THE DEEP SYNTAX OF LISU SENTENCES

A TRANSFORMATIONAL CASE GRAMMAR

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EXPLANATION OF ORTHOGRAPHY

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

Consonants

p	t	ts	k	ʔ
ph	th	tsh	kh	
b	d	dz	g	
f	s		x	h
v	z		ɣ	
m	n		ŋ	
	l			

Vowels

i	ɨ	u
e	ə	ɔ
æ		a

In addition I have posited the following suprasegmentals:

> Palatalization (symbolized by y)
> Labialization (symbolized by w)
> Laryngealization (symbolized by _)
> Tone: High (symbolized by ´)
> 　　　Mid (unmarked)
> 　　　Low (symbolized by `)
> 　　　Mid-rise (symbolized by ˇ)
> 　　　High-fall (symbolized by ^)

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

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

(ii) The labialization suprasegmental /-w-/ is articulated as a labio-dental fricative when the following vowel is either /-ɨ/ or /-u/. To illustrate, /phwɨ/ [pʰfv̩ɨ]; /bwɨ/ [bv̩ɨ]; /bwu/ [bv̩u].

(iii) The vowel /-ɨ/ is articulated with simultaneous labio-dental or palatal friction when it follows /-w-/ or /-y-/ respectively. To

illustrate, /twɨ/ [tɣ̩ᶤ]; /tyɨ/ [tʃʒ̩ᶤ].

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

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

(vi) Laryngealization is articulated as glottalization of the nuclear vowel in low-tone syllables, and as tenseness of the nuclear vowel in mid-tone syllables. Thus /næ̰/ [næ̰¹]; /næ̰/ [næ̰³].

(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 æ̰/ [ɟeæ̰³⁻¹] ∿ [ɟe̯æ̰³⁻¹]. 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 {-a̰} and {-ɥ}. The rules governing these changes can be stated informally as:

(a) When a verb having a laryngealized final syllable with mid tone, or a final syllable with high tone, is followed by the DECLARATIVE marker {-a̰} or {-ɥ}, the syllable reduction which occurs does not result in a tone glide, but in a syllable with high tone. The normal vowel glides occur in the reduced syllable. Thus {bæ̰}{-a̰} /bǽá̰/; {tʃɨ}{-a̰} /tʃɨ́á̰/.

(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 {pě}{-a̰} /peá̰/.

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

The above explanation of the orthography employed in the study is not to be interpreted as an attempt to describe Lisu phonology. It is rather an informal guide to the pronunciation of Lisu examples for those readers who like to be able to approximate Lisu speech when reading Lisu. For a fuller discussion of the phonology and a discussion of the impossibility of achieving a theoretically coherent phonemic description, see Hope (1970, 1971, 1973).

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LIST OF ABBREVIATIONS

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

CHAPTER I

INTRODUCTION

1.1 *THE LISU LANGUAGE*

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

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

1.2 *PREVIOUS GRAMMARS AND DESCRIPTIONS*

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

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THE DISTRIBUTION OF THE LISU LANGUAGE

(No indication of population density is intended.)

a. **Fraser (1922)** This is an outstanding work, albeit a rather
unsystematic one. The brief description of the phonology, and the
orthography Fraser invented, present a slightly over-differentiated,
but valid, phonemic analysis which is based on excellent phonetic
perception. This section is followed by a short, rather latinate
description of the major grammatical categories, bur rather than
manipulate Lisu too much to make it fit into the Latin mould, Fraser
had the good sense to add a highly illuminating section on 'particles
and miscellaneous idioms' in which most of the more interesting
aspects of Lisu structure can be found. The rest of the book, nearly
half of it in fact, is devoted to a word list which has provided a
wealth of information for comparative linguists. Fraser was extremely
fluent in Lisu, as the result of many years residence in Lisu villages,
and his glosses and translations throughout are highly trustworthy.

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

b. **Nishida (1967) and (1968)** These are papers concerned with com-
paring 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,[2] inaccurate
transcriptions,[3] and incorrect glosses.[4] 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.

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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 {-a} or {-u}. The second theoretical aspect of the analysis to be noted is that there is no attempt made to justify the analysis in the face of possible alternatives. Any phonemic solution of Lisu phonology is a non-unique one, and since Roop's differs from all previous analyses some such discussion would seem to be called for.[6]

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

1.3 *RAISON D'ETRE FOR A FURTHER GRAMMAR*

In a lecture to his senior students in the spring of 1971, John Haiman of the Linguistics Department, School of General Studies in Canberra, characterised descriptive linguists as belonging to one of three kinds. The Ants are those who get to personal grips with the mass made up of the languages of the world. They are concerned with

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

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

> There is at present no empirical evidence to support such an assertion. The choice of deep structure cannot be determined in any definitive way even for English, much less for other less-studied languages. The choice of deep structure will affect the rest of the grammar, of course, but in no case at present has the nature of the transformational component forced on us a specific choice of deep structure. Hence, since the nature of the base in any language cannot be determined conclusively, the decision as to whether the base is language-specific, Indo-European, or language-universal must rest on other factors. Thus, the linguist will work on each language individually, assuming no universality of the phrase structure rules. The appearance of similarities

between unrelated languages would, of course, support the
hypothesis of a universal base, but not prove it - not until
all known languages have been shown, on independent grounds,
to share the same deep structure will the hypothesis be
proved empirically. This will probably never be done.

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

By positing a highly abstract base it might be expected that one
result would be a more complicated transformational component. For
Lisu, however, if one adopts a theory which allows transformations which
are sensitive not to syntactic environment but to semantic presupposi-
tions,[11] in addition to the more traditional type of rule, the trans-
formational component can be kept extremely simple, since the abstract
base resembles closely the surface sentences derived from it.

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

1.4 *FACTORS DETERMINING THE CHOICE OF A BASE REPRESENTATION*

In this section I will attempt to describe certain features of Lisu
sentences which raise important questions about the choice of a base
component in a transformational grammar. In brief these features are:
 (i) The order of NPs[12] 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 poten-
tially unrestricted.[13] Subject and object positions can be transposed
without loss of meaning. Thus the unpredictability of subject and
object positions results in ambiguity about the meaning of the sentences.
Such sentences can only be completely disambiguated by reference to the
context[14] of the discourse, to the presuppositions of the sentence, to
the real-world situation, or to all of these. The relevance of the
notions subject and object to the empirical facts of Lisu is thus
questionable.
(ii) The constraints on the order of NPs are semantic and logical in
character, not syntactic. The NPs are ordered according to whether they

function as **topic** or **focus** of the sentence. The predictability of
order in these terms is what often makes possible the solution of the
inherent ambiguity, and this makes it seem likely that the notions
topic and focus are to be associated with the deep levels of grammatical
representation rather than with surface representations. This point
will be discussed more fully later in this section.

1.41 Order and the subject-object relation

Consider first the following Lisu sentences:

1. làma nya ánà khù̱ -a̱
    tiger TOP *dog bite*-DEC

    Tigers bite dogs.

1a. làma nya ánà khù̱ -a̱
    tiger TOP *dog bite*-DEC

    Dogs bite tigers.

2. ánà nya làma khù̱ -a̱
    dog TOP *tiger bite*-DEC

    Tigers bite dogs.

2a. ánà nya làma khù̱ -a̱
    dog TOP *tiger bite*-DEC

    Dogs bite tigers.

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

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

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

Here sentence (3) can be re-ordered to produce (3a), but if the re-
ordering is taken further to produce (3b) a change in meaning results.
This is obviously related to the fact that English word order is
crucial in surface sentences in the identifying of grammatical subjects
and objects. The ambiguity of the Lisu examples on the other hand
arises out of the indeterminacy of the syntactic relation of the NPs to
the verb. Yet it is still true that in the context of a discourse many

such sentences are disambiguated. The fact that this can be done, and
can be done in a unique way in many cases is due to the fact that there
must be some sort of predictability about the word order, in non-
syntactic terms if not in syntactic terms. We have seen that the order
cannot be accounted for in the terms of subject-object ordering;
however, when these sentences are viewed from a logico-semantic point
of view it is obvious that all of the sentences are ordered in the same
way in that all have a linear order of the form

    TOPIC nya COMMENT.

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

1.42 Topic, comment, focus and presupposition

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

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

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

    Lyons (1968:334-7) summarizes the traditional definition of topic
and comment and clarifies the situation somewhat by referring to these
notions in terms of contextual dispensability:

> ...the topic or 'subject of the discourse' is described as that
> element which is <u>given</u> 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 <u>new</u>
> (and thus communicates something to the hearer). By this
> criterion we cannot say what is topic and what is comment in a
> particular utterance (or indeed whether it can be divided into
> topic and comment) unless we know what is contextually given...
>
> In many languages, by the use of one word-order rather than
> another, or by the employment of a particular particle, the
> speaker can indeed make it clear that he is 'announcing a
> topic' (not necessarily given in the situation) and then 'say
> something about it'. This is only possible to a limited degree
> in English. [p.335-6].

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

In the discussion of Lisu sentences I shall use the term **topic** in the traditional sense as defined by Lyons (op. cit.). This means that in Lisu surface sentences I will maintain no distinction between 'theme' and 'given', but will treat both as varieties of topic. This will be done because at present it appears that the rules which topicalize selected NPs can be formulated without reference to this distinction.

Rather I prefer to treat 'theme' and 'given' as two rather different
kinds of presupposition associated with the base representation, either
of which triggers the topicalization rules.[15]

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

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

    4.   [*In England*] *is where I met him.*

    5.   *It was* [*John*] *I saw.*

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

    4a. *Where did you meet him?*

and (5) would appear to answer the question

    5a. *Who was it that you saw?*

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

Chomsky's later position (1970:70-87) is more convincing. Rather
than the topic : comment dichotomy he follows Halliday's position and
suggests rather the importance of the notions **presupposition** and **focus**.
In his discussion he states that if the focus is to be determined
directly from the deep structure then it will be the predicate of the
dominant proposition in the deep structure. If, however, it is to be

treated as determined by the surface structure then it will be the phrase containing the intonation centre. In either interpretation the presupposition will be determined by replacing the focus by a variable. Thus in the sentences

    6.   *Is it JOHN who writes poetry?*

    7.   *No, it is BILL who writes poetry.*

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

      It is x who writes poetry.

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

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

    a.   *How many people DIED?*

    b.   *Who CAME?*

    c.   *What HAPPENED?*

    d.   *Where is he LIVING?*

    e.   *Which is BILL?*

    f.   *When did you ARRIVE?*

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

In Lisu the fact that a question and the answer to that question are both structured in a way which assigns the focus to the correct elements is crucial. The main difference between the Lisu and the English situations is that in English phonological stress plays an important part in marking focus (although Chomsky acknowledges that grammar plays some part as well), while it is linear order which is crucial in Lisu. In English the order of subject, verb and object is predictable independently of the assignment of focus. All that is predictable about the focus seems to be that it will (apart from a number of exceptions still to be specified) coincide with the element which carries the intonation centre of the sentence. If focus is viewed as

a surface phenomenon then there is no way of predicting the location of the intonation centre until focus has been assigned in some way. In Lisu on the other hand the location of the focus is completely predictable in terms of phrase-order, and it is the lineal location of the subject and object which is unpredictable. This indicates that in Lisu at least focus must be assigned at a deep level of grammatical representation.

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

   Asa is going.

9. dye-a   ma nya ása
   go -DEC *one* TOP *Asa*

   The one who is going is Asa.

If synonymous sentences have identical bases, then these two sentences would appear to have the same base structure, and differ only in the presuppositions associated with them. If this is true, and I will assume it is, this is the basis for a claim that presuppositions must be part of a base representation since the difference in presuppositions is matched by a difference in surface structure in that (8) has no embedded S, and (9) does.

In Lisu the surface topics are marked by the morpheme nya. A sentence may have a number of topics, and the topicalized NPs and their markers occur as a set in front of the focus-plus-verbal string. The term 'set' is used purposely, since the order of the members of the set is free, and the various topics can occur in any order with reference to one another without any change in meaning or emphasis. In the context of a discourse some or all of the topicalized NPs can be deleted anaphorically.

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

10. níme   nya ŋwa nya nwu hi   basyɨa ása lǽ yí nápu balàtsha
    to-day TOP *I*   TOP *you house beside Asa to he ear slap*

    fwṳ yɛ̀ - ṳ
    send give - DEC
    This morning beside your house I gave Asa a slap on his ear.

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

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

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

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

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

1.43 Topicalization and discourse

Linguists have long agreed that a fact of language that must be accounted for is the fact that some sentences are synonyms of others, even though the surface forms be different. For Lisu, and probably for other languages too, a further fact must be explained, namely, that

while two sentences may be entirely synonymous in the usual sense, yet they may not substitute for one another in a discourse, if they are marked differently for topic and focus. We have already seen that sentences 1 and 2 are synonymous, but in a discourse they are not interchangeable. Thus if the first sentence in a discourse were

11. làma nya yí lì mà x<u>a</u>
    tiger TOP *custom not good*

    Tigers' habits are bad.

and the second sentence of the discourse were to mean *tigers bite dogs*, then the form of the sentence would have to be that of sentence 1, and sentence 2 would automatically be excluded from the discourse, since it has ánà *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. ánà nya ásyí na le   ty<u>e</u> - â
    dog TOP *what sore become cause* - Q

    What made the dog sore?

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

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

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

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

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

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 nya and that item is an NP, then the NPs refer to the same topic. (The situation becomes far more complex where a number of NPs in a sentence are marked as topic; in the next sentence some of the topicalized NPs may be deleted, and the order of the remaining ones can be altered, so that the only rule that can be made is the broad generalization that the two sentences share the same topics.) The rule given above is not intended to suggest that a Lisu speaker cannot change the topic of conversation or introduce new topics,

but rather the appearance of the marker nya indicates that no change is being made in the topic of conversation. A fact that I have not introduced before is that Lisu has a second topic marker xə which replaces nya when a new topic is introduced. Notice the type of semantic operation achieved by the topic markers in the following:

13. làma nya ánà khừ - a
    tiger TOP *dog bite* - DEC

  (i) *Tigers bite dogs.*

  (ii) *Dogs bite tigers.*

14. ánà xə làma khừ - a
    dog TOP *tiger bite* - DEC

  (i) *Dogs bite tigers.*

  (ii) *Tigers bite dogs.*

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

Now consider the following:

15. làma nya ánà lǽ khừ yὲ -a
    tiger TOP *dog to bite give* -DEC

    A tiger bit a dog.

16. yí nya na le   - a
    he TOP *sore become* - DEC

    He got hurt.

17. yí xə na le   - a
    he TOP *sore become* - DEC

    He got hurt.

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

18. ása xə the mu - a
    Asa TOP *thus see* - DEC

    Asa saw this.

1.44 Theoretical Implications

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

In his discussion of whether phrase structure rewriting rules should generate sets of symbols or strings of concatenated symbols, Chomsky[16] voiced a presupposition about natural languages which is widely held by linguists, namely that apart from a small number of optional stylistic transpositions word order in any language is relatively fixed.

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

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

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

The Lisu data I have presented would appear to constitute a strong counter-example to the universality of much of the above argument of Chomsky's. If, as Chomsky says, free word order can be represented best by a base component consisting of rules which generate sets, then surely this type of rule best represents the phenomenon of free **phrase** order at this deep level of representation. It follows then that the constraints on order may be of a different type for phrases than they

are for elements further 'down' the scale. For Lisu it seems plain
that the order of phrases within a sentence is determined by semantic
rules of some kind.

If Lisu is described within the framework of the 'Aspects' theory,
then the very fact of having introduced order into the strings produced
by the P-rules means that re-ordering T-rules must also be posited.
These T-rules in Lisu cannot adequately be treated as optional, since
re-ordering to achieve the Topic-Focus-Verbal sequence is required of
all sentences. If treated as optional, then this important general-
ization 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. m̩alà A *kinship term for senior brother's wife.*

B. yí kúku zàmə
   WH- *s.bro.wife*
   Senior brother's wife.

19. A. àgu A *hoe*.

 B. micha khwa dwu
 ground hoe thing
 An instrument for hoeing the ground.

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

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

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

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

(iii) A set of rules will convert the strings of ordered symbols representing semantic categories into surface strings. At this level notional categories will presumably be rewritten as such things as prepositional phrases, which will in turn have inner structure which presumably will be generated by means of P-rules and their associated

P-markers. In other words, it is possible that the term phrase struc-
ture as it has been used might need to be limited to a sub-component
which generates the structure of phrases, rather than the structure of
sentences.

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

20. *Tom hit Bill*

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

21. *hit x, y: x = Tom: y = Bill*

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

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

22. *hit x, y: x is agent: x = Tom: y is patient: y = Bill.*

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 → *Tom*
     D → *Bill*
     V → *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 láh-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 sǔh-dzɯ on page
6, but as sǔh-dzɯ̀ on page 269; *frog* is written as uó-pá on page 9, but
as vó-pá on page 20. Such inconsistencies apply to a dozen or more
additional forms.

3. These are extremely numerous. To take one page at random (1968:22)
the following are erroneous in my judgement:
    tshɯ̀h-pjah *foot* should have mid tone on first syllable;
    khù *hole* should have mid tone and free vowel;
    -ʔah 'post-verbal particle' should have no initial consonant, and
        laryngealized vowel;
    khǎ-thu *basket* should have free vowels on both syllables;
    sǔh-phæ̀ *leaf* should have free vowel on final syllable;
    ʔah-phá́h *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 mistranslations occur on almost
every page.

5. From such unusual sentences as the following, which appears on page 33, it would appear that the text was unedited:

/dwɨyɪ̄a; begh nya, tɪ́hwa azu ?/
enter=go=nom? say=to=as-for, this=emph=time we

Is it going in (the tape recorder) when we speak <u>this</u> time?

(Roop's translation and transcription).

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

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

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

àme   thæ̀ ása ávæ̀tɪ́ fwṵ syè̤ 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' /syɟ/ and /yɟsyɟ/ which are said to mean *in that case, in the case of* and to indicate that the following clause is related to preceding discourse. In fact the syllables under discussion are the Lisu equivalents of *Er...,* and *Um...* and indicate no more than that the speaker is thinking. Of more importance are the misunder- standings about particles such as dù and -a which Roop claims indicate 'emphasis' and nominalization respectively. In face dù marks reported speech, and -a marks declarative sentences. Similarly swɨ which Roop describes as an 'emphasis' marker, in fact nominalizes a sentence and means something like *it seems that ..., apparently ...* It is the same morpheme he elsewhere describes correctly as a classifier meaning *sort, type.*

9. Thus for instance the sentence translated as *Peppers are now ten baht per kilo, big peppers that is* on page 66, in fact means *They say that peppers are* ... Similarly that translated as *When we have raised pigs...* on page 111 means in fact *Even though we raise pigs...*, and the sentence on page 114 translated as *If you once get (there) tell (them) others will give (the money)* should read *By the time you arrive, others will have told them that someone will pay them.*

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

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

ásālényā àmāé madà
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* his Asa, and thus /àmāé/ is the focus of the sentence rather than /ásā/.

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

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

13. For the purpose of this discussion I am restricting myself to a discussion of re-orderings which do not involve special phonological marking such as a pause, abnormal intonation and the like. As a general rule, Lisu sentences have a surface configuration consisting

of a set of NPs followed by a verbal element. Within the set of NPs
there is potentially complete freedom of left-to-right order. At least
one NP may be moved to a position behind the verb without any special
phonological marking being required. However, once two or more NPs are
moved in this way, they are separated by pauses, and the normal intona-
tion of the sentence is affected. For this reason I will limit myself
to a discussion of the order of the NPs within the pre-verbal set.

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

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

16.   Chomsky (1965:126).

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 different orders. Fillmore has obviously assumed some intermediate step whereby one tree, with the required order of nodes, is selected from the set of possible trees. This assumption makes for ease of presentation, and is unimportant for the general theory, and so I will follow Fillmore throughout this study and make a similar assumption on an ad hoc basis in order to avoid the recurring need to select the correct type of tree from the set of possible trees.

The base rules posited above are supplemented by a set of rules which achieve such things as 'primary topicalization' (which is subjectivalization in English) by re-ordering the nodes and attaching them to other nodes higher or lower in the tree, thus producing the

correct surface structure and order. Fillmore has nowhere expounded
the theory of rules of this kind or indicated what sort of entity
provides the context to which the rules are sensitive. However, a
theory of the base representation which includes a set of presuppositions
and a focus which are generated along with the P-marker provides, for
Lisu at least, the type of environment required to 'trigger' such
topicalization rules.

2.1 *THE CASES*

I accept as basic the cases[1] 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.

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

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

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

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

Essive (E) The case of a noun indicating the generic class to which
an object or being belongs, or the essential matter of which the being
or object consists.

Translative (Tr)   The case of the name given to a being or object when identifying it or distinguishing it from other beings or objects.

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

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

2.2 *THE POSTPOSITION CASE MARKERS*

The Agentive, Objective, Instrumental, Factitive and Translative have no overt postpositions associated with them in Lisu. The Dative has the postposition lǽ which for sake of convenience I will gloss as *to*, and the Essive has the postposition tú 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*, tæthywè *direction of*; time adverbs are marked by thæ̀ *at*; manner adverbs are marked by le *in ... manner*; and the benefactive is marked by mɛ́sá *for*. All of these markers are post-positions.

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

2.3 *THE CASE FRAMES*

Sentences can obviously be classified according to the cases which are contained in the propositions of those sentences, and sentences in a given class, because they contain the same cases will have a certain amount of shared semantic content. Those with an Agentive in their

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

2.31 Case frames incorporating one obligatory case

2.31.a +[A_] verbs:

Verbs which have this specification include the following:[2]

lwɨ	*to wiggle*	tyɨ́	*to cough*
tǎ	*to jump*	swu̱	*to whistle*
tyu̱	*to rotate*	læ̀mè̱	*to wave*

The fact that verbs in this class have the specification +[A_] is not to be interpreted as meaning that this is the only case with which these verbs occur. Rather they require the co-occurrence of an A in the proposition, but some of the verbs also co-occur optionally with certain other cases in the proposition as well. What these additional optional cases are is determined by the verb's full case frame. Thus tyɨ́ *to cough* has a full case frame +[A_], i.e. it may not co-occur with any optional deep cases, while lwɨ *wiggle* has a full case frame[3] +[A(O)_] and may co-occur with an Objective. Note the following:

1. ása nya lwɨ   tyǎ -a̱
   A   V
   Asa TOP *wiggle* CONT-DEC
   Asa is wiggling (squirming around).

2. ása nya yàpu lwɨ̌   tyǎ -a̱
   A   O   V
   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 lwɨ *wiggle* have the same case frame specification as tyɟ *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 wàsɨ *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 pwě *to thunder* occurs only with the noun mègwù *thunder*.

3. ása lǽ nya mèha thù -a̱
    D   I   V
    Asa to TOP *rain soak* -DEC

    The rain drenched Asa.

4. ása lǽ nya mìhi dywè-a̱
    D   I   V
    Asa to TOP *wind blow*-DEC

    The wind blew against Asa.

5. ami lǽ nya mègwù   pwě   -a̱
    O   I   V
    field to 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.[4] The class is a small one, and has in it such verbs as

tá *to sting, burn*   ká *to prick*
xǎ *to cut*   thá *to scald*

Consider the following:

6. átú nya tá -a̱
    I   V
    fire TOP *sting*-DEC

    Fire burns (lit. *stings*).

7. átú nya ása lǽ tɔ́ -a̱
    I   D   V
    fire TOP *Asa to sting*-DEC

    The fire burnt Asa.

8. alě nya ása lǽ átú tɔ́ -a̱
    A   D   I   V
    Ale TOP *Asa to fire sting*-DEC

    Ale branded Asa with the fire.

9. thywù nya kɔ́ -a̱
    I   V
    thorn TOP *prick*-DEC

    Thorns prick/thorns are prickly.

10. ása nya thywù kɔ́ -a̱
    D   I   V
    Asa TOP *thorn prick*-DEC

    A thorn pricked Asa.

11. alě nya ása lǽ thywù kɔ́ -a̱
    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.[5] Intransitive members of the +[D_] class include the following:

tshɨ	*fat*	na	*sick*
dù	*prostrate*	the	*clever*
vwù	*big*	zµ	*little*
phwu	*white*	næ	*black*

12. ása nya tshɨ-a̱
    D   V
    Asa TOP *fat* -DEC

    Asa is fat.

13. ása nya na -a̱
    D   V
    Asa TOP *sick*-DEC

    Asa is sick.

14. ása nya næ -a̱
    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 tshɨ́   -a̠
     D   V
     Asa TOP *worried*-DEC
     Asa is worried.

16. laě nya ása lá̠ tsɨ̌   -a̠
     A   D   V
     Ale TOP *Asa to worry*-DEC
     Ale alarmed Asa.

17. ása nya thye   le   -a̠
     D   V
     Asa TOP *peaceful become*-DEC
     Asa is resting quietly.

18. alě nya ása lá̠ thyɛ́ -a̠
     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:

dywu̠	*withered*	ka̠	*dried out*
syɪ	*wide*	dyɨ	*increasing in size*
thywě	*brittle*	ʔ2̠	*stinking*
zɨlwɛ̠̀	*slippery*	zɨ	*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. áŋa̠   nya dyu-a̠
     O   V
     buffalo TOP # -DEC
     There was a buffalo/there are (such things as) buffaloes.

As in the case of the +[D_] verbs, so with the +[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 lwɛ̀ *warm*, ti̠ *sinking*, and bə *untied, loosened*. Once
again, the members of this class, like the +[(A)D_] verbs have a

slightly different surface form for each verb when the optional
Agentive occurs in the same proposition. Note the following:

20. wùphyà   nya lwè -a̱
          O   V
      vegetable TOP *warm*-DEC
      The vegetables are warm.

21. ása nya wùphyà   lwe̱ -a̱
      A   O   V
      Asa TOP *vegetable warm*-DEC
      Asa is warming the vegetables.

22. yíthwèbe nya bə   -a̱
               O   V
      WH-*knot* TOP *untied*-DEC
      The knot is loose.

23. ása nya yíthwèbe phə -a̱
      A   O   V
      Asa TOP WH-*knot* *untie*-DEC
      Asa untied the knot.

2.31.e +[F_] verbs:

This class is bigger than the analogous class in English, and
consists of various verbs meaning *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:

di   *to appear - tubers*   nwe̱   *to appear - shoots*
dwè   *to appear - fruit*   hwe   *to appear - holes*
ya̱   *to appear - cracks*   ywe   *to appear - teeth, hair, plants*
hwè   *to appear - mud*   li̱   *to appear - rain*

Note the following:

24. bi̱   nya di -a̱
      F   V
      taro TOP *form*-DEC
      Taro tubers are forming/have formed.

25. yí-si̱   nya dwè -a̱
       F   V
      WH-*fruit* TOP *form*-DEC
      Fruit is forming/has formed.

26. yí-tywé nya ya̱ -a̱
       F   V
      WH-*crack* TOP *form*-DEC
      A crack is forming.

27. bi̱ -tye̱ nya bi̱ di -a̱
         L   F   V
      taro-root TOP *taro form*-DEC
      Taro tubers are forming on the taro roots.

28. ŋama   nya yí-s‡   dwè -a̱
　　　　L　　　　　　F　　　　　V
　　　banana TOP WH-*fruit form*-DEC

　　　Fruit is forming on the banana trees.

29. lə́kə́ nya yí-tywé ya̱ -a̱
　　　　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 du̱ *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. làma thì ma du̱   -a̱
　　　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*	dè	*to beat*
tí	*to pound*	fwu̱	*to shoot*
syǎ	*to fix*	si̱	*to sew*

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

31. ása nya yí-phw‡ bə -a̱
　　　A　　　　　　O　　　V
　　　Asa paid the price (i.e. he did not get it free).

32. ása nya alě lə́ yí-phw‡ bə -a̱
　　　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.   ávạ̀ nya khà̀sa dzà-a̱
      A   O   V
     pig TOP *corn* *eat*-DEC
     The pig is eating corn.

34.   ása nya ávạ̀ lá̱ khà̀sa tsá -a̱
      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 dà̀ *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 tí *pound* is an example. Note the following:

35.   ása nya tshạ̀bu yí-xà̀   tí   -a̱
      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 tí *to pound* has the alternative frame +[A,I_]. Bearing in mind that all +[A,O_] verbs may have optional Instrumentals note the following sentences which have [A,O,V], [A,O,I,V] and [A,I,V] propositions:

36. ása nya tshàbu tí -a̱
     A   O   V
    Asa TOP *salt   pound*-DEC

    Asa is pounding salt.

37. ása nya tshàbu tshɨdwù tí -a̱
     A   O   I   V
    Asa TOP *salt   pestle   pound*-DEC

    Asa is pounding salt with a foot-pestle.

38. ása nya tshɨdwù tí -a̱
     A   I   V
    Asa TOP *pestle   pound*-DEC

    Asa is operating the foot-pestle.

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

39. ása nya khǎthwu wá -a̱
     A   O   V
    Asa TOP *basket   shield*-DEC

    Asa is shielding the basket.

40. ása nya khǎthwu yɪ̀pwú wá -a̱
     A   O   I   V
    Asa TOP *basket   cape   shield*-DEC

    Asa is shielding the basket with a rain-cape.

41. ása nya yɪ̀pwú wá -a̱
     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 syǎ *fix* and dè *to forge (metal)*. Since the Objective differs from the Factitive 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 hi   syǎ-a
     A   O   V
     Asa TOP *house fix*-DEC

     Asa is mending the house.

43. ása nya hi   syǎ-a
     A   F   V
     Asa TOP *house fix*-DEC

     Asa is building a house.

44. ása nya áthà dè   -a
     A   O   V
     Asa TOP *knife forge*-DEC

     *Asa is forging a knife (i.e. is re-shaping or re-tempering an
     old knife).*

45. ása nya áthà dè   -a
     A   F   V
     Asa TOP *knife forge*-DEC

     *Asa is forging a knife (i.e. is making a knife out of raw steel,
     truck springs etc.).*

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

   John paints nudes.

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

   What John does to nudes is paint them.

One or two verbs have the specification +[A,O/F/I_]. These thus
have three alternative types of proposition in which they can occur.
One of these verbs is sɨ *sew*. Observe the following:

46. ása nya bethyɨ sɨ -a
     A   O   V
     Asa TOP *jacket sew*-DEC
     Asa is darning the jacket.

47. ása nya bethyɨ sɨ -a
     A   F   V
     Asa TOP *jacket sew*-DEC
     *Asa is tailoring a jacket (i.e. sewing a jacket from pieces
     of cloth).*

48. ása nya thyàlà̰ sɨ̀ -a̠
    A   I   V
    Asa TOP *machine sew*-DEC
    Asa is operating the sewing-machine.

2.32.c +[A,I_] verbs:

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

49. ása nya áthà zywè-a̠
    A   I   V
    Asa TOP *knife use* -DEC
    Asa uses a knife.

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

2.32.d +[A,D_] verbs:

These are verbs requiring both an animate subject and an animate
object. Examples of the class, which is not very large, are hǎy
murder, pwě *scold*, syɨ́ *put to sleep*, dyɨ̀ *meet*.

50. ása nya zànwe̠ lá̰ pwě -a̠
    A   D   V
    Asa TOP *child to scold*-DEC
    Asa scolded the child.

51. ása nya zànwe̠ lá̰ syɨ́   -a̠
    A   D   V
    Asa TOP *child to put-to-bed*-DEC
    Asa put the child to sleep.

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

52. ása nya ŋwa lá̰ khwu-a̠
    A   D   V
    Asa TOP *me to call*-DEC
    Asa called me.

53. ása nya ŋwa lá̰ wúwu   khwu-a̠
    A   D   Tr   V
    Asa TOP *me   j.-uncle call*-DEC
    Asa calls me (his) junior uncle.

2.32.e +[A,D_] verbs with alternative +[A,F_] specification:

At present I know of only one verb in this class, namely syè̱ *to kill*
which only occurs with the Factitive noun yí-pó *an end*.

54.   ása nya yí-pó syè̱ -a̱
      A   F   V
      Asa TOP WH-*end kill*-DEC
      Asa brought 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[6]	the	Factitive	dzagwu	*road*
gwa̱	*to sing*	"	"	"	mə̀gwà̱	*song*
thyě	*to dance*	"	"	"	gwa	*dances*
thywè	*to speak*	"	"	"	pùxwá	*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 xwàthwu zywè-a̱
      A   F   V
      Asa TOP *headman*   # -DEC
      Asa is (performing the function of) headman.

56.   ása nya tshu-vwù zywè-a̱
      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 átú thywu-a̲
    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   átú thywu-a̲
    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 Factitive nouns. Examples of the class are:

bwɨ   *make a noise*   lwè̲   *bore into*

thwu *pierce*   tywú   *erode*

59. tshɨdwù nya yí-sya̲ bwɨ -a̲
     I   F   V
    pestle   TOP WH-noise make-DEC
    The foot-pestle is making a noise.

60. thywělwè̲ nya yí-khwu lwè̲ -a̲
     I   F   V
    awl   TOP WH-hole bore-DEC
    The awl is boring a hole.

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

Some of the verbs in this class such as lwè̲ *bore* may occur with an optional Agentive, while others such as bwɨ *make a noise* may not. The verb bwɨ 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 yí-sya̲ bwɨ -a̲
     A   F   V
    Asa TOP WH-noise make-DEC
    Asa is making a noise.

63. ása nya yí-khwu lwὲ -ạ
    A   F   V
    Asa TOP WH-*hole* bore-DEC

    Asa is boring a hole (with something).

2.32.i +[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:

wạ	*to obtain*	hὲmạ̀	*to hunger*
nwe	*to desire*	bædzà	*to hear*

64. ása nya dza wạ -ạ
    D   O   V
    Asa TOP *rice* get-DEC

    Asa obtained some rice.

65. ása nya dza nwe -ạ
    D   O   V
    Asa TOP *rice* desire-DEC

    Asa wants some rice.

66. ása nya dza hὲmạ̀ -ạ
    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 possessives are derived from relative clauses in which the main proposition has a Dative and an Objective and an empty verb has some syntactic support from the Lisu data. Fillmore's proposal is that a phrase like *John's books* has an underlying form that is roughly

    [*books* [VERB *books to-John*]]
    NP   S   S NP

Relativization of this sentence involves deletion of the empty verb and the Dative preposition, and the replacement of the preposition by a postposition which has the written form, **ṣ**. 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. [thùyè [thùyè ása lé VERB]]
           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. thùyè ása lé ma
      O   D
    books Asa to ones
    The books which are Asa's.

The preposed relative then has the form

67b. ása thùyè
     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 lé 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 sé *know* and sy *learn* are to be analysed as one verb. This verb then has the form sé in [D,O,V] propositions, and sy 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 phǔ *to reach a biological or social stage in one's life*, pé *to be changed into another form*, and phywè *to attain*. Note the following:

68. ása nya zàgwulǽ phǔ -a̱
    D   F   V
    Asa TOP *youth   reach*-DEC

    Asa is becoming a young man (i.e. no longer a child)

69. ása nya làma̱ pέ -a̱
    D   F   V
    Asa TOP *tiger become*-DEC

    Asa turned into a tiger (i.e. he is a were-tiger)

70. ása nya xwàthu phywè̱ -a̱
    D   F   V
    Asa TOP *headman attain*-DEC

    Asa succeeded in becoming headman.

2.32.k +[0,L_] verbs:

Verbs in this class are the verbs of motion and include

dye *to go*   la   *to come*
yà̱   *to descend*   da̱   *to ascend*
lwέ *to roll*   bywe̱ *to fly*

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

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

71. ása nya hi   khwù wa dwɨ -a̱
    O   L   V
    Asa TOP *house inside to enter*-DEC

    Asa entered the house.

72. ása nya mithya dwɨ -a̱
    A   L   V
    Asa TOP *ground enter*-DEC

    Asa was digging (into the ground).

73. ása nya walàkhwu dwɨ -a̱
    A   F   V
    Asa TOP *pit   enter*-DEC

    Asa was digging a pit.

74. ása nya phwu mithya wa twɨ -a̱
    A   O   L   V
    Asa TOP *money ground to enter*-DEC

    Asa buried the money in the ground.

There are two empty verbs with +[0,L_] specification, both having the redundant meaning *to be located at*. The surface form tyǎ occurs if the

Objective is an animate noun, and the form dǎ occurs if it is an inanimate one.

75. ása nya tha tyǎ-ą
       O   L   V
    Asa TOP *here* # -DEC
    Asa is here/Asa lives here.[7]

76. áthà nya tha dǎ -ą
       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*   ŋwá *lend, for temporary use*

bwe *apportion*   thyɬ *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*   ŋwá *borrow, for temporary use*

bwe *have a portion*   thyɬ *borrow, to be repaid in kind*

77. ása nya ŋwa lɛ́ mə vwù -ą
       A   D   O   V
    Asa TOP *me to cloth sell*-DEC
    Asa sold some cloth to me.

78. ŋwa nya mə   vwu-ą
       D   O   V
    I   TOP *cloth buy*-DEC
    I bought some cloth (from an Agent x)

79. ása nya ŋwa lɛ́ pu ŋwá -ą
       A   D   O   V
    Asa TOP *me to gun lend*-DEC
    Asa lent a gun to me.

80. ŋwa nya pu ŋwá -ą
       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. ŋwa nya ása tsú mə vwu-a̱
    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 radically.

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

tshɨ	*wash*	nywǎ	*to hold with tweezer action*
?wǎ	*to ladle*	pæ̌	*to stir*
thyɫ	*to slash*	khə̀	*to split*

82. ása nya lə́kə́ a̱dya̱ tshɨ-a
    A   O   I   V
    Asa TOP *bowl water wash*-DEC
    Asa washed the bowl with water.

83. ása nya wùphyà phyákhə̀ ?wǎ -a̱
    A   O   I   V
    Asa TOP *vegetable ladle   ladle* -DEC
    Asa ladled out the vegetables with a gourd ladle.

84. ása nya ma̱khwà áthə̀ thyɫ -a̱
    A   O   I   V
    Asa TOP *bamboo knife slash*-DEC
    Asa slashed the bamboo with his machete.

In addition to the many verb classes already mentioned there exists
a very important class of verbs which occur with sentential complements.
Rather than list them at this point, I will do so at the appropriate
time during the discussion of complementation in general in Chapter V.

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 study for a discussion of this feature of Lisu syntax.

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

    byàma̠ tɕ   -a̠
      A   V
    bee   sting-DEC
    The bee stung.

```
ása nya alě lɛ̌ áthà ká -ạ
 A      D    I    V
```
Asa TOP *Ale to knife stab*-DEC

Asa stabbed Ale with a knife.

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

```
ása nya alě lɛ̌ nya áthà xwa hɛ́ ká -ạ
```
Asa TOP *Ale to* TOP *knife seek* CAUSE *stab*-DEC

Asa found a knife and stabbed Ale.)

5. If this case is defined as Experiencer as per Fillmore (1970) rather than as Dative, some members of the class I have posited, such as tshɨ *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:

```
?* yí tha tyǎ-ạ  yə yí tha mà tyǎ
   he here  # -DEC TOP he here not  #
```
In actual performance the problem is overcome by the use of time adverbs
– *He usually lives here, but he is not here now.*

CHAPTER III

TOPICALIZATION, FOCUS AND THE ORDER OF NOUN PHRASES

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

The stage at which the topicalization rules apply is an open question,
and whether they are to operate before or after the expansion of the NP
nodes, before or after lexical substitution, and whether they are to
apply en bloc or not are empirical questions yet to be decided. What
is certain is that for Lisu such rules must operate before the rules
which result in anaphoric pronominalization, since such pronouns refer
to equivalent nouns further to the left in the sentence, regardless of
the relative 'height' in the P-marker of the nouns in question.

Throughout the discussion which follows the main issues will be clarified if the first of the ordering rules is assumed to have applied, namely the global constraint that selects from the set of possible P-markers generated by the base rules only those in which the V-node succeeds the set of cases. This constraint is the equivalent of saying that while the cases are not ordered with respect to one another, they occur as a set to the left of the V-node.

3.1 PRIMARY TOPICALIZATION

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

The choice of the argument to be raised is determined by a constraint which applies to all sentences of the type under consideration. Informally stated the constraint is: If there is any non-basic derived case (adverbs of time or place[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.

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

as O-S-V when an Instrumental is the 'subject', and in all interrogative sentences the item being queried is ordered immediately before the verb.)

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

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

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

1.   A three-argument predicate:[3]

P-marker:
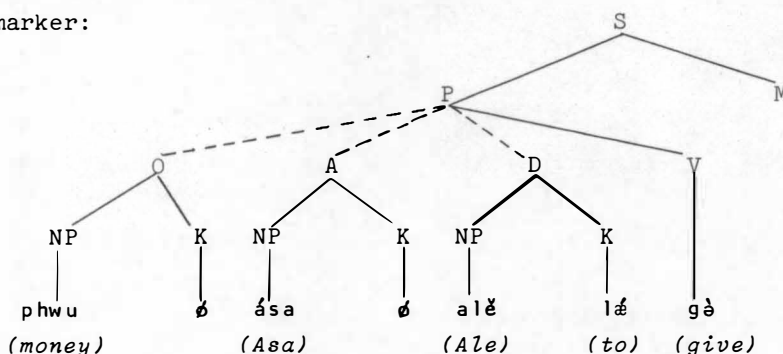
Presupposition: x occurred.

Assertion: $x = g\grave{e} \ [phwu^O, \ \acute{a}sa^A, \ al\check{e}^D]$
$(x = give \ [money^O, \ Asa^A, \ Ale^D])$

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 D O.

The transformed P-marker is

la.

ása	ø	alě	lǽ	phwu	ø	gà
(Asa)		(Ale)	(to)	(money)		(give)
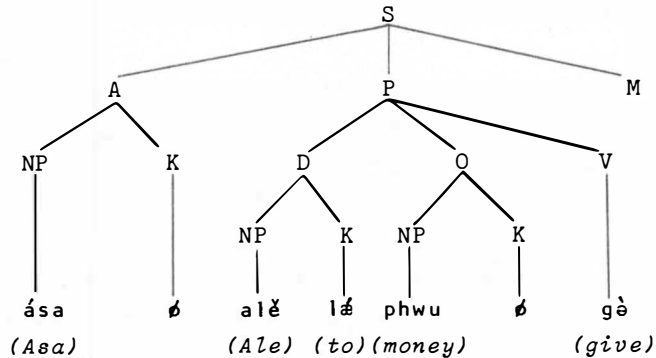
After the topic marker has been inserted, the following well-formed sentence is generated (the modal component has been assumed):

lb. ása nya alě lǽ phwu gà -ą
    Asa TOP *Ale* to money give-DEC

    Asa gave some money to Ale.

2.   A two-argument predicate:

The P-marker:

ása	lǽ	thywù	ø	ká
(Asa)	(to)	(thorn)		(prick)
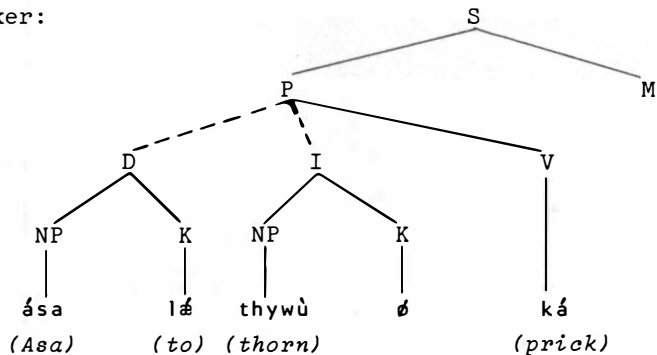
Presupposition: x occurred

Assertion: $x = \text{ká} \; [\text{ása}^D, \text{thywù}^I]$

         $(x = prick \; [Asa^D, thorn^I])$

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:

2a.
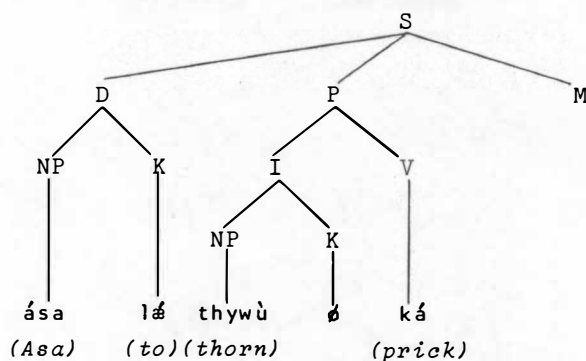
The surface form of this sentence is

2b. ása lǽ nya thywù ká   -ə
     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 trans-
formational 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,[4] and therefore the arguments used for the 'basic' nature of
the active form over the 'derived' passive form do not apply.

3. A one-argument predicate:
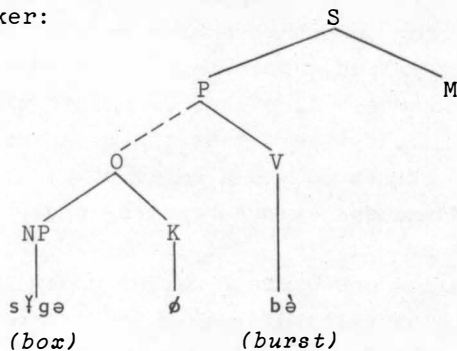
The P-marker:

Presupposition: x occurred

Assertion: x = bà [sɤgə]^O

        (x = *burst* [*box*]^O)

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

3a.
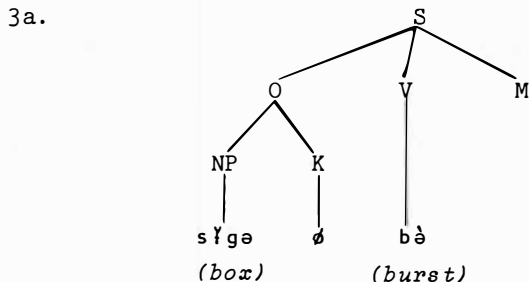
The surface form of the sentence is

3b. sɤgə nya bà   le   -ɥ
    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:

```
                                            S
                                           / \
                                          P   M
                                   .-..-/|\-..-\
                                  /    /   \     \
                                 D    O     A     V
                                / \  / \   / \    |
                              NP   K NP  K NP  K  |
                              |    | |   | |   |  |
                             alě  lǎ phwu ø  ása ø gè
                            (Ale) (to)(money)  (Asa)  (give)
```
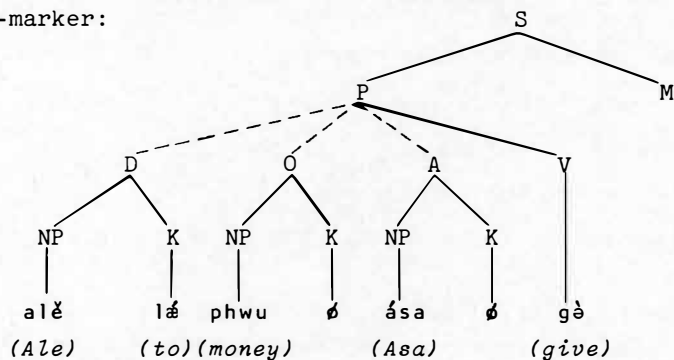
4a. Presupposition: Asa was the agent in some activity x.

Assertion: gè [àsa^A, alě^D, phwu^O]

give [Asa, Ale, money]

The topic is thus ása^A since it occurs as a non-variable in the pre-supposition. The focus assignment rule previously mentioned marks the O as focus and the resulting surface sentence after the movement has been completed is

4a'. ása nya alě lǎ phwu gè -a̧
      A   TOP   D   O   V
     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 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: gè [ása^A, alě^D, phwu^O]

give [Asa, Ale, money]

The topic is phwu^O and the focus is alě^D, and after the raising and moving rules the surface form generated is

4b'. phwu nya ása alě lǎ gè -a̧
     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: gè [ása^A, alě^D, phwu^O]

give [Asa, Ale, money]

The topics are ása[A] and alě[D] and the focus is phwu[O]. The surface sentence after movement is completed is

4c'. ása nya alě lɑ́ nya phwu gə̀ -a
     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 alě lɑ́ gə̀ -a
    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 pre-suppositions 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 ali yɐ-à ?
    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 this 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. ása nya phwu àma lɑ́ gə̀ -à ?
    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.

ása	phwu	alě	lá	gà		ạ
Asa	*money*	*Ale*	*to*	*give*		DEC

6a.

#	asa	phwu	#	gà	ạ	alě
#	*Asa*	*money*	#	*give*	DEC	*Ale*
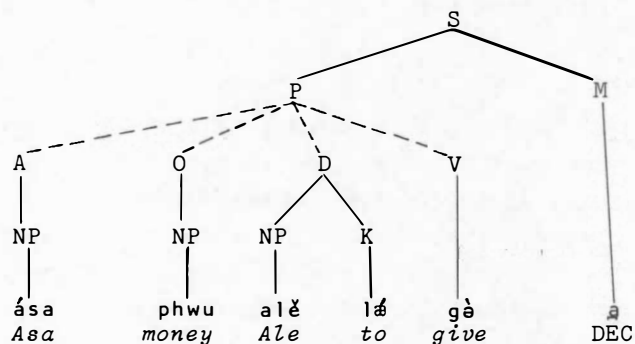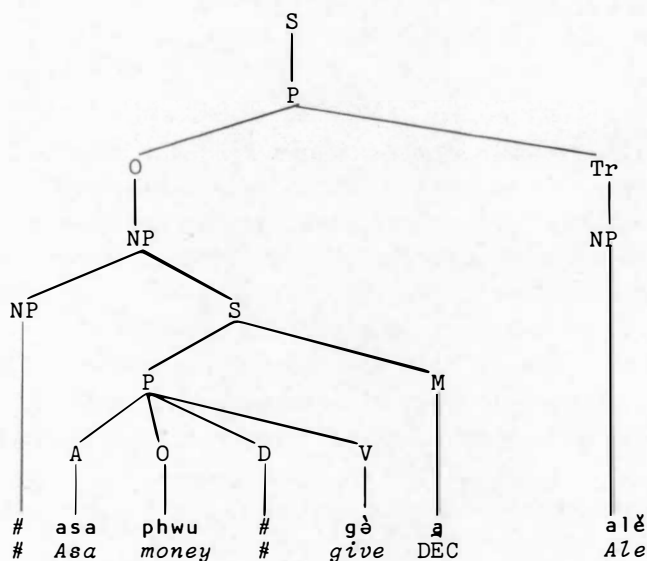
The original Dative NP has been raised into a higher sentence in which there are two cases, an O and a predicate Tr. The O dominates an empty NP which is modified by an S which was the original sentence base. The regular relativitization rules (see Chapter 4), and the topicalization of the highest O node generate

6b. ása phwu gà̰ -a̰ ma nya alě
    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* xə

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 xə 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 xə 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 xə topics are entailed, as well as
presupposed. The notions presupposition and entailment have been
discussed by Horn (1969) who quotes Austin (1958) as attributing the
anomaly of

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

b. **All the guests are French, but some of them aren't*

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

'2a. If (S → S') and (-S → S') then S presupposes S';

  b. If (S → S') and (-S' → -S) then S entails S'

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

By way of example:

7. *Most of the guests are French.* (S)

    Therefore there are some guests. (S')

7a. *Most of the guests are not French.* (-S)

    Therefore there are some guests. (S')

Since the same conclusion can be drawn from both the positive and
negative forms of the antecedent sentence, the first sentence in each
pair presupposes the second.

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

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

Since a negative conclusion is drawn from a positive antecedent in
(8), and the positive version of this conclusion requires the negativ-
ization 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 áthà dɔ̀ -ạ
    Asa TOP *knife forge*-DEC

    Asa is forging a knife.

10. ása xə áthà dɔ̀ -ạ
    Asa TOP *knife forge*-DEC

    Asa is forging a knife too.

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

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

9a. ása nya áthà dɔ̀ -ạ
    Asa TOP *knife forge*-DEC

    Asa is forging a knife.

    Presupposition: *Asa is forging y.*

    ása nya áthà mà dɔ̀
    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 áthà dè -a̠ / ása xə áthà dè -a̠
     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 áthà mà dè   / ása xə áthà mà dè
     one TOP *knife not forge* / *Asa* TOP *knife not forge*
     *Someone else is not forging a knife, and Asa is not forging a
     knife either.*

10c. swu nya áthà mà dè   / *ása xə áthà dè -a̠
     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 xə 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 xə.

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 xə 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. alě nya thsɨbə thyě-a̱ / ása xə áthà dè -a̱
    Ale TOP *banjo play*-DEC / *Asa* TOP *knife forge*-DEC
    Ale was playing the banjo and Asa was forging a knife.

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

12. ása xə áthà dè -a̱ na
    Asa TOP *knife forge*-DEC UNEXPECTED
    Even Asa was forging a knife.

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

13. ása xə áthà dè -a̱ / alě xə áthà dè -a̱
    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. ása xə tshɨbə thyě-a̱ / alě xə áthà dè -a̱
    Asa TOP *banjo play*-DEC / *Ale* TOP *knife forge*-DEC
    *(Both Asa and Ale were doing something) Asa was playing the
    banjo and Ale was forging a knife.*

In (14) the first part of the English gloss is deduced quite easily from the Lisu sentence by the way the topics are marked. Earlier in this study the over-simplified statement was made that xə marks a change in topic (see 1.43). This much is true, but there are also sentences in which a topic change takes place but is not marked by xə, but by nya. In cases like this the relationship of the sentence to the preceding one is contrastive rather than an accumulative one.[6] Note the following:

15. alě nya tshɨbə thyě-a̱ / ása nya áthà dè -a̱
    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 xə 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 xə, 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. ása nya áthà xə dè -ạ
    Asa TOP *knife* ENT *forge*-DEC

    Asa was forging a knife too.

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

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

Sentence (16) has two possible surface structures. If both ása and áthà xə 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 ása 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. *áthà xə ása nya dè -ạ
    **knife* ENT *Asa* TOP *forge*-DEC

17a. *ása nya áthà xə nya dè -ạ
    Asa TOP *knife* ENT TOP *forge*-DEC

3.4 ADVERBIAL TOPICS[7]

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:

```
                                      S
                    ┌─────────────────┴───────────────────┐
                    P                                      M
              ┌─────┴─────┐                         ┌──────┴──────┐
              D           V                       Manner         NEG
          ┌───┴───┐       │                         │             │
         NP       K       │                         │             │
          │       │       │                         │             │
         asa      ∅       na                       akhɔ́          mà
         Asa             sick                      very          not
```
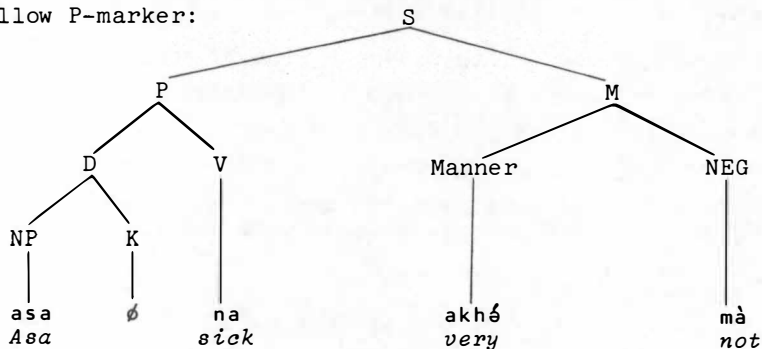
Presuppositions: *Asa is sick.*
                  Very (sick)

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

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

    18a.

```
                              S
          ┌───────────┬───────┴──────┬──────────┐
          D         Manner           P          M
          │           │        ┌─────┴─────┐     │
         NP           │       NEG          V      │
          │           │        │           │      │
         ása         akhɔ́      mà          na    -á
         Asa         very      not        sick   -DEC⁸
```
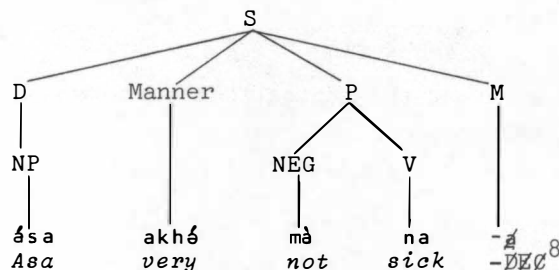
18b.   ása nya akhɔ́ nya mà   na
       Asa TOP *very* TOP *not sick*

       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 topical-
ization seems to be related to the fact that subordinate clauses are
either already presupposed, or are to provide the presupposition of the
following main clause.

3.51 Presupposition-creating topics

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

19. àme   thə̀ nwu pə́tsɨ-a dye-a̱   ŋu bæ -a̱   nya nwu nya
    yesterday TIME *you plain-to go* -DEC FACT *say*-DEC TOP *you* TOP

    ása mà   mu -â
    Asa not see ?

    Assuming that it is a fact that you went to the plain yesterday,
    ... didn't you see Asa?

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

   (i) *I am talking about S* (or perhaps *Let me talk about S*).

 (ii) *S is a fact.*

(iii) *Yesterday you went to town.*

The main clause is

 (iv) *Didn't you see Asa?*

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

19a.
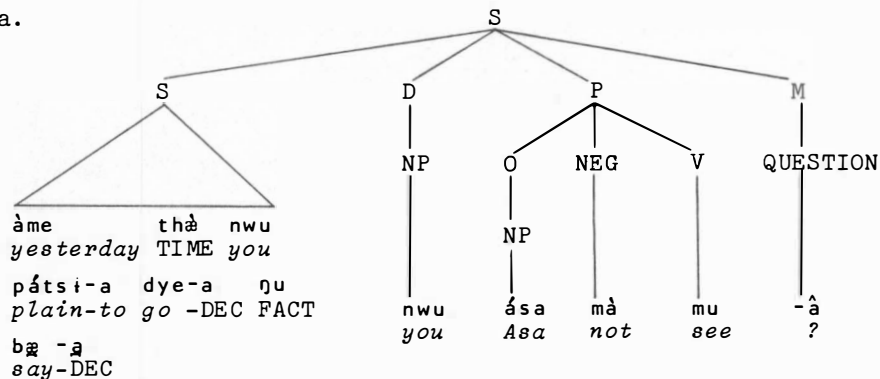
Topicalized sentences of this kind may not only serve to introduce the context in which the main sentence is to be understood when such context cannot be deduced, as for instance at the beginning of a conversation, but may also occur in the middle of a connected discourse to

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 bæ *say, assume* etc.
are embedded as complements in a higher sentence which also has the
main verb bæ *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. ása hi   khwù wa ʔi̠dye -y̠ ŋu bæ -a̠ bæ -a̠ nya yí pu
    Asa house inside to return-DEC FACT *say*-DEC *say*-DEC TOP *he gun*

    nya tha thyedě̠-a̠   na
    TOP *here left* -DEC UNEXPECTED

    *Assuming that I have been saying that Asa went home, his gun
    however, he left behind here.*

Such summaries of presupposition mark the beginning of new episodes
in the discourse, roughly equivalent to new paragraphs. If the
preceding paragraph happens to end with a quote, i.e. if the main verb
of the last sentence in that paragraph is bæ *say*, the new paragraph
often commences with a summary of the quote followed by a triple
occurrence of the verb bæ *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] bæ̱ -a̱   bæ̱ -a̱   bæ̱ -a̱
    [*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.   yí-phwɨ   xǔ   -a̱   nya ŋwa nya ámù   vwù -a̱
      WH-*price right*-DEC TOP *I*   TOP *horse sell*-DEC
      If the price is right I will sell (my) horse.

Surface P-marker:

```
                              S
        ┌───────────┬──────────────┬──────────┐
        S           A              P          M
        │           │          ┌───┴───┐      │
       /│\         NP          O       V      │
      / │ \                    │              │
     /  │  \                   NP             │
  yi-phwɨ  xǔ  -a     ŋwa      ámu      vwù    a̱
  WH-price right-ASS   I       horse    sell   DEC
```
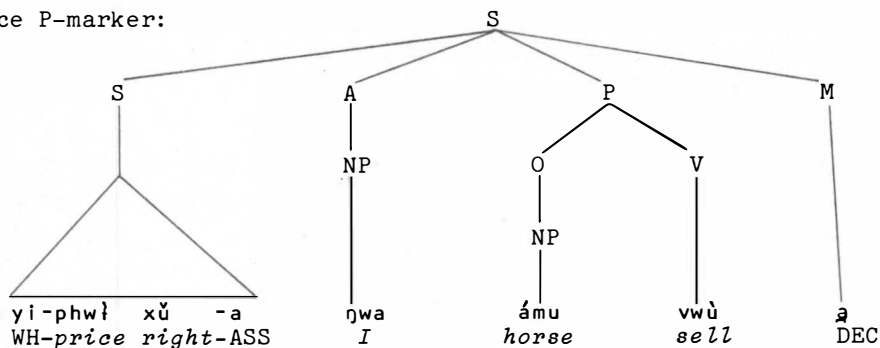
The presuppositions associated with (22) are crucial to the interpretations of the sentence, only one of which is given above. The various alternative interpretations cannot be ascribed to syntactic differences, apart from reference to the presuppositions. The alternatives are:

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

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

22c.   Presupposition: *The price is/was/will be right.*
       Meaning: *Since the price is/was/will be right, I will sell (my) horse.*

22d.   Presupposition: *The price is not yet right, but it will be sometime.*

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

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

23.   yí-phwì xǔ -ạ   xə ŋwa nya ámù vwù -ạ
       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 yə rather than xə. Note the difference between the following:

24.   mə̀ha lị -ạ   nya ŋwa nya khə̀sa tạ -ạ
       rain fall-DEC TOP *I* TOP *corn plant*-DEC

   If it rains I will plant corn.

24a.   mə̀ha lị -ạ   xə ŋwa nya khə̀sa tạ -ạ
       rain fall-DEC ENT *I* TOP *corn plant*-DEC

   If it rains also I will plant corn.

24b.   mə̀ha lị -ạ   yə ŋwa nya khə̀sa tạ -ạ
       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.   yí-phwì xǔ -ạ   hínyi ŋwa nya ámù vwù -ạ
       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:

```
                              S
          ┌──────────┬────────┴────────┬──────────┐
          S          A                 P          M
          │          │          ┌──────┴──────┐   │
         /│\         NP         O             V    │
        / │ \        │          │             │    │
       /  │  \       │          NP            │    │
      /   │   \      │          │             │    │
  yɨ́-phwɨ̀ xǔ  -a̱    ŋwa       ámù          vwù  -a̱
  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 hɨ́nyi to wúnyi. Note the following:

26. ŋwa nya ámù nya yɨ́-phwɨ̀ xǔ -a̱ wúnyi vwù -a̱
    I TOP *horse* TOP WH-*price right*-DEC CAUSE *sell*-DEC

    I sold my horse because the price was right.

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

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

27. ŋwa pátsɨ-a dye-a̱ hɨ́nyi ámù vwù -a̱
    I plain-to go -DEC TOP *horse sell*-DEC

    I am going to the plain to sell the horse, OR *I am going to the plain, so I will sell the horse.*

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

3.54 The deep base of subordinate clause constructions

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

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

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

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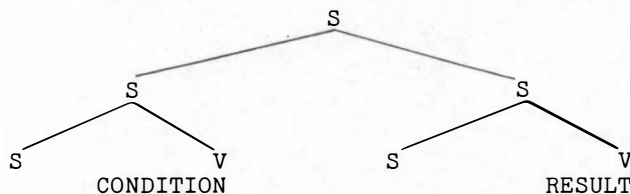
A global constraint requires that a sentence having as its main verb CONDITION be lowered into the conjoined sentence as the latter's topic. The surface marking of the conditional will depend on the presuppositions and entailments of the sentence.

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

```
                          S
                _____
               S                        S
          _____              _____
         S           V            S           V
                CAUSE                     RESULT
```
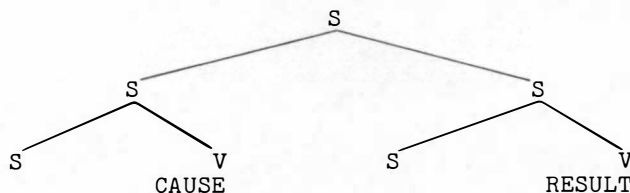
The CAUSE sentence is lowered into the RESULT sentence before topicalization takes place. The presuppositions of the RESULT sentence will result in the CAUSE sentence being either topicalized and thus marked by hínyi, or focused and thus marked by wúnyi.

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

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

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

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

   (i) ása nya ásyɬ yɛ-aʔ
        Asa TOP *what do*-QUESTION

        What is Asa doing?

   (ii) ása nya ávą̀ lą́ nætshɬ ká   -ą̣
        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 ávą̀ lą́ nætshɬ   ká   yɛ-ą̣
         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 yε *do* would account for the form and the focus of (11).

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

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

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

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

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

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

CHAPTER IV

THE STRUCTURE OF NOUN PHRASES

4.1 *DETERMINERS*

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

Thus   NP   is transformed into   NP

$$\begin{bmatrix} <+N> \\ <+Def> \\ etc. \end{bmatrix} \qquad \begin{bmatrix} <+Art> \\ <+Def> \\ etc. \end{bmatrix} \begin{bmatrix} <+N> \\ <+Def> \\ etc. \end{bmatrix}$$

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

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

introducing a category Determiner is redundant if one accepts a theory
in which presuppositions are part of the deep representation.

On the other hand if the transformational introduction of determiners
is accepted the problems of the above analysis remain, and in addition
there are a few more. In Lisu the demonstrative pronouns (or articles)
are specified as not only <±proximity>, but also as <±altitude> and
<±demarcation>, as will be seen later in this chapter. To maintain
that these are features of noun phrases, rather than semantic features
of the demonstratives is an *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 ma which happens
to be the marker of relative clauses. Both the 'base' position and the
'transformation' position above would have to treat as a coincidence
the fact that the relative marker and the morpheme associated with the
demonstratives have the same phonological shape.

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

4.2 *RELATIVE CLAUSES*

4.21 Relative clause PRO-nominalization

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

The rule consists of two parts. The first involves simply the
conversion of the noun phrase feature <-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 (1b) from (1):

1. NP   1a. NP   1b.   NP
    ⌈ <+N>   ⌉   ⌈ <+N>   ⌉   ⌈ <+Art> ⌉ ⌈ <+N>   ⌉
    | <+human> | ⇒ | <+human> | ⇒ | <+human> | | <+human> |
    | <-PRO> | | <+PRO> | | <+PRO> | | <+PRO> |
    ⌊ etc. ⌋   ⌊ etc. ⌋   ⌊ etc. ⌋ ⌊ etc. ⌋
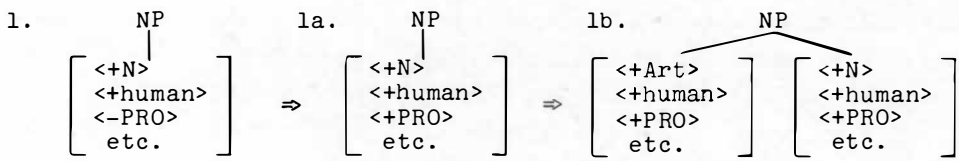
The final lexical pass provides the morpheme yí (something like the hypothetical WH- of English) for the PRO-article, and the morpheme ma *one* for the PRO-noun.

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. làthyu yí yàphí thyɨ̀ -a   ma
    person WH- opium smoke-DEC one

    The person who smokes opium

2a.

làthyu   làthyu   yàphí   thyɨ̀   a
person   *person*   *opium*   *smoke*   DEC

⌈ <+N>   ⌉   ⌈ <+N>   ⌉   ⌈ <+N>   ⌉   ⌈ <+V>   ⌉
| <+human> | | <+human> | | <-anim> | | +[A,O_] |
| <-PRO> | | <-PRO> | | <-PRO> | ⌊   ⌋
⌊ etc. ⌋   ⌊ etc. ⌋   ⌊ etc. ⌋
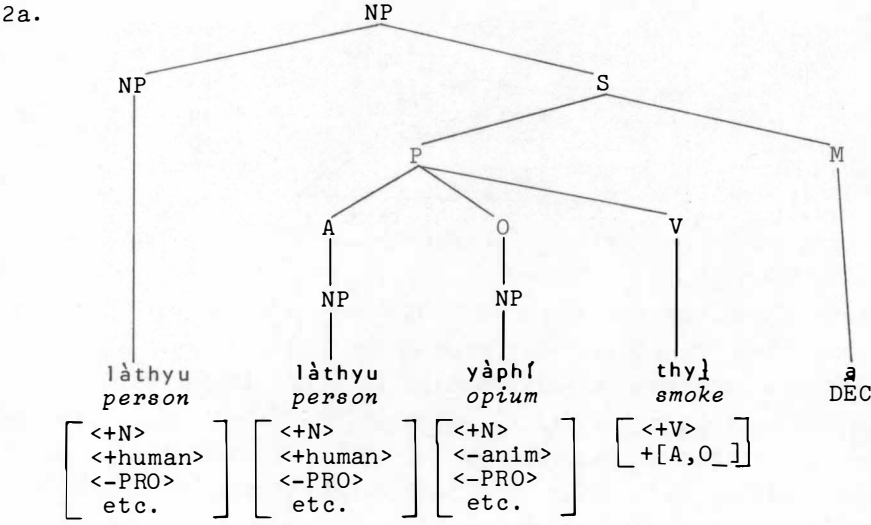
The relative pronominalization rules operate on the second occurrence of làthyu transforming its specification into <+PRO> and creating the PRO-article node. The resulting P-marker is

2b.

làthyu *person*
$\begin{bmatrix} \text{<+N>} \\ \text{<+human>} \\ \text{<-PRO>} \\ \text{etc.} \end{bmatrix}$

yí WH-
$\begin{bmatrix} \text{<+Art>} \\ \text{<+human>} \\ \text{<+PRO>} \\ \text{etc.} \end{bmatrix}$

ma *one*
$\begin{bmatrix} \text{<+N>} \\ \text{<+human>} \\ \text{<+PRO>} \\ \text{etc.} \end{bmatrix}$

yàphi *opium*
$\begin{bmatrix} \text{<+N>} \\ \text{<-anim>} \\ \text{<-PRO>} \\ \text{etc.} \end{bmatrix}$

thyḷ *smoke*
$\begin{bmatrix} \text{<+V>} \\ +[A,O\_] \end{bmatrix}$

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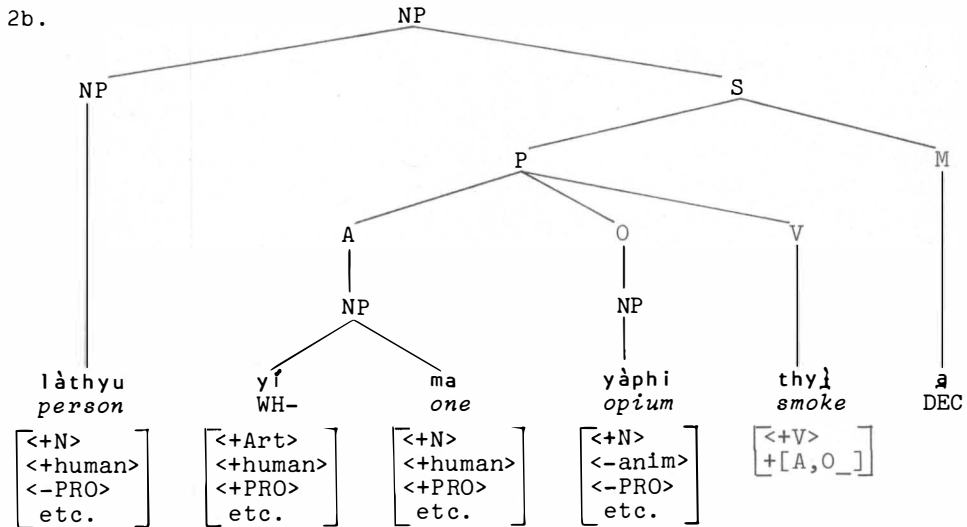
The relativization rule raises the NP which has <+PRO> specification and adjoins it to the dominating NP node, and the S node is then lowered and adjoined under the domination of the <+PRO> NP node which has just been raised. The final step is the movement of the PRO-noun to the very end of the NP. The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

2c.

$\begin{bmatrix} \text{<+N>} \\ \text{<-PRO>} \\ \text{<+human>} \end{bmatrix}$
làthyu *person*

$\begin{bmatrix} \text{<+Art>} \\ \text{<+PRO>} \\ \text{<+human>} \end{bmatrix}$
yí WH-

yàphi thyḷ -ạ *opium smoke-DEC*

$\begin{bmatrix} \text{<+N>} \\ \text{<+PRO>} \\ \text{<+human>} \end{bmatrix}$
ma *one*
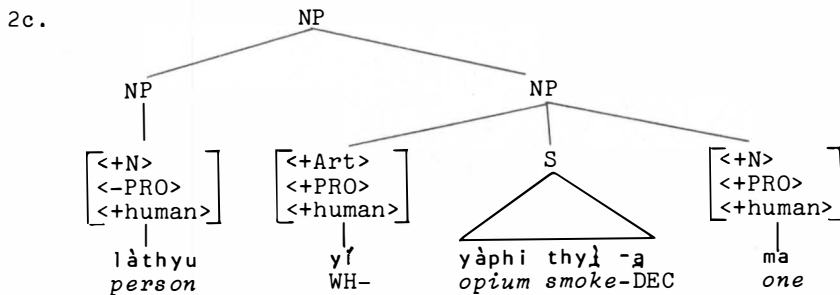
This is the surface structure of sentence (2) after the final lexical pass has inserted the PRO-article yí and the PRO-noun ma. There is no relativized noun deletion transformation in Lisu, of the kind proposed by Jacobs and Rosenbaum (1968:202) and thus the relativized noun appears in the surface string 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 NP but only of the modifying component NP.

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

2d.   làthyu yàphi thyɨ -a̱   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.   yàphi thyɨ -a̱   ma làthyu
      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.


```
                            NP
              ┌──────────────┴──────────────┐
             NP                              S
              │                              │
              │                              P
              │                    ┌─────────┴─────────┐
              │                    O                   V
              │                    │                   │
              │                    NP                  │
              │                    │                   │
           làthyu              yàphi               thyɨ
           person             opium               smoke
```

2g.


```
                        NP
                        │
                        NP
              ┌──────────┴──────────┐
              S                      │
              │                      │
              P                      │
         ┌────┴────┐                 │
         O         V                 │
         │         │                 │
       yàphi     thyɨ             làthyu
       opium     smoke            person
```
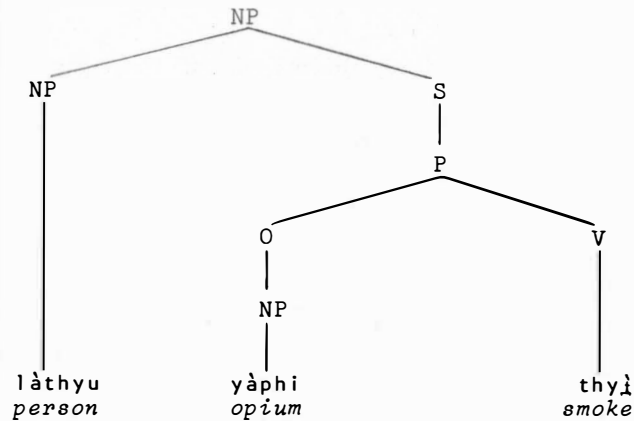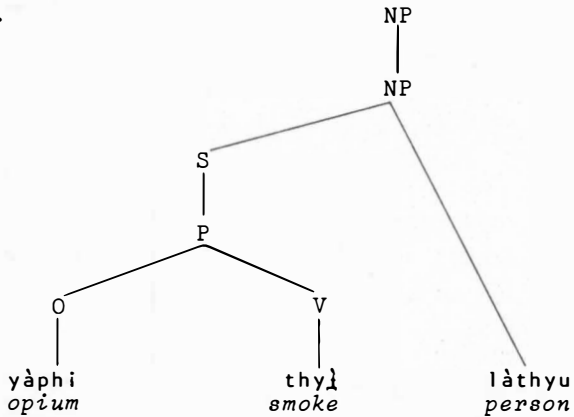
The tree-pruning rule proposed by Ross (1966) deletes the S-node because it does not branch, and the higher NP node because it dominates only a repeat of the symbol NP. This yields the surface string

2h. yàphi thyɨ làthyu
     opium smoke person

The opium-smoking person.

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

The in-bed-opium-smoking person

The much-opium-smoking person

The money-giving-to-Peter person

In Lisu the same restrictions do not hold, and there are switched clauses analogous to all of the above.

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

3. àme   thà demi wa dza γà̀ swu
    yesterday on field in rice reap ones

    They who were reaping rice in the fields yesterday.

3a. àme   thà demi wa dza γà̀ dwu
    yesterday on field in rice reap instruments

    That which was used for reaping in the fields yesterday.

3b. ása demi wa dza γà̀ tsɪ́
    Asa field in rice reap time

    The time at which Asa reaped rice in the fields.

3c. ása àme   thà dza γà̀ 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:

swu	dwu	gwu	tsɪ́
<+N>	<+N>	<+N>	<+N>
<+PRO>	<+PRO>	<+PRO>	<+PRO>
<+A/D>	<+I>	<+L>	<+T>
<±[_S]>	<+[_S]>	<+[_S]>	<+[_S]>

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. nyǐma byạ   dwu
    heart shatter instruments

    Catastrophes

5. nyǐma thyɬ gwu
    heart decay places

    Sorrows

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

6. the ma nya hi   khwù wa ʔį̀dye dwu   ŋu
    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. àme   thằ demi wa ása γ̀ạ -ạ̀ ma
    yesterday on field at Asa reap-DEC *one*

    That which Asa reaped in the fields yesterday.

7a.
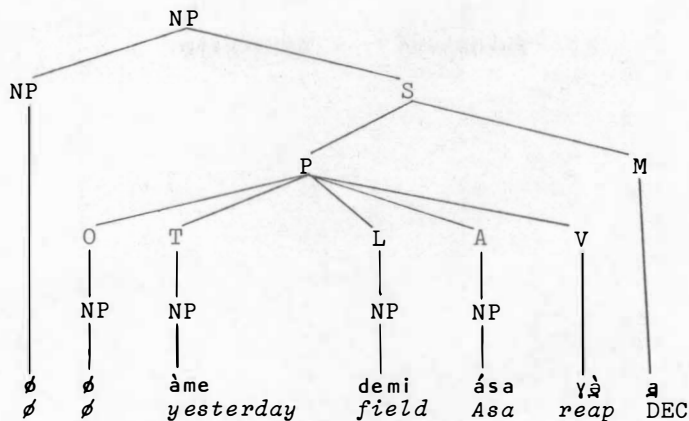
The head NP apparently carries too few features to enable a lexical insertion to take place, (there is no word for *thing* in Lisu) but the PRO-nominalization and segmentation rules apply to the identical zero NP in the embedded S, yielding the usual yí-ma pair. The normal relativization process generates 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 yà *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. *àme   thà demi wa ása yà
     *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 is adjectival, i.e. is specified as [O/D_], [O_] or [D_], the normal rules of relativization apply, with the one restriction that switching cannot occur, even though relative clause reduction may. Consider the following noun phrase:

8. làthyu the   ˙a   ma
    person clever-DEC one

    The person who is clever

The base structure of this NP is as follows:

8a.

```
                              NP
                 ┌─────────────┴──────────────┐
                NP                             S
                                        ┌──────┴──────┐
                                        P             M
                                   ┌────┴────┐        │
                                   D         V        │
                                   │         │        │
                                   NP        │        │
                                   │         │        │
               làthyu           làthyu     the        a
               person           person    clever     DEC
            ⌈<+N>    ⌉        ⌈<+N>    ⌉
            |<+human>|        |<+human>|
            ⌊<-PRO>  ⌋        ⌊<-PRO>  ⌋
```

The regular relative pronominalization rule operates on the second occurrence of làthyu 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. làthyu yí the   -a   ma
     person WH *clever*-DEC *one*

     The person who is clever.

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

8c. the   -a   ma   làthyu
     clever-DEC *one person*

     The person who is clever.

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

8d.

```
                    NP
                    │
                    NP
                 ┌──┴──┐
                 │      S
                 │      │
                 │      P
                 │      │
                 │      V
                 │      │
              làthyu   the
              person   clever
```

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

8e.

```
                                   NP
                                  /  \
                                 /    P
                                /     |
                               /      V
                              /       |
                           làthyu    the
                           person    clever
```
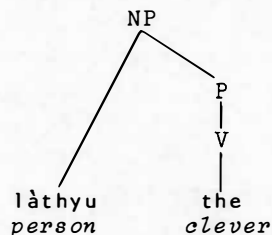
A low-level optional rule may reduplicate the verb:

8f. làthyu the   -the
     person clever-clever

     The clever person.

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

9.   làthyu akhɔ́ the   -a̱ ma
     person very clever-DEC one

     The person who is very clever.

9a. *làthyu akhɔ́ the
     **person very clever*

     **The very clever person.*

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

10. làthyu mà the   ma
     person not clever one

     The person who is not clever

10a. làthyu mà the   -the
     person not clever-clever

     The not-clever person.

4.24 Relative clauses with demonstrative predicates

In the beginning of Chapter II it was mentioned that the deep V
component of the sentence base was to be interpreted as a notional
category rather than as a syntactic one. Thus a V is roughly equivalent
to a logical predicate, which may appear as any one of a number of
different surface categories. It may appear as a true verb, but need
not necessarily. Thus there appears to be a need for some device by
which different types of deep predicates are assigned to the required
syntactic categories. The usual sub-categorization features <+V>,

<+DEMONST> etc. provide such a device. I am positing here that
demonstratives are dominated by the V node in the base, and are to be
distinguished from verbs by the sub-categorization features mentioned
above. The advantages of doing this will become evident in the following
discussion. According to this position the base form of (11) is (11a):

11. làthyu nɔ́   ma
     person that one

     That person above (some presupposed point of reference)

11a.
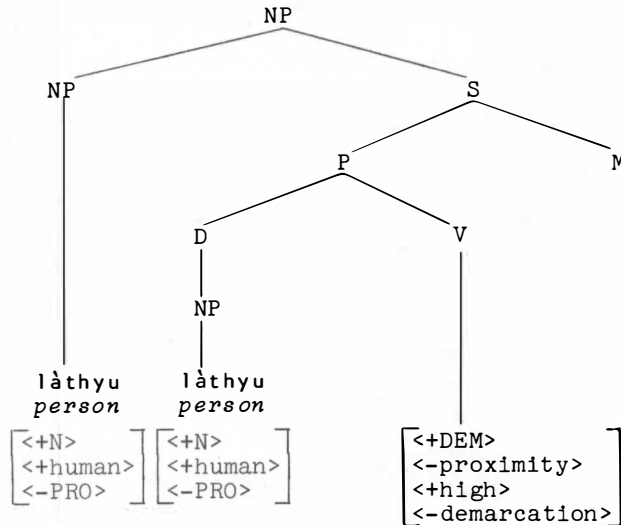
The first rule to apply to this base is a feature-copying rule which
copies all of the features in the set headed by <+DEM> onto the noun
phrase in the same proposition. The V node and the associated complex
symbol are then deleted. The resulting P-marker is

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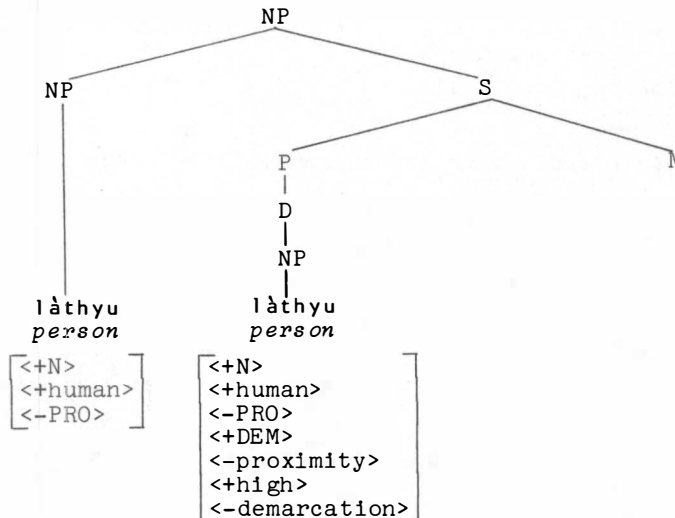
A major problem in the above trees is the M node. It does not seem to be the case that abstract non-verbal predicates require that the dominating S node be expanded as P + M, as there is no evidence that modals are ever a part of the semantic interpretation of such predicates, and certainly there is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

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

11c.

NP

NP   NP   S

                         P   (M)

                         D

làthyu
person

[<+N>
<+human>
<-PRO>]

[<+Art>
<+human>
<+PRO>
<+DEM>
<-proximity>
<+high>
<-demarc>]

[<+N>
<+human>
<+PRO>
<+DEM>
<-proximity>
<+high>
<-demarc>]
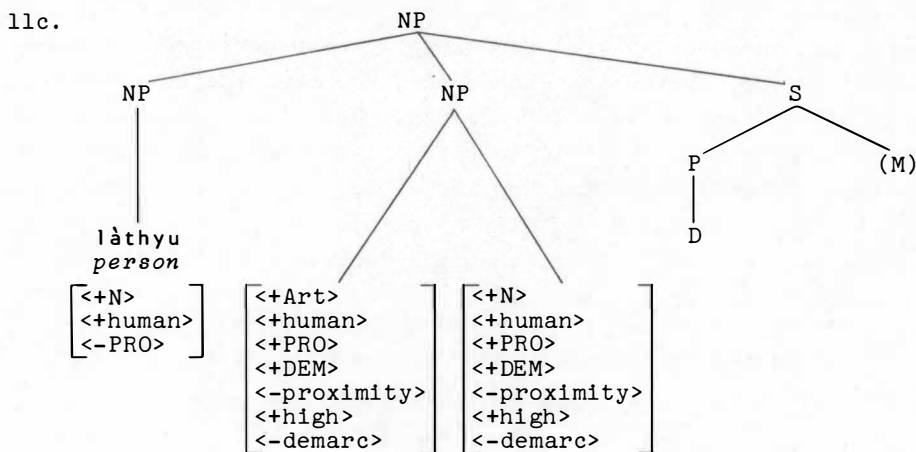
The tree-pruning rule deletes the nodes which dominate nothing. The final lexical pass inserts nɔ́ for the demonstrative PRO-article, instead of the non-demonstrative yí 'WH-', and for the PRO-noun it inserts the usual ma *one*. This yields the surface string

11. làthyu nɔ́   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 nya the　ma　mà　sywɛ
　　　　person that one TOP *this one not resemble*

　　　　That person does not resemble this one.

12a.　 làthyu the　-the　　gu　ma nya the　ma　mà　sywɛ
　　　　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 nya làthyu the　ma　mà　sywɛ
　　　　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　lǽ khə　　-ạ　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　lǽ khə　　-ạ　ma
　　　　person rich poor to oppress-DEC *one*

　　　　Rich people who oppress the poor

If one deletion rule is posited then the noun làthyu must be analysed as a noun phrase.[4] It remains to produce supporting data for the position that the string nɔ́ ma in (11) is also an NP as intimated by the P-marker (11c), and not some other component of the higher NP node. Consider the following sentence.

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

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

the	gu	gwé
<+DEM>	<+DEM>	<+DEM>
<+proximity>	<-proximity>	<-proximity>
	<-demarcation>	<+demarcation>

dywɔ	dywe	nwɔ́	nwé
<+DEM>	<+DEM>	<+DEM>	<+DEM>
<-proximity>	<-proximity>	<-proximity>	<-proximity>
<-demarcation>	<+demarcation>	<-demarcation>	<+demarcation>
<+altitude>	<+altitude>	<-altitude>	<-altitude>

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

14. wàdyì the ma
     mountain this one
     This mountain

14a. wàdył   gu ma
mountain that one

That mountain

14b. wàdył   nwɔ́ ma
mountain that one

That mountain above

14c. wàdył   dywɔ ma
mountain that one

That mountain below

14d. wàdył   dywe ma
mountain that one

That mountain below

The difference between (14a) and those below it is that it refers to the mountain without specifying its relative height to some presupposed point of reference. The mountain could be higher or lower, but more commonly gu 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 <+demarcation> a gesture or at least a look at the object being referred to is necessary.

4.25 Relative clauses with enumerated predicates

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

15.   lɔ́kɔ́ nyì phæ̀
bowl two Clf

Two bowls.

15a.   lɔ́kɔ́ nyì 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 zʮ
may only occur in NPs in which the head noun is a <+human> one, and phà̰
may only co-occur with bowl-like utensils. The morpheme ma on the other
hand may co-occur with nouns referring to humans, bowl-like utensils,
and hosts of other sub-classes of noun. Note the following:

16.   làthyu thì zʮ
       person one Clf

       One person

16a.   làthyu thì ma
       person one ?

       One person

16b.   *làthyu thì phà̰
       **person one* Clf*

15b.   *lə́kə́ thì zʮ
       **bowl one* Clf*

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

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

In the analysis which follows I will show that it is possible to
treat ma as a relative PRO-noun with the same phonological shape as the
one which has appeared in the relative constructions discussed thus
far. It is also possible to account for the enumerators and the

classifiers with which they occur by a set of rules which derive them
from the predicates of very deep relative clauses. This set of rules
has already been posited for the derivation of demonstratives from
relative clauses, and thus the following analysis will complicate the
grammar no further. The application of those rules will merely be
extended to incorporate enumerators and classifiers as well.

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

17. ámù   thì ma
     horse one one

     One horse

17a.
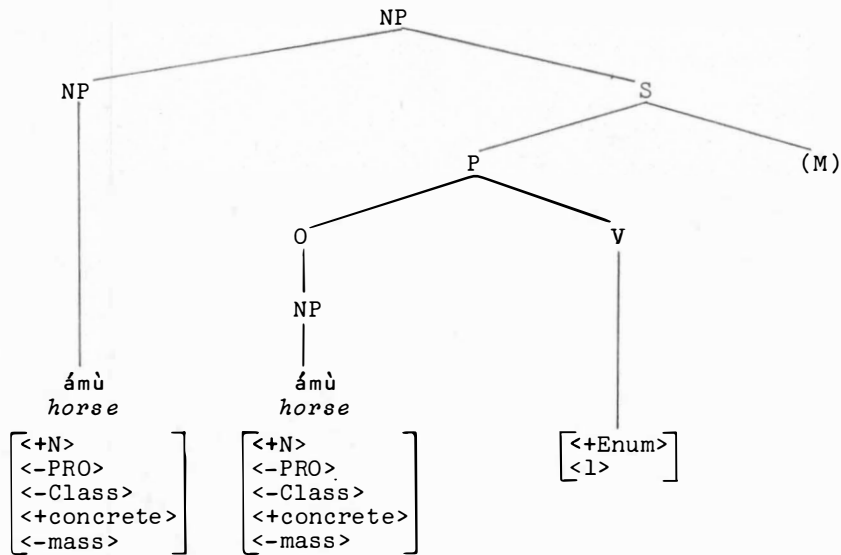
The feature-copying rule applies, as in the case of the demonstrative
relative. The NP feature <-Class> indicates that the NP does not have
embedded within it a relative containing a classifier predicate, i.e.
that it does not appear with a true classifier in the surface string.
All NPs having the feature <+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.

```
                               NP
                    _____
                   |                        |
                   NP                       NP
                   |              _____
                  ámù           |                   |
                 horse          ⌈<+Art>  ⌉        ⌈<+N>     ⌉
            ⌈<+N>     ⌉         |<+PRO>  |        |<+PRO>   |
            |<-PRO>   |         |<-Class>|        |<-Class> |
            |<-Class> |         |<+concrete>      |<+concrete>
            |<+concrete>        |<-mass> |        |<-mass>  |
            |<-mass>  ⌋         |<+Enum> |        |<+Enum>  |
                                |<1>     ⌋        |<1>      ⌋
```

The final lexical pass inserts thì *one* for the PRO-article and ma
one as usual for the PRO-noun. For some idiosyncratic reason if the
PRO-noun has acquired the feature <4> instead of having the phonological
form ma it becomes lwè.

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

18. ámù nyì ma nya sə̀   ma xwá mà da
     horse two one TOP *three one win not able*

     Three horses are better than two. (ámù *horse* deleted).

18a. ámù nyì ma tye ányì sə̀   ma tye ámù xwá-ə̀
     horse two one with cow three one with horse win-DEC

     (Comparing) two horses with three cows, the horses win. (nyì
     ma *two ones* has been deleted)

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

19. ámù myà -ə̀
     horse many-DEC

     The horses are many.

19a. ámù amyâ ma
     horse many one

     Many horses.

19b. *ámù   myà -ạ   ma
   *horse many-DEC one
   *The horses which are many

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

4.26 Relative clauses with classifier predicates

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

20. nètsɨ nyì sɨ̀
   button two globule
   Two buttons (Lisu buttons are spherical).

20a.


```
                                      NPa
                        ┌──────────────┴──────────────┐
                      NPb                             S₁
                       │                    ┌──────────┴────┐
                       │                    P               M
                       │              ┌─────┴─────┐         │
                       │              O           V         │
                       │              │                     │
                       │             NPc                    │
                       │        ┌─────┴─────┐               │
                       │      NPd          S₂               │
                       │       │      ┌─────┴────┐          │
                       │       │      P          M          │
                       │       │   ┌──┴──┐                  │
                       │       │   O     V                  │
                       │       │   │                        │
                       │       │  NPe                       │
                       │       │   │                        │
                     nètsɨ   nètsɨ nètsɨ
                     button  button button
```

$\begin{bmatrix}<+N>\\<-anim>\\<-PRO>\\<+conc>\\<-mass>\\<+Class>\\<+unit>\end{bmatrix}$	$\begin{bmatrix}<+N>\\<-anim>\\<-PRO>\\<+conc>\\<-mass>\\<+Class>\\<+unit>\end{bmatrix}$	$\begin{bmatrix}<+N>\\<-anim>\\<-PRO>\\<+conc>\\<-mass>\\<+Class>\\<+unit>\end{bmatrix}$	$\begin{bmatrix}<+Class>\\<+Globule>\\<+unit>\end{bmatrix}$	$\begin{bmatrix}<+Enum>\\<2>\end{bmatrix}$
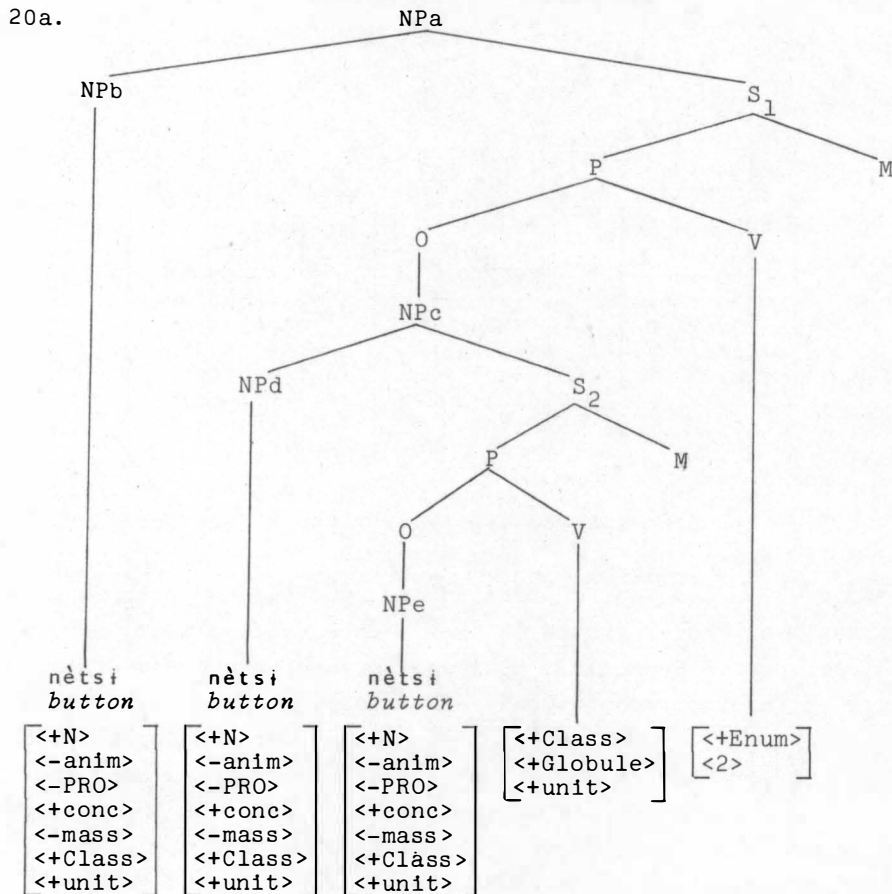
A constraint states that if a <+Class> predicate in a relative clause
is commanded by a higher <+Enum> predicate, then the noun phrase of the
relative clause cannot be pronominalized. This results in Equi-NP-
deletion operating instead, and this deletes NPe in the P-marker above.
Feature-copying then occurs copying the Classifier features onto NPd,
and then the same is done with the Enumerator features. NPc is then
raised and adjoined under the domination of NPa. Relative pronominal-
ization 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

20b.


```
                                 NPa
                        _____/    _____
                       /                      \
                    NPb                        NPd
                     |                    _____/  \_____
                  nètsɨ                  /              \
                  button
        ⎡<+N>      ⎤      ⎡<+Art>     ⎤      ⎡<+N>       ⎤
        ⎢<-anim>   ⎥      ⎢<-anim>    ⎥      ⎢<-anim>    ⎥
        ⎢<-PRO>    ⎥      ⎢<+PRO>     ⎥      ⎢<+PRO>     ⎥
        ⎢<+concrete>⎥     ⎢<+concrete>⎥      ⎢<+concrete>⎥
        ⎢<-mass>   ⎥      ⎢<-mass>    ⎥      ⎢<-mass>    ⎥
        ⎢<+Class>  ⎥      ⎢<+Class>   ⎥      ⎢<+Class>   ⎥
        ⎣<+unit>   ⎦      ⎢<+unit>    ⎥      ⎢<+unit>    ⎥
                         ⎢<+Globule> ⎥      ⎢<+Globule> ⎥
                         ⎢<+Enum>    ⎥      ⎢<+Enum>    ⎥
                         ⎣<2>        ⎦      ⎣<2>        ⎦
```
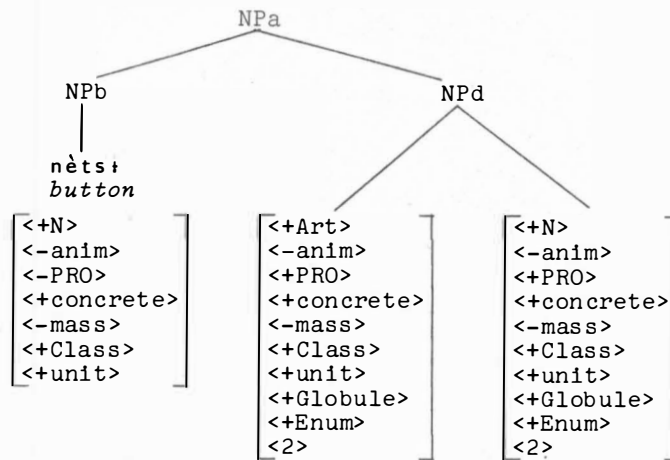
The final lexical pass inserts nyɨ *two* for the PRO-article and sɨ *globule* for the PRO-noun.

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

21.   làthyu gu ma
      person that one

      That person

21a.   làthyu thɨ ma
       person one one

       One person

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

22.   làthyu yɨ́ bwu
      person WH group

      People in groups

22a.   làthyu thɨ bwu
       person one group

       One group of people.

```
22b.  *làthyu yí thì bwu
      *person WH one group

22c.  *làthyu thì yí bwu
      *person one WH group
```

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

```
yí sì                                        *sì
WH globule          BUT NOT                  *globule

Globules, fruit

yí dzì                                       *dzì
WH tree             BUT NOT                  *tree

The tree (excluding leaves etc.)

yí phyà                                      *phyà
WH leaf             BUT NOT                  *leaf

The leaves

yí khwá                                      *khwá
WH board            BUT NOT                  *board

Boards

yí thwù                                      *thwù
WH cylinder         BUT NOT                  *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.

```
yí yàpu             yàpu
WH tin              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 enumerated. Nouns in this class
may occur in NPs in which there are two classifying relatives, the first
unenumerated, and the second enumerated. Thus an NP like (23) has the
base form (23a):

```
23.  makhwà [yí] thǒ nyì thǒ
     bamboo (WH) pole two pole

     Two poles of bamboo
```

23a.
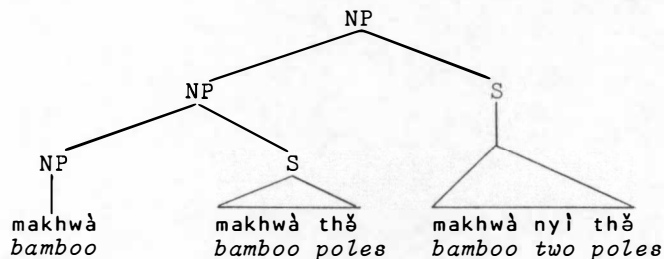
Another aspect of enumerated NPs that must be accounted for is that enumerators which are multiples of ten have certain properties not possessed by PRO-article enumerators. Among these properties are (i) that while regular numerical enumerators are bound PRO-articles and require the co-occurrence of a following classifier in the surface structure, the decimal enumerators require the co-occurrence of a preceding PRO-article, and the occurrence of a following classifier is optional, and (ii) when the unit enumerators occur in front of decimal enumerators, the semantic content of the resulting NP is equal to the product of the semantic contents of the enumerators. But when a decimal enumerator occurs in front of a unit enumerator, the semantic content of the resulting NP is the sum of the semantic contents of the enumerators.

As examples of property (i) note the following:

	Unit enumerators	Decimal enumerators

24a. làthyu sạ   zụ
person three person

Three people

24b. *làthyu hya   zụ
person hundred person

Hundred people

24c. *làthyu sạ
person three

24d. làthyu sạ   hya
person three hundred

Three hundred people

24e. làthyu sạ   hya   zụ
person three hundred person

Three hundred persons

As examples of property (ii) note the following:

25.   sạ   hya
three hundred

= 3(100)

25a. sạ   hya   sạ   zụ
three hundred three people

= 3(100) + 3 people.

In the Thailand dialect one exception to the characterization of decimal enumerators under (i) above, is the enumerator tshi *ten*.[5] Thus while (24b) is ungrammatical, both (24f) and (24g) below are grammatical:

24f. làthyu tshi zụ
person ten   person

Ten people

24g. làthyu sạ   tshi
person three ten

Thirty people

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

26. làthyu ŋwà hya
     person five hundred

     Five hundred people.

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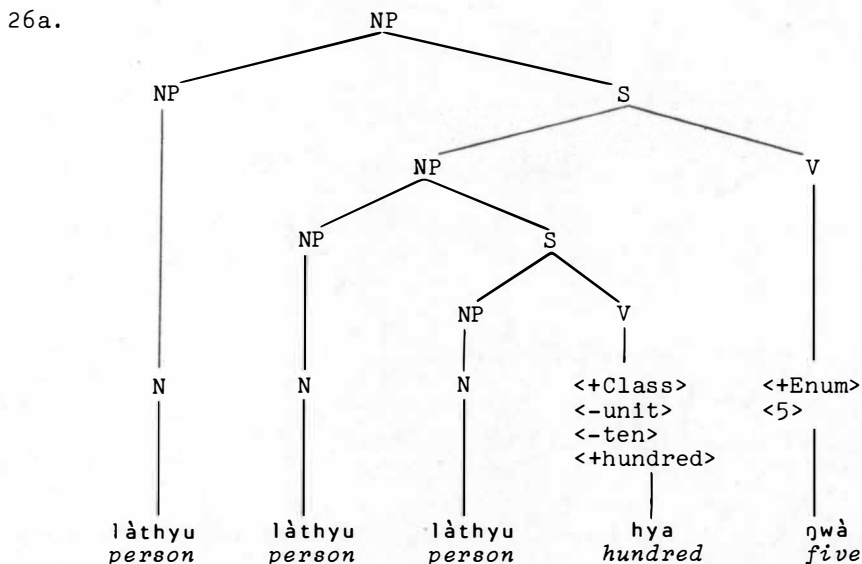
The normal rules of feature-copying, pronominalization, NP-raising, segmentation and tree-pruning generate the surface structure (26b):

26b.
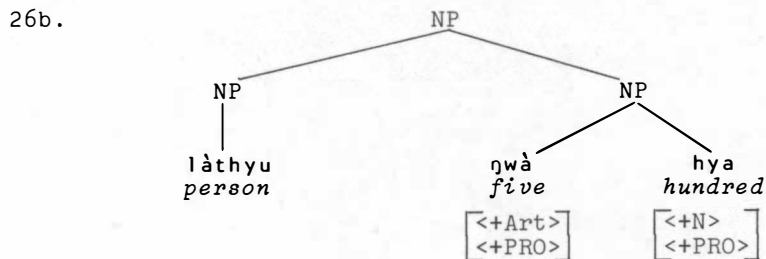
The decimal classifiers will be differentiated from other classifiers by a feature <±unit> where the minus specification will isolate the decimal classifiers as a sub-set. They will then need to be further specified as <±ten , <±hundred>, and <±thousand>. The lexical item tshɨ *ten* will have a specification in terms of features which allow it

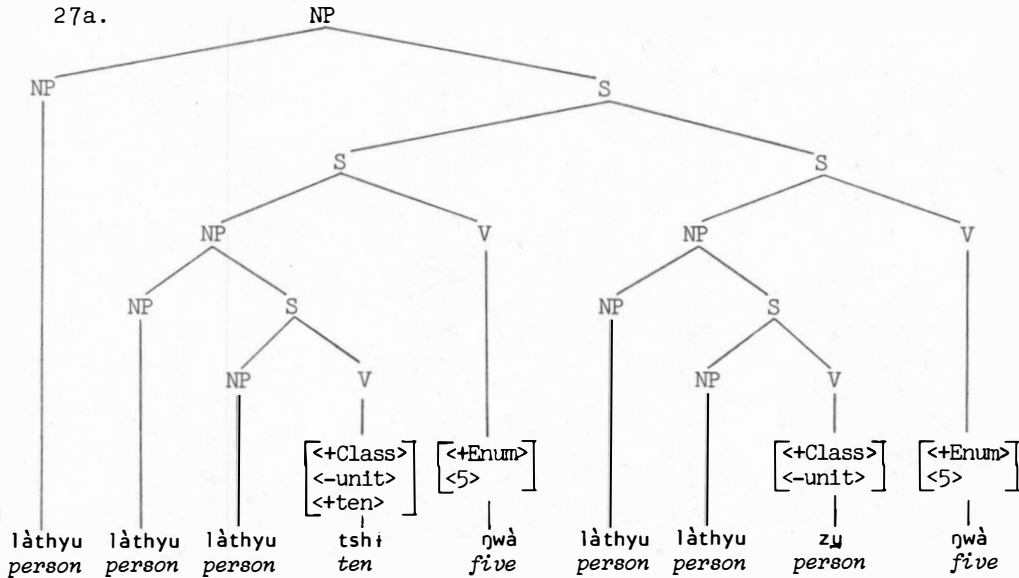an optional occurrence as either an enumerator marked <10>, or as a
classifier marked <-unit> <+ten>.

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

27.   làthyu ŋwà tshɨ ŋwà zɏ
      person five ten   five people

      Fifty five people

27a.

NP
├── NP
│   └── làthyu *person*
└── S
      ├── S
      │   ├── NP
      │   │   ├── NP — làthyu *person*
      │   │   └── S
      │   │   ├── NP — làthyu *person*
      │   │   └── V — [<+Class> <-unit> <+ten>] tshɨ *ten*
      │   └── V — [<+Enum> <5>] ŋwà *five*
      └── S
            ├── NP
            │   ├── NP — làthyu *person*
            │   └── S
            │   ├── NP — làthyu *person*
            │   └── V — [<+Class> <-unit>] zɏ *person*
            └── V — [<+Enum> <5>] ŋwà *five*

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

27b.

NP
├── NP — làthyu *person*
├── NP — ŋwà hya *five hundred*
└── NP — ŋwà zɏ *five people*

27c.

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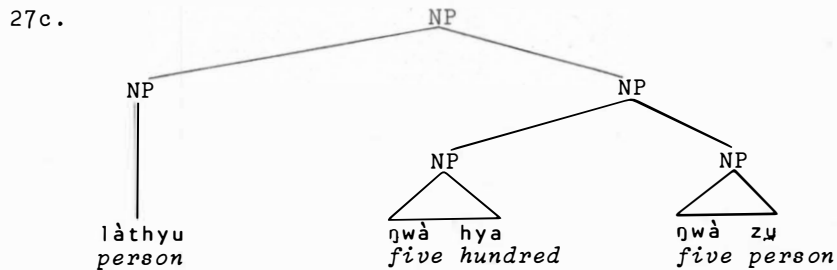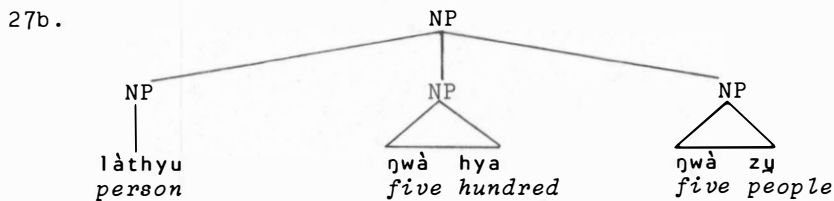
Thus it would seem that a conjunction rule would need to apply to the conjoined S's of (27a) at some point in the derivation before the NP-raising rule. This conjunction rule would adjoin the NP of the one sentence to the other and create a new NP node to dominate both. This rule would be generalized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

28. làthyu yí dywu yí mà
   *person* WH *herd* WH *army*

    Crowds and multitudes of people

28a. mə   yí xə̀   yí mi
    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.
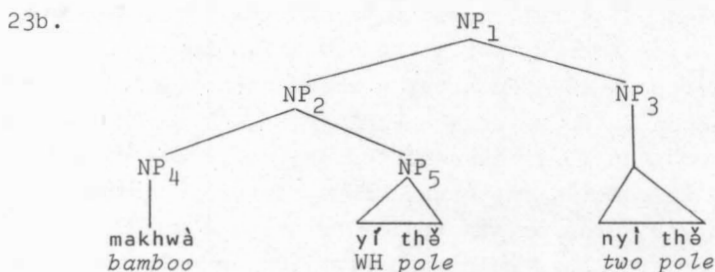
In this surface P-marker, the modifying PRO-NP NP_3 modifies the NP_2 node and all it dominates. In (27c) the PRO-NP NP_3 and all it dominates modifies NP_2.

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

29. makhwà sə̱   hya   thə̌
    bamboo three hundred pole

    Three hundred poles of bamboo

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

29a.

```
                              NP
                    ┌──────────┴──────────┐
                   NP                     S
                    │            ┌─────────┴─────────┐
                    │            S                   S
                    │        ┌───┴───┐         ┌──────┴──────┐
                    │        │       │        NP             V
                    │        │       │         │             │
                 makhwà   makhwà sa hya     <+N>         <+Class>
                 bamboo   bamboo  3  hundred <-PRO>       <+unit>
                                             <-Enum>
```
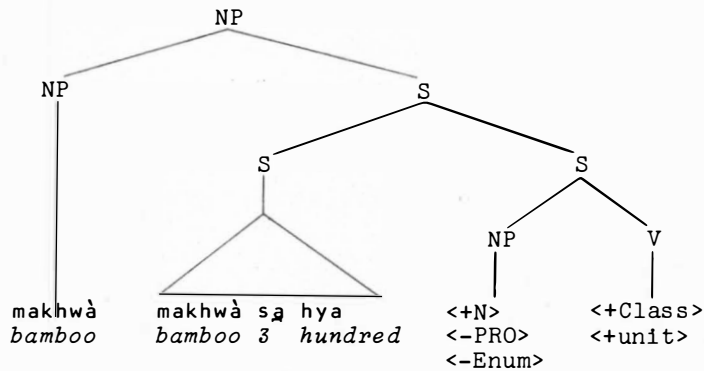
Such an analysis is intuitively incorrect. For one thing the string

*makhwà sa   hya   yí thǒ
 bamboo three hundred WH pole

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

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

```
                    NP
            ┌───────┴───────┐
           NP               NP
                       ┌─────┼─────┐
                      Art    S     N
```
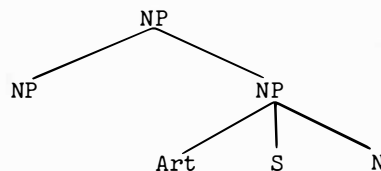
Supporting empirical evidence for this analysis is not hard to find.
That the relative clause is nominalized is beyond doubt as can easily
be seen in the English glosses of such phrases as *the one who smokes
opium*. However, in English such noun phrases as *The person, the one
who smokes opium* are non-restrictive relatives, but in Lisu they are
restricting. The nominalized relative clause in Lisu functions like

any other NP, and can be deleted by the identical noun phrase deletion
rule.   For instance the full NP

   30.   làthyu yí yaphi thyì -a̱   ma gu   ma
           person WH opium smoke-DEC one that one

           That person who smokes opium.

can be reduced in appropriate circumstances to

   30a. làthyu gu   ma
           person that one

           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 incor-
porates both demonstrative and verbal predicates may have either of two
different surface forms.   Consider the following:

   31.   làthyu pátsɨ wa dye-a̱   ma gu   ma
           person plain to go-DEC   one that one

           That person who is going to the plain

   32.   làthyu gu   pátsɨ wa dye-a̱   ma [ma]
           person that plain to go -DEC one (one)

           That person who is going to the plain

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

31a.

32a.
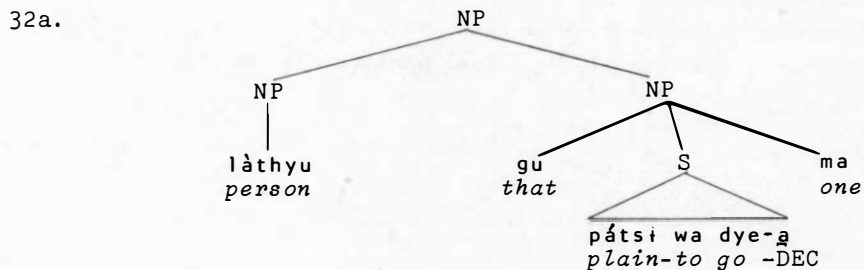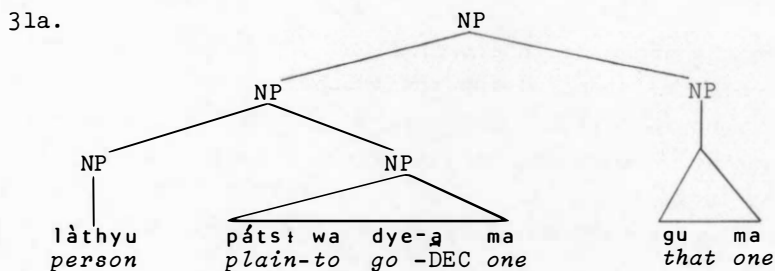
If these sentences are analysed as having different deep structures, the existing transformations are all that is required to generate the correct surface structures, such deep structures being (31b) and (32b) respectively:

31b.

```
                              NP
                  NP                        S
          NP            S               làthyu gu
        làthyu    làthyu pátsɨ wa dye-a  person that
        person    person plain-to go -DEC
```

32b.

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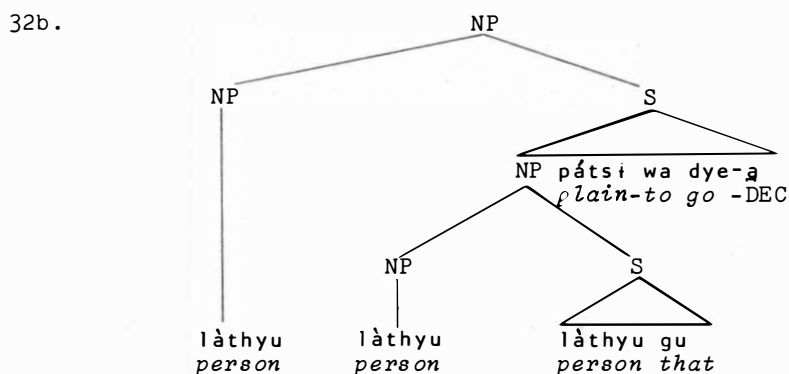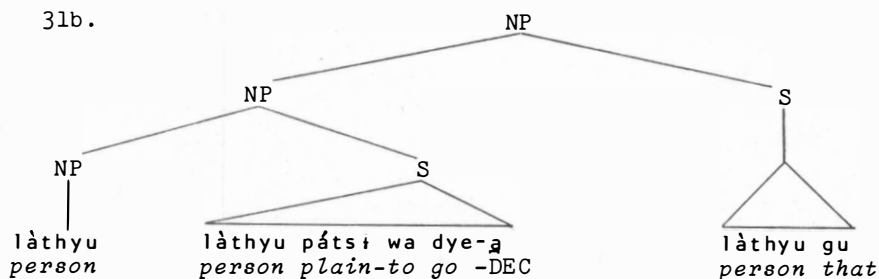
However, since the semantic interpretations of (31) and (32) are equivalent, the only difference being the 'scope' of the modifying NP in the surface structure, it does not seem as though the position of two different deep structures can be justified. (32b) in particular is suspect, since it is difficult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

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

33.

```
                              NP
              NP                        S
            làthyu          S₁                   S₂
            person    làthyu pátsɨ wa dye-a    làthyu gu
                      person plain-to go -DEC  person that
```
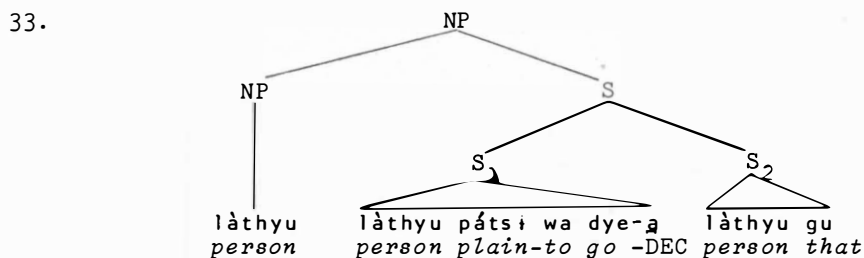
The surface form of the NP will depend on whether or not S_1 and S_2 are conjoined before the NP raising rule applies. The conjunction is optional, and if it does not apply the normal relative and demonstrative transformations apply. However, as the demonstrative transformation now stands, the application of the normal rules would generate (31c) which is not equivalent to the required (31a):

31c.

```
                              NP
              _____/|_____
           NP              NP                   NP
           |          _____/|\_____            / \
        làthyu     pátsɨ wa dye-a   ma        gu   ma
        person     plain-to go -DEC one      that  one
```
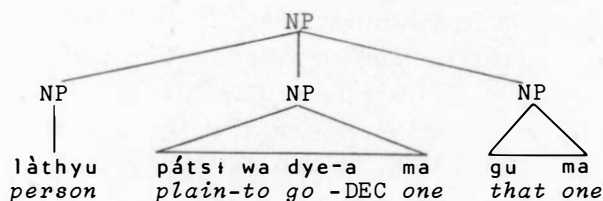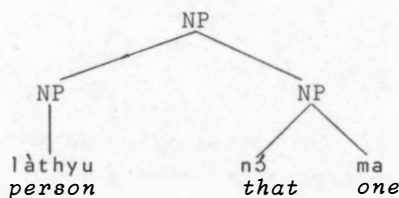
This suggests that the NP raising rule for demonstrative NPs is different from the rule for other relative NPs, in that the raising operation is accompanied by the creation of a new dominating NP node. If this modification to the demonstrative rule is made, it brings it into line with the English demonstrative rule proposed by Jacobs and Rosenbaum (1968:208). Thus note that while the rule still generates the surface structure

31d.

```
                         NP
                  _____/ _____
                NP              NP
                |              /  \
             làthyu          nɔ́    ma
             person         that   one
```

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

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

31c'.

```
                              NP
                    _____/ _____
                 NP                      NP
              __/ \__                   / \
            NP      S                  /   \
            |      / \          <+Art>      <+N>
         làthyu  P   M          <+PRO>      <+PRO>
         person  |                nɔ́          ma
                 D               that         one
```
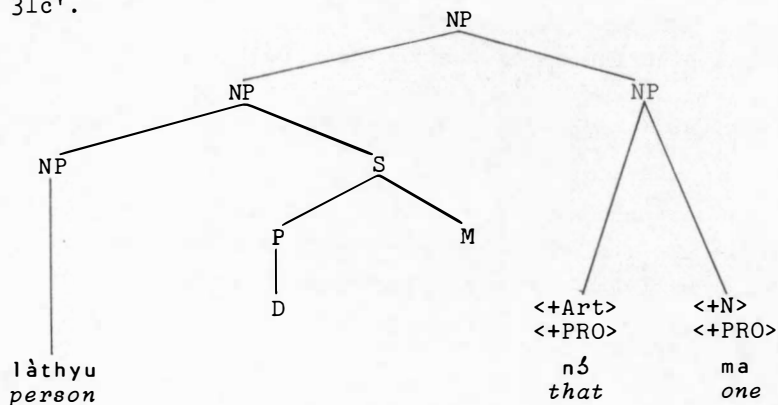
The tree-pruning rules would delete the empty nodes M, D and P, and the non-branching S would then remain. This leaves the intermediate NP a candidate for deletion since it dominates only another NP. Once this is accomplished, the resulting P-marker is the required (31d).

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

32c.

```
                               NP
                   ┌────────────┴──────────┐
                  NP                        NP
                   │          ┌─────────────┼──────────────┐
                   │      <+Art>  <+N>                      NP
                   │      <+PRO>  <+PRO>        ┌───────────┼──────────┐
                   │      <+DEM>  <+DEM>    <+Art>  <+N>               S
                   │                        <+PRO>  <+PRO>          ┌──┴──┐
                làthyu        gu     ma        yí      ma      pátsɨ wa dye-a
                person       that   one        WH     one     plain-to go -DEC
```
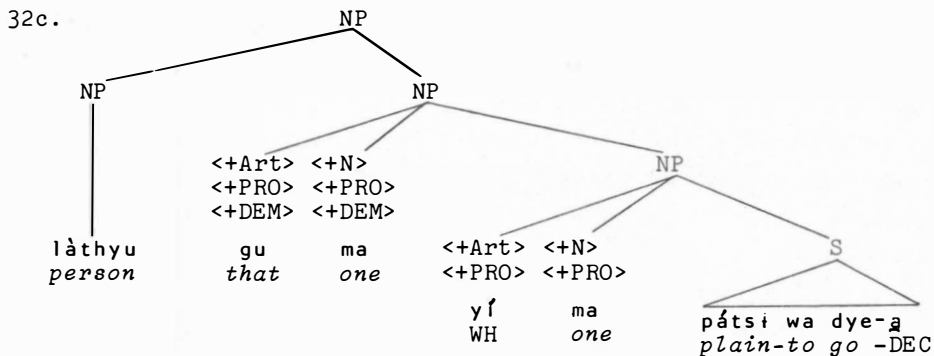
The normal relative PRO-noun placement rule moves the PRO-nouns to the end of the particular NPs that dominate them, generating the string

32d.   làthyu gu   yí pátsɨ wa dye-a   ma   ma
        person that WH plain to go -DEC one one

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

4.32 Relative clauses incorporating demonstrative and enumerative predicates

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

34.   làthyu nyì zu   gu   ma
        person two person those ones

        Those two people.

35. làthyu gu   nyì zʉ   ma
     person those two person ones
     Those two people.

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

36.
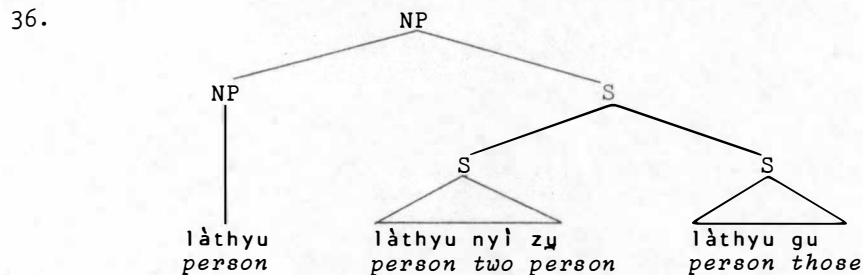
If conjunction of the relatives does not take place, then the normal
relativization rules will generate the surface string (34) with a
structure analogous to (31a). If conjunction is opted for, however,
the NP containing the enumerative specification is lowered into the NP
containing the demonstrative specification, by the same rules which
caused the relative with a verbal predicate to be embedded in the same
place. The resulting string is (35) with a structure analogous to
(32a).

4.33 Relatives incorporating verbal and enumerative predicates

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

37. làthyu pátsɨ wa dye-a̠   ma   nyì zʉ
     person plain to go -DEC one two person
     Two people who are going to the plain

38. làthyu pátsɨ wa dye-a̠   nyì zʉ   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.
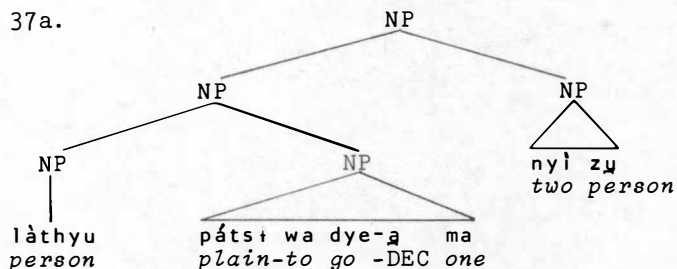
However, assuming that both (37) and (38) have one base form and not two, that form is

39.

```
                              NP
                  _____/ _____
                NP                            S
                |                 _____/ _____
                |                S                          S
                |            ___/ \___                   ___/___
                |           /         \                 /       \
             làthyu    làthyu páts+ wa dye-a        làthyu nyì zy
             person    person plain-to go -DEC      person two person
```
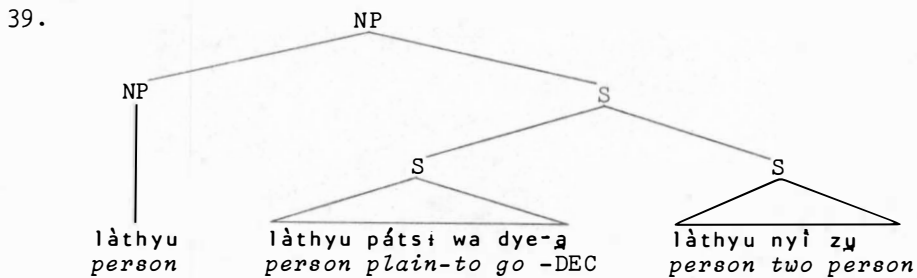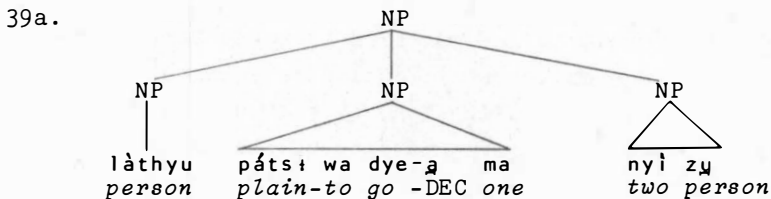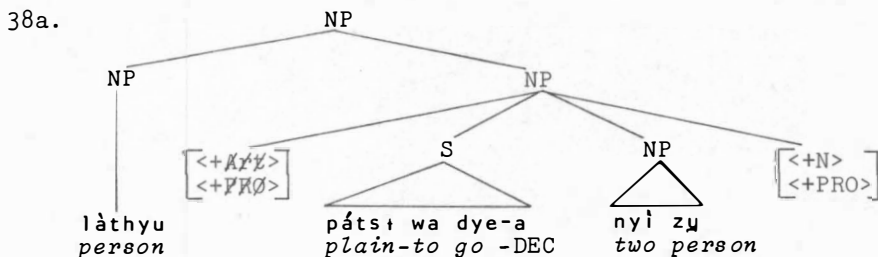
As with complex relatives incorporating a demonstrative, so here too if the rules raising enumerated and classified NPs are as I have stated, then they generate the incorrect structure

39a.

```
                              NP
                 _____/ | _____
                NP            NP              NP
                |        ___/ | \___        _/ \_
                |       /         \        /     \
             làthyu  páts+ wa dye-a   ma  nyì  zy
             person  plain-to go -DEC one two person
```

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

38a.

```
                              NP
                 _____/ _____
                NP                          NP
                |              _____/  |  |  _____
                |         [<+ATY>]    S    NP    [<+N>]
                |         [<+PRO>]  _/ \_  /\    [<+PRO>]
                |                  /     \ /  \
             làthyu      páts+ wa dye-a  nyì zy
             person      plain-to go -DEC two person
```

4.34 Relatives incorporating verbal, demonstrative and enumerative predicates

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

(i) Relatives not conjoined:

40. làthyu pátst wa dye-ạ   ma nyì zy   gu   ma
person plain-to go -DEC one two person those ones

Those two people who are going to the plain

(ii) Conjunction of demonstrative and enumerative:

41. làthyu pátst wa dye-ạ   ma gu   nyì zy   ma
person plain-to go -DEC one those two person ones

Those two people who are going to the plain

(iii) Conjunction of verbal and enumerative relatives:

42. làthyu pátst wa dye-ạ nyì zy   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. làthyu gu   pátst wa dye-ạ   ma nyì zy   ma
person those plain-to go -DEC one two person ones

Those two people who are going to the plains

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

44. làthyu gu   pátst wa dye-ạ nyì zy   ma ma
person those plain-to go -DEC two person one one

Those two people who are going to the plain

4.4 PRONOUNS

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

The PRO-nouns introduced so far include the relative marker ma which is introduced transformationally through the pronominalization rules, such forms as swu *agent*, dwu *instrument*, gwu *place* and tsì *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 yì a general relative marker introduced by the pronominalization transformations, and the demonstratives and enumerators derived from deep predicates. An important class of PRO-articles not yet dealt with are the so-called personal pronouns. These present something of a problem in the

description of Lisu, since there appears at first sight to be a need to distinguish between singular and plural forms, making these PRO-articles the only forms in the language where such a distinction is relevant. Elsewhere noun and verb forms exhibit no distinction which can be attributed to a singular/plural difference. Where number is distinctive, this is expressed by the use of enumerators or mass classifiers, but there is no evidence that a dichotomy is made between singularity on the one hand and more than singularity on the other. Thus all forms of all nouns in Lisu (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:

ŋwa   ŋwanwù   azwù

$$
\begin{bmatrix}
<+Art> \\
<+PRO> \\
<+human> \\
<+I> \\
<-II> \\
<-III>
\end{bmatrix}
\quad
\begin{bmatrix}
<+Art> \\
<+PRO> \\
<+human> \\
<+I> \\
<-II> \\
<+III>
\end{bmatrix}
\quad
\begin{bmatrix}
<+Art> \\
<+PRO> \\
<+human> \\
<+I> \\
<+II> \\
<\pm III>
\end{bmatrix}
$$

(I)   (we: exclusive)   (we: inclusive)

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

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

45. ása nwu thà tshí
     Asa you don't fret

     Asa, don't you fret

46. pòtya   watya   vwu nwu thà   tshí
     clansmen affines VOC you don't fret

     Ladies and gentlemen, don't you fret

47. ása nwuwà thà   tshí
    Asa you   don't fret

    Asa, don't you and the others fret

48. pàtya   wątya   vwu nwuwà thà   tshí
    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:

$$
\begin{array}{cc}
\text{nwu} & \text{nwuwà} \\
\begin{bmatrix}
\text{<+Art>} \\
\text{<+PRO>} \\
\text{<+animate>} \\
\text{<-I>} \\
\text{<+II>} \\
\text{<-III>}
\end{bmatrix}
&
\begin{bmatrix}
\text{<+Art>} \\
\text{<+PRO>} \\
\text{<+animate>} \\
\text{<-I>} \\
\text{<+II>} \\
\text{<+III>}
\end{bmatrix} \\
(you) & (you\ and\ others)
\end{array}
$$

The feature <+animate> is used hesitantly rather than <+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 yí may have reference to singular or plural
entities, while the other yíwà has only plural reference. Note the
following discourse:

49. dza ɣà̧ swu ɣà̧ gwu le   -û?
    rice reap one reap all become-QUESTION

    Have the reapers finished reaping?

50. mà sɔ́ / yí mà ʔìla hè
    not know   he not return yet

    (I) don't know. They haven't come home yet.

51. ŋwanwù nya tha yi̧tá-a̧   / yíwà nya nɔ́ -wa ʔìtá-a̧
    we   TOP here lie -DEC   they TOP that-at lie -DEC

    We have been sleeping here, but they have been sleeping up there.

Here the same group of people are referred to by yí and by yíwà in
(50) and (51) respectively.

The distinction between these two pronouns cannot be accounted for
in terms of the features suggested so far, unless one of them be
specified as <-I> <-II> <-III>, which is hardly satisfactory. One has
to posit some additional feature to account for this one contrast.
What the correct feature is I am not certain. It might possibly be

<±singular>. It is even possible that the correct solution is related
to the fact that both the second and third person pronouns which have
exclusively plural reference end in the syllable -wà, which if it is a
suffix occurs nowhere else.[6]
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 pɛ   ye-a   nya yí nà   yə -ɥ
    Asa TOP *road*   at reach *go*-DEC TOP *he stop* COMP-DEC
    When Asa reached the road he stopped.

53. lὺ nya dzagwu wa pɛ   ye-a   nya nà   yə ' -ɥ
    car TOP *road*   at reach *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:

$$X - NP^a - Y - NP^b - Z \Rightarrow X - NP^a - Y - NP^b - Z$$
$$\quad\ \ \text{<-PRO>}\qquad\ \text{<-PRO>}\qquad\qquad\quad\ \text{<-PRO>}\qquad\quad\ \text{<+PRO>}$$

where NP^a = NP^b and NP^a precedes NP^b and is not a constituent
     <-PRO>   <-PRO>

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 NP^b and meets the conditions specified
for the pronominalization of animate nouns, the NP^b is deleted rather
than pronominalized.
In Lisu there are no reflexive pronouns. Note the following:

54. ása nya yí tsɿtshɨ kudwὲ lɛ́ tú   yὰ -a
    Asa TOP *he real*   *body -to 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 tsɿtshɨ kudwὲ
Asa's real body.

4.5 POSSESSIVES

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

55. ása ámù   *Asa's horse.*
      1   2   1   2

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 ... <u>have</u> is inserted just in case the
subject is an NP which is not from the case O.'

In Lisu the case of the topic is immaterial, and what is of importance
rather are the cases in the proposition, since Lisu appears to have a
number of 'empty' verbs, as was seen in Chapter II of this book. If
the empty verb which co-occurs with O and D cases is a constituent of
a matrix sentence, then the substitution of the surface form **dyu** *have*
is obligatory. This substitution is always accompanied by the deletion
of the Dative postposition. If the sentence is embedded in a relative,
then the lexical substitution is optional. If the option is for non-
insertion, there is a further option in that normal relativization may
apply, or relative clause reduction and switching may apply. Thus (55a)
yields the string (55b) if lexical insertion of the verb **dyu** *have* and
relativization apply, the string (55c) if relativization but not lexical
insertion apply, and the string (55d) if relative clause reduction and
switching apply:

55b. ámù ása dyu -ạ ma
  horse Asa have-DEC one

  The horse which Asa has

55c. ámù ása lǽ 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 thì ma dyu -ạ
  Asa horse one one have-DEC

  Asa has one horse

56a. ása ámù thì ma dyu-ạ
  Asa horse one one be -DEC

  There was once a horse of Asa's

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

4.6 *DERIVED NOUNS*

4.61 Deverbal nouns

In Lisu there are a number of nouns consisting of the PRO-article yí 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 yí + deverbal noun stem forms are numerous, and include the following:

 yí na *disease* [na *to be sick, sore*]

 yí phwì *price* [phwì *to honour, value*]

 yí nwé *shoot* [nwé *to send out shoots*]

 yí næ *black (colour name)* [næ *to be black*]

 yí fwʉ *egg* [fwʉ *to lay eggs*]

 yí vɛ *flower* [vɛ *to flower*]

The prefix-like yí 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 yí na-ạ ma, and the causative relative *that which makes sick* requires a Dative NP in Lisu, and would be

57. swu   lǎ na le   tyɛ -ạ 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 yí marker here would seem to mark an embedded S of a slightly different kind, in which the V-node of the base has been nominalized. In fact all of the necessary rules for such nominalization already exist, and all that is required to derive the above nouns from deep verbs is to amplify the set of conditions necessary for the operation of the existing rules. Since not all verbs can have nouns derived from them, a sub-set of verbs will need to be specified <±Nom>.

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

4.62 Nouns derived from classifiers

Another large class of nouns having a prefix-like morpheme yí 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:

yí dzɨ *a tree-trunk, stem* [dzɨ Clf. *for plant-stems*]
yí sɨ *fruit, globules* [sɨ Clf. *for fruits, globules*]
yí khwy *a hole* [khwy Clf. *for holes, caves*]
yí khwá *a board, metal sheet* [khwá Clf. *for oblong, flat objects*]

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

4.63 Other nouns with prefix-like PRO-article yí

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 yí. 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:

yí thyɨ   *A rhizome*

tyá̱ thyɨ   *Ginger root*

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

yí ṅtsha   *a liquid [*ṅtsha]*

yí phà   *a male*

yí ma̠   *a female*

yí mywɛ   *a name*

yí lì   *a custom, habit, law*

yí syà̱   *a noise*

yí masɨ   *unmilled grain*

yí tyù   *a clan*

yí syalṳ̀   *a last-born son*

yí zà   *a son*

yí nyḭzà   *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 yí mywɛ
     you ? name
     Your name

59. nwu yí tyù
     you ? clan
     Your clan

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

60. *nwu yí ámù
     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. yí nyɨzà
     ?he 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. nætshɨ yí sɨ   nwe -à   yí ǹtsha nwe -à?
     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 ǹtsha would
thus be

63.
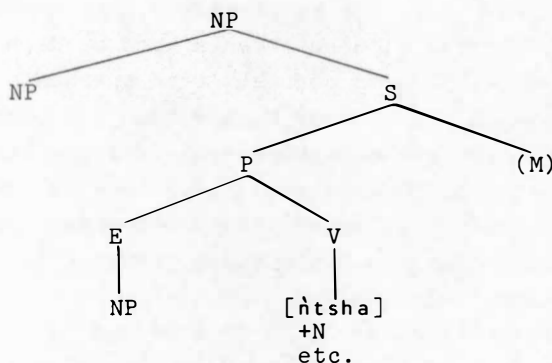
All the NP nodes in the above tree are lexically empty, and the V-
node dominates the complex symbol which constitutes all of the features
of the word ǹtsha *liquid*. The normal rules of feature-copying, pro-
nominalization, NP-raising and segmentation generate the string yí ǹtsha
which has the structure

64.

```
                              NP
                    _____
                   |                        |
          ⎡<+Art>⎤                    ⎡<+N> ⎤
          ⎢<+PRO>⎥                    ⎢<+PRO>⎥
          ⎣ etc. ⎦                    ⎣ etc. ⎦
             yí                        ǹtsha
             WH                        liquid
```
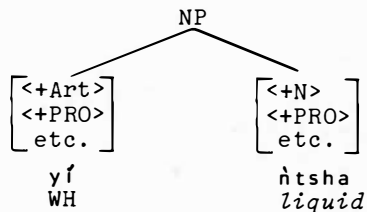
One of the more questionable aspects of the analysis I have posited
for the derivation of demonstratives, classifiers, quantifiers, and
derived nouns of the kinds mentioned above, is that one of the results
is a large set of nouns, literally hundreds, which appear in the surface
strings with the specification <+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 predi-
cates. If so then the distinction between verbs and nouns would be a
surface one, and at the deepest representation both would originate as
predicates, but as predicates which have differing transformational
properties. Such a position has been argued by Bach (1968) and McCawley
(1970). If this position is correct, then the basic rules needed are
already available in the grammar I have been positing for Lisu. The
deep predicate would have a feature <+N>, and the base would be that of
(63). Some additional feature would be needed to allow the feature-
copying rule to apply, but not relative pronominalization. After
feature-copying, NP raising would apply, and the result would yield an
NP node dominating a noun marked <-PRO>.

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

For example:

áthà	*knife*	álwù	*frying pan*
ánà	*dog*	ákhà	*door*
ámù	*horse*	ápə	*yoke*
ávà	*pig*	áphì	*great-grandfather*
áɣá	*fowl*	ázà	*grandmother*

The full list numbers over a hundred.

It is at least possible that this initial syllable is historically related to the yí PRO-article which appears in the case of derived nouns. This seems especially plausible in the case of kinship terms, and the Lisu proper names which refer to the order of birth: atá *First-born*, alĕ *Second-born*, ása *Third-born*, así *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:

áthyỉ *goat/Goat*; bəsỉ *nut/Nut*

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

átsɨ *appearance, looks*	syítsɨ *behaviour, tendency, temper*
sɨyi *thankfulness*	mìhi *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 ạdyạ *water* occur only as mass nouns, while others like làthyu *people* can occur as either mass or non-mass nouns. Note the following:

65. làthyu thỉ zy / wà / syí
    person one person / man-power / sibling
    One person viewed as an individual/a labourer/a sibling.

66. làthyu thì bwu / tsáy   / hì   / dzì
     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. ánà phà   ánà ma
     dog male   *dog female*

68. ánà yí phà   ánà yí ma
     dog WH male   *dog WH female*

N O T E S

1. I use the term 'equivalent' rather than 'identical' since identity
of real-world referrent 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 yí-deletion rule is always obligatory if relative clause extra-
position occurs.

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

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

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

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

CHAPTER V

COMPLEMENTATION, AUXILIARIES AND MODALS

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

Fillmore's position seems to be that regardless of whether or not complements are NPs in surface strings, they are arguments, but not noun phrases in the base. What the full implications are for this position is unclear, but for Lisu it holds no difficulties that I know of. On the contrary a theory which treats complements as noun phrases creates its own problems in a description of Lisu complementation. For one thing the head noun of the hypothetical noun phrase containing the complement would need to be an abstract one not only having no phono-logical form, but no meaning either, since Lisu has no pronoun *it* and no nouns such as *fact, idea* etc.[2] Furthermore, when complements are extra-posed 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 consist of

thyɨ	*weakly expedient*[3]	thyⱡ	*common, usual*
wa̰	*obligatory*	tyú	*precedented*
tyǔ	*needful*	tyɛ̰	*free from taboo*

1. ása nya ami khwa thyɨ   -a̰
    Asa TOP *field hoe expedient*-DEC

    Asa may as well hoe the field

2. ása nya ami khwa thyⱡ -a̰
    Asa TOP *field hoe   common*-DEC

    It is common for Asa to hoe the field

3. ása nya ami khwa wa̰   -a̰
    Asa TOP *field hoe   obligatory*-DEC

    It is obligatory for Asa to hoe the field

4. ása nya ami khwa tyú   -a̰
    Asa TOP *field hoe   precedented*-DEC

    Asa's hoeing the field has happened before

5. ása nya ami khwa tyǔ -a̰
    Asa TOP *field hoe   needed*-DEC

    Asa's hoeing the field was needed

6. ása nya ami khwa tyɛ̰ -a̰
    Asa TOP *field hoe   safe*-DEC

    It is not taboo for Asa to hoe the field

The underlying base of the above sentences is

7.
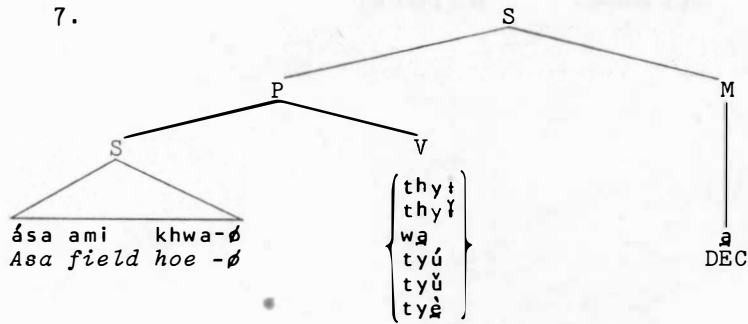
No complementation transformations are required, as this base form requires only lexical insertion to take place in order to generate the correct surface strings.

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

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

kwú *mentally able*   khwu *physically able*

bala *able (no hindrance)*   pɔ́ *able, courage-wise*

bwu *disinterested*[4]

8.   ása nya ami   khwa kwú -a̰
    Asa TOP *field hoe able*-DEC

    Asa is able (knows how) to hoe fields

9.   ása nya ami   khwa khwu-a̰
    Asa TOP *field hoe able*-DEC

    Asa is able (strong enough) to hoe fields

10.   ása nya ami   khwa bala-a̰
    Asa TOP *field hoe   free*-DEC

    Asa is free to hoe fields

11.   ása nya ami   khwa pɔ́ -a̰
    Asa TOP *field hoe   dare*-DEC

    Asa dares to hoe fields

12.   ása nya ami   khwa bwu   -a̰
    Asa TOP *field hoe   disinterested*-DEC

    Asa is tired of hoeing fields

The base form of the above sentences is

13.
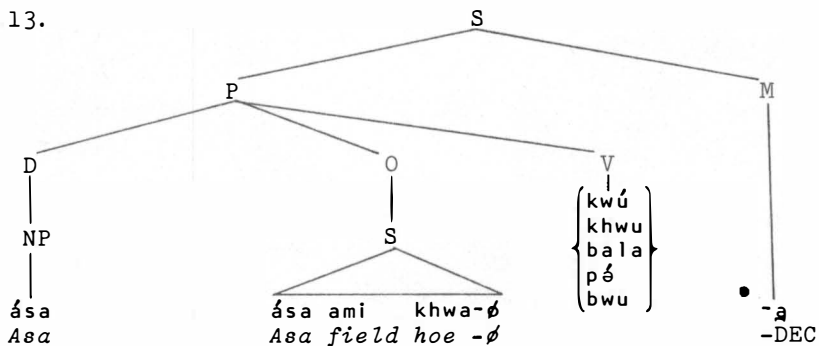
The normal Equi-NP-deletion rule deletes the occurrence of ása in the embedded complement.

There are no sentences

14. *ása nya kwú-a   *Asa is able.

14a. *ása nya khwu-a   *Asa is able.

14b. *ása nya bala-a   *Asa is able.

14c. *ása nya pə́-a   *Asa is brave/bold/daring.

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

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

This small sub-class consists of the following:

mi *tasty*   pwụ *to last, be used up at a slow rate*

fwụ *to require a lot of time*

15.   dza   nya nyíme dzà mi   -a
      rice TOP today eat tasty-DEC

      Today the rice is tasty (to eat)

16.   dza   nya nyíme dzà pwụ -a
      rice TOP today eat last-DEC

      Today the rice is lasting well

17.   dza   nya nyíme dzà fwụ -a[5]
      rice TOP today eat long-DEC

      Today the rice is taking a long time to eat

The base form of the above sentences is

18.

```
                                   S
                           _____|_____
                          P                 M
                 _____|_____         |
                O         O        V          |
                |         |        |          |
               NP         S      ┌ mi ┐       |
                |        _|_      │ pwʉ │      |
               dza      ∅ dza dzà-∅  │ fwʉ │   a
               rice     ∅ rice eat-∅ └    ┘   DEC
```
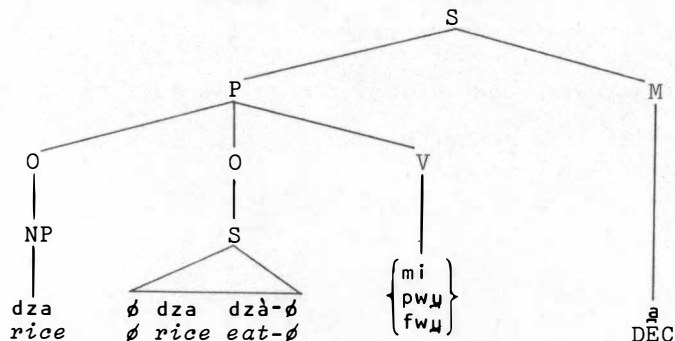
The regular Equi-NP-deletion rule deletes the second occurrence of
the NP dza *rice*, but a major problem is the provision of an Agentive NP
for the embedded S, since the verb dzà *eat* requires an Agentive. In
some sentences the Agentive is overtly identified[6] and in these cases
the problem is resolved. In other cases the discourse context can enable
one to provide the correct NP, but in a large number of cases it is
impossible to provide a unique NP in any motivated way. There are always
a number of possible candidates for inclusion, and each NP is as good
as another. In sentences (15-17) above for instance, it is impossible
to know whether the beings doing the eating are the class of humans as
a whole, or a sub-set of that class, or whether domestic animals or
birds are to be included too. Thus it seems plausible that the A node
will appear in the base, but with insufficient features attached to make
lexical insertion a possibility. It would thus be a 'dummy' node required
to reflect the fact that every speaker of Lisu feels that some being is
performing the action of eating, even though he cannot say who it is.

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

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

       Rice is tasty

19a.   *dza   nya pwʉ -a
       *rice TOP *last*-DEC

       Rice lasts a long time

19b.   *dza   nya fwʉ -a
       *rice TOP *long*-DEC

       Rice takes a long time

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

To my knowledge there is only one verb in this class, namely the verb
di *having sufficient spatial capacity, roomy enough*.

20. nwu dzakǎ   nya hama   yḭtá di   -ạ
     you granary TOP *elephant lie   roomy*-DEC

     Your granary is roomy enough for an elephant to lie in

The base form of this sentence is

21.
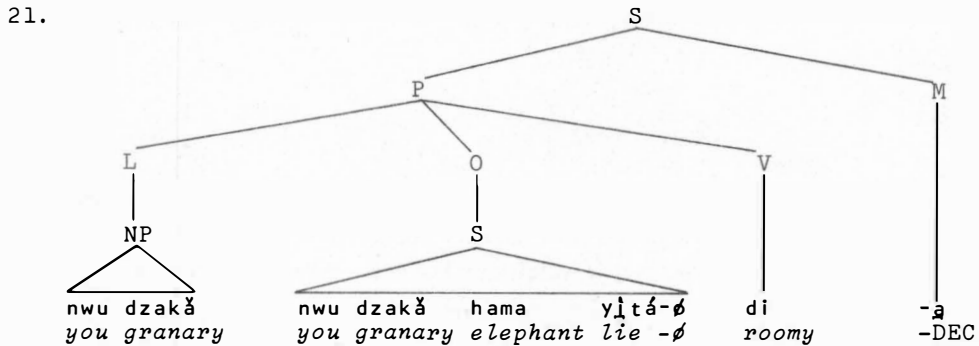
Equi-NP-deletion again deletes the second occurrence of the leftmost
NP. Although *elephant* has been provided in the above example, the
problem of providing the correct subject for the verb in the embedded
sentence arises in many other examples.

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

The complement-requiring verbs above all occur in a restricted type
of proposition. There are in·addition, however, a fairly large number
of complement-requiring verbs which do not have such rigid restrictions.
This latter class includes such verbs as

da	*able*	tshà	*urgent*
khù	*natural*	sa	*easy*
nạ	*possible*	xạ	*good*
pyɔ	*enjoyable*	hḭ	*difficult*

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

22. ása nya ami   khwa da   -ạ   [S,V]
     Asa TOP *fields hoe acceptable*-DEC

     It is acceptable for Asa to hoe fields.

23. ása nya ami   khwa da -ạ   [D,S,V]
     Asa TOP *fields hoe able*-DEC

     Asa is able to hoe/skilled at hoeing fields.

24. ami   nya khwa da -ạ   [O,S,V]
     fields TOP *hoe -able*-DEC

     Fields are 'hoe-able'/The fields are ready for hoeing.

25. thyɨ-xwà nya dzà nạ   -ạ   [S,V]
    deer-meat TOP *eat possible*-DEC

    It is possible to eat deer-meat.

26. thyɨ-xwà nya dzà nạ   -ạ   [O,S,V]
    deer-meat TOP *eat appropriate*-DEC

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

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

    It is normal for Asa to hoe fields.

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

    Asa finds hoeing fields comfortable/natural.

5.16 Remarks on complement S types discussed thus far

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

28'. *ása nya ami   khwa-ạ kwú -ạ
     Asa TOP *fields hoe* -DEC *able*-DEC

28". *ása nya ami   khwa ɣə   kwú -ạ
     Asa TOP *fields hoe* COMPLETE *able*-DEC

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

29. ása nya ami   wùxə mà nà -nà lè khwa kwú -ạ
    Asa TOP *field tire not stop-stop* ADV *hoe able*-DEC

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

30. ása nya ami   kạpê khwa kwú -ạ
    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*, tshà *urgent*. Thus the following are not grammatical, with the exception of (32a) in which the [+Adj] verb is not in fact the highest verb in the complement, as will be seen later in this chapter:

   31. *nwu hi   nya ámù phwu di -ạ
         *you house TOP *horse white roomy*-DEC

         Your house is roomy enough for a horse to be white in

   32. *ámù   nya phwu tshà -ạ
         *horse TOP *white urgent*-DEC

         It is urgent that the horse is white

32a. ámù   nya phwu le   tshà -ạ
     horse TOP *white become urgent*-DEC
     It is urgent that the horse become white

With many of the other [+Adj] [+Aux] verbs this restriction does not
apply to the complements they command, and this often has results rather
surprising to an English speaker. The following are perfectly grammatical sentences:

33. nwu ámù   nya phwu kwú -ạ
    you horse TOP *white able*-DEC
    *Your horse is able to be white (which means that the horse is
    whiter than most white horses, rather than that it could become
    white)*

34. nwu ámù   nya phwu hí   -ạ
    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
[O,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 fwụ
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 pwụ *to last well*
the complement may have as its main verb dzà *to eat*, du *drink*, vwù *sell*
and other verbs which refer to the consumption of commodities or fuel.
In the case of fwụ *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

xạ	*good*	phéfwu	*surprising*
hí	*difficult*	sátụ	*shameful*
dyụ	*fearsome*	mà	*genuine*
ŋa	*factual*	etc.	

Besides the differences in meaning between the resulting sentences,
the [+Aux] forms of the verbs involve other differences from the [-Aux]
forms too. These have to do with the restrictions on the complement

sentences with which they co-occur. Note the following:

35. ása nya ami   khwa xạ -ạ
     Asa TOP *field hoe   good*-DEC

     Asa is good at hoeing fields

35a. ása nya ami   khwa-ạ   xạ -ạ
     Asa TOP *field hoe* -DEC *good*-DEC

     It is good that Asa hoes fields

When verbs in this class occur with [-Aux] specification and take a
complement, the base form is always one which has an [S,V] proposition:

36.


```
                              S
              P                        M
       O              V
          S           │
                  ⎧ xạ  ⎫
                  ⎪ hí  ⎪
                  ⎨ phéfwu ⎬
 ása ami   khwa-ạ ⎩ etc. ⎭           ạ
 Asa field hoe -DEC    good etc.       DEC
```
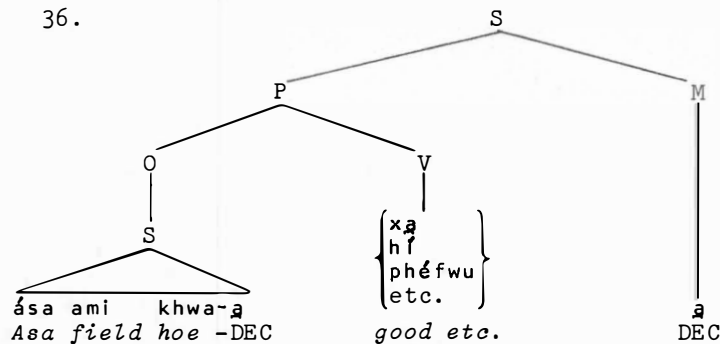
Complement S's commanded by [+Adj] [-Aux] verbs differ in a number of
ways from those discussed in the preceding subsections. For one thing
such complement S's as we are dealing with here must incorporate a
performative verb and may include an aspect auxiliary too, while both of
these 'higher verb' types are excluded from the complements discussed
earlier. Note the following:

37. ánà-xwà nya ása dzà xạ -ạ
     dog meat TOP *Asa eat good*-DEC

     Asa finds dog meat good to eat.

38. ánà-xwà nya ása dzà-ạ   xạ -ạ
     dog meat TOP *Asa eat*-DEC *good*-DEC

     It is good that Asa eats dog meat.

Sentence (37) has a deep structure like that of (18), while the base
of (38) is like (36) above. To illustrate that sentences like (38) may
incorporate post-verbal aspect markers as well as performatives like
DEC, I include the following, which is perfectly grammatical:

39. ánà-xwà nya ása dzà yə   -ạ xạ -ạ
     dog meat TOP *Asa eat* COMPLT-DEC *good*-DEC

     It is good that Asa has been eating dog meat.

Complements commanded by [+Adj] [-Aux] higher verbs may optionally be
nominalized, which is not true of those commanded by [+Adj] [+Aux]
higher verbs. Thus (40) and (41) are grammatical, while (42) and (43)
are not.

40. ása mègwà gwa̠ ma nya xa̠ -a̠
     Asa song sing NOM TOP *good*-DEC

     Asa's singing of songs is good (An identical surface sentence
is an action nominalization meaning *Asa's way of singing songs is good,*
but it is not the reading under discussion here.)

41. ása pátsɨ-a dye ma nya phéfwu   -a̠
     Asa plain-to go NOM TOP *surprising*-DEC

     Asa's going to the plain was surprising.

42. *ása mègwa̠ gwa̠ ma nya thyǐ -a̠
     Asa songs sing NOM TOP *common*-DEC

43. *ása pátsɨ-a dye ma nya tyǔ   -a̠
     Asa plain-to go NOM TOP *needful*-DEC

In nominalizations of the above kind, which are ·translated by English
gerundives, the subject noun of the Lisu complement is in fact not a
possessive form. This can be shown by sentences such as

41a. ása nya pátsɨ wa dye-a̠ ma nya phéfwu -a̠
      Asa TOP *plain-to go* -DEC NOM TOP *strange*-DEC

      Asa's going to the plain was surprising.

In this sentence the Agentive of the complement sentence has been
topicalized and the marker nya has separated the word ása from the rest
of the sentence. This can never happen to the possessor noun in a
possessive construction. If a possessor noun is topicalized, then it
must be replaced by a pronominal copy, giving surface forms such as

44. ása nya yǐ ámù ...
     Asa TOP *he horse*

     About Asa, his horse...

To continue, complements commanded by [+Adj] [-Aux] verbs may be
topicalized, while those commanded by [+Adj] [+Aux] verbs may not. Note
the following:

45. ása ami   khwa-a xa̠ -a̠
     Asa fields hoe -DEC *good*-DEC

     That Asa hoes fields is good.

46. ása ami   khwa-a nya xa̠ -a̠
     Asa fields hoe -DEC TOP *good*-DEC

     That Asa hoes fields is good/It is good when Asa hoes the fields

47. *ása ami   khwa nya kwú -a̠
     Asa fields hoe TOP *able*-DEC

Sentences (45) and (46) are entirely synonymous, with nya deletion
having applied to (45), but not to (46). Both of these differ from (35),
which was

35. ása nya ami   khwa-a xa̠ -a̠
     Asa TOP *fields hoe* -DEC *good*-DEC

     It is good that Asa hoes fields

only in the fact that the complement S has been topicalized in (45) and (46) but not in (35). Of interest at this point is whether sentences like (46) contain a subordinate clause or not, or to rephrase the problem, in what way does (46) differ from (48) below?

48. *ása ami   khwa-a   nya xa̱ -a̱*
    Asa fields hoe -DEC TOP good-DEC
    When/if Asa hoes the fields it will be good/Since Asa is hoeing the fields all is well.

One of the more obvious differences is one of presupposition. Certain readings presuppose that Asa is hoeing, others that he is not, and yet others that he is not yet, but will be. However there appears to be a further difference which is best seen if the discussion is limited to a comparison of (49) and (50), assuming a reading in which the presuppositions are identical, namely that it is a fact that Asa hoes fields, and the assertion is that this fact is good. The English glosses of the respective sentences are then:

49. *That Asa is hoeing the fields is good,* (or to put it in more colloquial English) *The fact that Asa is hoeing the fields is good.*

50. *Since Asa is hoeing the fields, all is well.*

It must be remembered that in the Lisu examples there are no surface differences between the two sentences. The only semantic difference between the two sentences in Lisu that I can discern is that (50) involves a conditional, while (49) does not. I therefore conclude that the only deep structure difference is that (50) contains a complement having the abstract verb CONDITION in its derivation, while (49) does not. The appearance of CONDITION requires that the whole configuration under its domination be topicalized, while the complement in (49) is topicalized for other reasons, having to do with the presuppositions associated with the sentence. To put this fact another way, a non-conditional complement of the type under discussion is topicalized optionally, as can be seen from a comparison of (35) and (49). A conditional complement (i.e. a subordinate clause) is obligatorily topicalized. A further restriction on subordinate clauses, which does not apply to the non-conditional type of complement under discussion, (i.e. that type of complement commanded by a verb marked [+Adj] [-Aux]) is that nya deletion may not occur. Given these restrictions on complements containing the abstract verb CONDITION, there appears to be no difficulty in the position that complements of the usual type and subordinate clauses both originate as embedded S's of the same kind, i.e. both are generated in the base by the same rule.

5.3 COMPLEMENT-TAKING VERBS - [-Adj] [-Aux]

Verbs in this class are verbs of communicating, thinking, seeing and hearing, such as

bæ	*say, intend*	má	*teach, show*
nanyi̱	*ask*	mu	*see*
bædzà	*hear*	kwù	*consider*
tsʃ	*remember*	dwɨdzà	*think*

Some of these verbs such as tsʃ *remember*, dwɨdzà *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 ma̱ *obtain, be successful*, or nyi̱ *try*.

51. a lě nya ása nya ami   khwa-a̱   bæ -a̱
     Ale TOP *Asa* TOP *fields hoe* -DEC *say*-DEC

     Ale says that Asa is hoeing fields.

52. a lě nya ása nya ami   khwa-a̱   mu -a̱
     Ale TOP *Asa* TOP *fields hoe* -DEC *see*-DEC

     Ale saw that Asa was hoeing fields.

53. a lě nya ása nya ami   khwa-a̱   tsʃ   ma̱ -a̱
     Ale TOP *Asa* TOP *fields hoe* -DEC *remember get*-DEC

     Ale remembers that Asa is hoeing fields.

54. a lě nya ása nya ami   khwa-a̱   kwù   nyi̱-a̱
     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:

55.
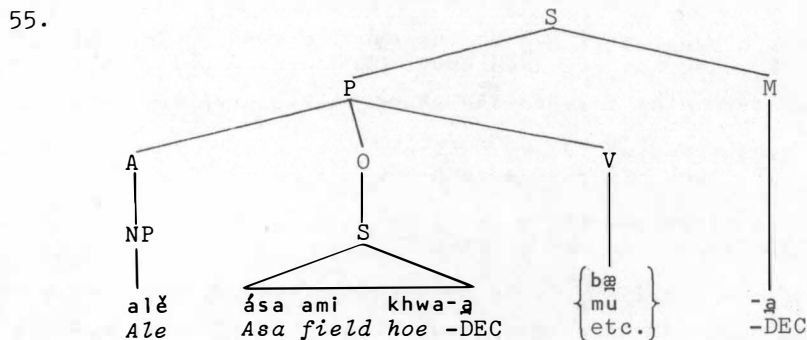
5.4 COMPLEMENT-TAKING VERBS - [-Adj] [+Aux]

Verbs in this general class include a number of rather diverse kinds. I will sub-classify them according to the general semantic class to which they belong, which sub-classification happens to group together verbs with similar syntactic distribution.

5.41 Verbs of motion

The auxiliary verbs of motion under consideration are ye *go*,[7] la *come*, dwɨ *enter*, dʉ *exit*, dæ̧ *climb*, and yæ̧̀ *descend*. Of these ye and la have rather different distributions from the other verbs in the sub-class, in that these other verbs require the co-occurrence of ye and la, but the reverse is not true. (All of the verbs in this class may also occur as main verbs i.e. as [-Aux] verbs which have no complement S in their proposition's configuration.)

56. ása nya hipywɛ wa tɔ̌ ye-ạ
    Asa TOP *shack to run go-*DEC

    Asa ran away to the shack (away from presupposed point of reference).

57. ása nya hipywɛ wa tɔ̌ la -ạ
    Asa TOP *shack to run come-*DEC

    Asa came running to the shack (towards presupposed point of reference).

58. ása nya hipywɛ khwù wa tɔ̌ dwɨ ye-ạ
    Asa TOP *shack in to run enter go-*DEC

    Asa went running into the shack.

59. ása nya hipywɛ tyú tɔ̌ dʉ la -ạ
    Asa TOP *shack from run exit come-*DEC

    Asa came running out of the shack.

60. ása nya hipywɛ wa tɔ̌ dæ̧ la -ạ
    Asa TOP *shack to run climb come-*DEC

    Asa came running up to the shack.

61. ása nya hipywɛ wa tɔ̌ yæ̧̀ ye-ạ
    Asa TOP *shack to run descend go-*DEC

    Asa went running down to the shack.

62. *ása nya hipywɛ wa tɔ̌ yæ̧̀ -ạ
    *Asa TOP *shack to run descend-*DEC

63. *ása nya hipywɛ wa tɔ̌ dæ̧ -ạ
    *Asa TOP *shack to run climb-*DEC

When two of the auxiliary verbs of motion co-occur, one must always be ye *go* or la *come* and this must occur finally in the string of motion verbs. Thus (56) is grammatical, but (61a) below is not.

61a. *ása nya hipywɛ wa tǒ ye yà̰   -a̰
     *Asa TOP shack to run go descend-DEC

[There is a sentence with the surface form of (61a) meaning *Asa ran away to the shack and went down* but in this sentence yà̰ is not an auxiliary verb].

When three of the auxiliary verbs of motion co-occur, ye or la must occur finally, but the other two verbs are not strictly ordered in relation to each other. However, the different orders involve different meanings. Note the following:

64. làma nya làsyi mi   wa tǒ dwɬ   yà̰   ye-a̰
     tiger TOP grass field to run enter descend go-DEC

     The tiger ran into the long grass, moving away downhill.

65. làma nya làsyi mi   wa tǒ yà̰   dwɬ   ẏe-a̰
     tiger TOP grass field to run descend enter go-DEC

     The tiger ran away down into the long grass.

The English gloss of (64) is very unsatisfactory as it infers some sort of sentence conjunction. In the Lisu examples the difference in meaning has to do with the distance of the grass from the tiger. In (65) one imagines the tiger running downhill away from the point of reference into a grassfield a short distance away. In (64) the idea is that the tiger is right at the edge of the grassfield when he starts running. He runs into the grassfield almost as soon as he starts running away downhill. In both sentences the activity is treated as one event rather than as a sequence of events. However, it is obvious that the timing of the various actions is relevant. In (64) the tiger entered the grass before he had moved downhill appreciably, and thus dwɬ *enter* precedes yà̰ *descend*. Semantically it is obvious that more than one predication is involved. Leaving out the complement-dominating O node, the base I propose for (65) is

66.
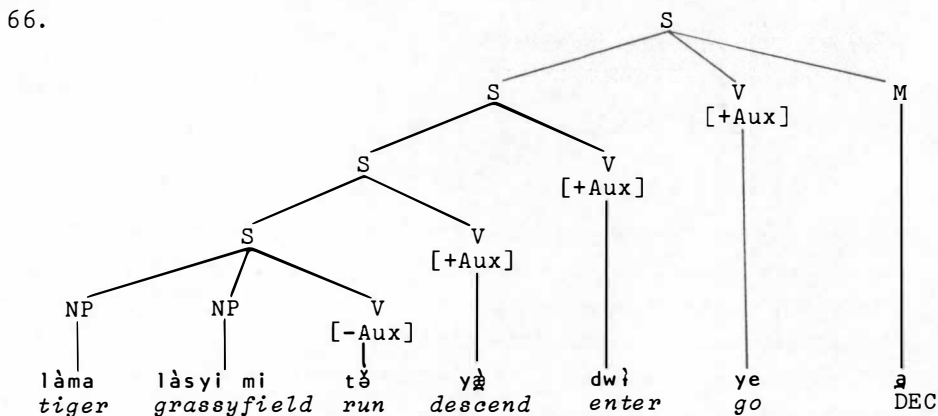
The question arises as to why the above base marker is preferred to one which treats (65) as a conjunction of sentences meaning *the tiger runs, and the tiger descends, and the tiger enters, and the tiger goes, to the grassfield*. A series of lowering rules could lower the verbs, changing them to [+Aux] specification, embedding them one into the other, leaving the selected S embedded at the deepest level. The rules required to do this would be vastly complicated, but presumably such a schema could be devised. However, the position of such a base could not account for the fact that if two of the presumably co-ordinate sentences are re-ordered, a change in meaning takes place of the kind which differentiates (64) and (65). Furthermore if the sentence conjunction is posited for the base a number of ad hoc rules would need to apply. For one thing, the lowering rule would have to be blocked if the sentences contained any adverbial modification. *The tiger ran, the tiger descended gradually and the tiger entered in terror* etc. would have to follow the usual rules of conjunction, in which some of the conjunct sentences are embedded as adverbs of manner in others. Note the following:

67.   làma nya yà̱ -yà̱ -a̱ le tǒ -a̱
    tiger TOP *descend-descend*-DEC ADV *run*-DEC

    The tiger ran, descending.

67a.   làma nya tǒ -tǒ -a̱ le yà̱ ye-a̱
    tiger TOP *run-run*-DEC ADV *descend go*-DEC

    The tiger descended, running.

67b.   làma nya ka̱pê tǒ -tǒ -a̱ le yà̱ -a̱
    tiger TOP *hard run-run*-DEC ADV *descend*-DEC

    The tiger descended, running hard.

67c.   làma nya akhɔ́ yà̱ -yà̱ -a̱ le tǒ -a̱
    tiger TOP *very descend-descend*-DEC ADV *run*-DEC

    The tiger ran, descending rapidly.

67d.   làma nya tǒ yà̱ ye-a̱
    tiger TOP *run descend go*-DEC

    The tiger ran down.

67e.   *làma nya tǒ akhɔ́ yà̱ ye-a̱
    **tiger* TOP *run very descend go*-DEC

    **The tiger ran very down.*

In the base that I have posited, the subject of the [+Aux] verb in each case is not *tiger*, but a complement S. Thus I am interpreting the meaning of (65) to be something like

    The tiger's running to the grassfield was downhill.
    The tiger's running downhill to the grassfield was into.
    The tiger's running downhill into the grassfield was away.

Such an interpretation would account for the fact that when the order
of the [+Aux] verbs is altered different meanings result. Some additional
support for the position that the auxiliaries above modify complements
representing whole events rather than concrete nouns comes from sentences
such as

68. ása nya yí tshɨbə tǎ   yà̰   ye-a̰
     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 dwɨ and dy̰ are a sample used to
illustrate the structures involved, but there are a few other verbs in
the class too, though not a great many. All require a following ye *go*
or la *come*. Examples are

kú	*to cross*	khú	*to pass over*
mywé	*to overtake*	lwé	*to roll*
kwá	*to tip over*	tǎ	*to carry*

All members of the class of verbs of motion occur as [-Aux] verbs as
well.

The main verbs in complements governed by the auxiliary verbs of motion
must naturally also be verbs of motion. The auxiliaries occur when the
motion being performed has some relative reference to some point in
space. Thus if the verb meaning *to walk* were used with no particular
spacial point of reference no auxiliary would be required, as in the
following:

69. tshu-syɨ̰-à̰   nya dzagwu sywè kwú -a̰
     man -new-DIM TOP *road   walk able*-DEC
     The baby can walk

The restriction on the occurrence of ye *go* and la *come* can be stated
as a deep structure constraint that these two verbs may not be commanded
by any other auxiliary verb of motion. This would result in their always
occurring at the end of a string of such verbs.

One other auxiliary verb of motion which requires mention is the verb
fwy̰ which as a [-Aux] verb means *send* and as an auxiliary *away*. This
differs from the auxiliary ye *go/away* in many ways. The complement
sentence it commands must always have an Agentive and either a Dative
or Objective. Semantically the motion never involves the Agent.

70. ása nya yí pu yɔ̌ fwy -a̧
    Asa TOP *he gun throw away-*DEC

    Asa is throwing away his gun.

The strict restrictions on the form of the complement S make it seem
likely that fwy occurs in [A,O,S,V] propositions rather than [S,V] ones,
and that the base of (70) is

71.

ása	pu	ása pu yɔ̌ -ø	fwy	-a̧
Asa	*gun*	*Asa gun throw-ø*	*away*	*-*DEC
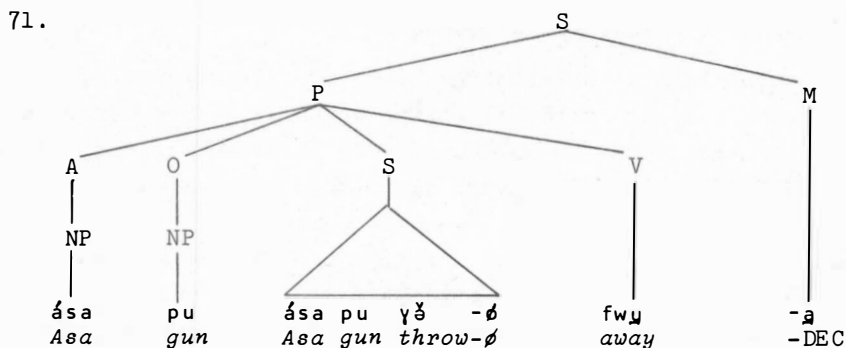
A synonym of fwy is the verb ha which has identical distribution and
seems to be an archaic form of the former.

There are certain restrictions on the type of verb which can occur as
the main verb in complement S's commanded by fwy *away*. The class of
verbs which can occur in such sentences is limited to those which refer
to actions which set other objects into motion, such as yɔ̌ *throw*, dzɬ
throw like a spear, ba̧ *fire a crossbow*, pɔ̌ *flick*, tí *spit* etc., and to
verbs of communication such as bæ̧ *say*.

5.42 Giving, Benefiting and Helping

The three verbs under consideration here are yɔ̀ *give,*[8] dzà *eat*, dzwa
help. These three verbs are in complementary distribution, and may not
co-occur which indicates that they should be assigned to the same 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 yɔ̀ *give* occurs in [A,D,S,V] or [A,O,S,V] propositions.
Semantically it is often the case that intent is indicated on the part
of the agent to affect the object or being identified by the Object or
Dative NP in some way, and usually that this affect or change of state
is accomplished.

72. ása nya alě læ̃́ dywù-a̧
    Asa TOP *Ale to bump-*DEC

    Asa bumped Ale.

73. ása nya alě lǽ dywù γɔ̀ -a̩
    Asa TOP *Ale to bump give*-DEC

    Asa bumped Ale/Asa gave Ale a bump.

74. ása nya alě lǽ ánà lú -a̩ bæ -a̩
    Asa TOP *Ale to dog bark*-DEC *say*-DEC

    Asa told Ale that the dog was barking.

75. ása nya alě lǽ ánà lú -a̩ bæ γɔ̀ -a̩
    Asa TOP *Ale to dog bark*-DEC *say give*-DEC

    Asa told Ale that the dog was barking.

In (72) and (74) the meaning is unspecific as to whether Asa intended
to influence Ale or not. In (72) the bumping could have been an
accident, and in (74) Asa may merely have been passing the time of day.
In (73) and (75), however, the intent to influence Ale is clear. In
(73) Asa bumped Ale on purpose and in (75) Asa expected that the news
that the dog was barking would have some effect on Ale.

In many sentences, however, the intent-to-influence aspect is irrele-
vant 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:

76. ása nya alě lǽ thà dye bæ tí -a̩
    Asa TOP *Ale to don't go say leave*-DEC

    Asa left word FOR Ale that he shouldn't go.

77. ása nya alě lǽ thà dye bæ tí γɔ̀ -a̩
    Asa TOP *Ale to don't go say leave give*-DEC

    Asa left word WITH Ale that he shouldn't go.

In (76) it is not clear who Asa spoke to, but in (77) it is clear that
Asa spoke directly to Ale - a fact I have not adequately reflected in
the free English translation.

A further semantic influence which the appearance of γɔ̀ has is that it
specifies a particular event in time. Sentence (74) is not specific in
this respect, and can mean *Asa told Ale every now and then that the dog
was barking*, or *Asa keeps telling Ale that the dog is barking*, besides
the meaning given above. Sentence (75) however, can only refer to a
specific event, a particular occasion on which *Asa told/is telling/will
tell Ale that the dog is barking.*

Sentence (73) typifies sentences incorporating a complement and the
auxiliary γɔ̀. Such sentences have the base form

78.

```
                                    S
                    _____|_____
                   P                                 \
        _____|_____               M
       A        D         S            V
       |        |        /\          [+Aux]
      NP       NP       /  \            |
       |        |      /____\           |           |
      ása      alě   ása alě lǎ dywù-ø  yə̀         -a
      Asa      Ale   Asa Ale to bump-ø  give       -DEC
```
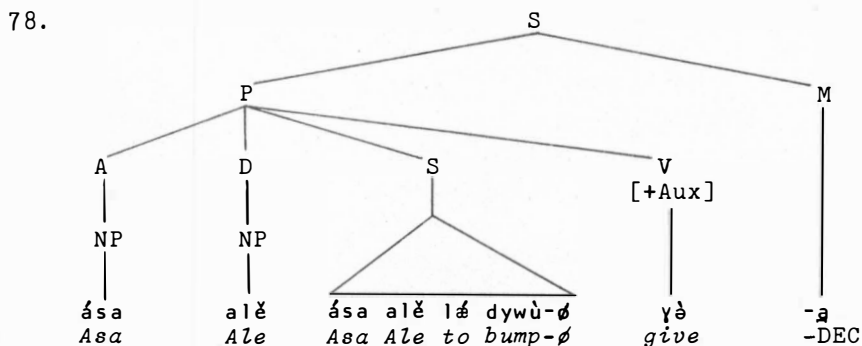
In sentences in which the Dative of the higher sentence does not
appear in the embedded S, the usual meaning is that the activity iden-
tified in the embedded S was performed for the benefit of the being
identified by the higher Dative.

For example:

79. ása nya alě lǎ hi   syǎ yə̀ -a
     Asa TOP Ale to house make give-DEC

     Asa built a house for Ale.

The base form of this example is

80.

```
                                         S
                          _____|_____
                         P                                \
             _____|_____              M
            A        D        S             V
            |        |       /\             |
           NP       NP      /  \            |          |
            |        |     /____\           |          |
           ása      alě  ása hi   syǎ -ø    yə̀        -a
           Asa      Ale  Asa house make-ø   give      -DEC
```
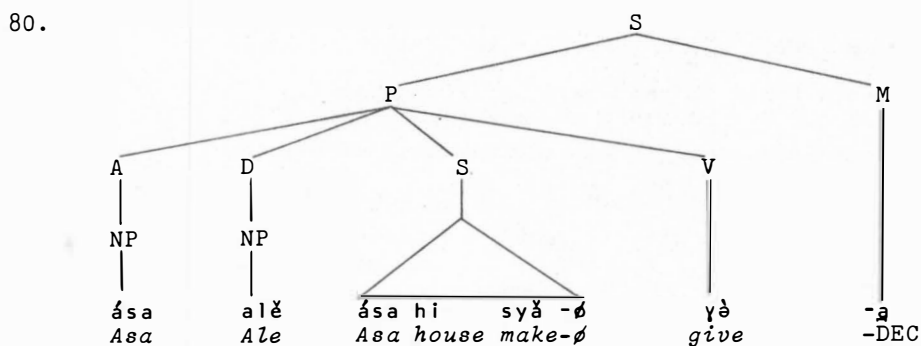
Note the following:

81. ása nya alě lǎ áyá vwù yə̀ -a
     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 gà to γà (see note 8) if the verb has
[+Aux] specification is blocked. Thus from the base (82) is generated
(82a):

82.
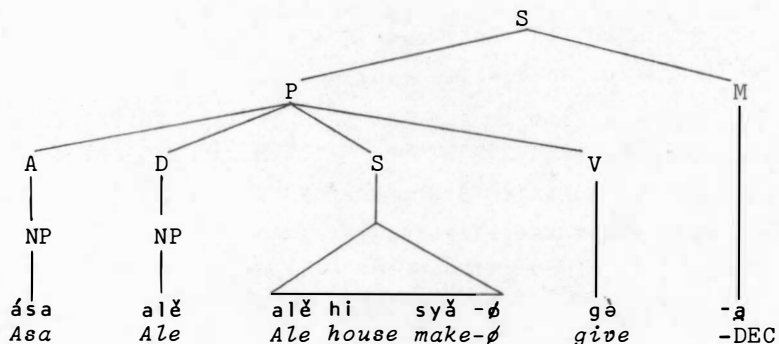
83. ása nya alě lɛ́ hi   gà   syǎ -à
     Asa TOP *Ale to house give make*-DEC

     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 γà. 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
γà in complements of the type illustrated in (78), but they apparently
can in complements of the type illustrated in (80) and (83). Verbs in
the sub-class excluded from (78) but allowed in (80) and (83) include
dè *beg,* khwu *call,* syǎ *fix, make,* xù *lead,* mæ *carry,* nanyị *ask.*
Sentences incorporating verbs of this sub-class do not involve in their
semantic interpretation a change of state for the Dative being.

84. ása nya alě lɛ́ dè γà -à
     Asa TOP *Ale to beg give*-DEC

     a. *Asa begged someone else on Ale's behalf*

     b. **Asa begged Ale*

The one auxiliary verb of benefiting in this class is dzà *to eat.*
It occurs in [D,S,V] propositions. The restrictions on the type of main
verb which may occur in the complement S are severe. The main verb of
the complement must be one which requires the co-occurrence of an
Agentive, and this Agentive must be identical to the Dative NP of the
higher sentence. Not many verbs requiring an Agentive may occur in the
complement, however, vwù *sell,* kɛ́ *lie, deceive,* khu *to fine* being some
of the few which can.

85. ása nya alě lɛ́ áγá vwù dzà-à
     Asa TOP *Ale to fowl sell eat*-DEC

     Asa sold a chicken to Ale

86. ása nya alě lǽ kɔ́   dzà-a̖
     Asa TOP Ale to deceive eat-DEC

     Asa cheated Ale/deceived Ale

87. ása nya alě lǽ thsɨ bà̖   khu dzà-a̖
     Asa TOP Ale to ten baht fine eat-DEC

     Asa fined Ale ten baht

In the above the assertion is that Asa profited in each case. In (85) he profited from the sale of the chicken, in (86) he deceived Ale and gained thereby, and in (87) he pocketed the fine himself. The base structure of such sentences is

88.
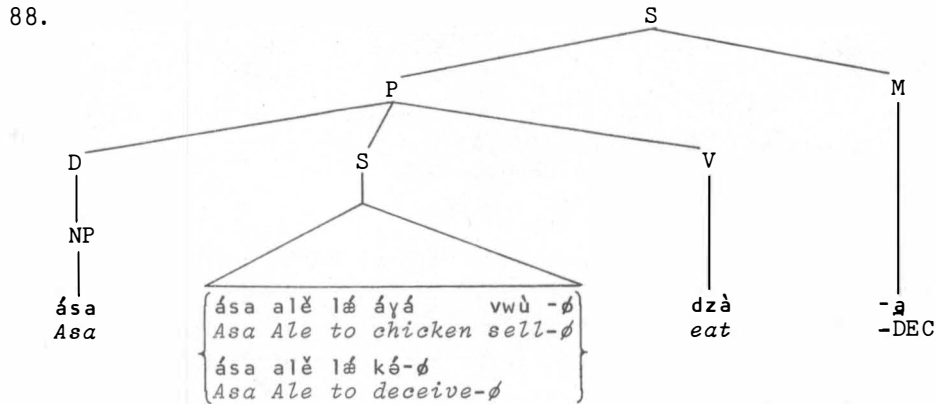
The verb *to help* in Lisu is the auxiliary dzwa (dza or dya in some dialects). It occurs in [A,D,S,V] propositions only. The only restriction on the type of complement which may occur is that it must contain a deep Agentive consisting of two conjoined NPs, which are identical to the Agentive and Dative NPs respectively, of the higher sentence.

89. ása nya alě lǽ hi   syǎ dzwa-a̖
     Asa TOP Ale to house make help-DEC

     Asa helped Ale build a house.

The base structure of sentences of this type is

90.
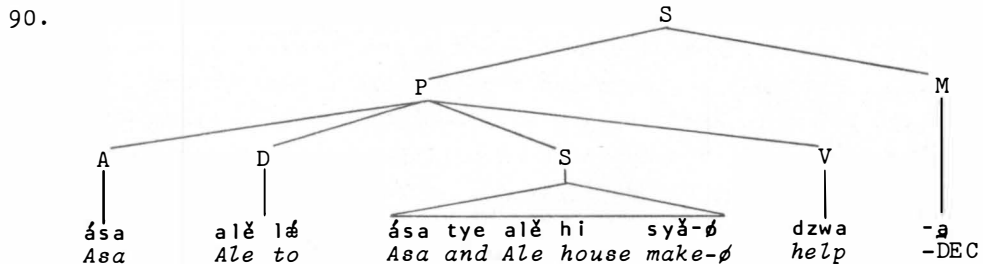
I have proposed a conjunct Agentive in the embedded S, since the meaning of (89) is that both Asa and Ale were building the house together, i.e. Asa was giving direct help. A conjunct Agentive is not always required, however, since the same basic structure occurs in cases of indirect help too.

5.43 Trying and succeeding

The two auxiliary verbs in this class are nyị *try* and mạ *get, succeed*. As [-Aux] verbs these mean *see* and *obtain* respectively. As [+Aux] verbs they occur in [A,S,V] and [D,S,V] propositions respectively. Consider the following:

91. ása nya ami   khwa-ạ
    Asa TOP *fields hoe* -DEC

    Asa is hoeing the field.

92. ása nya ami   khwa nyị-ạ
    Asa TOP *field hoe   try*-DEC

    Asa is trying to hoe the field.

93. ása nya ami   khwa mạ -ạ
    Asa TOP *field hoe   get*-DEC

    Asa got to hoe the field.

94. ása nya ámù   gà -ạ
    Asa TOP *horse chase*-DEC

    Asa is chasing the horse.

95. ása nya ámù   gà   nyị-ạ
    Asa TOP *horse chase try*-DEC

    Asa is trying to chase the horse.

96. ása nya ámù   gà   mạ -ạ
    Asa TOP *horse chase get*-DEC[9]

    Asa got to chase the horse.

The base structure of sentences like (92,93,95,96) is

97.
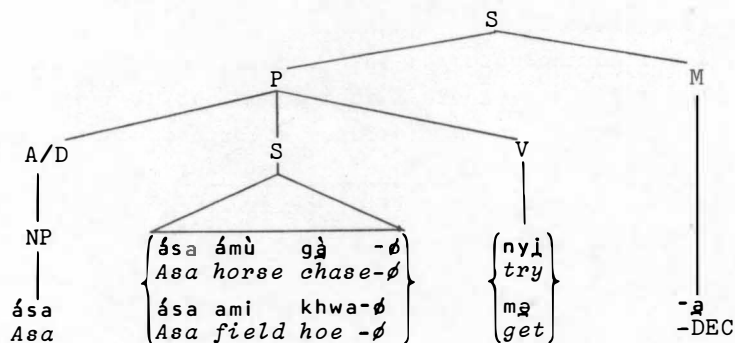
5.44 Causing, Happening, and Becoming

The causative auxiliary verb is tyɛ. It can occur in a variety of proposition types, namely [A,S,V], [A,D,S,V] and [I,S,V]. Note the following:

98. ása nya zànwɛ thùyà su   kạle   tyɛ -ạ
    Asa TOP *child book   study happen cause*-DEC

    Asa instituted children's schooling (lit., *caused it to happen that children study books*)

99. ása nya zànwɛ lá thùyà su   tyɛ -ạ
    Asa TOP *child to book   study cause*-DEC

    Asa made the children study/go to school

100. átú   nya ása thyě kạle   tyɛ -ạ
     fire TOP *Asa flee happen cause*-DEC

     The fire caused Asa to flee

The base forms of these sentences are (101), (102) and (103) respectively:

101.

102.

103.

```
                                    S
                          _____/ _____
                         P                    M
            _____/|_____        |
           I            S             V        |
           |         __/ \__          |        |
           NP       /       \         |        |
           |       /         \        |        |
          átú    ása thyě-∅ kạle -∅   tyg.    -ạ
          fire   Asa flee-∅ happen-∅  cause   -DEC
```
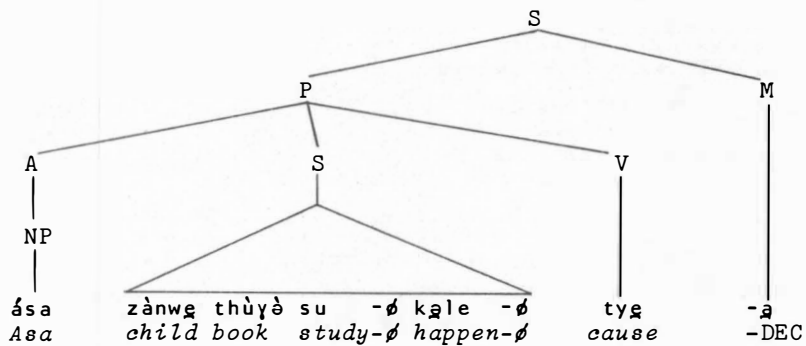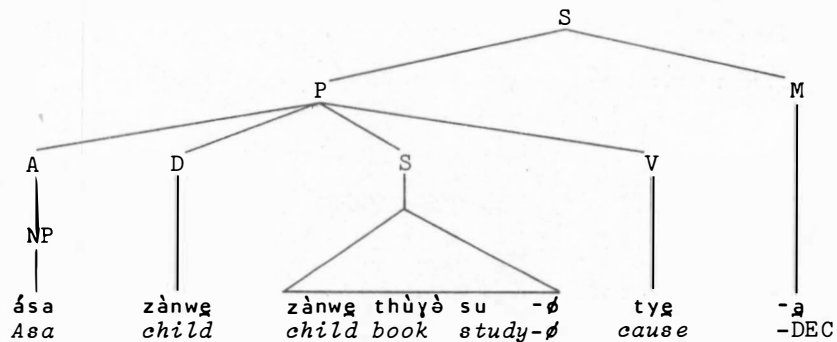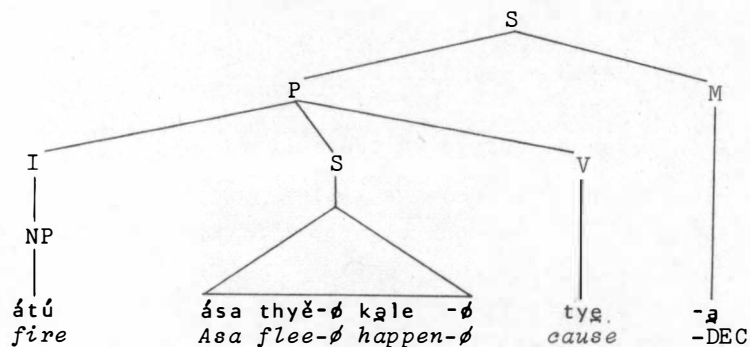
There are no grammatical sentences

  98a. *ása nya zànwg lá̃ thùyà̀ su   kạle   tyg -ạ[10]
      Asa TOP *children to books study happen cause-DEC*

  100a.?*átú nya ása lá̃ thyě tyg -ạ
       fire TOP *Asa to flee cause-DEC*

(Two of my younger informants accepted (100a) but all of my older ones did not.)

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

  104. ása thyě kạle -ạ
       Asa flee happen-DEC

       Asa happened to run away.

The embedded S complements commanded by kạle have unusual character-istics. For one thing they may optionally have the performative marker -a DECLARATIVE. Thus (104) may also have the form

  104a. ása thyě-ạ   kạle -ạ
       Asa TOP -DEC *happen-DEC*

       Asa happened to run away.

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

  105. *ása nya thyě kạle -ạ
       *Asa TOP flee happen-DEC

The main verb of a complement sentence commanded by kạle is always a verb specified as [-Adj].

The inchoative auxiliary verb le *become* also occurs in [S,V] propo-sitions, but the S in this case has a main verb specified as [+Adj], and may be either intransitive such as phwu *white*, xǔ *right, correct* and vwù *big* or transitive such as hə *angry*, dyu *afraid* and tshǔ *make a mistake*. Note the following:

  106. áphwi̧si̧ nya phwu le   -ạ
       pumpkin TOP *white become-DEC*

       The pumpkin is growing white.

107. ása nya alě lǽ hə   le   -ạ
     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-occurrence possibilities of the
various kinds of auxiliary verbs. This is perhaps the most complex
aspect of the deep structure of Lisu sentences. Given the fact that
there are all these various kinds of auxiliary verbs (and there are a
few more types not included here) what types of restrictions govern their
co-occurrence with one another, and what decides the surface order of the
possible strings? For English the question has largely been ignored,
and although I can suggest the type of constraint required for Lisu I
am only partly able to provide a statement of these constraints at
present. Note first the following sentence:

108. ása nya alě khàsa zwu tǽ dụ yầ   ye dzwa nyị kạle
     Asa TOP *Ale corn grasp carry exit descend go help try happens*

     tyẹ -ạ
     cause-DEC

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

Certain of the restrictions on the ordering of the component auxiliary
verbs in (108) can be stated informally. Verbs of MOTION precede the
others. Among the verbs in the MOTION string, tǽ *carry* must occur first,
and ye *go* last, while dụ *exit* and yầ *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) tǽ *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 auxili-
aries.

Another such constraint applies to the verb kạle *happen* (and to le *become*). If such a verb is commanded by another auxiliary, that commanding auxiliary must be tyɛ *cause*.

Since in Lisu sentences the left to right surface order of auxiliaries is the same as the left to right order of auxiliaries in the base, the constraints above allow the following strings of non-motion auxiliaries:

109. ... dzwa kạle   tyɛ   nyị-ạ
      help happen cause try-DEC

      ... *try to cause it to happen that X helps.*

110. ... kạle   tyɛ   dzwa nyị-ạ
      happen cause help try-DEC

      ... *try to help cause to happen ...*

111. ... kạle   tyɛ   nyị dzwa-ạ
      happen cause try help-DEC

      ... *help to try to cause to happen ...*

112. ... tyɛ   nyị dzwa kạle -ạ
      cause try help happen-DEC

      ... *happen that X helped try to cause ...*

which are all perfectly grammatical, and exclude

113. *... kạle   dzwa nyị tyɛ -ạ
      happen help try cause-DEC

114. *... kạle   nyị dzwa tyɛ -ạ
      happen try help cause-DEC

which are ungrammatical.

5.5 MEANS AND PURPOSE

A number of the examples given in section 5.4 as instances of a concatenation of a [-Aux] verb and a [+Aux] verb are ambiguous, as they can be read as [-Aux] + [-Aux] verb concatenations:

58a. ása nya hịpywɛ khwù wa tš̌ dwɨ   ye-ạ
      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.

85a. ása nya alě lɨ̌ áyá   vwù dzà-ạ
      Asa TOP Ale to chicken sell eat-DEC

      Asa sold Ale a chicken (and Asa profited thereby).   OR

      Asa sold Ale a chicken to eat.

95a. ása nya ámù gạ   nyị-ạ
      Asa TOP horse chase try-DEC

      Asa is trying to chase the horse.   OR

      Asa is chasing the horse to see (if he can accomplish something)

Furthermore note the following:

115a. ása nya ámù   dzⱡ la -a̱
       Asa TOP *horse ride come*-DEC

115b. ása nya ámù   la   dzⱡ -a̱
       Asa TOP *horse come ride*-DEC

Both can mean

        Asa came to ride a horse.

    If at this point more traditional grammar were to influence us, the structure of (115) would be:

116.
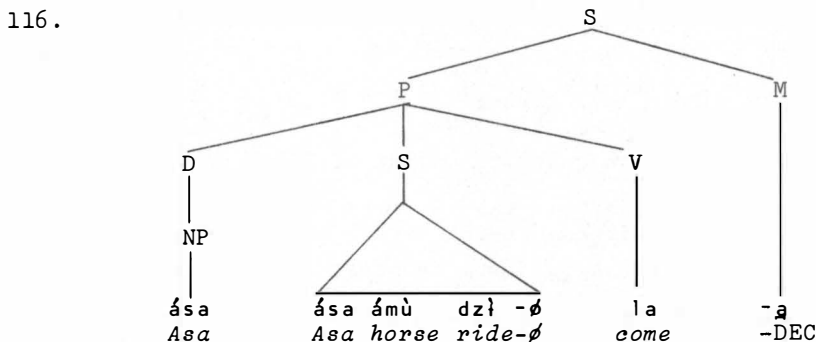
    The difference in meaning between (115a) and the same surface sentence with the reading *Asa rode a horse toward us* would be ascribed to the fact that in (115a) the verb **la** *come* is specified as [-Aux], but in the other as [+Aux], and to the fact that (115a) has a [D,S,V] proposition, while the other sentence with the auxiliary verb would have an [S,V] one. An ad hoc rule could apply to (116) which would allow **dzⱡ** *ride* to be raised and adjoined to the higher P node behind **la** *come*. This solution, however, does not account for the fact that in both sentences in (115) the meaning involves a purpose, and a means of attaining that purpose, the purpose being to ride the horse, and in order to attain this end Asa came.

    In order to reflect this fact in the base I posit two abstract verbs <PURPOSE> and <MEANS> and a base for (115) which contains two conjoined sentences having these abstract verbs as their respective main verbs:

117.
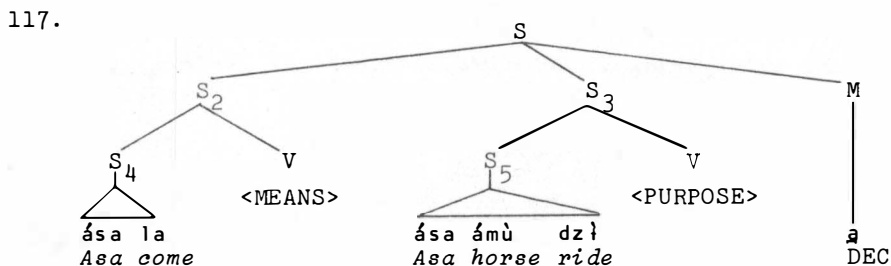
From this base a number of surface structures can be generated without loss of meaning, the various possibilities being related to the presuppositions associated with the sentence.

If S_4 is presupposed (i.e. that Asa has come), then S_3 is lowered into S_4 as a complement, yielding (roughly):

117a.
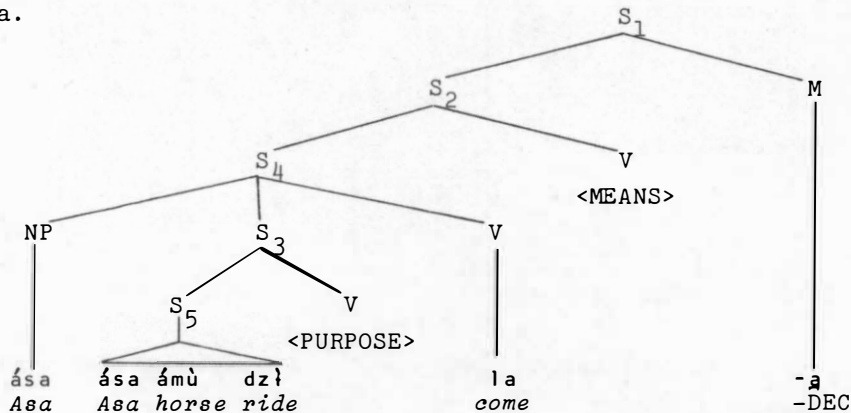
This in turn, after topicalization, Equi-NP and abstract verb deletion, yields:

115a. ása nya ámù dzł la -a̱
     Asa TOP *horse ride come*-DEC

     Asa came to ride a horse.

If S_2 is presupposed (i.e. that Asa's coming is the means to some end) S_2 is lowered into S_3 as a topic yielding:

117b.
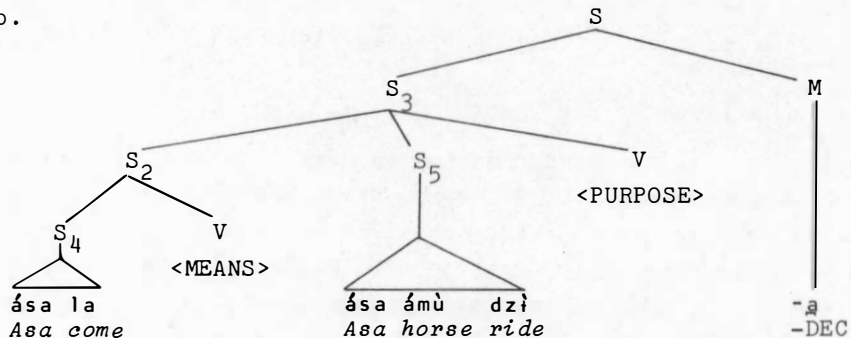
When an S with <MEANS> as its verb is topicalized, the topic marker is hínyi. Thus from (117b) after Equi-NP and abstract verb deletion we get:

115c. ása la hínyi ámù dzł -a̱
     Asa come TOP *horse ride*-DEC

     Asa came to ride a horse.

If there is an absence of any conditioning presupposition then the S_2 node of (117) is lowered into S_5 as a complement, yielding:

117c.
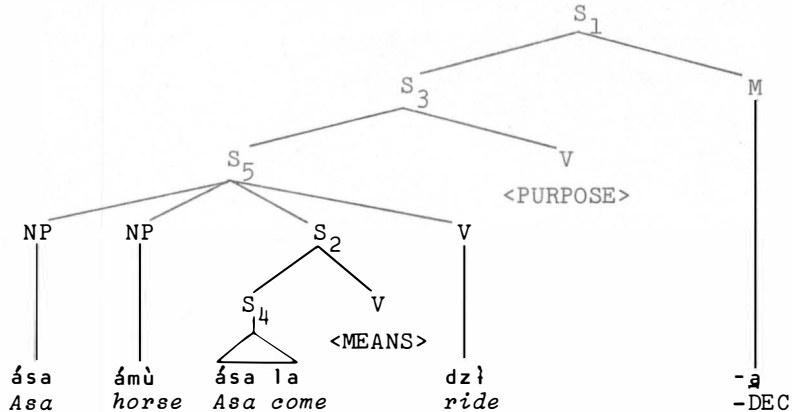
This, after topicalization, Equi-NP-deletion and abstract verb deletion yields:

115b. 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 (117b). What the theoretical reper- cussions are of having such rules I am unable to say, but there is certainly a demonstrable relationship between the alternative surface forms and the presuppositions associated with each sentence.

5.6 ASPECT MARKERS

A number of [+Aux] verbs function as aspect markers, and as a class these occur to the right of all verbs discussed thus far, and are presumably 'higher' in the base trees. These would apparently fall under the heading of the modality component in Fillmore's 'The case for case' schema (1968:23), and in examples throughout this study I have placed these under the M node. It is difficult to see, however, how these differ from other auxiliary verbs which occur in [S,V] propositions, except in the matter of relative height in the base trees. For the remainder of this study I shall treat aspect and other modal categories as predicates (i.e. as deep verbs) following Ross (1967b). Thus, as I have said earlier, while accepting Fillmore's position (ibid.) that 'in the basic structure of sentences ... we find what might be called the "proposition", a tenseless set of relationships involving verbs and

nouns ... separated from what might be called the "modality" constituent', I am maintaining that this is a difference of degree, not of kind. What appear to be involved are predicates which differ only in the degree of abstractness inherent in them. In Lisu, at what point one passes from the one type of predicate to the other is impossible to decide, and even in surface forms the matter is far from being clear-cut. Thus, for instance, in my discussion of the auxiliary verbs of motion, the only reason I included these in the sub-tree dominated by P, rather than M, was that in each case there was also a main verb with the same or similar phonological shape and with similar meaning. However, as auxiliaries these verbs function very much as modals. Some of the verbs I am including here as aspect markers also occur as main verbs. Similarly I included kᾳle *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 tyἄ, and if inanimate it is dἄ.

118.   ása nya gwa   lwé ye tyἄ -ᾳ
       Asa TOP *there roll go* CONT-DEC

       Asa is rolling away over there.

118a. γátshɨpá nya gwa   lwé ye dἄ -ᾳ
       stone   TOP *there roll go* CONT-DEC

       The stone is rolling away over there.

As [-Aux] verbs tyἄ and dἄ mean *to live*[11] and *to be located at* respectively, but as auxiliaries they merely indicate an event or action in process. The absence of the continuative marker in a surface sentence does not necessarily mean that the sentence is not to be understood as having the continuative aspect. The lack of a specific aspect marker merely means that the aspect is unspecific. Thus a sentence like:

119.   ása nya lwé ye-ᾳ
       Asa TOP *roll go*-DEC

can mean a. *Asa will roll away.*

       b. *Asa is rolling away.*

       c. *Asa rolled away.*

       d. *Asa would have rolled away.*

       e. *Asa keeps rolling away.* etc.

Certain adjectival verbs may co-occur with the continuative but others may not.

120.　ása nya na　tyǎ -a̱
　　　Asa TOP *sick* CONT-DEC

　　　Asa continues to be sick.

121.　*ása nya vwù tyǎ -a̱
　　　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 γə which has no corresponding occurrence as a main verb.

122.　ása dza dzà γə　-y̱
　　　Asa *rice eat* COMPL-DEC

　　　Asa has eaten his rice.

In conjoined sentences the γə morpheme indicates that the sentences are to be understood as referring to a sequence of actions or events, rather than to actions or events concurrent with each other.

123.　ása nya dza dzà γə　dy̱　ye-a̱
　　　Asa TOP *rice eat* COMPL *exit go*-DEC

　　　Asa ate his food and (then) went outside

One way of indicating that the conjoined sentences are to be interpreted as referring to concurrent actions or events is to insert the adverb the *thus, in this way* into both sentences:

123a.　ása nya dza the dzà the dy̱　ye-a̱
　　　Asa TOP *rice thus eat thus exit go*-DEC

　　　Asa ate his food as he went outside.

In imperative sentences the γə 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 γə marker the meaning is ambiguous with reference to this particular point.

124.　nwu ámɛ́　　dzà
　　　you quickly eat

　　　Hurry up and eat/Hurry up and start eating.

124a. nwu ámɛ́　　dzà γə
　　　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:

125. *ása ámù   nya na   γə   -ɥ
     Asa horse TOP *sick* COMPL-DEC

125a. ása ámù   nya na   le   γə   -ɥ
      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 làxu *each other, among themselves*:

126. ása ámù   lí   lwè nya khừ làxu -a̱
     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 (126). The sentence does not mean that each of the four horses was biting each of the other three. In the Lisu sentence (and even in the English translation), one horse might have been biting only one other, while another horse might have been biting two other ones, while another might have been biting three others, and so on. Thus the base of (126) cannot be a conjunction of sentences meaning *Horse No.1 bit horses Nos.2,3,4 and Horse No.2 bit horses Nos. 1,3,4... etc.* Rather the base would appear to be something like:

127.
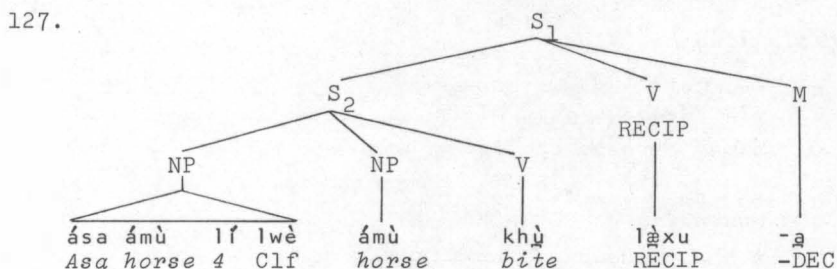
In this representation RECIP would be a predication indicating that only the beings specifically identified in S_2 were affected by the activity identified in S_2. Admittedly this might be a shallow form of some deeper logical base.

Only transitive verbs - including transitive adjectives may be commanded by làxu.

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.

128.

```
                                                    S
                                              ┌─────┴─────┐
                                              S           V
                                         ┌────┴────┐      NEG
                                         S         V       │
                                    ┌────┴────┐    │        │
                                    S         V    │        │
                               ┌────┴───┐     │    │        │
                               S        V     │    │        │
                          ┌────┴───┐    │     │    │        │
                          NP       V    │     │    │        │
                          │        │    │     │    │        │
                         ása      tǒ   yà    ye   tyǎ      mà
                         Asa      run  descend go  CONT     not
```
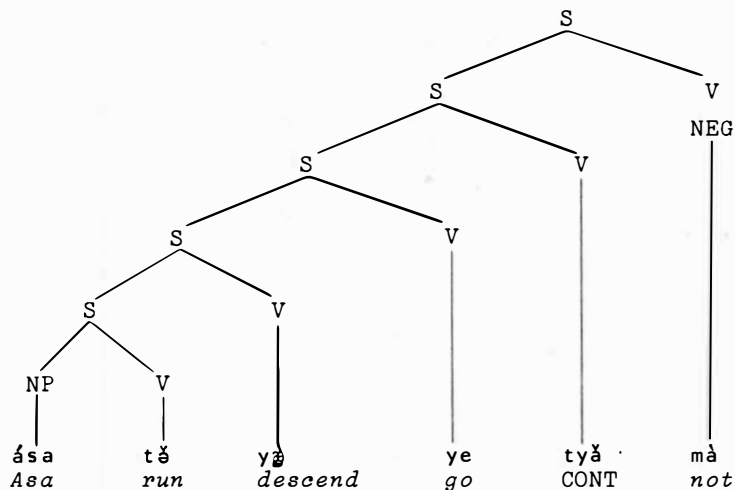
⟹ ása mà tǒ yà   ye tyǎ
    Asa not run descend go CONT

    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.[12] The surface sentence (128) could be continued in any of the following ways:

128a. yí nya dza dzà-a
      he TOP rice eat-DEC

      He is eating his food.

128b. yí nya bywe yà   ye tyǎ -a
      he TOP fly   descend go CONT-DEC

      He is in the process of flying away downhill.

128c. yí nya tǒ dæ   ye tyǎ -a
      he TOP run climb go CONT-DEC

      He is in the process of running away uphill.

128d. yí nya tǒ yà   la tyǎ -a
      he TOP run climb come CONT-DEC

      He is in the process of running this way downhill.

128e. yí nya tǒ yà   ye yə   -y
      he TOP run descend go COMPL-DEC

      He has run away downhill already.

As in English, a morphophonemic rule adds stress to the particular verb representing the predicate being negated in the different readings of a surface string like that of (128).

A further restriction on the NEG movement rule applies if one of the verbs to the left of NEG is one of the class of verbs of communication, thought, etc., which have what are traditionally called 'object comple- ments'. In such a case the NEG is placed immediately in front of this verb.

129.


```
ása                 S                    NEG
 |          ┌───────┼───────┐             |
ása        S        S       V             ↓
 |         ása    ása dye-ạ  bæ           mà
ása        Asa    Asa go -DEC say        not
Asa
```

==> ása dye-ạ   mà bæ
    Asa go -DEC not say

    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.

130. ása nya mà dye bæ
      Asa TOP *not go say*

      Asa did not go to tell (which can mean that *he went but not to*
      tell, that *he did not GO to tell but CAME*, or that the whole
      assertion is wrong).

In order to alter the rule so as to enable it to generate sentences
like (130) a derivational constraint is necessary which nullifies the
above restriction if the complement of bæ *say* or another such verb is the
result of a lowering rule, rather than a complement generated in the
base. (For a base representation of sentences like (130) see 5.5.)

If one of the auxiliary verbs to the left of NEG in a string is
specified as [+Adj], the movement rule stated above becomes optional,
and an alternative rule allows NEG to be moved to the front of the [+Adj]
verb. Thus both of the following are grammatical, and synonymous
(according to one reading of the first of the two)

131. ása nya ami   mà khwa kwú
      Asa TOP *field not hoe able*

      Asa doesn't know how to hoe fields.

131a. ása nya ami   khwa mà kwú
      Asa TOP *field hoe not able*

      Asa doesn't know how to hoe fields.

The actual surface form of the negative depends on the nature of the
higher performative verb. Thus in an imperative sentence the form is
thà *don't*, and in all non-imperatives it is mà *not*.

5.8 PERFORMATIVES

5.81 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 -ɥ. If the performative is [-Tense] the sentence
is to be interpreted as referring to whatever tense is indicated in the
presuppositions associated with the sentence and the surface form will
be -a. If specified as [+Negative] an obligatory deletion rule deletes
the declarative altogether. The declarative is specified as [+Negative]
if the NEGATIVE quantifier occurs at any point in the base tree between
the declarative itself and the first [-Aux] verb to the left. Stated in
this form the specification rule must apply before NEG movement. Note
the following:[13]

132.

```
                              S
                   _____
                  /                        \
                 S                          V
                /\                      DECLARATIVE
               /  \                      [-Tense]
              /    \                       [-Neg]
             /_____\                        |
                                             |
           ása  dye                         -a
           Asa  go                         -DEC
```
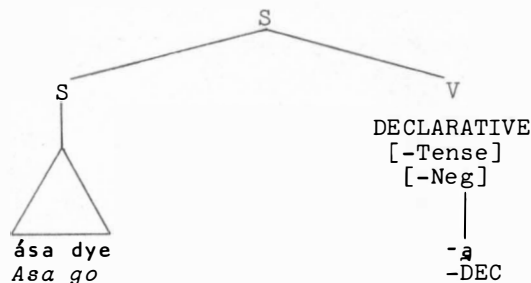
       Asa is going/goes/will go/went.

133.

```
                              S
                   _____
                  /                        \
                 S                          V
                /\                      DECLARATIVE
               /  \                      [+Tense]
              /    \                       [-Neg]
             /_____\                        |
                                             |
           ása  dye                         -ɥ
           Asa  go                         -DEC
```

       Asa has gone/went.

134.

```
                              S
                 _____|_____
                S                             V
        _____|_____             DECLARATIVE
       S                 V              [+Tense]
     __|__              NEG              [+Neg]
    /     \              |                 |
   /_____\             mà               ˉy
  ása dye              not              -DEC
  Asa go               not
```
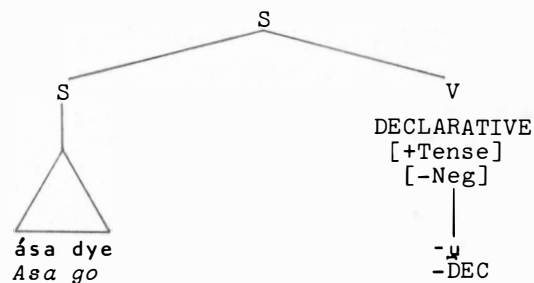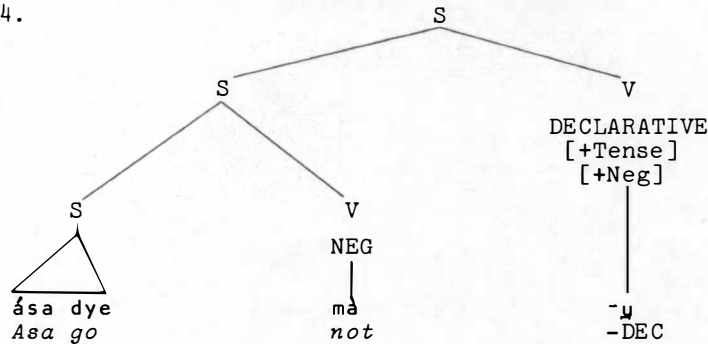
==> ása dye mà ∅ ==> ása mà dye
    Asa go not ∅   *Asa not go*

    Asa didn't go/has not gone.

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

135.   ása nya dye-a̱
     Asa TOP *go* -DEC

     Asa is going.

135a. ása nya dye-â
     Asa TOP *go* -QUEST

     Is Asa going?

136.   ása nya dye-y̱
     Asa TOP *go* -DEC

     Asa has gone.

136a. ása nya dye-û
     Asa TOP *go* -QUEST

     Has Asa gone?

The interrogative is not specified as [±Negative] and appears in the surface form of both positive and negative questions.

When one turns to the so-called WH-questions the situation is far more complex. The interrogative marker mentioned above still appears in the surface form, and the problem concerns not the interrogative performative itself, but the pronouns associated with it. In the first place these pronouns have non-interrogative occurrence which have only slight resemblance to the relative pronouns.

Note the following question and the alternative answers:

137. ása lɛ́ nya àma dὲ -ə̰
     Asa to TOP *WHO hit*-QUEST

     Who hit Asa?

137a. ása lɛ́ nya àma xə dὲ -ə̰
      Asa to TOP *WHO* TOP *hit*-DEC

      Everybody hit Asa.

137b. ása lɛ́ nya àma-ɛ́ mà dὲ
      Asa to TOP *WHO   not hit*

      Nobody hit Asa.[14]

137c. ása lɛ́ nya àma mu àma dὲ -ə̰
      Asa to TOP *WHO see WHO hit*-DEC

      Everyone who saw Asa hit him.

The only apparent base difference between (137) and (137a), at first
sight, is that (137) incorporates the QUEST performative and (137a) the
DEC. Yet while (137b) is the negative form of (137a), sentence (137d)
below is not the negative form of (137).

137d. ása lɛ́ nya àma mà dὲ -ə̰
      Asa to TOP *WHO not hit*-DEC

      Didn't anyone hit Asa? (NOT: *Who didn't hit Asa?*)

At present I am unable to explain this fact, and thus am uncertain
about the proper base form of (137). Of importance in investigating the
problem is the fact that the WH-pronouns occur as main predicates in
interrogative but not in declarative sentences.

138. ása lɛ́ dὲ -ə̰   ma nya àma-ə̰
     Asa to hit-DEC *one* TOP *WHO*-QUEST

     Who is the one who hit Asa?

138a. *ása lɛ́ dὲ -ə̰   ma nya àma-ə̰
      Asa to hit-DEC one TOP *WHO*-DEC

From sentences like (138) the possibility presents itself that
pronouns of this sort are deep predicates of some sort, but predicates
having peculiar properties. Be this as it may, I am still unable to
posit base structures which reflect the true meaning of the sentences,
since all of my attempts thus far predict that (137d) is the negative
form of (137) which it is not. The negative of (137) is (139) in which
àma *WHO* is the predicate:

139. ása lɛ́ mà dὲ ma nya àma-ə̰
     Asa to not hit one TOP *WHO*-QUEST

     Who is the one who did not hit Asa.

There is no positive form of (137d) which incorporates the pronoun
àma. Note, however the following:

140. ása lɛ́ nya swu   dὲ -ə̰
     Asa to TOP *people hit*-QUEST

     Did anyone/someone hit Asa?

141.   ása lǽ nya àma xə dè̜ -ą̀
       Asa to TOP *WHO* TOP *hit*-QUEST

       Did everybody hit Asa?

Since questions like (137) involve presuppositions consisting of everything in the sentence except the interrogative pronoun (or, in Lisu, the interrogative and the pronoun) Lisu questions of this sort always involve the topicalization of all NPs in the sentence except the WH-pronoun. The result of this is that the pronoun always occurs in focus position in the surface structure, immediately before the string of predicates. In questions such pronouns may never be moved out of the proposition, and since every other NP in the proposition is topicalized, no movement transformations ever apply to interrogative pronouns of the WH-type.

Other WH-pronouns, all of which share exactly the same general characteristics as àma are:

ásyɬ *what*   athə̀ *when*   ala *where*

A pronoun having some of the same characteristics, but differing in other ways is ali *which*. This is the only pronoun in the language which can be classified and quantified. Note the following:

142.   ása ásyɬ xwa la -ą̀
       Asa WHAT seek come-QUEST

       What has Asa come looking for?

142a. ása ali syɬ xwa la -ą̀
       Asa WHICH kind seek come-QUEST

       Which kind has Asa come looking for?

142b. ása ali   thɬ syɬ xwa la -ą̀
       Asa WHICH one kind seek come-QUEST

       Which particular kind has Asa come looking for?

5.83 The imperative

The imperative performative has an optional surface realization as -ą̀, but is often marked only by the absence of a declarative or an interrogative marker.

143.   ámé   dye-ą̀
       quickly go -IMP

       Go right now!

143a. ámé   dye
       quickly go

       Go right now!

As mentioned before the negative has a special imperative form thà instead of the usual mà.

The only difference between ordinary imperatives and hortatory type imperatives is a difference of pronoun in the base structure. Both consist of a sentence commanded by a higher performative IMPERATIVE, analogous to the P-marker (132) except that IMPERATIVE is not marked for tense or negation. In the case of the regular imperative, the subject of the sentence commanded by the performative is nwu *you* and this may optionally appear in the surface string. In the case of the hortative, the subject of the lower sentence is àzwù *we, inclusive*, and this too may appear optionally in the surface. A low-level rule alters the surface form of IMPERATIVE from -à̠ to -y̠.

144. nwu ámɛ́   dye-à̠   OR   nwu ámɛ́   dye
     you quickly go -IMP   *you quickly go*

     Go quickly!/Go right now!

144a. àzwù ámɛ́   dye-y̠
      we   quickly go -IMP

      Let's go right away!

When the first person plural pronoun appears in the base proposition, then the appearance of IMP in the surface string is obligatory.

5.84 Modal performatives

In Lisu, sentences may contain a final morpheme which indicates the speaker's attitude to or judgement of what he is saying. In English this information is conveyed in a number of different ways. For instance there are a number of ways of saying *That iron is hot*, and the speaker's intonation will indicate that he is agreeing or disagreeing, complaining, issuing a warning, or some such attitude of his. In other cases so-called sentential adverbs may fulfil the same function, as when a person says something like *Surprisingly, she dribbles too*. At other times these attitudes are expressed more subtly as when a person says *She even dribbles*, in which case part of the intended meaning is that the speaker judges the information to be surprising. In Lisu meaning of this kind is conveyed by sentence-final particles.

These particles seem to be of two kinds, some of which modify a whole sentence, and thus would appear to be very deep abstract verbs which make a predication about the utterance itself rather than about some real-world situation. Note the following:

145. ŋwa áthà   nya lì -a̠
     my machete TOP heavy-DEC

     My machete is heavy.

145a. ŋwa áthà   nya lì -a̠ na
      my machete TOP heavy-DEC SURPRISE

      Surprisingly my machete is heavy (My declaration that my

      machete is heavy will surprise).

145b. ŋwa áthà   nya lì -a̱   naɣà/laɣà
      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.

146.

```
                              S
                          ____|____
                         S         V
                      ___|___       |
                     S       V      |
                    / \      |      |
                   /   \     |      |
              ŋwa áthà  lì   -a̱    na      SURPRISE
              my machete heavy  -DEC   naɣà    OBVIOUS
```
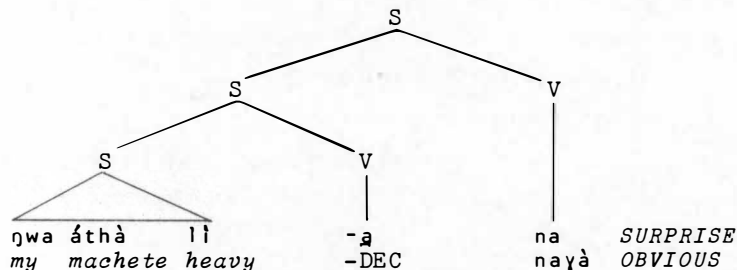
The other finals in this class are **dyu/dù** which indicates that the
utterance is a second-hand report, and **nì** which indicates that the
utterance is an expression of the speaker's concurrent deliberations
(i.e. he is speaking to himself as he deliberates).

The second type of particle involves a semantic modification of the
performative verb. Note the following:

147. ŋwa áthà   nya lì -a̱ lê
      I   machete TOP heavy-DEC WARNING

      (I warn you that) my machete is heavy.

147a. ŋwa áthà   nya lì -a̱ hé
      I   machete TOP heavy-DEC WONDER

      (I wonder whether) my machete is heavy.

147b. ŋwa áthà   nya lì -a̱ xù
      I   machete TOP heavy-DEC COMPLAIN

      (I complain that) my machete is (too) heavy.

The following is a rough base of the above sentences:

148.

```
                          S
                    _____|_____
                   S             V
                  / \         ___|___
                 /   \       V       V
                /     \      |       |
           ŋwa áthà  lì    -a̱    {lê WARNING }
           my machete heavy  -DEC  {hé WONDER  }
                                   {xù COMPLAIN}
```
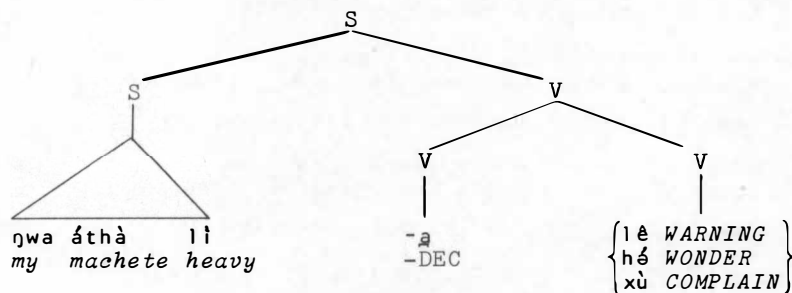
Thus in these sentences the performative rather than being *I declare that...* would be something like *I declare warningly that..., I declare in a wondering way that..., I declare complainingly that...* respectively.

A fuller list of these modifiers follows:

-a̱ lù	*I emphasize that...*	
-a̱ là	*I confirm that...*	
-a̱ xù	*I complain that...*	
-a̱ hɔ́	*I wonder if...*	
-a̱ lê	*I warn that...*	
-a̱ mâ	*I plead that...*	
-a̱ phɔ́	*I expect that...*	

All of the above occur in DECLARATIVE sentences, while phɔ́ may also occur in QUESTION sentences, and lù and mâ may also occur in IMPERATIVE sentences.

149. ŋwa áthà̱   nya lì̱ -a̱   phɔ́
      I   machete TOP heavy-DEC EXPECT

      My machete is probably heavy.

150. ŋwa áthà̱   nya lì̱ -a̱   phɔ́ -â̱
      I   machete TOP heavy-DEC EXPECT-QUEST

      My machete is probably heavy, isn't it?

151. thà̱   yᶒ 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 conjoined string of NPs, may be topicalized, raised out of the domination of its dominating S in the base tree, and adjoined to the front of the sentence, thus crossing over NPs which were higher in the base. Thus the following are all grammatical:

152. ása nya alɛ̌ là̱ phwu thy̱ì yà̱ bwu -a̱
      Asa TOP Ale to money lend give tired-DEC

      Asa is tired of lending money to Ale.

152a. alɛ̌ là̱ nya ása nya phwu thy̱ì yà̱ bwu -a̱
      Ale to TOP Asa TOP money lend give tired-DEC

      Asa is tired of lending money to Ale.

152b. phwu nya ása nya alɛ̌ là̱ thy̱ì yà̱ bwu -a̱
      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):

153.

```
                                                    S
                                          _____
                                         S                        V
                             _____         |
                           NP                           S         |
                            |              _____
                           NP   NP        S                    V      |    |
                            |     /\    _____     |      |    |
                          ása   ása  alě lǽ  ása alě lǽ phwu thyì   yà   bwu  -a̧
                          Asa   Asa  Ale to  Asa Ale to money lend give tired -DEC
```

Similarly the following are all grammatical too:

154. ása nya alě ami   khwa-a̧   bæ -a̧
      Asa TOP *Ale field hoe* -DEC *say*-DEC

      Asa says that Ale is hoeing fields.

154a. ami   nya ása nya alě khwa-a̧   bæ -a̧
      field TOP *Asa* TOP *Ale hoe* -DEC *say*-DEC

      Asa says that Ale is hoeing fields.

154b. alě nya ása nya ami   khwa-a̧   bæ -a̧
      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 pre-supposed, the restriction on such complements does not allow them to be topicalized, unless the whole complement is first nominalized. In such cases the nominalized complement S is raised in toto, but a copy of the verb or verb string remains in the base proposition. Note the following:

155. ása ami   khwa ma nya khwa kwú -a̧
      Asa field hoe NOM TOP *hoe able*-DEC

      Referring to Asa's hoeing of fields, he knows how to do so.

156. ása thyě du̧ ye ma nya thyě du̧ ye yə -u̧
      Asa flee exit go NOM TOP *flee exit go* COMP-DEC

      Referring to Asa's fleeing away, he has already done so.

N O T E S

1. The rejected rule appears at present to involve no particular
problems for Lisu.

2. The notion of *fact* is expressed verbally in Lisu by the verb ŋa/ŋu
which means *It is a fact that... .*

3. This rather poor gloss is given because the negative of this verb
means something like *not obliged to*, while the positive, instead of being
obliged to means *may as well*:

    nwu dye thyɨ-a̠
    you go   -DEC

    You may as well go

    nwu dye mà thyɨ
    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 -a̠
    Asa TOP *lazy*-DEC

    Asa is lazy

5. The English gloss does not adequately reflect the fact that it is
some property of the rice that it is being discussed - it is too old,
improperly cooked, etc.

6. This is a contradiction of Roop's claim (1970:50) that such sentences
do not occur. The following is perfectly grammatical and in no way
abnormal:

    ánà xwà nya ŋwa dzà mi-a̠ /ŋwa zàmə nya dzà mà mi
    dog meat TOP *I   eat tasty my wife* TOP *eat not tasty*

    I find dog meat tasty to eat, but my wife doesn't.

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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 **gə̀**, but in Thailand the [+Aux] version changes to **γə̀**.

9. This sentence could also mean *Asa caught the horse*, but it would then have a different deep structure, involving conjoined [-Aux] verbs.

10. A sentence with this surface form does occur, meaning something like *Asa punished the children by making them study books*, or more literally *Asa made a study-the-books happen to the children.* In this sentence, however, k̯ale *happen* is not a [+Aux] but a [-Aux] verb.

11. An analogous situation occurs in many other languages in the area (e.g. Thai, Lahu, Akha, Karen) where the main verb meaning *to live* also occurs as an auxiliary indicating the continuative aspect.

12. In English verbs like *believe* behave unusually with negatives, so that *Peter doesn't believe that Tom is going* is ambiguous, meaning that Tom is going, but Peter doesn't believe it, or that Tom is not going, and Peter believes this fact (see George Lakoff (1970) for a discussion of this). In Lisu, however, all verbs of communication have the same types of distribution and co-occurrence restrictions and function in the same way with regard to negation.

13. Since the Agent of any performative is the first person, the A node is redundant, and is thus not incorporated into the derivational trees in this section.

14. The form **àma-é** is the required surface form of **àma** when a negative co-occurs.

CONCLUSION

I have shown that a base component which presupposes a left-to-right order of constituents cannot correctly represent one important generalization about Lisu, namely that all NPs may occur as surface 'subjects' and all are equally free with respect to phrase order. I have further shown that any adequate grammar of Lisu must include in its base a set of presuppositions and a focus. The rules which assign left-to-right order are sensitive to the presuppositions and focus associated with the base representations, and these rules make redundant any prior assignment of order. The logical relations which hold between the components of the sentence are not related to their relative order, but to logical notions associated with those components; these notions are the case labels. Verbs are sub-classified according to the types of propositions in which they occur, such classification being accomplished by case frames which specify the notional cases with which each verb may co-occur.

The rules which derive the various kinds of surface noun phrase are highly generalized, and indicate that in the base all noun phrases originate as relative clauses which contain either of two basic types of predicate. One type is characterized by a specification which classifies it as a verb. To relatives containing this type of predicate no feature-copying rules apply before relativization, and the resulting surface structure consists of a head noun and a surface relative clause, or a noun and adjective construction. The other type of predicate is classified as a demonstrative, a classifier, a quantifier or a nominal. To these predicates the feature-copying rule does apply and the relativization rules then generate surface forms in which demonstratives and quantifiers are PRO-articles, and classifiers and some nominals are PRO-nouns, while others are surface nouns.

In an attempt to maintain the simplest possible base component in constructing a grammar, one might expect that one result of this a priori concern with a simple base would be the complication of the transformational component. In Lisu, as the preceding study shows, this is not the case. In fact, the more abstract the base becomes, and simpler in terms of the number of rules and the size of the alphabet required, the fewer the transformations needed to generate surface structures from this base. Where complication is evident is in the configurations of the P-markers, with sentences embedded in sentences which are themselves embedded in other sentences to a marked degree. This configurational complexity is not in itself necessarily a disadvantage, however, since, beside allowing the T-rules to be stated in

a highly generalized way, these complex trees can also be expected to simplify the rules of semantic interpretation, since so much semantic information is already represented in the P-markers.

The rules posited in this study are, to recapitulate:

Base Rules

P1.　S → P (M) Presupposition Focus [where P and M represent non-modal and modal propositions respectively].

P2.　P → Case-set, V

P3.　Case → $\begin{Bmatrix} NP\ (K) \\ S \end{Bmatrix}$

P4.　NP → $\begin{Bmatrix} NP\ S \\ CS \end{Bmatrix}$

Transformational Rules

　　Topicalization
　　Focus
　　Conjunct-S-lowering
　　Equi-NP-deletion
　　Relativization - Feature-copying
　　　　　　　　　- V-deletion
　　　　　　　　　- PRO-nominalization
　　　　　　　　　- NP-raising
　　　　　　　　　- S-lowering
　　　　　　　　　- Segmentation
　　　　　　　　　- PRO-noun movement
　　　　　　　　　- Relative clause reduction
　　　　　　　　　- Switching
　　NEG-transportation
　　Tree-pruning (including empty and abstract V-deletion)

Thus a 'logical' base representation with a set of generalized constraints which mainly concern matters of 'command', together with the above small set of T-rules, generates all of the major Lisu surface structures. The reason why the set of T-rules is so small is that complementation requires no T-rules, and that aspect and performative markers occur in surface structures, representing almost on a one-to-one basis the abstract modal predicates. Thus the surface structures of Lisu sentences are not too far removed from the base representations, and it could be said that Lisu has 'logical' surface as well as base structure. Any theory of universal grammar will need to take account of

the fact that languages like Lisu do occur, and thus will presumably
need to be a theory incorporating a logical base.

When one considers the vast amount of literature which has appeared
in the last decade, concerned with constructing adequate grammars for
various aspects of the English language, it goes without saying that
there are a great number of areas to be explored in Lisu syntax. In
particular an additional number of constraints governing transformations
will be required as counter-examples not yet evident come to light.

APPENDIX A

A SAMPLE TEXT: The orphan and the buffalo

1. nɔ́   anyí   thì ma dyu-a̠   / 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   án̠à   amyâ ma dyu -a̠ / án̠à   -bṳlu-à̠
   two siblings buffalo many ones have-DEC / buffalo-ant -DIM
   The two of them had many buffalo.

3. thì ma dyu -a̠ / án̠à   -bṳlu-à̠ thì ma dyu -a̠ bæ
   one one have-DEC / buffalo-ant -DIM one one have-DEC say
   They had a miniature buffalo. And so

4. -a̠ nya yí nyi̠zà lú   tyɛ -a̠ thì nyi thì nyi 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   tyɛ ŋu bæ -a̠ nya, sa̠ khṳ̀ lú   yə -ṳ
   watch cause fact say-DEC TOP, three year watch COMP-DEC
   And then, after looking after it for three years,

6. ŋu bæ -a̠ nya, án̠à   -bṳlu-à̠ gu ma zàthyì-à̠̠ lǽ
   fact say-DEC TOP, buffalo-ant -DIM that one orphan-DIM to
   that miniature buffalo spoke to the orphan boy.

7. pùxwá thywɛ̠̀ yə̀ -a̠ / pùxwá thywɛ̠̀ yə̀ -a̠ ŋu bæ -a̠
   speech speak give-DEC / speech speak give-DEC fact say-DEC
   And said,

8. nya, 'hǎ mə̀khə̀ bæ -a̠ nya nwu kúku nwu málà̠,
   TOP, 'soon evening say-DEC TOP you E.Bro. you E.Bro.Wi.
   'This evening your elder brother and his wife

9. nwu lǽ hi bwe   yə̀ -a̠ ' / án̠à   -bṳlu-à̠ nya
   you to house apportion give-DEC' / buffalo-ant -DIM TOP
   will give you your share of the household goods'. So said

10. the pùxwá thywɛ̠̀ yə̀ -ṳ / 'zàthyìú   nwu ásyì-ɛ́ thà
    so speech speak give-DEC / 'orphan-VOC you what   don't
    the miniature buffalo. 'Orphan, don't you take anything.

11. nwe / dza phwu sa̠ pà   tshàbu sa̠ pà
    want / rice white three parcels salt three parcels
    Three parcels of milled rice, and three parcels of salt -

12. the leà̠ nwe ' / án̠à   -bṳlu-à̠ nya the thywɛ̠̀ yə̀ yə
    this only want' / buffalo-ant -DIM TOP this speak give COMP
    take only this.' The buffalo said this to him.

13. -ṳ / atsítshɨ yi̠dye yə ŋu bæ -a̠ nya yí kúku
    -DEC / actually return COMP FACT say-DEC TOP he E.Bro.
    And when in fact they did return home, his elder brother

14. yí mɛ́là   yí lɛ́ hi   bwe   yɜ̀ -ɰ / bwe   yɜ̀
    he E.Bro.Wi. he to house apportion give-DEC / apportion give

    and his wife gave him his share of the household goods.

15. yɜ -ɰ   ŋu   bæ -ə   nya yí xə ɔ́ŋɜ̀   -bɯ̀lu-ɜ̀   ŋù   zwu -ə
    COMP-DEC fact say-DEC TOP he ENT buffalo-ant -DIM words take-DEC

    After they had given him his share, he took the buffalo's

16. hínyi yí ŋù   nanɜ̌ -ə   hínyi dza -phwu sə   pà
    CAUSE he words listen-DEC CAUSE rice-white three parcels

    advice, obeyed and thus took only three parcels of milled

17. tshàbu sə   pà   the leɜ̀ nwe -ə / the leɜ̀ nwe -ə
    salt   three parcels this only want-DEC / this only want-DEC

    rice and three of salt.

18. bæ -ə   bæ -ə   nya yíwà nyì zɰ   bæ -ə   nya hi   syɜ̌ -ə /
    say-DEC say-DEC TOP they two people say-DEC TOP house make-DEC /

    Later they both built a house.

19. lɯ̌khwa hi   syɜ̌ -ə / syɜ̌ yə   ŋu   bæ -ə   nya, syɜ̌
    lavender house make-DEC / make COMP fact say-DEC TOP, make

    They built a house out of lavender bush. When they had

20. dɰ   le   -ə   ŋu   bæ -ə   nya, ɔ́ŋɜ̀   -bɯ̀lu-ɜ̀   nya
    appear become-DEC fact say-DEC TOP, buffalo-ant -DIM TOP

    finished building, and the house was complete, the miniature

21. yí lɛ́ bæ   yɜ̀ -ə / 'dzwɔ́ dzwo   yí kɔ́nyɛ́ gɜ̀   ye /
    he to say give-DEC / 'there there he after follow go /

    buffalo told him 'Go down there and follow them.

22. zɜ̀thyɬ-û   nwu thɬ nyi thɬ nyi ŋwa the kɛ́   dzɬ -ə   ma
    orphan-VOC you one day one day me this amount ride-DEC NOM

    Orphan, about your riding me this much day after day,

23. ɔ́syɬ wɯ́nyi dzɬ -ɜ̀ / nwu zàmə nwe -ɜ̀ / nwu zàmə
    what CAUSE ride-QUEST / you wife want-QUEST / you wife

    why do you do it? Do you want a wife?

24. nwe -ə , ŋwa bæ   yɜ̀ -ɜ̀ ' / 'nwe -ə / haməsà ali
    want-DEC, me say give-IMP' / 'want-DEC / now   which

    If you want a wife, tell me.' 'I do. But at the moment

25. yɛ-ɜ̀ / ŋwa nya ɔ́syɬ-ɛ́ mà dyu ' / zɜ̀thyɬ-ɜ̀   nya the
    do-QUEST / I   TOP what not have' / orphan-DIM TOP this

    what can I do? I have nothing'. The orphan

26. bæ -ə / ɔ́the ŋu   bæ -ə   nya 'gwɛ́ lwùbwɛ yí khɜ̀ -ə
    say-DEC / this fact say-DEC TOP 'there pool WH edge-to

    said this. This being so, 'Let us both go over there to

27. dye-ɰ   àzwù nyì zɰ   / dye yə   ŋu   bæ -ə   nya wusa
    go -IMP we   two person / go COMP fact say-DEC TOP Wusa

    the edge of the pool.' After they had done this, the

28. ámì   xə ạdyạ kǎnyá la -ạ lwùbwɛ wa / kǎnyá la
    daughter ENT water play come-DEC pool   at / pool come

    daughters of Wusa came to play in the water at the pool.

29. -ạ bæ -ạ 'zàthyɬ-û nwu ali thî ma nwe -â   ' /
    -DEC say-DEC 'orphan-VOC you which one one want-QUEST' /

    So, 'Orphan, which one do you want?'

30. 'ŋwe bəthyɬ nyîthyↄ thi ma nwe -ạ ' / 'zàthyɬ-û nwe
    'there coat   green   one one want-DEC' / 'orphan-VOC want

    'There, the one with a green coat'. 'Orphan, if you want

31. -ạ bæ -ạ nya gwa yî bəthyɬ ámɛ́   dye khwù sạtyↄ'/
    -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. áŋà   -bùlu-à the bæ yè -ạ bæ -ạ nya, zàthyɬ-à
    buffalo-ant -DIM this say give-DEC say-DEC TOP, orphan-DIM

    The miniature buffalo said this, and so the orphan boy

33. xə yî bəthyɬ dye khwù sạtyↄ-ạ / khwù sạtyↄ-ạ ŋu
    ENT he coat   go steal hide -DEC / steal hide -DEC fact

    went and stole her coat to hide it. And then

34. bæ -ạ nya, swu   nya yↄdye yə gwu-ụ yî thywèphæ̀ thà /
    say-DEC TOP, people TOP return COMP all-DEC he friends   sort /

    the people all went home, the friends that is,

35. yî nya tyǎ-ạ / 'zàthyɬ-û nwu sạtyↄ-ạ nya átî   lî
    he TOP be -DEC / 'orphan-VOC you hide-DEC TOP little return

    but she stayed. 'Orphan, if you have hidden it, please

36. yè -à ' / ŋwa nya mà sạtyↄ' / 'nwu sạtyↄ-ạ ŋu
    give-IMP' / 'I   TOP not hide' / 'you hide -DEC fact

    give it back.' 'I didn't hide it.' 'I expect you really did.

37. phá   / nwu sạtyↄ-ạ nya átî   lî   yè mà ' /
    EXPECT / you hide -DEC TOP little return give PLEAD' /

    If you hid it please give it back, I beg you.'

38. 'ɑ́ ŋwa nya mà lî   yè / sạtyↄ-ạ ŋwa sạtyↄ-ạ ŋu /
    'ah I   TOP not return give / hide -DEC I   hide -DEC fact /

    'Oh, no, I won't give it back. I did hide it.

39. nwu ŋwa nwe -ạ nya ŋwa nwu lǽ lî   yè -ạ ' / 'zàthyɬ
    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 -ạ ŋu ' / 'ɑ́ nwe -ạ nya sạ   khừ pɛ
    -VOC want-DEC fact' / 'ah want-DEC TOP three years reach

    I will love you.' 'O.K., if you will love me, in three years

41. ye-ạ nwu lǽ lî   yè -ạ ' / áthe ŋu bæ -ạ 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 ámì   xə zàthyì-à   lǽ fwudzà-ạ   ŋu /
     Wusa daughter ENT *orphan*-DIM *to marry* -DEC *fact* /

     Wusa's daughter married the orphan boy.

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The following abbreviations are employed:

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CLS-RM5	Papers from the Fifth Regional Meeting of the Chicago Linguistic Society
FoL	Foundations of Language
GK	Gengo Kenkyuu
GUM	Georgetown University Monograph Series on Languages and Linguistics
HCLab	Harvard Computational Laboratory Report to the National Science Foundation on Mathematical Linguistics and Automatic Translation
IJAL	International Journal of American Linguistics
JAOS	The Journal of the Americal Oriental Society
JBRS	The Journal of the Burma Research Society
JoL	The Journal of Linguistics
KNU	Kotoba no uchū
LI	Linguistic Inquiry
Lg	Language
MASB	Memoirs of the Asiatic Society of Bengal
OPWS	Occasional Papers of the Wolfenden Society on Tibeto-Burman Linguistics
PIL	Papers in Linguistics
POLA	Project on Linguistic Analysis Report, Ohio State University
PSEAL-2	Pacific Linguistics, Series A - Occasional Papers Number 29: Papers in Southeast Asian Linguistics, Number 2.
TAK	Toonan Adia Kenkyu [Southeast Asian Studies]
WPL	Working Papers in Linguistics #4, Computer and Information Science Research Centre, Ohio State University, Report No. 70-26.

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