THE DEEP SYNTAX OF LISU SENTENCES

A Transformational Case Grammar

by

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Except where otherwise acknowledged in the text, this thesis represents the original research of the author.

E. R. Hope
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This thesis is based on some fourteen years of study of the Lisu language, nine and a half of which were spent on the field. During this time I have, to a reasonable extent, acquired native-speaker intuitions about the language, and this thesis is largely an attempt to explain these intuitions. I have in most cases used my own judgement in deciding whether sentences are grammatical or not, but where I have been uncertain, or where a point I have wished to make hinges on examples which are not self-evident in this respect, I have accepted the judgement of my Lisu friends.

To these friends I owe a great debt of gratitude, not only for their kindness and patience in helping me learn their language, but also for the way in which they helped me participate in life in their village, welcoming me into their homes, their work-parties and their festivities. It was in these situations that I learned as much about their language as I did in the more formal sessions with various informants. It would be impossible to mention by name all to whom thanks are due, but I cannot miss this opportunity of expressing my appreciation of my close friends and neighbours ávwò syékhe and slè nèné, who live in Huay Khlai village in the Doi Chang west of Chiang Rai. They provided me with many hours of tape-recorded narrative and conversation, a portion of which makes up some two-thirds of the 50,000 words of transcribed text in my possession.

Thanks are also due to the Overseas Missionary Fellowship under whose auspices I have worked since 1957. The members of the Fellowship have provided help in numerous ways, and the Directors allowed me leave of absence to undertake this thesis. My introduction to linguistics came from Dr. William Smalley who, with Dr. Eugene Nida, also provided the inspiration to undertake further studies. I am very grateful to them both for their constant encouragement. The staff of the Department of Phonetics and General Linguistics, University of the Witwatersrand, Johannesburg deserve credit for whatever understanding of the discipline of linguistics may be evident in this thesis. In particular I would like to express my thanks to Tony Traill, who was my teacher in transformational grammar.
Since early 1969 I have been a research scholar in the Linguistics Department of the Research School of Pacific Studies, Australian National University, and acknowledge my gratitude for a most generous scholarship and field-work grant. The head of this Department, Professor Stephen Wurm has provided constant support and understanding, and has helped in ways too numerous to mention. My principal supervisors have been Dr. Donald Laycock, and Dr. Tom Dutton, and they have provided many helpful suggestions and corrections as they read the earlier drafts of this thesis. Mrs. Sue Tys and Miss Helen Grunseit have been of great help in reading the proofs, drawing the derivational trees and overseeing the collating and binding.

The Thai government, The Thai National Research Council, and The Tribal Research Centre at the Chiang Mai University graciously gave their permission for me to undertake research during my final period of field-work in their lovely country.

Finally, my warm thanks to my wife, Nell, who has remained cheerful through all kinds of disruption to our family life occasioned by this thesis. Without her provision of moral support this thesis would never have seen the light of day.

E. R. Hope
EXPLANATION OF ORTHOGRAPHY

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

Consonants

<table>
<thead>
<tr>
<th>p</th>
<th>t</th>
<th>ts</th>
<th>k</th>
<th>?</th>
</tr>
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<tbody>
<tr>
<td>ph</td>
<td>th</td>
<td>tsh</td>
<td>kh</td>
<td></td>
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<tr>
<td>b</td>
<td>d</td>
<td>dz</td>
<td>g</td>
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<tr>
<td>f</td>
<td>s</td>
<td>x</td>
<td>h</td>
<td></td>
</tr>
<tr>
<td>v</td>
<td>z</td>
<td></td>
<td>y</td>
<td></td>
</tr>
<tr>
<td>m</td>
<td>n</td>
<td></td>
<td>η</td>
<td></td>
</tr>
</tbody>
</table>

Vowels

<table>
<thead>
<tr>
<th>i</th>
<th>ɨ</th>
<th>u</th>
</tr>
</thead>
<tbody>
<tr>
<td>e</td>
<td>ø</td>
<td>o</td>
</tr>
<tr>
<td>æ</td>
<td>a</td>
<td></td>
</tr>
</tbody>
</table>

In addition I have posited the following suprasegmentals:

- Palatalization (symbolized by ɨ)
- Labialization (symbolized by ø)
- 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:

1. Any alveolar consonant phoneme, when it is followed by /-ɨ-/ 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 /-ɨ'/.

Example: /syə/ [ʃə]; /tyə/ [ca]; /ty+/ [tʃə].
(ii) The labialization suprasegmental /-w-/ is articulated as a labio-dental fricative when the following vowel is either /-i/ or /-u/. To illustrate, /phw+/ [pʰfʰvʲ]; /bw+/ [bʲvʲ]/ /bwu+/ [bʲvʲ].

(iii) The vowel /-t/ is articulated with simultaneous labio-dental or palatal friction when it follows /-w-/ or /-y-/ respectively. To illustrate, /tw+/ [tvʲ]; /ty+/ [tʃʲvʲ].

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

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

(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 /n̩w/ [n̩v²]; /n̩/ [n̩v³].

(vii) Either one of two adjacent syllabic vowels may lose their syllabicity optionally if they both occur in the same breath-group. The resulting syllable has both glided vowels, and a tone glide. Thus /dye a/ [je³-1] ~ [je³-1]. 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 { -g } and { -u }. The rules governing these changes can be stated informally as:

a. When a verb having a laryngealized syllable with mid tone, or a final syllable with high tone, is followed by the DECLARATIVE marker { -g } or { -u }, the syllable reduction which occurs does not result in a tone glide, but in a syllable with high tone. The normal vowels glides occur in the reduced syllable. Thus {bg} { -g } /bg³/; {t} { -u } /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 {pé} { -g } /p³/.
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 thesis 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).
**LIST OF ABBREVIATIONS**

<table>
<thead>
<tr>
<th>A</th>
<th>Agentive</th>
<th>N</th>
<th>noun</th>
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</thead>
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<tr>
<td>Adj</td>
<td>Adjective</td>
<td>NP</td>
<td>Noun phrase</td>
</tr>
<tr>
<td>ADV</td>
<td>Adverb marker</td>
<td>O</td>
<td>Object</td>
</tr>
<tr>
<td>anim</td>
<td>animate</td>
<td>P</td>
<td>Proposition</td>
</tr>
<tr>
<td>Art</td>
<td>Article</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aux</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Case</td>
<td></td>
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</tr>
<tr>
<td>Class</td>
<td>Classifier</td>
<td>P-marker</td>
<td>Phrase structure marker</td>
</tr>
<tr>
<td>Clf</td>
<td>Classifier</td>
<td>P-rules</td>
<td>Phrase structure rules</td>
</tr>
<tr>
<td>COMP</td>
<td>Completive aspect</td>
<td></td>
<td></td>
</tr>
<tr>
<td>conc</td>
<td>concrete</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONT</td>
<td>Continative aspect</td>
<td>Q</td>
<td>Question</td>
</tr>
<tr>
<td>D</td>
<td>Dative</td>
<td>Quant</td>
<td>Quantifier</td>
</tr>
<tr>
<td>DEC</td>
<td>Declarative</td>
<td>QUEST</td>
<td>Question</td>
</tr>
<tr>
<td>DEM</td>
<td>Demonstrative</td>
<td>S</td>
<td>Sentence</td>
</tr>
<tr>
<td>Demarc</td>
<td>Demarcation</td>
<td>SOV</td>
<td>Subject-object-verb</td>
</tr>
<tr>
<td>E</td>
<td>Essive</td>
<td>T</td>
<td>Time</td>
</tr>
<tr>
<td>ENT</td>
<td>Entailment marker</td>
<td>T-rules</td>
<td>Transformational rules</td>
</tr>
<tr>
<td>Excl</td>
<td>Exclusive</td>
<td>TOP</td>
<td>Topic marker</td>
</tr>
<tr>
<td>F</td>
<td>Factitive</td>
<td>Tr</td>
<td>Translative</td>
</tr>
<tr>
<td>I</td>
<td>Instrumental</td>
<td>V</td>
<td>Verb/predicate</td>
</tr>
<tr>
<td>IMP</td>
<td>Imperative</td>
<td>VSO</td>
<td>Verb-subject-object</td>
</tr>
<tr>
<td>Inc</td>
<td>Inclusive</td>
<td>WH</td>
<td>Relative PRO-article</td>
</tr>
<tr>
<td>K</td>
<td>Case marker</td>
<td>#</td>
<td>Empty verb</td>
</tr>
<tr>
<td>L</td>
<td>Locative</td>
<td>$</td>
<td>zero</td>
</tr>
<tr>
<td>M</td>
<td>Modal (more correctly, non-modal proposition.)</td>
<td>I</td>
<td>First person</td>
</tr>
<tr>
<td></td>
<td>Modal proposition.</td>
<td>II</td>
<td>Second person</td>
</tr>
<tr>
<td></td>
<td></td>
<td>III</td>
<td>Third person</td>
</tr>
</tbody>
</table>
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. 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 thesis 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.

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
THE DISTRIBUTION OF THE LISU LANGUAGE
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 { -u }. 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.

The remainder of the thesis 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. 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, and one result is that throughout the thesis there occur sentences with incorrect translations. 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 on page 181 topics are described as 'focal'. Other items marked as focus in examples are in my opinion not focal at all, and if my judgement is correct this indicates an inadequate description of the surface form of this feature.

1.3 Raison d'être 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 different 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 thesis 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 (1968:214-215) 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:
1. 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, subject and object positions result 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 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 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 ānā khụ -ä
tiger TOP dog bite-DEC
Tigers bite dogs.

1a. lāma nya ānā khụ -ä
tiger TOP dog bite-DEC
Dogs bite tigers.

2. ānā nya lāma khụ -ä
dog TOP tiger bite -DEC
Tigers bite dogs.

2a. ānā nya lāma khụ -ä
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
have identical surface form but have completely different meanings. While I̞m̰a 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 most 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 ɳ¥a 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 (1968:334-337) 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 co-incides 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 Chomsky (1965:220-21) 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 verbals 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-à
Asa TOP go -DEC
Asa is going.
9. dye-à 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 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. *nîme nya ŋwa nya nwu hi basyia āsa lē yî to-day TOP I TOP you house beside Asa to he

nâpu balâtsha fwy yê - w ear slap 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
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 अना '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. अना न्या एस्यः नाले त्या - अ
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 forms which reflect 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

$S_X = [NP_a न्या] \text{ topic } ABC$

and $S_{X+1} = [NP_b न्या] \text{ topic } XYZ$

Then $NP_a$ and $NP_b$ 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 न्या 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 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 that rather the appearance of the marker न्या 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 xe which replaces nya when a new topic is introduced. Notice the type of semantic operation achieved by the topic markers in the following:

13. låma nya ânà khû - ĝ
tiger TOP dog bite - DEC
(i) Tigers bite dogs.
(ii) Dogs bite tigers.

14. ânà xe låma khû - ĝ
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 (i), since the xe signals a new topic. If 13 means (ii), then 14 must have meaning (ii) as well. The discourse must mean 'Dogs bite tigers. Tigers bite dogs.' Not also the following:

15. låma nya ânà là khû ĝ ě - ĝ
tiger TOP dog to bite give -DEC.
A tiger bit a dog.

16. ýf nya na le - ĝ
he TOP sore become - DEC.
He got hurt.

17. ýf xe na le - ĝ
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. âsa xe the mu - ĝ
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 syntactic rules.
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. ƙalỳ A kinship term for senior brother's wife.
   B. yɪ kuku zámè
   WH- s.bro.wife
   Senior brother's wife.

   B. mìchà khwa dwù
   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 or 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 to some that have been suggested, in particular to 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: p.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= Tom: y = Bill

the correct meaning can only be derived from (21) if an a priori assumption has been made that English is VSO language. To make 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. $\text{hit } x, y$: $x$ is agent: $x = \text{Tom}$; $y$ is patient: $y = \text{Tom}$.

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

23. $S + P + M$

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

$A + \text{Tom}$

$D + \text{Bill}$

$V + \text{hit}$

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.
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 lah-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 lah-ʔah; 'tree' is cited as sūh-dzw on page 6, but as sūh-dzw on page 269; 'frog' is written as u0-pā on page 9, but as vō-pā 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; khū '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-phā 'leaf' should have free vowel on final syllable; ṭah-phā '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 crack' 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 mis-translations 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: /dwiya; beghinya, ṭhwa 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.

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 /ämtyaw/ 'to the field'. If this is a single word, then so is the following (my orthography):
âme thā āsa āvāt fwy syā 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' /syf/ and /yʃyʃ/ which are said to mean 'in that case, in the case of' and to indicate that the following clause is related to following 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 dù and -a which Roop claims indicate 'emphasis' and nominalization respectively. In fact dù marks reported speech, and -a marks declarative sentences. Similarly swf 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, (they) will have been told 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):

\[
\text{ásalén} \text{á} \text{māe} \text{mad} \text{á}
\]
\[
\text{Asa=to=TOP somebody not=hit}
\]

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 hit Asa, and thus /ámāe'/ is the focus of the sentence rather than /ása'/.
11. I am unable to suggest a way of formulating these rules and am uncertain about the repercussions this type of rule might have for the general theory. At various points in this thesis 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-ordering 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.

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:

\[ S \rightarrow M + P \]
\[ P \rightarrow V + C_1 + \ldots + C_n \]

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 a different order. 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 thesis 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 Experiencer.

**Factive (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 re-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 íê which for sake of convenience I will gloss as 'to', and the Essive has the postposition tí which I shall gloss as 'out of', and the Locative has either wa 'to' or tsú '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', tsú 'from', tæthywë 'direction of'; time adverbs are marked by thă 'at'; manner adverbs are marked by le 'in ... manner'; and the benefactive is marked by mészá 'for'. All of these markers are postpositions.

Lisu has no nouns for 'agent', 'place', 'instrument' etc., but certain cases have 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 $+[\text{A}]$ can occur in sentences having a proposition in which an 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 $+[\text{A}]$ verbs:

Verbs which have this specification include the following:

- $\text{lwi}$ 'to wiggle'
- $\text{tjf}$ 'to cough'
- $\text{t\textasciitilde}$ 'to jump'
- $\text{sw\textasciitilde}$ 'to whistle'
- $\text{ty\textasciitilde}$ 'to rotate'
- $\text{l\textasciitilde m\textasciitilde}$ 'to wave'

The fact that verbs in this class have the specifications $+[\text{A}]$ 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 $\text{tjf}$ 'to cough' has a full case frame $+[\text{A}]$, i.e. it may not co-occur with any optional deep cases, while $\text{lwi}$ 'wiggle' has a full case frame $+[\text{A}(0)]$ and may co-occur with an Objective.

Note the following:
1. áša nya lwig tyś -a
   Asa TOP wiggle CONT-DEC
   Asa is wiggling (squirming around).

2. áša nya yàpu lwig tyś -a
   Asa TOP tin wiggle CONT-DEC
   Asa 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 lwig 'wiggle' have the same case frame specification as tyś '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 thù 'to soak' only co-occurs with mèha 'rain' or wàsì 'hail', and with other nouns a causative construction has to be used which incorporates a different verb phà 'to be soaking wet', (see Chapter IV for a discussion of causatives). Similarly the verb dywè 'blow' occurs only with the noun mìhi 'wind', and the verb pwè 'to thunder' occurs only with the noun mègwù 'thunder'.

3. áša nya mèha thù -a
   D I V
   Asa TOP rain soak-DEC
   The rain drenched Asa.

4. áša nya mìhi dywè-à
   D I V
   Asa TOP wind blow-DEC
   The wind blew against Asa.
5. ami nya mëgwu pwë -a
   O I V
field TOP thunder thunder-DEC

The lightning (lit. thunder) struck the field.

The +[I_] verbs have a full specification +[(A)I(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
té 'to sting, burn'       ká 'to prick'
xé 'to cut'             thá 'to scald'

Consider the following:

6. átú nya té -a
   I V
fire TOP sting-DEC

Fire burns (lit. stings).

7. átú nya ása lá té -a
   I D V
fire TOP Asa to sting-DEC

The fire burnt Asa.

8. alë nya ása lá átú té -a
   A D I V
Ale TOP Asa to fire sting-DEC

Ale branded Asa with the fire.

9. thywù nya ká -a
   I V
thorn TOP prick-DEC

Thorns prick/thorns are prickly.

10. ása nya thywù ká -a
    D I V
Asa TOP thorn prick-DEC

A thorn pricked Asa.

11. alë nya ása lá thywù ká -a
    A D I V
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:

tshì 'fat'        nì 'sick'
dù 'prostrate'    the 'clever'
vwì 'big'         zì 'little'
phwu 'white'      nì 'black'
12. ása nya tshî-ä
D V
Asa TOP fat-DEC
Asa is fat.
13. ása nya na -ä
D V
Asa TOP sick-DEC
Asa is sick.
14. ása nya nã -ä
D V
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. ása nya tshî -ä
D V
Asa TOP worried-DEC
Asa is worried.
16. alæ nya ása lá tsy -ä
A D V
Ale TOP Asa to worry-DEC
Ale alarmed Asa.
17. ása nya thyé lë -ä
D V
Asa TOP peaceful become-DEC
Asa is resting quietly.
18. alæ nya ása lá thyé -ä
A D V
Ale TOP Asa to pacify-DEC
Ale pacified Asa.

2.31.d +[O_] 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:

dywû 'withered'
$kyä$ 'dried out'
syî 'wide'
dyî 'increasing in size'
thywê 'brittle'
$?ç$ 'stinking'
zỳlwê 'slippery'
zî '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. áŋə n̂̂̂̂̂̂̂̂ ŷ̂̂̂̂̂̂ d̂̂̂̂̂̂̂ u-ə̂̂̂̂̂̂̂ 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 +[O_] 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 lwè 'warm', ṭî 'sinking', and be 'untied, loosened'. Once again, this class, like the +[(A)D_] verbs has a slightly different surface form for each verb when the optional Agentive occurs in the same proposition.

Note the following:

20. ŵ̂̂̂̂̂̂̂ û̂̂̂̂̂̂− NŶ̂̂̂̂̂̂ l̂̂̂̂̂̂̂− V
    vegetable TOP warm-DEC
    The vegetables are warm.

21. ásə n̂̂̂̂̂̂̂ ŷ̂̂̂̂̂̂ ŵ̂̂̂̂̂̂− V
    Asa TOP vegetable warm-DEC
    Asa is warming the vegetables.

22. ŷ̂̂̂̂̂̂ tĥ̂̂̂̂̂̂− V
    The knot is loose.

23. ásə n̂̂̂̂̂̂̂ ŷ̂̂̂̂̂̂− V
    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 '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:

dí 'to appear - tubers'
dwè " " - fruit'
hwe " " - holes'
yfare " " - cracks'
ywe " " - teeth, hair, plants'
hwè " " - mud'
li " " - rain'
Note the following:

24. bį̂ nya dį̄ -a
   F  V  
taro TOP form-DEC
   Taro tubers are forming / have formed.

25. yį̄-sį̄ nya dwe -a
   F  V  
WH-fruit TOP form-DEC
   Fruit is forming / has formed.

26. yį̄-tywé nya ɣa -a
   F  V  
WH-crack TOP form-DEC
   A crack is forming.

27. bį̂ -tya nya bį̂ dį̄ -a
   L  F  V  
taro-root TOP taro form-DEC
   Taro tubers are forming on the taro roots.

28. ɣama nya yį̄-sį̄ dwē -a
   L  F  V  
banana TOP WH-fruit form-DEC
   Fruit is forming on the banana trees.

29. lęké nya yį̄-tywé ɣa -a
   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. lỳma thì ma dỳ -a
    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,O_] 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'  
de 'to beat'  
̱f 'to pound'  
fw² 'to shoot'  
syã '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 de 'beat', ̱f 'pound', syã 'fix', and sì 'sew', may not.

31. ása nya ̱f-phwêt be -q
   A O V
Asa paid the price (i.e. he did not get it free).

32. ása nya a³ le ̱f-phwêt be -q
   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 dzà 'eat' and tsá '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. áva³ nya khèsa dzà-q
   A O V
pig TOP corn eat-DEC
The pig is eating corn.

34. ása nya áva³ le khèsa tsá -q
   A D O 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 tsá '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 de '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 Factitive instead of an optional Dative. The verb \(\text{tf}'\) 'pound' is an example. Note the following:

35. \(\text{ása nya tshåbu yif-xè tf -q}\)
\(A\ O\ F\ V\)
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 \(\text{tf}'\) 'to pound' has the alternative frame \([A,I_]\). Bearing in mind that all \([A,O_]\) may have optional Instrumentals note the following sentences which have \([A,O,V]\), \([A,O,I,V]\) and \([A,I,V]\) propositions:

36. \(\text{ása nya tshåbu tf -q}\)
\(A\ O\ V\)
Asa TOP salt pound-DEC
Asa is pounding salt.

37. \(\text{ása nya tshåbu tshìdwù tf -q}\)
\(A\ O\ I\ V\)
Asa TOP salt pestle pound-DEC
Asa is pounding salt with a foot-pestle.

38. \(\text{ása nya tshìdwù tf -q}\)
\(A\ I\ V\)
Asa TOP pestle pound-DEC
Asa is operating the foot-pestle.

The verb \(\text{wá}'\) 'to shield' is another in this class. Note:

39. \(\text{ása nya khåthwu wá -q}\)
\(A\ O\ V\)
Asa TOP basket shield-DEC
Asa is shielding the basket.

40. \(\text{ása nya khåthwu ylpwù wá -q}\)
\(A\ O\ I\ V\)
Asa TOP basket cape shield-DEC
Asa is shielding the basket with a rain-cape.
41. ása nya ṣyəpwa wá -ã
   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,O] verbs which have alternative specification as +[A,F] are a small class and can be exemplified by the verbs syə 'fix' and de '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. ása nya hí syə-ã
   A O V
Asa TOP house fix-DEC
Asa is mending the house.

43. ása nya hí syə-ã
   A F V
Asa TOP house fix-DEC
Asa is building a house.

44. ása nya áṯhá də -ã
   A O V
Asa TOP knife forge-DEC
Asa is forging a knife (i.e. is re-shaping or re-tempering an old knife.)
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,O/F/I_]. These thus have three alternative types of proposition in which they can occur. One of these verbs is ši 'sew'. Observe the following:

46. ása nya bethy f ši -ą
   A O V
   Asa TOP jacket sew-DEC
   Asa is darning the jacket.

47. ása nya bethy f ši -ą
   A O V
   Asa TOP jacket sew-DEC
   Asa is tailoring a jacket (i.e. sewing a jacket from pieces of cloth).

48. ása nya thyañą ši -ą
   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 áthá zywè-ą
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 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 høy 'murder', pwë 'scold', syf 'put to sleep', dyt 'meet'.

50. ása nya zànwe lá pwë -ą
Asa TOP child to scold-DEC
Asa scolded the child.

51. ása nya zànwe lá syf -ą
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 n̄wa lá khwu-ą
Asa TOP me to call-DEC
Asa called me.

53. ása nya n̄wa lá wùwu khwu-ą
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 syą 'to kill' which only occurs with the Factive noun yf-pó 'an end'.

54. ása nya yf-pó syą-ą
Asa TOP WH-end kill-DEC
Asa killed something to an end (more literally: Asa 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:

- sywè 'to walk' requires the Factitive dzagwu 'road'
- gwâ 'to sing' " " mègwâ 'song'
- thyè 'to dance' " " gwa 'dances'
- thywè 'to speak' " " pûxwâ 'speech'
- thwu '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. ása nya xwâ thúwú zywè-à
   A F V
   Asa TOP headman # -DEC
   Asa is (performing the function of) headman.

56. ása nya tshu-vwù zywè-à
   A F V
   Asa TOP man -big # -DEC
   Asa 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,O_] 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  ámbu 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  ámbu 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 Facti-
tive nouns. Examples of the class are:

bwt 'make a noise' lỳw 'bore into'

thwu 'pierce' tỳwu 'erode'

59. tshìdwù nya yî-syè bwt-á
   I F V
pestle TOP WH-noise make-DEC
The foot-pestle is making a noise.

60. thywëlwè nya yî-khwu lỳw-á
   I F V
awl TOP WH-hole bore-DEC
The awl is boring a hole.

61. dìyì nìa sasù tywù -á
    I F V
water TOP gully erode-DEC
The water eroded a gully.

Some of the verbs in this class such as lỳw 'bore' may
occur with an optional Agentive, while others such as bwt
'make a noise' may not. The verb bwt 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 yî-syè bwt-á
    A F V
Asa TOP WH-noise make-DEC
Asa is making a noise

63. ása nya yî-khwu lỳw-á
    A F V
Asa TOP WH-hole bore-DEC
Asa is boring a hole (with something).
2.32.1 +[D,O_] 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:

wã 'to obtain'

nwe 'to desire'

64. ása nya dza wã -ã
    D          O      V
    Asa TOP rice get-DEC
    Asa obtained some rice.

65. ása nya dza nwe -ã
    D          O      V
    Asa TOP rice desire-DEC
    Asa wants some rice.

66. ása nya dza hãmã -ã
    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 +[O_] 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 possessive 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

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

\[
\text{NP S S NP}
\]

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 's'. 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. [thûyê [thûyê ása lâ VERB]]

\[
\text{O D V}
\]

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. **thuya ása lámá**
   D O
books Asa to ones

The books which are Asa's.

The preposed relative then has the form

67b. **ása thuya**
   D
Asa books
Asa's books.

Any other posited base form underlying (67b) appears to be inadequate in that the appearance of the Dative marker lámá 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 constructions.

Some +[D,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 +[D,O] form, and mú 'to focus on, to aim at' which is the +[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 su 'learn' are to be analysed as one verb. This verb then has the form só in [D,O,V] propositions, and su in [A,O,V].

2.32.j +[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 phũ 'to reach a biological or social stage in one's life', pé 'to be changed into another form', and phywá 'to attain'. Note the following:

68. **ása nya zágwulá phũ -q**
   D F V
Asa TOP youth reach-DEC
Asa is becoming a young man (i.e. no longer a child)
69. ása nya lâma pê -ã
   D  F  V
Asa TOP tiger become-DEC
Asa turned into a tiger (i.e. he is a were-tiger)

70. ása nya xwâthu phywã -ã
   D  F  V
Asa TOP headman attain-DEC
Asa succeeded in becoming headman.

2.32.k +[O,L_] verbs
Verbs in this class are the verbs of motion and include

dye 'to go'
la 'to come'
ywa 'to descend'
dwê 'to ascend'
lwê 'to roll'
bywê '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 specified as +[O,L_], [A,O,L_], [A,L_], and
[A,F_]. This is the verb dwê which has the alternative surface
form twf in [A,O,L,V] propositions. Observe the following:

71. ása nya hi khwû wa dwê -ã
   O  L  V
Asa TOP house inside to enter-DEC
Asa entered the house.

72. ása nya mithya dwê -ã
   A  L  V
Asa TOP ground enter-DEC
Asa was digging (into the ground).

73. ása nya wałâkhwu dwê -ã
   A  F  V
Asa TOP pit enter-DEC
Asa was digging a pit.

74. ása nya phwu mithya wa twf -ã
   A  O  L  V
Asa TOP money ground to enter-DEC
Asa buried the money in the ground.

There are two empty verbs with +[O,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 dâ occurs if it is an inanimate one.
75. ása nya tha tyā-ã
   O   L   V
   Asa TOP here # -DEC
   Asa is here / Asa lives here.

76. áthā nya tha dā-ã
   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
vwù 'sell'       njwá 'lend, for temporary use'
bwe 'apportion'  thyl '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'         njwá 'borrow, for temporary use'
bwe 'have a portion'  thyl 'borrow, to be repaid in kind'.

77. ása nya njwá lā mɔ   vwù-ã
   A   D   O   V
   Asa TOP me to cloth sell-DEC
   Asa sold some cloth to me.

78. njwá nya mɔ   vwù-ã
   D   O   V
   I TOP cloth buy-DEC
   I bought some cloth (from an Agent x)

79. ása nya njwá lā pu njwá-ã
   A   D   O   V
   Asa TOP me to gun lend-DEC
   Asa lent a gun to me.

80. njwá nya pu njwá-ã
    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. ñwa nya åsa tsu’ me vw-u-a
   D    ?L    O    V
   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.

   The [A,D,O_] class of verbs includes an empty verb which has the surface form gè 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:

   tshê 'wash'
   ?wê 'to ladle'
   thyê 'to slash'

   Asa washed the bowl with water.

82. åsa nya lékê adya tshê-a
    A    O    I    V
    Asa TOP bowl water wash-DEC
    Asa ladled out the vegetables with a gourd ladle.
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.
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 x 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 thesis 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

   byャmaga tó -ャ
   A       V
   bee     sting-DEC
   The bee stung.

   ása nya álè lè áthá ká -ャ
   A       D   I   V
   Asa TOP Ale to knife stab
   Asa stabbed Ale with a knife

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 tshl '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:

\[ ?^* \text{ yí tha tyä-ä ye yí tha mä tyä} \]

\[ \text{DEC TOP he here not} \]

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 supercedes 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\(^1\)) 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.

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: 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 predicate⁴:

P-marker:

```
  P
  /\  
 S  M
```

```
P
  \  /  
 O  A  D
```

```
  NP
\  /  /  
 phwu  ə̃̃sa  ə̃̃lẽ  gẽ
```

(money) (Asa) (Ale) (to) (give)

Presupposition: x occurred.

Assertion: \( x = gẽ [\text{phwu}^0, \text{ə̃̃sa}^A, \text{ə̃̃lẽ}^D] \)

\( (x = \text{give} [\text{money}^0, \text{Asa}^A, \text{Ale}^D]) \)

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 DO.
The transformed P-marker is

\[\text{S} \rightarrow \text{A} \rightarrow \text{P} \rightarrow \text{M}\]

\[\text{NP} \rightarrow \text{K} \rightarrow \text{D} \rightarrow \text{O} \rightarrow \text{V}\]

\[
\begin{array}{c}
\text{Asa} \\
\text{(Asa)}
\end{array}
\begin{array}{ccc}
\phi & \text{Ale} & \text{to} \\
\phi & \text{(Ale)} & \text{(to)}
\end{array}
\begin{array}{c}
\text{læ} \\
\text{(læ)}
\end{array}
\begin{array}{c}
\text{phwu} \\
\text{(money)}
\end{array}
\begin{array}{c}
\phi \\
\text{(give)}
\end{array}
\]

After the topic marker has been inserted, the following well-formed sentence is generated (the modal component has been assumed):

\[\text{Asa nya alæ læ phwu gé -å}
\]

Asa TOP Ale to money give-DEC

Asa gave some money to Ale.

2. A two-argument predicate:

The P-marker:

\[\text{S} \rightarrow \text{P} \rightarrow \text{M}\]

\[\text{NP} \rightarrow \text{K} \rightarrow \text{D} \rightarrow \text{I} \rightarrow \text{V}\]

\[
\begin{array}{c}
\text{Asa} \\
\text{(Asa)}
\end{array}
\begin{array}{c}
\text{læ} \\
\text{(læ)}
\end{array}
\begin{array}{c}
\text{thywu} \\
\text{(thorn)}
\end{array}
\begin{array}{c}
\phi \\
\text{(prick)}
\end{array}
\]

Presupposition: \(x\) occurred

Assertion: \(x = ká [\text{Asa}^{D}, \text{thywu}^{I}]\)

\((x = \text{prick} [\text{Asa}^{D}, \text{thorn}^{I}])\)

Since none of the arguments in the proposition of the P-marker occur as components of the presupposition, the rules of primary topicalization operate. Since there is no A node, the node D is raised and moved to the front of the sentence.
The remaining argument is already in focus position and so the focus ordering rule is redundant. The transformed P-marker is:

\[ \text{2a.} \]

```
 S
   /\  \\
  D   P  M \\
     /\     \\
    NP  K  I  V \\
       /\     \\
      NP  K  \\
     /\      \\
    ása  lá thywù  g  ká
```

(Asa  (to)(thorn)  (prick))

The surface form of this sentence is

\[ \text{2b.} \]

```
Asa to TOP thorn prick-DEC
```

Asa was pricked by a thorn.

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:

```
            S
           /\  
          P   M
               /\  
              O   V
            /\   /\  
           NP  K  s'ge  bê
     (box)     (burst)
```

Presupposition: x occurred

Assertion: x = bê [s'ge]
            (x = burst [box])

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

3a.

```
            S
           /\  
          O   V
            /\   /\  
           M  K  s'ge  bê
     (burst)     (box)
```

The surface form of the sentence is

3b. s'ge nya bê le ñw
    box TOP burst become-DEC

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:

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

Assertion: \( \text{gē} [\text{ása}^A, \text{alē}^D, \text{phwu}^O] \)
\( \text{give [Asa, Ale, money]} \)

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

\( 4a'. \text{ása nya alē lā phwu gē -g} \)
\( \text{A D O V} \)
\( \text{Asa TOP Ale to money give-DEC} \)

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

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

Assertion: \( \text{gē} [\text{ása}^A, \text{alē}^D, \text{phwu}^O] \)
\( \text{give [Asa, Ale, money]} \)

The topic is \( \text{phwu}^O \) and the focus is \( \text{alē}^D \), and after the raising and moving rules the surface form generated is
4b'. phwu nya ása a lė lā ţe gē -ə
O A D V
money TOP Asa Ale to give-DEC
Asa gave Ale some money.

4c. Presupposition: Asa was the agent in some activity
X in which Ale was involved as the patient.

Assertion: gē [ásaA, a lēD, phwu0]
give [Asa Ale money]
The topics are ásaA and a lēD and the focus is phwu. The
surface sentence after movement is completed is

4c'. ása nya a lē lā nya phwu gē -ə
A D O V
Asa TOP Ale to TOP money give-DEC
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 a lē lā gē -ə
Asa TOP money TOP Ale to give-DEC
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 =
gave to Ale'. Thus sentence (5) could be the answer to the
question

5a. ása nya phwu a l i ye-ə?
Asa TOP money how do-QUERY
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 his sentence could be 'Asa gave money to x' and the assertion could be intended to establish that x = Ale. Thus it could be the answer to the very different question

5b. ąsa nya phwu āma lā gā-ā?
Asa TOP money who to give-QUERY
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)

![Diagram of sentence structure](image-url)
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 relativization rules (see chapter 4), and the topicalization of the highest O node generate

6b. ása phwu gè -â ma nya ále
Asa money give-DEC one TOP Ale

The one Asa gave money (to) is Ale.

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 xe

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 xe 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 xe 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 xe 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 of this principle consider the following:

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 átha dè -ã
   Asa TOP knife forge -DEC
   Asa is forging a knife.

10. ása xe átha dè -ã
    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. aponsa nya atha de -a
Asa TOP knife forge-DEC
Asa is forging a knife.
Presupposition: Asa is forging y.

9b. aponsa nya atha ma de
Asa TOP knife not forge
Asa is not forging a knife.
Presupposition: 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 atha de -a /aponsa xe atha de -a
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 atha ma de /aponsa xe atha ma de
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 atha ma de /*aponsa xe atha de -a
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 xe 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 xe.

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:
   (i) What Asa is forging is a knife
   (ii) What Asa is doing is forging a knife

The correct interpretation of a sentence with a topic marked with the morpheme xe 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. a/ša nya tshibe thyš-æ /áša xe átha dá -æ
   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 xe 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 xe and the presupposition is inherent in the final na. Note the following:
12. ăsa xe ăthâ dë -ă na
Asa TOP knife forge-DEC UNEXPECTED
Even Asa was forging a knife.

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

13. ăsa xe ăthâ dë -ă / ălē xe ăthâ dë -ă
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. ăsa xe tshîbe thye-ă / ălē xe ăthâ dë -ă
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 thesis the over-simplified statement was made that xe marks a change in topic (see 1.4). This much is true, but there are also sentences in which a topic change takes place but is not marked by xe, 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. ălē nya tshîbe thye-ă / ăsa nya ăthâ dë -ă
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 xe 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 xe, 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. ásā nya áthā xe dē -ā
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 sentence structures. If both ásā and áthā xe 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 ásā 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. *áthā xe ásā nya dē -ā
*knife ENT Asa TOP forge-DEC

17a. *āsā nya áthā xe nyya dē -ā
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 वा 'Asa' and आ 'very'. After topic raising and the proper negative lowering (a rule to be discussed in chapter V), the following surface structure results:

18a. 

\[
\begin{array}{c}
\text{S} \\
\text{\text{D \ Manner \ P \ M}} \\
\text{\text{\text{NF \ NEG \ V}}}
\end{array}
\]

\[
\begin{array}{c}
\text{Asa} \\
\text{very} \\
\text{not sick}
\end{array}
\]

18b. वा न्या आ न्या मा ना 
Asa TOP very TOP not sick
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.

3.5.1 Presupposition-creating topics

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

19. वा था न्यु पासी-ा आ ज-ा ण व आ न्या येस्टर्ड टाइम यू प्लाइन-टो गो -चैर-एक फॅक्ट स्पे-एक टोप 
Assuming that it is a fact that you went to the plain yesterday, ...

\text{\text{n्यु न्या वा मा मु -ा}} \\
you TOP Asa not see ?
\text{\text{दिन्त यू सी आसा?}}
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.

The surface structure of (19) is

19a. 

\[ S \]

\[ \text{NP} \]

\[ \text{O} \]

\[ \text{NEG} \]

\[ \text{V} \]

\[ \text{QUESTION} \]

\[ \text{dámé} \]

\[ ðhâ \]

\[ nwu \]

\[ \text{yesterday} \]

\[ \text{TIME} \]

\[ \text{you} \]

\[ \text{páts]-a} \]

\[ dye]-a \]

\[ ꦷu \]

\[ nwu \]

\[ ñsa \]

\[ mā \]

\[ mu \]

\[ -â \]

\[ \text{plain-to go} \]

\[ \text{-DEC} \]

\[ \text{YES} \]

\[ \text{you} \]

\[ \text{Asa} \]

\[ \text{not} \]

\[ \text{see} \]

\[ ? \]

\[ \text{b̤̄} \]

\[ -ã \]

\[ \text{say} \]

\[ \text{-DEC} \]

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 б 'say, assume etc.' are embedded as complements in a higher sentence which also has the main verb б '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. аса хи кху ва тьдье -у ну б -а б -а нья
Asa house inside to return-DEC FACT say-DEC say-DEC TOP
Assuming that I have been saying that Asa went home,

ьи пу нья тха тьядё-а на
he gun TOP here left -DEC UNEXPECTED
his gun however, he left behind here.

Such summaries of presupposition mark the beginnings 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 б 'say', the new paragraph often commences with a summary of the quote followed by a triple occurrence of the
verb b sworn '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] b sworn -
[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. ṣif-phwî xú -
[WH-price right-DEC TOP I TOP horse sell-DEC]
If the price is right I will sell (my) horse.

Surface P-marker:

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

Presupposition: The price is/was/will be right.
Meaning: Since the price is/was/will be right, I will sell (my) horse.

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 xe:

23. yí-phwñ xú -ã xe nya nya āmù vwu -ã
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 ye rather than xe. Note the difference between the following:

24. mæha li -ã nya nya nñe kñësa tá -ã
rain fall-DEC TOP I TOP corn plant-DEC
If it rains I will plant corn.

24a. mæha li -ã xe nya nya kñësa tá -ã
rain fall-DEC ENT I TOP corn plant-DEC
If it rains also I will plant corn.

24b. mæha li -ã ye nga nya kñësa tá -ã
rain 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. yì-phwì xù -ã hínyì ñwa ñya ámù vwù -ã
   WH-price right-DEC TOP I TOP horse sell-DEC
   The price is/was right so I am selling/sold/will sell my horse.
   Surface P-marker:

   ![Surface tree diagram]
   - S
   - A
   - P
   - M
   - NP
   - O
   - V

   yì-phwì xù -ã ñwa ámù vwù -ã
   WH-price right-ASS I horse sell -DEC
   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 hínyì to wúnyì. Note the following:

26. ñwa ñya ámù ñya yì-phwì xù -ã wúnyì vwù -ã
    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 referrent 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. ꙙ waitFor a dye-a hinya amu vwU-s
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 to account in some way so as to account for the phenomena. This would apparently need to be 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. The 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
  /\V
 S  S
  /\  /
  S  S
CONDITION  RESULT
```
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.

\[
\begin{array}{c}
\text{S} \\
\text{S} \rightarrow \text{V} \\
\text{S} \rightarrow \text{V} \\
\text{CAUSE} \\
\text{RESULT}
\end{array}
\]

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 hîñyi, or focused and thus marked by wûñyi.

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 topocalized 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 (ii) below: [(ii) is the answer to (i)]

(i) ása nya ásyə yə-a?
Asa TOP what do-QUESTION
What is Asa doing?

(ii) ása nya ávə lə nətšəl kə -ə
Asa TOP pig to medicine prick-DEC
Asa is giving the pig an injection.

In (ii) 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 (iii) is completely synonymous with (ii).

(iii) ása nya ávə lə nətšəl kə yə-ə
Asa TOP pig to medicine prick do-DEC
Asa 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 yə '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) ñsa is the theme, and in (4b) it is the 'given' as well as the theme.

6. This is the opposite claim to Roop's (1970:266) that xe (written in his transcription as he) is a contrasting, particularizing or limiting focus marker, while nye 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 thesis. 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 $\text{NP} \rightarrow (D) \text{N} (S)$. 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 $<\pm \text{Def}>$. Thus $\text{NP} <\pm \text{Def}>$ is transformed into

\[
\begin{array}{c}
\text{NP} \\
<\pm \text{Def}>
\end{array}
\]

This rule accounts for demonstrative articles as well as the usual determiners. The features associated with the demonstratives, such as $<\pm \text{proximity}>$, 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 <±demarkation>, 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 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 ṃ which happens to be the marker of relative clauses. Both the 'base' position and the 'transformation' position above would have to treat the fact that the relative marker and the morpheme associated with the demonstratives have the same phonological shape as a coincidence.

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 PRO-nominalization

The generalized rule of relative clause pronominalization which accounts for the appearance of ṃ 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 <-PRO> to <+PRO> if the noun to which the feature is attached is equivalent\(^1\) 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 <+PRO> onto a new node dominated by the NP but specified as <+Art> and not <+N>. This rule thus generates (lb) from (1):

\[\text{(lb)} \text{from (1):}\]
The final lexical pass provides the morpheme ýf (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 (Det) N (S), but will keep to the rule now more generally accepted, namely

NP + NP (S)

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

2. láthyu ýf yáph́ thýi -á ma
   person WH- opium smoke-DEC one
   The person who smokes opium
The relative pronominalization rules operate on the second occurrence of ląthyu transforming its specification into <+PRO> and creating the PRO-article node. The resulting P-marker is

2b.

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.

This is the surface structure of sentence (2) after the final lexical pass has inserted the PRO-article yf and the PRO-noun ma. 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 ma 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 S 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. lāthyu yāphi thỹl -mā 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.²

2e. yāphi thỹl -mā ma lāthyu
   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):

2f.

![Diagram of tree structure]

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. yâphi thyî lâthyu
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 pronounization 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. âme thə demi wa dza ŋə swu yesterday on field in rice reap ones
   They who were reaping rice in the fields yesterday.

3a. âme thə demi wa dza ŋə dzu yesterday on field in rice reap instruments
   That which was used for reaping in the fields yesterday.

3b. ása demi wa dza ŋə təf
   Asa field in rice reap time
   The time at which Asa reaped rice in the fields.

3c. ása âme thə dza ŋə gwu
   Asa yesterday on rice reap place
   The place at which Asa was reaping rice yesterday.
The base structure of the above sentences is basically that for all noun phrases containing relative clauses, namely NP's. 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:

\[
\begin{array}{cccc}
\text{swu} & \text{dwu} & \text{gwu} & \text{ts}\vline \\
<+N> & <+N> & <+N> & <+N> \\
<+PRO> & <+PRO> & <+PRO> & <+PRO> \\
<+A/D> & <+I> & <+L> & <+T> \\
<\pm[-S]> & <+[-S]> & <+[-S]> & <+[-S]>
\end{array}
\]

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. nyîma byâ dwu
   heart shatter instruments
   Catastrophes

5. nyîma thyî 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 khwâ w2 ðdye dwu ñu
   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-base\(^3\) structure (7a):

7. ìme thè demí wà ása γə -maju 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 γ'-me 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 γə 'reap' 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. *ìme thè demí wà ása γə
   *yesterday on field in Asa reap

*The yesterday-in-the-field-Asa-reap
4.23 Relative clauses with adjectival verbal predicates

When the main verb of a relative clause in 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. \(\text{lətyu the -a ma person clever-DEC one}\)

The person who is clever

The base structure of this NP is as follows:

8a. 

The regular relative pronominalization rule operates on the second occurrence of lətyu 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. \(\text{lətyu yf the -a ma person WH clever-DEC one}\)

The person who is clever.

Optional yf deletion results in the string (8). The optional extraposition rule can move the relative clause to the front of the NP yielding the string

8c. \(\text{the -a ma lətyu clever-DEC one person}\)

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

A low-level optional rule may reduplicate the verb:

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

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

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 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 (lla):

11. láthyu nó ma
    person that one

That person above (some presupposed point of reference)

lla.

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
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 (llb) raises the NP of the relative S and adjoins it to the higher dominating NP node. The normal relative pronominalization rule then applies, and the result after segmentation is the tree llc.
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 γή 'WH-', and for the PRO-noun it inserts the usual ma 'one'. This yields the surface string

11. làthyu nó ma
   person that one
   That person above

The structure of this string is that of (11c) minus the extraneous S component. That this is the correct structure can be seen by an examination of such sentences as:

12. làthyu gu ma nña the ma mà sywə
   person that one TOP this one not resemble
   That person does not resemble this one.

12a. làthyu the -the gu ma nña the ma mà sywə
    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 làthyu and that the fuller form of the sentence before the deletion would be

12'. làthyu gu ma nña làthyu the ma mà sywə
    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 làthyu the-the 'clever person' or làthyu '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 là khā -a 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 khê -ā ma
*person rich poor to oppress -DEC one

Rich people who oppress the poor

If one deletion rule is posited then the noun là thyu must be
analysed as a noun phrase. If it remains to produce supporting
data for the position that the string nó ma in (11) is also an
NP as intimated by the P-marker (11c), and not some other compon-
ent of the higher NP node. Consider the following sentence:

13. ámù gu ma tye ávâ the ma tye ámù mù -ā
horse that one with pig this one with horse old-DEC

(Comparing) that horse with this pig, the horse is older.

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 ávâ the ma tye ámù gu ma
horse that one with pig this one with horse that one
mù -ā
old-DEC
is older.

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 demon-
strative 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 there-
fore (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
can not account for the appearance of the relative PRO-noun ma
'one' in the surface form of all demonstratives.

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

<table>
<thead>
<tr>
<th>the</th>
<th>gu</th>
<th>gwé</th>
</tr>
</thead>
<tbody>
<tr>
<td>[+DEM]</td>
<td>[+DEM]</td>
<td>[+DEM]</td>
</tr>
<tr>
<td>[+proximity]</td>
<td>[-proximity]</td>
<td>[-demarcation]</td>
</tr>
</tbody>
</table>
The semantic importance of the various features can be seen in the following examples:

14. wâdyî the ma mountain this one
14a. wâdyî gu ma mountain that one
14b. wâdyî nwô ma mountain that one
14c. wâdyî dywo ma mountain that one
14d. wâdyî dywe ma mountain that one

The difference between (14a) and those below it is that it refers to the mountain with specifying its relative height to some presupposed point of reference. The mountain could be higher or lower, but more commonly gu ma 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 a gesture or at least a look at the object being referred to is necessary.

4.25 Relative clauses with quantificative predicates

In the surface strings of Lisu quantified noun phrases, there appear a noun (or noun phrase), a quantifier, 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 ma instead of the classifier specifically associated with that noun.

15. lâkô nyî phâ bowl two Clf Two bowls
15a. lâkô nyî ma bowl two ? Two bowls

In every grammar of Lisu produced thus far, ma 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 ʐy may only occur in NPs in which the head noun is a <+human> one, and phâ may only co-occur with bowl-like utensils. The morpheme mä 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 zy
   person one Clf
One person

16a. lâthyu thî mä
    person one ?
One person

16b. *lâthyu thî phâ
     *person one Clf

15b. *lêké thî zy
    *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 mä and with no other unitary classifier. Thus nouns 'taking' true classifiers may co-occur with mä, but nouns 'taking' mä do not co-occur with other classifiers. This is another way of saying that most, if not all nouns co-occur with mä 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 mä. All other classifiers have a fairly easily delimited meaning, so that phâ can be said to refer to bowl-like utensils, ʂ to globular objects and fruits, thê to poles and pole-like objects, thwû to cylinders, and so forth. The definition of mä 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 mä as the relative PRO-noun which has the same phonological shape, and which has appeared in the relative constructions discussed thus far. It is also possible to account for the quantifiers 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 quantifiers and classifiers as well.

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

17. āmü thl̚ 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:

17b.
The final lexical pass inserts the '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 |wë.

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 identity 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. amù ny1 ma nya sa ma xwa ma da
   horse two one TOP three one win not able
   Three horses are better than two. (amù 'horse' deleted).

18a. amù ny1 ma tye any1 sa ma tye amù xwa-a
   horse two one with cow three one with horse win-DEC
   (Comparing) two horses with three cows, the horses win.
   (ny1 ma 'two ones' has been deleted)

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

19. amù mya-a
   horse many-DEC
   The horses are many.

19a. amù amyå ma
    horse many one
    Many horses.

19b.*amù mya-a ma
*horse many-DEC one
*The horses which are many

The morpheme amyå is a bound form, like all other quantifiers, 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 quantifier nf 'few' which only occurs as a verb. The difference between the various kinds of quantifier then is that most, while occurring as deep predicates, require a transformation which transforms them into articles, while mya 'many' is idiosyncratic 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):

20a. nêtsî nyî sî
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 <+Quant> predicate, then the noun phrase of the relative clause cannot be pronominalized. This results in Equi-NP-deletion operating instead, and this deletes NPs in the P-marker above. Feature-copying then occurs copying the Classifier features onto NPd, and then the same is done with the Quantifier 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

\[
\text{NPb} \quad \text{NPa} \quad \text{NPd}
\]
\[
\text{nets} \quad \text{button}
\]
\[
\begin{array}{c}
\text{[+N]} \\
\text{[-anim]} \\
\text{[-PRO]} \\
\text{[+concrete]} \\
\text{[-mass]} \\
\text{[+Class]} \\
\text{[+unit]}
\end{array} \quad \quad
\begin{array}{c}
\text{[+Art]} \\
\text{[-anim]} \\
\text{[+PRO]} \\
\text{[+concrete]} \\
\text{[-mass]} \\
\text{[+Class]} \\
\text{[+unit]} \\
\text{[+Globule]} \\
\text{[+Quant]} \\
\text{[2]}
\end{array} \quad \quad
\begin{array}{c}
\text{[+N]} \\
\text{[-anim]} \\
\text{[+PRO]} \\
\text{[+concrete]} \\
\text{[-mass]} \\
\text{[+Class]} \\
\text{[+unit]} \\
\text{[+Globule]} \\
\text{[+Quant]} \\
\text{[2]}
\end{array}
\]

The final lexical pass inserts ny 'two' for the PRO-article and s 'globule' for the PRO-noun.

Earlier it was noted that quantified noun phrases may occur with or without classifiers incorporated in them. Thus we find noun phrases with the forms Noun + Quantifier + Classifier and Noun + Quantifier + 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 quantifiers 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 quantifiers would substitute for other PRO-articles in some surface environments. This is in fact the case. The most obvious examples are cases like

21. lāthyu gu ma
   person that one

21a. lāthyu th ma
   person one one

Further support comes from an examination of quantified and non-quantified classified noun phrases. Note the following:
22. lāthyu ɣf bwu  
   person WH group  
   People in groups  

22a. lāthyu thl bwu  
   person one group  
   One group of people  

22b.*lāthyu ɣf thl bwu  
   *person WH one group  

22c.*lāthyu thl ɣf bwu  
   *person one WH group  

Many classifiers are bound forms (which suggests that they are transformationally derived) but occur as free noun phrases if the PRO-article ɣf 'WH-' co-occurs. Thus

ɣf sɺ  
WH globule  
*BUT NOT* sɺ  
*globule  
Globules, fruit

ɣf dzɺ  
WH tree  
*BUT NOT* dzɺ  
*tree  
The tree (excluding leaves etc.)

ɣf phya  
WH leaf  
*BUT NOT* phya  
*leaf  
The leaves

ɣf khwɺ  
WH board  
*BUT NOT* khwɺ  
*board  
Boards

ɣf thwɺ  
WH cylinder  
*BUT NOT* thwɺ  
*cylinder  
Cylinders

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

ɣf yəpu  
WH tin  
*yəpu  
*tin (but as a free noun it cannot mean 'tinful')  
By the tinful

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

23. makhwɺ [ɣf ] thɺ nyl thɺ  
   bamboo (WH) pole two pole  
   Two poles of bamboo
Another aspect of quantified NPs that must be accounted for is that quantifiers which are multiples of ten have certain properties not possessed by PRO-article quantifiers. Among these properties are (i) that while regular numerical quantifiers are bound PRO-articles and require the co-occurrence of a following classifier in the surface structure, the decimal quantifiers require the co-occurrence of a preceding PRO-article, and the occurrence of a following classifier is optional, and (ii) when the unit quantifiers occur in front of decimal quantifiers, the semantic content of the resulting NP is equal to the product of the semantic contents of the quantifiers. But when a decimal quantifier occurs in front of a unit quantifier, the semantic content of the resulting NP is the sum of the semantic contents of the quantifiers.

As examples of property (i) note the following:

Unit quantifiers

24a. lāthyu sā zū
   person three person
   Three people

24c. *lāthyu sā
     *person three

Decimal quantifiers

24b. *lāthyu hya zū
     *person hundred person
     *Hundred people

24d. lāthyu sā hya
     person three hundred
     Three hundred people

24e. lāthyu sā hya
     person three hundred
     zū
     person
     Three hundred persons

As examples of property (ii) note the following:

25. sā hya
    three hundred = 3(100)

25a. sā hya sā zū
     three hundred three people = 3(100) + 3 people.
In the Thailand dialect one exception to the characterization of decimal quantifiers under (i) above, is the quantifier tsh+ 'ten'. Thus while (24b) is ungrammatical, both (24f) and (24g) below are grammatical:

24f. låthyu tsh+ zy
    person ten person
    Ten people

24g. låthyu sā tsh+ 
    person three ten
    Thirteen people

Leaving aside for the moment the question of the status of tsh+ 'ten', the most obvious solution to the problem posed by (i) and (ii) above is an analysis which categorizes the decimal quantifiers as having the feature <+Class>, and thus as belonging to a special class of PRO-nominal classifiers rather than PRO-article quantifiers. The noun phrase (26) will thus have the base structure (26a):

26. låthyu ɳwâ 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):

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):
The decimal classifiers will be differentiated from other classifiers by a feature `<± unit>` where a minus specification will isolate the decimal classifiers as a sub-set. They will then need to be further specified as `<±ten>`, `<±hundred>`, and `<±thousand>`.

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

27. lāthyu ṣwā tshī ṣwā zu
    person five ten five people
    Fifty five people.

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):
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 quantification conjunction. The rule would be required for constructions like the following:

28. Lāthyu yif dywu yif mē
   person WH herd WH army
   Crowds and multitudes of people

28a. mē yif xā yif mē
    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 quantified 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. makhwâ sã hya thê bamboo three hundred pole

Three hundred poles of bamboo

The problem concerns the deep PRO-article of the NP having the classifier thê as the PRO-noun. If this deep NP is specified as <-Quant> and the deep structure is thus (29a), one would expect the appearance of the PRO-article yf in the surface form.

29a.

Such an analysis is intuitively incorrect. For one thing the string

*makhwâ sã hya yf thê bamboo three hundred WH pole

is ungrammatical, and for another the specification <-Quant> normally indicates an indefinite quantity whereas the entire surface NP sã hya thê '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 <+Quant> <$>$.

The normal feature-copying rule would thus provide the required <+Quant> specification for the NP, while the specification <$>$ 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

\[
\begin{array}{c}
\text{NP} \\
\text{NP} \\
\text{Art} \quad \text{S} \quad \text{N}
\end{array}
\]

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 clauses 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. lāthyu yī yāphi thyl-ā ma gu ma
    That person who smokes opium.

can be reduced in appropriate circumstances to

30a. lāthyu gu ma
    That person

4.3 Complex relative clauses

4.31 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. lāthyu pātsi wa dye-a ma gu ma
    That person who is going to the plain

32. lāthyu gu pātsi wa dye-a ma
    That person who is going to the plain
The surface structures of these two examples are (31a) and (32a) respectively:

31a.

\[
\begin{array}{c}
\text{NP} \\
\text{NP} \\
\text{NP} \\
\text{lāthyu} & \text{pātsi wa dye-a} & \text{ma} & \text{gu} & \text{ma} \\
\text{person} & \text{plain-to go -DEC} & \text{one} & \text{one} \\
\end{array}
\]

32a.

\[
\begin{array}{c}
\text{NP} \\
\text{NP} \\
\text{lāthyu} & \text{gu} & \text{S} & \text{ma} & \text{one} \\
\text{person} & \text{that} & \text{S} & \text{one} \\
\text{pātsi wa dye-a} & \text{plain-to go -DEC} \\
\end{array}
\]

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.

\[
\begin{array}{c}
\text{NP} \\
\text{NP} \\
\text{NP} \\
\text{lāthyu} & \text{lāthyu pātsi wa dye-a} & \text{lāthyu gu} \\
\text{person} & \text{person plain-to go -DEC} & \text{person that} \\
\end{array}
\]

32b.

\[
\begin{array}{c}
\text{NP} \\
\text{NP} \\
\text{NP} \\
\text{lāthyu} & \text{lāthyu gu} \\
\text{person} & \text{person that} \\
\end{array}
\]

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 'lāthyu 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.

\[
\text{NP} \quad \text{NP} \\
\quad \text{NP} \\
\quad \quad \quad \text{S} \\
\quad \quad \quad \text{S}_1 \\
\quad \quad \quad \quad \quad \text{lāthyu} \quad \text{lāthyu pātsi wa dye-a} \quad \text{lāthyu gu} \\
\quad \quad \quad \quad \quad \text{person} \quad \text{person plain-to go -DEC} \quad \text{person that}
\]

The surface form of the NP will depend on whether or not S₁ and S₂ 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.

\[
\text{NP} \\
\quad \text{NP} \\
\quad \quad \quad \text{NP} \\
\quad \quad \quad \text{NP} \\
\quad \quad \quad \quad \quad \text{lāthyu pātsi wa dye-a ma gu ma} \\
\quad \quad \quad \quad \quad \text{person plain-to go -DEC one that one}
\]

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
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 (llc) would rather be llc'.

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 (lld).

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 another PRO-NP, and adjoined to the right of the other nodes. At this stage in the derivation, the P-marker is:
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. latlhyu gu yf patst wa dye-a ma ma

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 yf PRO-article, and the other deleting one of the occurrences of the PRO-noun ma.

4.32 Relative clauses incorporating demonstrative and quantificative 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. latlhyu nyl zy gu ma

Those two people.

35. latlhyu gu nyl zy ma

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 qualificative 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 quantificative 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. lāthyu pātsi wa dye-ā ma nyāl zy
    person plain to go DEC one two person
    Two people who are going to the plain

38. lāthyu pātsi wa dye-ā nyāl 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 quantified and classified NPs are as I have stated, then they generate the incorrect structure
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 quantified 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

4.34 Relatives incorporating verbal, demonstrative and qualitative 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. lāthyu pāts̄i wa dye-a ma nyil 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 qualitative:

41. lāthyu pāts̄i wa dye-a ma gu nyil 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 quantificative relatives:

42. láthu pāts; wa dye-ā nyā žy ma gu ma
   person plain-to go -DEC two person one those ones
   Those two people who are going to the plains

(iv) Conjunction of verbal and demonstrative relatives:

43. láthu gu pāts; wa dye-ā ma ma nyā žy
   person those plain-to go -DEC one ones two person
   Those two people who are going to the plains

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

44. láthu gu pāts; wa dye-ā nyā žy ma ma
   person those plain-to go -DEC two person one one
   Those two people who are going to the plains

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 tšf '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 γš a general relative marker introduced by the pronominalization transformations, and the demonstratives and quantifiers derived from deep predicates. An important class of PRO-article 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 quantifiers, 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 (excepting 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:

\[
\begin{align*}
\text{ṣwa} & \quad \text{ṣwanwū} & \quad \text{ażwū} \\
\begin{bmatrix}
\text{Art} \\ 
\text{PRO} \\ 
\text{human} \\ 
\text{I} \\ 
\text{II} \\ 
\text{III} \\
\end{bmatrix} & \quad \\
\text{Art} & \quad \\
\text{PRO} & \quad \\
\text{human} & \quad \\
\text{I} & \quad \\
\text{II} & \quad \\
\text{III} & \quad \\
\end{align*}
\]

(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 nwuwā 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. ása nwu thā tshf
Asa you don't fret
Asa, don't you fret

46. pētya w水利工程 nvu nwu thā tshf
clansmen affines VOC you don't fret
Ladies and gentlemen, don't you fret

47. ása nwuwā thā tshf
Asa you don't fret
Asa, don't you and the others fret

48. pētya w水利工程 nvu nwuwā thā tshf
clansmen affines VOC you don't fret
Ladies and gentlemen, don't you and the others 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:

\[
\begin{align*}
\text{nwu} & \quad \text{nwuwà} \\
\langle+\text{Art}\rangle & \quad \langle+\text{Art}\rangle \\
\langle+\text{PRO}\rangle & \quad \langle+\text{PRO}\rangle \\
\langle+\text{animate}\rangle & \quad \langle+\text{animate}\rangle \\
\langle-I\rangle & \quad \langle-I\rangle \\
\langle+\text{II}\rangle & \quad \langle+\text{II}\rangle \\
\langle-\text{III}\rangle & \quad \langle+\text{III}\rangle \\
\text{(you)} & \quad \text{(you and others)}
\end{align*}
\]

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 \(y\) may have reference to singular or plural entities, while the other \(y\) has only plural reference. Note the following discourse:

\[
\begin{align*}
49. & \quad \text{dza } y\text{ } swu y\text{ } gwu le \text{ } -Q? \\
& \quad \text{rice reap one reap all become-QUESTION} \\
& \quad \text{Have the reapers finished reaping?} \\
50. & \quad \text{mà sô } / y\text{ } mà ?\text{ } lì a hê} \\
& \quad \text{not know he not return yet} \\
& \quad (I) \text{ don't know. They haven't come home yet.}
\end{align*}
\]

\[
\begin{align*}
51. & \quad \eta w\text{ } n\text{ } n\text{ } th\text{ } ?\text{ } lì t\text{ } -a / y\text{ } w\text{ } n\text{ } n\text{ } we ?\text{ } lì t\text{ } -a \\
& \quad \text{we TOP here lie -DEC / they TOP that-at lie -DEC} \\
& \quad \text{We have been sleeping here, but they have been sleeping up there.} \\
& \quad \text{Here the same group of people are referred to by } y\text{ and by } y\text{ in (50) and (51) respectively.} \\
& \quad \text{The distinction between these two pronouns cannot be accounted for in terms of the features suggested so far, unless one of them be specified as } \langle-I\rangle \langle-II\rangle \langle-III\rangle, \text{ which is hardly satisfactory. One has to posit some additional feature to account for this one contrast. What the correct feature is I am not certain. It might possibly be } \langle+\text{singular}\rangle. \text{ It is even possible that the correct solution is related to the fact}
\end{align*}
\]
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.

Both third person pronouns will be specified as <+animate> as there is no pronoun referring to inanimate objects. The discourse rule which causes the insertion of person pronouns instead of nouns deletes the noun instead of pronominalizing it if it has the feature <-animate>. Note the following.

52. ása nya dzagwu wa pg ye-a nya yî nà ye -w
Asa TOP road go-DEC TOP he stop COMP-DEC
When Asa reached the road he stopped.

53. ëë nya dzagwu wa pg ye-a nya nà ye -w
car TOP road go-DEC TOP stop COMP-DEC
When the car reached the road it stopped.

The pronoun in (52) is deleted optionally, but in (53) deletion of the noun is obligatory. The deletion does not apply to inanimate nouns in embedded sentences, where they are left intact.

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:

\[ X - NPa - Y - NPb - Z \Rightarrow X - NPa - Y - NPb - Z \]
\[ <-PRO> <-PRO> <-PRO> <+PRO> \]

where \( NPa + NPb \) and \( NPa \) precedes \( NPb \) 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 \( NPb \) and meets the conditions specified for the pronominalization of animate nouns, the \( NPb \) is deleted rather than pronominalized.

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

54. ása nya yî tsîtshë kudwë lâ tû ye -w
Asa TOP he real body poison give-DEC
Asa poisoned himself (lit. his real body).

This would seem to indicate that the base contains as the Dative NP, not simply ása, but the deep form of the noun phrase ása tsîtshë kudwë '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. ạsa ạmu  'Asa's horse'.

55a.

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 thesis. If the empty verb which co-occurs with O and D cases is in 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 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:
55b. ámù ása dyu -à ma  
  horse Asa have-DEC one  
  The horse which Asa has

55c. ámù ásaлаг ma  
  horse Asa to one  
  The horse which is Asa's

55d. ása ámù  
  Asa horse  
  Asa's horse

Neither nouns nor pronouns are inflected in possessive constructions, and this results in ambiguities like the following:

56. ása ámù thl ma dyu -à  
  Asa horse one one have-DEC  
  Asa has one horse

56a. ása ámù thl ma dyu -à  
  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 difference in the respective cases which occur in the different propositions.

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 phwi 'price' [ phwi 'to honour, value']
yf nwé 'shoot' [ nwé 'to send out shoots']
yf ng 'black (colour name)' [ng 'to be black']
yf fww 'egg' [ fww 'to lay eggs']
yf Ng 'flower' [ Ng '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 γφ na-γ ma, and the causitive relative 'that which makes sick' requires a Dative NP in Lisu, and would be

57. swu l̂̂ 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 γφ 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 ≤ γφ 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 Quantificative V-nodes will operate here too. According to this analysis all of the nouns in the above list and scores beside 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 γφ 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:
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:

yf thy+ A rhizome
tyá 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 is:

yf nhša 'a liquid' [*nhša]
yf phà 'a male'
yf mä 'a female'
yf mywè 'a name'
yf llì 'a custom, habit, law'
yf syâ 'a noise'
yf masì 'unmilled grain'
yf tyù 'a clan'
yf syalà 'a last-born son'
yf zà 'a son'
yf nyìlìza '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 yɪ mywg
   you ? name
   Your name

59. nwu yɪ tyụ
   you ? clan
   Your clan

This is very different from the usual possessive construction. There is no NP

60. *nwu yɪ āmù
   *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. yɪ nyɪlzà
   ?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. mɛtsɛh́ yɪ sɶ nwe -â yɪ ächtsha 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 ächtsha would thus be
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 ntsha 'liquid'. The normal rules of feature-copying, pronominalization, NP-raising and segmentation generate the string y1 ntsha 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:

áthē 'knife'    álwù 'frying pan'
ánà 'dog'       ákhè 'door'
ámu 'horse'     ápo 'yoke'
ávè 'pig'       ápì 'great-grandfather'
áyè 'fowl'      ázà 'grandmother'

The full list numbers over a hundred.

It is at least possible that this initial syllable is historically related to the yi 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: átâ '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:

âthyû 'goat/Goat'; besû 'nut/Nut'

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

âtsû 'appearance, looks' syîtsû 'behaviour, tendency' syîyî 'thankfulness' mîhi '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 âdyû 'water' occur only as mass nouns, while others like lâthyû 'people' can occur as either mass or non-mass nouns. Note the following:

65. lâthyû thî zû / wà / syî
person one person/ man-power / sibling
One person viewed as an individual / a labourer / a sibling.

66. lâthyû thîbwû / tsûyî / hi / dzî
person one group / village / house / type
One group / village / household / sort of people

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. ánâ phâ
   dog male
   ánâ mä
   dog female

68. ánâ yî phâ
   dog WH male
   ánâ yî mä
   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 γ'-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 (1968:206-208).

5. In some Burma dialects 战场上 'ten' is no exception to the rule about decimal qualifiers, and always requires a preceding unit quantifier.
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 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 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. 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.

5.11 [+Adj] [+Aux] verbs which occur in \([S,V]\) propositions.

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

- \(\text{thiy} \) 'weakly expedient'
- \(\text{thiy} \) 'common, usual'
- \(\text{wå} \) 'obligatory'
- \(\text{tyú} \) 'precedented'
- \(\text{tyå} \) 'free from taboo'

1. \(\text{ása nya ami khwa thiy} \) -å
   Asa TOP field hoe expedient -DEC
   Asa may as well hoe the field

2. \(\text{ása nya ami khwa thiy} \) -å
   Asa TOP field hoe common-DEC
   It is common for Asa to hoe the field

3. \(\text{ása nya ami khwa wå} \) -å
   Asa TOP field hoe obligatory-DEC
   It is obligatory for Asa to hoe the field

4. \(\text{ása nya ami khwa tyú} \) -å
   Asa TOP field hoe preceded-DEC
   Asa's hoeing the field has happened before

5. \(\text{ása nya ami khwa tyú} \) -å
   Asa TOP field hoe needed-DEC
   Asa's hoeing the field was needed

6. \(\text{ása nya ami khwa tyå} \) -å
   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 [D,S,V] propositions

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

kwú 'mentally able'        khwa 'physically able'
bala 'able (no hinderence)'  pé 'able, courage-wise'
bwu 'disinterested, 4

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

9. ása nya ami khwa kwu-á
Asa is able (strong enough) to hoe fields

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

11. ása nya ami khwa pé -á
Asa dares to hoe fields

12. ása nya ami khwa bwu -á
Asa is tired of hoeing fields

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

There are no sentences
14. *ọsa nya kwú-ọ *Asa is able.
14a.*ọsa nya khwu-ọ *Asa is able.
14b.*ọsa nya bala-ọ *Asa is able.
14c.*ọsa nya pọ-ọ *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', pwụ 'to last, be used up at a slow rate'
- fwu 'to require a lot of time'

13. dza nya nyíme dzá mi -ọ
   rice TOP today eat tasty-DEC

   Today the rice is tasty (to eat)

14. dza nya nyíme dzá pwụ -ọ
   rice TOP today eat last-DEC

   Today the rice is lasting well

15. dza nya nyíme dzá fwu -ọ
   rice TOP today eat long-DEC

   Today the rice is taking a long time to eat

The base form of the above sentences is

16.

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 dzá '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 (13-15) 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

17. *dza nya mi -ā 
   *rice TOP tasty-DEC  
   *Rice is tasty

17a. *dza nya pwu -ā 
   *rice TOP last-DEC  
   *Rice lasts a long time

17b. *dza nya fwy -ā 
   *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 dį 'having sufficient spatial capacity, roomy enough'.

18. nwu dzakā nya hama yîtā dį -ā 
   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

19.  

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 again arises in 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'
- khù 'natural'
- nga 'possible'
- pyò 'enjoyable'
- tshà 'urgent'
- sa 'easy'
- xà 'good'
- hi '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:

20. àsa nya ami khwa da -à
   Asa TOP fields hoe acceptable-DEC [S,V]
   It is acceptable for Asa to hoe fields.

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

22. ami nya khwa da -à
    fields TOP hoe -able-DEC [O,S,V]
    Fields are 'hoe-able' / The fields are ready for hoeing.

23. thyt-xwà nga dzà -à
    deer-meat TOP eat possible-DEC [S,V]
    It is possible to eat deer-meat.

24. thyt-xwà nga dzà -à
    deer-meat TOP eat appropriate-DEC [O,S,V]
    Deer-meat is the appropriate meat to eat
    (on this occasion).

25. àsa nya ami khwa khù -à
    Asa TOP fields hoe normal-DEC [S,V]
    It is normal for Asa to hoe fields.

26. àsa nya ami khwa khù -à
    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
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:

27. ásá nya ami wùxe mà nà -nà lè khwa kwú -g
    Asa TOP field tire not stop-stop ADV hoe able-DEC
    Asa knows how to hoe the field without stopping to rest

28. ásá nya ami khpê khwa kwú -g
    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', tsha 'urgent'. Thus the following are not grammatical, with the exception of (30a) in which the [+Adj] verb is not in fact the highest verb in the complement, as will be seen later in this chapter:

29. *nwu hi nya ámù phwu di -â
   * you house TOP horse white roomy-DEC
   * Your house is roomy enough for a horse to be white in
30. *ámù nya phwu le tshâ -â
   * horse TOP white urgent-DEC
   * It is urgent that the horse is white
30a. ámù nya phwu le tshâ -â
    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:
31. nwu  ámbu  nya phwu kwú -à
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)
32. nwu  ámbu  nya phwu hÍ -à
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 fwey 'to require a lot of time'. For instance, if the commanding auxiliary is mi 'tasty', the complement may have as its main verb only those verbs such as dzà 'eat', du 'drink' and nwè 'sniff' which involve the olfactory organs. If the auxiliary verb which commands the complement is pwey 'to last well' the complement may have as its main verb dzà 'to eat', du 'drink', vwè 'sell' and other verbs which refer to the consumption of commodities or fuel. In the case of fwey '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

xá 'good' phéfwu 'surprising'
hÍ 'difficult' sátú 'shameful'
dyú 'fearsome' mà 'genuine'
 gà '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:
33. ása nya ami khwa xə -ə
Asa TOP field hoe good-DEC
Asa is good at hoeing fields
33a. ása nya ami khwa-ə xə -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:

34.

```
\[
S \\
  \_P \\
  \_O \\
  \_S \\
  ása ami khwa-ə
\]
```

Asa field hoe-DEC good etc. -DEC

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:

35. ánå-xwå nya ása dzå xə -ə

dog meat TOP Asa eat good-DEC
Asa finds dog meat good to eat.

36. ánå-xwå nya ása dzå-a xə -ə

dog meat TOP Asa eat-DEC good-DEC
It is good that Asa eats dog meat.

Sentence (35) has a deep structure like that of (16), while the base of (36) is like (34) above. To illustrate that sentences like (36) may incorporate post-verbal aspect markers as well as performatives like DEC, I include the following, which is perfectly grammatical:

37. ánå-xwå nya ása dzå yə -ə xə -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 (38) and (39) are grammatical, while (40) and (41) are not.

38. ása mègwà gwà ma nya x gà -ā
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.)

39. ása pātsì-a dye ma nya phéfwu -ā
Asa plain-to go NOM TOP surprising-DEC
Asa's going to the plain was surprising.

40. *ása mègwà gwà ma nya thỳỳ -ā
*Asa songs sing NOM TOP common-DEC

41. *ása pātsì-a dye ma nya tyù -ā
*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

39a. ása nya pātsì wa dye-ā ma nya phéfwu -ā
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

42. ása nya yì́ amù ...
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:

43. ása ami khwa-a x gà -ā
Asa fields hoe-DEC good-DEC
That Asa hoes fields is good.

44. ása ami khwa-a nya x gà -ā
Asa fields hoe -DEC TOP good-DEC
That Asa hoes fields is good. It is good when Asa hoes the fields
45. *ása ami  khwä nya kwû -ג
   *Asa fields hoe TOP able-DEC

Sentences (43) and (44) are entirely synonymous, with nya deletion having applied to (43), but not to (44). Both of these differ from (33), which was

33. ása nya ami  khwa-a  xא -ג
   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 (43) and (44) but not in (33). Of interest at this point is whether sentences like (44) contain a subordinate clause or not, or to rephrase the problem, in what way does (44) differ from (46) below?

46. ása ami  khwa-a  nya xא -ג
   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 (47) and (48), 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:

47. 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.

48. 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 (48) involves a conditional, while (47) does not. I therefore conclude that the only deep structure difference is that (48) contains a complement having the abstract verb CONDITION in its derivation, while (47) does not. The appearance of CONDITION requires that the whole configuration under its domination be topicalized, while the complement in (47) 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 (33) and (47). 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

bë 'say, intend'  mä 'teach, show'
nanyì 'ask'  mu 'see'
bædzë 'hear'  kwù 'consider'
tsì 'remember'  dwìdzë 'think'

Some of these verbs such as tsì 'remember', dwìdzë '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 mä 'obtain, be successful', or nyl 'try'.

49. alë nya âsa nya ìmi khwa-ã bë -ã
Ale TOP Asa TOP fields hoe -DEC say-DEC
Ale says that Asa is hoeing fields

50. alë nya âsa nya ìmi khwa-ã mu -ã
Ale TOP Asa TOP fields hoe -DEC see-DEC
Ale saw that Asa was hoeing fields.

51. alë nya âsa nya ìmi khwa-ã tsì mä -ã
Ale TOP Asa TOP fields hoe -DEC remember get-DEC
Ale remembers that Asa is hoeing fields

52. alë nya âsa nya ìmi khwa-ã kwù nyl-ã
Ale TOP Asa TOP fields hoe -DEC consider try-DEC
Ale 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:

53.

\[
\begin{array}{c}
\text{S} \\
\text{P} \\
\text{A} \\
\text{NP} \\
\text{alē} \\
\text{Ale} \\
\text{asa amī khwa-ā} \\
\text{Asa field hoe -DEC} \\
\text{b m} \\
\text{etc.} \\
\text{m u} \\
\text{ā} \\
\text{-DEC} \\
\end{array}
\]

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.

5.4.1 Verbs of motion

The auxiliary verbs of motion under consideration are ye 'go', la 'come', dwē 'enter', dē 'exit', dē 'climb', and yā '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.)

54. āsa nỳa hipywē wa tē ye-a
Asa TOP shack to run go 2DEC
Asa ran away to the shack (away from presupposed point of reference).

55. āsa nỳa hipywē wa tē la -ā
Asa TOP shack to run come 2DEC
Asa came running to the shack (towards presupposed point of reference).
56. ása nya hipyw kwu wa tǭ dwi ye-a
Asa TOP shack in to run enter go-DEC
Asa went running into the shack.

57. ása nya hipyw tyu tǭ du la-a
Asa TOP shack from run exit come-DEC
Asa came running out of the shack.

58. ása nya hipyw wa tǭ du la -a
Asa TOP shack to run climb come-DEC
Asa came running up to the shack.

59. ása nya hipyw wa tǭ yâ ye -a
Asa TOP shack to run descend go -DEC
Asa went running down to the shack.

60. *ása nya hipyw wa tǭ yâ -a
*Asa TOP shack to run descend-DEC

61. *ása nya hipyw wa tǭ du -a
*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 (50) is grammatical, but (59a) below is not.

59a. *ása nya hipyw wa tǭ ye yâ -a
*Asa TOP shack to run go descend-DEC

[There is a sentence with the surface form of (59a) meaning "Asa ran away to the shack and went down' but in this sentence yâ 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:

62. lâma nya lâsyi mi wa tǭ dwi yâ ye-a
tiger TOP grass field to run enter descend go-DEC
The tiger ran into the long grass, moving away downhill.

63. lâma nya lâsyi mi wa tǭ yâ dwi 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 (62) 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 (63) one imagines the tiger running downhill away from the point of reference into a grassfield
a short distance away. In (62) 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 (62) the tiger entered the grass before he had moved downhill appreciably, and thus ∆w 'enter' precedes γ 'descend'. Semantically it is obvious that more than one predication is involved. Leaving out the complement-dominating O node, the base I propose for (63) is

The question arises as to why the above base marker is preferred to one which treats (63) 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 (62) and (63). 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:
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 (63) 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

66. ása n Igné tshibe tā yān ye-ā
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 dwā and dy 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 dye 'go' or la 'come'. Examples are

kū 'to cross'   kū 'to pass over'
mwyē 'to overtake'   lwē 'to roll'
kwa '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:

67. tshu-syl-ɑ nya dzagw sywè kwú -ɑ
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 string of such verbs.

One other auxiliary verb of motion which requires mention is the verb fwɣ 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.

68. ása nya yí pu gê fwy -ɑ
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 (68) is

69.

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 actions which set other objects into motion, such as yê 'throw', dzê 'throw like a spear',

\[\text{Asa gun Asa gun throw-ɑ away -DEC}\]
bq 'fire a crossbow', ṃ 'flick', tf 'spit' etc., and to verbs of communication such as bq 'say'.

5.42 Giving, Benefiting and Helping

The three verbs under consideration here are ye 'give', dz 'eat', dzw 'help'. These three verbs are in complementary distribution, and may not co-occur which indicates that they should be assigned to the same sub-class 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 ye '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.

67. ása nya alè lā dywù -á
Asa TOP Ale to bump -DEC
Asa bumped Ale.

68. ása nya alè lā dywù yè -á
Asa TOP Ale to bump give -DEC
Asa bumped Ale / Asa gave Ale a bump.

69. ása nya alè lā ánà lú -á bq -á
Asa TOP Ale to dog bark -DEC say -DEC
Asa told Ale that the dog was barking.

70. ása nya alè lā ánà lú -á bq ye -á
Asa TOP Ale to dog bark -DEC say give -DEC
Asa told Ale that the dog was barking.

In (67) and (69) the meaning is unspecific as to whether Asa intended to influence Ale or not. In (67) the bumping could have been an accident, and in (69) Asa may merely have been passing the time of day. In (68) and (70), however, the intent to influence Ale is clear. In (68) Asa bumped Ale on purpose and in (70) 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:-

71. ása nya alè lā thà dye bq tf -á
Asa TOP Ale to don't go say leave -DEC
Asa left word for Ale that he shouldn't go.

72. ása nya alè lā thà dye bq tf ye -á
Asa TOP Ale to don't go say leave give -DEC
Asa left word with Ale that he shouldn't go.
In (71) it is not clear who Asa spoke to, but in (72) 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 ϭ̃ has is that it specifies a particular event in time. Sentence (69) 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 (70) 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 (68) typifies sentences incorporating a complement and the auxiliary ϭ̃. 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:

74. ása nya alə lá hi sya ϭ̃ -ā
    Asa TOP Ale to house make give-DEC
    Asa built a house for Ale.

The base form of this example is

Note the following:

76. ása nya alə lá áyá nwù ϭ̃ -ā
    Asa TOP Ale to fowl 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 gá to yá (see note 8) if the verb has [+Aux] specification is blocked. Thus from the base (77) is generated (78):

77.

```
    S
     |   |
    A   D   S   V
     |   |   |   |
    NP NP alé hi syá -g
gá -á
```

Thus from the base (77) is generated (78):

78. ása nya alé lá hi gá syá -á
    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 yá. 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 yá in complements of the type illustrated in (73), but they apparently can in complements of the type illustrated in (75) and (78). Verbs in the sub-class excluded from (73) but allowed in (75) and (78) include dé 'beg', khwu 'call', syá 'fix, make', xú 'lead', më 'carry', nanyá 'ask' not involving a change of state for the Dative being.

79. ása nya alé lá dé yá -á
    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 dzá '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, vwú 'sell', kó 'lie, deceive', khú 'to fine' being some of the few which can.

80. ása nya alé lá áyá vwú dzá -á
    Asa TOP Ale to fowl sell eat -DEC
    Asa sold a chicken to Ale
81. ása nya alë lâ kâ dzâ-ã
Asa TOP Ale to deceive eat-DEC
Asa cheated Ale / deceived Ale

82. ása nya alë lâ thsì bâ kho dzâ-ã
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 (80) he profited from the sale of the chicken, in (81) he deceived Ale and gained thereby, and in (82) he pocketed the fine himself. The base structure of such sentences is

83.

The verb 'to help' in Lisu is the auxiliary dzwa (dzâ 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.

84. ása nya alë lâ hi syâ dzwa-ã
Asa TOP Ale to house make help - DEC
Asa helped Ale build a house.

The base structure of sentences of this type is

85.
I have proposed a conjunct Agentive in the embedded S, since the meaning of (84) 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 nyí 'try' and mg '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:

85. ása nya ami khwa-ə
   Asa TOP fields hoe -DEC
   Asa is hoeing the field

86. ása nya ami khwa nyí-ə
   Asa TOP field hoe try -DEC
   Asa is trying to hoe the field.

87. ása nya ami khwa mg-ə
   Asa TOP field hoe get -DEC
   Asa got to hoe the field.

88. ása nya ámù gà -ə
   Asa TOP horse chase -DEC
   Asa is chasing the horse.

89. ása nya ámù gà nyí-ə
   Asa TOP horse chase try -DEC
   Asa is trying to chase the horse.

90. ása nya ámù gà mg-ə
   Asa TOP horse chase get -DEC
   Asa got to chase the horse.

The base structure of sentences like (86, 87, 89, 90) is 91.
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:

92. ása nya zànwe thùyè su kgle tyg -ə
Asa TOP child book study happen cause-DEC
Asa instituted childrens' schooling (Lit. caused it to happen that children study books)

93. ása nya zànwe lə thùyè su tyg -ə
Asa TOP child to book study cause-DEC
Asa made the children study / go to school

94. átú nya ása thye kgle tyg -ə
fire TOP Asa flee happen cause-DEC
The fire caused Asa to flee

The base forms of these sentences are (95), (96) and (97) respectively:

95.

96.

97.
There are no grammatical sentences

92a. *ása nya zànwọ lá thỳyọ su kgle tyg -a
    Asa TOP children to books study happen cause-DEC

94a. ?*átú nya ása lá thỳyọ tyg -a
    fire TOP Asa to flee cause -DEC

(Two of my younger informants accepted (94a) but all of
my older ones did not.)

The auxiliary verb kgle 'happen' occurs only in [S,V]
propositions of the sort exemplified by

98. ása thỳyọ kgle -a
    Asa flee happen -DEC
    Asa happened to run away.

The embedded S complements commanded by kgle have unusual
characteristics. For one thing they may optionally have the
performative marker -a DECLARATIVE. Thus (99) may also have
the form

98a. ása thỳyọ -a kgle -a
    Asa TOP DEC happen -DEC
    Asa happened to run away.

Furthermore the NPs in such a complement may not be topic-
alized, which is a very rare restriction.

99. *ása nya thỳyọ kgle -a
    *Asa TOP flee happen -DEC

The main verb of a complement sentence commanded by kgle
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' xù 'right, correct' and vwu 'big' or transitive
such as he 'angry' dyì 'afraid' and tshú 'make a mistake'.

Note the following:

100. áphwlsl nya phwu le -a
    pumpkin TOP white become -DEC
    The pumpkin is growing white.

101. ása nya alè lá he le -a
    Asa TOP Ale to angry become -DEC
    Asa is becoming angry at Ale.

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-
ocurrence 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:

102. ása nya alé khèsa zwu tæk yë ye
dzwa nyi kgle tyë -a
Asa caused Ale to try to help take the corn outside downhill

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 zwu tæk ye [grasp-carry-go]. This differs only in direction from 'bring' zwu tæk la [grasp-carry-come]. Such concatenations expressing these notions are found in other languages too, such as Thai, and many New Guinea languages too.

Certain of the restrictions on the ordering of the component auxiliary verbs in (102) can be stated informally. Verbs of MOTION precede the others. Among the verbs in the MOTION string, tæk 'carry' must occur first, and ye 'go' last, while dzwa 'exit' and yë '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) tæk '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 kgle 'happen' (and to le '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:

103. ... dzwa kgle tyg nyi -a
    ... try to cause it to happen that X helps.

104. ... kgle tyg dzwa nyi -a
    ... try to help cause to happen ...

105. ... kgle tyg nyi dzwa -a
    ... help to try to cause to happen ...

106. ... tyg nyi dzwa kgle -a
    ... happen that X helped try to cause ...

which are all perfectly grammatical, and exclude

107. *... kgle dzwa nyi tyg -a
    * happen help try cause - DEC

108. *... kgle nyi dzwa tyg -a
    * 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:

56a. ása nya hipywgh khwû wa té dwi ye - a
    Asa TOP shack 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.

80a. ása nya álè lá áyá vwu dzâ -a
    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.
89a. ása nya ámù gá nyá - a  
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:

109a. ása nya ámù dzì l a - a  
Asa TOP horse ride come - DEC  

b. ása nya ámù l a dzì - a  
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 (109) would be:

110.

```
S
  |
  P
  |
  D
  |
NP
  |
ása ása ámù dzì - ø l a - ø  
Asa Asa horse ride - ø come - ø DEC.
```

The difference in meaning between (109a) and the same surface sentence with the reading 'Asa rode a horse toward us' would be ascribed to the fact that in (109a) the verb la 'come' is specified as [-Aux], but in the other as [+Aux], and to the fact that (109a) 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 (110) which would allow dzì '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 (109) 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 (109) which contains two conjoined sentences having these abstract verbs as their respective main verbs:
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):

$$l_{11a}. \text{Asa come}$$

This in turn, after topicalization, Equi-NP and abstract verb deletion, yields:

$$l_{109a}. \text{Asa TOP horse ride come - DEC.}$$

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:
When an S with <MEANS> as its verb is topicalized, the topic marker is *h'nyi*. Thus from (lllb) after Equi-NP and abstract verb deletion we get:

109c. ása la *h'nyi* ámù dzì - à
asa come TOP horse ride - DEC.
Asa came to ride a horse.

If there is an absence of any conditioning presupposition then the S₂ node of (111) is lowered into S₅ as a complement, yielding:

lllc.

This, after topicalization, Equi-NP-deletion and abstract verb deletion yields:

109b. ása nya ámù la dzì - à
asa TOP horse come ride - DEC
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 (lllb). 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 thesis 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 thesis 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 kgle '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 ti, and if inanimate it is da.

112. ása nya gwa lwé ye ti-a
Asa TOP there roll go CONT. -DEC
Asa is rolling away over there.

112a. yatshipá nya gwa lwé ye da -a
stone TOP there roll go CONT -DEC.
The stone is rolling away over there.

As [-Aux] verbs ti and da 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:

113. ása nya lwé ye - a
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.

114. ása nya na ti-a
Asa TOP sick CONT -DEC
Asa continues to be sick.

115. *ása nya wù ti-a
Asa TOP big CONT -DEC.

At present I am unable to define what governs these co-occurrence restrictions.
5.62 The completive

The completive auxiliary verb is \( \text{ye} \) which has no corresponding occurrence as a main verb.

116. \( \text{āsa dzà } \text{ye} - \text{̃} \)
Asa rice eat COMPL - DEC.
Asa has eaten his rice.

In conjoined sentences the \( \text{ye} \) 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.

117. \( \text{āsa nya dzà ye } \text{du } \text{ye} - \text{̃} \)
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 'thüs, in this way' into both sentences:

117a. \( \text{āsa nya dzà the du } \text{ye} - \text{̃} \)
Asa TOP rice thus eat thus exit go - DEC.
Asa ate his food as he went outside.

In imperative sentences the \( \text{ye} \) 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 \( \text{ye} \) marker the meaning is ambiguous with reference to this particular point.

118. \( \text{nwu } \dot{\text{áme}} \text{ dzà} \)
you quickly eat
Hurry up and eat/ Hurry up and start eating.

118a. \( \text{nwu } \dot{\text{áme}} \text{ dzà } \text{ye} \)
you quickly eat COMPL
Hurry up and get your eating over with.

The main verb of sentences commanded by a higher completive may not be an intransitive adjective, but any other main or auxiliary verb may co-occur. Thus:

119. \( *\text{āsa } \dot{\text{ámù}} \text{ nya na } \text{ye} - \text{̃} \)
Asa horse TOP sick COMPL - DEC.

119a. \( \text{āsa } \dot{\text{ámù}} \text{ nya na } \text{le } \text{ye} - \text{̃} \)
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 \( \text{\textligature{a}xu} \) 'each other, among themselves':

120. \( \text{\textligature{a}sa \text{\textligature{a}mu} \text{\textligature{a} we nya k\textligature{a}xu} - \text{\textligature{a}}} \)

Asa horse four Clf TOP bite RECIP - 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 (120). 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 (120) 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:

121.

\[
\begin{array}{c}
\text{NP} \\
\text{\textligature{a}sa \text{\textligature{a}mu} \text{\textligature{a} we}} \\
\text{Asa horse 4 Clf}
\end{array}
\quad \begin{array}{c}
\text{NP} \\
\text{\textligature{a}mu \text{\textligature{a} bite}} \\
\text{horse bite}
\end{array}
\quad \begin{array}{c}
\text{V} \\
\text{\textligature{a}k\textligature{a}xu} \\
\text{bite}
\end{array}
\quad \begin{array}{c}
\text{RECIP} \\
\text{\textligature{a}xu} - \text{\textligature{a}}
\end{array}
\]

In this representation RECIP would be a predication indicating that only the beings specifically identified in \( S_2 \) were affected by the activity identified in \( S_2 \). Admittedly this might be a shallow form of some deeper logical base.

Only transitive verbs - including transitive adjectives may be commanded by \( \text{\textligature{a}xu} \).

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.
Asa is not in the process of running away downhill.

This rule applies no matter how high in the tree NEG is generated, with the result that all such sentences are multiply ambiguous. Sentence (122) could be continued in any of the following ways:

122a. yf nya dza dzà - a
   he TOP rice eat - DEC.
   He is eating his food.

122b. yf nya bywe yà ye tyà - a
   he TOP fly descend go CONT - DEC.
   He is in the process of flying away downhill.

122c. yf nya tò da ye tyà - a
   he TOP run climb go CONT - DEC.
   He is in the process of running away uphill.

122d. yf nya tò yà la tyà - a
   he TOP run climb come CONT - DEC.
   He is in the process of running this way downhill.

122e. yf nya tò yà ye ye - a
   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 (122).
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.

123.

\[
\text{Asa didn't say that he would go.}
\]

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.

124. \text{Asa didn't 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 (124) a derivational constraint is necessary which nullifies the above restriction if the complement of \text{b\textsuperscript{m}} '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 (124) 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)

125. \text{Asa doesn't know how to hoe fields.}
125a. \text{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 the '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 -w. 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 -m. 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:

Asa is going / goes/ will go/ went.

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 `-ä' if the interrogative is specified as [-Tense] and `-û' if specified as [+Tense]. Note the following:

129. ása nya dye -ä
   Asa TOP go -DEC.
   Asa is going.

129a. ása nya dye -å
   Asa TOP go -QUEST.
   Is Asa going?

130. ása nya dye -û
   Asa TOP go -DEC.
   Asa has gone.

130a. ása nya dye -ô
   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:

131. ása lā nya ãmā dá - ā
Asa to TOP WHO hit - QUEST
Who hit Asa?

131a. ása lā nya ãmā xe dá - ā
Asa to TOP WHO TOP hit - DEC.
everybody hit Asa.

131b. ása lā nya ãmā-é má dá
Asa to TOP WHO not hit
nobody hit Asa.

131c. ása lā nya ãmā mu ãmā dá - ā
Asa to TOP WHO see WHO hit - DEC.
everyone who saw Asa hit him.

The only apparent base difference between (131) and (131a), at first sight, is that (131) incorporates the QUEST performative and (131a) the DEC. Yet while (131b) is the negative form of (131a), sentence (131d) below is not the negative form of (131).

131d. ása lā nya ãmā má dá - ā
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 (131). Of importance in investigating the problem is the fact that the WH-pronouns occur as main predicates in interrogative but not in declarative sentences.

132. ása lā dá - a ma nya ãmā - ā
Asa to hit - DEC one TOP WHO - QUEST
Who is the one who hit Asa?

132a. *ása lā dá - a ma nya ãmā - ā
Asa to hit - DEC one TOP WHO - DEC.

From sentences like (132) 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 (131d) is the negative form of (131) which it is not. The negative of (131) is (133) in which ãmā 'WHO' is the predicate:
133. ása lā mā dè ma nya àma - á
Asa to not hit oneTOP WHO - QUEST.
Who is the one who did not hit Asa,
There is no positive form of (131d) which incorporates
the pronoun àma. Note, however the following:

134. ása lā nya swu dè - á
Asa to TOP people hit - QUEST.
Did anyone/ someone hit Asa?

135. ása lā nya àma xe dè - á
Asa to TOP WHO TOP hit - QUEST.
Did everybody hit Asa?

Since questions like (131) involve presuppositions consist­
ing 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 àma are:
ášyl 'what' 
áhə 'when'
álə '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:

136. ása ášíl xwa la - á
Asa WHAT seek come - QUEST.
What has Asa come looking for?

136a. ása ali śyí xwa la - á
Asa WHICH kind seek come - QUEST.
Which kind has Asa come looking for?

136b. ása ali thlé śyí xwa la - á
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 realiza­
tion as - á, but is often marked only by the absence of a decla­
rative or an interrogative marker.
As mentioned before the negative has a special imperative form thè instead of the usual mà.

The only difference between ordinary imperatives and hortative 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 (126) 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 àzwù 'we, inclusive', and this too may appear optionally in the surface. A low-level rule alters the surface form of IMPERATIVE from -à to -ù.

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:

139. ṇwa áṭhā  nya 11 -ā
     my machete TOP heavy -DEC
My machete is heavy

139a. ṇwa áṭhā  nya 11 -ā na
     my machete TOP heavy -DEC SURPRISE
Surprisingly my machete is heavy (My declaration that my machete is heavy will surprise)

139b. ṇwa áṭhā  nya 11 -ā nayā/layā
     my machete TOP heavy -DEC OBVIOUS
Obviously my knife is heavy (My declaration that my machete is heavy will cause no 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.

140.

The other finals in this class are dyu/dù which indicates that the utterance is a second-hand report, and nį which indicates that the utterance is an expression of the speaker's concurrent deliberations (i.e. he is speaking to himself as he deliberates), and these appear to be modifications of the performative verb.

141. ṇwa áṭhā  nya 11 -ā 1ā
     I machete TOP heavy - DEC WARNING
(I warn you that) my machete is heavy.

141a. ṇwa áṭhā  nya 11 -ā  hó
     I machete TOP heavy - DEC WONDER
(I wonder whether) my machete is heavy.
141b. ɲwá əθhá ɲɔa lɛ - ꙉ ꙉ 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:

142.

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:

- ꙉ ꙉ lù I emphasize that ...
- ꙉ ꙉ lè I confirm that ...
- ꙉ ꙉ xù I complain that ...
- ꙉ ꙉ hó I wonder if ...
- ꙉ ꙉ lè I warn that ...
- ꙉ ꙉ mà I plead that ...
- ꙉ ꙉ phá 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.

143. ɲwá əθhá ɲɔa lɛ - ꙉ phá
I machete TOP heavy - DEC EXPECT
My machete is probably heavy.

144. ɲwá əθhá ɲɔa lɛ - ꙉ phá - ꙉ
I machete TOP heavy - DEC EXPECT QUEST
My machete is probably heavy, isn't it?

145. thá yá lù
don't do EMPHASIZE
Don't do that!

5.9 Complements and topicalization

Any NP in a complement sentence, other than one of a con-
joined 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:

146. ása nya alé lé phwu thyl ye bwu - á
    Asa TOP Ale to money lend give tired - DEC.
    Asa is tired of lending money to Ale.

146a. alé lé nya ása nya phwu thyl ye bwu - á
    Ale to TOP Asa TOP money lend give tired - DEC.
    Asa is tired of lending money to Ale.

146b. phwu nya ása nya alé lé thyl ye bwu - á
    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)

147.

Similarly the following are all grammatical too:

148. ása nya alé ami khwa - á bá - á
    Asa TOP Ale field hoe - DEC say - DEC
    Asa says that Ale is hoeing fields.

148a. ami nya ása nya alé khwa - á bá - á
    field TOP Asa TOP Ale hoe - DEC say - DEC
    Asa says that Ale is hoeing fields.

148b. alé nya ása nya ami khwa - á bá - á
    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:

149. ása ami khwa ma nya khwa kwú -á
Asa field hoe NOM TOP hoe able-DEC
Referring to Asa's hoeing of fields, he knows how to do so.

150. ása thye ðy -ye ma nya thye ðy -ye ye ye -y
Asa flee exit go NOM TOP flee exit go COMP-DEC
Referring to Asa's fleeing away, he has already done so.

5. The English gloss does not adequately convey the fact that it is some property of the whole plant that is discussed - it is too old, improper to the context.

6. This is a contradiction of Roop's claim that such sentences do not occur. The following is evidently grammatical and in no way abnormal:

áy we ðy -ye ma ña ñe te ñe te ñe thye ðy -á
Try next TOP I eat tasty food eat eat eat

7. In dialects in Burma and China, the various forms of the [base] and [auxiliary] versions of this verb are used with ya, but in Thailand the [+Aux] version is Ye.

8. In dialects in Burma and China the various forms of both versions of this verb are gá, but in Thailand the verbal version changes to yá.

9. A sentence with this surface form does occur, meaning something like 'Asa punished the children by selling their study books', or more literally 'book how a study-book happen to the children'. A first sentence, however, this 'happen' is not a [+Aux] but a [-Aux] verb.

10. An analogous situation occurs in some other languages in the area (e.g., Thai, Lahu, Akha, Hmong where the main verb meaning 'to live' also occurs as an auxiliary indicating the continuative aspect.)
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 ηά/ηυ 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 thyi-α
   you go -DEC You may as well go

   nwu dye má thyi
   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'

   ása nya bwu -α
   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:

   áná xwà nya ηα/ηα dzá mi`ηα/ηα záma nya dzá má 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 gα, but in Thailand the [+Aux] version changes to yα.

9. 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, kgle 'happen' is not a [+Aux] but a [-Aux] verb.

10. 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.
11. 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.

12. The form ăma-ë is the required surface form of ăma when a negative co-occurs.

13. Since the Agent of any performative is the first person singular, the A node is redundant.
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, namely 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 thesis are, to recapitulate:

**Base Rules**

P1. \( S \rightarrow P \ (M) \) Presupposition Focus \( [\text{where} \ P \ \text{and} \ M \ \text{represent non-modal and modal propositions respectively}] \).

P2. \( P \rightarrow \text{Case-set, V} \)

P3. \( \text{Case} \rightarrow \{\text{NP (K)}\} \)

P4. \( \{\text{NP S}\} \rightarrow \{\text{CS}\} \)

**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. One of the reasons 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.
APPENDIX

A SAMPLE TEXT: The orphan and the buffalo

1. nó aný thì ma dyu-á / nyì syí / yíwà there last-year one one have-DEC/ two siblings they There is a story of long ago. The two brothers.

2. nyì syí ánà amyá ma dyu-á / ánà -bùlu-á two siblings buffalo many ones have-DEC / buffalo-ant -DIM The two of them had many buffalo.

3. thì ma dyu-á / ánà -bùlu-á thì ma dyu-á bë one one have-DEC / buffalo-ant -DIM one one have-DEC say They had a miniature buffalo. And so

4. -á nìa yi nyìzà lú tyà -á thì nìi thì nìi 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 -tyà nù bë -á nìa, sà khû lú ye -w watch cause fact say-DEC TOP, three year watch COMP-DEC And then, after looking after it for three years,

6. nù bë -á nìa, ánà -bùlu-á gu ma záthyí-á lè fact say-DEC TOP, buffalo-ant -DIM that one orphan-DIM to that miniature buffalo spoke to the orphan boy.

7. pùxwà thywà yà -á / pùxwà thywà yà -á nù bë -á speech speak give-DEC / speech speak give-DEC fact say-DEC And said,

8. nìa, 'há mèkhè bë -á nìa nìw kúkù nìw málà, TOP, 'soon evening say-DEC TOP you E.Bro. you E.Bro.Wi. 'This evening your elder brother and his wife

9. nìw lè hi bwe yà -á / ánà -bùlu-á nìa you to house apportion give-DEC / buffalo-ant -DIM TOP will give you your share of the household goods'. So said

10. the pùxwà thywà yà -w / 'záthyí-ó nìw ásyí-á thà so speech speak give-DEC / 'orphan-VOC you what don't the miniature buffalo. 'Orphan, don't you take anything.

11. nìwe / dza phwu sà pà tshàbu sà pà want / ricewhite three parcels salt three parcels Three parcels of milled rice, and three parcels of salt -

12. the leá nìwe '/ ánà -bùlu-á nìa the thywà yà ye this only want'/ buffalo-ant -DIM TOP this speak give COMP take only this.' The buffalo said this to him.

13. -w / atsítshí yìdye yè nù bë -á nìa yì kúkù -DEC / actually return COMP FACT say-DEC TOP he E.Bro. And when in fact they did return home, his elder brother.

14. yí málà yí lè hi bwe yè -w / bwe yè he E.Bro.Wi. he to house apportion give-DEC / apportion give and his wife gave him his share of the household goods.
After they had given him his share, he took the buffalo's words. Then they both built a house. Later they both built a house.

They built a house out of lavender bush, When they had finished building, and the house was complete, the miniature buffalo told him 'Go down there and follow them. Orphan, which one do you want?'

So, 'Orphan, which one do you want?'
30. 'gwe bethyɁ nyɪθyɁ thi ma nwe-Ɇ' / 'zâθyɁ-û nwe 'the coat green one one want-DEC' / 'orphan-VOC want 'There, the one with a green coat'. 'Orphan, if you want

31. -Ɇ bâ-Ɇ nya gwa yɁ bethyɁ ámé dye khwʉ sâtyi-Ɇ / -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. âŋâ -bʉlu-Ɇ the bâ yâ-Ɇ bâ-Ɇ nya, zâθyɁ-Ɇ buffalo-ant -DIM this say give-DEC say-DECTOP, orphan-DIM The miniature buffalo said this, and so the orphan boy

33. xe yɁ bethyɁ dye khwʉ sâtyi-Ɇ / khwʉ sâtyi-Ɇ nu ENT he coat go steal hide -DEC / steal hide -DEC fact went and stole her coat to hide it. And then

34. bâ-Ɇ nya, swu nya yɁdye ye gwu-Ɇ yɁ thywɛpθɛ thɛ / say-DEC TOP, people TOP returnCOMP all-DEC he friends sort / the people all went home, the friends that is,

35. yɁ nya tyâ-Ɇ / 'zâθyɁ-û nwu sâtyi-Ɇ nya âtɪ If he TOP be -DEC / 'orphan-VOC you hide-DECTOP little return but she stayed. 'Orphan, if you have hidden it, please

36. yɔ -Ɇ / 'ŋwa nya mâ sâtyi- '/ 'nwu sâtyi-Ɇ nu give-IMP' / 'I TOP not hide' / you hide -DEC fact give it back.' 'I didn't hide it.' 'I expect you really did.

37. phɛ / nwu sâtyi-Ɇ nya âtɪ If yâ mâ '/' EXPECT / you hide -DEC TOP little return give PLEAD / If you hid it please give it back, I beg you.'

38. ŋwa nya mâ If yɔ / sâtyi-Ɇ ŋwa sâtyi-Ɇ nu / 'aŋ 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 ŋwa nwe-Ɇ nya ŋwa nwu lâ If yɔ-Ɇ / 'zâθyɁ you me want-DEC TOP I you to return give-DEC' / 'orphan, If you will love me I'll give it back.' 'Orphan,

40. -û nwe-Ɇ nu / 'aŋ nwe-Ɇ nya sâ khʉ pug -VOC want-DEC fact' / 'ah want-DEC TOP three years reach I will love you.' 'O.K., if you will ove me, in three years

41. ye-Ɇ nwu lâ If yɔ-Ɇ / áthe nu bâ-Ɇ 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 âmâ xe zâθyɁ-Ɇ lâ fwudzâ-Ɇ nu / Wusa daughter ENT orphan-DIM to marry -DEC fact / Wusa's daughter married the orphan boy.
The following abbreviations are employed:

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<th>Abbreviation</th>
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<tr>
<td>ALH</td>
<td>Acta Linguistica Hafniensia</td>
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<td>CLS-RM5</td>
<td>Papers from the Fifth Regional Meeting of the Chicago Linguistic Society</td>
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<tr>
<td>FoL</td>
<td>Foundations of Language</td>
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<td>GK</td>
<td>Gengo Kenkyuu</td>
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<tr>
<td>GUM</td>
<td>Georgetown University Monograph Series on Languages and Linguistics</td>
</tr>
<tr>
<td>HCLab</td>
<td>Harvard Computational Laboratory Report to the National Science Foundation on Mathematical Linguistics and Automatic Translation</td>
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<tr>
<td>IJAL</td>
<td>International Journal of American Linguistics</td>
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<td>JAOS</td>
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<td>JBRs</td>
<td>The Journal of the Burma Research Society</td>
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<td>PIL</td>
<td>Papers in Linguistics</td>
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<td>POLA</td>
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<td>Toonan Adia Kenkyuu [Southeast Asian Studies]</td>
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<td>WPL</td>
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