within a sentence is determined by semantic rules of some kind.

If Lisu is described within the framework of the 'Aspects' theory, then the very fact of having introduced order into the strings produced by the P-rules means that re-ordering T-rules must also be posited. These T-rules in Lisu cannot adequately be treated as optional, since re-ordering to achieve the Topic-Focus-Verbal sequence is required of all sentences. If treated as optional, then this important generalization is lost. If by introducing order into the P-marker further rules which re-order these are necessarily introduced ipso facto, then there needs to be strong motivation for the introduction of order at the early stage. For English such justification is at least plausible, although it has been challenged by Fillmore (1968), and others. For Lisu the usual arguments used for English do not apply, since there is no empirical reason for positing the subject NP as the only NP directly dominated in the P-marker by the S node. One obvious feature which makes this argument invalid is the great mobility of all NPs in Lisu. There is further strong counter-evidence in the fact that in Lisu, rather than the object NP and the verb forming a single unit in the operation of many T rules, it is the comment, i.e. the focus plus the verbal which is the important closely-knit unit, and this remains true whether the focus element be the subject, the object, a time phrase or any other NP. Thus the argument based on the assumption that the verb and its object are bound more closely together than the verb and the subject is invalid for Lisu, where entirely different units are involved.

The claim that left-to-right order, and the associated existence of the VP node are irrelevant raises the matter of verb sub-classification and the way rules which govern the co-occurrence restrictions of verbs and nouns will operate. Lakoff and Ross (1967) have argued that both the sub-classification of verbs and the rules governing co-occurrence restrictions are not syntactic in nature as claimed by Chomsky, but are rather semantic or lexical and can be adequately accounted for in non-syntactic terms. Their argument would seem to apply to the Lisu data very well, where the restrictions obviously apply to the whole NP rather than to the noun itself. Thus in the following examples all co-occurrence restrictions which apply to the noun A also apply to the noun phrase B, simply because B is a paraphrase of A.

18. A. mālā A kinship term for senior brother's wife.
B. yf kūku zāmo
   WH- s.bro. wife
   Senior brother's wife.
19.  A. àgu **A hoe.**
    
    B. **micha khwa dwu**
    ground hoe thing

    An instrument for hoeing the ground.

    Even what Chomsky has called his Extended Standard Theory (EST) (Chomsky 1970b) has the same inadequacies as those already mentioned for the 'Aspects' theory. The fact that symbols standing for focus and presupposition are introduced as well as the P-marker still doesn't equip the theory to reflect adequately the generalization that all NPs are equally mobile in Lisu. Even if the Presupposition and Focus categories can be made to account for the final word order by the addition of certain new rules, (i.e. the theory can be made to have adequate weak generative capacity) the strong generative capacity will remain inadequate since while it may capture important generalizations for English, these same generalizations (e.g. the predictability of subject and object order) are irrelevant for Lisu, and the important generalizations for Lisu (e.g. the predictability of the order of topic and comment, and the mobility of all NPs) are not accounted for at all.

    It seems that a theoretical framework within which an adequate description of Lisu can be attempted should have the following minimal features:

    (i) An abstract level of representation in which the categories which are generated are semantic in nature. At this level the semantic relationship between the various constituents will need to be indicated in a unique way. The constituents at this deep level will need to be generated as sets and not as strings of concatenated symbols. Associated with the semantic categories at this level will need to be some way of defining the co-occurrence restrictions between them. This means that these restrictions will apply at a far deeper level than has been the case with Chomskyan grammars. Associated with the semantic representations will be a set of underlying presuppositions by means of which the semantic categories (or at least a sub-set of them) will be marked either Topic or Focus.

    (ii) A set of rules will assign an order to the symbols generated under (i), and presumably these rules will operate in a way which is governed by the topic and focus marking of the various categories.

    (iii) A set of rules will convert the strings of ordered symbols representing semantic categories into surface strings. At this level notional categories will presumably be rewritten as such things as prepositional phrases, which will in turn have inner structure which presumably will be generated by means of P-rules and their associated
P-markers. In other words, it is possible that the term phrase structure as it has been used might need to be limited to a sub-component which generates the structure of phrases, rather than the structure of sentences.

A schema such as that which I have outlined so informally approximates in many respects some that have been suggested, in particular Fillmore's case grammar in which left-to-right order and the assignment of such relations as subject and object is viewed as a near-surface operation which may be applicable to different languages in different ways (1968: 58). Many features of the theories of generative semantics also appear to coincide with those required for Lisu, but while these suggest the right kind of abstract logical categories, they too assume a left-to-right orientation of these categories. Thus if a sentence such as:

20. Tom hit Bill

has a deep form of the type suggested by McCawley (1967, 1968a,b), of roughly the same sort as

21. hit $x, y$: $x = \text{Tom}: y = \text{Bill}$

the correct meaning can only be derived from (21) if an a priori assumption has been made that English is a VSO language. To make a base representation such as (21) free from the a priori assumption it is necessary to have a global constraint which states that English in fact is a VSO language, and thus that left-to-right order is significant.

To capture the necessary generalizations about Lisu such a theory would need to dispense with this particular global constraint, and the necessary relationships between the arguments and the predicate would have to be asserted in the base representation. If such a schema were adopted for English, the base representation of (20) would need to be something like

22. hit $x, y$: $x$ is agent: $x = \text{Tom}: y$ is patient: $y = \text{Bill}$.

At this point it becomes obvious that such a base is equivalent to Fillmore's representation which would be

23. $S \rightarrow P + M$

$P \rightarrow A,D,V$ (where V stands for predicate, A for agentive and D for dative)

$A \rightarrow \text{Tom}$

$D \rightarrow \text{Bill}$

$V \rightarrow \text{hit}$

Since these base representations are equivalent, I will assume that Fillmore's suggested base rules are correct, although there remain problems connected with the number of cases to be incorporated into the theory. At various points in my analysis I will diverge from Fillmore's suggestions, but these points will be identified as I come to them.
In addition to the type of base representation suggested by Fillmore I will assume that each representation has associated with it a set of presuppositions. These presuppositions will be the means of correct topic and focus assignment to the basic categories and by virtue of this fact they are the means by which sentences will be accepted or rejected in a discourse.
NOTES

1. There are known to be 60,000-odd adult members of the Lisu church in Burma, and I have based my estimate on this figure.

2. For example in (1968) to come is cited as lāh-ʔah on page 4, but as lah-ʔah on page 32, and this morpheme is glossed as go on page 269 in the expression cited as doh lāh-ʔah; tree is cited as sūh-dzw on page 6, but as sūh-dzù on page 269; frog is written as wō-pá on page 9, but as vō-pá on page 20. Such inconsistencies apply to a dozen or more additional forms.

3. These are extremely numerous. To take one page at random (1968:22) the following are erroneous in my judgement:
   - tshūh-pjah foot should have mid tone on first syllable;
   - khù hole should have mid tone and free vowel;
   - ʔah 'post-verbal particle' should have no initial consonant, and laryngealized vowel;
   - khā-thu basket should have free vowels on both syllables;
   - sūh-pham leaf should have free vowel on final syllable;
   - ʔah-phāh grandfather should have unaspirated initial and mid tone on the final syllable, and laryngealized vowels on both syllables.

4. For example in (1968) the form cited as meaning to sink on page 17 means to roll over; that cited as to stir on the same page means to make warm, to warm up; the form cited as meaning to kick on page 20 means to pound; the gloss to cracks on page 21 should be to hit, to strike; that cited on page 23 and elsewhere as meaning to trap means to set a trap; and so forth. Such mistranslations occur on almost every page.
5. From such unusual sentences as the following, which appears on page 33, it would appear that the text was unedited:

/dwɪyɪɑː begh nyɑ, tʃhwa azu?/
enter=go=nom? say=to=as-for, this=emph=time we
Is it going in (the tape recorder) when we speak this time?
(Roop's translation and transcription).

Native speakers have great difficulty understanding this sentence, and when it is explained to them, invariably re-order it. Until it is explained most feel it could more easily mean If it is going in, then it's our turn now.

6. For a fuller discussion of Lisu phonology and more detailed comments on Roop's solution see Hope (1971).

7. For instance the definition given of 'complex words' given on page 48 reads: '...a complex word is a combination involving elements of different form classes.' This definition could equally apply to phrases, and even sentences. As an example of a complex word Roop gives /əmyɪwə/ to the field. If this is a single word, then so is the following (my orthography):

/əmɛ thɛ åsɑ ɛwɛtʃ fwy syɛ gwu wa /
yesterday time Asa boar shoot kill place to
To the place where Asa shot a boar yesterday.

In this example, the morpheme gwu place is a bound form which nominalizes the preceding sentence. The nominalized sentence in turn could have embedded in it an infinite number of relative clauses, thus if Roop's definition is true, words as well as sentences and noun phrases are potentially of infinite length.

8. For example on pages 114 and 115 there is a discussion of the 'introductory words' /syɪ/ and /yɪsyɪ/ which are said to mean in that case, in the case of and to indicate that the following clause is related to preceding discourse. In fact the syllables under discussion are the Lisu equivalents of Er..., and Um... and indicate no more than that the speaker is thinking. Of more importance are the misunderstandings about particles such as ḋu and -a which Roop claims indicate 'emphasis' and nominalization respectively. In face ḋu marks reported speech, and -a marks declarative sentences. Similarly swì which Roop describes as an 'emphasis' marker, in fact nominalizes a sentence and means something like it seems that ..., apparently ... It is the same morpheme he elsewhere describes correctly as a classifier meaning sort, type.
9. Thus for instance the sentence translated as *Peppers are now ten baht per kilo, big peppers that is* on page 66, in fact means *They say that peppers are ...* Similarly that translated as *When we have raised pigs...* on page 111 means in fact *Even though we raise pigs...*, and the sentence on page 114 translated as *If you once get (there) tell (them) others will give (the money) should read By the time you arrive, others will have told them that someone will pay them.*

Not all of the mistranslations are due to misunderstandings about particles, however. For instance a form glossed on page 112 as *not capable* actually means *to move away from home with her husband, or more literally to move away from home without her father pulling,* which is a reference to the Lisu custom of 'pulling' - the father's right to demand that a newly married couple live in the same village as him for a while.

10. For instance the particle */lé/* on page 197 is described as a focus particle marking a nominal as 'singled out for the listener's special attention'. However, counter-examples to this analysis abound. Note the following sentence (Roop's orthography is used):

\[
\text{áśālénų āmāē made} \\
\text{Asa=to=TOP somebody not=hit} \\
\text{Nobody hit Asa}
\]

This sentence could answer the question *Who hit Asa?* In such a case it is difficult to see in what way the speaker is singling out Asa for the listener's special attention. What the speaker is singling out for the listener's attention is that *nobody* his Asa, and thus */āmāē/* is the focus of the sentence rather than */áśā/*. 

11. I am unable to suggest a way of formulating these rules rigorously and am uncertain about the repercussions this type of rule might have for the general theory. At various points in this study I will, however, indicate their relevance for Lisu.

12. I am using the term NP rather loosely at this point to include both noun phrases and what are usually referred to as prepositional phrases.

13. For the purpose of this discussion I am restricting myself to a discussion of re-orderings which do not involve special phonological marking such as a pause, abnormal intonation and the like. As a general rule, Lisu sentences have a surface configuration consisting
of a set of NPs followed by a verbal element. Within the set of NPs there is potentially complete freedom of left-to-right order. At least one NP may be moved to a position behind the verb without any special phonological marking being required. However, once two or more NPs are moved in this way, they are separated by pauses, and the normal intonation of the sentence is affected. For this reason I will limit myself to a discussion of the order of the NPs within the pre-verbal set.

14. I am aware of the difficulty of defining the limits of linguistic and extra-linguistic 'context', but use the term without discussion for want of a more precise notion.

15. Theme corresponds to a presupposition shared by previous sentences in the discourse. It is thus a presupposition associated with the discourse as a whole rather than with a single sentence. Given corresponds to a presupposition of the individual sentence.

CHAPTER II

THE BASE, THE CASES, AND THE CASE FRAMES

According to Fillmore (1968) the base representation of a sentence consists of a proposition and a modal component. The proposition in turn consists of a verb (apparently a notional or semantic category rather than a morphological class) and a set of notional cases which reflect the relationship of the arguments of the proposition to the main predicate and to each other. He converts this description into a system of re-write rules:

$$ S \rightarrow M + P $$

$$ P \rightarrow V + C_1 + ... + C_n $$

These rules are not to be interpreted as assigning a lineal order to the constituent symbols (p.24, fn.30) and thus they presumably generate sets of symbols which are unordered rather than strings of symbols which are concatenated and in left-to-right order. Thus when Fillmore proceeds to generate tree diagrams from the rules, in which the nodes of the trees are assigned an order, each tree generated in this way is actually only one of a set of possible trees, since the same rules could generate trees with the nodes in different orders. Fillmore has obviously assumed some intermediate step whereby one tree, with the required order of nodes, is selected from the set of possible trees. This assumption makes for ease of presentation, and is unimportant for the general theory, and so I will follow Fillmore throughout this study and make a similar assumption on an ad hoc basis in order to avoid the recurring need to select the correct type of tree from the set of possible trees.

The base rules posited above are supplemented by a set of rules which achieve such things as 'primary topicalization' (which is subjectivalization in English) by re-ordering the nodes and attaching them to other nodes higher or lower in the tree, thus producing the
correct surface structure and order. Fillmore has nowhere expounded
the theory of rules of this kind or indicated what sort of entity
provides the context to which the rules are sensitive. However, a
theory of the base representation which includes a set of presuppositions
and a focus which are generated along with the P-marker provides, for
Lisu at least, the type of environment required to 'trigger' such
topicalization rules.

2.1 THE CASES

I accept as basic the cases proposed by Fillmore (1968) whose
definitions follow:

Agentive (A) The case of the typically animate perceived instigator
of the action identified by the verb.

Instrumental (I) The case of the inanimate force or object causally
involved in the action or state identified by the verb.

Dative (D) The case of the animate being affected by the state or
action identified by the verb. In Fillmore (1969) this case is called
the Experimenter.

Factitive (F) The case of the object or being resulting from the
action or state identified by the verb, or understood as a part of the
meaning of the verb.

Locative (L) The case which identifies the location or spatial
orientation of the state or action identified by the verb.

Objective (O) The semantically most neutral case, the case of
anything representable by a noun whose role in the action or state
identified by the verb is identified by the semantic interpretation of
the verb itself; conceivably the concept should be limited to things
which are affected by the action or state identified by the verb. The
term is not to be confused with the notion of direct object, nor with
the surface case synonymous with the accusative. In Fillmore (1969)
the relations covered by this definition are ascribed to two different
cases, the Counter-agent, which is the force or resistance against
which the action is carried out, and the Object, which is the entity
which moves or changes, or whose position or existence is under
consideration.

In addition to the above there are two more cases which Fillmore
suggests but does not define. These are the cases of nouns which
function as nominal predicates. I will define them as follows:

Essive (E) The case of a noun indicating the generic class to which
an object or being belongs, or the essential matter of which the being
or object consists.
Translative (Tr) The case of the name given to a being or object when identifying it or distinguishing it from other beings or objects.

The Essive and the Translative are unique in many ways. They are the only two cases which cannot be topicalized, since they only occur as nominal predicates. If McCawley (1970) and Bach (1968) are correct in maintaining that nouns are not a basic category, but are a derived category the deep form of which is a predicate, then the case of that deep predicate will be the Translative.

In Fillmore's theory the case nodes are each written as a concatenation of NP + K, where K is the case marker in the form of a preposition or postposition, each of which is closely associated with one particular case. Not all surface prepositions are K-prepositions, however, as some are transformationally introduced. The rules which re-write the symbol C as NP + K are a new type of rule since they convert 'notional' or semantic categories into syntactic categories such as noun phrases.

2.2 THE POSTPOSITION CASE MARKERS

The Agentive, Objective, Instrumental, Factitive and Translative have no overt postpositions associated with them in Lisu. The Dative has the postposition la which for sake of convenience I will gloss as to, and the Essive has the postposition tu which I shall gloss as out of, and the Locative has either wa to or tsu from depending on the semantic choice made by the speaker between these two spatial orientations. Some of the non-basic 'cases' which are the surface forms of underlying sentences, occur with postpositions too. Locative adverbs are marked by wa to, tsu from, tmywè direction of; time adverbs are marked by thè at; manner adverbs are marked by le in ... manner; and the benefactive is marked by mësá for. All of these markers are postpositions.

Lisu has no nouns for agent, place, instrument etc., but certain cases have relative pronouns which are uniquely associated with them. These pronouns are bound forms which require the co-occurrence of an embedded relative clause (see section 4.2).

2.3 THE CASE FRAMES

Sentences can obviously be classified according to the cases which are contained in the propositions of those sentences, and sentences in a given class, because they contain the same cases will have a certain amount of shared semantic content. Those with an Agentive in their
base form will all have a semantic interpretation involving an animate being who is performing an action, and so forth. Not all such classification is of interest, however, the only important classification being the grouping together of propositions which share a common obligatory case or set of cases. These proposition classes are the basis of verb sub-classification, providing 'case frames' which allow or block the co-occurrence of verbs with the various types of proposition. Thus only those verbs specified as having the case frame +[A_] can occur in sentences having a proposition in which an obligatory Agentive occurs. All such verbs are those which require, in Chomskyan terms, an animate noun as subject. In the sections which follow the more important verb classes are exemplified with the defining case frames. Such classification is semantic rather than syntactic.

2.3.1 Case frames incorporating one obligatory case

2.3.1.a +[A_] verbs:

Verbs which have this specification include the following:

- lwĺ to wiggle
- tyf to cough
- tă to jump
- swy to whistle
- tyū to rotate
- lămă to wave

The fact that verbs in this class have the specification +[A_] is not to be interpreted as meaning that this is the only case with which these verbs occur. Rather they require the co-occurrence of an A in the proposition, but some of the verbs also co-occur optionally with certain other cases in the proposition as well. What these additional optional cases are is determined by the verb's full case frame. Thus tyf to cough has a full case frame +[A_], i.e. it may not co-occur with any optional deep cases, while lwĺ wiggle has a full case frame +[A(O)_] and may co-occur with an Objective. Note the following:

1. āsa nya lwĺ tyă -ă
   A V
   āsa TOP wiggle CONT-DEC
   āsa is wiggling (squirming around).

2. āsa nya yăpu lwĺ tyă -ă
   A O V
   āsa TOP tin wiggle CONT-DEC
   āsa is jiggling the tin.

The assumption is that both forms of the verb have the same semantic specification in the lexicon, and the slight change in meaning between the two forms of the verb, and the slight change in phonological shape is attributable to the difference in the constitution of the base
proposition, rather than being attributable to different lexical items having different meanings. If the assumption is not made, then the fact that two verbs with very similar phonological shapes and closely related meanings occur is deemed to be a mere accident. Such accidents would then be strangely common in Lisu, as will be seen later in this chapter.

Of the verbs given as examples above, all but lw+ wiggle have the same case frame specification as ty+ cough.

2.31.b +[I_] verbs:

All verbs in this class may occur with optional Datives or Objectives, and some may occur with optional Agentives. Of those with the specification +[I(O/D)], most have a very small set of Instrumental nouns with which they can co-occur. For example thu to soak only co-occurs with mōha rain or wās+ hail, and with other nouns a causative construction has to be used which incorporates a different verb phā to be soaking wet (see Chapter IV for a discussion of causatives). Similarly the verb dywē blow occurs only with the noun mīhī wind, and the verb pwē to thunder occurs only with the noun māgwū thunder.

3. ása lā nya mōha thu -a
   D I V
   Asa to TOP rain soak -DEC
   The rain drenched Asa.

4. ása lā nya mīhī dywē-a
   D I V
   Asa to TOP wind blow-DEC
   The wind blew against Asa.

5. ami lā nya māgwū pwē -a
   O I V
   field to TOP thunder thunder-DEC
   The lightning (lit. thunder) struck the field.

The +[I_] verbs have a full specification +[(A)(O/D)] when they belong to the sub-class which allows the co-occurrence of an optional Agentive. The class is a small one, and has in it such verbs as
tā to sting, burn  kā to prick
xā to cut  thā to scald

Consider the following:

6. átū nya tā -a
   I V
   fire TOP sting-DEC
   Fire burns (lit. stings).
7. átú nya ása lá tá -á
   fire TOP Asa to sting-DEC
   The fire burnt Asa.

8. alë nya ása lá átú tá -á
   Ale TOP Asa to fire sting-DEC
   Ale branded Asa with the fire.

9. thywù nya ká -á
   thorn TOP prick-DEC
   Thorns prick/thorns are prickly.

10. ása nya thywù kó -á
    Asa TOP thorn prick-DEC
    A thorn pricked Asa.

11. alë nya ása lá thywù kó -á
    Ale TOP Asa to thorn prick-DEC
    Ale pricked Asa with a thorn.

2.31.c [+D_] verbs:

This class consists of adjectival verbs, and is a very large class
indeed. The intransitive adjectival verbs may not co-occur with an
Agentive, but the transitive adjectival verbs may optionally occur with
one. Intransitive members of the [+D_] class include the following:

   tshi  fat          na  sick
   dù    prostrate   the  clever
   vwù   big          zu  little
   phwu  white      ng  black

12. ása nya tshi-á
    Asa TOP fat -DEC
    Asa is fat.

13. ása nya na -á
    Asa TOP sick-DEC
    Asa is sick.

14. ása nya ng -á
    Asa TOP black-DEC
    Asa is dark skinned.
Almost all of the transitive adjectival verbs have two phonological shapes, depending on whether or not the optional Agentive occurs.

Observe the following:

15. ásaña tshé -á  
   D  V  
   Asa TOP worried-DEC  
   Asa is worried.

16. laé nya ásá lá tshé -á  
   A  D  V  
   Ale TOP Asa to worry-DEC  
   Ale alarmed Asa.

17. ásaña thye le -á  
   D  V  
   Asa TOP peaceful become-DEC  
   Asa is resting quietly.

18. alé nya ásá lá thye -á  
   A  D  V  
   Ale TOP Asa to pacify-DEC  
   Ale pacified Asa.

2.31.d +[0_] verbs:

This class of verbs consists of adjectival verbs which modify inanimate nouns, stative verbs, and one 'empty' verb. The following are some of the adjectival verbs:

- dywy withered  
- ká dried out  
- syi wide  
- dyi increasing in size  
- thye brittle  
- ŋi stinking  
- zí slippery  
- z+ spinning

The empty verb with this case frame is dyu. In the theory of Fillmore (1968) such empty verbs occur as V nodes in the base, but have no semantic content, and are thus not part of the lexicon. All the necessary meaning of the proposition is provided by the case labels, and the NPs they dominate. Thus although empty verbs have phonological form, their sole function is to provide a surface form of the V node.

19. ánaga nya dyu-á  
   O  V  
   buffalo TOP # -DEC  
   There was a buffalo/there are (such things as) buffaloes.

As in the case of the +[D_] verbs, so with the +[0_] verbs, there are only a few which allow the co-occurrence of an Agentive, and thus have a case frame specification as +[(A)O_]. In this small sub-set are such verbs as lwé warm, ti sinking, and be untied, loosened. Once again, the members of this class, like the +[(A)D_] verbs have a
slightly different surface form for each verb when the optional Agentive occurs in the same proposition. Note the following:

20. \text{wúphyà nya lwè -a} \\
\text{vegetable TOP warm-DEC} \\
The vegetables are warm.

21. \text{ása nya wúphyà lwè -a} \\
\text{Asa TOP vegetable warm-DEC} \\
Asa is warming the vegetables.

22. \text{yfthwèbe nya ba -a} \\
\text{WH-knot TOP untied-DEC} \\
The knot is loose.

23. \text{ása nya yfthwèbe phe -a} \\
\text{Asa TOP WH-knot untie-DEC} \\
Asa untied the knot.

2.31.e +[F_] verbs:

This class is bigger than the analogous class in English, and consists of various verbs meaning \textit{come into being} and one empty verb. All but the empty verb may co-occur with an optional Locative. The following are examples of the class:

\begin{align*}
di & \text{ to appear - tubers} \\
dwè & \text{ to appear - fruit} \\
yg & \text{ to appear - cracks} \\
hwè & \text{ to appear - mud} \\
nwè & \text{ to appear - shoots} \\
hwe & \text{ to appear - holes} \\
ywe & \text{ to appear - teeth, hair, plants} \\
lh & \text{ to appear - rain}
\end{align*}

Note the following:

24. \text{bl nga di -a} \\
\text{F V} \\
\text{taro TOP form-DEC} \\
Taro tubers are forming/have formed.

25. \text{yf-sl nga dwè -a} \\
\text{F V} \\
\text{WH-fruit TOP form-DEC} \\
Fruit is forming/has formed.

26. \text{yf-tywe nga ya -a} \\
\text{F V} \\
\text{WH-crack TOP form-DEC} \\
A crack is forming.

27. \text{bl tyg nga bl di -a} \\
\text{L F V} \\
\text{taro-root TOP taro form-DEC} \\
Taro tubers are forming on the taro roots.
28. ɲama nya yf-s† dwè -ã  
   L F V  
   banana TOP WH-fruit form-DEC  
   Fruit is forming on the banana trees.

29. 1áké nya yf-tywé yã -ã  
   L F V  
   bowl TOP WH-crack form-DEC  
   There is a crack forming on the bowl.

In the English glosses of (27), (28) and (29) I have tried to reflect the Locative. The sentences could as easily have been glossed as The taro roots are bearing tubers, The banana tree is bearing fruit, The bowl is cracked respectively.

The empty verb in the +[F_] class is dỳ to appear, and this occurs in sentences in which all of the meaning to appear is actually provided by the F node to which such meaning attaches.

30. 1àma thì ma dỳ -ã  
    F V  
    tiger one one appear-DEC  
    A tiger appeared.

To my knowledge there are no verbs with the specification +[L_], +[E_] or +[Tr_].

2.32 Case frames incorporating two obligatory cases

2.32.a +[A,0_] verbs:

This class is one of the largest, and includes all transitive verbs which can take inanimate objects. The following list is a sample:

dzà to eat     dè to beat  
tf to pound   fwy to shoot  
syś to fix     sì to sew

All verbs in this class may co-occur with optional Instrumental. A sub-set may occur with an optional Dative, but a few, such as dè beat, tf pound, syś fix, and sì sew, may not.

31. @studentfield>ása nya yf-phwl bà -ã  
    A O V  
    Asa paid the price (i.e. he did not get it free).

32. @studentfield>ása nya alè lâ yf-phwl bà -ã  
    A D O V  
    Asa TOP Ale to WH-price pay-DEC  
    Asa paid Ale the price.

In a reading other than that given for (31), a Dative must be posited for the base, even though none appears in the surface sentence.
A few verbs have different surface forms depending on whether the proposition contains \([A,O,V]\) or \([A,O,D,V]\). Thus the two surface verbs \(dz\dot{a}\) *eat* and \(ts\dot{a}\) *feed* can be analysed as the same deep verb, the former occurring in \([A,O,V]\) and the latter in \([A,O,D,V]\) propositions.

33. \(\dot{a}v\dot{a} n\dot{y}a k\dot{h}s\dot{a} dz\dot{a}\-\dot{a}\)
\[ A \quad O \quad V \]
\(pig\ TOP\ corn\ eat-DEC\)

The pig is eating corn.

34. \(\dot{a}sa n\dot{y}a \dot{a}\v\dot{a} l\dot{a} k\dot{h}\dot{a}sa ts\dot{a}\-\dot{a}\)
\[ A \quad D \quad O \quad V \]
\(Asa\ TOP\ pig\ to\ corn\ feed-DEC\)

Asa feeds corn to the pig.

In Lisu only nouns referring to animals can occur as the Dative in sentences having \(ts\dot{a}\) *feed* as the main verb. This is a social rather than a linguistic restriction. To modify McCawley's famous example, a speaker who used this verb with a human Dative would need a lesson in manners and not a lesson in remedial Lisu. The situation is somewhat analogous to the English *He fed sandwiches to the guests*.

Some verbs in the class may obviously take a Dative instead of an Objective, but may not take both in Lisu. Thus a verb such as \(dz\dot{a}\) *beat* may have an animate or an inanimate object, but may not take both, as there are no sentences in Lisu like *John hit the ball at Peter*. In Lisu the deep form of such a sentence would incorporate an embedded S, and the sentence would mean something like *John sent Peter a ball by hitting it*.

Another very small sub-set of \(+[A,O_]\) verbs allows the co-occurrence of an optional Factive instead of an optional Dative. The verb \(tf\) *pound* is an example. Note the following:

35. \(\dot{a}sa n\dot{y}a t\dot{a}sh\dot{a} bu yf-x\dot{a}\quad tf\-\dot{a}\)
\[ A \quad O \quad F \quad V \]
\(Asa\ TOP\ salt\ WH-particle\ pound-DEC\)

Asa pounded the salt into a powder.

### 2.32.b \(+[A,O_]\) verbs which have alternative specification:

Some verbs which occur in \(+[A,O,V]\) propositions (which may also incorporate optional I, D or F symbols) have alternative co-occurrence possibilities. The \(+[A,D_]\) possibility has already been referred to. In addition some verbs have case frames \(+[A,I_]\) and some have \(+[A,F_]\).

For instance, the \(+[A,O_]\) verb \(tf\) *to pound* has the alternative frame \(+[A,I_]\). Bearing in mind that all \(+[A,O_]\) verbs may have optional Instrumentals note the following sentences which have \([A,O,V]\), \([A,O,I,V]\) and \([A,I,V]\) propositions:
36. ása nya tshàbu t'f -á
   A  O  V
   Asa TOP salt pound-DEC
   Asa is pounding salt.

37. ása nya tshàbu tshìdwù t'f -á
   A  O  I  V
   Asa TOP salt pestle pound-DEC
   Asa is pounding salt with a foot-pestle.

38. ása nya tshìdwù t'f -á
   A  I  V
   Asa TOP pestle pound-DEC
   Asa is operating the foot-pestle.

The verb wá to shield is another in this class. Note:

39. ása nya khàthwù wá -á
   A  O  V
   Asa TOP basket shield-DEC
   Asa is shielding the basket.

40. ása nya khàthwù yìpùwù wá -á
    A  O  I  V
    Asa TOP basket cape shield-DEC
    Asa is shielding the basket with a rain-cape.

41. ása nya yìpùwù wá -á
    A  I  V
    Asa TOP cape shield-DEC
    Asa is using the rain-cape as a shield.

In sentences like (36) and (39) it can be argued that since some sort of instrument is 'understood' the correct base structure of such sentences should include an I node. If this interpretation is accepted in favour of the one I have posited, then the deep I node will either be an 'empty' one having no surface form, or else it will be the Instrumental PRO-noun (see section 4.2), and a deletion rule then becomes necessary. At present I know of no criterion which can be used to distinguish between these various analyses.

The +[A,0] verbs which have alternative specification as +[A,F] are a small class and can be exemplified by the verbs syā fix and ìbì to forge (metal). Since the Objective differs from the Factive in that they are associated with a previously existing entity and one that results from an action respectively, the verbs mentioned above appear to change in meaning when they occur in the alternative type of proposition. However, the difference in meaning can easily be ascribed to the difference in the cases rather than to the verb, since the difference in meaning between the two types of proposition when they both incorporate the same verb is precisely the difference in meaning.
associated with the two different cases involved. For instance, consider the following:

42. áṣa nya hi sya-à
   A  O  V
   Asa TOP house fix-DEC
   Asa is mending the house.

43. áṣa nya hi sya-à
   A  F  V
   Asa TOP house fix-DEC
   Asa is building a house.

44. áṣa nya áthà db-à
   A  O  V
   Asa TOP knife forge-DEC
   Asa is forging a knife (i.e. is re-shaping or re-tempering an old knife).

45. áṣa nya áthà db-à
   A  F  V
   Asa TOP knife forge-DEC
   Asa is forging a knife (i.e. is making a knife out of raw steel, truck springs etc.).

Since the meaning of the verb in each member of the pairs of sentences above is obviously related to that of the other member of the pair, and the difference in meaning between (42) and (43) on the one hand, and (44) and (45) on the other is that in (42) and (44) the object was in existence prior to the action, and in (43) and (45) it is the result of the action, there is no need to posit two meanings for each of the verbs. The situation is exactly parallel to that of Fillmore's English sentence (1968:4).

John paints nudes.

This can be interpreted in two ways, only one of which (the one involving an O and not an F) is paraphrased by

What John does to nudes is paint them.

One or two verbs have the specification +[A,0/F/I_]. These thus have three alternative types of proposition in which they can occur.

One of these verbs is sì sew. Observe the following:

46. áṣa nya bethyl sì-à
    A  O  V
    Asa TOP jacket sew-DEC
    Asa is darning the jacket.

47. áṣa nya bethyl sì-à
    A  F  V
    Asa TOP jacket sew-DEC
    Asa is tailoring a jacket (i.e. sewing a jacket from pieces of cloth).
48. ása nya thyä'la ści -á
   A   I   V
asa TOP machine sew-DEC
asa is operating the sewing-machine.

2.32.c +[A,I_] verbs:

There appears to be only one verb in the class, and it is an empty verb zywè to use. Thus any sentence in which an Agentive and an Instrument occur and in which the verb is semantically empty the case nodes contribute the required meaning.

49. ása nya áthà zywè-á
   A   I   V
asa TOP knife use -DEC
asa uses a knife.

Without any verbal meaning, the sentence indicates that Asa is the animate being instigating the action, and that a knife is the inanimate object causally involved in the action. Thus the verb is redundant. This same surface verb is the empty verb associated with +[A,F_] verbs, as will be seen later.

2.32.d +[A,D_] verbs:

These are verbs requiring both an animate subject and an animate object. Examples of the class, which is not very large, are háy murder, pwè scold, syf put to sleep, dyì meet.

50. ása nya zànwg lá pwè -á
    A   D   V
asa TOP child to scold-DEC
asa scolded the child.

51. ása nya zànwg lá syf -á
    A   D   V
asa TOP child to put-to-bed-DEC
asa put the child to sleep.

The verbs of communication and thought in this class may occur with optional Translatives. Note the following:

52. ása nya ñwa lá khwu-á
    A   D   V
asa TOP me to call-DEC
asa called me.

53. ása nya ñwa lá wùwu khwu-á
    A   D   Tr   V
asa TOP me j.-uncle call-DEC
asa calls me (his) junior uncle.
2.32.e +[A,D_] verbs with alternative +[A,F_] specification:

At present I know of only one verb in this class, namely syỳ to kill which only occurs with the Factitive noun yf-pé an end.

54. àsá nya yf-pé syỳ -á
   À P V
   Àsá TOP WH-end kill-DEC
   Àsá brought something to an end (more literally: Àsá killed and an end resulted).

2.32.f +[A,F_] verbs:

This is a fairly large class, certainly larger than the analogous class in English. Verbs in this class usually have a small sub-set of Factitive nouns with which they may co-occur. The following is a selected sample, with the nouns with which each co-occurs:

syỳwè to walk requires the Factitive dzagwu road
gwà to sing " " " magwà song
thỳỳ to dance " " " gwa dances
thyỳwè to speak " " " pùxwà speech
thuwù to set traps " " " various traps
thwù to make fences " " " various fences

This class has an empty verb too, namely zywè to act as, to perform the functions of. Thus an Agentive x and a Factitive y contribute the meaning An animate being x performed an action, and this resulted in the being y, and a deep verb is semantically redundant. This 'empty' verb has the same phonological form as that associated with the [A,I,V] type of proposition (see section 2.32.b). Consider the following:

55. àsá nya xwàthwu zywè-á
   À P V
   Àsá TOP headman # -DEC
   Àsá is (performing the function of) headman.

56. àsá nya tshù-wwù zywè-á
   À P V
   Àsá TOP man -big # -DEC
   Àsá is (acting like) an adult.

The difference between the empty verb and a true verb in this class is that the nature of the action being performed by the Agent is completely synonymous with the nature of the result indicated by the Factitive in the case of the empty verb, whereas with a true verb, that verb indicates some additional aspect of the action, and contributes some semantic content of its own.
2.32.g +[I,0_] verbs:

Verbs in this class are those which require both an inanimate subject and an inanimate object. At present I know of only one such verb, but suspect that there may be a few more. The verb is thywu to burn up, to roast.

57. ami nya dtú thywu-á
O I V
field TOP fire burn -DEC
Fire gutted the field.

This verb may take an optional Agentive, as in
58. ása nya ami dtú thywu-á
A O I V
Asa TOP field fire burn -DEC
Asa burnt off the field (with fire).

2.32.h +[I,F_] verbs:

This is a small class, and each member of the class is idiosyncratically associated with a very small class of Factive nouns. Examples of the class are:

bw+ make a noise  lw+ bore into
thwu pierce  tywú erode

59. tshidwú nya yf-syá bw+ -á
I F V
pestle TOP WH-noise make-DEC
The foot-pestle is making a noise.

60. thywlw+ nya yf-khwu lw+ -á
I F V
awl TOP WH-hole bore-DEC
Theawl is boring a hole.

61. ádyá nya sasù tywú -á
I F V
water TOP gully erode-DEC
The water eroded a gully.

Some of the verbs in this class such as lw+ bore may occur with an optional Agentive, while others such as bw+ make a noise may not. The verb bw+ has an alternative specification +[A,F_] but the other verbs in the class do not. Thus in a sentence like (62) no Instrumental occurs in the base, but in one like (63) it does:

62. ása nya yf-syá bw+ -á
A F V
Asa TOP WH-noise make-DEC
Asa is making a noise.
2.32.1 +[0,0_] verbs:

This is a small class of verbs which are strictly limited to the proposition type specified by the case frame and may not co-occur with any optional cases. The class is exemplified by the following:

\[
\begin{align*}
\text{wa} & \quad \text{to obtain} \\
\text{nwe} & \quad \text{to desire}
\end{align*}
\]

64. \(\text{ása nya dza wa} - \text{a} \)  \\
D O V  \\
Asa TOP rice get-DEC  \\
Asa obtained some rice.

65. \(\text{ása nya dza nwe} - \text{a} \)  \\
D O V  \\
Asa TOP rice desire-DEC  \\
Asa wants some rice.

66. \(\text{ása nya dza həmə} - \text{a} \)  \\
D O V  \\
Asa TOP rice hunger-DEC  \\
Asa is hungry. (Not necessarily for rice).

This class has an empty verb dyu to have which has the same phonological form as the empty +[0,0_] verb (see section 2.31.d). This analysis of to have is the one Fillmore posits for English (1968:47). Thus the deep form of Asa has a horse is something like A horse to-Asa.

Fillmore's further suggestion that possessives are derived from relative clauses in which the main proposition has a Dative and an Objective and an empty verb has some syntactic support from the Lisu data. Fillmore's proposal is that a phrase like John's books has an underlying form that is roughly

\[
[\text{books} [\text{VERB books to-John}]]
\]

NP S S NP

Relativization of this sentence involves deletion of the empty verb and the Dative preposition, and the replacement of the preposition by a postposition which has the written form, a. The relativized form is then

The books which are John's.

Relative clause reduction and preposing finally yield

John's books.

In Lisu support for the base proposed by Fillmore is found in the relativized form of that base, in which the Dative postposition is not
deleted, but actually appears in the surface phrase. The base form in Lisu is

67. \[\text{thùyà} \ [\text{thùyà ása lá VERB}] \]

books books Asa to #

Relativization simply involves deletion of the empty verb and the
normal relativization process (see chapter IV), yielding the grammatical
surface form

67a. thùyà ása lá ma
books Asa to ones
The books which are Asa's.

The preposed relative then has the form

67b. ása thùyà
Asa books
Asa's books.

Any other posited base form underlying (67b) appears to be inadequate
in that the appearance of the Dative marker lá in the relative clause
in (67a) cannot be explained. In particular any posited base in which
ása is the subject cannot explain why the postposition usually associated
with the indirect object appears in the surface form of such construc-
tions.

Some \[[A,O,\_]\] verbs have an alternative specification as \[[A,O,\_]\], and
have one surface form when D co-occurs and another when A does. With a
few of these verbs the different surface forms bear some resemblance to
one another, as in the case of mu to see which is the \[[\text{D},O,\_]\] form, and
mu to focus on, to aim at which is the \[[\text{A},O,\_]\] form. But if Fillmore's
suggestion that verbs like know and learn are two different surface
forms of the one deep verb is meant to be a universal, then the fact
that the surface verbs differ from one another widely does not necessarily
mean that they are not semantically the same, in the deep representation,
and só know and sô learn are to be analysed as one verb. This verb then
has the form só in \[[\text{D},O,V]\] propositions, and sô in \[[\text{A},O,V]\].

2.32. j \[[\text{D,F,\_}]\] verbs:

Verbs in this small class have a restriction that they may not co-
occur with any optional cases. Examples of the class are phû to reach
a biological or social stage in one's life, pe to be changed into another
form, and phûwà to attain. Note the following:
68. ása nya zàngwulé phù -á
Asa TOP youth reach-DEC
Asa is becoming a young man (i.e. no longer a child)

69. ása nya làmà pé -á
Asa TOP tiger become-DEC
Asa turned into a tiger (i.e. he is a were-tiger)

70. ása nya xwâthu phywâ -á
Asa TOP headman attain-DEC
Asa succeeded in becoming headman.

2.32.k +[0,L_] verbs:

Verbs in this class are the verbs of motion and include
dye to go la to come
yâ to descend dâ to ascend
lwé to roll bywé to fly

In many cases the Locative is not overtly expressed in the surface sentence, but a change in locality or a spatial orientation is always involved, and for this reason I suggest that the deep base of such sentences involves a Locative node which is lexically empty.

One verb in this class has a number of alternative case frames. It is the verb dwî which has the alternative surface form twî in [A,O,L,V] propositions. Observe the following:

71. ása nya hi khwù wa dwî -á
Asa TOP house inside to enter-DEC
Asa entered the house.

72. ása nya mîthya dwî -á
Asa TOP ground enter-DEC
Asa was digging (into the ground).

73. ása nya wâlahkwu dwî -á
Asa TOP pit enter-DEC
Asa was digging a pit.

74. ása nya phwu mîthya wa twî -á
Asa TOP money ground to enter-DEC
Asa buried the money in the ground.

There are two empty verbs with +[0,L_] specification, both having the redundant meaning to be located at. The surface form tyâ occurs if the
Objective is an animate noun, and the form dà occurs if it is an inanimate one.

75. ása nya tha tyā-ā
   O  L  V
Asa TOP here # -DEC
Asa is here/Asa lives here.7

76. átha nya tha dā -ā
   O  L  V
knife TOP here # -DEC
The knife is here.

2.33 Case frames incorporating three obligatory cases

2.33.a +[A,D,O_] verbs:

This small class includes such examples as
vwu sell  nyā lend, for temporary use
bwe apportion  thyī lend, to be repaid in kind

The set of verbs above is very interesting, as the members of the set provide some support for Fillmore's theory of deep verbs. In certain sentences the above verbs have what at first sight seem to be the opposite meanings to those given:
vwu buy  nyā borrow, for temporary use
bwe have a portion  thyī borrow, to be repaid in kind

77. ása nya  nyā lá ma vwū-ā
   A  D  O  V
Asa TOP me to cloth sell-DEC
Asa sold some cloth to me.

78. nyā nya  mā vwū-ā
   D  O  V
I TOP cloth buy-DEC
I bought some cloth (from an Agent x)

79. ása nya  nyā lá pu  nyā-ā
   A  D  O  V
Asa TOP me to gun lend-DEC
Asa lent a gun to me.

80. nyā nya pu  nyā-ā
    D  O  V
I TOP gun borrow-DEC
I borrowed a gun (from an Agent x)

These examples provide some support for an analysis in which buy and sell on the one hand, and lend and borrow on the other, are differing surface forms of the same two deep verbs, the one meaning something like goods passing from one person to another in exchange for money and the other goods passing from one person to another, to be returned later.
An explanation is still required for such sentences as

81. ṇwa nya Ḃa tsú ma ṃwa-地方政府
    I TOP Asa from cloth buy-DEC
    I bought some cloth from Asa.

In this sentence the surface Locative is a deep Agentive, and in fact is so interpreted, as can be seen by a comparison of the following sentences:

I bought some cloth from Asa
*I bought some cloth from town.

I am unable at present to provide the reason for the transformation, but suspect that it has something to do with the presupposed deixis of the sentence. If the event of passing the goods is viewed by the speaker from the Agentive point of view, the surface case remains the Agentive, but if it is viewed from the Dative point of view, the deep Agentive is transformed into a surface Locative, and in English, but not in Lisu, the surface form of the verb changes radically.

The [A,D,O] class of verbs includes an empty verb which has the surface form ḡ which has the redundant meaning give. The redundant nature of this verb is reflected in the fact that to my knowledge it is the only verb in Lisu which allows 'gapping' deletion, or to be more precise, has optional appearance in surface structure if it occurs in conjoined sentences in which the sentence immediately to the left has the surface form of the verb in its surface structure.

2.33.b +[A,I,O] verbs:

This is a large class of verbs which is exemplified by the following:

tshí wash nywê to hold with tweezers action

?wê to ladle pā to stir

thyi to slash khâ to split

82. ṃa nya ɬâkâ ɬdyâ tshí-a
    A O I V
    Asa TOP bowl water wash-DEC
    Asa washed the bowl with water.

83. ṃa nya wûphyâ phûkhâ ?wê -a
    A O I V
    Asa TOP vegetable ladle ladle -DEC
    Asa ladled out the vegetables with a gourd ladle.

84. ṃa nya makhâtâ ɬhâ thyi -a
    A O I V
    Asa TOP bamboo knife slash-DEC
    Asa slashed the bamboo with his machete.
In addition to the many verb classes already mentioned there exists a very important class of verbs which occur with sentential complements. Rather than list them at this point, I will do so at the appropriate time during the discussion of complementation in general in Chapter V.
NOTES

1. There are other surface cases which are not basic cases such as the so-called adverbs of time, place and manner, which are derived from deep sentences. Thus in a sentence such as
   
   John hit Peter in the eye
   
   The Agentive is John, the Dative is Peter and the phrase in the eye is a basic Locative. However, in a sentence such as
   
   John hit Peter in the living-room
   
   the phrase in the living-room is the surface form of a sentence An event happened in the living-room rather than the surface form of a Locative case.

2. The class is not large, consisting only of intransitive active verbs requiring animate subjects. Most of the verbs which belong to this class in English, such as walk, kneel, snore, etc. require objects in Lisu, and thus belong to other classes.

3. This verb cannot take an animate object. Thus in a sentence meaning
   
   John jiggled Peter
   
   the Lisu equivalent would involve a causative construction John cause Peter to wiggle. See the conclusion of this study for a discussion of this feature of Lisu syntax.

4. Verbs in this class which admit optional Agentives sometimes have alternative case frame specification in which the Agentive is obligatory. Thus the verb tó sting has an alternative frame +[A_], and ká prick has an alternative frame +[A,I,O/D_], as can be seen in sentences like

   byàma tó -á
   A V
   bee sting-DEC
   The bee stung.
Ása nya ažë lâ áthâ ká -ã
Asa TOP Ale to knife stab-DEC
Asa stabbed Ale with a knife.

(Since writing this study I have established that in all cases where a proposition includes A,I,V the Instrumental is in fact derived from a deep sentence of the form x found an instrument and... Thus the example cited above is completely synonymous with, and derived from the following:

Ása nya ažë lâ nya áthâ xwâ hê ká -ã
Asa TOP Ale to TOP knife seek CAUSE stab-DEC
Asa found a knife and stabbed Ale.)

5. If this case is defined as Experiencer as per Fillmore (1970) rather than as Dative, some members of the class I have posited, such as tshí fat will need re-classification as +[O_] verbs, since they do not refer to sensed experience.

6. The Factitive dzagwu road is optionally deleted from the surface structure, but is always understood, even when no actual road is involved. The relationship of walk and road in Lisu is analogous to that between shrug and shoulders in English.

7. Since this sentence is ambiguous, there are problems involved in saying He lives here, but he is not here, since the surface form of the sentence in Lisu involves two conjoined sentences, one of which is the negation of the other:

?* ñí tha tyâ-ã  ya ñí tha má tyâ
he here # -DEC TOP he here not #

In actual performance the problem is overcome by the use of time adverbs - He usually lives here, but he is not here now.
CHAPTER III

TOPICALIZATION, FOCUS AND THE ORDER OF NOUN PHRASES

If the base rules generate sets in which the relative order of the component symbols is random, then a set of rules is required which operates upon these sets converting them into concatenated strings which have the correct left-to-right order and the correct structure. These ordering rules are of a different kind from those usually called transformational rules in that these latter operate on P-markers by virtue of the fact that these P-markers meet certain structural conditions, whereas topicalization rules of the type I posit are sensitive to structural features (which here means the case labels of the component arguments), to certain presuppositions associated with the P-marker, and to a set of global constraints. Any grammar of Lisu which incorporates rules which are sensitive to structural descriptions alone, will, by virtue of that fact, be unable to account adequately for the surface forms of Lisu sentences. Surface sentences in this language, with the exception of sentences which are introductory in some discourse, reflect certain unambiguous information about the presuppositions of those sentences. In particular they indicate which of the arguments of that sentence are presupposed. The same does not hold with respect to the predicates of sentences, as there is some ambivalence at this point, as will become evident in the discussion which follows.

The stage at which the topicalization rules apply is an open question, and whether they are to operate before or after the expansion of the NP nodes, before or after lexical substitution, and whether they are to apply en bloc or not are empirical questions yet to be decided. What is certain is that for Lisu such rules must operate before the rules which result in anaphoric pronominalization, since such pronouns refer to equivalent nouns further to the left in the sentence, regardless of the relative 'height' in the P-marker of the nouns in question.
Throughout the discussion which follows the main issues will be clarified if the first of the ordering rules is assumed to have applied, namely the global constraint that selects from the set of possible P-markers generated by the base rules only those in which the V-node succeeds the set of cases. This constraint is the equivalent of saying that while the cases are not ordered with respect to one another, they occur as a set to the left of the V-node.

3.1 PRIMARY TOPICALIZATION

The rules of primary topicalization apply in the event that none of the arguments of the main proposition are presupposed. The two main types of operation achieved by these (and the rules of secondary topicalization) are (i) the raising of selected arguments, with their case nodes, out of the domination of the P-node, and their attachment to the higher S-node; and (ii) the ordering of the remaining arguments in the proposition.

The choice of the argument to be raised is determined by a constraint which applies to all sentences of the type under consideration. Informally stated the constraint is: If there is any non-basic derived case (adverbs of time or place) this is raised; if there is an A in the proposition it is raised; in the absence of an A the rule applies to D; in the absence of a D it applies to O; in the absence of O it applies to I. This rule establishes an order of priority among the case nodes according to which the topic selection is accomplished, and it ensures that if one of the cases occurs as the only case in a proposition, it will be raised automatically. The cases not mentioned in the rule are never topicalized by this process, although they may be raised by the rules of secondary topicalization. The node which is raised is marked in the surface string by a following morpheme nya. The primary topicalization rule applies to all derived cases, in the event there are any, and to one other case besides.

(A superficial glance at these rules might lead one to conclude that in fact they assign a lineal order to the sentence which is virtually S-O-V. However, this is only the case when the subject is the Agentive in a Declarative sentence, or when the 'object' happens to be the item being queried in an interrogative sentence. The topicalization rules as formulated in this chapter account for the order of all types of sentences, and thus a description which assigns a base order and then proposes transformational re-ordering rules must include unnecessary redundancy. In all cases sentences of the kind under discussion, namely those to which the rules of primary topicalization apply, are ordered
as O-S-V when an Instrumental is the 'subject', and in all interrogative sentences the item being queried is ordered immediately before the verb.)

The ordering of the nodes remaining in the proposition is accomplished by a rule which moves the focus case into a position immediately in front of the verb. Unmarked focus is assigned by a rule which applies to unraised cases:² If there is a Tr it is focus; in the absence of a Tr the rule applies to E; in the absence of an E it applies to F; in the absence of an F to L; in the absence of an L to I; in the absence of an I to O; in the absence of an O to D; and in the absence of D to A.

These rules thus raise and move one case node to the front of the sentence and mark it with nya, and mark another and move it into focus position in front of the verb. The order of the remaining case nodes is irrelevant and they may occur in any order as a set between the topic and the focus.

In the examples which follow the presuppositions which are pertinent to the discussion are expressed in English for the sake of clarity. Nodes which are unordered in relation to sister nodes are adjoined to the dominating node by broken lines, while nodes which have been assigned an order are adjoined by a continuous line.

1. A three-argument predicate:³

P-marker:

\[ P \]

\[ S \]

\[ M \]

\[ O \]

\[ A \]

\[ D \]

\[ V \]

\[ NP \]

\[ K \]

\[ NP \]

\[ K \]

\[ NP \]

\[ K \]

\[ phwu \] (money)

\[ åsa \] (Asa)

\[ aIé \] (Ale)

\[ Iá \] (to)

\[ gê \] (give)

Presupposition: \( x \) occurred.

Assertion: \( x = gê [phwu^O, åsa^A, aIé^D] \)

\( (x = give [money^O, åsa^A, aIé^D]) \)

Since none of the arguments in the proposition of the P-marker occur as components of the presupposition the rules of primary topicalization operate. An A node occurs in the proposition, and so it is raised and prefaced to S. The remaining arguments are assigned the order D O.
The transformed P-marker is

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One of the claims implicit in the rules I have posited is that in sentences like the above in Lisu, the Dative NP is chosen as 'surface subject' in preference to the Instrumental NP. In the Chomskyan theory sentences like 2b are deemed to be less basic than ones in which the NP thorn or the like is the subject, i.e. that A thorn pricked John is more basic than John was pricked by a thorn. For English the active form of the sentence can be posited as the deeper one, since the alternative position involves greater complexity in the base rules and in the transformational component. In Lisu such complexity only results if the base component generates ordered strings, but there is no such problem in the framework within which I am working. Lisu cannot really be said to have a passive, and therefore the arguments used for the 'basic' nature of the active form over the 'derived' passive form do not apply.

3. A one-argument predicate:

The P-marker:
Presupposition: x occurred

Assertion: \( x = \text{bò} [\text{ṣigung}]^0 \)
\[ (x = \text{burst} [\text{box}]^0) \]

Since the proposition contains no A, D or I, the node 0 is raised. The resulting P-marker is

3a.

The surface form of the sentence is

3b. \( \text{ṣigung} \text{ nya bò le -w} \)
\[ \text{box TOP burst become-DEC} \]
\[ \text{The box has burst.} \]

3.2 SECONDARY TOPICALIZATION

These rules apply in the event that one or more of the arguments of the proposition are part of the presupposition of the sentence concerned. The main operations achieved by these rules are analogous to those achieved by the primary topicalization rules in that they raise appropriate nodes out of the domination of P and preface them to the S node. In the case of secondary topicalization however, there is no order of priority determining which nodes are raised. Instead it is the presuppositions underlying the given sentence which select the nodes to be raised. Any argument occurring in both the base proposition and a presupposition is automatically raised. Note that these rules thus allow for multiple topics in a sentence. Since the arguments which are raised are from unordered sets one would expect that the relative order of the raised nodes in the surface structure would be immaterial. This is in fact the case and the raised nodes may occur in any order without any semantic changes taking place.

In the examples which follow one basic P-marker underlies all of the sentences, but differing presuppositions result in different topicalizations:
4. The P-marker:

\[ S \]

\[ P \]

\[ D \]

\[ O \]

\[ A \]

\[ V \]

\[ NP \]

\[ NP \]

\[ NP \]

\[ NP \]

\[ K \]

\[ K \]

\[ K \]

\[ K \]

\[ alè \]

\[ lé \]

\[ phwu \]

\[ asa \]

\[ gè \]

\[ (Ale) \]

\[ (to) \]

\[ (money) \]

\[ (Asa) \]

\[ (give) \]

4a. Presupposition: Asa was the agent in some activity \( x \).

Assertion: \( gè \text{ [} \text{asa}^{A}, \text{alè}^{D}, \text{phwu}^{O}\text{]} \)

\[ \text{give [Asa, Ale, money]} \]

The topic is thus \( \text{asa}^{A} \) since it occurs as a non-variable in the presupposition. The focus assignment rule previously mentioned marks the 0 as focus and the resulting surface sentence after the movement has been completed is

\[ 4a'. \text{ asa nya alè lé phwu gè -a} \]

\[ \text{Asa TOP Ale to money give-DEC} \]

Note that \( (4a') \) has the same base and the same surface structure as \( (1b) \), but that the NP \( \text{asa} \) has been topicalized for two different reasons, and by two different rules.\(^5\)

4b. Presupposition: phwu \((\text{money})\) was the object involved in some event \( x \).

Assertion: \( gè \text{ [} \text{asa}^{A}, \text{alè}^{D}, \text{phwu}^{O}\text{]} \)

\[ \text{give [Asa, Ale, money]} \]

The topic is \( \text{phwu}^{O} \) and the focus is \( \text{alè}^{D} \), and after the raising and moving rules the surface form generated is

\[ 4b'. \text{ phwu nya asa alè lé gè -a} \]

\[ \text{money TOP Asa Ale to give-DEC} \]

\[ \text{Asa gave Ale some money.} \]

4c. Presupposition: Asa was the agent in some activity \( x \) in which Ale was involved as the patient.

Assertion: \( gè \text{ [} \text{asa}^{A}, \text{alè}^{D}, \text{phwu}^{O}\text{]} \)

\[ \text{give [Asa, Ale, money]} \]
The topics are ása\(^A\) and ale\(^D\) and the focus is phwu\(^O\). The surface sentence after movement is completed is

\[4c'.\ ása\ nya\ ale\ lé\ nya\ phwu\ gô\ -â\ \\
\text{Asa}\ TOP\ \text{Ale}\ \text{to}\ \text{TOP}\ \text{money}\ \text{give-DEC}\ \\
\text{Asa\ gave\ Ale\ some\ money.}\]

The order of topics in this sentence can be switched without any change of meaning or emphasis.

The examples just given do not exhaust the possibilities of the ways in which the given sentence can be topicalized, but are only intended to give an idea of the way the rules proposed operate, and the way in which they are sensitive to the underlying presuppositions. Different configurations of the arguments in the presupposition would give additional configurations of topicalized and propositional arguments.

In the discussion so far mention has only been made of arguments and the way in which they figure in topicalization and in presuppositions. In fact the verb of the sentence may be involved in the presupposition of that sentence as well, but the verb is not topicalized. Consider the sentence

\[5.\ ása\ nya\ phwu\ nya\ ale\ lé\ gô\ -â\ \\
\text{Asa}\ TOP\ \text{money}\ \text{TOP}\ \text{Ale}\ \text{to}\ \text{give-DEC}\ \\
\text{Asa\ gave\ money\ to\ Ale.}\]

There are two possible semantic interpretations of this sentence. Both would appear to have the same P-marker but have different presuppositions associated with them. One has a presupposition something like Asa did \(x\) with money, and the intention of the assertion is that \(x = \text{gave to Ale}\). Thus sentence (5) could be the answer to the question

\[5a.\ ása\ nya\ phwu\ ali\ yg-â\ ?\ \\
\text{Asa}\ TOP\ \text{money}\ \text{how}\ \text{do-QUERY}\ \\
\text{What\ did\ Asa\ do\ with\ the\ money?}\]

In this case the verb is clearly part of the assertion but not part of the presupposition.

On the other hand the presupposition associated with this sentence could be Asa gave money to \(x\) and the assertion could be intended to establish that \(x = \text{Ale}\). Thus it could be the answer to the very different question

\[5b.\ ása\ nya\ phwu\ âma\ lé\ gô\ -â\ ?\ \\
\text{Asa}\ TOP\ \text{money}\ \text{who}\ \text{to}\ \text{give-QUERY}\ \\
\text{Who\ did\ Asa\ give\ the\ money\ to?}\]
In this case the verb is not part of the assertion but is an element of the presupposition. When this type of situation arises there is apparently an option with regard to the type of surface structure to be generated. If the normal rules of focus and topicalization are applied, (5) is generated, since these rules apply only to case arguments. If, however, the verb is to be included in the topic a rather complicated set of transformations is applied. From the base P-marker (6) these rules generate (6a).

6.

The original Dative NP has been raised into a higher sentence in which there are two cases, an O and a predicate Tr. The O dominates an empty NP which is modified by an S which was the original sentence base. The regular relativitization rules (see Chapter 4), and the topicalization of the highest O node generate
The transformational rules which generate (6a) from (6) are very strange, involving the creation of numerous additional nodes, but such rules would be required by a theory which is based on the assumption that sentences with identical meanings have identical bases, since (5) and (6b), given the presuppositions associated with (5b), are synonymous, even to the point of shared presuppositions.

3.3 TOPICS MARKED BY xa

In the discussion so far the topicalized entities have been marked with the morpheme nya. In Lisu there are also raised topics which are marked with xa rather than nya, and this seems to suggest that there need to be rules which differentiate the two kinds of topic. I will proceed on this assumption for the purpose of discussion, but will later show that there is in fact no relationship between the appearance of the marker xa and the process of topicalization.

One of the major differences between the two kinds of 'topic' is that the nya topics are presupposed and the xa topics are entailed, as well as presupposed. The notions presupposition and entailment have been discussed by Horn (1969) who quotes Austin (1958) as attributing the anomaly of

a. *All John's children are bald, but John has no children

b. *All the guests are French, but some of them aren't
to violation of presupposition and entailment respectively. In (a) the left conjunct presupposes that John has children, and the right conjunct contradicts this presupposition. In (b) the fact that the guests are French is not presupposed, but is asserted, and that assertion is contradicted by the rest of the sentence. Thus Austin and Horn relate the notion of entailment to that of assertion, although an entailed sentence is not to be conceived of as necessarily involving an overt utterance. Such an utterance may be understood, but not spoken. Rather the difference between a presupposition and an entailment has to do with certain conditions of deduction. To quote Horn (1969:98):

'2a. If (S + S') and (-S + S') then S presupposes S';
b. If (S + S') and (-S' + -S) then S entails S'

(To be read "If from S we can conclude S' ...")'

By way of example:

7. Most of the guests are French. (S)
    Therefore there are some guests. (S')

7a. Most of the guests are not French. (-S)
    Therefore there are some guests. (S')
Since the same conclusion can be drawn from both the positive and negative forms of the antecedent sentence, the first sentence in each pair presupposes the second.

8. Most of the guests are French. (S)
   Therefore a few of the guests are not French. (S')

8a. A few of the guests are French. (S')
   Therefore most of the guests are not French. (S)

Since a negative conclusion is drawn from a positive antecedent in (8), and the positive version of this conclusion requires the negativization of the original antecedent in (8a), the first sentence in each pair entails the second. The important thing about (8) and (8a) is that they are interdependent with regard to negativization. If one member of the pair changes from positive to negative, the other changes in the same way. With presuppositions on the other hand, the presupposed element remains constant regardless of whether the antecedent is positive or negative.

Consider now the following Lisu sentences:

9. ása nya áthạ də -ə
   Asa TOP knife forge-DEC
   Asa is forging a knife.

10. ása xa áthạ də -ə
    Asa TOP knife forge-DEC
    Asa is forging a knife too.

Both of the above sentences have the same surface structure in which the NP Asa is raised as topic. Both also share the same presupposition which is either Asa is doing x or Asa is forging y. However, sentence (10), but not (9) entails a sentence which is either Someone else is doing x, Someone else is forging y or, in the Lisu sentence but not the English gloss, Someone else is doing a (an activity different from x), or Someone else is forging b (something different from y).

For the sake of exemplification, let us assume that the presupposition Asa is forging y underlies both (9) and (10) - the choice is not significant. As is to be expected, if this is a true presupposition then the form remains constant when (9) or (10) is negativized.

9a. ása nya áthạ də -ə
    Asa TOP knife forge-DEC
    Asa is forging a knife.
    Presupposition: Asa is forging y.

ása nya áthạ mà də
Asa TOP knife not forge
Asa is not forging a knife.
Presumption: *Asa is forging y* (The sentence asserts that this presupposition is false.)

If *Someone else is forging knives* is a true entailment of sentence (10), then the negative of this would be entailed by the negative of (10). From the following it can be seen that this is in fact the case:

10a. swu nya áthá dè - pó / ása xa áthá dè - pó
   one TOP knife forge-DEC / Asa TOP knife forge-DEC
   Someone is forging a knife, and Asa is forging a knife too.

10b. swu nya áthá mà dè / ása xa áthá mà dè
   one TOP knife not forge / Asa TOP knife not forge
   Someone else is not forging a knife, and Asa is not forging a knife either.

10c. swu nya áthá mà dè / *ása xa áthá dè - pó
   one TOP knife not forge / *Asa TOP knife forge-DEC
   Someone else is not forging a knife, and *Asa is forging a knife too.

If the possible entailments of (10) are compared to the possible assertions being made by the sentence, it can be seen that the NP marked by xa in the surface sentence corresponds to that argument in the assertion which corresponds with a variable of the entailments, whereas in normal secondary topicalization the NP which is raised corresponds to a constant of the presupposition. Sentence (10) is typical in this respect of all sentences containing an NP marked with xa.

9a. Possible entailments: (In all cases a ≠ Asa)
   (i) An agent a is forging knives
   (ii) An agent a is forging b
   (iii) An agent a is engaged in some activity c
   Possible assertions:
   (1) What Asa is forging is a knife
   (2) What Asa is doing is forging a knife

The correct interpretation of a sentence with a topic marked with the morpheme xa will depend on the nature of the entailment associated with the sentence. In (10a) and (10b) the morpheme was translated *too* and *either* respectively. If however the entailment had been one of the other alternatives the meaning would have altered slightly. If the entailment had been *Someone else is forging b* then the meaning of (10) would have been something like *Asa was forging too - a knife*. If the entailment had been *Someone else was doing a* then the meaning would have been something like *Asa was doing something too - forging a knife*. In the Lisu version the form would still be that of (10), and the entailment would be understood but not expressed overtly. Sentences like this are
common in Lisu, where the use of the English entailment marker *too* is inappropriate. Note the following:

11. *ālē nya thsibə thyē-* / *āsa xə ṣəthə də -*

   **Ale TOP banjo play-DEC / Asa TOP knife forge-DEC**

   *Ale was playing the banjo and Asa was forging a knife.*

In any sentence with an NP marked with *xə* if the speaker assumes that the information in the sentence is unexpected, and this fact is conveyed by the use of the sentence final *na*, then the English gloss of the sentence contains *even* rather than *too*. In English *even* has associated it with an entailment that some other object or being has the same sort of characteristic or is involved in the same sort of action or event, and also a presupposition that the information being asserted is unexpected. This presupposition is the only difference between *even* and *too*. In Lisu however, the entailment is marked by *xa* and the presupposition is inherent in the final *na*. Note the following:

12. *āsa xə ṣəthə də -* *na*

   **Asa TOP knife forge-DEC UNEXPECTED**

   *Even Asa was forging a knife.*

If two juxtaposed sentences both have topics marked by *xə*, then the meaning is *both ... and ...*

13. *āsa xə ṣəthə də -* / *ālē xə ṣəthə də -*

   **Asa TOP knife forge-DEC / Ale TOP knife forge-DEC**

   *Both Asa and Ale were forging knives.*

Even when the proposition of the left sentence in the surface string is very different from the one in the right sentence, the inclusive or additive function of the marking is evident:

14. *āsa xə tshibə thyē-* / *ālē xə ṣəthə də -*

   **Asa TOP banjo play-DEC / Ale TOP knife forge-DEC**

   *(Both Asa and Ale were doing something) Asa was playing the banjo and Ale was forging a knife.*

In (14) the first part of the English gloss is deduced quite easily from the Lisu sentence by the way the topics are marked. Earlier in this study the over-simplified statement was made that *xə* marks a change in topic (see 1.43). This much is true, but there are also sentences in which a topic change takes place but is not marked by *xə*, but by *nya*. In cases like this the relationship of the sentence to the preceding one is contrastive rather than an accumulative one. Note the following:

15. *ālē nya tshibə thyē-* / *āsa nya ṣəthə də -*

   **Ale TOP banjo play-DEC / Asa TOP knife forge-DEC**

   *Ale was playing the banjo, but Asa was forging a knife.*
Turning now to the nature of *xa* topicalization, one of the questions which needs to be asked is how and why topics marked with this morpheme are raised. Thus far the entailed arguments have also been presupposed arguments, and it needs to be ascertained what happens when the entailed argument does not coincide with a presupposed one. Is the presupposed argument or the entailed one raised? The answer is that it is the presupposed argument which is raised, and when a sentence has a topic marked with *xa*, it has been raised because it is presupposed, and the fact that it is entailed, and thus marked in this way is coincidental.

Note the following:

16. €asa nya €altha €xa dè -a
   Asa TOP knife ENT forge-DEC
   Asa was forging a knife too.

   Presupposition: Asa was doing $x$ to a knife OR
   Asa was forging $y$

   Entailment: Asa was doing $a$ to a knife OR
   Asa was forging $b$

Sentence (16) has two possible surface structures. If both €asa and €altha €xa are raised as topics, then the presupposition can only be the first of the two possibilities, and the entailment can only be the first of the entailment possibilities. If, however, only €asa is raised, the presupposition and entailment of the sentence can only be the second of the respective alternatives. Thus the meaning of (16) is Asa was forging a knife as well (as doing something else to it), or Asa was forging a knife as well (as forging something else).

Even when the entailed NP is raised, it may not precede a topic marked with nya, and it may not itself be marked with nya. Thus both of the following are ungrammatical:

17. *€altha €xa €asa nya dè -a
   *knife ENT Asa TOP forge-DEC

17a. *€asa nya €altha €xa nya dè -a
   Asa TOP knife ENT TOP forge-DEC

3.4 **ADVERBIAL TOPICS**

Besides applying to propositional elements the secondary topicalization rules may also apply to time, place and manner adverbial elements in the modal component if those elements are elements of the presuppositions. Thus surface structures like the following are the result of a raising process which is sensitive to the nature of the presupposition, and thus the topicalization rules should be altered slightly to allow for the raising of adverbial elements like these as well.
18. Shallow P-marker:

Presuppositions: *Asa is sick.*

*Very (sick)*

Assertion: *Asa is sick: not very (sick).*

The topics are thus *Asa Asa* and *akhó very*. After topic raising and the proper negative lowering (a rule to be discussed in Chapter V), the following surface structure results:

18a.

18b. *Asa nya akhó nya mà na*  
*Asa TOP very TOP not na*  
*Asa is not very sick (i.e. is sick, but not very).*

Such sentences always involve the negativization of the topicalized adverb and not of the main verb of the sentence. This is the reason for the base I have posited in (18). Topicalized adverbs may not precede topicalized NPs in surface strings.

3.5 SUBORDINATE CLAUSE TOPICALIZATION

All subordinate clauses in Lisu are topicalized, and such topicalization seems to be related to the fact that subordinate clauses are either already presupposed, or are to provide the presupposition of the following main clause.
3.51 Presupposition-creating topics

Subordinate clauses of this type typically contain the verb bë say, intend, refer to, suppose etc. and a complement sentence which itself contains the factive verb ñu is so, is true, plus another complement sentence. Consider the following:

19. ñu bë nyu pâtsi-a dye-a ñu bë-á nya nyu nya yesternight TIME you plain-to go -DEC FACT say-DEC TOP you TOP
ása mà mu -á
Asa not see ?
Assuming that it is a fact that you went to the plain yesterday, ... didn't you see Asa?

This sentence explicitly states one of the presuppositions that the speaker is making which might not otherwise be clear to the hearer. The topicalized sentence, marked by the usual nya contains (at least) three basic sentences:

(i) I am talking about S (or perhaps Let me talk about S).
(ii) S is a fact.
(iii) Yesterday you went to town.

The main clause is
(iv) Didn't you see Asa?

It seems likely that the topicalized complex sentence is generated in the base as a conjunction of sentences, some of which are lowered into the main sentence as its topic. This possibility will be discussed in 3.54.

Topicalized sentences of this kind may not only serve to introduce the context in which the main sentence is to be understood when such context cannot be deduced, as for instance at the beginning of a conversation, but may also occur in the middle of a connected discourse to
indicate that information already passed on in the discourse is to function as an accumulated set of presuppositions for what follows. To English speakers such overt identification of the presuppositions seems very redundant, but in Lisu texts, especially in myths and fables where events and the participants in those events are not of the kind easily presupposed, topicalized sentences which identify the presuppositions occur with monotonous frequency. In such cases a readable translation into English requires whole sentences to be rendered by so, then or some other connector of this type, in order to avoid sequences like the following which result from a sentence-for-sentence translation:

'...With reference to my assumption that there were two people, a buffalo and an orphan, they built a house. With reference to my assumption that they finished building, and to my assumption that the house was completed, the buffalo said to the orphan...'

All of which means something like

'...So the two of them, the buffalo and the orphan, built a house, and when they had finished and the house was complete, the buffalo said to the orphan...'

(For the Lisu version of this text see the appendix.)

When commencing a new episode in a connected discourse it is common for the speaker to summarise those presuppositions of the preceding episode which have an immediate bearing on what is to follow. This summary is in the form of a series of topicalized sentences in which sentences consisting of a complement and the verb b̥ say, assume etc. are embedded as complements in a higher sentence which also has the main verb b̥ say, assume etc. The surface strings thus result in a duplication of the verb, and the meaning of the topics is something like With reference to my saying that I have been saying that ... In many cases the embedded complements consist of a repetition of the proposition of the preceding sentence in the discourse.

20. ña sa hi kwu wa ñidye -y ñu b̥ -a b̥ -a nya yi pu ña sa haw inside to return-DEC PACT say-DEC say-DEC TOP he gun
   nya tha thyeḏ-a na
   TOP here left -DEC UNEXPECTED
   Assuming that I have been saying that ña sa went home, his gun however, he left behind here.

Such summaries of presupposition mark the beginning of new episodes in the discourse, roughly equivalent to new paragraphs. If the preceding paragraph happens to end with a quote, i.e. if the main verb of the last sentence in that paragraph is b̥ say, the new paragraph often commences with a summary of the quote followed by a triple occurrence of the verb b̥ say, the first having as its subject the
reported speaker of the quote, and the other two have the reporting speaker as subject.

21. [X Y Z] ḅg -a ḅg -a ḅg -a
[X Y Z] say-DEC say-DEC say-DEC

Referring to my assumption that I have been saying that he said X Y Z, ...

In a discourse it would appear that there is an accumulation of presuppositions, each sentence adding to the presuppositions of the sentence to follow, and that periodically the speaker needs to select the pertinent ones from the accumulated mass, as some of the ones that have been accumulated are no longer relevant.

3.52 Conditional topics

The surface structure of sentences incorporating a conditional clause is virtually identical to the structure of (19a). Note the following:

22. yĩ-phwl xũ -a nya ṣwa nya ámũ vwu̲ -a
WH-price right-DEC TOP I TOP horse sell-DEC

If the price is right I will sell (my) horse.

Surface P-marker:

```
          S
           |
          A
           |
          NP
           |
           yĩ-phwl xũ -a
WH-price right-ASS

           |
          NP
           |
           ṣwa

           |
          NP
           |
           ámũ horse

           |
          NP
           |
           vwu̲ sell

           |
          DEC
```

The presuppositions associated with (22) are crucial to the interpretations of the sentence, only one of which is given above. The various alternative interpretations cannot be ascribed to syntactic differences, apart from reference to the presuppositions. The alternatives are:

22a. Presupposition: The price may or may not be right.
   Meaning: If the price is right, I will sell (my) horse.

22b. Presupposition: The price is not/was not right
   Meaning: If the price had been right, I would have sold (my) horse.

22c. Presupposition: The price is/was/will be right.
   Meaning: Since the price is/was/will be right, I will sell (my) horse.
22d. Presupposition: The price is not yet right, but it will be sometime.

Meaning: When the price is right I will sell (my) horse.

With noun phrase topics we have noted a difference between 'ordinary' and entailed topics. A similar distinction exists with conditional clause topics. The normal type of topicalization has been exemplified above by examples in which the topic was marked by nya. The entailed topic in a conditional clause is marked by the entailment marker xa:

23. \(\text{نيا} \quad \text{ماها} \quad \text{آنستا} \quad \text{ماكار} \quad \text{ماحو} \quad \text{ماهو} \quad \text{ماهو} \quad \text{ماهو} \quad \text{ماهو} \quad \text{ماهو} \quad \text{ماهو}
\)

WH-price right-DEC ENT I TOP horse sell-DEC

If the price is right also, I will sell the horse.

The presuppositions of this sentence are the same as those associated with (22), and the entailment is There is some other condition.

A different type of entailed conditional has the marker ya rather than xa. Note the difference between the following:

24. \(\text{نيا} \quad \text{ماها} \quad \text{آنستا} \quad \text{ماكار} \quad \text{ماحو} \quad \text{ماهو} \quad \text{ماهو} \quad \text{ماهو} \quad \text{ماهو} \quad \text{ماهو}
\)

WH-fall-DEC TOP I TOP corn plant-DEC

If it rains I will plant corn.

24a. \(\text{نيا} \quad \text{ماها} \quad \text{آنستا} \quad \text{ماكار} \quad \text{ماحو} \quad \text{ماهو} \quad \text{ماهو} \quad \text{ماهو} \quad \text{ماهو} \quad \text{ماهو}
\)

WH-fall-DEC ENT I TOP corn plant-DEC

If it rains also I will plant corn.

24b. \(\text{نيا} \quad \text{ماها} \quad \text{آنستا} \quad \text{ماكار} \quad \text{ماحو} \quad \text{ماهو} \quad \text{ماهو} \quad \text{ماهو} \quad \text{ماهو} \quad \text{ماهو}
\)

WH-fall-DEC ENT I TOP corn plant-DEC

Even if it rains I will plant corn.

The difference between (24a) and (24b) is that while the presuppositions and entailment of (24a) are also associated with (24b), the latter has one additional presupposition, namely that the information of the consequent clause is contrary to expectation.

3.53 Causal topics

A surface structure in which a subordinate clause is embedded in a main clause as its topic is a characteristic of another type of sentence in which the relation between the subordinate clause and the main clause rather than being conditional is one of cause-effect, or stimulus-response. Consider the following:

25. \(\text{نيا} \quad \text{ماها} \quad \text{آنستا} \quad \text{ماكار} \quad \text{ماحو} \quad \text{ماهو} \quad \text{ماهو} \quad \text{ماهو} \quad \text{ماهو}
\)

WH-price right-DEC TOP I TOP horse sell-DEC

The price is/was right so I am selling/sold/will sell my horse.
Entailment: The price is/was right.
Presupposition: The fact that the price is right is ground for some consequence x.
Assertion: The fact that the price is right is ground for my selling my horse.

When causal clauses like the above occur as the focus rather than the topic of the sentence, the marker changes from hînyi to wûnyi. Note the following:

26. ñwa nwa àmù nwa yî-phwî xû -à wûnyi vwû -à
   I TOP horse TOP WH-price right-DEC CAUSE sell-DEC
   I sold my horse because the price was right.

The presupposition of this sentence is that I have sold my horse because of some cause.

An interesting aspect of sentences like (25) is that when the Agentive of the causal clause has the same referent as the Agentive of the main clause, then the sentence as a whole is ambiguous. If a causal interpretation is given the meaning is x happened and therefore... The sentence can however also have a purposive interpretation x happened in order that... Note the following:

27. ñwa pâtsi-a dye-a hînyi àmù vwû -à
    I plain-to go -DEC TOP horse sell-DEC
    I am going to the plain to sell the horse, OR I am going to the plain, so I will sell the horse.

In the framework of theory in which I am working there is no way to account for this ambiguity apart from a schema of the kind to be discussed in the following sub-section.
3.54 The deep base of subordinate clause constructions

In current transformational theory I know of no convincing discussion of the problem of subordinate clauses. There appear to be two possible avenues open for exploration. The base rules could be expanded in some way so as to account for the phenomena. This would apparently need to be a language-specific solution, since subordinate clauses seem to differ widely in many aspects from language to language. Another possibility would be to preserve the base component in an attempt to maintain a universal base, and account for the various types of subordinate clause transformationally. One way this could be done would be to allow the position of highly abstract deeper sentences having abstract verbs which have meaning, but which occur in surface structure only as markers, or not at all. The need for abstract verbs in a theory of grammar has been argued by George Lakoff (1966), Ross (1967a) and (1967b) for English, and by Robin Lakoff (1969a) for Latin.

Thus the two interpretations of (27) above can be explained by reference to an abstract verb CAUSE in the one case and an abstract verb PURPOSE in the other. Some other abstract verbs associated with subordination are CONDITION, and RESULT.

The deep form of a sentence containing a conditional clause in Lisu would thus consist of two conjoined abstract sentences each of which consists of a sentential complement and an abstract verb:

```
S
  /  
 S   S
  / 
 S   S
     /  
    S V
     
CONDITION
```

A global constraint requires that a sentence having as its main verb CONDITION be lowered into the conjoined sentence as the latter's topic. The surface marking of the conditional will depend on the presuppositions and entailments of the sentence.

Similarly the base form of a causal subordinate clause will consist of a complement and an abstract verb CAUSE:

```
S
  /  
 S   S
  / 
 S   S
     /  
    S V
     
CAUSE
```

RESULT
The CAUSE sentence is lowered into the RESULT sentence before topicalization takes place. The presuppositions of the RESULT sentence will result in the CAUSE sentence being either topicalized and thus marked by ʰɪŋɨɨ, or focused and thus marked by wʊŋɨɨ.

For Lisu these rules appear to be adequate, but they are admittedly ad hoc pending further research and empirical findings.
NOTES

1. Manner adverbs do not seem to occur in sentences in which none of the arguments are presupposed.

2. At present there seems to be no difference between marked and unmarked focus in Lisu, which is rather surprising. This might be the result of the fact that Lisu sentences, at least at a deep level, never contain more than one focus. On the occasions when marked focus might be expected, such as in questions in which the case node to be questioned is the focus rather than the case specified by the focus assignment rule, all other cases are presupposed and thus topicalized and in fact since the case to be questioned is the only one remaining in the proposition, it would be assigned focus by the normal rules. The same applies when the verb and not a case is to be focus; it always seems to be the case that the case nodes are all presupposed.

Certain counter-examples appear to exist in surface structures such as (11) below: [(11) is the answer to (1)].

(1) ásā nya áśyi ṣg-a?
   Ásā TOP what do-QUESTION
   What is Ásā doing?

(11) ásā nya ávā lá mātshl ká ṣg-a
   Ásā TOP pig to medicine prick DEC
   Ásā is giving the pig an injection.

In (11) the focus is everything to the right of the topic, and includes two case nodes and a verb in the surface string. However, there is evidence that this focus element is a sentential complement at a deeper level, and may even occur as such in the surface form, since (11) is completely synonymous with (11).

(111) ásā nya ávā lá mātshl ká ṣg-a
   Ásā TOP pig to medicine prick do-DEC
   Ásā is (doing) giving the pig an injection.
Thus the normal focus rule applying to the case node dominating the complement sentence and a subsequent optional deletion of the PRO-verb ɣa do would account for the form and the focus of (ii).

3. In order to avoid complicating the description, the node M will appear in tree-diagrams blank on occasions. At other times it will be developed as if M were a true base node. A fuller and more correct analysis of M appears in Chapter V.

4. That is, in Lisu there is no basis for positing a special passive transformation which applies to a deep structure object raising it as the surface subject of a sentence, since the one raising rule accounts for all surface subjects regardless of the logical relation of the NP to the verb. No additional morphemes are introduced just because the NP being raised was a deep object, rather than a subject.

5. In Halliday's terms in (1a) ása is the theme, and in (4a') it is the 'given' as well as the theme.

6. This is the opposite claim to Roop's (1970:266) that xa (written in his transcription as ha) is a 'contrasting, particularizing or limiting focus' marker, while nya is the more 'general' focus marker.

7. At present I am unable to account for the derivation of time, place and manner adverbials adequately, and will not be discussing them in this study. I shall, however, make the assumption that at some point in a derivation they are part of the modal component of the sentence. For descriptions of the surface features of such adverbs, see Roop (1970) and especially Fraser (1922).

8. See 5.81 for a discussion of DEC-deletion.
CHAPTER IV

THE STRUCTURE OF NOUN PHRASES

4.1 DETERMINERS

Two theories about determiners have been discussed by transformational linguists. On the one hand are those who posit the more traditional rule which treats the determiner as a component of the base form of noun phrases. This is the rule NP + (D) N (S). Fillmore (1968:67) proposes that this rule should be kept as it is in his case grammar theory, as determiners seem to be a universal feature. On the other hand there are those who maintain that determiners are introduced transformationally by a rule which segments certain features of the noun phrase. The rule is sensitive to the NP feature <+Def>.

Thus NP is transformed into

\[
\begin{array}{c}
\langle N \rangle \\
\langle +Def \rangle \\
\text{etc.}
\end{array} \quad \rightarrow \quad \begin{array}{c}
\langle Art \rangle \\
\langle +Def \rangle \\
\text{etc.}
\end{array} \quad \rightarrow \quad \begin{array}{c}
\langle N \rangle \\
\langle +Def \rangle \\
\langle +Def \rangle \\
\text{etc.}
\end{array}
\]

This rule accounts for demonstrative articles as well as the usual determiners. The features associated with the demonstratives, such as <+proximity>, originate, in such a theory, as features of the noun phrase and are segmented off. This position was made by Postal (1966) and is followed in Jacobs and Rosenbaum (1968).

For Lisu both of these positions seem to involve problems. Apart from demonstratives there are no articles in Lisu, and if the Determiner category is accepted as a basic deep component of noun phrases, then abstract definite and indefinite articles have to be posited which do not appear in the surface forms of sentences. In most, if not all cases, a noun phrase in Lisu can be interpreted as definite or indefinite according to the presuppositions of the sentence. If a noun is presupposed, it is definite, and if not it is indefinite. Thus a base rule
introducing a category Determiner is redundant if one accepts a theory in which presuppositions are part of the deep representation.

On the other hand if the transformational introduction of determiners is accepted the problems of the above analysis remain, and in addition there are a few more. In Lisu the demonstrative pronouns (or articles) are specified as not only <±proximity>, but also as <±altitude> and <±demarcation>, as will be seen later in this chapter. To maintain that these are features of noun phrases, rather than semantic features of the demonstratives is an \textit{ad hoc} position.

An important fact which neither of the above positions can account for is that the demonstratives all consist of two morphemes, the first the demonstrative proper, and the second the morpheme \textit{ma} which happens to be the marker of relative clauses. Both the 'base' position and the 'transformation' position above would have to treat as a coincidence the fact that the relative marker and the morpheme associated with the demonstratives have the same phonological shape.

A third alternative is that demonstratives are predicates in the base representation which modify noun phrases, but which never appear in surface structure as main verbs. Logically the predicative nature of demonstratives is plain, and in Lisu, and possibly all languages the deepest base will need to reflect this fact. I shall assume this position, which is supported by the fact that in Lisu the rules required for relative clauses are all that is required to generate the correct surface forms of the demonstrative 'articles' from a base in which they are predicates.

4.2 RELATIVE CLAUSES
4.21 Relative clause \textit{PRO}-nominalization

The generalized rule of relative clause pronominalization which accounts for the appearance of \textit{ma} in relative clauses and demonstrative pronouns applies also to other types of relative-like constructions which will be discussed in this chapter.

The rule consists of two parts. The first involves simply the conversion of the noun phrase feature <-\textit{PRO}> to <+\textit{PRO}> if the noun to which the feature is attached is equivalent\textsuperscript{1} to a higher NP dominated by the same NP node as the embedded relative sentence. The second part of the rule duplicates the features associated with the noun phrase now specified as <+\textit{PRO}> onto a new node dominated by the NP but specified as <+\textit{Art}> and not <+\textit{N}>. This rule thus generates (lb) from (1):
1. NP

\[
\begin{array}{c}
\begin{array}{c}
<+N> \\
<+human> \\
<-PRO> \\
\text{etc.}
\end{array}
\end{array}
\Rightarrow
\begin{array}{c}
\begin{array}{c}
<+N> \\
<+human> \\
<-PRO> \\
\text{etc.}
\end{array}
\end{array}
\Rightarrow
\begin{array}{c}
\begin{array}{c}
<+Art> \\
<+human> \\
<-PRO> \\
\text{etc.}
\end{array}
\end{array}
\Rightarrow
\begin{array}{c}
\begin{array}{c}
<+N> \\
<+human> \\
<-PRO> \\
\text{etc.}
\end{array}
\end{array}
\end{array}
\]

The final lexical pass provides the morpheme \( yf \) (something like the hypothetical WH- of English) for the PRO-article, and the morpheme \( ma \) \( one \) for the PRO-noun.

There is more to be said about pronouns, and this will be done at the relevant points in what follows.

4.22 Relative clauses with verbal predicates

To maintain the generality of the pronominalization rule posited above, it is necessary to base the relative clause rule in the base on a component labelled NP rather than on N. The only alternative is to have two rules of pronominalization, one for the NP node and one for the N node. This alternative, as well as being redundant, involves certain problems too, as will become evident in the following discussion.

For this reason I will not adhere to Fillmore's rule developing the NP node as \((\text{Det}) \ N \ (S)\), but will keep to the rule now more generally accepted, namely \( \text{NP} \rightarrow \text{NP} \ (S) \).

Thus the base structure of (2) will be (2a):

2. \lathyu \ yf \ yaphf \ thyl -a \ ma
   \begin{itemize}
   \item person
   \item opium
   \item smoke
   \item DEC
   \item one
   \end{itemize}
   The person who smokes opium

2a.
The relative pronominalization rules operate on the second occurrence of láthyu transforming its specification into <+PRO> and creating the PRO-article node. The resulting P-marker is

2b.

```
NP
 /\                  /
 NP  P
 /\          /
 NP  S
 /\  /
 NP  M
 /\ /
 NP A
 /\ /
 NP V
 /\ /
 NP P

látthyu [\ <+N>  <+human>  <-PRO> ]
     \ [ etc. ]
WH- [\ <+Art>  <+human>  <+PRO> ]
     \ [ etc. ]
ma [\ <+N>  <-anim>  <-PRO> ]
     \ [ etc. ]
yàphi [\ <+N>  <+human> ]
     \ [ etc. ]
thúli [\ <+V>  [+A,0_]]
     \ [ etc. ]
```

The relativization rule raises the NP which has <+PRO> specification and adjoins it to the dominating NP node, and the S node is then lowered and adjoined under the domination of the <+PRO> NP node which has just been raised. The final step is the movement of the PRO-noun to the very end of the NP. The transformed P-marker is

2c.

```
NP
 /\                  /
 NP  S
 /\          /
 NP  M
 /\  /
 NP  P
 /\ /
 NP A
 /\ /
 NP V
 /\ /
 NP P

látthyu [\ <+N>  <+human>  <-PRO> ]
     \ [ etc. ]
WH- [\ <+Art>  <+human>  <+PRO> ]
     \ [ etc. ]
yàphi [\ <+N>  <+human> ]
     \ [ etc. ]
```

This is the surface structure of sentence (2) after the final lexical pass has inserted the PRO-article yf and the PRO-noun mà. There is no relativized noun deletion transformation in Lisu, of the kind proposed by Jacobs and Rosenbaum (1968:202) and thus the relativized noun appears in the surface string as the PRO-noun mà which is roughly equivalent to the English pronoun one. Thus in Lisu the NP-raising and S-lowering rules result in the nominalization of the relative clause itself and cause the surface NP to be composed of two NPs rather than of an NP and a sentence.
Supporting empirical data for this analysis will be given later in this chapter, after NP deletion has been discussed. It is interesting to note that in the Lisu P-marker (2c) one of the component NPs has the form Art+S+N, which is the structure suggested by Fillmore and others as being the base form of an NP containing a relative S. In Lisu, however, such a structure is not characteristic of the whole of the matrix NP but only of the modifying component NP.

In regular relative clauses like that mentioned above there is an optional PRO-article deletion rule analogous to the relative pronoun deletion rule in English. In Lisu, however, the rule does not have the restrictions that it does in English. Thus sentence (2) could be reduced to

2d. lâthyu yâphi thyl-a ma
    person opium smoke-DEC one
    The person who smokes opium

In English the deletion cannot apply to the English gloss.

*The person smokes opium

but it can apply in cases where the present continuous occurs:

The person smoking opium

Lisu also has an optional extraposition rule which applies to all relative clauses which have verbal predicates. This re-positions the relative to the front of the dominating NP.

2e. yâphi thyl-a ma lâthyu
    opium smoke-DEC one person
    The person who smokes opium

If the verb of the embedded relative sentence is non-adjectival (i.e. has a case specification other than +[D/O_], +[D_] or +[O_]), a relative clause reduction rule which is optional applies instead of the regular relativization rule. The rule is similar to Carlotta Smith's (1964) rule in that it involves first of all the generalized Equi-NP-deletion, and the deletion of the modal. In Lisu, however, the application of the reduction rule requires the further transformation which I shall call 'switching'. This rule moves the reduced relative clause to the front of the NP and adjoins it, not to the higher NP node as in the case of relative clause extraposition, but to the lower node. Thus applying this rule to the P-marker (2a), after Equi-NP-deletion and modal-deletion (2f) results, and relative clause switching then generates (2g):
The tree-pruning rule proposed by Ross (1966) deletes the S-node because it does not branch, and the higher NP node because it dominates only a repeat of the symbol NP. This yields the surface string

2h. yàphi thyl làthyu
opium smoke person

The opium-smoking person.

In English there are restrictions on the types of constructions which may be switched in this way. For instance, while the English gloss of (2h) is grammatical, the following are not:

*The in-bed-opium-smoking person
*The much-opium-smoking person
*The money-giving-to-Peter person

In Lisu the same restrictions do not hold, and there are switched clauses analogous to all of the above.
In addition to noun phrases of the types described thus far there are also relative clause constructions in which the head of the noun phrase is a PRO-noun rather than a noun. This means that the equivalent noun phrase in the relative clause is already specified as <+PRO> and so the relative pronominalization rule cannot apply. Instead relative clause reduction becomes obligatory, with the switching that accompanies such reduction whenever the main verb of the relative clause is a non-adjectival verb. In each case the result is a nominalization of a sentence similar to the English phrases wool-buyer, antique furniture dealer, children's remedial shoe distributor etc. In English, however, the -er/-or suffix is used in agentive and instrumental nominalizations with no corresponding suffixes for temporal or locative nominalizations, while Lisu has separate pronoun forms for surface Agentive (and Dative), Instrumental, Locative and Temporal nominalizations. English also has restrictions on the complexity of sentences which may be nominalized by the -er/-or suffix which are similar to those which apply to switching. In Lisu, once again, there are no such restrictions save that the main verb of the relative clause must be non-adjectival. Note the following:

3. ñme ñi demi wå dza yå swu yesterdays on field in rice reap ones
   They who were reaping rice in the fields yesterday.

3a. ñme ñi demi wå dza yå dwu yesterdays on field in rice reap instruments
   That which was used for reaping in the fields yesterday.

3b. ñsa demi wå dza yå tsf
   ñsa field in rice reap time
   The time at which ñsa reaped rice in the fields.

3c. ñsa ñme ñi dza yå gwu
   ñsa yesterdays on rice reap place
   The place at which ñsa was reaping rice yesterday.

The base structure of the above sentences is basically that for all noun phrases containing relative clauses, namely NP₃. The proposition switching rule already outlined is all that is required to transform this base into the required surface string. The lexical pass which inserts the head PRO-noun will need to be sensitive to the case dominating the NP. In fact it seems likely that in the lexicon these PRO-nouns will have the following features, and no others:

<table>
<thead>
<tr>
<th>swu</th>
<th>dwu</th>
<th>gwu</th>
<th>tsf</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;+N&gt;</td>
<td>&lt;+N&gt;</td>
<td>&lt;+N&gt;</td>
<td>&lt;+N&gt;</td>
</tr>
<tr>
<td>&lt;+PRO&gt;</td>
<td>&lt;+PRO&gt;</td>
<td>&lt;+PRO&gt;</td>
<td>&lt;+PRO&gt;</td>
</tr>
<tr>
<td>&lt;+A/D&gt;</td>
<td>&lt;+I&gt;</td>
<td>&lt;+L&gt;</td>
<td>&lt;+T&gt;</td>
</tr>
<tr>
<td>&lt;+[S]&gt;</td>
<td>&lt;+[S]&gt;</td>
<td>&lt;+[S]&gt;</td>
<td>&lt;+[S]&gt;</td>
</tr>
</tbody>
</table>
The semantic content of each PRO-noun is equivalent to that of the case which dominates, and thus no further semantic specification is necessary. All four PRO-nouns have a specification indicating that they co-occur with a relative sentence in the base representation. With swu such co-occurrence is optional, but in the other cases the relative sentence is obligatory, since these PRO-nouns never occur as free forms, but always as nominalizers of sentences.

The PRO-nouns dwu and gwu may occur in abstract noun phrases such as

4. nyima bya dwu
   heart shatter instruments
   Catastrophes

5. nyima thyl gwu
   heart decay places
   Sorrows

In addition dwu has an idiomatic meaning thing that ought to be done, as in

6. the ma nya hi khwù wa ?îdye dwu gnu
   this one TOP house inside to return instrument FACT
   It is a fact that this warrants your returning home.

Noun phrases having PRO-forms as their heads have the same co-occurrence restrictions as other noun phrases, and may be modified by further relatives, quantifiers, and demonstratives.

A rather curious fact is that while the four cases mentioned have particular PRO-nouns associated with them, there is no analogous PRO-noun underlying the objective case, so that a nominalization meaning something like The-Asa-in-the-fields-reap-thing does not occur. What appears to happen in cases like this is that a normal relative clause noun phrase construction is generated, with 'dummy' NP nodes occurring as the head noun and as the appropriate NP in the embedded S. Thus the noun phrase (7) has the near-base³ structure (7a):

7. òme thà demi wa àsà yà -a ma
    yesterday on field at Asa reap-DEC one
    That which Asa reaped in the fields yesterday.
7a. The head NP apparently carries too few features to enable a lexical insertion to take place, (there is no word for *thing* in Lisu) but the PRO-nominalization and segmentation rules apply to the identical zero NP in the embedded S, yielding the usual γf-α pair. The normal relativization process generates the required string, which is a relativized sentence with no overt noun phrase to modify, although some noun-like entity is obviously 'understood'. Such an analysis is highly suspect, as there is no evidence of an empirical nature which would support the position of a 'dummy' head in the NP. However, it is the only analysis I am able to suggest at present. Verbs like γf reaping require Objects in the propositions in which they occur, but in sentences like (7) no specific NP can be provided, without changing the meaning of the original modified NP. Where the head noun of an NP modified by a relative clause is a 'dummy' of this sort, switching cannot take place, since there are no noun phrases like

7b. *âme thè dema wa âsa γf
   *yesterday on field in Asa reaping
   *The yesterday-in-the-field-Asa reaping

4.23 Relative clauses with adjectival verbal predicates

When the main verb of a relative clause is adjectival, i.e. is specified as [O/D_], [O_] or [D_], the normal rules of relativization apply, with the one restriction that switching cannot occur, even though relative clause reduction may. Consider the following noun phrase:

8. lâthu the -a ma
   person clever-DEC one
   The person who is clever

The base structure of this NP is as follows:
The regular relative pronominalization rule operates on the second occurrence of lāthyu transforming it into a PRO-article and PRO-noun as before, and the relativization rule raises the PRO-NP and lowers the S in the usual way. The resulting string is:

8b. lāthyu yî the -a ma
clever-DEC one
personWH

The person who is clever.

Optional yî deletion results in the string (8). The optional extra-position rule can move the relative clause to the front of the NP yielding the string

8c. the -a ma lāthyu
clever-DEC one person

The person who is clever.

If, however, relative clause reduction operates on the P-marker (8a), switching cannot apply, but instead an S-lowering rule applies which adjoins the embedded relative S to the lower governing NP node, at which stage the P-marker is

8d.
The tree-pruning rule deletes the non-branching S, and the highest NP node. The final surface marker is 8e.

A low-level optional rule may reduplicate the verb:

8f. lāthyu the -the person clever-clever
    The clever person.

Relative clause reduction and S-lowering may not apply if the adjectival verb is intensified by 'quantifiers' such as akhô very.

Note the following:

9. lāthyu akhô the -a ma person very clever-DEC one
   The person who is very clever.

9a. *lāthyu akhô the
    *person very clever
    *The very clever person.

This restriction does not apply to negative relative clauses but if the reduced relative is negativized, then the verb reduplication becomes obligatory:

10. lāthyu mà the ma person not clever one
    The person who is not clever

10a. lāthyu mà the -the person not clever-clever
    The not-clever person.

4.24 Relative clauses with demonstrative predicates

In the beginning of Chapter II it was mentioned that the deep V component of the sentence base was to be interpreted as a notional category rather than as a syntactic one. Thus a V is roughly equivalent to a logical predicate, which may appear as any one of a number of different surface categories. It may appear as a true verb, but need not necessarily. Thus there appears to be a need for some device by which different types of deep predicates are assigned to the required syntactic categories. The usual sub-categorization features <+V>,
<+DEMONST> etc. provide such a device. I am positing here that demonstratives are dominated by the V node in the base, and are to be distinguished from verbs by the sub-categorization features mentioned above. The advantages of doing this will become evident in the following discussion. According to this position the base form of (11) is (11a):

11. làthyu né ma
   person that one
   That person above (some presupposed point of reference)

11a.

The first rule to apply to this base is a feature-copying rule which copies all of the features in the set headed by <+DEM> onto the noun phrase in the same proposition. The V node and the associated complex symbol are then deleted. The resulting P-marker is

11b.
A major problem in the above trees is the M node. It does not seem to be the case that abstract non-verbal predicates require that the dominating S node be expanded as P + M, as there is no evidence that modals are ever a part of the semantic interpretation of such predicates, and certainly there is never any modal component associated with them in surface structure. If the modal node is to be excluded from the base form of such constructions, then the base rule rewriting S must be altered to S + P (M). An alternative would be to not require that the M node be developed, and allow the tree-pruning rule to delete the M since it would dominate nothing. I am unable to say which of these alternatives is to be preferred, but my current best guess is that the alteration to the rewrite rule is more correct since a P-marker in which there is no modal at all reflects what I understand to be the semantics of a deep relative involving things like demonstratives. An M node in the base marker, even if it were not developed, would indicate that there is an indefinite 'understood' modality connected with such relatives.

The next rule to operate on the tree (11b) raises the NP of the relative S and adjoins it to the higher dominating NP node. The normal relative pronounization rule then applies, and the result after segmentation is the tree

The tree-pruning rule deletes the nodes which dominate nothing. The final lexical pass inserts nó for the demonstrative PRO-article, instead of the non-demonstrative yf 'WH-', and for the PRO-noun it inserts the usual ma one. This yields the surface string

11. lāthyu nó ma
    person that one
    That person above
The structure of this string is that of (llc) minus the extraneous S component. That this is the correct structure can be seen by an examination of such sentences as:

12. láthyu gu ma nya the ma mà sywg person that one TOP this one not resemble
That person does not resemble this one.

12a. láthyu the -the gu ma nya the ma mà sywg person clever-clever that one TOP this one not resemble
That clever person does not resemble this one.

In sentence (12) it is easy to see that a rule of deletion has applied to the second occurrence of láthyu and that the fuller form of the sentence before the deletion would be

12'. láthyu gu ma nya láthyu the ma mà sywg person that one TOP person this one not resemble
That person does not resemble this person.

Sentence (12a) involves an ambiguity not present in the English gloss. The sentence can mean

That clever person does not resemble this clever person OR
That clever person does not resemble this person

depending on whether the deletion rule has deleted láthyu the-the clever person or láthyu person. This shows that the deletion rule must apply to noun phrases as well as nouns, just as pronominalization in English applies to noun phrases as well as nouns in these sentences. If two deletion rules are posited instead of one, one applying only to nouns and the other to noun phrases it is impossible to my knowledge to so constrain the noun deletion rule so that it will not delete the wrong nouns in many situations. This applies especially where a noun + adjective surface string is modified by a relative which contains another noun + adjective string, such as the following:

12b. thyu by thyu swá lá kha -ã ma person rich person poor to oppress-DEC one
Rich people who oppress the poor (ones/people)

In English the second occurrence of the noun may be deleted, or pronominalized, but in Lisu deletion may not occur. There is no sentence

12c. *thyu by swá lá kha -ã ma
*person rich poor to oppress-DEC one
Rich people who oppress the poor

If one deletion rule is posited then the noun láthyu must be analysed as a noun phrase. It remains to produce supporting data for the position that the string nó ma in (ll) is also an NP as intimated by the P-marker (llc), and not some other component of the higher NP node. Consider the following sentence.
13. ámù gu ma tye á vá the ma tye ámù mù -g
    (Comparing) that horse with this pig, this one with horse old-DEC

Here the second occurrence of the noun ámù horse is the reduced form of the full noun phrase ámù gu ma, as can be seen in the fact that (13a) is completely synonymous with (13):

13a. ámù gu ma tye á vá the ma tye ámù gu ma mù -g
    (Comparing) that horse with this pig, this one with horse that one old-DEC

The deletion of gu ma can be accounted for by the identical noun phrase deletion rule quite easily, and in the absence of any data contrary to this proposal, it is not necessary to posit some other kind of deletion rule.

The main points of difference between the analysis of demonstratives that I have suggested here and that which has been made for English by Jacobs and Rosenbaum (1968:Ch.12) and others, are that (i) whereas they posit the features of the demonstrative as inherent, but not necessarily specified, features of the NP, I have suggested that these features are derived from a very deep relative clause containing an abstract predicate, and that therefore (ii) the surface forms of demonstratives are derived in Lisu by means of the regular relative pronominalization rules rather than by some separate article segmentation rules. If the point I am making about Lisu is to be taken as a universal, this would mean that an NP like that man is to be derived from the form the man who is that one. For Lisu any alternative analysis cannot account for the appearance of the relative PRO-noun ma one in the surface form of all demonstratives.

There are seven demonstrative PRO-articled in Lisu, and they have the following lexical specification:

- the
  - gu
  - gwé

- dywó
dywe

- nwó
nwé

The semantic importance of the various features can be seen in the following examples:

14. wàdyi the ma
    mountain this one
    This mountain
14a. wâdyəl gu mə
mountain that one
That mountain

14b. wâdyəl nwó mə
mountain that one
That mountain above

14c. wâdyəl dywɔ mə
mountain that one
That mountain below

14d. wâdyəl dywe mə
mountain that one
That mountain below

The difference between (14a) and those below it is that it refers to the mountain without specifying its relative height to some presupposed point of reference. The mountain could be higher or lower, but more commonly gu mə is used to refer to entities on approximately the same level as this point of reference. The difference between (14c) and (14d) is that the former makes reference to a mountain which is easily distinguished from other mountains, or to a general area in which the mountain is situated, while in (14d) the reference is to a mountain which is not easily distinguished, or to a specific mountain excluding any other adjacent areas. In the case of a demonstrative marked <+demarcation> a gesture or at least a look at the object being referred to is necessary.

4.25 Relative clauses with enumerated predicates

In the surface strings of Lisu enumerated noun phrases, there appear a noun (or noun phrase), an enumerator, and a classifier, as is also the case with many languages of mainland Asia. One of the important facts about such noun phrases in Lisu that requires comment and, if possible, explanation, is that with very few exceptions a noun may co-occur with a morpheme mə instead of the classifier specifically associated with that noun.

15. lâkó nyə phə
bowl two Clf
Two bowls.

15a. lâkó nyə mə
bowl two ?
Two bowls

In every grammar of Lisu produced thus far, mə has been described as a classifier. Such an analysis, however, involves a number of
problems. The 'classifier' ma has to be described as aberrant in a number of ways. It has to be described as 'a colourless adjunct' (Fraser 1922:16), or as a 'general classifier' (Roop 1970:62) since it has a vastly wider distribution than any other member of the class, and is not restricted to co-occurrence with a small set of nouns in the same way other classifiers are. Thus for instance the classifier zu may only occur in NPs in which the head noun is a <+human> one, and pha may only co-occur with bowl-like utensils. The morpheme ma on the other hand may co-occur with nouns referring to humans, bowl-like utensils, and hosts of other sub-classes of noun. Note the following:

16. lâthyu thî zu
   person one Clf
   One person

16a. lâthyu thî ma
   person one ?
   One person

16b. *lâthyu thî pha
    *person one Clf

15b. *ijâkô thî zu
    *bowl one Clf

On the other hand all animals and a large class of nondescript articles are identified by nouns which only co-occur with ma and with no other unitary classifier. Thus nouns 'taking' true classifiers may co-occur with ma, but nouns 'taking' ma do not co-occur with other classifiers. This is another way of saying that most, if not all nouns co-occur with ma but a sub-set of these nouns may also co-occur with other classifiers.

Furthermore there is the problem of trying to delimit the semantic content of ma. All other classifiers have a fairly easily delimited meaning, so that pha can be said to refer to bowl-like utensils, si to globular objects and fruits, thô to poles and pole-like objects, thwù to cylinders, and so forth. The definition of ma in semantic terms is impossible, as it is open-ended and all-inclusive, referring to as many different objects as there are nouns in the language. In fact it has no meaning, rather than a lot of meanings. It is thus either some kind of 'dummy' classifier, or conceivably, some other kind of grammatical entity.

In the analysis which follows I will show that it is possible to treat ma as a relative PRO-noun with the same phonological shape as the one which has appeared in the relative constructions discussed thus far. It is also possible to account for the enumerators and the
classifiers with which they occur by a set of rules which derive them from the predicates of very deep relative clauses. This set of rules has already been posited for the derivation of demonstratives from relative clauses, and thus the following analysis will complicate the grammar no further. The application of those rules will merely be extended to incorporate enumerators and classifiers as well.

The base P-marker of (17) is (17a):

17. ámù thai ma
   horse one one
   One horse

17a.

The feature-copying rule applies, as in the case of the demonstrative relative. The NP feature <-Class> indicates that the NP does not have embedded within it a relative containing a classifier predicate, i.e. that it does not appear with a true classifier in the surface string. All NPs having the feature <+concrete> are count noun phrases in Lisu, and there are only a few abstract nouns in Lisu, when compared with English. The count-noun phrases are further specified as <+mass> if they have been specified as <+Class>. This choice will determine which of two sets of classifiers will be selected as possible candidates for co-occurrence. The mass classifiers are measures of various kinds such as bucketsful, bowlsful, groups, rows etc.

After feature-copying the NP-raising rule applies, and then the relative pronominalization rule, generating the following:
The final lexical pass inserts thi one for the PRO-article and ma one as usual for the PRO-noun. For some idiosyncratic reason if the PRO-noun has acquired the feature <4> instead of having the phonological form ma it becomes lwè.

The operations required to generate (17b) from (17a) are thus identical to those required to generate (11c) from (11a). My conclusion is that in Lisu so-called demonstrative pronouns and numerical quantifiers are the same type of surface category, namely PRO-articles. If the identical NP deletion rule operates on NPs rather than nouns, then the fact that (17b) assigns the correct surface structure description to the cited string can be seen from sentences like the following:

18. ámù nyì ma nya sa ma xwá mà da
   horse two one TOP three one win not able
   Three horses are better than two. (ámù horse deleted).

18a. ámù nyì ma tye ányì sa ma tye ámù xwá-â
    horse two one with cow three one with horse win-DEC
    (Comparing) two horses with three cows, the horses win. (nyì ma two ones has been deleted)

Some support for treating enumerators as being the surface forms of deep relative clauses comes from an examination of the behaviour of the verb enumerator myà to be many. When this verb occurs in relative clauses it undergoes the relativization process described above as being that applicable to enumerators rather than undergoing the usual verbal relative clause transformations:

19. ámù myâ-â
    horse many-DEC
    The horses are many.

19a. ámù amyà ma
    horse many one
    Many horses.
19b. * ámbu myā -g ma
    *horse many-DEC one

*The horses which are many

The morpheme amyā is a bound form, like all other enumerators, and like
them it requires the co-occurrence of ma or a true classifier. In every
respect the whole class, with one exception, functions like a class of
articles. The one exception is the enumerator nf few which only occurs
as a verb. The difference between the various kinds of enumerators
then is that most, while occurring as deep predicates, require a trans-
formation which transforms them into articles, while myā many is idio-
syncratic in that the transformation is optional, and so is nf few in
that the transformation cannot apply in its case.

4.26 Relative clauses with classifier predicates

Noun phrases having the feature <+Class> may have embedded in them a
relative clause containing a classifying predicate. Thus NPs which have
this feature are those which contain nouns of the kind mentioned
previously which co-occur with true classifiers. The base form of a
phrase like (20) is (20a):

20. nētsi, nyā sl
    button two globule

    Two buttons (Lisu buttons are spherical).
A constraint states that if a <+Class> predicate in a relative clause is commanded by a higher <+Enum> predicate, then the noun phrase of the relative clause cannot be pronominalized. This results in Equi-NP-deletion operating instead, and this deletes NPe in the P-marker above. Feature-copying then occurs copying the Classifier features onto NPd, and then the same is done with the Enumerator features. NPc is then raised and adjoined under the domination of NPa. Relative pronominalization and segmentation apply, and tree-pruning deletes all 'empty' nodes, non-branching S-nodes, and NPc, which at this stage is dominating only NPd. The transformed P-marker is
The final lexical pass inserts ny|two for the PRO-article and s|globule for the PRO-noun.

Earlier it was noted that enumerated noun phrases may occur with or without classifiers incorporated in them. Thus we find noun phrases with the forms Noun + Enumerator + Classifier and Noun + Enumerator + ma in their surface representations. This fact, together with the fact that the same rules of pronominalization account for the appearance of both the classifiers and ma leads to the analysis proposed here that classifiers are a class of pronoun similar to ma one. In the case of the enumerators I have proceeded on the assumption that these are to be analysed as PRO-articles of the same general type as the demonstratives. If this analysis is correct one would expect that the enumerators would substitute for other PRO-articles in some surface environments. This is in fact the case. The most obvious examples are cases like

21. lâðhyu gu  ma
    person that one
    That person

21a. lâðhyu thî ma
    person one one
    One person

Further support comes from an examination of enumerated and non-enumerated classified noun phrases. Note the following:

22. lâðhyu yî bwu
    person WH group
    People in groups

22a. lâðhyu thî bwu
    person one group
    One group of people.
Many classifiers are bound forms (which suggests that they are transformationally derived) but occur as free noun phrases if the PRO-article yf 'WH-' co-occurs. Thus

\[
\begin{align*}
\text{yf } s & \quad \text{BUT NOT} \quad *s \\
\text{WH globule} & \quad *\text{globule} \\
\text{Globules, fruit} & \\
\text{yf } dz & \quad \text{BUT NOT} \quad *dz \\
\text{WH tree} & \quad *\text{tree} \\
\text{The tree (excluding leaves etc.)} & \\
\text{yf phy} & \quad \text{BUT NOT} \quad *\text{phy} \\
\text{WH leaf} & \quad *\text{leaf} \\
\text{The leaves} & \\
\text{yf khwa} & \quad \text{BUT NOT} \quad *\text{khwa} \\
\text{WH board} & \quad *\text{board} \\
\text{Boards} & \\
\text{yf thw} & \quad \text{BUT NOT} \quad *\text{thw} \\
\text{WH cylinder} & \quad *\text{cylinder} \\
\text{Cylinders} & \\
\end{align*}
\]

With mass classifiers such constructions mean by the x measure, and in most cases the mass classifiers can also occur as free nouns.

\[
\begin{align*}
\text{yf yapu} & \quad *\text{yapu} \\
\text{WH tin} & \quad *\text{tin} \quad \text{(but as a free noun it cannot mean tinful)} \\
\text{By the tinful} & \\
\end{align*}
\]

Certain generic nouns which refer to raw materials of various kinds are obligatorily classified if they are enumerated. Nouns in this class may occur in NPs in which there are two classifying relatives, the first unenumerated, and the second enumerated. Thus an NP like (23) has the base form (23a):

23. makhw [yf] th̬ nyl th̬ 
    bamboo (WH) pole two pole
    Two poles of bamboo

23a. 

[Diagram of tree structure]
Another aspect of enumerated NPs that must be accounted for is that enumerators which are multiples of ten have certain properties not possessed by PRO-article enumerators. Among these properties are (i) that while regular numerical enumerators are bound PRO-articles and require the co-occurrence of a following classifier in the surface structure, the decimal enumerators require the co-occurrence of a preceding PRO-article, and the occurrence of a following classifier is optional, and (ii) when the unit enumerators occur in front of decimal enumerators, the semantic content of the resulting NP is equal to the product of the semantic contents of the enumerators. But when a decimal enumerator occurs in front of a unit enumerator, the semantic content of the resulting NP is the sum of the semantic contents of the enumerators.

As examples of property (i) note the following:

<table>
<thead>
<tr>
<th>Unit enumerators</th>
<th>Decimal enumerators</th>
</tr>
</thead>
<tbody>
<tr>
<td>24a. làthyu sà zý person three</td>
<td>24b. *làthyu hýa zý *person hundred</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>24c. *làthyu sà *person three</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>24e. làthyu sà hýa zý *person three</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As examples of property (ii) note the following:

25. sà hýa three hundred  
    = 3(100)

25a. sà hýa sà zý three hundred three people  
     = 3(100) + 3 people.

In the Thailand dialect one exception to the characterization of decimal enumerators under (i) above, is the enumerator tshì tèn. Thus while (24b) is ungrammatical, both (24f) and (24g) below are grammatical:

24f. làthyu tshì zý person ten person  
     Ten people

24g. làthyu sà tshì person three ten  
     Thirty people
Leaving aside for the moment the question of the status of tshi ten, the most obvious solution to the problem posed by (1) and (11) above is an analysis which categorizes the decimal enumerators as having the feature <+Class>, and thus as belonging to a special class of PRO-nominal classifiers rather than PRO-article enumerators. The noun phrase (26) will thus have the base structure (26a):

26. lathyu ñwà hya  
    person five hundred  
    Five hundred people.

26a.

The normal rules of feature-copying, pronominalization, NP-raising, segmentation and tree-pruning generate the surface structure (26b):

26b.

The decimal classifiers will be differentiated from other classifiers by a feature <±unit> where the minus specification will isolate the decimal classifiers as a sub-set. They will then need to be further specified as <±ten>, <±hundred>, and <±thousand>. The lexical item tshi ten will have a specification in terms of features which allow it
an optional occurrence as either an enumerator marked <10>, or as a classifier marked <-unit> <+ten>.

A complex enumerated NP such as (27) would have the base marker (27a):

27. lathyu ñwà tshì ñwà zy
   person five ten five people
   Fifty five people

27a.

As the rules stand at present, if they operated in the usual way they would generate the surface structure (27b), which is incorrect. The surface structure is rather (27c):

27b.

27c.
Thus it would seem that a conjunction rule would need to apply to the
conjoined S's of (27a) at some point in the derivation before the NP-
raising rule. This conjunction rule would adjoin the NP of the one
sentence to the other and create a new NP node to dominate both. This
rule would be generalized in that it would also apply to cases of double
classification as well as to enumeration conjunction. The rule would
be required for constructions like the following:

28. lâthyu yî dywu yî mē
   person WH herd WH army
   Crowds and multitudes of people

28a. mē yî xê yî mî
    cloth WH particle WH fragment
    Bits and pieces of cloth

In both of these phrases the deep and surface structure is analogous to
that of (27a) and (27c) respectively.

The difference between the deep structures (23a) and (27a) is
important, as the difference coincides with the difference in 'scope'
of the right-most modifiers in the respective noun phrases. The base
marker (23a) generates the surface structure (23b):

23b.

In this surface P-marker, the modifying PRO-NP NP₃ modifies the NP₂
node and all it dominates. In (27c) the PRO-NP NP₃ and all it dominates
modifies NP₂.

One type of enumerated NP construction that presents a problem is
one in which the decimal classifier is followed immediately by a unit
classifier, as in the phrase

29. makhwà sā hya thā
    bamboo three hundred pole
    Three hundred poles of bamboo

The problem concerns the deep PRO-article of the NP having the
classifier thā as the PRO-noun. If this deep NP is specified as <-Enum>
and the deep structure is thus (29a), one would expect the appearance
of the PRO-article yî in the surface form.
Such an analysis is intuitively incorrect. For one thing the string

*makhwa sə hya yif thə
bamboo three hundred WH pole

is ungrammatical, and for another the specification <$-Enum$> normally indicates an indefinite quantity whereas the entire surface NP sə hya thə three hundred poles is obviously a definite quantity. I would suggest that a deep structure of this NP should rather incorporate a relative with a predicate specified as <$+Enum$>$<$φ$>.

The normal feature-copying rule would thus provide the required <$+Enum$> specification for the NP, while the specification <$φ$> would cause the PRO-article to be deleted after segmentation. This analysis means that (29) is to be interpreted as meaning Three hundred and zero poles of bamboo rather than Three hundred and an indefinite number of poles of bamboo, and this is in fact the correct interpretation.

Before turning to a discussion of complex relative clauses it is necessary to return briefly to a point made earlier, namely that the surface form of simple relative sentences is

Supporting empirical evidence for this analysis is not hard to find. That the relative clause is nominalized is beyond doubt as can easily be seen in the English glosses of such phrases as the one who smokes opium. However, in English such noun phrases as The person, the one who smokes opium are non-restrictive relatives, but in Lisu they are restricting. The nominalized relative clause in Lisu functions like
any other NP, and can be deleted by the identical noun phrase deletion rule. For instance the full NP

30. lâthyu yî yaphi thîl-â ma gu ma
   person WH opium smoke-DEC one that one
   That person who smokes opium.

can be reduced in appropriate circumstances to

30a. lâthyu gu ma
    person that one
    That person

4.3 COMPLEX RELATIVE CLAUSES

4.3.1 Relative clauses incorporating demonstrative and verbal predicates

In Lisu noun phrases which are modified by a relative which incorporates both demonstrative and verbal predicates may have either of two different surface forms. Consider the following:

31. lâthyu pátsî wa dye-â ma gu ma
    person plain to go-DEC one that one
    That person who is going to the plain

32. lâthyu gu pátsî wa dye-â ma [ma]
    person that plain to go -DEC one (one)
    That person who is going to the plain

The surface structures of these two examples are (31a) and (32a) respectively:

31a.

```
NP
   NP
      NP
      NP
    lâthyu
    person

NP
   NP
      NP
      NP
    pátsî wa dye-â ma
    plain-to go -DEC one

NP
  gu ma
    that one
```

32a.

```
NP
   NP
      NP
    lâthyu
    person

NP
  gu
    that

NP
  pátsî wa dye-â
  plain-to go -DEC
```
If these sentences are analysed as having different deep structures, the existing transformations are all that is required to generate the correct surface structures, such deep structures being (31b) and (32b) respectively:

31b.

```
NP
  │
  │
NP | S
  │  │
Nàthyu person | Nàthyu pà̃tsi wa dye-a
  │  │
S   │
  │
  │
Nàthyu gu person
```

32b.

```
NP
  │
  │
NP | S
  │  │
NP | S
  │  │
Nàthyu person | Nàthyu person | Nàthyu gu
  │  │  │
S   │  │
  │
  │
Nàthyu pà̃tsi wa dye-a
  │
  │
plain-to go -DEC
```

However, since the semantic interpretations of (31) and (32) are equivalent, the only difference being the 'scope' of the modifying NP in the surface structure, it does not seem as though the position of two different deep structures can be justified. (32b) in particular is suspect, since it is difficult to see in what sense the deep sentence nàthyu gu person that is more deeply embedded than the simple relative sentence.

If a single deep structure is posited, as seems necessary, then the existing demonstrative transformation rule will need to be modified slightly, as will be seen below. The deep structure shared by both (31) and (32) would be:

33.

```
NP
  │
  │
NP | S
  │  │
Nàthyu person | Nàthyu pà̃tsi wa dye-a
  │  │
S   │  │
  │  │
Nàthyu gu
  │
  │
plain-to go -DEC
```
The surface form of the NP will depend on whether or not $S_1$ and $S_2$ are conjoined before the NP raising rule applies. The conjunction is optional, and if it does not apply the normal relative and demonstrative transformations apply. However, as the demonstrative transformation now stands, the application of the normal rules would generate (31c) which is not equivalent to the required (31a):

31c.

\[
\begin{array}{c}
\text{NP} \\
\text{làthyu} \\
\text{person} \\
\end{array} \quad \begin{array}{c}
\text{NP} \\
\text{pátsi} \\
\text{wa dye-a ma} \\
\text{plain-to go-DEC one} \\
\end{array} \quad \begin{array}{c}
\text{NP} \\
\text{gu} \\
\text{ma} \\
\text{that one} \\
\end{array}
\]

This suggests that the NP raising rule for demonstrative NPs is different from the rule for other relative NPs, in that the raising operation is accompanied by the creation of a new dominating NP node. If this modification to the demonstrative rule is made, it brings it into line with the English demonstrative rule proposed by Jacobs and Rosenbaum (1968:208). Thus note that while the rule still generates the surface structure

31d.

\[
\begin{array}{c}
\text{NP} \\
\text{làthyu} \\
\text{person} \\
\end{array} \quad \begin{array}{c}
\text{NP} \\
\text{nā} \\
\text{that} \\
\end{array} \quad \begin{array}{c}
\text{NP} \\
\text{ma} \\
\text{one} \\
\end{array}
\]

the process is slightly different from that suggested. In particular the highest NP node is created by the raising rule.

Before tree-pruning the structure of (31c) would rather be (31c').

31c'.

\[
\begin{array}{c}
\text{NP} \\
\text{làthyu} \\
\text{person} \\
\end{array} \quad \begin{array}{c}
\text{NP} \\
\text{S} \\
\text{P} \\
\text{D} \\
\text{M} \\
\end{array} \quad \begin{array}{c}
\text{NP} \\
\text{++Art} \\
\text{++PRO} \\
\text{++PRO} \\
\text{nā} \\
\text{that} \\
\text{ma} \\
\text{one} \\
\end{array}
\]
The tree-pruning rules would delete the empty nodes M, D and P, and the non-branching S would then remain. This leaves the intermediate NP a candidate for deletion since it dominates only another NP. Once this is accomplished, the resulting P-marker is the required (31d).

This modification to the demonstrative rule would mean that the normal relativization rules would generate the required tree (31a) from the base (33) in the event that an optional PRO-NP lowering rule had not operated. If the option is for lowering, then after feature copying, relative pronominalization, NP-raising and relative PRO-NP segmentation, the PRO-NP containing the relative S with a verbal predicate is lowered into the other PRO-NP, and adjoined to the right of the other nodes. At this stage in the derivation, the P-marker is:

32c.

\[
\begin{array}{c}
\text{làthyu} \\
\text{person} \\
\text{NP} \\
\text{NP} \\
\langle+\text{Art}\rangle \langle+\text{N}\rangle \\
\langle+\text{PRO}\rangle \langle+\text{PRO}\rangle \\
\langle+\text{DEM}\rangle \langle+\text{DEM}\rangle \\
\text{gu} \text{ ma} \\
\text{that} \text{ one} \\
\langle+\text{Art}\rangle \langle+\text{N}\rangle \\
\langle+\text{PRO}\rangle \langle+\text{PRO}\rangle \\
\text{yī} \text{ ma} \\
\text{WH} \text{ one} \\
\text{pātsī wa dye-a} \text{ -DEC} \\
\end{array}
\]

The normal relative PRO-noun placement rule moves the PRO-nouns to the end of the particular NPs that dominate them, generating the string

32d. làthyu gu yī pātsī wa dye-a ma ma 
\hspace{50pt} \text{person} \text{ that WH plain to go -DEC one one}
\hspace{50pt} \text{That person who is going to the plain}

This is a perfectly well-formed sentence as it stands, and all that is required to transform it into the string (32) is the operation of two optional rules, the one deleting the yī PRO-article, and the other deleting one of the occurrences of the PRO-noun ma.

4.32 Relative clauses incorporating demonstrative and enumerative predicates

Relative clauses of this type are similar to those discussed in the preceding section. Two surface forms are possible with structures analogous to (31a) and (32a) respectively. Consider the following:

34. làthyu nyl zu y gu ma 
\hspace{50pt} \text{person two person those ones}
\hspace{50pt} \text{Those two people.}
35.  làthuy gu  nyl zy  ma
     person  those  two  person  ones
     Those  two  people.

The deep representation of both (34) and (35) is roughly

36.

If conjunction of the relatives does not take place, then the normal relativization rules will generate the surface string (34) with a structure analogous to (31a). If conjunction is opted for, however, the NP containing the enumerative specification is lowered into the NP containing the demonstrative specification, by the same rules which caused the relative with a verbal predicate to be embedded in the same place. The resulting string is (35) with a structure analogous to (32a).

4.33 Relatives incorporating verbal and enumerative predicates

Relatives of this type also have two possible surface forms depending on whether or not conjunction of the relatives has taken place. Consider the following:

37.  làthu pâtsi  wa dye-a  ma  nyl zy
     person  plain  to  go  -DEC  one  two  person
     Two  people  who  are  going  to  the  plain

38.  làthuy  pâtsi  wa  dye-a  nyl  zy  ma
     people  plain  to  go  -DEC  two  person  one
     Two  people  who  are  going  to  the  plain.

The structure of the surface string (37) is

37a.
However, assuming that both (37) and (38) have one base form and not two, that form is

39.

As with complex relatives incorporating a demonstrative, so here too if the rules raising enumerated and classified NPs are as I have stated, then they generate the incorrect structure

39a.

Thus the rule will need to be modified in the same way as the rule raising relativized demonstratives. In fact the modified rule applies to all relatives in which feature copying occurs. If the modified rule applies, and a new NP node is created when the relativized NP is raised, then the normal relativization rules generate the correct structure (39) if the conjoining transformation does not apply. The conjoining rule in this case accomplishes the same operation as the rule which applied in the previous two sub-sections, but in this case the enumerated NP is lowered into the NP containing the relative with the verbal predicate. The rule operates after relative pronominalization, segmentation, NP-raising, and S-lowering have applied. Once conjunction and then PRO-noun placement have applied, the surface structure generated is

38a.
4.34 Relatives incorporating verbal, demonstrative and enumerative predicates

In relatives involving multiple complexity of the type suggested by the title of this sub-section, the rules thus far posited account for the various possible surface forms.

(i) Relatives not conjoined:

40. làthyu pátsí wa dye-ŋ ma nyl zy gu ma person plain-to go -DEC one two person those ones Those two people who are going to the plain

(ii) Conjunction of demonstrative and enumerative:

41. làthyu pátsí wa dye-ŋ ma gu nyl zy ma person plain-to go -DEC one those two person ones Those two people who are going to the plain

(iii) Conjunction of verbal and enumerative relatives:

42. làthyu pátsí wa dye-ŋ nyl zy ma gu ma person plain-to go -DEC two person one those ones Those two people who are going to the plain

(iv) Conjunction of verbal and demonstrative relatives:

43. làthyu gu pátsí wa dye-ŋ ma nyl zy ma person those plain-to go -DEC one two person ones Those two people who are going to the plain

(v) Conjunction of verbal, demonstrative and enumerative relatives:

44. làthyu gu pátsí wa dye-ŋ nyl zy ma ma person those plain-to go -DEC two person one one Those two people who are going to the plain

4.4 PRONOUNS

As has already become evident a distinction needs to be made between pronouns which appear in the surface structure as PRO-articles and those which appear as PRO-nouns.

The PRO-nouns introduced so far include the relative marker ma which is introduced transformationally through the pronominalization rules, such forms as swu agent, dwu instrument, gwu place and tsī time all of which occur in the deep base, and the various kinds of classifiers (a list of which appears in the appendix) which are derived from deep predicates.

The PRO-articles introduced so far include yf a general relative marker introduced by the pronominalization transformations, and the demonstratives and enumerators derived from deep predicates. An important class of PRO-articles not yet dealt with are the so-called personal pronouns. These present something of a problem in the
description of Lisu, since there appears at first sight to be a need to
distinguish between singular and plural forms, making these PRO-articles
the only forms in the language where such a distinction is relevant.
Elsewhere noun and verb forms exhibit no distinction which can be
attributed to a singular/plural difference. Where number is distinctive,
this is expressed by the use of enumerators or mass classifiers, but
there is no evidence that a dichotomy is made between singularity on the
one hand and more than singularity on the other. Thus all forms of all
nouns in Lisu (excluding the personal pronouns) can refer to either
singular or plural entities. Thus if the distinction is introduced into
the analysis of pronouns, it is something of an anomaly. As will be
seen below, this distinction is in fact superfluous in all cases but
one, and it is the single distinction between the two third person forms
that presents the difficulty.

The 'first person' pronouns can be distinguished fairly simply by
their associated 'person' specifications:

ηwa  ηwanwù  azwù
[<+Art>]  [<+Art>]  [<+Art>]
[<+PRO>]  [<+PRO>]  [<+PRO>]
[<+human>]  [<+human>]  [<+human>]
[<+I>]  [<+I>]  [<+I>]
[<-II>]  [<<-II>]  [<<-II>]
[<-III>]  [<<-III>]  [<<-III>]
(I) (we:exclusive) (we:inclusive)

Note that the inclusive we minimally incorporates a plus specification
for first and second person but may optionally incorporate a plus third
person feature as well.

With the second person pronouns there are two forms, as is to be
expected, but the distinction between them can be accounted for without
reference to a plurality feature and in fact must be accounted for in
some such way, since the one form may refer to singular or plural
entities, while the other refers only to plurals. The former form nwu
is used when actually addressing a second person or a group, when
wishing to refer to that person or group. The other form nwuwà is used
when addressing a second person or a group when referring both to that
person or group and some other party. Note the following:

45. ̀sa nwu thè  tshí
    Asa you don't fret
    Asa, don't you fret

46. ̀pta ya  wàtya  nwu nwu thè  tshí
    clansmen affines VOC you don't fret
    Ladies and gentlemen, don't you fret
Thus rather than involving a singular/plural distinction, the difference between these pronouns is an inclusive/exclusive one, in the sense that the one term excludes third parties, while the other includes them.

The feature specifications for these pronouns are:

\[
\begin{align*}
\text{nwu} & : [++]\text{Art} [++]\text{PRO} [++]\text{animate} \{-I\} [++]\text{II} [-III]\left(\text{you}\right) \\
\text{nwuwâ} & : [++]\text{Art} [++]\text{PRO} [++]\text{animate} \{-I\} [++]\text{II} [-III]\left(\text{you and others}\right)
\end{align*}
\]

The feature \( [++] \text{animate} \) is used hesitantly rather than \( [++] \text{human} \) as these forms are commonly used with animals. It may possibly be argued that when Lisu speakers do this they are treating the animals as if they were human.

The correct specification of the third person pronouns is difficult to determine. One form \( yî \) may have reference to singular or plural entities, while the other \( yîwâ \) has only plural reference. Note the following discourse:

49. dza yâ swu yâ gwu le -û?
   rice reap one reap all become-QUESTION
   Have the reapers finished reaping?

50. mà só / yî mà ?lîa hê
    not know he not return yet
    (I) don't know. They haven't come home yet.

51. ñwanwù nya tha yîtâ-g / yîwâ nya nó -wa ?lîtâ-g
    we TOP here lie -DEC they TOP that-at lie -DEC
    We have been sleeping here, but they have been sleeping up there.

Here the same group of people are referred to by \( yî \) and by \( yîwâ \) in (50) and (51) respectively.

The distinction between these two pronouns cannot be accounted for in terms of the features suggested so far, unless one of them be specified as \( \{-I\} \) \( \{-II\} \) \( \{-III\} \), which is hardly satisfactory. One has to posit some additional feature to account for this one contrast. What the correct feature is I am not certain. It might possibly be
It is even possible that the correct solution is related to the fact that both the second and third person pronouns which have exclusively plural reference end in the syllable -wà, which if it is a suffix occurs nowhere else. The normal conditions under which pronominalization occurs to animate nouns are simpler than the corresponding rules for English. The rule, to which there are no exceptions to my knowledge, is simply:

\[
X - N^a_p - Y - N^b_p - Z 
\rightarrow \begin{array}{c}
X - N^a_p - Y - N^b_p - Z \\
\text{<-PRO>}
\end{array}
\]

where \(N^a_p = N^b_p\) and \(N^a_p\) precedes \(N^b_p\) and is not a constituent of the same S. (Here the notation \(=\) masks the usual problems of defining identity, involving identity of referent rather than of lexical form.)

Where an inanimate noun occurs as \(N^b_p\) and meets the conditions specified for the pronominalization of animate nouns, the \(N^b_p\) is deleted rather than pronominalized.

In Lisu there are no reflexive pronouns. Note the following:

54. \(\text{àsà nya yì tsìtšì kudwè lè tú} \, tā \, yê \, -y\)

\(\text{Asa TOP he real body -to poison give-DEC}\)

\(\text{Asa poisoned himself (lit. his real body).}\)

This would seem to indicate that the base contains as the Dative NP, not simply \(\text{àsà}\), but the deep form of the noun phrase \(\text{àsà tsìtšì kudwè Asa's real body.}\)
4.5 POSSESSIVES

Possessive noun phrases are generated by the rule which generates relatives, namely the familiar NP + NP S. Thus the base form of (55) is (55a).

55. ása ámù  

1 2  

Asa's horse.

55a.

NP

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ámù  ámù  ása  1ò (dyu)  (have)

horse  horse  Asa  to

I shall accept Fillmore's position (1968:47,49,50) that the verb is 'empty' in the base form, i.e. the V constituent occurs but is lexically empty. In Lisu the rule governing the substitution of the lexical form dyu is different from that posited for English by Fillmore:

'... in verbless sentences ... have is inserted just in case the subject is an NP which is not from the case 0.'

In Lisu the case of the topic is immaterial, and what is of importance rather are the cases in the proposition, since Lisu appears to have a number of 'empty' verbs, as was seen in Chapter II of this book. If the empty verb which co-occurs with O and D cases is a constituent of a matrix sentence, then the substitution of the surface form dyu have is obligatory. This substitution is always accompanied by the deletion of the Dative postposition. If the sentence is embedded in a relative, then the lexical substitution is optional. If the option is for non-insertion, there is a further option in that normal relativization may apply, or relative clause reduction and switching may apply. Thus (55a) yields the string (55b) if lexical insertion of the verb dyu have and relativization apply, the string (55c) if relativization but not lexical insertion apply, and the string (55d) if relative clause reduction and switching apply:
Neither nouns nor pronouns are inflected in possessive constructions, and this results in ambiguities like the following:

56. ása  ámbù  thl ma dyu-a
    Asa horse one one have-DEC
    Asa has one horse
56a. ása  ámbù  thl ma dyu-a
    Asa horse one one be -DEC
    There was once a horse of Asa's

In the base representation both sentences would have an empty verb, and the difference in meaning would be associated with the fact that (56a) incorporates an embedded S.

4.6 DERIVED NOUNS

4.6.1 Deverbal nouns

In Lisu there are a number of nouns consisting of the PRO-article yf followed by a noun stem which is derived from a verb. Fillmore (1968:50) correctly suggests that deverbal nouns, if they are not productive cases, are a subject for diachronic rather than synchronic study. In Lisu, however, I am uncertain as to what should be considered productive and what purely historical derivation, and will thus make no distinction.

Examples of yf + deverbal noun stem forms are numerous, and include the following:

yf na disease [na to be sick, sore]
yf phwl price [phwl to honour, value]
yf nwé shoot [nwé to send out shoots]
yf nga black (colour name) [nga to be black]
yf fwy egg [fwy to lay eggs]
yf vg flower [vg to flower]

The prefix-like yf morpheme is suspiciously similar to the relative PRO-article of the same phonological shape, but the constructions above are definitely not normal relatives. For instance The one who is sick
would be yI na-γ ma, and the causative relative that which makes sick requires a Dative NP in Lisu, and would be

57. swu ʔa na le tyg -γ ma
   people to sick become cause-DEC one

That which causes people to become sick

The above nouns nevertheless appear to have a common derivation. It seems likely that some sort of relativization process is involved, even though it may not be the normal one. The yI marker here would seem to mark an embedded S of a slightly different kind, in which the V-node of the base has been nominalized. In fact all of the necessary rules for such nominalization already exist, and all that is required to derive the above nouns from deep verbs is to amplify the set of conditions necessary for the operation of the existing rules. Since not all verbs can have nouns derived from them, a sub-set of verbs will need to be specified <+Nom>.

The base rule will be the well-established NP + NP S in which all the NPs will be lexically empty and in which the verb has the necessary specification. The case of the NP in the embedded S will be the Translative. The nominalization process will consist of the regular pronominalization, feature copying, V-deletion, NP-raising, segmentation and tree-pruning rules. In other words the rules which operated in deep sentences containing Demonstrative and Enumerative V-nodes will operate here too. According to this analysis all of the nouns in the above list and scores besides will appear in the surface structure with the associated feature <+PRO>, i.e. they will be classed as pronouns.

4.62 Nouns derived from classifiers

Another large class of nouns having a prefix-like morpheme yI is derived from classifiers (i.e. from abstract classifier predicates in the base representation), rather than from verbs. The following are examples of de-classifier nouns:

- yI dzI a tree-trunk, stem [dzI Clf. for plant-stems]
- yI sγ fruit, globules [sg Clf. for fruits, globules]
- yI khwγ a hole [khwγ Clf. for holes, caves]
- yI khwá a board, metal sheet [khwá Clf. for oblong, flat objects]

In every case the stem-like morphemes of the above nouns function as classifiers, i.e. as PRO-nouns in PRO-article + PRO-noun constructions, and each is thus a bound form. Thus the base form of these nouns is apparently the same as those derived from verbal bases, and the rules which derive the surface nouns from the base form are the regular rules which derive deverbal nouns, classifiers, quantifiers etc.
4.63 Other nouns with prefix-like PRO-article yf

A further large class of nouns has members which have what appears to be identical surface structure to the derived nouns mentioned above, in that they are bound stems requiring the co-occurrence of the PRO-article yf. The stem in these cases, however, does not occur as a free verb nor as a classifier. Many of the stems occur elsewhere as bound nouns (pronouns?) in complex-noun constructions such as:

\[ y\bar{f} \text{ thy} \] A rhizome
\[ ty\acute{a} \text{ thy} \] Ginger root

A minority of the members of this class of noun do not occur in such constructions however. A sample list of the nouns in this class are:

\[ y\bar{f} \text{ ntsha} \] a liquid [*ntsha]
\[ y\bar{f} \text{ pha} \] a male
\[ y\bar{f} \text{ ma} \] a female
\[ y\bar{f} \text{ myw} \] a name
\[ y\bar{f} \text{ li} \] a custom, habit, law
\[ y\bar{f} \text{ sy\acute{a}} \] a noise
\[ y\bar{f} \text{ mas} \] unmilled grain
\[ y\bar{f} \text{ ty\acute{u}} \] a clan
\[ y\bar{f} \text{ syal\acute{u}} \] a last-born son
\[ y\bar{f} \text{ z\acute{a}} \] a son
\[ y\bar{f} \text{ ny\acute{z}\grave{a}} \] a junior brother

In all but the first of these examples the forms might traditionally have been analysed as cases of 'inalienable possession', since the list includes bound kinship terms which have often been treated as requiring the co-occurrence of a possessing noun. Fillmore (1968:61-81) devotes a long section of his paper to a discussion of such forms, in which he posits an underlying Dative embedded in such NPs. His point that such nouns are inherently 'relational' is well taken, but for Lisu it is not clear that the relation involved is in fact possession, nor that the case of the embedded entity is Dative. Note the following possessed forms:

58. \[ nwu y\bar{f} \text{ myw} \] you? name
\[ \text{Your name} \]

59. \[ nwu y\bar{f} \text{ ty\acute{u}} \] you? clan
\[ \text{Your clan} \]

This is very different from the usual possessive construction. There is no NP
60. *nwu yi amù
  *you ? horse

In certain cases the form of the possessive at first sight appears to support the analysis of the above forms as possessives, but in every such case, an ambiguity is involved which does not occur in ordinary possessive constructions. Note the following:

61. yi nyizà
  the junior-brother

His junior brother, or The junior brother

If the underlying relationship is not possessive, what alternatives are there? One which suggests itself, and which I will adopt is that the relationship is classificatory. Note the following:

62. natshl yi sî nwe -â  yi ātsha nwe -â?
  potion WH globule want-QUEST ? liquid want-QUEST
  Do you want medicine in pill form or in liquid form? (i.e. Do you want medicine which is globules or which is liquid?)

On the basis of such sentences I propose that the base of the nominals under discussion incorporates a deep relative in which the predicate is an abstract noun. The base of a form like ātsha would thus be

63.

All the NP nodes in the above tree are lexically empty, and the V-node dominates the complex symbol which constitutes all of the features of the word ātsha liquid. The normal rules of feature-copying, pro-nominalization, NP-raising and segmentation generate the string yi ātsha which has the structure
One of the more questionable aspects of the analysis I have posited for the derivation of demonstratives, classifiers, quantifiers, and derived nouns of the kinds mentioned above, is that one of the results is a large set of nouns, literally hundreds, which appear in the surface strings with the specification <+PRO>. This seems odd, but nevertheless it is a feature of the language that, while it is non-agglutinating, it has a large number of bound stem-like nouns. This set of bound nouns is precisely the set I suggest are PRO-nouns.

The fact that some nouns are derived from deep nominal predicates in Lisu raises the question as to whether this same type of derivation may not be a generalized process which derives all nouns from deep predicates. If so then the distinction between verbs and nouns would be a surface one, and at the deepest representation both would originate as predicates, but as predicates which have differing transformational properties. Such a position has been argued by Bach (1968) and McCawley (1970). If this position is correct, then the basic rules needed are already available in the grammar I have been positing for Lisu. The deep predicate would have a feature <+N>, and the base would be that of (63). Some additional feature would be needed to allow the feature-copying rule to apply, but not relative pronominalization. After feature-copying, NP raising would apply, and the result would yield an NP node dominating a noun marked <-PRO>.

Before leaving this subject, it is interesting to note that in Lisu a large number of free nouns are bisyllabic, while almost all verbs are monosyllabic. Many of these bisyllabic nouns consist of the syllable a- followed by some other syllable.

For example:

áthà  knife    álwù  frying pan
ánà  dog       ákhà  door
ámù  horse     ápò  yoke
ávù  pig       áphi  great-grandfather
áyá  fowl      ázà  grandmother

The full list numbers over a hundred.
It is at least possible that this initial syllable is historically related to the yì PRO-article which appears in the case of derived nouns. This seems especially plausible in the case of kinship terms, and the Lisu proper names which refer to the order of birth: atá First-born, alé Second-born, ása Third-born, asì Fourth-born etc.

4.7 NOUN FEATURES

In the preceding pages there has been mention made of some of the important lexical features associated with nouns, but many such features have not yet been mentioned. The following are some of the more important of them:

<±animate>: This is one of the major features, and the specification of this feature will determine the types of verbs which may co-occur with the noun. Thus a noun specified <animate> can never occur as the only NP in a deep sentence with a verb specified as <+[A_]> or <+[D_]>, since only 'animate' nouns may occur as Agentives or Datives. All nouns specified as <+human> will always be automatically specified as <+animate>.

<±common>: As in English, this will differentiate proper nouns from common nouns. Many nouns may be specified as either plus or minus this feature, as all Lisu, besides having a name which indicates the order of their birth in their respective families, also have a name which may be a descriptive phrase or the name of an animal or plant. Thus besides being common nouns, the following also may be proper nouns:

áthyl goat/Goat; bösì nut/Nut

<±concrete>: In Lisu there are very few abstract nouns, and these are non-countable. They include such nouns as

átsì appearance, looks syltsì behaviour, tendency, temper sìyi thankfulness mlhi wind

All concrete nouns are countable, unlike English concrete nouns which may or may not be countable. In English concrete nouns have to be specified as <±count>, those with a negative specification being mass nouns. In Lisu concrete nouns must be specified as <±mass>, those with a positive specification taking a different set of classifiers from those with minus specification. Some nouns like adya water occur only as mass nouns, while others like lāthyu people can occur as either mass or non-mass nouns. Note the following:

65. lāthyu thì ẓyì / wà / syì
gerson one person / man-power / sibling

One person viewed as an individual/a labourer/a sibling.
The concord that exists between classifiers and nouns would appear to involve features of both the noun and the classifier. Given certain conditions of feature-identity they may occur together, but if these conditions are not met, such co-occurrence is blocked. Thus the fact that a classifier is specified as <+human> <+mass> means that it can co-occur with nouns sharing these same features.

The specification of gender with animate noun phrases is optional since there are no gender agreement rules between most verbs and their subjects, or between nouns and pronouns. A very small set of verbs will be idiosyncratic in that gender specification will become obligatory when nouns co-occur with them. These verbs all refer to specifically male or female aspects of sex and reproduction. Noun phrases specified as <+male> or <+female> incorporate a relative clause with a predicate which is a noun marked appropriately. This relative clause undergoes feature-copying, and then either relative clause reduction or relative pronominalization, yielding forms like (67) or (68) respectively:

67.  ánà phà  ánà mà
    dog male    dog female

68.  ánà yí phà  ánà yí mà
    dog WH male    dog WH female
NOTES

1. I use the term 'equivalent' rather than 'identical' since identity of real-world referent is involved rather than lexical identity. In Lisu since there are no differences between male and female third person pronouns, and no difference between singular and plural nouns, some of the difficulties of defining 'identity' disappear. [See Ross (1967): section 5.2.3 for a discussion of these difficulties in English.]

2. The ɣf-deletion rule is always obligatory if relative clause extraposition occurs.

3. Desentential adverb lowering has applied, creating the surface cases T and L.

4. This position enables both the noun-phrase deletion rule and the relative pronominalization rule to maintain their generality. For a discussion of the need to have pronominalization rules in English apply to NP nodes rather than to nouns see Jacobs and Rosenbaum (1968:206-8).

5. In some Burma dialects tsh: ten is no exception to the rule about decimal enumerators, and always requires a preceding unit enumerator.

6. Since writing this study I have come to the position that the morpheme wà is in fact a lexical item meaning strength, manpower, a labour force, a work party, and that nwuwà and ɣfwa are compound forms.
CHAPTER V

COMPLEMENTATION, AUXILIARIES AND MODALS

Fillmore (1968:28) proposes that one of the case nodes in a base proposition may be re-written as S rather than as NP-K. This rule accounts for complementation of various kinds. In a P-marker then, an O node (which is Fillmore's chosen case for the rule), may directly dominate an S node. One of the inferences of this rule would thus seem to be that complement sentences are not to be analysed as noun phrases or constituents of noun phrases in the base representation. This is a departure from the more traditional transformational-generative position that complements are sentences embedded in NPs which have *it* or a noun such as *fact*, *idea* etc. as their head nouns, and also from the later hypothetical modification suggested and rejected\(^1\) by McCawley (1970:179) that there is in fact no head noun to such noun phrases. According to this suggestion of McCawley's the appearance of *it* in the surface structure of sentences which have extraposed complements is to be accounted for by a rule of sentential pronominalization.

Fillmore's position seems to be that regardless of whether or not complements are NPs in surface strings, they are arguments, but not noun phrases in the base. What the full implications are for this position is unclear, but for Lisu it holds no difficulties that I know of. On the contrary a theory which treats complements as noun phrases creates its own problems in a description of Lisu complementation. For one thing the head noun of the hypothetical noun phrase containing the complement would need to be an abstract one not only having no phonological form, but no meaning either, since Lisu has no pronoun *it* and no nouns such as *fact*, *idea* etc.\(^2\) Furthermore, when complements are extraposed in Lisu the PRO-form of the extraposed sentence is not a PRO-noun, but an adverb meaning *so*. Finally, since complement sentences are no different in surface form from matrix declarative sentences, and are unmarked by nominalizers or complementizers of any kind, syntactic
evidence that they are indeed nominal constructions is difficult to find. The only other solution is to adopt the position made by Roop (1970:214-17) that all Lisu declarative sentences are noun phrases. To avoid these problems and because Fillmore's position involves no new problems (apart from the one possible difficulty of explaining the appearance of the PRO-adverb referred to) I will assume that his position is correct.

5.1 COMPLEMENT-TAKING VERBS - [+Adj] [+Aux]

Verbs in this class are adjectival auxiliaries which occur with obligatory complement S's in which the modal is suppressed. The verbs are sub-classified according to their case-frame specifications which are [S_], [D,S_], [O,S_] and [L,S_], where the symbol S in the frame stands for a sentential complement, i.e. an S dominated by an O.

5.1.1 [+Adj] [+Aux] verbs which occur in [S,V] propositions

This is a small class of auxiliary adjectival verbs which consist of

weakly expedient\(^3\)  common, usual

obligatory

preceded

free from taboo

1. ása nya ami khwa thyi -ā
   Asa TOP field hoe expedient-DEC
   Asa may as well hoe the field

2. ása nya ami khwa thyi -ā
   Asa TOP field hoe common-DEC
   It is common for Asa to hoe the field

3. ása nya ami khwa wa -ā
   Asa TOP field hoe obligatory-DEC
   It is obligatory for Asa to hoe the field

4. ása nya ami khwa tyú -ā
   Asa TOP field hoe preceded-DEC
   Asa's hoeing the field has happened before

5. ása nya ami khwa tyú -ā
   Asa TOP field hoe needed-DEC
   Asa's hoeing the field was needed

6. ása nya ami khwa tyū -ā
   Asa TOP field hoe safe-DEC
   It is not taboo for Asa to hoe the field

The underlying base of the above sentences is
No complementation transformations are required, as this base form requires only lexical insertion to take place in order to generate the correct surface strings.

5.12 [+Adj] [+Aux] verbs which occur in [D,S,V] propositions

This class is again a small one consisting of the following:

kwú  mentally able
khwu  physically able
bala  able (no hindrance)
pé    able, courage-wise
bwu   disinterested

8. ása nya ami khwa kwú -á
Asa TOP field hoe able-DEC
Asa is able (knows how) to hoe fields

9. ása nya ami khwa khwu-á
Asa TOP field hoe able-DEC
Asa is able (strong enough) to hoe fields

10. ása nya ami khwa bala-á
Asa TOP field hoe free-DEC
Asa is free to hoe fields

11. ása nya ami khwa pé -á
Asa TOP field hoe dare-DEC
Asa dares to hoe fields

12. ása nya ami khwa bwu -á
Asa TOP field hoe disinterested-DEC
Asa is tired of hoeing fields

The base form of the above sentences is
The normal Equi-NP-deletion rule deletes the occurrence of ãsa in
the embedded complement.

There are no sentences

14. *ãsa nya kwú-a  #Asa is able.
14a. *ãsa nya khwu-a  #Asa is able.
14b. *ãsa nya bala-a  #Asa is able.
14c. *ãsa nya pó-a  #Asa is brave/bold/daring.

With the one exception of bwu (see Fn.4) verbs in this class occur only
as auxiliaries, and require the co-occurrence of a sentential complement.

5.13 [+Adj] [+Aux] verbs which occur in [O,S,V] propositions

This small sub-class consists of the following:
mi tasty  pwú to last, be used up at a slow rate
fwú to require a lot of time

15. dza nya nyime dza mi -a
rice TOP today eat tasty-DEC
Today the rice is tasty (to eat)
16. dza nya nyime dza pwú -a
rice TOP today eat last-DEC
Today the rice is lasting well
17. dza nya nyime dza fwú -a 5
rice TOP today eat long-DEC
Today the rice is taking a long time to eat

The base form of the above sentences is
The regular Equi-NP-deletion rule deletes the second occurrence of the NP dza rice, but a major problem is the provision of an Agentive NP for the embedded S, since the verb dza eat requires an Agentive. In some sentences the Agentive is overtly identified and in these cases the problem is resolved. In other cases the discourse context can enable one to provide the correct NP, but in a large number of cases it is impossible to provide a unique NP in any motivated way. There are always a number of possible candidates for inclusion, and each NP is as good as another. In sentences (15-17) above for instance, it is impossible to know whether the beings doing the eating are the class of humans as a whole, or a sub-set of that class, or whether domestic animals or birds are to be included too. Thus it seems plausible that the A node will appear in the base, but with insufficient features attached to make lexical insertion a possibility. It would thus be a 'dummy' node required to reflect the fact that every speaker of Lisu feels that some being is performing the action of eating, even though he cannot say who it is.

All verbs in this class require the co-occurrence of a complement S, and there are no sentences such as

19. *dza nya mi -a
   *rice TOP tasty-DEC
   *Rice is tasty

19a. *dza nya pwy -a
    *rice TOP last-DEC
    *Rice lasts a long time

19b. *dza nya fwy -a
    *rice TOP long-DEC
    *Rice takes a long time

5.14 [+Adj] [+Aux] verbs which occur in [L,S,V] propositions

To my knowledge there is only one verb in this class, namely the verb di having sufficient spatial capacity, roomy enough.
20. nwu dzakə nya hama yîtá di -ə
you granary TOP elephant lie -roomy-DEC
Your granary is roomy enough for an elephant to lie in

The base form of this sentence is

21.

Equi-NP-deletion again deletes the second occurrence of the leftmost NP. Although elephant has been provided in the above example, the problem of providing the correct subject for the verb in the embedded sentence arises in many other examples.

5.15 [+Adj] [+Aux] verbs which occur in a variety of complement proposition types

The complement-requiring verbs above all occur in a restricted type of proposition. There are in addition, however, a fairly large number of complement-requiring verbs which do not have such rigid restrictions. This latter class includes such verbs as
da  able
tshà  urgent
khù  natural
sa  easy
ña  possible
xà  good
pyò  enjoyable
hì  difficult

In many cases the exact meaning of the above verbs depends to some extent on the kind of base proposition with which they co-occur. Note the following:

22. āsa nya ami khwa da -ə [S,V]
Asa TOP fields hoe acceptable-DEC
It is acceptable for Asa to hoe fields.

23. āsa nya ami khwa da -ə [D,S,V]
Asa TOP fields hoe able-DEC
Asa is able to hoe/skilled at hoeing fields.

24. ami nya khwa da -ə [O,S,V]
fields TOP hoe -able-DEC
Fields are 'hoe-able'/The fields are ready for hoeing.
25. thy-i-xwà nya dzà na -a
deer-meat TOP eat possible-DEC [S,V]

It is possible to eat deer-meat.

26. thy-i-xwà nya dzà na -a
deer-meat TOP eat appropriate-DEC [O,S,V]

Deer-meat is the appropriate meat to eat (on this occasion).

27. ása nya ami khwa khù -a
Asa TOP fields hoe normal-DEC [S,V]

It is normal for Asa to hoe fields.

28. ása nya ami khwa khù -a
Asa TOP fields hoe comfortable-DEC [D,S,V]

Asa finds hoeing fields comfortable/natural.

5.16 Remarks on complement S types discussed thus far

In every example of complement sentence commanded by an adjectival auxiliary verb, it will be noted that the embedded complement sentence contains no post-verbal Modal in the surface structure. There are no sentences such as

28'. *ása nya ami khwa-á kwù -á
Asa TOP fields hoe -DEC able-DEC

28". *ása nya ami khwa ye kwù -á
Asa TOP fields hoe COMPLETE able-DEC

This restriction on modal auxiliaries does not apply to all of the categories that Fillmore has suggested should be included in the Modal component. For instance adverbs, intensifiers and negatives, all of which are obligatorily moved into pre-verbal position in all sentences in which they occur, may occur in embedded complements of the above type, so that the following are perfectly grammatical:

29. ása nya ami wùxa mà nà -nà le khwa kwù -á
Asa TOP field tire not stop-stop ADV hoe able-DEC

Asa knows how to hoe the field without stopping to rest.

30. ása nya ami kápê khwa kwù -á
Asa TOP field hard hoe able-DEC

Asa knows how to hoe the field hard.

The categories in the base which are governed by the restriction mentioned above are aspect markers, those sentence markers which indicate whether the speaker is making a statement, asking a question or giving an order, and finally those 'modal' markers which indicate whether the speaker is expecting his utterance to be news, is making an hypothesis, is being emphatic etc. These two types of marker lend themselves to an analysis in which they are treated as 'higher' verbs of two kinds, namely aspect auxiliary verbs and performative verbs. If this analysis is
adopted, as it will be later in this chapter, then the required restriction can be stated in terms of these two 'higher verb' classes: aspect auxiliaries and performatives may not occur in complement sentences commanded by [+Adj] [+Aux] verbs of the kind discussed in the previous sub-sections. This rule would be a deep structure constraint in all probability.

There are further restrictions upon the form of complement sentences commanded by verbs of the type under discussion. Complement sentences commanded by such verbs may not be topicalized or extraposed in any way, but are required always to occur in focus position immediately before the commanding verb. This constraint can be stated in a number of different ways, for instance as a surface structure constraint blocking sentences which appear in surface form with the complement in the wrong position, as a transformational constraint on the operation of topicalization and focus rules, or perhaps even as a deep structure constraint on the types of entities that may be generated as focus in sentences containing such complement structures. I am uncertain at present as to which type of constraint is correct.

One additional restriction on these complements is that, unlike certain other complement sentences to be discussed, they may never be nominalized. Again the restrictions can be stated as either a transformational or a surface structure constraint, but if transformational, then the nominalization rule must be made sensitive to the features associated with the commanding verb in the next higher S.

Besides the above restrictions, which are all concerned with the complement S as a whole, there are also restrictions on the types of verb which may occur as main verbs of these complements. These restrictions are extremely difficult to state, as they differ according to which particular [+Adj] [+Aux] verb is commanding the complement. In some cases the main verb of the complement S may not be a [+Adj] verb of any kind. This restriction applies to complements governed by such verbs as khwu physically able, di roomy enough, tšà urgent. Thus the following are not grammatical, with the exception of (32a) in which the [+Adj] verb is not in fact the highest verb in the complement, as will be seen later in this chapter:

31. *nwu hi nya ámù phwu di -á
   *you house TOP horse white roomy-DEC
   *Your house is roomy enough for a horse to be white in

32. *ámù nya phwu tšà -á
   *horse TOP white urgent-DEC
   *It is urgent that the horse is white
32a. ámù nyə phwu le tshà -gə
horse TOP white become urgent-DEC
It is urgent that the horse become white

With many of the other [+Adj] [+Aux] verbs this restriction does not apply to the complements they command, and this often has results rather surprising to an English speaker. The following are perfectly grammatical sentences:

33. nwu ámù nyə phwu kwú -gə
you horse TOP white able-DEC
Your horse is able to be white (which means that the horse is whiter than most white horses, rather than that it could become white)

34. nwu ámù nyə phwu hí -gə
you horse TOP white difficult-DEC
It is difficult for your horse to be white (which means that the horse is not as white as most white horses rather than that it would find it hard to become white)

With the [+Adj] [+Aux] verbs which are restricted to occurrence in \([0,S,V]\) propositions, the restrictions on the verbs which may occur in the complement as main verbs are very severe, except in the case of \(f\)\(w\)\(y\) to require a lot of time. For instance, if the commanding auxiliary is \(m\)\(l\) \(t\)asty, the complement may have as its main verb only those verbs such as \(d\)\(z\)\(á\) eat, \(d\)\(u\) drink and \(n\)\(w\)\(á\) \(s\)niff which involve the olfactory organs.

If the auxiliary verb which commands the complement is \(p\)\(w\)\(y\) to last well the complement may have as its main verb \(d\)\(z\)\(á\) to eat, \(d\)\(u\) drink, \(v\)\(w\)\(ú\) \(s\)ell and other verbs which refer to the consumption of commodities or fuel.

In the case of \(f\)\(w\)\(y\) to take a long time almost any active transitive verb can occur as the main verb of the complement.

5.2 COMPLEMENT-TAKING VERBS - [+Adj] [+Aux]

Verbs in this class do not require complements, but when they do take complements, they are specified as either [+Aux] or [-Aux]. Some of these verbs have been mentioned with [+Aux] specification in section 5.15. This class includes such verbs as

\(x\)\(á\) good  \(p\)\(h\)\(é\)\(f\)\(w\)u surprising
\(h\)\(í\) difficult  \(s\)\(á\)\(t\)\(ú\) shameful
\(d\)\(w\)\(ú\) fearsome  \(m\)\(á\) genuine
\(n\)\(á\) factual etc.

Besides the differences in meaning between the resulting sentences, the [+Aux] forms of the verbs involve other differences from the [-Aux] forms too. These have to do with the restrictions on the complement
sentences with which they co-occur. Note the following:

35. ása nya ami khwa x̄a -ə
    Asa TOP field hoe good-DEC
    Asa is good at hoeing fields

35a. ása nya ami khwa-ə x̄a -ə
    Asa TOP field hoe-DEC good-DEC
    It is good that Asa hoes fields

When verbs in this class occur with [-Aux] specification and take a complement, the base form is always one which has an [S,V] proposition:

36.

Complement S's commanded by [+Adj] [-Aux] verbs differ in a number of ways from those discussed in the preceding subsections. For one thing such complement S's as we are dealing with here must incorporate a performative verb and may include an aspect auxiliary too, while both of these 'higher verb' types are excluded from the complements discussed earlier. Note the following:

37. ánà-xwá n̄ya ása dzà x̄a -ə
dog meat TOP Asa eat good-DEC
    Asa finds dog meat good to eat.

38. ánà-xwá n̄ya ása dzà-ə x̄a -ə
dog meat TOP Asa eat-DEC good-DEC
    It is good that Asa eats dog meat.

Sentence (37) has a deep structure like that of (18), while the base of (38) is like (36) above. To illustrate that sentences like (38) may incorporate post-verbal aspect markers as well as performatives like DEC, I include the following, which is perfectly grammatical:

39. ánà-xwá n̄ya ása dzà ye -ə x̄a -ə
dog meat TOP Asa eat COMPLT-DEC good-DEC
    It is good that Asa has been eating dog meat.

Complements commanded by [+Adj] [-Aux] higher verbs may optionally be nominalized, which is not true of those commanded by [+Adj] [+Aux] higher verbs. Thus (40) and (41) are grammatical, while (42) and (43) are not.
40. ása mègwá gwá ma nya xá -á
Asa song sing NOM TOP good-DEC
Asa's singing of songs is good (An identical surface sentence is an action nominalization meaning Asa's way of singing songs is good, but it is not the reading under discussion here.)

41. ása patsu-a dye ma nya phéfwu -á
Asa plain-to go NOM TOP surprising-DEC
Asa's going to the plain was surprising.

42. *ása mègwá gwá ma nya thyf -á
*Asa songs sing NOM TOP common-DEC

43. *ása patsu-a dye ma nya tyũ -á
*Asa plain-to go NOM TOP needful-DEC

In nominalizations of the above kind, which are translated by English gerundives, the subject noun of the Lisu complement is in fact not a possessive form. This can be shown by sentences such as

41a. ása nya patsu wa dye-á ma nya phéfwu -á
Asa TOP plain-to go -DEC NOM TOP strange-DEC
Asa's going to the plain was surprising.

In this sentence the Agentive of the complement sentence has been topicalized and the marker nya has separated the word ása from the rest of the sentence. This can never happen to the possessor noun in a possessive construction. If a possessor noun is topicalized, then it must be replaced by a pronominal copy, giving surface forms such as

44. ása nya yf ámü ...  
Asa TOP he horse
About Asa, his horse...

To continue, complements commanded by [+Adj] [-Aux] verbs may be topicalized, while those commanded by [+Adj] [+Aux] verbs may not. Note the following:

45. ása ami khwa-a xá -á
Asa fields hoe -DEC good-DEC
That Asa hoes fields is good.

46. ása ami khwa-a nya xá -á
Asa fields hoe -DEC TOP good-DEC
That Asa hoes fields is good / It is good when Asa hoes the fields

47. *ása ami khwa nya kwó -á
*Asa fields hoe TOP able-DEC

Sentences (45) and (46) are entirely synonymous, with nya deletion having applied to (45), but not to (46). Both of these differ from (35), which was

35. ása nya ami khwa-a xá -á
Asa TOP fields hoe -DEC good-DEC
It is good that Asa hoes fields
only in the fact that the complement S has been topicalized in (45) and (46) but not in (35). Of interest at this point is whether sentences like (46) contain a subordinate clause or not, or to rephrase the problem, in what way does (46) differ from (48) below?

48. ́asa ami khwa-a nya x-a
Asa fields hoe -DEC TOP good-DEC

When/if Asa hoes the fields it will be good/Since Asa is hoeing the fields all is well.

One of the more obvious differences is one of presupposition. Certain readings presuppose that Asa is hoeing, others that he is not, and yet others that he is not yet, but will be. However there appears to be a further difference which is best seen if the discussion is limited to a comparison of (49) and (50), assuming a reading in which the presuppositions are identical, namely that it is a fact that Asa hoes fields, and the assertion is that this fact is good. The English glosses of the respective sentences are then:

49. That Asa is hoeing the fields is good, (or to put it in more colloquial English) The fact that Asa is hoeing the fields is good.

50. Since Asa is hoeing the fields, all is well.

It must be remembered that in the Lisu examples there are no surface differences between the two sentences. The only semantic difference between the two sentences in Lisu that I can discern is that (50) involves a conditional, while (49) does not. I therefore conclude that the only deep structure difference is that (50) contains a complement having the abstract verb CONDITION in its derivation, while (49) does not. The appearance of CONDITION requires that the whole configuration under its domination be topicalized, while the complement in (49) is topicalized for other reasons, having to do with the presuppositions associated with the sentence. To put this fact another way, a non-conditional complement of the type under discussion is topicalized optionally, as can be seen from a comparison of (35) and (49). A conditional complement (i.e. a subordinate clause) is obligatorily topicalized. A further restriction on subordinate clauses, which does not apply to the non-conditional type of complement under discussion, (i.e. that type of complement commanded by a verb marked [+Adj] [-Aux]) is that nya deletion may not occur. Given these restrictions on complements containing the abstract verb CONDITION, there appears to be no difficulty in the position that complements of the usual type and subordinate clauses both originate as embedded S's of the same kind, i.e. both are generated in the base by the same rule.
5.3 COMPLEMENT-TAKING VERBS - [-Adj] [-Aux]

Verbs in this class are verbs of communicating, thinking, seeing and hearing, such as

- bļa say, intend
- má teach, show
- nanyí ask
- mu see
- bļdzá hear
- kwù consider
- tsļ remember
- dwl dzā think

Some of these verbs such as tsļ remember, dwl dzā think, kwù consider and some others not listed here, can only occur as verbs commanding a complement S if they in turn are commanded by a higher auxiliary verb such as mą obtain, be successful, or nyì try.

51. alë nya ás a nya ami khwa-ą bļ -ą
   Āle TOP Asa TOP fields hoe-DEC say-DEC
   Āle says that Asa is hoeing fields.

52. alë nya ás a nya ami khwa-ą mu -ą
   Āle TOP Asa TOP fields hoe-DEC see-DEC
   Āle saw that Asa was hoeing fields.

53. alë nya ás a nya ami khwa-ą tsļ mą -ą
   Āle TOP Asa TOP fields hoe-DEC remember get-DEC
   Āle remembers that Asa is hoeing fields.

54. alë nya ás a nya ami khwa-ą kwù nyì -ą
   Āle TOP Asa TOP fields hoe-DEC consider try-DEC
   Āle is considering whether Asa is hoeing the fields.

(In the Lisu there is no implied negative alternative such as attaches to the English word whether in the dialect of some English speakers.)

All verbs in this class require an Agentive NP and thus occur in [A,S,V] propositions. Some of these verbs require a commanding higher auxiliary verb when they co-occur with complements. If, for the present we ignore this fact for the sake of illustration, then all of the above sentences have the following basic P-marker:

55. [Diagram]
5.4 COMPLEMENT-TAKING VERBS - [-Adj] [+Aux]

Verbs in this general class include a number of rather diverse kinds. I will sub-classify them according to the general semantic class to which they belong, which sub-classification happens to group together verbs with similar syntactic distribution.

5.41 Verbs of motion

The auxiliary verbs of motion under consideration are ye go, la come, dwl enter, dy exit, dL climb, and yÂ descend. Of these ye and la have rather different distributions from the other verbs in the sub-class, in that these other verbs require the co-occurrence of ye and la, but the reverse is not true. (All of the verbs in this class may also occur as main verbs i.e. as [-Aux] verbs which have no complement S in their proposition's configuration.

56. ása nya hipyw g wa tò ye-á
Asa TOP shack to run go-DEC
Asa ran away to the shack (away from presupposed point of reference).

57. ása nya hipyw g wa tò la -á
Asa TOP shack to run come-DEC
Asa came running to the shack (towards presupposed point of reference).

58. ása nya hipyw g khwù wa tò dwl ye-á
Asa TOP shack in to run enter go-DEC
Asa went running into the shack.

59. ása nya hipyw g tyú tò dy la -á
Asa TOP shack from run exit come-DEC
Asa came running out of the shack.

60. ása nya hipyw g wa tò dL la -á
Asa TOP shack to run climb come-DEC
Asa came running up to the shack.

61. ása nya hipyw g wa tò yÂ ye-á
Asa TOP shack to run descend go-DEC
Asa went running down to the shack.

62. *ása nya hipyw g wa tò yÂ -á
*Asa TOP shack to run descend-DEC

63. *ása nya hipyw g wa tò dL -á
*Asa TOP shack to run climb-DEC

When two of the auxiliary verbs of motion co-occur, one must always be ye go or la come and this must occur finally in the string of motion verbs. Thus (56) is grammatical, but (61a) below is not.
61a. *asa nya hipywà wa tò ye yà -a
    *Asa TOP shack to run go descend-DEC

[There is a sentence with the surface form of (61a) meaning Asa ran away to the shack and went down but in this sentence yà is not an auxiliary verb].

When three of the auxiliary verbs of motion co-occur, ye or la must occur finally, but the other two verbs are not strictly ordered in relation to each other. However, the different orders involve different meanings. Note the following:

64. làma nya làsyì mi wa tò dwí yà ye-a
tiger TOP grass field to run enter descend go-DEC
The tiger ran into the long grass, moving away downhill.

65. làma nya làsyì mi wa tò yà dwí ye-a
tiger TOP grass field to run descend enter go-DEC
The tiger ran away down into the long grass.

The English gloss of (64) is very unsatisfactory as it infers some sort of sentence conjunction. In the Lisu examples the difference in meaning has to do with the distance of the grass from the tiger. In (65) one imagines the tiger running downhill away from the point of reference into a grassfield a short distance away. In (64) the idea is that the tiger is right at the edge of the grassfield when he starts running. He runs into the grassfield almost as soon as he starts running away downhill. In both sentences the activity is treated as one event rather than as a sequence of events. However, it is obvious that the timing of the various actions is relevant. In (64) the tiger entered the grass before he had moved downhill appreciably, and thus dwí enter precedes yà descend. Semantically it is obvious that more than one predication is involved. Leaving out the complement-dominating 0 node, the base I propose for (65) is

66.
The question arises as to why the above base marker is preferred to one which treats (65) as a conjunction of sentences meaning the tiger runs, and the tiger descends, and the tiger enters, and the tiger goes, to the grassfield. A series of lowering rules could lower the verbs, changing them to [+Aux] specification, embedding them one into the other, leaving the selected S embedded at the deepest level. The rules required to do this would be vastly complicated, but presumably such a schema could be devised. However, the position of such a base could not account for the fact that if two of the presumably co-ordinate sentences are re-ordered, a change in meaning takes place of the kind which differentiates (64) and (65). Furthermore if the sentence conjunction is posited for the base a number of ad hoc rules would need to apply. For one thing, the lowering rule would have to be blocked if the sentences contained any adverbial modification. The tiger ran, the tiger descended gradually and the tiger entered in terror etc. would have to follow the usual rules of conjunction, in which some of the conjunct sentences are embedded as adverbs of manner in others. Note the following:

67. lāma nya yä -yä -ä le tō -a
tiger TOP descend-descend-DEC ADV run-DEC
The tiger ran, descending.

67a. lāma nya tō -tō -a le yä ye-ä
tiger TOP run-run-DEC ADV descend go-DEC
The tiger descended, running.

67b. lāma nya kapē tō -tō -a le yä -a
tiger TOP hard run-run-DEC ADV descend-DEC
The tiger descended, running hard.

67c. lāma nya akhō yä -yä -ä le tō -a
tiger TOP very descend-descend-DEC ADV run-DEC
The tiger ran, descending rapidly.

67d. lāma nya tō yä ye-ä
tiger TOP run descend go-DEC
The tiger ran down.

67e. *lāma nya tō akhō yä ye-ä
*tiger TOP run very descend go-DEC
*The tiger ran very down.

In the base that I have posited, the subject of the [+Aux] verb in each case is not tiger, but a complement S. Thus I am interpreting the meaning of (65) to be something like

The tiger's running to the grassfield was downhill.
The tiger's running downhill to the grassfield was into.
The tiger's running downhill into the grassfield was away.
Such an interpretation would account for the fact that when the order of the [+Aux] verbs is altered different meanings result. Some additional support for the position that the auxiliaries above modify complements representing whole events rather than concrete nouns comes from sentences such as

68. åsa nya yí tshía tā ye-a
Asa TOP he banjo carry descend go-DEC
Asa carried his banjo away downwards.

Here the meaning is that everything connected with the event, Asa, his banjo, and his activity were all moving downhill. In a sentence meaning Asa was carrying his banjo and singing the verb singing refers only to Asa and has nothing to do with his banjo or his action of carrying.

The auxiliary verbs of motion dśl and dû are a sample used to illustrate the structures involved, but there are a few other verbs in the class too, though not a great many. All require a following ye go or la come. Examples are

kú to cross         khú to pass over
mywé to overtake   lwé to roll
kwá to tip over    tā to carry

All members of the class of verbs of motion occur as [-Aux] verbs as well.

The main verbs in complements governed by the auxiliary verbs of motion must naturally also be verbs of motion. The auxiliaries occur when the motion being performed has some relative reference to some point in space. Thus if the verb meaning to walk were used with no particular spacial point of reference no auxiliary would be required, as in the following:

69. tshu-syl-â nya dzagwu sywè kwú -a
man -new-DIM TOP road walk able-DEC
The baby can walk

The restriction on the occurrence of ye go and la come can be stated as a deep structure constraint that these two verbs may not be commanded by any other auxiliary verb of motion. This would result in their always occurring at the end of a string of such verbs.

One other auxiliary verb of motion which requires mention is the verb fmy which as a [-Aux] verb means send and as an auxiliary away. This differs from the auxiliary ye go/away in many ways. The complement sentence it commands must always have an Agentive and either a Dative or Objective. Semantically the motion never involves the Agent.
70. ása nya ɣí pu ɣá fwy -á
Asa TOP he gun throw away-DEC
Asa is throwing away his gun.

The strict restrictions on the form of the complement S make it seem likely that fwy occurs in [A,O,S,V] propositions rather than [S,V] ones, and that the base of (70) is

71.

A synonym of fwy is the verb ha which has identical distribution and seems to be an archaic form of the former.

There are certain restrictions on the type of verb which can occur as the main verb in complement S's commanded by fwy away. The class of verbs which can occur in such sentences is limited to those which refer to actions which set other objects into motion, such as ɣá throw, dzl throw like a spear, bə fire a crossbow, pə flick, Ɂi spit etc., and to verbs of communication such as bə say.

5.42 Giving, Benefiting and Helping

The three verbs under consideration here are ɣà give, dzà eat, dzwa help. These three verbs are in complementary distribution, and may not co-occur which indicates that they should be assigned to the same subclass of auxiliary verb. However, their respective case specifications and other co-occurrence restrictions differ widely, and so I will deal with each separately.

As an auxiliary ɣà give occurs in [A,D,S,V] or [A,O,S,V] propositions. Semantically it is often the case that intent is indicated on the part of the agent to affect the object or being identified by the Object or Dative NP in some way, and usually that this affect or change of state is accomplished.

72. ása nya alę lá dywù -á
Asa TOP Ale to bump-DEC
Asa bumped Ale.
In (72) and (74) the meaning is unspecific as to whether Asa intended to influence Ale or not. In (72) the bumping could have been an accident, and in (74) Asa may merely have been passing the time of day. In (73) and (75), however, the intent to influence Ale is clear. In (73) Asa bumped Ale on purpose and in (75) Asa expected that the news that the dog was barking would have some effect on Ale.

In many sentences, however, the intent-to-influence aspect is irrelevant or redundant. In some of these sentences the occurrence of the auxiliary indicates a face-to-face activity rather than some indirect influence, for instance:

65. 
Asa TOP Ale to don't go say leave-DEC
Asa left word FOR Ale that he shouldn't go.

77. 
Asa TOP Ale to don't go say leave give-DEC
Asa left word WITH Ale that he shouldn't go.

In (76) it is not clear who Asa spoke to, but in (77) it is clear that Asa spoke directly to Ale - a fact I have not adequately reflected in the free English translation.

A further semantic influence which the appearance of ɣò has is that it specifies a particular event in time. Sentence (74) is not specific in this respect, and can mean Asa told Ale every now and then that the dog was barking, or Asa keeps telling Ale that the dog is barking, besides the meaning given above. Sentence (75) however, can only refer to a specific event, a particular occasion on which Asa told/is telling/will tell Ale that the dog is barking.

Sentence (73) typifies sentences incorporating a complement and the auxiliary ɣò. Such sentences have the base form
In sentences in which the Dative of the higher sentence does not appear in the embedded S, the usual meaning is that the activity identified in the embedded S was performed for the benefit of the being identified by the higher Dative.

For example:
79. ása nya alé lā hi syā ɣè -a
Asa TOP Ale to house make give-DEC
Asa built a house for Ale.

The base form of this example is
80.

Note the following:
81. ása nya alé lā áyá wìw ɣè -a
Asa TOP Ale to foul sell give-DEC
a. Asa sold some chickens to Ale
b. Asa sold some chickens for Ale, to someone else.

Finally when the complement S contains a noun identical to the higher Dative NP, but no noun identical to the higher Agentive, the meaning is that the Agent allowed the being represented by the Dative NP to do something. When this type of base structure is generated, two things happen to the auxiliary verb. First it is moved to the front of the main verb of the complement sentence, and then the rule which alters the
phonological specification from ɣà to ɣà (see note 8) if the verb has [+Aux] specification is blocked. Thus from the base (82) is generated (82a):

82.

83. ása nya alè lá hi ɣà syà -gà  
Asa TOP Ale to house give make-DEC  
Asa allowed Ale to build a house

There are restrictions on the type of main verb which may occur in complements commanded by a higher ɣà. One restriction is that such a verb must be a transitive verb which requires the co-occurrence of an Agentive. However, not all such verbs can co-occur with the auxiliary ɣà in complements of the type illustrated in (78), but they apparently can in complements of the type illustrated in (80) and (83). Verbs in the sub-class excluded from (78) but allowed in (80) and (83) include dé beg, kwu call, syà fix, make, xu lead, mm carry, nanyà ask.

Sentences incorporating verbs of this sub-class do not involve in their semantic interpretation a change of state for the Dative being.

84. ása nya alè lá dé ɣà -gà  
Asa TOP Ale to beg give-DEC  
a. Asa begged someone else on Ale's behalf  
b. *Asa begged Ale

The one auxiliary verb of benefiting in this class is dzà to eat. It occurs in [D,S,V] propositions. The restrictions on the type of main verb which may occur in the complement S are severe. The main verb of the complement must be one which requires the co-occurrence of an Agentive, and this Agentive must be identical to the Dative NP of the higher sentence. Not many verbs requiring an Agentive may occur in the complement, however, vuwà sell, ké lie, deceive, khu to fine being some of the few which can.

85. ása nya alè lá áyà vuwà dzà-gà  
Asa TOP Ale to foul sell eat-DEC  
Asa sold a chicken to Ale
86. ása nya alé lá kó dzà-g
Asa TOP Ale to deceive eat-DEC
Asa cheated Ale/deceived Ale

87. ása nya alé lá thsi bà khu dzà-g
Asa TOP Ale to ten baht fine eat-DEC
Asa fined Ale ten baht

In the above the assertion is that Asa profited in each case. In (85) he profited from the sale of the chicken, in (86) he deceived Ale and gained thereby, and in (87) he pocketed the fine himself. The base structure of such sentences is

88.

The verb to help in Lisu is the auxiliary dzwa (dza or dya in some dialects). It occurs in [A,D,S,V] propositions only. The only restriction on the type of complement which may occur is that it must contain a deep Agentive consisting of two conjoined NPs, which are identical to the Agentive and Dative NPs respectively, of the higher sentence.

89. ása nya alé lá hi syã dzwa-g
Asa TOP Ale to house make help-DEC
Asa helped Ale build a house.

The base structure of sentences of this type is

90.
I have proposed a conjunct Agentive in the embedded S, since the meaning of (89) is that both Asa and Ale were building the house together, i.e. Asa was giving direct help. A conjunct Agentive is not always required, however, since the same basic structure occurs in cases of indirect help too.

5.43 Trying and succeeding

The two auxiliary verbs in this class are nyi try and mə get, succeed. As [-Aux] verbs these mean see and obtain respectively. As [+Aux] verbs they occur in [A,S,V] and [D,S,V] propositions respectively. Consider the following:

91. ása nya ami khwa-mə-
    Asa TOP fields hoe -DEC
    Asa is hoeing the field.

92. ása nya ami khwa nyi-try-
    Asa TOP field hoe try-DEC
    Asa is trying to hoe the field.

93. ása nya ami khwa mə-get-
    Asa TOP field hoe get-DEC
    Asa got to hoe the field.

94. ása nya âmù gə-get-
    Asa TOP horse chase-get-DEC
    Asa is chasing the horse.

95. ása nya âmù gə-nyi-try-
    Asa TOP horse chase try-DEC
    Asa is trying to chase the horse.

96. ása nya âmù gə-mə-get-
    Asa TOP horse chase get-DEC
    Asa got to chase the horse.

The base structure of sentences like (92,93,95,96) is

```
  P
 /   |
S    V
 |   |
A/D  M
 |   |
  NP |
   |   |
    ása âmù gə-get-
    Asa horse chase-get-DEC
    Asa is trying to chase the horse.
```

```
  |   |
  |   |
    nyi-try-
    Asa fields hoe try-DEC
    Asa is trying to build the house.
```

```
  |   |
  |   |
    mə-get-
    Asa fields hoe get-DEC
    Asa is building the house.
```
5.44 Causing, Happening, and Becoming

The causative auxiliary verb is tyg. It can occur in a variety of proposition types, namely [A,S,V], [A,D,S,V] and [I,S,V]. Note the following:

98. ása nya zànwe thùyè su kàle tyg -a
  Asa TOP child book study happen cause-DEC
  Asa instituted children's schooling (lit., caused it to happen that children study books)

99. ása nya zànwe lâ thùyè su tyg -a
  Asa TOP child to book study cause-DEC
  Asa made the children study/go to school

100. âtû nya ása thỳë kàle tyg -a
  fire TOP Asa flee happen cause-DEC
  The fire caused Asa to flee

The base forms of these sentences are (101), (102) and (103) respectively:

101.

102.
There are no grammatical sentences.

98a. *ása nya zànweg lá thûyê su kâle tyg -à
    Ása TOP children to books study happen cause-DEC

100a.?*átu nya ása lá thûyê tyg -à
    fire TOP Ása to flee cause-DEC

(Two of my younger informants accepted (100a) but all of my older ones did not.)

The auxiliary verb kâle happen occurs only in [S,V] propositions of the sort exemplified by

104. ása thûyê kâle -à
    Ása flee happen-DEC
    Ása happened to run away.

The embedded S complements commanded by kâle have unusual characteristics. For one thing they may optionally have the performative marker -a DECLARATIVE. Thus (104) may also have the form

104a. ása thûyê-a kâle -à
    Ása TOP -DEC happen-DEC
    Ása happened to run away.

Furthermore the NPs in such a complement may not be topicalized, which is a very rare restriction.

105. *ása nya thûyê kâle -à
    *Ása TOP flee happen-DEC

The main verb of a complement sentence commanded by kâle is always a verb specified as [-Adj].

The inchoative auxiliary verb le become also occurs in [S,V] propositions, but the S in this case has a main verb specified as [+Adj], and may be either intransitive such as phwu white, xû right, correct and vvû big or transitive such as he angry, dyû afraid and tshû make a mistake. Note the following:

106. áphwûsl nya phwu le -à
    pumpkin TOP white become-DEC
    The pumpkin is growing white.
5.45 Remarks on verbs discussed in sub-section 5.4

From the discussion above about auxiliary verbs of different kinds a question arises about the various co-occurrence possibilities of the various kinds of auxiliary verbs. This is perhaps the most complex aspect of the deep structure of Lisu sentences. Given the fact that there are all these various kinds of auxiliary verbs (and there are a few more types not included here) what types of restrictions govern their co-occurrence with one another, and what decides the surface order of the possible strings? For English the question has largely been ignored, and although I can suggest the type of constraint required for Lisu I am only partly able to provide a statement of these constraints at present. Note first the following sentence:

108. áša nya ališ lë hë le -a
áša TOP Ale to angry become-DEC
Áša is becoming angry at Ale.

From this sentence it can be seen that the various logical predicates are all expressed by verbs in the surface structure in Lisu, while in English some are verbs and some adverbs. In particular the English verb take, around which so much discussion has centred in recent years, is expressed in Lisu by a concatenation of three separate verbs zuwu tš ye dy yă ye dzwa nyi kale [grasp-carry-exit descend go help try happens]. This differs only in direction from bring zuwu tš la [grasp-carry-come]. Such concatenations expressing these notions are found in other languages too, such as Thai and many New Guinea languages.

Certain of the restrictions on the ordering of the component auxiliary verbs in (108) can be stated informally. Verbs of MOTION precede the others. Among the verbs in the MOTION string, tš carry must occur first, and ye go last, while dy exit and yă descend may occur in either order (but with different meanings resulting).

The position of a deep structure constraint which states that (i) ye go and la come may not be commanded by another motion verb, and that (ii) tš carry may not command another motion verb, would achieve the required result. A further constraint that no motion auxiliary could dominate an auxiliary verb of any other kind would ensure that the string of motion verbs would occur first in a longer string of auxiliaries.
Another such constraint applies to the verb kale happen (and to be become). If such a verb is commanded by another auxiliary, that commanding auxiliary must be tyg cause.

Since in Lisu sentences the left to right surface order of auxiliaries is the same as the left to right order of auxiliaries in the base, the constraints above allow the following strings of non-motion auxiliaries:

109. ... dzwa kale tyg nyi-ä
    help happen cause try-DEC
    ... try to cause it to happen that X helps.

110. ... kale tyg dzwa nyi-ä
    happen cause help try-DEC
    ... try to help cause to happen ...

111. ... kale tyg nyi dzwa-ä
    happen cause try help-DEC
    ... help to try to cause to happen ...

112. ... tyg nyi dzwa kale -ä
    cause try help happen-DEC
    ... happen that X helped try to cause ...

which are all perfectly grammatical, and exclude

113. *... kale dzwa nyi tyg -ä
    happen help try cause-DEC

114. *... kale nyi dzwa tyg -ä
    happen try help cause-DEC

which are ungrammatical.

5.5 MEANS AND PURPOSE

A number of the examples given in section 5.4 as instances of a concatenation of a [-Aux] verb and a [+Aux] verb are ambiguous, as they can be read as [-Aux] + [-Aux] verb concatenations:

58a. ása nya hipywã khwù wa ṭø dwî ye-ä
    Asa TOP shakk in to run enter go-DEC
    Asa went running into the shack. OR
    Asa went into the shack to run. OR
    Asa ran to the shack to enter it.

85a. ása nya alè lá áyâ wwp dzà-ä
    Asa TOP Ale to chicken sell eat-DEC
    Asa sold Ale a chicken (and Asa profited thereby). OR
    Asa sold Ale a chicken to eat.

95a. ása nya ṣmû gã nyi-ä
    Asa TOP horse chase try-DEC
    Asa is trying to chase the horse. OR
    Asa is chasing the horse to see (if he can accomplish something)
Furthermore note the following:

115a. ása nya ámù dzl la -à
Asa TOP horse ride come-DEC

115b. ása nya ámù la dzl -à
Asa TOP horse come ride-DEC

Both can mean

Asa came to ride a horse.

If at this point more traditional grammar were to influence us, the structure of (115) would be:

116.

The difference in meaning between (115a) and the same surface sentence with the reading Asa rode a horse toward us would be ascribed to the fact that in (115a) the verb la come is specified as [-Aux], but in the other as [+Aux], and to the fact that (115a) has a [D,S,V] proposition, while the other sentence with the auxiliary verb would have an [S,V] one. An ad hoc rule could apply to (116) which would allow dzl ride to be raised and adjoined to the higher P node behind la come. This solution, however, does not account for the fact that in both sentences in (115) the meaning involves a purpose, and a means of attaining that purpose, the purpose being to ride the horse, and in order to attain this end Asa came.

In order to reflect this fact in the base I posit two abstract verbs <PURPOSE> and <MEANS> and a base for (115) which contains two conjoined sentences having these abstract verbs as their respective main verbs:

117.
From this base a number of surface structures can be generated without loss of meaning, the various possibilities being related to the presuppositions associated with the sentence.

If \( S_4 \) is presupposed (i.e. that Asa has come), then \( S_3 \) is lowered into \( S_4 \) as a complement, yielding (roughly):

117a.

This in turn, after topicalization, Equi-NP and abstract verb deletion, yields:

115a. \( \text{ása nyá ámü dzì lá -a} \)
Asa TOP horse ride come-DEC
Asa came to ride a horse.

If \( S_2 \) is presupposed (i.e. that Asa’s coming is the means to some end) \( S_2 \) is lowered into \( S_3 \) as a topic yielding:

117b.

When an S with <MEANS> as its verb is topicalized, the topic marker is hñyì. Thus from (117b) after Equi-NP and abstract verb deletion we get:

115c. \( \text{ása lá hñyì ámü dzì -a} \)
Asa come TOP horse ride-DEC
Asa came to ride a horse.
If there is an absence of any conditioning presupposition then the \( S_2 \) node of (117) is lowered into \( S_5 \) as a complement, yielding:

117c.

This, after topicalization, Equi-NP-deletion and abstract verb deletion yields:

115b. \( \text{āsə nya əmù 1a dzl -ə} \)

\( \text{Asa TOP horse come ride-DEC} \)

\( \text{Asa came to ride a horse} \)

The lowering rules proposed above are similar to the topicalization rules in that they are sensitive to presuppositions rather than to syntactic environments, but they perform rather different operations, except for those exemplified in (117b). What the theoretical repercussions are of having such rules I am unable to say, but there is certainly a demonstrable relationship between the alternative surface forms and the presuppositions associated with each sentence.

5.6 ASPECT MARKERS

A number of [+Aux] verbs function as aspect markers, and as a class these occur to the right of all verbs discussed thus far, and are presumably 'higher' in the base trees. These would apparently fall under the heading of the modality component in Fillmore's 'The case for case' schema (1968:23), and in examples throughout this study I have placed these under the M node. It is difficult to see, however, how these differ from other auxiliary verbs which occur in [S,V] propositions, except in the matter of relative height in the base trees. For the remainder of this study I shall treat aspect and other modal categories as predicates (i.e. as deep verbs) following Ross (1967b). Thus, as I have said earlier, while accepting Fillmore's position (ibid.) that 'in the basic structure of sentences ... we find what might be called the "proposition", a tenseless set of relationships involving verbs and
nouns ... separated from what might be called the "modality" constituent', I am maintaining that this is a difference of degree, not of kind. What appear to be involved are predicates which differ only in the degree of abstractness inherent in them. In Lisu, at what point one passes from the one type of predicate to the other is impossible to decide, and even in surface forms the matter is far from being clear-cut. Thus, for instance, in my discussion of the auxiliary verbs of motion, the only reason I included these in the sub-tree dominated by P, rather than M, was that in each case there was also a main verb with the same or similar phonological shape and with similar meaning. However, as auxiliaries these verbs function very much as modals. Some of the verbs I am including here as aspect markers also occur as main verbs. Similarly I included *k stale happen* in a tree dominated by P earlier in this chapter, and *le become* in the same class because they shared certain ordering restrictions with each other. However, le could equally well be included in the class of aspect markers as the inchoative morpheme. Thus the category I am here labelling 'aspect marker' is in fact merely one more class of auxiliary verb, a class which can not be commanded, in the base tree, by auxiliaries of the classes mentioned previously.

5.61 The continuative

There are two surface forms of the continuative, depending on whether the topic of the embedded S is animate or inanimate. If animate, the surface form is *tyâ*, and if inanimate it is *dâ*.

118. ása nya gwa lwé ye tyâ -g
    Asa TOP there roll go CONT-DEC
    Asa is rolling away over there.

118a. yấtshipá nya gwa lwé ye dâ -g
    stone TOP there roll go CONT-DEC
    The stone is rolling away over there.

As [-Aux] verbs *tyâ* and *dâ* mean to *live* and to *be located at* respectively, but as auxiliaries they merely indicate an event or action in process. The absence of the continuative marker in a surface sentence does not necessarily mean that the sentence is not to be understood as having the continuative aspect. The lack of a specific aspect marker merely means that the aspect is unspecific. Thus a sentence like:

119. ása nya lwé ye-ê
    Asa TOP roll go-DEC

can mean a. Asa will roll away.
    b. Asa is rolling away.
    c. Asa rolled away.
    d. Asa would have rolled away.
    e. Asa keeps rolling away, etc.
Certain adjectival verbs may co-occur with the continuative but others may not.

120. ása nya na tyã -ã  
Asa TOP sick CONT-DEC  
Asa continues to be sick.

121. *ásá nya vů tyã -ã  
Asa TOP big CONT-DEC  

At present I am unable to define what governs these co-occurrence restrictions.

5.62 The complete

The complete auxiliary verb is ye which has no corresponding occurrence as a main verb.

122. ása dzã dzã ye -ã  
Asa rice eat COMPL-DEC  
Asa has eaten his rice.

In conjoined sentences the ye morpheme indicates that the sentences are to be understood as referring to a sequence of actions or events, rather than to actions or events concurrent with each other.

123. ása nýa dzã dzã ye dy ye-ã  
Asa TOP rice eat COMPL exit go-DEC  
Asa ate his food and (then) went outside

One way of indicating that the conjoined sentences are to be interpreted as referring to concurrent actions or events is to insert the adverb the thus, in this way into both sentences:

123a. ása nýa dzã the dzã the dy ye-ã  
Asa TOP rice thus eat thus exit go-DEC  
Asa ate his food as he went outside.

In imperative sentences the ye marker indicates that the imperative applies not to the commencement of the action alone, but to the whole duration of the action until its completion. Without the ye marker the meaning is ambiguous with reference to this particular point.

124. nůu ámé dzã  
you quickly eat  
Hurry up and eat/Hurry up and start eating.

124a. nůu ámé dzã ye  
you quickly eat COMPL  
Hurry up and get your eating over with.

The main verb of sentences commanded by a higher completeive may not be an intransitive adjective, but any other main or auxiliary verb may co-occur. Thus:
125. ása ámù nya na ya -w
   Asa horse TOP sick COMPL-DEC

125a. ása ámù nya na le ya -w
   Asa horse TOP sick INCHOAT COMPL-DEC
   Asa's horse has already become sick.

5.63 The reciprocal

The surface reciprocal aspect auxiliary verb is lāxu each other, among themselves:

126. ása ámù 1f lwè nya khù lāxu -ə
   Asa horse four Clf TOP bite RECIPI-DEC
   Four of Asa's horses are biting each other.

In order to posit a deep base form of this sentence it is necessary to first clarify the meaning of (126). The sentence does not mean that each of the four horses was biting each of the other three. In the Lisu sentence (and even in the English translation), one horse might have been biting only one other, while another horse might have been biting two other ones, while another might have been biting three others, and so on. Thus the base of (126) cannot be a conjunction of sentences meaning Horse No.1 bit horses Nos. 2, 3, 4 and Horse No.2 bit horses Nos. 1, 3, 4... etc. Rather the base would appear to be something like:

In this representation RECIPI would be a predication indicating that only the beings specifically identified in S₂ were affected by the activity identified in S₂. Admittedly this might be a shallow form of some deeper logical base.

Only transitive verbs - including transitive adjectives may be commanded by lāxu.

5.7 NEGATION

When a base marker is generated in which NEGATIVE occurs as one of the higher predicates, a low-level placement rule moves the negative to the front of the left-most verb, with the restriction that no non-verb may be crossed over.
This rule applies no matter how high in the tree NEG is generated, with the result that all such sentences are multiply ambiguous. The surface sentence (128) could be continued in any of the following ways:

128a. yı́ nya dzə dzə-ə
     he TOP rise eat-DEC
     He is eating his food.

128b. yı́ nya bywe yə ye tyə -ə
     he TOP fly descend go CONT-DEC
     He is in the process of flying away downhill.

128c. yı́ nya tə də ye tyə -ə
     he TOP run climb go CONT-DEC
     He is in the process of running away uphill.

128d. yı́ nya tə yə la tyə -ə
     he TOP run climb come CONT-DEC
     He is in the process of running this way downhill.

128e. yı́ nya tə yə ye ye -ə
     he TOP run descend go COMPL-DEC
     He has run away downhill already.

As in English, a morphophonemic rule adds stress to the particular verb representing the predicate being negated in the different readings of a surface string like that of (128).

A further restriction on the NEG movement rule applies if one of the verbs to the left of NEG is one of the class of verbs of communication, thought, etc., which have what are traditionally called 'object complements'. In such a case the NEG is placed immediately in front of this verb.
The restriction as stated above is not entirely adequate since it would predict that the following is ungrammatical, which is not in fact the case.

130. ása nya mà dye bₕ
    Asa TOP not go say
    Asa did not go to tell (which can mean that he went but not to
tell, that he did not GO to tell but CAME, or that the whole
assertion is wrong).

In order to alter the rule so as to enable it to generate sentences like (130) a derivational constraint is necessary which nullifies the above restriction if the complement of bₕ say or another such verb is the result of a lowering rule, rather than a complement generated in the base. (For a base representation of sentences like (130) see 5.5.)

If one of the auxiliary verbs to the left of NEG in a string is specified as [+Adj], the movement rule stated above becomes optional, and an alternative rule allows NEG to be moved to the front of the [+Adj] verb. Thus both of the following are grammatical, and synonymous (according to one reading of the first of the two)

131. ása nya amí mà khwa kwú
    Asa TOP field not hoe able
    Asa doesn't know how to hoe fields.

131a. ása nya amí khwa mà kwú
    Asa TOP field hoe not able
    Asa doesn't know how to hoe fields.

The actual surface form of the negative depends on the nature of the higher performative verb. Thus in an imperative sentence the form is thà don't, and in all non-imperatives it is mà not.
5.8 PERFORMATIVES

5.8.1 The declarative

The declarative performative occurs under the domination (direct or indirect) of the highest V node in the base of a sentence. It is specified as [+Tense] and [+Negative]. If the specification is [+Tense] the sentence is to be interpreted as referring to past tense, and the surface form of DEC is -µ. If the performative is [-Tense] the sentence is to be interpreted as referring to whatever tense is indicated in the presuppositions associated with the sentence and the surface form will be -a. If specified as [+Negative] an obligatory deletion rule deletes the declarative altogether. The declarative is specified as [+Negative] if the NEGATIVE quantifier occurs at any point in the base tree between the declarative itself and the first [-Aux] verb to the left. Stated in this form the specification rule must apply before NEG movement. Note the following:

132.

Asa dye go

Asa is going/goes/will go/went.

133.

Asa dye go

Asa has gone/went.
5.82 The interrogative

Yes/No questions present very little difficulty in an analysis of Lisu grammar. The Interrogative performative is represented in the surface structure by a particle -á if the interrogative is specified as [-Tense] and -ù if specified as [+Tense]. Note the following:

135. ása nya dye-á
   Asa TOP go -DEC
   Asa is going.

135a. ása nya dye-â
   Asa TOP go -QUEST
   Is Asa going?

136. ása nya dye-ù
   Asa TOP go -DEC
   Asa has gone.

136a. ása nya dye-ú
   Asa TOP go -QUEST
   Has Asa gone?

The interrogative is not specified as [+Negative] and appears in the surface form of both positive and negative questions.

When one turns to the so-called WH-questions the situation is far more complex. The interrogative marker mentioned above still appears in the surface form, and the problem concerns not the interrogative performative itself, but the pronouns associated with it. In the first place these pronouns have non-interrogative occurrence which have only slight resemblance to the relative pronouns.

Note the following question and the alternative answers:
137. ása la nya àma dè -ã
   Asa to TOP WHO hit-QUEST
   Who hit Asa?

137a. ása la nya àma xe dè -ã
   Asa to TOP WHO TOP hit-DEC
   Everybody hit Asa.

137b. ása la nya àma-é mà dè
   Asa to TOP WHO not hit
   Nobody hit Asa. 14

137c. ása la nya àma mu àma dè -ã
   Asa to TOP WHO see WHO hit-DEC
   Everyone who saw Asa hit him.

The only apparent base difference between (137) and (137a), at first sight, is that (137) incorporates the QUEST performative and (137a) the DEC. Yet while (137b) is the negative form of (137a), sentence (137d) below is not the negative form of (137).

137d. ása la nya àma mà dè -ã
   Asa to TOP WHO not hit-DEC
   Didn't anyone hit Asa? (NOT: Who didn't hit Asa?)

At present I am unable to explain this fact, and thus am uncertain about the proper base form of (137). Of importance in investigating the problem is the fact that the WH-pronouns occur as main predicates in interrogative but not in declarative sentences.

138. ása la dè -ã ma nya àma-ã
   Asa to hit-DEC one TOP WHO-QUEST
   Who is the one who hit Asa?

138a. #ása la dè -ã ma nya àma-ã
   Asa to hit-DEC one TOP WHO-DEC

From sentences like (138) the possibility presents itself that pronouns of this sort are deep predicates of some sort, but predicates having peculiar properties. Be this as it may, I am still unable to posit base structures which reflect the true meaning of the sentences, since all of my attempts thus far predict that (137d) is the negative form of (137) which it is not. The negative of (137) is (139) in which àma WHO is the predicate:

139. ása la mà dà ma nya àma-ã
   Asa to not hit one TOP WHO-QUEST
   Who is the one who did not hit Asa.

There is no positive form of (137d) which incorporates the pronoun àma. Note, however the following:

140. ása la nya swu dà -ã
   Asa to TOP people hit-QUEST
   Did anyone/someone hit Asa?
Since questions like (137) involve presuppositions consisting of everything in the sentence except the interrogative pronoun (or, in Lisu, the interrogative and the pronoun) Lisu questions of this sort always involve the topicalization of all NPs in the sentence except the WH-pronoun. The result of this is that the pronoun always occurs in focus position in the surface structure, immediately before the string of predicates. In questions such pronouns may never be moved out of the proposition, and since every other NP in the proposition is topicalized, no movement transformations ever apply to interrogative pronouns of the WH-type.

Other WH-pronouns, all of which share exactly the same general characteristics as ǹma are:

āsyl what athâ when ala where

A pronoun having some of the same characteristics, but differing in other ways is ali which. This is the only pronoun in the language which can be classified and quantified. Note the following:

142. āsa āsyl xwa la -å
Asa WHAT seek come-QUEST
What has Asa come looking for?

142a. āsa ali syl xwa la -å
Asa WHICH kind seek come-QUEST
Which kind has Asa come looking for?

142b. āsa ali thl syl xwa la -å
Asa WHICH one kind seek come-QUEST
Which particular kind has Asa come looking for?

5.83 The imperative

The imperative performative has an optional surface realization as -å, but is often marked only by the absence of a declarative or an interrogative marker.

143. āmè dye-å
quickly go -IMP
Go right now!

143a. āmè dye
quickly go
Go right now!

As mentioned before the negative has a special imperative form thå instead of the usual mà.
The only difference between ordinary imperatives and hortatory type imperatives is a difference of pronoun in the base structure. Both consist of a sentence commanded by a higher performative IMPERATIVE, analogous to the P-marker (132) except that IMPERATIVE is not marked for tense or negation. In the case of the regular imperative, the subject of the sentence commanded by the performative is nwu you and this may optionally appear in the surface string. In the case of the hortative, the subject of the lower sentence is āzwu we, inclusive, and this too may appear optionally in the surface. A low-level rule alters the surface form of IMPERATIVE from -ā to -u.

144. nwu ōmē dye-ā OR nwu ōmē dye
   you quickly go -IMP OR you quickly go
   Go quickly!/Go right now!

144a. āzwu ōmē dye-ū
to quickly go -IMP
   Let's go right away!

When the first person plural pronoun appears in the base proposition, then the appearance of IMP in the surface string is obligatory.

5.84 Modal performatives

In Lisu, sentences may contain a final morpheme which indicates the speaker's attitude to or judgement of what he is saying. In English this information is conveyed in a number of different ways. For instance there are a number of ways of saying That iron is hot, and the speaker's intonation will indicate that he is agreeing or disagreeing, complaining, issuing a warning, or some such attitude of his. In other cases so-called sentential adverbs may fulfil the same function, as when a person says something like Surprisingly, she dribbles too. At other times these attitudes are expressed more subtly as when a person says She even dribbles, in which case part of the intended meaning is that the speaker judges the information to be surprising. In Lisu meaning of this kind is conveyed by sentence-final particles.

These particles seem to be of two kinds, some of which modify a whole sentence, and thus would appear to be very deep abstract verbs which make a predication about the utterance itself rather than about some real-world situation. Note the following:

145. qwa āṭhā nya 11 -a
    my machete TOP heavy-DEC
    My machete is heavy.

145a. qwa āṭhā nya 11 -a na
    my machete TOP heavy-DEC SURPRISE
    Surprisingly my machete is heavy (My declaration that my machete is heavy will surprise).
Particles of this sort can probably best be treated as abstract verbs in \([S,V]\) propositions, rather than as performatives which occur in \([A,S,V]\) propositions.

The other finals in this class are \(dyu/du\) which indicates that the utterance is a second-hand report, and \(nī\) which indicates that the utterance is an expression of the speaker's concurrent deliberations (i.e. he is speaking to himself as he deliberates).

The second type of particle involves a semantic modification of the performative verb. Note the following:

\[147. \quad \text{qwa ásthà nya ll } -\text{á} \text{ lè } \]
\(I \) machete TOP heavy-DEC WARNING
\((I \) warn you that\) my machete is heavy.

\[147a. \quad \text{qwa ásthà nya ll } -\text{á} \text{ há } \]
\(I \) machete TOP heavy-DEC WONDER
\((I \) wonder whether\) my machete is heavy.

\[147b. \quad \text{qwa ásthà nya ll } -\text{á} \text{ xù } \]
\(I \) machete TOP heavy-DEC COMPLAIN
\((I \) complain that\) my machete is (too) heavy.

The following is a rough base of the above sentences:

\[148. \]

\[\text{qwa ásthà ll } -\text{á } \text{ na } \text{ SURPRISE } \]
\(my \) machete heavy -DEC
\((I \) wonder whether\) my machete is (too) heavy.
Thus in these sentences the performative rather than being I declare that... would be something like I declare warningly that..., I declare in a wondering way that..., I declare complainingly that... respectively.

A fuller list of these modifiers follows:

- I emphasize that...
- I confirm that...
- I complain that...
- I wonder if...
- I warn that...
- I plead that...
- I expect that...

All of the above occur in DECLARATIVE sentences, while phá may also occur in QUESTION sentences, and lù and mà may also occur in IMPERATIVE sentences.

5.9 COMPLEMENTS AND TOPICALIZATION

Any NP in a complement sentence, other than one of a conjoined string of NPs, may be topicalized, raised out of the domination of its dominating S in the base tree, and adjoined to the front of the sentence, thus crossing over NPs which were higher in the base. Thus the following are all grammatical:

152. ása nya alë lá phwu thyl yå bwu -å
    Asa TOP Ale to money lend give tired-DEC
    Asa is tired of lending money to Ale.

152a. alë lá nya ása nya phwu thyl yå bwu -å
     Ale to TOP Asa TOP money lend give tired-DEC
     Asa is tired of lending money to Ale.

152b. phwu nya ása nya alë lá thyl yå bwu -å
     money TOP Asa TOP Ale to lend give tired-DEC
     Asa is tired of lending money to Ale.

The base of all of these is (in simplified form):
Similarly the following are all grammatical too:

154. ása nga alé ami kwá-ba bë-a
Asa TOP Ale field hoe -DEC say-DEC
Asa says that Ale is hoeing fields.

154a. ami nga ása nga alé kwá-ba bë-a
field TOP Asa TOP Ale hoe -DEC say-DEC
Asa says that Ale is hoeing fields.

154b. alé nga ása nga ami kwá-ba bë-a
Ale TOP Asa TOP field hoe -DEC say-DEC
Asa says that Ale is hoeing fields.

(The topicalization of this last sentence makes the surface sentence ambiguous, but it is nevertheless grammatical with the sense given.)

In all sentences involving reported speech, ideas, etc., the 'higher' NP is always topicalized, as well as any NP from a lower sentence, but no special constraints need to be stated to account for this fact, as the topicalization of the higher NPs is accounted for by the normal rules of topicalization, since such NPs are always presupposed.

When the whole of a complement S commanded by a [+Adj] verb is presupposed, the restriction on such complements does not allow them to be topicalized, unless the whole complement is first nominalized. In such cases the nominalized complement S is raised in toto, but a copy of the verb or verb string remains in the base proposition. Note the following:

155. ása ami kwá ma nga kwá kwó-a
Asa field hoe NOM TOP hoe able-DEC
Referring to Asa's hoeing of fields, he knows how to do so.

156. ása thyé dyé ma nga thyé dyé ye yo -w
Asa flee exit go NOM TOP flee exit go COMP-DEC
Referring to Asa's fleeing away, he has already done so.
NOTES

1. The rejected rule appears at present to involve no particular problems for Lisu.

2. The notion of fact is expressed verbally in Lisu by the verb ŋa/ŋu which means *It is a fact that... .*

3. This rather poor gloss is given because the negative of this verb means something like *not obliged to*, while the positive, instead of being *obliged to* means *may as well*:

   - `nwu dye thy1-a`
you go -DEC
   *You may as well go*

   - `nwu dye mỳ thy1`
you go not
   *You don't have to go*

4. This verb also occurs as a [-Aux] verb which cannot occur with a complement. It then means *lazy*:

   - `ásə nya bwu -ə`
   Asa TOP lazy-DEC
   *Asa is lazy*

5. The English gloss does not adequately reflect the fact that it is some property of the rice that it is being discussed - it is too old, improperly cooked, etc.

6. This is a contradiction of Roop's claim (1970:50) that such sentences do not occur. The following is perfectly grammatical and in no way abnormal:

   - `ánà xwà nya ŋwa dzà mi-ə /ŋwa zàmə nya dzà mà mi`
dog meat TOP I eat tasty my wife TOP eat not tasty
   *I find dog meat tasty to eat, but my wife doesn't.*
7. In dialects in Burma and China, the surface forms of the [+Aux] and [-Aux] versions of this verb are both dye, but in Thailand the [+Aux] version is ye.

8. In dialects in Burma and China the surface forms of both versions of this verb are gâ, but in Thailand the [+Aux] version changes to yâ.

9. This sentence could also mean Asa caught the horse, but it would then have a different deep structure, involving conjoined [-Aux] verbs.

10. A sentence with this surface form does occur, meaning something like Asa punished the children by making them study books, or more literally Asa made a study-the-books happen to the children. In this sentence, however, kale happen is not a [+Aux] but a [-Aux] verb.

11. An analogous situation occurs in many other languages in the area (e.g. Thai, Lahu, Akha, Karen) where the main verb meaning to live also occurs as an auxiliary indicating the continuative aspect.

12. In English verbs like believe behave unusually with negatives, so that Peter doesn’t believe that Tom is going is ambiguous, meaning that Tom is going, but Peter doesn’t believe it, or that Tom is not going, and Peter believes this fact (see George Lakoff (1970) for a discussion of this). In Lisu, however, all verbs of communication have the same types of distribution and co-occurrence restrictions and function in the same way with regard to negation.

13. Since the Agent of any performative is the first person, the A node is redundant, and is thus not incorporated into the derivational trees in this section.

14. The form âma-é is the required surface form of âma when a negative co-occurs.
CONCLUSION

I have shown that a base component which presupposes a left-to-right order of constituents cannot correctly represent one important generalization about Lisu, namely that all NPs may occur as surface 'subjects' and all are equally free with respect to phrase order. I have further shown that any adequate grammar of Lisu must include in its base a set of presuppositions and a focus. The rules which assign left-to-right order are sensitive to the presuppositions and focus associated with the base representations, and these rules make redundant any prior assignment of order. The logical relations which hold between the components of the sentence are not related to their relative order, but to logical notions associated with those components; these notions are the case labels. Verbs are sub-classified according to the types of propositions in which they occur, such classification being accomplished by case frames which specify the notional cases with which each verb may co-occur.

The rules which derive the various kinds of surface noun phrase are highly generalized, and indicate that in the base all noun phrases originate as relative clauses which contain either of two basic types of predicate. One type is characterized by a specification which classifies it as a verb. To relatives containing this type of predicate no feature-copying rules apply before relativization, and the resulting surface structure consists of a head noun and a surface relative clause, or a noun and adjective construction. The other type of predicate is classified as a demonstrative, a classifier, a quantifier or a nominal. To these predicates the feature-copying rule does apply and the relativization rules then generate surface forms in which demonstratives and quantifiers are PRO-articles, and classifiers and some nominals are PRO-nouns, while others are surface nouns.

In an attempt to maintain the simplest possible base component in constructing a grammar, one might expect that one result of this a priori concern with a simple base would be the complication of the transformational component. In Lisu, as the preceding study shows, this is not the case. In fact, the more abstract the base becomes, and simpler in terms of the number of rules and the size of the alphabet required, the fewer the transformations needed to generate surface structures from this base. Where complication is evident is in the configurations of the P-markers, with sentences embedded in sentences which are themselves embedded in other sentences to a marked degree. This configurational complexity is not in itself necessarily a disadvantage, however, since, beside allowing the T-rules to be stated in
a highly generalized way, these complex trees can also be expected to simplify the rules of semantic interpretation, since so much semantic information is already represented in the P-markers.

The rules posited in this study are, to recapitulate:

**Base Rules**

P1. \( S + P \ (M) \) Presupposition Focus [where \( P \) and \( M \) represent non-modal and modal propositions respectively].

P2. \( P + \text{Case-set, } V \)

P3. \( \text{Case} + \left\{ \begin{array}{l} \text{NP (K)} \\ \text{S} \end{array} \right\} \)

P4. \( \text{NP} + \left\{ \begin{array}{l} \text{NP S} \\ \text{CS} \end{array} \right\} \)

**Transformational Rules**

Topicalization

Focus

Conjunct-S-lowering

Equi-NP-deletion

Relativization - Feature-copying

- V-deletion

- PRO-nominalization

- NP-raising

- S-lowering

- Segmentation

- PRO-noun movement

- Relative clause reduction

- Switching

NEG-transportation

Tree-pruning (including empty and abstract V-deletion)

Thus a 'logical' base representation with a set of generalized constraints which mainly concern matters of 'command', together with the above small set of T-rules, generates all of the major Lisu surface structures. The reason why the set of T-rules is so small is that complementation requires no T-rules, and that aspect and performative markers occur in surface structures, representing almost on a one-to-one basis the abstract modal predicates. Thus the surface structures of Lisu sentences are not too far removed from the base representations, and it could be said that Lisu has 'logical' surface as well as base structure. Any theory of universal grammar will need to take account of
the fact that languages like Lisu do occur, and thus will presumably need to be a theory incorporating a logical base.

When one considers the vast amount of literature which has appeared in the last decade, concerned with constructing adequate grammars for various aspects of the English language, it goes without saying that there are a great number of areas to be explored in Lisu syntax. In particular an additional number of constraints governing transformations will be required as counter-examples not yet evident come to light.
A SAMPLE TEXT: The orphan and the buffalo

1. nö anyf thi ma dyu-ä/ nyì syl/ yìwà there last-year one one have-DEC/ two siblings/ they
   There is a story of long ago. The two brothers.

2. nyì syl ânà anyà ma dyu-ä/ ânà -bûlu-ä two siblings buffalo many ones have-DEC/ buffalo-ant -DIM
   The two of them had many buffalo.

3. thi ma dyu-ä/ ânà -bûlu-ä thi ma dyu-ä bâ one one have-DEC/ buffalo-ant -DIM one one have-DEC say
   They had a miniature buffalo. And so

4. -ä nya yì nyìzà lú tyg -ä thi nyì thi' nyì lè/ -DEC TOP WH Y.Bro. watch cause-DEC one day one day ADV/
   the younger brother was made to look after it daily.

5. lú tyg ñu bû -ä nya, ânà -bûlu-ä gu ma zàthyl-ä le
   fact say-DEC TOP, buffalo-ant -DIM that one orphan-DIM to
   that miniature buffalo spoke to the orphan boy.

6. pûxwà thywè yè -ä/ pûxwà thywè yè -ä ñu bû -ä speech speak give-DEC/ speech speak give-DEC fact say-DEC
   And said,

7. nya, 'hà makhà bû -ä nya nwu kûku nwu màlà,
   TOP, 'soon evening say-DEC TOP you E.Bro. you E.Bro.Wi.
   'This evening your elder brother and his wife

8. nwu lë hi bwe yè -ä'/ ânà -bûlu-ä nga
   you to house apportion give-DEC'/ buffalo-ant -DIM TOP
   will give you your share of the household goods'. So said

9. the pûxwà thywè yè -w'/ 'zàthylù nwu ñsyl-ë thà
   so speech speak give-DEC/ 'orphan-VOC you what don't
   the miniature buffalo. 'Orphan, don't you take anything.

10. the le ñwe '/ ânà -bûlu-ä nga the thywè yè ya
    this only want'/ buffalo-ant -DIM TOP this speak give COMP
    take only this.' The buffalo said this to him.

11. nwe/ dza phwu sà pà tshàbu sà pà
    want/ rice white three parcels salt three parcels
    Three parcels of milled rice, and three parcels of salt -

12. the le ñwe '/ ânà -bûlu-ä nga the thywè yè ya
    this only want'/ buffalo-ant -DIM TOP this speak give COMP
    take only this.' The buffalo said this to him.

13. nyì / atsìstì yîlde ya ñu bû -ä nya yì kûku
    -DEC/ actually return COMP FACT say-DEC TOP he E.Bro.
    And when in fact they did return home, his elder brother
14. yf málà yf lá hi bwe yà -m / bwe yà he E. Bro. Wi. he to house apportion give-DEC / apportion give and his wife gave him his share of the household goods.

15. ye -m nu bë-a nya yf xa áñà -bûlu-à ñu zwu -a COMP-DEC fact say-DEC TOP he ENT buffalo-ant -DIM words take-DEC After they had given him his share, he took the buffalo's

16. hínnyi yf ñu nanà -a hínnyi dza -phwu sa pà CAUSE he words listen-DEC CAUSE rice-white three parcels advice, obeyed and thus took only three parcels of milled

17. tshàbu sa pà the leà nwe -a / the leà nwe -a salt three parcels this only want-DEC / this only want-DEC rice and three of salt.

18. bë-a bë-a nya yfwà nyi zy bë-a nya hi syà -a / say-DEC say-DEC TOP they two people say-DEC TOP house make-DEC / Later they both built a house.

19. lûkhwà hi syà -a / syà yo nu bë-a nya, syà lavender house make-DEC / make COMP fact say-DEC TOP, make They built a house out of lavender bush. When they had

20. du le -m nu bë-a nya, áñà -bûlu-à nya appear become-DEC fact say-DEC TOP, buffalo-ant -DIM TOP finished building, and the house was complete, the miniature

21. yf lâ bë yà -a / 'dzwà dzwà yf kànyà gà ye / he to say give-DEC / 'there there he after follow go / buffalo told him 'Go down there and follow them.'

22. zàthyl-ù nwu thí nùyí thî nùyí nwa the kà dzì-l-a ma orphan-VOC you one day one day me this amount ride-DEC NOM Orphan, about your riding me this much day after day,

23. ásyl wûnî dzì-l-a / nwu zàma nwe -a / nwu zàma what CAUSE ride-QUEST / you wife want-QUEST / you wife why do you do it? Do you want a wife?

24. nwe -a , nwa bë yà -à / 'nwe -a / hamasà ali want-DEC, me say give-IMP' / 'want-DEC / now which If you want a wife, tell me.' 'I do. But at the moment

25. yg-à / nwa nya ásyl-é mà dyu ' / zàthyl-à nya the do-QUEST / I TOP what not have' / orphan-DIM TOP this what can I do? I have nothing'. The orphan

26. bë-a / áthe yì bë-a nya 'gwà lwùbwà yf khà -a say-DEC / this fact say-DEC TOP 'there pool WH edge-to said this. This being so, 'Let us both go over there to

27. dye-y ìzwà nyl zy / dye yè ñu bë-a nwa go -IMP we two person / go COMP fact say-DEC TOP Wusa the edge of the pool.' After they had done this, the
28. ámi xe ãdyâ kányâ la -a lwùbwg wa / kányâ la daughter ENT water play come-DEC pool at / pool come daughters of Wuq came to play in the water at the pool.

29. -a bë -a 'zàthyl-ù nwu ali thi ma nwe -å '/' -DEC say-DEC 'orphan-VOC you which one one want-QUEST' /
   So, 'Orphan, which one do you want?'

30. 'gwe bاثyl nyìthyl thi ma nwe -å '/' 'zàthyl-ù nwe 'there coat green one one want-DEC' '/'orphan-VOC want 'There, the one with a green coat'. 'Orphan, if you want

31. -a bë -a nya gwa yi bاثyl ámé dye khwù sàtyi '/' -DEC say-DEC TOP there he coat quickly go steal hide '/'
   her, go there and steal her coat so that you can hide it.'

32. ána -bùlu-å the bë yè -a bë -a nya, zàthyl-å buffalo-ant -DIM this say give-DEC say-DEC TOP, orphan-DIM The miniature buffalo said this, and so the orphan boy

33. xo yi bاثyl dye khwù sàtyi-a / khwù sàtyi-a EN'T he coat go steal hide -DEC / steal hide -DEC fact went and stole her coat to hide it. And then

34. bë -a nya, swu nya yìdye ye gwu-u yi thywèphâ thè /
   say-DEC TOP, people TOP return COMP all-DEC he friends sort /
   the people all went home, the friends that is,

35. yi nya tyã-a / 'zàthyl-ù nwu sàtyi-a nya åtî if he TOP be -DEC / 'orphan-VOC you hide-DEC TOP little return but she stayed. 'Orphan, if you have hidden it, please

36. yè -å '/' 'nwa nya mà sàtyi' / 'nwu sàtyi-a òu give-IMP' / 'I TOP not hide' / 'you hide -DEC fact give it back.' 'I didn't hide it.' 'I expect you really did.

37. phà / nwu sàtyi-a nya åtî if yè mà '/' EXPECT / you hide -DEC TOP little return give PLEAD' /
   If you hid it please give it back, I beg you.'

38. 'à nwa nya mà if yè / sàtyi-a òwa sàtyi-a òu /
   'ah I TOP not return give / hide -DEC I hide -DEC fact /
   'Oh, no, I won't give it back. I did hide it.

39. nwu gwa nwe -å nya òwa nwu lâ if yè -å '/' 'zàthyl you me want-DEC TOP I you to return give-DEC' / 'orphan If you will love me I'll give it back.' 'Orphan,

40. -å nwe -å òu '/' 'à nwe -å nya sà khù pè 
   -VOC want-DEC fact' / 'ah want-DEC TOP three years reach
   I will love you.' 'O.k., if you will love me, in three years

41. ye-å nwu lâ if yè -å '/' òthe òu bë -å nya go-DEC you to return give-DEC' / this fact say-DEC TOP time I will give it back to you.' This being the case,
42. wusa áml xe záthyl-á lé fwudzá-á ŋu / 
Wusea daughter ENT orphan-DIM to marry -DEC fact / 
Wusea's daughter married the orphan boy.
The following abbreviations are employed:

**ALH**  
Acta Linguistica Hafniensia

**CLS-RM5**  
Papers from the Fifth Regional Meeting of the Chicago Linguistic Society

**FoL**  
Foundations of Language

**GK**  
Gengo Kenkyuu

**GUM**  
Georgetown University Monograph Series on Language and Linguistics

**HCLab**  
Harvard Computational Laboratory Report to the National Science Foundation on Mathematical Linguistics and Automatic Translation

**IJAL**  
International Journal of American Linguistics

**JAOS**  
The Journal of the Americal Oriental Society

**JBRs**  
The Journal of the Burma Research Society

**JoL**  
The Journal of Linguistics

**KNU**  
Kotoba no uchū

**LI**  
Linguistic Inquiry

**Lg**  
Language

**MASB**  
Memoirs of the Asiatic Society of Bengal

**OPWS**  
Occasional Papers of the Wolfenden Society on Tibeto-Burman Linguistics

**PIL**  
Papers in Linguistics

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