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OUTLINE OF SRE STRUCTURE

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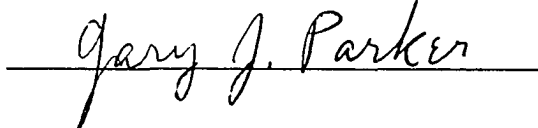
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We certify that we have read this dissertation and that in our opinion it is satisfactory in scope and quality as a dissertation for the degree of Doctor of Philosophy in Linguistics.

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ABSTRACT

Sre, also known as Koho, is a Mon Khmer language of the Austroasiatic stock spoken by a group of Montagnards inhabiting the South Vietnamese city of Di Linh and surrounding area. Thomas, on the basis of lexico-statistics, divides the Mon Khmer languages of South Vietnam into a northern group, Katuic, and a southern group, Bahnaric; the Bahnaric group is further subdivided into Bahnaran (north Bahnaric) and Stiengan (south Bahnaric); and Sre (Koho) is placed in this latter group.

Sre exhibits many of the areal features common to the languages of the Indo-Chinese peninsula. Phonologically, it utilizes lexical tone (although not extensively); has pre-glottalized (imploded) consonants; and, like Khmer, the vowel system has two registers. Lexically, it is mostly monosyllabic. Syntactically, Sre is analytic, affixation having died out almost completely as an active process; it uses the numeral-classifier-noun device for enumerating nouns - the most common and geographically widespread enumerative device in the area; and, like Vietnamese, its noun phrases are characterized by having restrictive complements (numerals, specifiers) preceding the head noun and descriptive complements of various kinds (nouns, adjectives, sentences, determiners) following it.

This study has two principal goals: (1) to describe the basic phonological and syntactic facts of the language; and

(2) to apply a recent version of transformational-generative grammar which recognizes the importance of case relations and which incorporates mechanisms for handling them lexically. In addition an attempt is made - in one short, tangential chapter - to describe and interpret some of the archaic morphological devices of the language.

It has been found that Sre has eleven case relations, expressed through nine surface manifestations, called case forms or case realizations. These case relations have syntactic consequences. In particular, they make it possible to subcategorize verbs in an economical and natural way through the use of case frames. A case frame is a device for stipulating which actants can occur with which verbs (an actant is a noun phrase marked for a particular case relation). They also make possible a keener understanding of functions like 'subject', which in Sre is found to constitute a neutralization of four different case relations (similar to Fillmore's findings for English).

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CHAPTER I

Introduction

1.0 General Information on Sre

1.1 Geographic Setting

Sre is a Mountain Mon Khmer language spoken by a group of Montagnards inhabiting the South Vietnamese city of Di Linh and surrounding area. Di Linh, located in an upland plateau area forty-five miles inland from the sea, some forty miles southwest of Dalat and one hundred ten miles northeast of Saigon, is the capital of the Di Linh District in the Province of Lam Dong.

The Sre are sometimes called Kơhc¹ (pronounced [kə'hɔ]). Usually, though, the term Kơho is used when referring to the entire language (which has many dialects), while the term Sre is reserved for this particular dialect of Kơho. One reason, perhaps, that the two terms are sometimes used interchangeably is that the Sre are considered the most advanced of the Kơho people, both commercially and agriculturally. (Unlike most of the other Kơho people, who have traditionally lived in sparsely settled mountain areas and gained their livelihood from hunting, fishing, and slash-and-burn agriculture, the Sre practice the more technologically advanced wet rice farming; in fact, the word Sre means '(wet) rice field'.)

1.2 Principal Dialects

The principal dialects of Kohn² (which are all mutually intelligible), together with estimated number of speakers and general geographic locations, are as follows:

| <u>Name</u> | <u>Estimated Population</u> | <u>General Location</u> |
|---------------|-----------------------------|--|
| Sre ['srɛ] | 23,000 | Di Linh area and eastward |
| Ma ['mà:ʔ] | 40,000 | From Quang Duc to south of Bao Loc |
| Cil ['cil] | 14,000 | Countryside around Dalat |
| Lac ['là:c] | 3,000 | Dalat |
| Nop ['nò:p] | 6,000 | Area southeast of Di Linh and on towards sea |
| Riong ['rjɔŋ] | 14,000 | Area west of Lieng Khong |

For the past few years, the Vietnamese government has been pursuing the policy of removing Montagnards from their mountain habitats and resettling them in fortified hamlets along major transportation routes. The purpose of this policy is both to deny to the Viet Cong a ready source of labor and military recruits and to facilitate defense. One result of this policy is increased communication and contact among groups once fairly widely dispersed geographically. It may be that this forced intermingling of different dialect groups will eventually produce linguistic side effects, though what form they will take can not be guessed at the present time.

1.3 Linguistic Affiliation

Pinnow (1959:3), in a study which is primarily a comparative treatment of Kharia (a language of the Munda family in India), but which also attempts to fit Kharia broadly into the Austroasiatic stock, places Ko'ho in what he calls the Chema sub-group of Mon Khmer, along with Ma, Sop, and Chrau. Thomas (1966:197) proposes a slightly different classification. Since careful phonological studies of most of these languages do not exist at the present time, thus precluding the establishment of linguistic relationships on genetic grounds, his classification is based upon lexico-statistics. He divides the Mon Khmer languages of southern Vietnam into a northern group, which he calls Katuic, and a southern group, which he calls Bahnaric. The Bahnaric group is further divided into Bahnaran (north Bahnaric) and Stiengan (south Bahnaric). Ko'ho is placed in the Stiengan group, along with Stieng, Central Mnong, Biat, Mnong Ro'lo'm, Mnong Gar, Mnong Khwanh, and Chrau. As Thomas himself (1966:194) makes clear, though, this classification of the Mon Khmer languages of South Vietnam is provisional since language relationships "can only be established with certainty by a study of phoneme shifts and mergers, as their imprint is indelible, while lexical and syntactic features are more easily erased. ...So this study is perforce a lexico-statistical study, hence only tentative..." Thomas believes, however, that his suggested classification will not turn out

to be too far wrong, that "the main outlines [of Thomas' classification] will stand when phonological comparisons can be made."

1.4 Previous Work on Sre

The first important work dealing with Sre was a Sre-French dictionary, which was compiled by Jacques Dournes (a Catholic priest who worked among the Sre in the Di Linh area) and published in 1950. This was followed, in 1951, by the Lexique Polyglotte, compiled by Dournes and Gilbert Bochet. This was a dictionary which presented words synoptically in four languages, K^oho (Sre), Vietnamese, French, and R^oglai (an Austronesian language).

In 1954, Smalley's article "Sre Phonemes and Syllables" was published. This article represents the first serious linguistic study of any portion of the Sre language.

In 1963 Helen Evans and Peggy Bowen, of the Christian and Missionary Alliance in Dalat, published their K^oho Language Course. In two volumes, this course introduces the beginner to the basic patterns of the language through the technique of dialogs and pattern drills. Comments on Sre grammar and phonology are interspersed throughout the text but no attempt is made to present an integrated, systematic analysis of the syntax.

In 1967 the Summer Institute of Linguistics (SIL), in cooperation with the Ministry of Education of the government of South Vietnam and assisted financially by the U. S.

Agency for International Development, inaugurated the Highlander Education Project, a project aimed at raising the educational level of the various Montagnard groups and thus facilitating their full participation in the socio-economic life of the country. The problem has been that the Montagnards, comprising some 1,000,000 of South Vietnam's 15,000,000 people, are fragmented into small groups, speak mutually unintelligible languages, and are geographically scattered throughout the country. Moreover, only a very few can speak Vietnamese. Partly this is because the French Colonial Government discouraged them from doing so; and partly it is because Montagnard children experience great difficulty in suddenly shifting, without preparation, into a milieu where both the cultural norms and language of instruction are foreign to them. The drop-out rate of Montagnard children in Vietnamese schools has been exceedingly high, with only the most gifted and persistent able to get a primary school education. This combination of educational and linguistic factors has not only blocked most Montagnard children from acquiring even primary school skills, it has effectively excluded them from meaningful participation in Vietnamese culture.

In attempting to remedy this situation, the Highlander Education Project is concentrating, primarily, on getting Montagnard children literate in their own languages. This is done, in a special preparatory grade, through primers and

other materials written in the mother tongue with phonemic orthographies. In this same preparatory grade, Vietnamese is taught as a foreign language. In the first and second grades the texts are diglot, with the mother tongue and Vietnamese on the same page, but Vietnamese-as-a-foreign-language is continued. After the second grade, all texts and instruction are in Vietnamese, except that a tribe's culture and folklore will continue to be taught from texts written in the mother tongue. Early indications are that this program is succeeding well.

The first (and so far only) text to appear in Sre is Añ Botê Sèn Sră, 'I Study Reading', a text for Sre children in the preparatory grade. Other texts are in preparation on various primary school subjects as well as tribal culture and folklore and should be forthcoming in the near future.

Finally, there has also been published a Sre version of the New Testament, as translated by missionaries of the Christian and Missionary Alliance.

Aside from the pedagogical work of Evans and Bowen (1963) and some brief observations by Dournes (1950) in the introduction to his dictionary, nothing has yet been published, to my knowledge, which deals specifically with Sre syntax.

1.5 Purposes of This Study

In this study, no attempt will be made to deal with historical-comparative questions; nor will any attempt be

made to present a major portion of the vocabulary. The goals are, rather, the following:

(1) to present the basic phonological facts of the language and to establish from this the orthography to be used throughout the balance of the study;

(2) to record (for the possible use of individuals interested in the historical development of this and other Mon Khmer languages) some of the archaic morphological devices no longer operative in the language;

(3) to describe the basic processes of Sre syntax; and

(4) to test, for its applicability to a hitherto undescribed non-Indo-European language, a recent version of transformational-generative grammar which incorporates mechanisms for handling case relations lexically (see Chapter 4 for full discussion of theoretical background).

1.6 Field Work

This study is based upon the dialect of my principal informant, Mr. Toplui Broi, who was born in Di Linh but is currently an undergraduate student at the University of Hawaii. Supplementary work was carried on in the field, at Di Linh, from January to April of 1970.

NOTES TO CHAPTER I

1. The origin of the term K^oho is obscure. In the introduction to Lexique Polyglotte, Bochet (1953:ix-xi) states that the Chams, during their ascendancy, distinguished two categories of Montagnards, the K^oho and the R^oglai. R^oglai referred to those Montagnards whose culture had been quite profoundly influenced by Cham civilization, while K^oho designated those who, with varying degrees of success, had resisted Cham influence. After the decline of the Chams, the two terms lost their original meanings, but survive today in a different sense: R^oglai now refers to a specific Austronesian-speaking people, while K^oho refers to a particular Mon Khmer-speaking people.
2. This information on K^oho dialects was kindly furnished the writer by Reverend and Mrs. George Irwin, of the Christian and Missionary Alliance. The Irwins, both fluent in the language, have worked among the Sre for many years.

CHAPTER II

Phonology

2.0 General

In Di Linh, the commercial, geographical and population center of Sre speakers in South Vietnam, there are at least two dialects which have social and economic importance: we shall call them dialects A and B. They are spoken by groups residing in areas only some 200 yards distant from each other. The two dialects are not only mutually intelligible; there are only very slight phonetic and lexical differences between them.

Dialect A is spoken by a large group which has been inhabiting the Di Linh area for at least four or five generations. It may be considered the prestige dialect, socially, since it is spoken by the wealthiest and best educated stratum of the population. Dialect B is spoken by a group which moved into the Di Linh area from nearby only within this generation. The older people (including one of my informants) were not born in Di Linh; the younger people (including two of my informants) were, but still preserve the characteristics of Dialect B. Although not the prestige dialect, Dialect B is important because it is the one principally used by missionaries of the Christian and Missionary Alliance, who have done a lot of valuable work on Sre, including translation into Sre of the New Testament.

Moreover, the orthography presently used for Sre (see 2.7) is based upon Dialect B; it is Dialect B which is taught in the schools at Di Linh; and a series of textbooks now being developed by linguists of the Summer Institute of Linguistics under the Highlander Education Project (see 1.4) will also reflect Dialect B. The dialect Smalley worked on (which we shall call Dialect C), the one on which he based his article "Sre Phonemes and Syllables", is apparently different still from Dialects A and B - more different, in fact, than A is from B. The present study is based upon Dialect A, but the major points of divergence between it and Dialects B and C will be noted and commented upon.

2.1 Sre Phonemes

The phonemes of Sre are as charted in the table below.

2.2 Description of Phonemes and Allophones

2.21 Non-Syllabics

There is a series of unaspirated, aspirated¹ and voiced stops at bilabial, alveolar, palatal and velar points of articulation respectively; there are two voiced imploded stops at bilabial and alveolar points of articulation respectively; and there is glottal stop. There are two voiceless fricatives, at alveolar and glottal points of articulation, respectively, and two liquids, a voiced alveolar lateral and a voiced alveolar trill. There are aspirated and unaspirated nasals at bilabial, alveolar, and palatal points of

Sre Phonemes

| | | <u>C O N S O N A N T S</u> (28) | | | | |
|------------|--------|---------------------------------|-----------------|----------------|--------------|----------------|
| | | <u>Labial</u> | <u>Alveolar</u> | <u>Palatal</u> | <u>Velar</u> | <u>Glottal</u> |
| | Vl | p | t | c | k | ʔ |
| STOPS | Vl Asp | ph | th | ch | kh | |
| | Vd | b | d | j | g | |
| | Vd Imp | ɸ | ɖ | | | |
| FRICATIVES | | | s | | | h |
| LATERALS | | | l | | | |
| TRILLS | | | r | | | |
| NASALS | Unasp | m | n | ɲ | ŋ | |
| | Asp | mʰ | nʰ | ɲʰ | | |
| GLIDES | | w | | y | | |

V O W E L S (10)

| | <u>Front</u> | <u>Back Unrounded</u> | <u>Back Rounded</u> |
|----------|--------------|-----------------------|---------------------|
| HIGH | i | u | u |
| MID HIGH | e | ə | o |
| MID | ɛ | | ɔ |
| LOW | | a | ɑ |

Vowel Tone and Quantity Features

- / / : (no marking); normal length
- / ` /: long (with predictable falling pitch)

Table 1.

articulation respectively and there is an unaspirated (but no aspirated) velar nasal. Finally, there are two glides: high, back, rounded; and high, front, unrounded respectively.

The voiceless stops may or may not have a slight aspirated release phrase-finally or in morphemes uttered in citation form. h is, as Smalley points out (1954:220) "a voiceless aspiration of neutral quality or of the quality of the following vowel when initial, and of the quality of the preceding vowel when final."

The r is realized as a flap ([ɾ]) when it is the second member of a consonant cluster; otherwise it is a trill.

The clusters /hy hw/ are realized as voiceless glides.

2.22 Syllabics

2.22.1 Vowel Length and Tone

Except in pre-syllables (see 2.6.1), all vowels in Sre are phonemically either normal in length or long, with low, falling pitch (in markedness terms the normal vowels being unmarked and the long vowels being marked). In principle, it would be possible to select either length or pitch as the phonemically crucial element and, whichever were selected, describe the other as a conditioned feature. However, in view of the general tendency for longer syllables to fall in pitch, it seems to make more sense to consider length as primary and low, falling pitch as a conditioned feature. This is the approach which will be followed in this study,

with the normal (unmarked) vowels indicated by plain vowel symbols and the long (marked) vowels indicated by vowel symbols with grave accents.

The unmarked degree of length has three conditioned allophones. It is realized as half-mora in length (and high, level in tone) preceding final obstruents; one mora in length (with high, level tone followed by a slight down-glide), preceding glides, liquids and nasals; and two moras in length (with high falling tone) in open syllables.

The marked degree of length (/V̄/) has a single realization, a phone two moras in length and low, falling in tone; and it occurs only before final consonants. This differs slightly from the corresponding length phoneme of Dialect C, both in tonal configuration and environment. Smalley (1954: 219) describes /V̄/ as a "two mora low-rising vowel in open syllables or syllables closed by voiceless consonants," but one mora in length and low-rising in tone before voiced finals.

2.22.2 Vowel Segments

The vowels present a feature which is rather difficult to deal with in a symmetrical way. The high front vowel /i/ is realized as [i] and [ɪ], while the mid-high front vowel /e/ is realized as [i], [ɪ] and [e^]. The higher allophones of these two phonemes generally occur in open syllables and before liquid and nasal finals; while the more lax allophones generally occur before obstruent finals. Thus it is not only possible, but in fact often happens, that in a minimal pair

where /i/ and /e/ contrast, the allophones will be indistinguishable as far as tongue height alone is concerned, e.g., /ntiŋ / 'bone' and /ntèŋ/ 'where', where the two vowels are both represented by a long, high, tense, front syllabic. There is, however, another articulatory factor at work here which serves to maintain the distinctiveness of these two vowel phonemes - the relative advancement of the tongue-root, resulting, in the case of neutral or advanced position, in an expanded pharyngeal cavity with concomitant deeper, breathy or "spooky" quality, or, in the case of retraction from neutral position, in a more tense, constricted kind of timbre². With /i/ there is always some degree, however slight, of tongue-root advancement while with /e/ there never is. The degree of tongue-root advancement in Sre is exceedingly subtle - not nearly as pronounced as in some other Mountain Mon Khmer languages spoken in South Vietnam.³

Moreover, although this expanded pharyngeal cavity in opposition to pharyngeal constriction is vital in keeping /i/ distinct from /e/ (in the environments noted), it may also occur optionally with other vowels, though without phonemic consequences. /u/, for example, may be pronounced with the tongue-root in neutral position, much like English /u/, or it may be given a slightly "spooky" quality by advancing the tongue-root. The expanded pharyngeal cavity is not necessary to keep /u/ separate from /o/, though, since the heights of their respective allophones do not overlap, i.e., /u/ [u, ʊ], /o/ [o, o[^]]. However, there are three

vowels which can never be uttered with advanced tongue-root: /e, o, a/. These vowels are tense (considerably more so than their nearest English equivalents) and involve some slight tension of the pharyngeal cavity as well. /a/ never occurs in normal length, but is always long; /e/ and /o/ virtually always occur long: that is, out of thousands of technically possible monosyllables checked, non-long realizations of /e/ and /o/ only turned up a few times - nearly always in proper names. It appears that these three vowels are basically different from the rest in being markedly tense and in not permitting non-long realizations.

If this is correct, it appears that what we are dealing with here are two intersecting vocalic systems, one set of tense vowels /e, o, a/ which can never (with the non-crucial exceptions noted above) occur non-long and can never be accompanied by expanded pharynx; and one set of non-tense vowels which may be either long or short and which may be accompanied by a pharyngeal articulation varying from neutral to slightly expanded. Since the latter can be produced with no, or only slight, movement from neutral position, we will consider these the unmarked set; while the latter, involving considerable tension of the muscles under the tongue as well as some tension in the pharyngeal cavity, we will consider marked.

In a sense, the covered/non-covered distinction⁴ might be thought of, for Sre, as a kind of "reserve" phonemic

system which comes into effect (i.e., is rendered phonemic) when vowel heights converge too closely. Thus, in Dialect A, where the heights of the two high front vowels have gotten close, resulting in overlap of allophones, the covered/uncovered distinction "comes to the rescue" to keep them distinct. Elsewhere in Dialect A this reserve capacity is not exploited because it is not necessary. In Dialect B, however, /o/ has risen to the point where its allophones overlap with those of /u/; and here again the covered/uncovered distinction is triggered to keep them apart.

The main features of the vowel segments are as follows:

/i/ and /u/ are high vowels, front and back respectively, both of which have lower allophones when preceding final voiceless consonants. /e/ and /o/ are upper mid vowels, front unrounded and back rounded respectively; /e/ (but not /o/) has higher allophones preceding final voiced consonants and in open syllables. /ɛ/ is realized as a mid front unrounded vowel with negligible variations; /ɔ/ is similarly represented by a narrow spectrum of mid back rounded vowels. /a/ is a low, front-central vowel which has a central allophone before velars and glottals. /ɑ/ is a low, back, slightly centralized, very slightly rounded vowel, with negligible allophonic variation. /ʊ/ and /ə/ are realized as unrounded back vowels, high and upper mid respectively, with negligible allophonic variation.

For Dialect C, the phonemes /ə/ and /ɑ/ appear to have coalesced. Smalley (1954:220) finds no /ɑ/ but describes /ə/ as having two allophones in complementary distribution: "[ə], mid, back, varying to central unrounded, which occurs with /'/ [non-long vowels]; and [ɔ], low, open, back, slightly rounded, which occurs with /'/. In Dialects A and B it is not possible to group these phones together because, while /ɑ/ occurs only long, /ə/ has both long and non-long realizations. Examples are /tət/ 'good, succulent-looking' (of fruit still on the branch); /tət/ (female proper name); and /tət/ (male proper name).

2.3 Minimal Pairs

The following minimal and/or illustrative pairs exemplify the phonemes described above:

| <u>Phoneme</u> | <u>Word in Phonemic Transcription</u> | <u>English Gloss</u> |
|----------------|---------------------------------------|---------------------------|
| /p/ | /pɛ/ | three |
| /ph/ | /phɛ/ | rice (uncooked) |
| /t/ | /tɛ/ | Here! (for calling swine) |
| /th/ | /(gə)tha/ | meaning |
| /c/ | /ca/ | ginger |
| /ch/ | /cha/ | bold |
| /k/ | /ka/ | fish |
| /kh/ | /khɔ/ | to cook |
| /ʔ/ | /ʔɛ/ | Hey! |
| /b/ | /bɛ/ | goat |

| | | |
|------|-----------|---------------------------|
| /d/ | /dɛ/ | PN (female) |
| /j/ | /ja/ | wild thatch |
| /g/ | /ga/ | to be busy at |
| /b/ | /bàʔ/ | part of |
| /ɛ/ | /ɛàʔ/ | to add water to |
| /s/ | /sɛ/ | young son |
| /r/ | /rɛ/ | to swim |
| /l/ | /li/ | a lot of |
| /h/ | /hi/ | we (exclusive) |
| /m/ | /mɛ/ | female (of animals) |
| /n/ | /nɛ/ | that |
| /p/ | /(kəl)pi/ | type of guitar |
| /ŋ/ | /(tə)ŋi/ | fat |
| /mh/ | /mhɔ/ | evening |
| /nh/ | /nhɔ/ | pine tree |
| /ph/ | /phɛ/ | strand (of rope) |
| /w/ | /wa/ | uncle |
| /y/ | /(mə)ya/ | but |
| /i/ | /tiʔ/ | deaf |
| /ì/ | /tìʔ/ | to peel (fruit, etc.) |
| /e/ | /teh/ | Sic 'em! (command to dog) |
| /è/ | /tèh/ | (interrogative particle) |
| /ɛ/ | /lɛʔ/ | beautiful |
| /è/ | /lèʔ/ | blind |
| /u/ | /juʔ/ | to hire (a person) |

| | | |
|------------------|-------|-------------------------------|
| /ù/ | /jùʔ/ | black |
| /o/ | /doh/ | PN (female) |
| /ò/ | /dòh/ | PN (female) |
| /ɔ/ | /hɔh/ | to speak (without reflecting) |
| /ò/ | /hòh/ | to bark (of barking deer) |
| /w/ | /muh/ | PN (male) |
| /ù/ | /mùh/ | PN (male) |
| /ə/ | /ləʔ/ | husk (of grain) |
| /è/ | /lèʔ/ | stupidly |
| /ɑ/ ⁵ | | |
| /à/ | /ʔàʔ/ | adverb of negation |
| /a/ | /haʔ/ | to vomit |
| /à/ | /hàʔ/ | to tear |

2.4 Accent

A thorough treatment of Sre intonation is beyond the scope of this study. However, it will be useful to state some generalities about accent which have been observed. Accent is probably perceived as a complex of (superimposed) features of relative pitch and length, although the impression of conventional stress (force or loudness) is strong. Here we shall distinguish three accents: primary ["], medium ['], and weak [◌]. None of these is phonemic. For citation form, in morphemes consisting of a single syllable, there is primary accent on that syllable. For words composed, phonologically, of a minor syllable, or

pre-syllable, and a major syllable, the pre-syllable receives weak accent and the major syllable receives primary accent. In connected discourse (for simple declarative sentences), accent placement depends upon the syntactic category of the word in question as well as on its relative position within the pause group (syntactically, phrases, clauses, and sentences). That is, if an item is what Chomsky (1965:65) calls a "lexical formative", i.e., noun, verb, or adjective, stress will start as primary, but will reduce to medium unless it is the final such item in the pause group: only in that case does it retain its original primary accent. Items which Chomsky (1965:65) calls "grammatical formatives" never start out with or end up with more than weak accent, no matter where they occur in the pause group.

To illustrate how this works, consider the following sentences (where underlined forms represent lexical formatives and forms that are not underlined represent grammatical formatives):

| | | | | | |
|-----|-------|-------|-----|-------|------------------------|
| (1) | ◌khay | 'lɔ̌t | ◌hə | 'bɔ̌n | He goes to the village |
| | 1 | 2 | 3 | 4 | 1 2 3 4 |

As there can only be a single primary accent per pause group (syntactically, a full sentence in this case), the accent on lɔ̌t drops to medium, yielding,

| | | | | | |
|-----|-------|---------------|-----|-------|------------------------|
| (2) | ◌khay | " <u>lɔ̌t</u> | ◌hə | 'bɔ̌n | He goes to the village |
|-----|-------|---------------|-----|-------|------------------------|

If the sentence-final particle ʔə is added, converting the sentence into a yes/no question, bɔ̌n is no longer the final element in the pause group. It is, however, still the final

lexical formative in the pause group, so it retains its primary accent, e.g.,

(3) əkʰay "lɔ̃t̃ .hə 'bɔ̃n.ʔə Is he going to the village?
 1 2 3 4 5 1 2 3 4 5

2.5 Syllable Structure

There are two kinds of syllables in Sre: minor syllables, or pre-syllables⁶ and major syllables. Since, apart from certain reduplicative and other compounds, the vast majority of morphemes in this language are coterminous either with major syllables or with major syllables immediately preceded by pre-syllables, to describe syllables is simultaneously to describe phonological constraints on the production of morphemes.

2.5.1 Pre-Syllables

Pre-syllables are of two general types: (1) A pre-syllable may be a syllabic nasal (assimilating to the point of articulation of the first segment of the following major syllable), or a syllable consisting of a glottal stop plus /a/. (2) Apart from these two non-typical cases, the general rules for pre-syllable formation may be stated as follows: (a) take any simple obstruent (a simple obstruent being one that is neither aspirated nor implosive) i.e., /p, t, c, k, b, d, j, g, s, h/ or /r, l, m/ and add the mid back unrounded vowel /ə/ (examples: pə, kə, sə, mə); or (b) take any of the pre-syllables formed by the preceding rule and after /ə/ add /r/, /l/, or /n/ (taking into account that

pre-syllables of the shape */rər/ are not permitted).

Table 2 summarizes in graphic form the constraints and possibilities for pre-syllables. Hyphens indicate combinations which are structurally not permitted. Pluses indicate not only that a combination is permitted but that actual examples are found. Blank spaces indicate that a combination is not specifically barred, structurally, but that examples are not attested in the data.

2.5.2 Major Syllables

The major syllable is made up of at least one initial consonant followed by one vowel, with its associated length and pitch features. Optionally, in pre-vocalic position there may be two-segment or three-segment consonant clusters. The vowel may be the final element of the syllable or there may be a single final consonant or a final two-consonant cluster.

Generally, initial clusters are of the form:

C (liquid or glide) (glide) V_____

while final clusters are of the form:

_____V (glide) (glottal).

However, there is a quite rigid underlying system governing which consonants can form clusters with which other consonants. Table 3a presents the phonotactic system of major syllables in graphic form. Pluses indicate permitted sequences, while hyphens indicate sequences which are barred, structurally. Blank spaces indicate that a sequence is not

Constraints on Pre-syllable Formation

| <u>Initial Segment</u> | <u>Vowel</u> | <u>Final Segment</u> | | |
|----------------------------|--------------|--------------------------|----------|----------|
| | | <u>1</u> | <u>2</u> | <u>3</u> |
| | | r | l | n |
| n | - | - | - | - |
| ʔ | a | - | - | - |
| p | e | + | | + |
| t | e | + | + | + |
| c | e | + | | |
| k | e | + | + | + |
| ph | - | - | - | - |
| th | - | - | - | - |
| ch | - | - | - | - |
| kh | - | - | - | - |
| b | e | + | | + |
| d | e | + | | |
| j | e | + | | + |
| g | e | + | | + |
| ʙ | - | | | |
| ɗ | - | | | |
| s | e | + | | + |
| r | e | - | | + |
| l | e | | | + |
| h | e | | | |
| m | e | | | + |
| n | - | - | - | - |
| ɲ | - | - | - | - |
| ŋ | - | - | - | - |
| mh | - | - | - | - |
| nh | - | - | - | - |
| ɲh | - | - | - | - |
| w | - | - | - | - |
| y | - | - | - | - |

Table 2.

Constraints on Initial Clusters in Major Syllables

| <u>Initial Plus Glide</u> | | | <u>Initial Plus Liquid</u> | | | <u>Three Segment Clusters</u> | | | |
|-------------------------------|------------|---|--------------------------------|------------|---|-------------------------------|------------|------------|---|
| <u>C 1</u> | <u>C 2</u> | | <u>C 1</u> | <u>C 2</u> | | <u>C 1</u> | <u>C 2</u> | <u>C 3</u> | |
| | w | y | | r | l | | | w | y |
| ? | + | + | ? | - | - | p | r | + | + |
| p | + | + | p | + | + | t | r | + | + |
| t | + | + | t | + | - | c | r | + | - |
| c | + | - | c | + | - | k | r | + | + |
| k | + | + | k | + | + | b | r | + | + |
| ph | + | + | ph | - | - | d | r | + | + |
| th | + | + | th | - | - | j | r | + | - |
| ch | + | - | ch | - | - | g | r | + | + |
| kh | + | + | kh | - | - | ɸ | r | + | + |
| b | + | + | b | + | + | ɖ | r | + | - |
| d | + | + | d | + | - | s | r | + | + |
| j | + | - | j | + | - | m | r | + | + |
| g | + | + | g | + | + | | | | |
| ɸ | + | + | ɸ | + | + | p | l | + | + |
| ɖ | + | + | ɖ | + | - | k | l | + | + |
| s | + | + | s | + | - | b | l | + | + |
| r | + | + | r | - | - | g | l | + | + |
| l | + | + | l | - | - | m | l | + | + |
| h | + | + | h | - | - | ɸ | l | + | + |
| m | + | + | m | ɸ | + | | | | |
| n | + | + | n | + | - | | | | |
| ɸ | + | - | ɸ | + | - | | | | |
| ŋ | + | + | ŋ | - | - | | | | |
| mh | + | + | mh | - | - | | | | |
| nh | + | + | nh | - | - | | | | |
| ɸh | + | - | ɸh | - | - | | | | |
| w | - | - | w | - | - | | | | |
| y | + | - | y | - | - | | | | |

Table 3a.

Constraints on Final Clusters in Major Syllables

| <u>Penultimate Segment</u> | <u>Final Segment</u> |
|--------------------------------|--------------------------|
| | <u>? h</u> |
| w | + |
| y | + + |

Table 3b.

barred structurally but that actual examples have not been attested.

2.5.3 Rules of Morpheme Formation

The system presented above can be reduced to the following set of rules, stated in prose:

1. No gemminate consonant clusters.
2. No liquid or nasal clusters of any kind.
3. Any consonant in the inventory may precede glides w and y to form two-segment initial clusters except that
 - i. the sequence *wy is not permitted; and
 - ii. a palatal glide may not follow another palatal consonant (ruling out such combinations as *cy-, *jy-, *ny-, *ny-).
4. Any consonant may precede liquids l and r to form two-consonant initial clusters except that
 - i. glottals, glides and aspirates may not be the first segment of such clusters;
 - ii. in case of two coronals in succession, the second may not be a lateral;⁷
 - iii. the velar nasal does not combine with r or l to form clusters.
5. Three-consonant initial clusters may be formed by adding glides w or y to any of the permitted two-consonant clusters except that:
 - i. a palatal glide may not follow a cluster whose initial member is itself a palatal (ruling out

such combinations as *cry- and *jry-); and

- ii. a palatal glide may not follow a cluster whose initial member is d.

6. All except aspirated, imploded or voiced consonants may occur as single final consonants.

7. In case of a two-consonant cluster in final position, the first segment must be a glide (y or w) and the second must be a glottal (ʔ or h).⁸

8. No instances of major syllables have been found which use all theoretically possible cluster combinations, i.e., no syllables of the type

$$c \begin{pmatrix} r \\ l \\ w \\ y \end{pmatrix} \begin{pmatrix} w \\ y \end{pmatrix} v \begin{pmatrix} w \\ y \end{pmatrix} \begin{pmatrix} ʔ \\ h \end{pmatrix}.$$

It is difficult to say whether this lack is accidental or has structural implications. I will say here that such combinations are possible based on the fact that my informant says they are possible and pronounces them without difficulty, while decisively rejecting such structurally forbidden forms as *rər, *tla, etc.

In general, any permitted pre-syllable can combine with any permitted major syllable to form disyllables, subject to the following constraints:

9. Gemminate consonant clusters reduce to a single consonant.

10. When there are two nasals in succession, the first drops out (e.g., tən+mùʔ becomes təmùʔ 'cause to enter').

11. Rule 4ii is applicable (e.g., tən+lik becomes təlɪk 'cause to come out').

2.5.31 Other Combinations

The rules presented above specify the constraints on the production of Sre morphemes and complex words. One additional constraint needs to be mentioned which applies to connected discourse:

12. Whenever there is a sequence of glottal stop followed by another consonant, glottal stop is deleted, e.g., /dàʔ mɛ/ 'river' is realized phonetically as [dà mɛ].

2.6 Some Observations on Orthography

Smalley (1954a) has given a concise account of the history of the various orthographies used for Sre⁹. The system presently in use was adopted only recently. It is not phonemic, in the sense of one symbol corresponding to one sound, but it is reasonably unambiguous. Since the textbook preparation program of the Highlander Education Project (described in Chapter 1) will very likely result, eventually, in much material in Sre, it will be useful and important to know something about the orthography that will be used and to see how it matches up with the phonemicization used in this study.

Many of the symbols used are identical. Below are listed the segments that are represented identically in this phonemicization and in the SIL orthography. The problem

areas will be discussed separately:

| <u>Phoneme</u> | <u>SIL Orthography</u> |
|----------------|------------------------|
| /p/ | p |
| /t/ | t |
| /c/ | c |
| /k/ | k |
| /ph/ | ph |
| /th/ | th |
| /ch/ | ch |
| /kh/ | kh |
| /b/ | b |
| /d/ | d |
| /j/ | j |
| /g/ | g |
| /ɸ/ | ɸ |
| /ɖ/ | ɖ |
| /s/ | s |
| /r/ | r |
| /l/ | l |
| /h/ | h |
| /m/ | m |
| /n/ | n |
| /mh/ | mh |
| /nh/ | nh |
| /i/ | i |
| /u/ | u |
| /a/ | a |
| /ʋ/ | ʋ |

Problem areas are discussed below:

1. Vowels

The difference here is mainly one of symbols: the SIL orthography attempts to match the vowel sound of Sre (and

of other Montagnard languages in Vietnam, as well) to the closest Vietnamese equivalent, and to use the appropriate Vietnamese symbol wherever possible, e.g.,

| | |
|-----|----|
| /e/ | ê |
| /ɛ/ | e |
| /o/ | ô |
| /ɔ/ | ơ |
| /u/ | ư |
| /ə/ | ơ' |

For the vowel /ɑ/, which does not exist in Vietnamese, they use an "o" underlined (o).

2. Parasitic Vowels

It will be recalled that the obligatory vowel in pre-syllables is always the obscure /ə/. Since, when it functions as the vocalic element of a pre-syllable, it is never subject to distinctions of accent, length, or tone, it is somehow different from the rest of the vocalic system and may be considered parasitic in nature. Normally, /ə/ (or orthographic ơ') is used to indicate this vowel. For some obscure reason, however, it is not used consistently. Proper names generally all begin with k, followed by the parasitic vowel ə, followed by the name. It is customary, though, not to write the ə but to replace it with an apostrophe, so that names come out looking like: K'Ba, K'Mòì, K'Rě.¹⁰ This presents no real problem, though, since the reader can think of the apostrophe as a kind of allograph of ə used in proper names. Certain other forms, on the other hand, are spelled

without e for no apparent reason. Two very common examples are:

| <u>Phonemic</u> | <u>Orthographic</u> | <u>English Gloss</u> |
|-----------------|---------------------|----------------------|
| /rəpu/ | rpu | water buffalo |
| /rəhyɑŋ/ | rhiang | (one) hundred |

A rule of thumb that the reader can follow is: wherever a form begins with a cluster not permitted by the phonotactic rules, insert the parasitic vowel.

3. Vowel Length

The symbol \tilde{V} is used to indicate non-long vowels only when they are followed by a final glottal stop (glottal stop itself not being indicated in this orthography); otherwise, as in the phonemicization used here, non-long vowels are not orthographically marked.

4. Glottal Stop

This study agrees with Smalley in giving phonemic representation to glottal stop. The Sre orthography, however, handles it in the following way: morphemes beginning (orthographically) with vowels are assumed to begin, phonetically, with glottal stops. The difference between /y-/ and /ʔy-/ is handled by writing the former y-, e.g., yàng 'God', and the latter i-, e.g., iang [ʔyaŋ] 'cozy'; the analogous difference between /w-/ and /ʔw-/ is handled by writing the former w- and the latter u-. As the single-consonant post-vocalic final, the vowel plus appropriate length mark is understood to mean "plus final glottal stop," as in

| | | |
|----|-------|------------|
| pǎ | /paʔ/ | 'to break' |
| pà | /pàʔ/ | 'to give' |
| pa | /pa/ | 'new' |

When glottal stop follows a glide, as the second segment of a two-consonant final cluster, the appropriate length marks are placed on the glide symbols, not on the vowels, e.g.,

| | | |
|------|---------|-------------|
| glàì | /glàyʔ/ | 'to punish' |
|------|---------|-------------|

as opposed to

| | | |
|------|-------|----------------|
| ngàì | /ŋày/ | 'far, distant' |
|------|-------|----------------|

5. Glides

Glides /w/ and /y/ turn up in various orthographic guises depending on whether they are functioning as initial consonants, final consonants, or the second or third members of consonant clusters. The various environments, and corresponding orthographic shapes, are shown below.

Representation of /w/:

w: pre-vocalically in initial position; wǎ /waʔ/ 'to understand'

o or u: postvocalically in final position, following /a/;
hào /hàw/ 'to climb', cau /caw/ 'man, person'

u: postvocalically in final position, following /i/; kliu
/kliw/ 'tiger'

∅: as the first segment of a major syllable immediately preceded by a pre-syllable ending in ə; tòès /təwès/ 'harvest'

u: when it is the second member of a two-segment cluster beginning with /ʔ/; uàn /ʔwàn/ 'to feel resentment'

w: when it is the second member of a two-segment cluster beginning with /h/; hwǐ /hwiʔ/ 'to forget'

o: when it is the second member of a two-segment cluster beginning with a consonant other than /h/; moat /mwat/ 'to be sad'

o: when it is the third member of a three-segment cluster; broǎ /brwaʔ/ 'work'

Representation of /y/:

y: prevocalically in initial position; yàng /yànŋ/ 'God'

i: postvocalically, in final position; ngai /ŋay/ 'day'

i: when it is the second member of a two-segment cluster beginning with /ʔ/; iar /ʔyar/ 'chicken'

i: elsewhere, as non-initial segments of consonant clusters.

NOTES TO CHAPTER II

1. Smalley considers aspirated voiceless stops as consonant clusters (stop plus h). I have chosen the unit phoneme solution because the elements in question function like other single consonants in the language, not like clusters. (For example, voiced stops and implosives can all precede r and l, but never precede h; see 2.6 for discussion of syllable structure.)
2. This feature of articulation is described in detail in Stewart (1967) and Pike (1967) and is also referred to in Chomsky and Halle (1968:314-15) where the feature "covered" is proposed for retraction of tongue-root (narrowing and tensing of walls of pharynx). "Non-covered" ([-covered]) would then presumably refer to configurations involving expansion of the pharyngeal cavity, achieved by tongue-root advancement as well as neutral ones (not involving either pharyngeal constriction or expansion). Chomsky and Halle cite Stewart 1967 to support establishment of this feature. In her article on Cambodian pronunciation, Henderson (1952:151) talks of two "registers", the characteristic of the first, or normal, being a head voice quality, the characteristic of the second being "a deep, rather breathy or 'sepulchral' voice, pronounced with lowering of the larynx, and frequently accompanied by a certain dilation of the nostrils." This second register doubtless corresponds

to Chomsky and Halle's "uncovered" feature, though they do not cite Henderson's article, so it is not known whether or not their "uncovered" is exactly the same as Henderson's second register.

Note that while for Sre [+covered] is marked, for many other languages, where tongue-root advancement achieves expansion of the pharyngeal cavity, it is rather [-covered] that would be marked - as presumably for Cambodian and several other mountain Mon Khmer languages, like Jeh.

3. For example, the writer had an opportunity to hear Jeh, as spoken by the informant of Mr. Dwight Gradin of the Summer Institute of Linguistics. In his (the informant's) speech the vowels articulated with co-occurring tongue-root advancement were easily recognizable as having the qualities described by various observers as "hollow", "breathy", "spooky", "sepulchral". On the other hand, the same Jeh informant needed considerable time before he could "tune in" on this same, though less pronounced, feature in words uttered by my informant.
4. From here on, to save space and avoid confusion, the term "register" will no longer be used. Rather, I will use Chomsky and Halle's covered and non-covered features: "non-covered" to mean "accompanied by neutral or expanded pharyngeal cavity", and "covered" to mean "tense, slightly constricted pharyngeal cavity".

5. No non-long realizations of /a/ have been uncovered out of some 8000 syllable possibilities tested.
6. The two terms "minor syllable" and "pre-syllable" are both used in the literature on Mon Khmer languages. However, to avoid confusion, only "pre-syllable" will be used from here on in this study.
7. Coronals (Chomsky and Halle 1968:304) are consonants made at dental, alveolar and alveopalatal points of articulation.
8. Smalley (1954:221) observes that for Dialect C -y?, -w?, and -yh occur in post-vocalic syllable-final position but not -wh. This holds for Dialect A as well; yet it does not seem to be structurally significant but rather an accidental gap in the pattern. When I presented made-up forms ending in -wh, my informant said they "could" occur; and he pronounced such forms with neither difficulty nor hesitation.
9. The reason why the very name of this language is sometimes spelled Srê, sometimes Sre, is that the vowel, phonetically [ɛ], is represented differently depending on the orthography used. The three columns below show the orthographic representations of Sre front vowels according to Dournes (1950), Smalley (1954), the present SIL system, and the phonemicization of this paper:

| <u>Dournes</u> | <u>Smalley</u> | <u>SIL</u> | <u>This Study</u> |
|----------------|----------------|-------------|-------------------|
| i | i | i | i |
| | ɪ | ê | e |
| ê - - - - - | ê - - - - - | e - - - - - | ε |

When referring to the language in prose in this paper, the spelling "Sre" (following the SIL orthography) will be used; the phonemic form /srɛ/ will be used only when necessary to make some point.

10. Illogically, however, the name of the overall language family is written Ko'ho, not, as one might reasonably expect from the above tradition, K'Ho.

CHAPTER III

Archaic Morphological Processes

3.0 General

The major morphological processes appear to have been affixation and reduplication; and these appear to have been involved only with derivation, not inflection. Both affixation and reduplication have almost completely died out as active processes in the language (two important exceptions are discussed below). This is probably the result of the trend toward monosyllabicity and analytic structure observable in Mon Khmer languages more generally.

3.1 Reduplication

Reduplication was apparently an active process in Sre at one time, as evidenced by the following examples:

| <u>Non Redu-</u> <u>plicated Form</u> | <u>Meaning</u> | <u>Redupli-</u> <u>cated Form</u> | <u>Meaning</u> |
|--|----------------|--------------------------------------|----------------|
| sùm | always | sùm sùm | frequently |
| rəhày | gradually | rəhày rəhày | gradually |

There are also reduplicative words which do not have non-reduplicated forms (although historically they may be derivatives of simplexes which have disappeared), e.g.,

| <u>Reduplicative Word</u> | <u>Meaning</u> |
|---------------------------|---------------------|
| mɔʔ mɔʔ | quiet, still |
| mənɛʔ mənay | beautiful |
| rəlèp rəlàp | winding (of a road) |

Since the process is inactive and the data limited, it is difficult to offer any meaningful generalizations. It is hoped that careful study of a large body of data will reveal some pattern. Many other languages of the area present this same problematic aspect of reduplicative morphology (see, for example, Jenner 1969 on Cambodian and Thompson 1965, Chapter Seven, on Vietnamese).

3.2 Non-Reduplicative Affixes

There are two types of non-reduplicative affixes in Sre, infixes and prefixes. Both are added exclusively to verbs. The infixes are all nominalizers which convert verbs into nouns. The prefixes convert certain types of verbs into other types of verbs (e.g., active to passive). No more than a single affix has been found to occur per word.

3.2.1 Nominalizing Infix -əmp-

This infix is inserted between the initial consonant and the balance of the syllable of transitive verbs. The general meaning is something like "that which is used in the action indicated by the verb." The following examples will illustrate:

| <u>Verb</u> | <u>English Gloss</u> | <u>Nominalization</u> | <u>English Gloss</u> |
|-------------|----------------------|-----------------------|--|
| sàñ | to wedge in | səmpàñ | a wedge |
| sàc | to fish by draining | səmpàc | the place one stands to "sàc"; small fish, fry |
| sèr | to repair a hole | səmpèr | wood (for fixing fence); patch (for mending cloth) |
| sòl | to illuminate | səmpòl | a torch |
| sèt | to plug up | səmpèt | a plug |
| sòc | to sting (of bee) | səmpòc | the stinger (of bee) |
| srañ | to sting (of fish) | səmprañ | the stinger (of fish) |
| sròm | to sheathe (a sword) | səmpròm | a scabbard |

3.2.2 Nominalizing Infix -ən-

Like -əmp-, this infix is inserted between the initial consonant and the balance of the syllable of transitive verbs. While certain of the derivatives formed from -ən- resemble in meaning those formed from -əmp-, others have a meaning something like: "that which is the goal of the action indicated by the verb." It is possible that both -əmp- and -ən- may have been morphologically conditioned allomorphs of the same 'instrumental' morpheme. Some examples are:

| <u>Verb</u> | <u>English Gloss</u> | <u>Nominalization</u> | <u>English Gloss</u> |
|-------------|--|-----------------------|---|
| sɛʔ | to detour around an obstacle | sɛnɛʔ | the place where a detour begins or ends |
| səm | to apply medicine | sənəm | medicine |
| syar | to eat up (rust); to wear down (by friction) | sənyar | iron tip of plow (that which gets worn down by plowing) |
| ʔasuh | to blow (on fire) | sənuh ¹ | bellows |
| pat | to kneed | pənat | that which is kneeded (dough, clay, etc.) |

3.2.3 Nominalizing Infix -ərn-

This infix is also inserted between the initial consonant and the balance of the syllable of transitive verbs. The general meaning appears to be: "that which is used in carrying out the action indicated by the verb." Only a single example of this nominalization has been found.

| <u>Verb</u> | <u>English Gloss</u> | <u>Nominalization</u> | <u>English Gloss</u> |
|-------------|----------------------|-----------------------|---|
| kəl | to support, help | kərndəl | a square of cloth worn over the buttocks by menstruating females to conceal the blood |

3.2.4 Causative Prefix tən-

This prefix is added to intransitive verbs to make them causative, as illustrated in the following examples:

| <u>Verb</u> | <u>Gloss</u> | <u>Causative</u> | <u>Gloss</u> |
|-------------|--|--------------------|----------------------|
| dùh | to fall | təndùh | to cause to fall |
| lik | to come out | təlik ² | to cause to come out |
| po | to feed at the breast (of infants) | təpo | to suckle |
| mù? | to descend | təmù? ³ | to cause to descend |
| chət | to die | tənchət | to kill |
| duh | to be hot | tənduh | to heat up |
| ŋac | Goodbye! (greeting) | təŋac ⁴ | to bid farewell |
| guh | to wake up | tənguh | to wake (someone) up |
| hòr | to flow | tənhòr | to pour |
| kah | to remember | tənkah | to remind |
| riŋ | to be flat, level | tənriŋ | to make flat, level |

3.2.5 Transitivizing Prefix pən-

This prefix, added to stative verbs, means something like: "cause (someone) to have the quality indicated by the verb." Examples are:

| <u>Verb</u> | <u>Gloss</u> | <u>Transitive</u> | <u>Gloss</u> |
|-------------|------------------------------|-------------------|------------------------------|
| hàŋ | to be beau- tiful (woman) | pənhàŋ | beautify |
| hàp | to be envious | pənhàp | to make (someone) envious |

One example that does not fit the pattern, since the prefix is added to a noun instead of a verb, but which obviously exemplifies the same process, is the following (the only such example found):

| <u>Noun</u> | <u>Gloss</u> | <u>Transitive</u> | <u>Gloss</u> |
|-------------|--------------|-------------------|-------------------------------------|
| glàŋ | collar | pənglàŋ | to put a collar on (e.g., a dog) |

The following additional examples are listed separately only because of a different morpho-phonemic realization when preceding verbs beginning with glottal stop: the sequence nʔ becomes nɛ. This particular morpho-phonemic phenomenon was not discussed under phonology because it does not appear to be presently active in the language, either word-internally or across word boundaries. (It does not happen, for example, with təŋ+ʔyat 'cause to listen' or with ɸɔŋ bɔl hɛ gan ʔɔr 'the previous village we went through'.) It seems, rather, to be confined to a very small residue of words in which, historically, pən preceded verbs beginning with glottal stop, e.g.,

| <u>Verb</u> | <u>Gloss</u> | <u>Transitive</u> | <u>Gloss</u> |
|-------------|---|-------------------|---|
| ʔum | to bathe | pəndum | to bathe (someone) |
| ʔàŋ | to be bright | pəndàŋ | to illuminate |
| ʔyaŋ | comfortable at ease; not homesick | pəndyaŋ | to put a person at ease; make a person feel at home |

3.2.6 Causative Prefix bə-

This prefix, added to statives, means something like: "to cause to become the quality represented by the verb," and, like -əmp- and -ən-, may have been a morphologically conditioned allomorph of an 'instrumental' morpheme.

Examples are:

| <u>Verb</u> | <u>Gloss</u> | <u>Causative</u> | <u>Gloss</u> |
|-------------|--------------|------------------|---------------|
| sòŋ | straight | bəsòŋ | to straighten |
| sàr | hard | bəsàr | to harden |

When added to transitive verbs, it has a causative meaning.

| | | | |
|-----|---------------------------------|-------|---|
| cah | to separate, sort out | bəcah | to break (cause to separate?) |
| kap | to bite | bəkap | to press (cause to "bite"??) in order to connect two chain links |
| teh | Sic 'em! (command to dog) | bəteh | to sic (a dog on someone) |

3.2.7 Passivizing Prefix gə-

This prefix is added to the verb when a noun phrase in the OBJECT case relation is in unmarked (subject) position and there is no AGENT noun phrase. (See Chapters 4 and 6 for complete discussion of the Sre case system.) Examples are:

| <u>Verb</u> | <u>Gloss</u> | <u>Passive</u> | <u>Gloss</u> |
|-------------|--------------|----------------|--------------|
| hàl | to cut | gəhàl | to be cut |
| pà? | to open | gəpà? | to be opened |

3.3 Presently Active Affixes

Of all the affixes discussed in this chapter, only two are presently active in the language: the causative prefix tən and the passive prefix gə; both of them will be treated fully in Chapter 6.

NOTES TO CHAPTER III

1. It seems possible that, historically, the base form may have been *suh (it is noteworthy that most of these bases begin with s-), that ?a was a possible prefix, but that now the word only occurs in the prefixed form ?asuh. If this is true, there would be nothing irregular about this derivation (i.e., sənuh would have been derived from *suh following the general rule).
2. The examples təlik, təṅac, and təmù?, where the final n of the prefix has dropped out, are explained by the phonological rules which prohibit laterals from following coronals and which prohibit nasal clusters. (See 2.6.3)
3. Loc. cit.
4. Loc. cit.

CHAPTER IV

Syntax: Theoretical Background and Descriptive Model

4.0 Theoretical Background

The descriptive model to be used in this study is essentially that put forward by Chomsky in Aspects of the Theory of Syntax. That is, the grammar will contain a syntactic component, a semantic component, and a phonological component - the latter two being interpretive only. The syntactic component contains a base and a transformational component. The base consists of a categorial component - the phrase structure rules - and the lexicon. The base generates deep structures, which are then directly interpreted as to meaning by the semantic component.¹ These deep structures are then operated upon by the transformational component to produce the surface structures. The resulting well-formed surface structures then comprise the input for the phonological component², which converts them into the proper phonetic shapes.

While following this "standard model" in its broad outlines, this study will depart from it in three ways: (1) the role of the syntactic component will be limited to accounting for syntactic phenomena alone and will not attempt to handle any phenomena based upon knowledge of the world or logic or reality; (2) case relationships are recognized as playing a significant syntactic role, and the mechanisms necessary to account for them are incorporated into the

grammar; and (3) the role of the lexicon is significantly expanded, reducing correspondingly the power of the transformational component. Because this model seeks to account syntactically for case relations, and to do so primarily through an expansion of the role of the lexicon, it has been called "lexicase" (Taylor:1971), and that term will be used from time to time in this study as an informal synonym for "this model."

4.1 Syntax and Semantics

In Aspects (1965:76), Chomsky discusses three types of problem sentences - syntactic anomalies, pragmatic anomalies, and selectional anomalies. While the first type of anomaly must clearly be prevented by any grammar claiming descriptive adequacy and the second type, represented by such a sentence as The earth is fiat, is beyond the bounds of syntax, the third type, represented by the now famous sentence The boy may frighten sincerity, is less clear-cut. The correct interpretation of these anomalous sentences appears to depend more upon one's beliefs and knowledge about the world than upon one's syntactic competence. Chomsky ambitiously attempted to solve the problem (e.g., so as to get Sincerity may frighten the boy instead of The boy may frighten sincerity) by using syntactic features and rules incorporating selectional restrictions, but the attempt was not altogether successful. The difficulty is that, once into the murky area of semantics and logic, it is exceedingly difficult to

get unanimous opinions about the acceptability of sentences. Selectionally anomalous sentences like The boy may frighten sincerity are not totally uninterpretable - given enough imagination - while pragmatically anomalous sentences like The earth is flat could be uttered by a child who had not yet been exposed to General Science in school. It would seem that, in order to prevent selectional anomalies, the grammar would somehow have to characterize formally the notion 'normal situation' (Starosta 1971), a task which is certainly not possible at the present stage of science. On the other hand, judgments (among speakers of the same dialect) about syntactic well-formedness are generally unhesitating and unanimous. In this study, therefore, no attempt will be made to prevent the generation either of selectional or pragmatic anomalies and, accordingly, only those semantic and contextual features will be used which have clear, overt syntactic manifestations (such as inflections, particle placement, relative order, and the like).

Recently, many stimulating papers have appeared, for example, Chomsky 1968 Deep Structure, Surface Structure, and Semantic Interpretation, dealing with such problems as reference, focus, and presupposition. In accounting for such phenomena, however, (as in accounting for selectional and pragmatic anomalies) it is necessary to reach beyond the boundaries of syntax and into the real world. Such problems, accordingly, will not be dealt with here. The restricted

goal which this study sets for itself is simply this: to produce a tight, explicit set of syntactic rules which will generate all the syntactically well-formed strings of the language, while excluding those that are syntactically ill-formed.

4.2 Case Relations

In Toward a Modern Theory of Case (1966), The Case for Case (1968) and other publications and lectures, Charles Fillmore has presented his insights into the "covert categories" - case relations - which affect surface syntactic structures. He has claimed that case relationships are universal in human languages and that some suitable apparatus for displaying them must be integrated into the "standard model". One of the main goals of this dissertation will be not only to test Fillmore's claim of their universality (by seeing whether they are applicable to Sre in a revealing and natural way) but also to incorporate a mechanism for accounting for them into the grammar.

In discussing case notions, Fillmore (1968:24) suggests that they comprise "a set of universal, presumably innate, concepts which identify certain types of judgments human beings are capable of making about the events that are going on around them, judgments about such matters as who did it, who it happened to, and what got changed." He lists six such cases (1968:24, 25):

"Agentive (A), the case of the typically animate 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.

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] things which are affected by the action or state identified by the verb."

In Toward a Modern Theory of Case, Fillmore mentions, but does not define, the following two:

Benefactive (B), the case which identifies the person or thing on behalf of whom some action is performed.

Comitative (C), the case which identifies the typically animate being in the company of whom another typically animate being is performing the action indicated by the verb.

In a series of lectures at the University of Hawaii in April of 1970, Fillmore discussed three other cases:

Source (S), the case indicating the thing or place from which the action indicated by the verb originates.

Goal (G), the case indicating the person or thing which represents the terminal point of the action represented by the verb.

Direction (DIR), the case which identifies the thing or place toward which the action represented by the verb is aimed.

In lectures at Ohio State University during the summer of 1970, Fillmore mentioned the possible need for two additional cases (which, however, he did not develop in any detail), namely,

Time (T), the case identifying the time at which the action represented by the verb took place.

Extent (E), the case identifying the span (presumably of time or space) over which the action represented by the verb takes place.

One might disagree about the number of case relations needed or about their precise semantic specifications. Their real importance, however - and herein lies Fillmore's great contribution to linguistic theory - lies in the fact that they have very real syntactic consequences. In particular, case relations, operating through surface case markers, serve to subcategorize verbs, to delimit the sentence environments in which verbs can occur. This means, in turn, that notions such as "transitive" and "intransitive" can be formally

specified by what Fillmore calls "case frames". Case frames, essentially contextual features which all verbs have as part of their original matrices in the lexicon, state which case relations a verb may contract in a sentence and, of these, which are optional and which obligatory. Fillmore (1968:27) gives the following well-known example:

| <u>Sentence</u> | <u>Case Frame</u> |
|---|--------------------------------------|
| (1) The door opened. | [+__0] |
| (2) John opened the door. | [__0 [^] A] |
| (3) The wind opened the door. | [__0 [^] I] |
| (4) John opened the door with a chisel. | [+__0 [^] I [^] A] |

These individual case frames can be collapsed, using the parentheses notation to express optionality, into [+__0 (I)(A)].

In Toward a Modern Theory of Case, Fillmore proposed the following apparatus for introducing case relationships into the base component. Assuming that the major constituents of a sentence are Modality (Mod), Auxiliary (Aux) and Proposition (Prop)³, the first phrase structure rule is:

$$(1) S \rightarrow (\text{Mod}) \text{Aux} \widehat{\text{Prop}}$$

The Proposition includes the verb and all the nominal constituents with which it contracts a case relationship. The second rule is then

$$(2) \text{Prop} \rightarrow V \widehat{A} \widehat{O} \widehat{I} \widehat{D} \dots$$

(This introduction of case relations as nodes in the

categorial component violates Chomsky's (1965:141) dictum that the phrase structure component should be essentially categorial in nature; that it should introduce the basic (presumably universal) categories, arrayed in a kind of abstract, underlying order and that functional information, notions such as 'subject of' and 'object of' should be defined by the dominance relations obtaining in the deep structure. Fillmore realizes that he is mixing categorial and functional information in the base rules, but feels that the advantages, in terms of integrating the syntactically important case relations into the grammar, outweigh the disadvantages.)

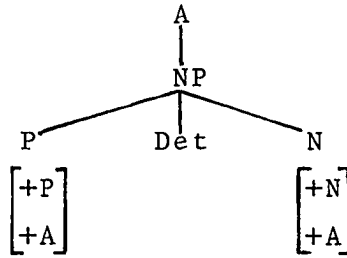
Each case is then unarily rewritten as NP:

$$(3) \left\{ \begin{array}{c} A \\ O \\ I \\ D \end{array} \right\} \rightarrow \text{NP}$$

Noun phrases are assumed to have prepositions built into them:

$$(4) \text{NP} \rightarrow \text{P (Det) (S) N}$$

thus obliterating the distinction between noun phrases and prepositional phrases. By convention, the lexical categories P and N within the same NP will automatically be assigned the feature of the case dominating that NP. An Agentive (A) would therefore assign the feature [+A] to the P and N of the NP it dominates:



so that an N would be properly paired with the appropriate P.

In The Case for Case Fillmore (1968:32-33) modifies slightly the apparatus for introducing case markers. The rule is

$$(5) \left\{ \begin{array}{c} A \\ O \\ I \\ \vdots \end{array} \right\} \rightarrow K \text{ NP}$$

where K (for Kasus) indicates the kind of case marking (preposition, postposition, affix) called for by a particular language.

Once all necessary constituents and case relationships have been introduced by the categorial component, some kind of apparatus is needed to convert the resulting deep structures into surface structures. In his April 1970 lectures Fillmore suggested what such an apparatus might look like for English. Basically, it consisted of fourteen rules, some of them transformational and some of them label-changing devices, to be applied cyclically from the outermost embedded sentence up through the matrix sentence. Since Fillmore emphasized the highly tentative nature of these rules as well as his own dissatisfaction with them, and since, in any case, they will not be used in this model, they will not

be discussed further here.

This programmatic model of Fillmore's appears to have two major defects: first, it mixes, within the categorial component, categorial and functional information; second, the apparatus for converting deep case constituents into their surface realizations - a mixture of true transformations and what are essentially ad hoc devices for changing labels - seems to be unnecessarily clumsy.

4.3 Case Relations as Lexical Features

In lectures and seminars at the University of Hawaii, Stanley Starosta has suggested that both case relations and their surface realizations might be introduced into the grammar as syntactic features on nouns. That is, just as, say, for English, most nouns can be either positively or negatively specified for plurality, so could they be positively or negatively specified for case relations; and, since case relations must be "carried" by surface forms (case realizations), every noun would have both case relation and case realization features - the one specifying its syntactic functions, the other its surface marking. Nouns would acquire such case features by the application of lexical redundancy rules (discussed in 4.6 below). Verbs could then be subcategorized in terms of the case features carried by the nouns with which they co-occur.

The principal advantage of this approach is that it avoids the necessity for introducing case relations as

categories of the phrase structure component and thus preserves the essentially categorial nature of this component. It also allows the capturing of cross-language generalizations concerning the relationships between case relations and case forms.

One problem would be that of assigning case relations to constituents which are not nouns, or do not have heads which are nouns - namely embedded sentences. (Fillmore considers embedded sentences to result from recursion through the OBJECTIVE case.) In the present model, however, the problem is provisionally avoided by considering sentences as complements, as not having case at all.

It will be appropriate, at this point, to define the terms used for case in this study and to pinpoint the ways in which they differ from the analogous terms as used by Fillmore.

Actant: An actant is a noun phrase the head noun of which has both case relation and case realization features. (See Fillmore 1966:7)

Case Relation: A case relation is a syntactic relation which a verb contracts with one or more actants.

Case Relization: A case realization (or case form - the two will be used synonymously) is the overt form through which one or more case relations are realized. (Case realizations may be indicated by such devices as affixes, prepositions, postpositions, or obligatory syntactic position.) Every

case realization must correspond to some overt marking. It is not the case that case relation somehow corresponds to Fillmore's "deep" case while case realization corresponds to Fillmore's "surface" case. Both case relations and case realizations are surface phenomena which are acquired by nouns as lexical features. Case relations are syntactically crucial in that they determine verb subcategorization. Case realizations, on the other hand, are the vessels which "carry" the case relations, provide their external manifestation. A case realization may never represent more than a single case relation in the same actant but may represent different case relations at different times (in one sentence the case form 'nominative' may represent the case relation AGENTIVE, in another the case relation OBJECTIVE). For this reason, the case relations are somewhat less accessible than the case forms; but this relative inaccessibility results not from any deep structure/surface structure dichotomy, but rather from the fact that they do not always correspond, in one-to-one fashion, with the case forms which represent them.

4.4 Case in Sre

From here on in this study, the following terminological conventions will be observed. Case relations, when mentioned in prose exposition, will be written in capital letters, in full, e.g., AGENTIVE, INSTRUMENTAL, but will be abbreviated when used to indicate a feature, e.g., [+AGT], [-INS]. The full set of case relations posited for Sre, and their

abbreviated forms when used as features, are given below:

| <u>Case Relation</u> | <u>Abbreviation</u> |
|----------------------|---------------------|
| AGENTIVE | AGT |
| OBJECTIVE | OBJ |
| DATIVE | DAT |
| INSTRUMENTAL | INS |
| COMITATIVE | COM |
| LOCATIVE | LOC |
| BENEFACTIVE | BEN |
| SOURCE | SOURCE |
| GOAL | GOAL |
| EXTENT | EXT |
| DIRECTION | DIR |

Case realizations are handled slightly differently. Since each one is phonologically or syntactically specifiable in terms of overt manifestation, a case realization could perfectly well be named after its surface marking. Thus it would be possible to speak of the mə case form, the preverbal case form, or the ?in case form. This is not done in the present study, however. Rather, the name of a case form is determined by the first letter (in upper case) of the case relation which preferentially expresses itself through that case form. For example, both the DATIVE and BENEFACTIVE case relations express themselves through the postposition ?in; but, of the two, the DATIVE is far more important, syntactically, and appears far more often, in terms of

sheer frequency; so the marker would be called the D case form. There are two exceptions to this convention. The case form through which the DIRECTION case relation customarily expresses itself is named Di, to avoid confusion with the D case form. And the case realization which is manifested by preverbal position will be called NM (suggesting 'nominative'); NM is used instead of N to avoid confusion with N as the symbol for Noun.

The main reason for handling it this way, aside from the relatively unimportant factor of mnemonic convenience, is that there appear to be cross-language similarities in the ways case relations are linked with case forms (for example, the well-known tendency in many languages for the INSTRUMENTAL and COMITATIVE both to express themselves through the I case form) and it would not be possible to capture such generalities if the case forms were named after their particular manifestations in particular languages.

The complete set of case forms for Sre, and their overt markings, are as follows:

| <u>Case Form</u> | <u>Indicated By</u> |
|------------------|---|
| NM | position immediately preceding the verb |
| O | position immediately following the verb |
| D | postposition <u>?in</u> |
| I | preposition <u>mə</u> |
| C | preposition <u>ba mə</u> ⁴ |

| | |
|----|------------------------|
| L | preposition <u>tam</u> |
| S | preposition <u>bəh</u> |
| G | preposition <u>tus</u> |
| Di | preposition <u>te</u> |

4.4.1 Identification of Case Relations in Sre

While case realizations are overt phonological or syntactic manifestations, and thus relatively easy to identify, case relations are "covert" and therefore have to be inferred. Case relations can not be inferred from semantic criteria alone: rather, they must be identified on the basis of overt, observable syntactic behavior. (Once identified and segregated on the basis of syntactic behavior, however, they are assigned names which most closely approximate their semantic character, as in 4.2 above.) In case the syntactic criteria are not decisive, resort may be had to examples from other languages, since case phenomena are assumed to be universal in language. If this is done, though, the results must at least be compatible with the syntactic facts.

In order to identify Sre case relations, case forms are examined to see how many case relations they can serve as conduit for. The principal method used has been to observe the differences in the syntactic behavior of actants when they are transposed by such processes as passivization and causativization. Actants behaving similarly are assumed to have been governed by the same case relation.

4.4.11 AGENTIVE, OBJECTIVE, DATIVE, and INSTRUMENTAL Case Relations

Fillmore has shown that, for English, the nominative case form - the 'subject' of a sentence - actually represents a neutralization of four different case relations. Sre appears to exhibit the same phenomenon. The case realization NM corresponds to four case relations, which can shown to be distinct by their differing behavior when transposed to another position. These four, provisionally labelled Group I, Group II, Group III, and Group IV, are discussed below, with illustrative sentences.

Group I The NM noun disappears entirely when displaced from its original position, in corresponding causative and passive sentences.

- | | |
|----------------------|------------------------------------|
| (1) khay pà? mpòŋ. | He opened the door. |
| 1 2 3 | 1 2 3 |
| (2) mpòŋ gəpà?. | The door opened. |
| 1 2 | 1 2 |
| (3) caw pù? ?an. | People beat me. |
| 1 2 3 | 1 2 3 |
| (4) khay tənpu? ?an. | He caused {people } to beat me. |
| 1 2 3 4 | 1 2 3 4 |

In (2) there is no way the noun indicating the person who did the opening can be reintroduced into the sentence in another position (as is possible, say, in English - "The door was opened by him"); if it is displaced, it simply disappears. Similarly, in sentence (4), it is not possible to indicate the person(s) doing the beating; the caw of (3)

Conversely, the OBJECTIVE case relation is describable in terms of the following syntactic behavior: it may be realized through the NM case form, if no AGENTIVE or DATIVE is present; if displaced from the NM position by causativization or passivization, it may be realized through the O case form. If neither NM nor displaced from the NM position, it is realized through the O case form.

NM nouns exhibiting the characteristics of Group IV did so because they had the INSTRUMENTAL case relation feature. Conversely, the INSTRUMENTAL case relation is describable in terms of the following syntactic behavior: it may be realized through the NM case form if no AGENTIVE or DATIVE is present; if displaced it may be realized through the I case form; if neither NM nor displaced, it may be realized through the I case form.

4.4.12 BENEFACTIVE Case Relation

I have not been able to find any really solid syntactic evidence for the existence of the BENEFACTIVE case relation. It could be argued, though, that since BENEFACTIVE occurs commonly in languages and is a putative universal, its presence in Sre could be expected. The informant, moreover, consistently distinguishes - in a way corresponding to the semantic functions of the two case relations - between "the ?in meaning 'to' and the ?in meaning 'for'." If it does exist, BENEFACTIVE is realized through the D case form. One slender bit of syntactic evidence is that when displaced

from the NM case form, the resulting actant never has the meaning 'for X' or 'for the sake of X'. This would seem to suggest that the DATIVE case relation can be carried by either the NM or D case forms but that the BENEFACTIVE can only be realized through the D case form. In this study, I will assume that the BENEFACTIVE does exist, but that it can be realized only through the D, never through the NM case form.

4.4.13 COMITATIVE Case Relation

The COMITATIVE case relation is posited on the basis of having a distinct overt realization, namely the C case form bal mə, as in the sentence

- (19) ʔap lət hə dāʔlác bal mə I went to Dalat with my
 1 2 3 4 5 1 2 3 4 5 7
 gəp ʔap. friend.
 6 7 6

The same sense could be expressed in

- (20) ʔap lət hə dāʔlác mə gəp ʔap.

where the I case form mə is used instead of the C case form bal mə. However, when both COMITATIVE and INSTRUMENTAL actants occur, as in

- (21) ʔap lət hə dāʔlác mə I went to Dalat by car with
 1 2 3 4 5 1 2 3 4 5 6 7
 rəndəh bal mə gəp ʔap. my friend.
 6 7 8 9 9 8

it becomes clear that the COMITATIVE was only being realized through the I case form; adding an INSTRUMENTAL actant forced realization of the underlying COMITATIVE through the

C case form.

We may say, then, that the COMITATIVE case relation can be realized through the I or C case forms provided there is no INSTRUMENTAL actant in the same sentence; if there is, the COMITATIVE is realized only through the C case form. (Cf. 'with' and 'by' in English.)

4.4.14 LOCATIVE Case Relation

The LOCATIVE case relation is posited on the basis of its having a distinct, overt realization, namely the L case form tam (or hə)⁶, as in

- | | | | | | | | | | |
|------|-----|-----|--------|-----|------|----|-----------|---------|----------|
| (22) | ʔəh | ʔap | bəsram | tam | mìh. | My | (younger) | brother | is |
| | 1 | 2 | 3 | 4 | 5 | 2 | | 1 | |
| | | | | | | | studying | in | America. |
| | | | | | | | 3 | 4 | 5 |
-
- | | | | | | | | | | | | |
|------|------|-----|-----|----|-----|----|------|----|----|------|--------|
| (23) | sraʔ | ʔap | lah | hə | ɗaŋ | My | book | is | on | that | table. |
| | 1 | 2 | 3 | 4 | 4 | 2 | 1 | 3 | 4 | 6 | 5 |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
-
- | | | |
|--|--------|-----|
| | cəndəŋ | nɛ. |
| | 5 | 6 |

4.4.15 EXTENT Case Relation

The EXTENT case relation is posited on the basis of the fact that, although it does not have a distinct overt realization (it is realized through the L case form) it does exhibit distinct syntactic behavior. When the L case represents LOCATIVE, the preposition tam is obligatory, as in,

- | | | | | | | | | | |
|------|------|-----|-----|------|----|-------|----|-----|----------|
| (24) | khay | ʔəm | tam | ɓòŋ. | He | lives | in | the | village. |
| | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | |

but when it represents EXTENT, its use is optional, as in,

(36) [SOURCE/time]

| | | | | | | | | | |
|------|-----|-------|-----|-------|----|-----|------|----------|-------|
| khay | ləh | brwa? | bəh | drim. | He | has | been | working | since |
| 1 | 2 | 3 | 4 | | 1 | 2 | 3 | | |
| | | | | | | | | morning. | |
| | | | | | | | | 4 | |

(37) [GOAL/space]

| | | | | | | | |
|------|-----|-----|---------|----|------|----|--------|
| khay | lət | tus | dà?lác. | He | went | to | Dalat. |
| 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |

(38) [GOAL/time]

| | | | | | | | | |
|------|-----|-------|-----|------|----|--------|-------|----------|
| khay | ləh | brwa? | tus | mho. | He | worked | until | evening. |
| 1 | 2 | 3 | 4 | | 1 | 2 | 3 | 4 |

In Chapter 5 the actual mechanics of how nouns acquire case relations and case forms and how the two systems are linked will be developed more fully. Here the goal has been simply to suggest, through syntactic evidence, the existence of the case relations.

4.5 The Role of the Lexicon

In Aspects, the job of accounting for compatibility among lexical items and their insertability into deep structures was divided between the phrase structure rules and the lexicon. That is, the phrase structure rules generated not only deep structures but also complex symbols which incorporated - in the form of features - semantic, strict subcategorizational, and selectional information concerning the terminal symbols. Entries in the lexicon were also specified for this same information (in addition to other needed features). And a lexical item was insertable into a deep structure just in case its features were not distinct from

those of the complex symbol.

In this model, the phrase structure rules will not be concerned at all with subcategorization or with the addition of features to lexical items but will function solely as a device for introducing the basic categories and displaying them in a kind of elementary, abstract order and hierarchy. The job of assigning the full complement of features - semantic features, rule features of various kinds, strict subcategorizational and selectional features - to lexical items will devolve upon the lexicon. The lexicon, in other words, will generate syntactically fully specified lexical items.

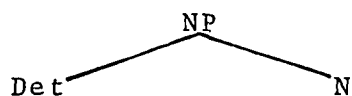
The lexicon will be composed of lexical entries and redundancy rules. In describing how lexical entries and redundancy rules are arrived at, the nature of both and their relationship to each other will be made clear. Let us assume, in the beginning, a lexicon composed solely of lexical items which have been fully specified as to syntactically pertinent features. Many of the features would be found to be common to classes and subclasses of items, therefore to be redundant, i.e., inferrable from the presence of other features. Most nouns in English, for example, can occur in either the singular or plural. If all were fully specified, it would be necessary to list not only book but also books, and so forth. On the other hand, if this fact is abstracted and stated once as a redundancy rule (in the

form, say, of [+N] → [\pm plural]), this would both capture the generality that nouns in English (with a handful of exceptions not germane to this discussion) can be either singular or plural and permit a significant conflation in the size of the lexicon. Once all possible generalities had been abstracted, not only would the absolute number of lexical items have contracted but those remaining (the lexical entries) would contain only the bare minimum of unpredictable features (cf. Bloomfield 1933:274). From the bare minimum of features could be inferred, via the redundancy rules, the full set of lexical items with complete feature specifications.

Actually, redundancy rules can be looked at in two ways: in one view, they constitute a list of all the linguistically significant generalizations obtaining among lexical items and classes of lexical items; in another view, they constitute a kind of mechanism - a set of rules - for "fleshing out" lexical entries to fully specified lexical items.

Once all redundancy rules had applied to a lexical entry, it would be considered syntactically as a fully specified lexical item. At this point, lexical items can be inserted into the trees generated by the categorial component. They may be inserted, no matter what their features, if they are compatible with the other lexical items dominated by the same node, that is, provided they are not oppositely specified for the same feature, and do not violate any

contextual feature. To illustrate, if a French NP had the structure



and the noun plume 'pen' had the feature [+feminine], then the Det la 'the' could be inserted because the shared feature [feminine] was specified '+' for both. But le 'the' could not because the feature it shares with plume, [feminine] is negatively specified for this feature. Compatibility does not require that all lexical items dominated by the same node have identical features (for example la is [+Det], while plume is [+N]), but only that they are not oppositely specified for a shared feature. Within these constraints, lexical insertion is totally random.

To recapitulate the working of the base component in the lexicase model: The categorial component generates all and only the well-formed phrase markers (or trees), which display both the linear and hierarchical relationships among sentence constituents. The lexicon, made up of lexical entries and lexical redundancy rules, generates the entire set of fully specified lexical items. These lexical items are then randomly inserted into the trees just so long as their feature complexes are syntactically compatible (in the sense described above). The resulting syntactically well-formed deep structures then serve as the input for the phonological component.

4.6 Definitions, Notations, Conventions

The first person to apply the ideas and suggestions of Starosta in any extended study of a particular language was Harvey Taylor (Taylor, 1971). Thus all of the formalisms and conventions concerned with lexical items and redundancy rules which are presented below are (with minor differences of wording and emphasis) essentially those developed by Taylor. Most of the terms have been discussed informally before in this chapter but it will be appropriate at this point to present them again below, this time as formal definitions.

"Lexical Entry" Defined: A lexical entry is a minimally specified abbreviation of one or more fully specified lexical items; it is the underlying representation of a word.

"Lexical Item" Defined: A lexical item is the representation, in a grammar, of a 'minimum free form'. It is a lexical entry to which one or more features have been added by redundancy rules. Technically speaking, then, a lexical item may range from partially specified to fully specified. Usually it will be clear from context whether "lexical item" means "fully specified" or applies to some intermediate stage. In a statement such as "Rule X adds the feature [+Y] to the lexical item", it is obvious that the lexical item in question is not yet fully specified. Similarly, when talking about insertion into trees, it will be obvious that "lexical item" implies its fully specified form. Accordingly, the

qualifying phrases "partially specified" or "fully specified" will be used only when, otherwise, some ambiguity might result.

"Lexical Category" Defined: The term "lexical category" can be understood in two senses - as one of the terminal nodes of a tree generated by the phrase structure rules (e.g., N, V, etc.) or as a class of lexical items having the feature of such a node (e.g., [+N], [+V], etc.).

"Class of Lexical Items" Defined: A class of lexical items is a group of lexical items which share at least one feature in common. Thus, [+proper] defines the class of lexical items having this feature. So also do [+N] and [+V], and, in this sense, the term "class of lexical items" includes "lexical category", but not vice versa.

"Fully Specified" Defined: The term "fully specified", when applied to a lexical item, means that all applicable redundancy rules have applied and that the item has acquired all the features it needs, syntactically, for insertion into a deep structure. It does not mean that the item is fully specified semantically. In this study, which is not concerned with the non-syntactic aspects of semantic specification, the gloss will "stand for" the full set of semantic features. Henceforth, therefore, when using the term "fully specified", the disclaimer about applying only to syntactically necessary features will be omitted.

rules, the arrows have "feathers" [\rightrightarrows].

"Lexicon" Defined: The lexicon consists of a set of lexical entries and a set of context-free redundancy rules. The redundancy rules operate upon the lexical entries to generate the complete set of fully specified lexical items.

"Insertability" Defined: Insertability means the capacity for a lexical item to be inserted into a tree under an appropriate node at any time provided it is not oppositely specified for a feature it shares with another lexical item governed by the same parent node, and provided it does not violate any contextual feature.

The notations regarding case relations and case forms have already been described above. The following notational distinctions should also be noted: (1) terminal symbols of the phrase structure rules will be written with the first letter capitalized and the rest, if any, in lower case letters (e.g., N, V, Adj); (2) semantic features will be written entirely in lower case letters; (3) rule features will be all in capital letters and the last element will always be ..RULE, as in [+ADVRULE] mentioned above; (4) lexical redundancy rules will be abbreviated LR so that, when referring to particular rules, it will be sufficient to say LR-5, LR-41, and so forth; (5) derivational rules will be abbreviated DR; and (6) transformational rules will be abbreviated TR.

Regarding general conventions, the following conventions of Chomsky (1965:111) are adopted in this study:

(1) Every lexical entry positively specified for an applicable lexical category feature, e.g., [+N], is automatically negatively specified for all other such features (e.g., [-V], [-Adj], etc.).

(2) Strict subcategorization is expressed positively; and every lexical item positively specified for a particular environment is automatically negatively specified for all other possible environments.

(3) Selectional⁷ features are expressed in terms of positive or negative specification. Unlike Chomsky's selectional features those used here may refer only to items in sister constituents, and may be positively as well as negatively specified.

4.7 Special Conventions for Redundancy Rules

The application of LR rules is always governed by three conventions (CO), the first two of which are Taylor's. These are given below, directly quoting Taylor 1971 on CO 1 and CO 2.

CO 1: A given LR rule can apply only to a matrix which meets the environmental conditions stated by the symbol(s) within a single set of square brackets to the left of the arrow in that rule. That is, each of these stated symbols with its specified "+" or "-" value must appear in a matrix before the rule in question can apply to that matrix.

CO 2: No LR rule can add to any matrix a feature (regardless of value) already present in that matrix. The portion of any rule which would add such a feature is said to "block" (not apply) because of the presence of the feature in question. Note that this does not prevent the application of other portions of that rule or of subsequent LR rules.

CO 3: Every redundancy rule must apply (vacuously or otherwise) to every lexical entry.

4.8 Rules for Sre Syntax

There are presented on the following pages the full set of rules for Sre syntax. Following the presentation of rules will be a prose discussion of the major points. Chapter 5 will deal with Noun Phrases, and Chapter 6 will deal with verbal constructions.

Phrase Structure Rules

1. $S \rightarrow (\text{Adv})(\text{Aux}^n) \text{NP} (\text{Adv}) \text{V}^n(\left\{ \begin{array}{c} \text{NP} \\ \text{S} \end{array} \right\}) \{ (\text{Adv})(\text{Adv})(\text{PP}^n) \} (\text{Adv})(\text{P})$
2. $\text{PP} \rightarrow (\text{P})\text{NP}(\text{P})$
3. $\text{NP} \rightarrow (\text{Qu}) \text{N} (\text{Adj}^n)(\text{NP})(\text{S})(\text{Det})$
4. $\text{Qu} \rightarrow (\text{Adv}) \text{Adj} (\text{N})$

A. Lexical Redundancy RulesI. Nouns

| | | | |
|--------|---|---|--|
| LR-1 | [±masc] | → | [+addr] |
| LR-2 | $\left\{ \begin{array}{l} [+addr] \\ [\pm spkr] \\ [\pm anim] \end{array} \right\}$ | → | [-proper] |
| LR-3 | [±proper] | → | [-common] |
| LR-4 | $\left\{ \begin{array}{l} [+human] \\ [-human] \\ [+anim] \end{array} \right\}$ | → | [±plural] |
| LR-4.5 | $\left\{ \begin{array}{l} [-anim] \\ [-human] \\ [+prop] \end{array} \right\}$ | → | [-plural] |
| LR-5 | [±place] | → | [-anim] |
| LR-6 | $\left[\begin{array}{l} +cl \\ \pm rso \end{array} \right]$ | → | $\left[\begin{array}{l} -human \\ -measure \end{array} \right]$ |
| LR-7 | $\left[\begin{array}{l} -cl \\ \pm rso \end{array} \right]$ | → | [-rel] |
| LR-8 | [±rel] | → | [-cat] |
| LR-9 | [±cat] | → | $\left[\begin{array}{l} +count \\ -human \end{array} \right]$ |
| LR-10 | [±liquid] | → | [+volume] |
| LR-11 | [±weight] | → | [-volume] |
| LR-12 | [±volume] | → | [+measure] |
| LR-13 | [±measure] | → | [-human] |
| LR-14 | [±ling] | → | [-conc] |
| LR-15 | [±conc] | → | [+common] |
| LR-16 | [±common] | → | [+N] |
| LR-17 | $\left\{ \begin{array}{l} [+proper] \\ [-proper] \\ [-human] \end{array} \right\}$ | → | [+___] |

| | | | |
|-----------|---|---|--|
| LR-18 | $\begin{bmatrix} -\text{proper} \\ +\text{human} \end{bmatrix}$ | → | $[(+)(\text{Qu}) \text{---} (\text{Det})]$ |
| LR-19 | $[-\text{count}]$ | → | $[-(\begin{bmatrix} +\text{Adj} \\ -\text{DERIV} \end{bmatrix} \text{ \& } \begin{bmatrix} +\text{cl} \\ -\text{measure} \end{bmatrix}) \text{---}]$ |
| LR-20 | $[\text{+cat}]$ | → | $[-[\text{+cl}] \text{---}]$ |
| LR-21 | $[\text{+rel}]$ | → | $\begin{bmatrix} + \begin{bmatrix} +\text{P} \\ +\text{L} \end{bmatrix} \text{---} [\text{+N}] \\ - \text{---} [\quad] [\text{+N}] \end{bmatrix}$ |
| LR-22 | $\left. \begin{bmatrix} -\text{cl} \\ [+human] \\ [-cat] \\ [-count] \\ [-conc] \end{bmatrix} \right\}$ | → | $[-\begin{bmatrix} +\text{Adj} \\ -\text{DERIV} \end{bmatrix} \text{---}]$ |
| LR-23 | $[\text{+cl}]$ | → | $\begin{bmatrix} -[\text{+cl}] \text{---} \\ + \text{+Adj} \\ -\text{DERIV} \text{---} \end{bmatrix}$ |
| LR-24 (a) | $\begin{bmatrix} +\text{cl} \\ \text{ahuman} \end{bmatrix}$ | → | $[\text{+---} \begin{bmatrix} +\text{N} \\ \text{ahuman} \end{bmatrix}]$ |
| LR-24 (b) | $\begin{bmatrix} +\text{cl} \\ \text{arsq} \end{bmatrix}$ | → | $[\text{+---} \begin{bmatrix} +\text{N} \\ \text{arsq} \end{bmatrix}]$ |
| LR-24 (c) | $\begin{bmatrix} +\text{cl} \\ \text{aling} \end{bmatrix}$ | → | $[\text{+---} \begin{bmatrix} +\text{N} \\ \text{aling} \end{bmatrix}]$ |
| LR-24 (d) | $\begin{bmatrix} +\text{cl} \\ \text{aliquid} \end{bmatrix}$ | → | $[\text{+---} \begin{bmatrix} +\text{N} \\ \text{aliquid} \end{bmatrix}]$ |
| LR-24 (e) | $\begin{bmatrix} +\text{cl} \\ \text{aweight} \end{bmatrix}$ | → | $[\text{+---} \begin{bmatrix} +\text{N} \\ \text{aweight} \end{bmatrix}]$ |
| LR-25 | $[\text{+N}]$ | → | $\begin{bmatrix} - \text{---} \begin{bmatrix} +\text{Adj} \\ +\text{DERIV} \\ +\text{quant} \end{bmatrix} \\ - \begin{bmatrix} +\text{Adj} \\ +\text{DERIV} \\ -\text{quant} \end{bmatrix} \text{---} \end{bmatrix}$ |
| LR-26 | $[\text{+N}]$ | → | $[\pm\text{NM}]$ |
| LR-27 | $[\text{+NM}]$ | → | $[-\text{O}, -\text{D}, -\text{I}, -\text{C}, -\text{L}, -\text{S}, -\text{G}, -\text{Di}]$ |
| LR-28 | $[-\text{NM}]$ | → | $[\pm\text{O}]$ |

| | | | |
|-------|--|---|-------------------------------|
| LR-29 | [+0] | → | [-D, -I, -C, -L, -S, -G, -Di] |
| LR-30 | [-0] | → | [±D] |
| LR-31 | [+D] | → | [-I, -C, -L, -S, -G, -Di] |
| LR-32 | [-D] | → | [±I] |
| LR-33 | [+I] | → | [-C, -L, -S, -G, -Di] |
| LR-34 | [-I] | → | [±C] |
| LR-35 | [+C] | → | [-L, -S, -G, -Di] |
| LR-36 | [-C] | → | [±L] |
| LR-37 | [+L] | → | [-S, -G, -Di] |
| LR-38 | [-L] | → | [±S] |
| LR-39 | [+S] | → | [-G, -Di] |
| LR-40 | [-S] | → | [±G] |
| LR-41 | [+G] | → | [-Di] |
| LR-42 | [-G] | → | [±Di] |
| LR-43 | [-Di] | → | [-k] |
| LR-44 | [+NM] | → | [±AGT] |
| LR-45 | [-AGT] | → | [±OBJ] |
| LR-46 | [-OBJ] | → | [±DAT] |
| LR-47 | [-DAT] | → | [+INS] |
| LR-48 | [+0] | → | [+OBJ] |
| LR-49 | [+D] | → | [±DAT] |
| LR-50 | $\left[\begin{array}{l} +D \\ -DAT \end{array} \right]$ | → | [+BEN] |
| LR-51 | [+I] | → | [±INS] |
| LR-52 | $\left[\begin{array}{l} +I \\ -INS \end{array} \right]$ | → | [+COM] |
| LR-53 | [+C] | → | [+COM] |

| | | | |
|-------|--|---|--|
| LR-54 | [+L] | → | [±LOC] |
| LR-55 | $\begin{bmatrix} +L \\ -LOC \end{bmatrix}$ | → | [±DIR] |
| LR-56 | $\begin{bmatrix} +L \\ -DIR \end{bmatrix}$ | → | [+EXT] |
| LR-57 | [+S] | → | [+SOURCE] |
| LR-58 | [+G] | → | [+GOAL] |
| LR-59 | [+Di] | → | [+DIR] |
| LR-60 | $\begin{bmatrix} +L \\ \{ [+LOC] \} \\ \{ [+EXT] \} \end{bmatrix}$ | → | [±time] |
| LR-61 | [+NM] | → | [+___ [+V]] |
| LR-62 | [+O] | → | [[+N] [+V] ___] |
| LR-63 | [+D] | → | [+ ___ [+P]] |
| LR-64 | $\left. \begin{array}{l} [+I] \\ [+C] \\ \begin{bmatrix} +L \\ +LOC \end{bmatrix} \\ [+S] \\ [+G] \\ [+Di] \end{array} \right\}$ | → | $\begin{bmatrix} +[+P] \text{ --- } \\ -[+P] [\text{ --- }] \end{bmatrix}$ |
| LR-65 | $\begin{bmatrix} +L \\ +EXT \end{bmatrix}$ | → | $\begin{bmatrix} [±P] \text{ --- } \\ - \text{ --- } [+V] \end{bmatrix}$ |

II. Verbs

| | | | |
|-------|---|---|----------|
| LR-66 | [±inchoate] | → | [+equat] |
| LR-67 | [±nom] | → | [-equat] |
| LR-68 | [±equat] | → | [+cop] |
| LR-69 | $\left. \begin{array}{l} [+abil] \\ [+necc] \\ [+perm] \\ [+att] \\ [+acc] \\ [+comp] \end{array} \right\}$ | → | [+cvb] |

| | | | |
|---------|---|---|---|
| LR-70 | [±quant] | → | [+stative] |
| LR-71 | [±stative] | → | [-cvb] |
| LR-72 | [±cvb] | → | [-cop] |
| LR-73 | [±cop] | → | [+V] |
| LR-73.5 | [+V] | → | [-comp] |
| LR-74 | [+V] | → | [+___([+LOC])] |
| LR-75 | [+ $\begin{bmatrix} +NM \\ +AGT \end{bmatrix}$ ___] | → | [+___[+OBJ]] |
| LR-76 | [+ $\begin{bmatrix} +NM \\ +AGT \end{bmatrix}$ ___[+OBJ]] | → | [+___([+INS])] |
| LR-77 | [+ $\begin{bmatrix} +NM \\ \{ [+OBJ] \\ [+DAT] \\ [+INS] \} \end{bmatrix}$ ___] | → | [-___[+AGT]] |
| LR-78 | [+___[+DAT]*] | → | [-___[+BEN]] |
| LR-79 | [-___[+DAT]*] | → | [+___([+BEN])] |
| LR-80 | [+___[+DAT]*] | → | [-___[+DIR]] |
| LR-81 | [+ $\begin{matrix} +NM \\ +INS \end{matrix}$ ___] | → | [+___[+OBJ]] |
| LR-82 | [-___[+EXT]] | → | [-___ $\left\{ \begin{matrix} [+SOURCE] \\ [+GOAL] \end{matrix} \right\}$] |
| LR-83 | [+cop] | → | $\left[\begin{array}{l} - \left\{ \begin{matrix} [+cop] \\ [+cvb] \\ [-stative] \end{matrix} \right\}^* \\ + \left\{ \begin{matrix} [-k] \\ [+LOC] \\ [+stative] \\ [-quant] \end{matrix} \right\} \\ - [+Aux] _ \end{array} \right]$ |
| LR-84 | [+inchoate] | → | [-___ $\left\{ \begin{matrix} [+LOC] \\ [-cvb] \end{matrix} \right\}$] |
| LR-85 | [+nom] | → | [-___ $\left\{ \begin{matrix} [+LOC] \\ [-cvb] \end{matrix} \right\}$] |

| | | | |
|--------|--|---|--|
| LR-86 | [-nom] | → | $[- \text{---} \begin{bmatrix} +N \\ -k \end{bmatrix}]$ |
| LR-87 | [+cvb] | → | $\left[\begin{array}{l} - \text{---} \left\{ \begin{array}{l} [+stative] \\ [+cop] \end{array} \right\} * \\ + \text{---} [-stative] \end{array} \right]$ |
| LR-88 | [+abil] | → | $[- \text{---} \left. \begin{array}{l} [+necc] \\ [+perm] \\ [+acc] \\ [+abil] \end{array} \right\}]$ |
| LR-89 | [+necc] | → | $[- \text{---} \left. \begin{array}{l} [+perm] \\ [+necc] \end{array} \right\}]$ |
| LR-90 | [+perm] | → | $[- \text{---} \left. \begin{array}{l} [+abil] \\ [+perm] \\ [+necc] \\ [+acc] \end{array} \right\}]$ |
| LR-91 | [+att] | → | $[- \text{---} \left. \begin{array}{l} [+necc] \\ [+perm] \\ [+att] \end{array} \right\}]$ |
| LR-92 | [+acc] | → | $[- \text{---} \left. \begin{array}{l} [+necc] \\ [+perm] \\ [+acc] \end{array} \right\}]$ |
| LR-93 | [+comp] | → | $[- \text{---} \left. \begin{array}{l} [+necc] \\ [+perm] \\ [+comp] \end{array} \right\}]$ |
| LR-94 | $\left\{ \begin{array}{l} [+abil] \\ [+necc] \end{array} \right\}$ | → | $[- \text{---} [+cvb] [+acc]]$ |
| LR-95 | [+perm] | → | $[- \text{---} [+cvb] [+comp] *]$ |
| LR-96 | [+att] | → | $[- \text{---} [+acc] [+comp] *]$ |
| LR-97 | [+acc] | → | $[- \text{---} [+att] [+comp] *]$ |
| LR-98 | [+comp] | → | $[- \text{---} [+att] [+acc] *]$ |
| LR-99 | [+necc] | → | $[- \text{---} \{ [+att] [+comp] \} * [+cvb]]$ |
| LR-100 | [+att] | → | $[- \text{---} [+cvb] \{ [+acc] [+comp] \} *]$ |
| LR-101 | [+acc] | → | $[- \text{---} [+abil] [+comp] [+att]]$ |

| | | | |
|--------|--|---|---|
| LR-102 | [+stative] | → | $\left[\begin{array}{l} -[+Aux] \text{---} \\ - \text{---} [+OBJ] \\ \text{---} [-stative] \\ \text{---} +Adv \\ \text{---} \left\{ \begin{array}{l} [+DERIV] \\ [+sentin] \end{array} \right\} \end{array} \right]$ |
| LR-103 | $\left[+ \left\{ \begin{array}{l} [+AGT] \\ [+DAT] \\ [+INS] \end{array} \right\} \text{---} [+OBJ] \right]$ | → | $\left[- \left[+ \left\{ \begin{array}{l} [+AGT] \\ [+DAT] \\ [+INS] \end{array} \right\} \text{---} [+OBJ] \text{---} \right] \right]$ |
| LR-104 | [-stative] | → | $\left[- \left\{ \begin{array}{l} [+stative] \\ + \left\{ \begin{array}{l} [+NM] \\ [+OBJ] \end{array} \right\} \text{---} \\ - \left\{ \begin{array}{l} +L \\ +DIR \end{array} \right\} \end{array} \right\} \right]$ |
| LR-105 | [-stative] | → | $\left[- \left[-stative \right] [-stative] \text{---} \right]$ |
| LR-106 | [+exist] | → | $\left[- \left[+NM \right] \text{---} \right]$ |
| LR-107 | $\left[\begin{array}{l} -stative \\ + \left\{ \begin{array}{l} +NM \\ +OBJ \end{array} \right\} \text{---} \end{array} \right]$ | → | $\left[\pm CAUSRULE \right]$ |
| LR-108 | $\left[+ \left\{ \begin{array}{l} +NM \\ +INS \end{array} \right\} \text{---} [+OBJ] \right]$ | → | $\left[\pm PASSRULE \right]$ |
| LR-109 | $\left[\begin{array}{l} +stative \\ -quant \end{array} \right]$ | → | $\left[\pm ADJRULE \right]$ |
| LR-110 | $\left[\begin{array}{l} +stative \\ -quant \end{array} \right]$ | → | $\left[\pm ADVRULE \right]$ |

III. Adjectives

| | | | |
|--------|--|---|---|
| LR-111 | [±num] | → | $\left[\begin{array}{l} +Adj \\ -DERIV \end{array} \right]$ |
| LR-112 | $\left[\begin{array}{l} +Adj \\ -num \end{array} \right]$ | → | $\left[+ \text{---} N \right]$ $\text{---} \left[\begin{array}{l} +N \\ -cl \end{array} \right]$ |
| LR-114 | $\left[\begin{array}{l} +Adj \\ +DERIV \end{array} \right]$ | → | $\left[+Adv \right]$ $\text{---} \left[+nominal \right] \text{---}$ |

| | | | |
|--------|----------------|---|---|
| LR-115 | +Adj -DERIV | → | $\left[\begin{array}{l} \text{---} \left[\begin{array}{l} +N \\ \{ [-c1] \\ [-cat] \} \end{array} \right] \\ \text{---} [\quad] [+N] \\ +Adv \\ \text{---} \left\{ \begin{array}{l} [-restr] \\ [+restr] \\ [-nominal] \end{array} \right\} \text{---} \end{array} \right]$ |
|--------|----------------|---|---|

IV. Determiners

| | | | |
|--------|--------------------------------------|---|--------------|
| LR-116 | [±aft] | → | [+prox spkr] |
| LR-117 | [±prox addr] | → | [-prox spkr] |
| LR-118 | [±prox spkr] | → | [-remote] |
| LR-119 | [±remote] | → | [+def] |
| LR-120 | [±def] | → | [+Det] |
| LR-121 | { [+prox spkr] } { [+prox addr] } | → | [±PRORULE] |

V. Aux

| | | | |
|----------|--|---|--|
| LR-122 | [±past] | → | [+Aux] |
| LR-123 | [-past] | → | [-___[+past]] |
| LR-123.5 | $\left[\begin{array}{l} +Aux \\ \text{QFi} \end{array} \right]$ | → | $\left[\text{---} \left[\begin{array}{l} +Aux \\ \text{QFi} \end{array} \right]^* \right]$ |
| LR-124 | [+Aux] | → | [-___[+Aux][+Aux]*] |

VI. Adverbs

| | | | |
|--------|------------|---|----------|
| LR-125 | [±nominal] | → | [+restr] |
| LR-127 | [±sentin] | → | [+fore] |
| LR-128 | [±manner] | → | [-final] |
| LR-129 | [±final] | → | [-fore] |

| | | | |
|--------|------------|---|---|
| LR-130 | [±fore] | → | [-restr] |
| LR-131 | [±restr] | → | [+Adv] |
| LR-132 | [-sentin] | → | [+___[+V]] |
| LR-133 | [+sentin] | → | [-[]___] |
| LR-134 | [+final] | → | $\left\{ \begin{array}{l} + \text{---} \left[\begin{array}{l} +P \\ +final \end{array} \right] \\ - \text{---} [] \left[\begin{array}{l} +P \\ +final \end{array} \right] \\ - \text{---} [] \end{array} \right\}$ |
| LR-135 | [±manner] | → | [-___[+V]] |
| LR-136 | [+manner] | → | [-[-manner]___] |
| LR-137 | [-nominal] | → | $\left[\begin{array}{l} +[+stative] \text{---} \\ -[+stative] [] \text{---} \end{array} \right]$ |
| LR-138 | [+nominal] | → | $\left[\begin{array}{l} + \text{---} \left[\begin{array}{l} +Adj \\ \left\{ \left[\begin{array}{l} -DERIV \\ +quant \end{array} \right] \right\} \end{array} \right] \\ - \text{---} [] [+Adj] \end{array} \right]$ |

VII. Particles

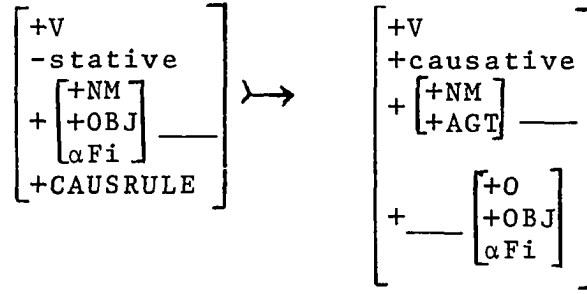
| | | | |
|--------|---|---|---|
| LR-139 | $\left[\begin{array}{l} +Adv \\ +neg \end{array} \right]$ | → | $\left[- \text{---} \left[\begin{array}{l} +P \\ +final \\ +K \end{array} \right] \right]$ |
| LR-140 | $\left[\begin{array}{l} +P \\ +final \\ +K \end{array} \right]$ | → | [+[+addr]___] |
| LR-141 | $\left[\begin{array}{l} +P \\ +final \\ +K \end{array} \right]$ | → | [-[+N]___] |
| LR-142 | $\left[\begin{array}{l} +P \\ +final \\ +K \\ \left\{ \begin{array}{l} \alpha spkr \\ \beta addr \end{array} \right\} \end{array} \right]$ | → | $\left[- \left[\begin{array}{l} +N \\ -proper \\ +NM \\ \left\{ \begin{array}{l} -\alpha spkr \\ -\beta addr \end{array} \right\} \end{array} \right] \text{---} \right]$ |
| LR-143 | $\left[\begin{array}{l} +P \\ +final \end{array} \right]$ | → | $\left[- \frac{NP(P)}{(P)NP} \text{---} \right]$ |

B. Derivational Rules

| | | | |
|----------|-----------------|---------------|--|
| DR-1 | <u>PRORULE</u> | \rightarrow | $\left[\begin{array}{l} +\text{Det} \\ +\text{PRORULE} \\ \alpha\text{Fi} \end{array} \right] \rightarrow \left[\begin{array}{l} +\text{N} \\ +\text{DERIV} \\ -\text{proper} \\ -\text{NM} \\ \alpha\text{Fi} \end{array} \right]$ |
| DR-2 | <u>QRULE</u> | \rightarrow | $\left[\begin{array}{l} +\text{N} \\ +\text{QRULE} \\ \alpha\text{Fi} \end{array} \right] \rightarrow \left[\begin{array}{l} +\text{N} \\ +\text{DERIV} \\ +\text{Q} \\ \alpha\text{Fi} \end{array} \right]$ |
| DR-3 | <u>ADJRULE</u> | \rightarrow | $\left[\begin{array}{l} +\text{V} \\ +\text{stative} \\ +\text{ADJRULE} \\ \alpha\text{Fi} \end{array} \right] \rightarrow \left[\begin{array}{l} +\text{Adj} \\ +\text{DERIV} \\ \alpha\text{Fi} \end{array} \right]$ |
| DR-4 | <u>ADVRULE</u> | \rightarrow | $\left[\begin{array}{l} +\text{V} \\ +\text{stative} \\ +\text{ADVRULE} \\ \alpha\text{Fi} \end{array} \right] \rightarrow \left[\begin{array}{l} +\text{Adv} \\ +\text{DERIV} \\ +\text{manner} \\ \alpha\text{Fi} \end{array} \right]$ |
| DR-5 (a) | <u>PASSRULE</u> | \rightarrow | $\left[\begin{array}{l} +\text{V} \\ + \text{ +NM} \\ + \text{ +INS} \text{ — } [+ \text{OBJ}] \\ +\text{PASSRULE} \end{array} \right] \rightarrow \left[\begin{array}{l} +\text{V} \\ +\text{passive} \\ +\text{Fi} \end{array} \right]$ |
| DR-5 (b) | | \rightarrow | $\left[\begin{array}{l} +\text{V} \\ + \left[\begin{array}{l} +\text{NM} \\ +\text{INS} \\ \alpha\text{Fi} \end{array} \right] \text{ — } \left[\begin{array}{l} +\text{OBJ} \\ \alpha\text{Fj} \end{array} \right] \\ + \text{PASSRULE} \\ \alpha \text{ Fk} \end{array} \right] \rightarrow \left[\begin{array}{l} +\text{V} \\ +\text{passive} \\ \left[\begin{array}{l} +\text{NM} \\ +\text{OBJ} \\ \alpha\text{Fj} \end{array} \right] \text{ — } \left(\left[\begin{array}{l} +\text{INS} \\ \alpha\text{Fi} \end{array} \right] \right) \\ \alpha\text{Fk} \end{array} \right]$ |

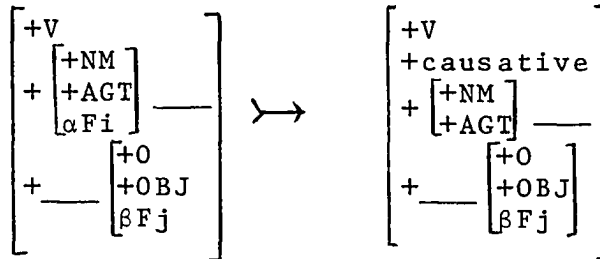
DR-6 (a)

CAUSRULE



DR-6 (b)

CAUSRULE



C. Morphophonemic Rules

MP-1 N → bɔ|+N/[+plural]

MP-2 N → n+N/ $\left[\begin{array}{l} +\text{DERIV} \\ -\text{proper} \end{array} \right]$

MP-3 N → n+N/ $\left[\begin{array}{l} +\text{DERIV} \\ +\text{Q} \end{array} \right]$

MP-4 V → gə+V/[+passive]

MP-5 V → tən+V/[+causative]

D. Transformational RulesTR-1 Equi-NP-Deletion: Relatives

$$\text{SD: } \underset{1}{X} - \underset{2}{\text{NP}} [\underset{3}{\text{U+N+V}} - \underset{4}{\text{S}} [\underset{5}{\text{W - NP - X}}]_{\text{S+Y}}]_{\text{NP+Z}}$$

$$\text{SC: } 1, 2, 3, 4, 5 \implies 1, 2, 3, \emptyset, 5$$

Condition: 2=4

TR-2 Equi-NP-Deletion: Complements

$$\text{SD: } \underset{1}{\text{S}} [\underset{2}{\text{X - NP - Y+V}} - \underset{3}{\text{S}} [\underset{4}{\text{NP - Z}}]_{\text{S-W}}]_{\text{S}}$$

$$\text{SC: } 1, 2, 3, 4, 5, 6 \implies 1, 2, 3, \emptyset, 5, 6$$

Condition: 2=4

TR-3 Q-Noun Permutation (Optional)

$$\text{SD: } \underset{1}{\text{S}} [\underset{2}{\begin{bmatrix} +\text{N} \\ +\text{Q} \end{bmatrix}} - \underset{3}{\text{Y}}]_{\text{S}}$$

$$\text{SC: } \emptyset, 1, 2, 3 \implies 2, 1, \emptyset, 3$$
TR-4 Subject Deletion (Optional)

$$\text{SD: } \underset{1}{\text{S}} [\underset{2}{\text{X - [+NM]}} - \underset{3}{\text{Y - }} \underset{4}{\begin{bmatrix} +\text{P} \\ +\text{final} \\ +\text{K} \end{bmatrix}}]_{\text{S}}$$

$$\text{SC: } 1, 2, 3, 4 \implies 1, \emptyset, 3, 4$$
TR-5 LOCATIVE Permutation (Optional)

$$\text{SD: } \underset{1}{\text{S}} [\underset{2}{\text{X+V+Y}} - \underset{3}{\text{NP}} [\underset{4}{\begin{bmatrix} +\text{L} \\ +\text{LOC} \end{bmatrix}} +\text{W}]_{\text{NP-Z}}]_{\text{S}}$$

$$\text{SC: } \emptyset, 1, 2, 3, \implies 2, 1, \emptyset, 3$$

NOTES TO CHAPTER IV

1. This study will deal only peripherally with the phonological and semantic components.
2. Loc. cit.
3. He uses the term Proposition rather than 'predicate' because the former includes what eventually becomes the subject of the sentence.
4. An alternative way of looking at this case form would be to say that bal (which means 'together') is simply a separate particle which is inserted to prevent confusion whenever INSTRUMENTAL and COMITATIVE actants co-occur in the same sentence. However, bal mə does occur optionally with COMITATIVE actants even when there is no co-occurring INSTRUMENTAL.
5. However, in the following pair of sentences,

| | |
|-----------------------|--------------|
| (13) khay ɲə̀t̚t̚ gə. | He fears it. |
| 1 2 3 | 1 2 3 |

| | |
|---------------------------------|-------------------------|
| (14) ?ap tənɲə̀t̚t̚ gə te khay. | I cause him to fear it. |
| 1 2 3 4 5 | 1 2 5 3 4 |

the displaced NM noun can only be marked by te. There are certain other verbs, in particular verbs representing sensory functions such as sən 'to look at', klɔ 'to hear', and bo 'to smell', which, when displaced, take only te. It is not clear why some displaced NM nouns can acquire either ?in or te while some can only acquire te. The informant's intuition is that this particular te is not the same as the te used in directional

constructions (e.g., khay cəm lu? te gah hiw 'He threw the stone to the side of the house'), that, when acquired by displaced NM nouns, it is somehow "the same" as ?in. This does not explain, however, why a displaced NM noun should take either te or ?in for certain verbs, but only te for others. This is an interesting problem which deserves further study in the future.

6. One problem, which has been avoided up to now because it was not crucial to the discussion at hand and because to have mentioned it earlier might have unnecessarily complicated the presentation of case realizations, is that there are actually two L case forms, tam and hə. However, in LOCATIVE actants they are in complementary distribution: hə is used only with relator nouns (see 5.2.3.2.3), tam elsewhere, as in sentences (22) and (23); while in DIRECTION actants realized through the L case form, they are in free variation, as in sentence (28).
7. Chomsky used selectional features and selectional rules to express both syntactic and semantic co-occurrence restrictions, while in this study, although formally identical, they express only syntactic, and not semantic, co-occurrence restrictions.

CHAPTER V
Noun Phrases

5.0 Nouns

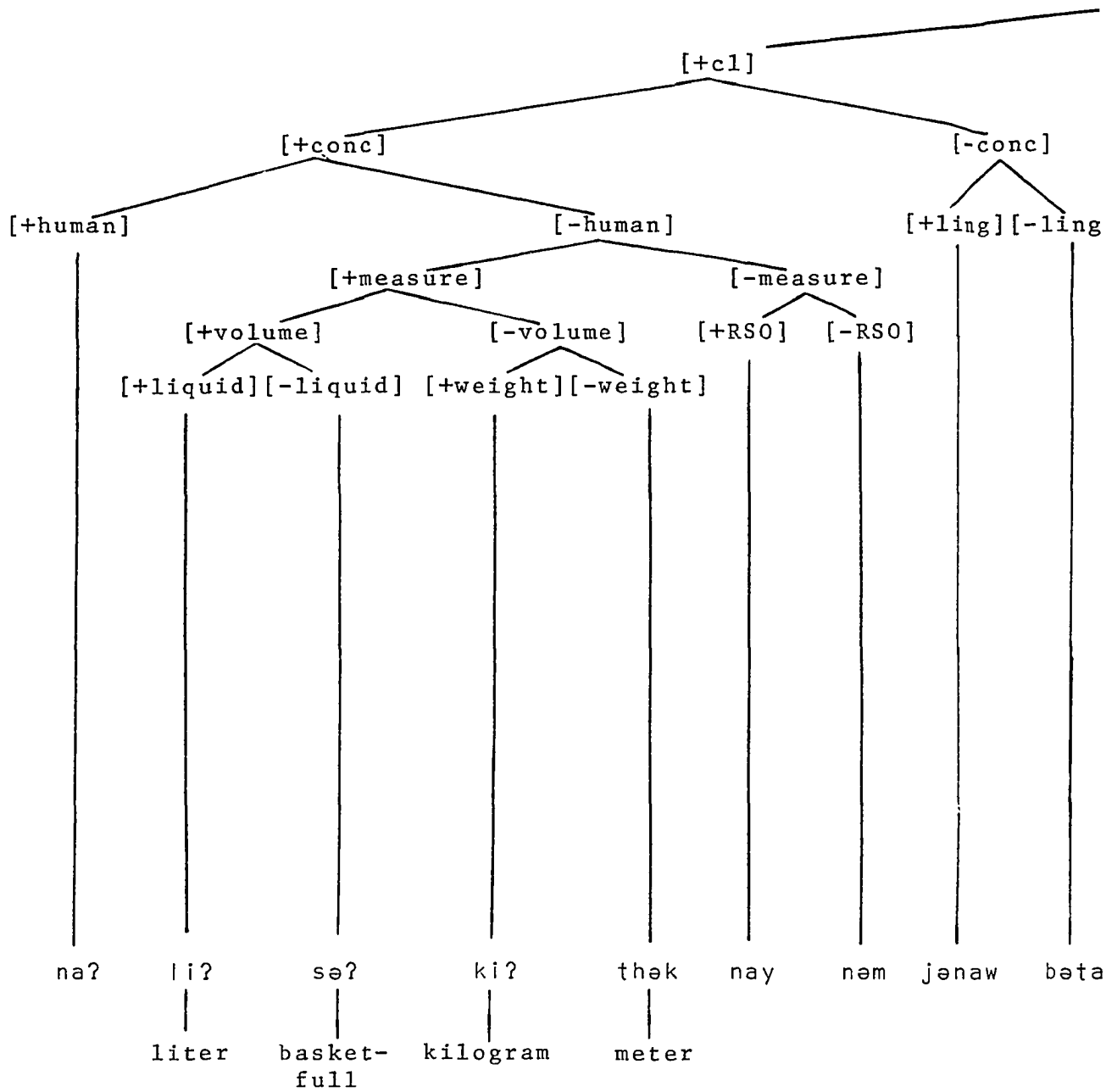
Nouns are the one obligatory constituent of Sre noun phrases. There are thirty-two different kinds of nouns. That is to say, there are thirty-two noun classes, each class having its own syntactic properties, or, expressed in terms of features, each with its own unique set of feature specifications. Figure 1 shows the feature development of Sre nouns in hierarchical form. (Seven of these thirty-two noun classes can take plurals and, to facilitate ease of following, the plural forms have been included in the Figure; thus there are thirty-nine nouns listed instead of thirty-two).

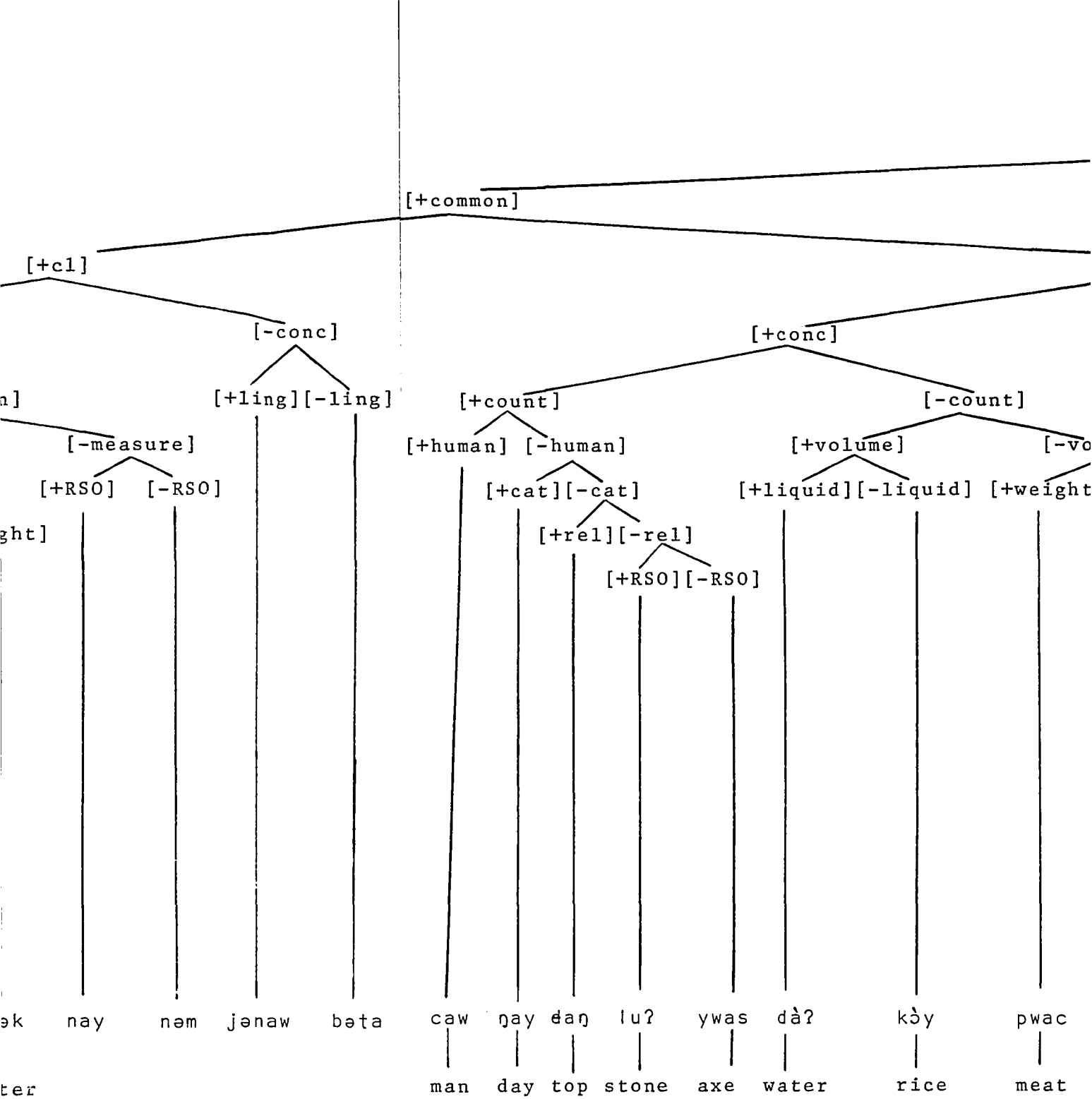
5.1 Noun Classes Exemplified

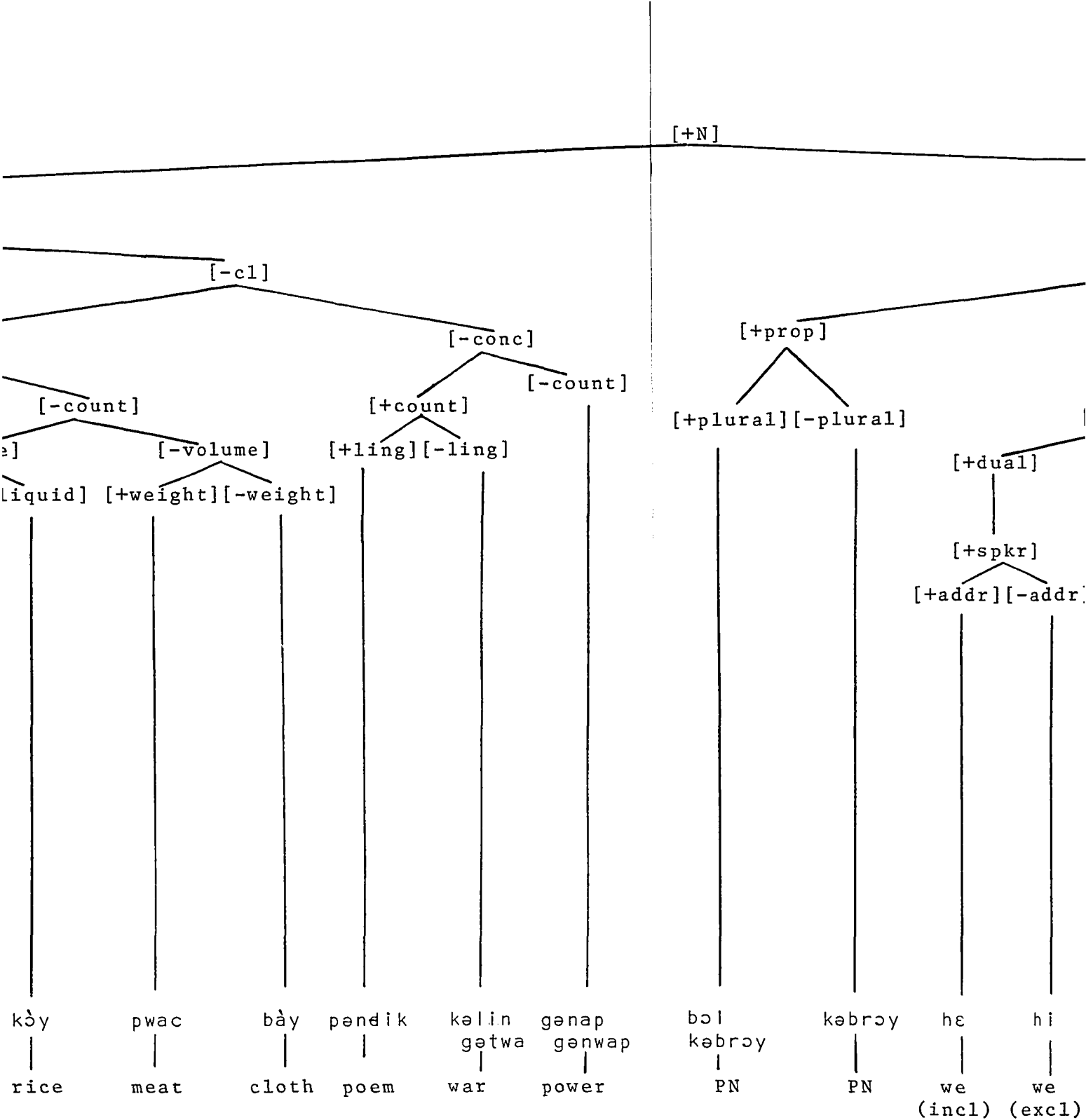
As mentioned above, a lexical entry is an abbreviation for one or more fully specified lexical items. The lexical redundancy rules operate on these minimally specified matrices to add features and expand the number of items. The LR rules for Sre nouns fall into four broad groups. The first group, represented by LR 1-16, adds features to and expands the number of the original matrices in the lexicon. The second group, LR 17-25, specifies the environmental properties (co-occurrence restrictions) of the various lexical items. The third group, LR 26-43, adds case

realization features. The fourth group, LR 44-65, adds features which link the case realization features to the case relation features.

Below are presented the thirty-two types, or classes, of nouns, and their minimal feature specifications, i.e., the specifications they start with as lexical entries before any rules have applied. Glosses are given for convenience, but should be considered only as approximations of the meaning. The full forms of those features which are abbreviated in the following presentation are: Cl=classifier; conc=concrete; rso=roundish, solid object; rel=relator; cat=categorial; ling=linguistic (to cover such things as words, poetry, languages); addr=addressee (second person); spkr=speaker (first person); masc=masculine; and anim=animate.

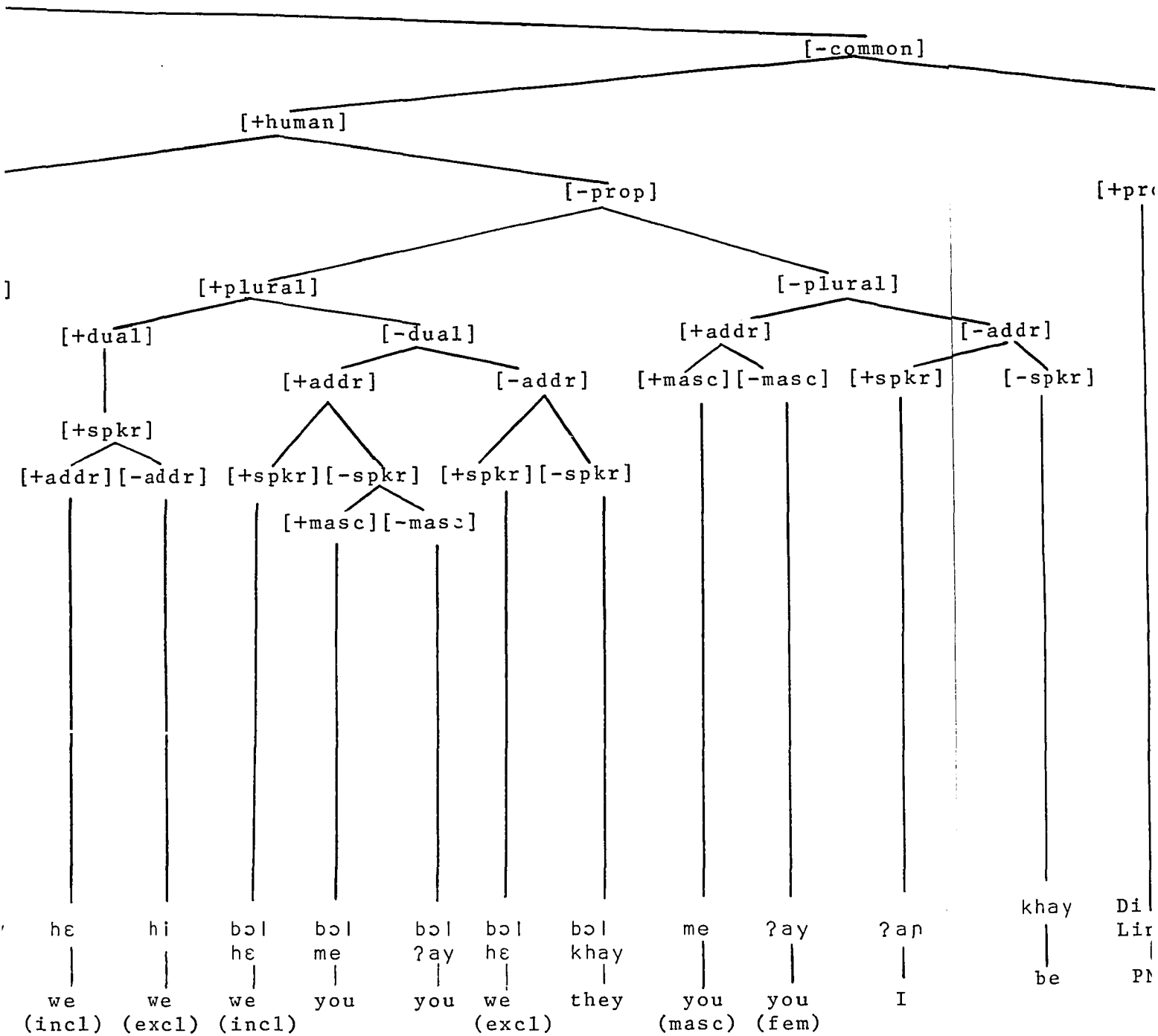




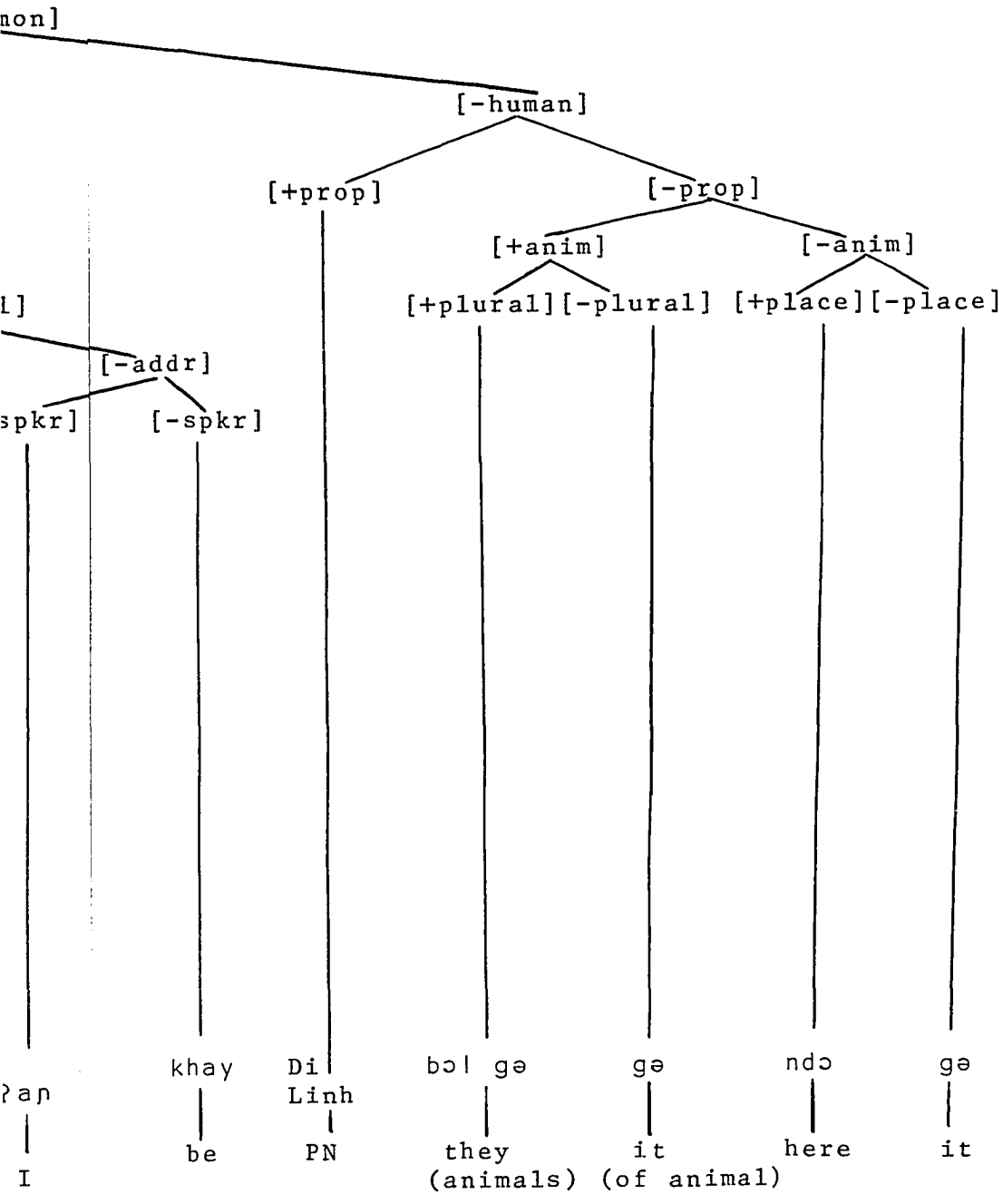


Hierarchical Display of Sre Nouns

Figure 1



uns



- (1) na? 'category of human beings'
 [+C1
 +human
 +conc]
- (2) lit 'liter' (unit of measure for liquids)
 [+C1
 +conc
 +liquid]
- (3) sə? 'basket' (also unit of measure for
 non-liquids)
 [+C1
 +conc
 -liquid]
- (4) ki? 'kilogram' (unit of measure for weight)
 [+C1
 +conc
 +weight]
- (5) thək 'meter' (unit of measure for length)
 [+C1
 +conc
 -weight]
- (6) nay 'category of round, solid objects'
 [+C1
 +conc
 -measure
 +rso]
- (7) nəm 'category of non-human, non-round/solid
 things'
 [+C1
 +conc
 -measure
 -rso]
- (8) jənaw 'category of linguistic things or
 events'
 [+C1
 +ling]
- (9) bəta 'category of non-linguistics things or
 events'
 [+C1
 -ling]

- (10) caw 'person; human being'
 [-cl
 +conc
 +human
 +count]
- (11) ḡay 'day'
 [-cl
 +conc
 +cat]
- (12) daḡ 'the top; the above part (of something)'
 [-cl
 +conc
 +rel]
- (13) luʔ 'rock, stone'
 [-cl
 +conc
 -rel
 +rso]
- (14) ywas 'a kind of axe or scythe'
 [-cl
 +conc
 -rel
 -rso]
- (15) dàʔ 'water'
 [-cl
 +conc
 -human
 -count
 +liquid]
- (16) kḡy 'rice'
 [-cl
 +conc
 -human
 -count
 -liquid]
- (17) pwac 'meat'
 [-cl
 +conc
 -human
 -count
 +weight]

- (18) bày 'cloth'
 [-cl
 +conc
 -human
 -count
 -weight]
- (19) pəndik 'a kind of poem'
 [-Cl
 +count
 +ling]
- (20) kəlin gətwa¹ 'war'
 [-Cl
 +count
 -ling]
- (21) gənap gənwar² 'power'
 [-Cl
 -conc
 -human
 -count]
- (22) kəbrɔy (Proper Name)
 [+proper
 +human]
- (23) hɛ 'we two (inclusive)'
 [+human
 +addr
 +spkr
 +dual]
- (24) hi 'we two (exclusive)'
 [+human
 -addr
 +spkr
 +dual]
- (25) me 'you (singular, masculine)'
 [+human]
 +ma [+human]
 [+masc]
- (26) ?ay 'you (singular, feminine)'
 [+human
 -masc]

- (27) ʔaŋ 'I'
 [+human]
 [-addr]
 [+spkr]
- (28) khay 'he'
 [+human]
 [-addr]
 [-spkr]
- (29) Di Linh (Proper Name; city in Vietnam)
 [-human]
 [+proper]
- (30) gə 'it (of animals)'
 [-human]
 [-proper]
 [+anim]
- (31) ndə 'here'
 [-human]
 [-proper]
 [+place]
- (32) gə 'it (non-animate)'
 [-human]
 [-proper]
 [-place]

5.1.1 Operation of Rules 1-16 Explained

Below are presented the thirty-two classes of nouns, (this time without glosses) with the features of their original matrices and with the new features added by LR 1-16; for new features, the number of the rule(s) which applied will be shown in parentheses. New lexical items will be indicated by (NEW).

- | | | | |
|-----|---|-----|--|
| (1) | <u>na?</u> $\left[\begin{array}{l} +cl \\ +human \\ +conc \\ \\ +common \text{ (LR-15)} \\ +N \text{ (LR-16)} \end{array} \right]$ | (2) | <u>lit</u> $\left[\begin{array}{l} +cl \\ +conc \\ +liquid \\ \\ +volume \text{ (LR-10)} \\ +measure \text{ (LR-12)} \\ -human \text{ (LR-13)} \\ +common \text{ (LR-15)} \\ +N \text{ (LR-16)} \end{array} \right]$ |
| (3) | <u>sə?</u> $\left[\begin{array}{l} +cl \\ +conc \\ -liquid \\ \\ +volume \text{ (LR-10)} \\ +measure \text{ (LR-12)} \\ -human \text{ (LR-13)} \\ +common \text{ (LR-15)} \\ +N \text{ (LR-16)} \end{array} \right]$ | (4) | <u>ki?</u> $\left[\begin{array}{l} +cl \\ +conc \\ +weight \\ \\ -volume \text{ (LR-11)} \\ +measure \text{ (LR-12)} \\ -human \text{ (LR-13)} \\ +common \text{ (LR-15)} \\ +N \text{ (LR-16)} \end{array} \right]$ |
| (5) | <u>thək</u> $\left[\begin{array}{l} +cl \\ +conc \\ -weight \\ \\ -volume \text{ (LR-11)} \\ +measure \text{ (LR-12)} \\ -human \text{ (LR-13)} \\ +common \text{ (LR-15)} \\ +N \text{ (LR-16)} \end{array} \right]$ | (6) | <u>nay</u> $\left[\begin{array}{l} +cl \\ +conc \\ +rso \\ \\ -measure \text{ (LR-6)} \\ -human \text{ (LR-13)} \\ +common \text{ (LR-15)} \\ +N \text{ (LR-16)} \end{array} \right]$ |

- (7) nəm
- | | |
|----------|---------|
| +cl | |
| +conc | |
| -rso | |
| -measure | (LR-6) |
| -human | (LR-13) |
| +common | (LR-15) |
| +N | (LR-16) |
- (8) jənaw
- | | |
|---------|---------|
| +cl | |
| +ling | |
| -conc | (LR-14) |
| +common | (LR-15) |
| +N | (LR-16) |
- (9) βeta
- | | |
|---------|---------|
| +cl | |
| -ling | |
| -conc | (LR-14) |
| +common | (LR-15) |
| +N | (LR-16) |
- (10) caw
- | | |
|---------|---------|
| -cl | |
| +conc | |
| +human | |
| +count | |
| +common | (LR-15) |
| +N | (LR-16) |
- (11) ŋay
- | | |
|---------|---------|
| -cl | |
| +conc | |
| +cat | |
| +count | (LR-9) |
| -human | (LR-9) |
| +common | (LR-15) |
| +N | (LR-16) |
- (12) ɬaŋ
- | | |
|---------|---------|
| -cl | |
| +conc | |
| +rel | |
| -cat | (LR-8) |
| +count | (LR-9) |
| -human | (LR-9) |
| +common | (LR-15) |
| +N | (LR-16) |
- (13) luʔ
- | | |
|---------|---------|
| -cl | |
| +conc | |
| +rso | |
| -rel | (LR-7) |
| -cat | (LR-8) |
| +count | (LR-9) |
| -human | (LR-9) |
| +common | (LR-15) |
| +N | (LR-16) |
- (14) ywas
- | | |
|---------|---------|
| -cl | |
| +conc | |
| -rso | |
| -rel | (LR-7) |
| -cat | (LR-8) |
| +count | (LR-9) |
| -human | (LR-9) |
| +common | (LR-15) |
| +N | (LR-16) |

- (15) dàʔ
- | |
|-----------------|
| -cl |
| +conc |
| -count |
| +liquid |
| +volume (LR-10) |
| +common (LR-15) |
| +N (LR-16) |
- (16) kòy
- | |
|-----------------|
| -cl |
| +conc |
| -count |
| -liquid |
| +volume (LR-10) |
| +common (LR-15) |
| +N (LR-16) |
- (17) pwac
- | |
|-----------------|
| -cl |
| +conc |
| -count |
| +weight |
| -volume (LR-11) |
| +common (LR-15) |
| +N (LR-16) |
- (18) bàʔ
- | |
|-----------------|
| -cl |
| +conc |
| -count |
| -weight |
| -volume (LR-11) |
| +common (LR-15) |
| +N (LR-16) |
- (19) pənɛik
- | |
|-----------------|
| -cl |
| +count |
| +ling |
| -conc (LR-14) |
| +common (LR-15) |
| +N (LR-16) |
- (20) kəlin gətwa
- | |
|-----------------|
| -cl |
| +count |
| -ling |
| -conc (LR-14) |
| +common (LR-15) |
| +N (LR-16) |
- (21) gənəp gənwar
- | |
|-----------------|
| -cl |
| -conc |
| -count |
| +common (LR-15) |
| +N (LR-16) |
- (22) kəbrɔy
- | |
|----------------|
| +proper |
| +human |
| -common (LR-3) |
| -plural (LR-4) |
| +N (LR-16) |
- (23) (bəl)³ kəbrɔy
(NEW)
- | |
|-----------------|
| +proper |
| +human |
| -common (LR-15) |
| +plural (LR-4) |
| +N (LR-16) |
- (24) hɛ
- | |
|----------------|
| +human |
| +addr |
| +spkr |
| +dual |
| -proper (LR-2) |
| -common (LR-3) |
| -plural (LR-4) |
| +N (LR-16) |

(25) bɔl hɛ (NEW)

| | | |
|---|----------------|---|
| [| +human |] |
| | +addr | |
| | +spkr | |
| | +dual | |
| | | |
| | -proper (LR-2) | |
| | -common (LR-3) | |
| | +plural (LR-4) | |
| | +N (LR-16) |] |

(26) hi

| | | |
|---|----------------|---|
| [| +human |] |
| | -addr | |
| | +spkr | |
| | +dual | |
| | | |
| | -proper (LR-2) | |
| | -common (LR-3) | |
| | -plural (LR-4) | |
| | +N (LR-16) |] |

(27) (bɔl) hi (NEW)

| | | |
|---|----------------|---|
| [| +human |] |
| | -addr | |
| | +spkr | |
| | +dual | |
| | | |
| | -proper (LR-2) | |
| | -common (LR-3) | |
| | +plural (LR-4) | |
| | +N (LR-16) |] |

(28) me

| | | |
|---|----------------|---|
| [| +human |] |
| | +masc | |
| | | |
| | +addr (LR-1) | |
| | -proper (LR-2) | |
| | -common (LR-3) | |
| | -plural (LR-4) | |
| | +N (LR-16) |] |

(29) (bɔl) me (NEW)

| | | |
|---|----------------|---|
| [| +human |] |
| | +masc | |
| | | |
| | +addr (LR-1) | |
| | -proper (LR-2) | |
| | -common (LR-3) | |
| | +plural (LR-4) | |
| | +N (LR-16) |] |

(30) ?ay

| | | |
|---|----------------|---|
| [| +human |] |
| | -masc | |
| | | |
| | +addr (LR-1) | |
| | -proper (LR-2) | |
| | -common (LR-3) | |
| | -plural (LR-4) | |
| | +N (LR-16) |] |

(31) (bɔl) ?ay (NEW)

| | | |
|---|----------------|---|
| [| +human |] |
| | -masc | |
| | | |
| | +addr (LR-1) | |
| | -proper (LR-2) | |
| | -common (LR-3) | |
| | +plural (LR-4) | |
| | +N (LR-16) |] |

(32) ?aɲ⁴

| | | |
|---|----------------|---|
| [| +human |] |
| | -addr | |
| | +spkr | |
| | | |
| | -proper (LR-2) | |
| | -common (LR-3) | |
| | -plural (LR-4) | |
| | +N (LR-16) |] |

- (33) khay
- | | | |
|---|----------------|---|
| [| +human |] |
| | -addr | |
| | -spkr | |
| | -proper (LR-2) | |
| | -common (LR-3) | |
| | -plural (LR-4) | |
| [| +N (LR-16) |] |
- (34) (bɔl) khay (NEW)
- | | | |
|---|----------------|---|
| [| +human |] |
| | -addr | |
| | -spkr | |
| | -proper (LR-2) | |
| | -common (LR-3) | |
| | +plural (LR-4) | |
| [| +N (LR-16) |] |
- (35) Di Linh
- | | | |
|---|------------------|---|
| [| -human |] |
| | +proper | |
| | -common (LR-3) | |
| | -plural (LR-4.5) | |
| [| +N (LR-16) |] |
- (36) gə
- | | | |
|---|----------------|---|
| [| -human |] |
| | +anim | |
| | -proper (LR-2) | |
| | -common (LR-3) | |
| | -plural (LR-4) | |
| [| +N (LR-16) |] |
- (37) (bɔl) gə (NEW)
- | | | |
|---|----------------|---|
| [| -human |] |
| | +anim | |
| | -proper (LR-2) | |
| | -common (LR-3) | |
| | +plural (LR-4) | |
| [| +N (LR-16) |] |
- (38) ndɔ
- | | | |
|---|------------------|---|
| [| -human |] |
| | +place | |
| | -anim (LR-5) | |
| | -proper (LR-2) | |
| | -common (LR-3) | |
| | -plural (LR-4.5) | |
| [| +N (LR-16) |] |
- (39) gə
- | | | |
|---|------------------|---|
| [| -human |] |
| | +place | |
| | -anim (LR-5) | |
| | -proper (LR-2) | |
| | -common (LR-3) | |
| | -plural (LR-4.5) | |
| [| +N (LR-16) |] |

5.2 Noun Classes and Their Syntactic Properties

The first major division of noun classes is between [+common] and [-common]. The latter is further divided into [+proper] and [-proper]. For convenience of reference, nouns marked [+proper] will be referred to as proper nouns, while those marked [-proper] will be referred to as pronouns.

5.2.1 Proper Nouns

The following are examples of proper nouns:

| | | | |
|--------|--------------|--------|----------------------|
| kədiŋ | (PN, female) | blaw | (PN, city 'Bao Loc') |
| kəbruh | (PN, male) | səgɔ̃ŋ | (PN, city 'Saigon') |

Proper nouns may be pluralized if they are human or animate (LR-4); otherwise they may not. As shown by LR-17, a proper noun, if it occurs, will be the head and only element of an NP; it may have no other modifiers of any kind within the same NP. That is, it may not be preceded by Qu, and may not be followed by Adj, NP, S, or Det; or any combinations of these.

5.2.2 Pronouns

There are two kinds of pronouns, those marked [+human], which correspond to what have traditionally been called personal pronouns, and those marked [-human], which include place pronouns and the impersonal "it".

5.2.21 Personal Pronouns

The basic set of personal pronouns is charted below:

First Person

| | | |
|----------|--------|----------------|
| Singular | ʔaŋ | I |
| Dual | hi | we (exclusive) |
| | hɛ | we (inclusive) |
| Plural | bɔl hi | we (exclusive) |
| | bɔl hɛ | we (inclusive) |

Second Person

| | | |
|----------|---------|----------------------|
| Singular | me | you (masculine) |
| | ʔay | you (feminine) |
| Plural | bɔl me | you [pl] (masculine) |
| | bɔl ʔay | you [pl] (feminine) |

Third Person

| | | |
|----------|----------|------------------|
| Singular | khay | he/she (human) |
| | gə | he/she (animals) |
| Plural | bɔl khay | they (human) |
| | bɔl gə | they (animals) |

The first person is the only place the category Dual⁵ turns up, and also, the only place the inclusive/exclusive distinction is made, thus suggesting that hi and hɛ may be surviving relics from an older, richer pronominal system.

Syntactically, personal pronouns may all be pluralized. However, as indicated by LR-18, they may not be followed by Adj, NP, or S. They may, however, be preceded by Qu and followed by Det (which proper nouns may not).

In addition to the above, there is a set of kinship terms which may be used in a pronominal sense to indicate second person. When so used, they express a higher degree of respect than personal pronouns; they do so, perhaps, because they lack the feature [+addr], that is, because they do not presume the speaker's status is high enough to address the hearer directly, as an equal partner in discourse. Many languages (e.g., German, French, Chinese, Japanese, English) seem to utilize this device of referring to the person addressed by title or status ("Did Grandfather sleep well?", "Would the General like another drink?") to indicate deference.

However, although when used pronominally they resemble second person pronouns, they do not behave the same way syntactically. That is, unlike personal pronouns, which are rigidly restricted by LR-18, these kinship terms may be preceded by Qu and followed by Adj, or NP, or S, or Det, or all of these. Accordingly, they will be treated syntactically simply as item nouns (cf. 5.2.3.2.4).

The most important kinship terms are listed below, with Level I being the most polite and Level II being not quite so polite as Level I.

Level I

| <u>Term</u> | <u>Meaning</u> | <u>Used when addressing</u> |
|-------------|----------------|-----------------------------------|
| ʔòŋ | grandfather | older man in respected position |
| móʔ | grandmother | older woman in respected position |

Level II

| <u>Term</u> | <u>Meaning</u> | <u>Used when addressing</u> | | | | |
|-------------|------------------|----------------------------------|-------|---|---|---|
| kòŋ | uncle (maternal) | middle-aged man; known to family | | | | |
| wa | uncle (paternal) | " | " | " | " | " |
| məy | aunt (maternal) | " | woman | " | " | " |
| m ɔʔ | aunt (paternal) | " | " | " | " | " |

It is worth noting that these levels of politeness apply only when called forth by differences in status. That is, a young person uses ʔòŋ when addressing an older man; but two older men, themselves entitled to be addressed as ʔòŋ by younger people, nevertheless use me to each other. Similarly, older ladies, entitled to be addressed as mɔʔ by younger people, would call each other ʔay.

5.2.22 Place and Impersonal Pronouns

The place pronouns are (see 5.4.6):

| | |
|------|-------|
| ndo | here |
| ngɛn | there |
| ndɛn | there |
| ndaʔ | there |

There are two homonymic impersonal pronouns gə. One, with the feature [+anim], refers to animals and can be pluralized (e.g., bɔl gə 'they' - referring to water buffalo, dogs, chickens, and the like); the other, with the feature [-anim], refers both to inanimate objects and, anaphorically, to sentential antecedents, and can not be pluralized. Like proper nouns, these impersonal pronouns may not be preceded

by Qu or followed by Adj, NP, S, Det, or any combinations of these.

5.2.3 Common Nouns

Common nouns are divided, first, into those with the feature [-cl] and those with the feature [+cl]: the latter will be referred to descriptively as classifiers.

5.2.3.1 Classifiers

Classifiers are divided into two groups, those that have the feature [+conc], to be referred to descriptively as concrete; and those that have the feature [-conc], to be referred to descriptively as abstract. The former are classifiers for concrete nouns, the latter for abstract nouns.

5.2.3.1.1 Classifiers for Concrete Nouns

All Sre concrete nouns which can be counted, i.e., that have the feature [+count], must (with certain exceptions to be noted presently) be preceded by a classifier when being enumerated. This numeral-classifier combination is provided for by one of the possible rewrites of Qu, namely (Adv) Adj (N) where Adv is the adverb jəh 'completely', Adj is either a numeral or a specifier (təl, 'each'; ?ala?, 'most of'), and N is a classifier.

In his article on classifiers in Southeast Asian languages, R. B. Jones (1970) notes that this particular pattern, of numeral-classifier-noun, is the most common and has the widest geographical distribution in the area. The classifiers

for concrete things fall into two broad categories, the "pure" classifiers, which Jones characterizes as "those bound morphemes which, broadly speaking, classify nouns into one of a limited number of categories, sometimes shape-specific but often arbitrary, and whose use is obligatory"; and measure classifiers, nouns which "measure quantity, time, distance, some of which such as those referring to time or distance, may occur in constructions without an additional nominal, while others such as those referring to quantities, may occur in construction with any nominal which can be so measured."

5.2.3.12 Pure Classifiers

The concrete world is divided by Sre into three major categories:

| | |
|-----|--|
| naʔ | for humans |
| nay | for roundish, solid objects (whence the feature [rso]) such as fruit, rocks, foot- balls, grains (of rice, wheat) and so forth |
| nəm | for non-human animate crea- tures and all other inanimate objects not comprehended under <u>nay</u> |

In addition to these, others that are sometimes, though not often, used are:

| | |
|------|---|
| nkəŋ | for stalk-like things (vines, corn-stalks, wheat stalks) |
| paŋ | for flat, sheet-like things (cloth, mats, papers) |

| | |
|-----|--|
| ba? | for spatial points, particular locations |
| rət | for longhouses |
| tap | for things occurring in layers |

The use of the classifiers listed immediately above appears to be dying out, with the trio na?, nay, nəm taking over their functions. Accordingly, they are mentioned here for reference only and are not integrated into the grammar. There are listed below some examples of these numeral-classifier-noun constructions:

| | | |
|------|-----------------------------------|------------------------------|
| (p1) | <u>bàr na?</u> <u>caw ?ùr</u> | two women |
| | 1 2 | 1 2 |
| (p2) | <u>təl na?</u> <u>bəl me</u> | each of you (plural, male) |
| | 1 2 | 1 2 |
| (p3) | <u>jəh bār na?</u> <u>bəl ?ay</u> | both of you (plural, female) |
| | 1 2 | 1 2 |
| (p4) | <u>pε nay lu?</u> | three rocks |
| | 1 2 | 1 2 |
| (p5) | <u>dùl nəm chi</u> | one tree |
| | 1 2 | 1 2 |
| (p6) | <u>praw nəm sra?</u> | six books |
| | 1 2 | 1 2 |
| (p7) | <u>jəh təl na?</u> <u>kòn</u> | every child ('completely |
| | 1 2 | 1 2 |
| | | each'='every') |
| (p8) | <u>jəh bār nəm ?aso</u> | both of the dogs |
| | 1 2 | 1 2 |

5.2.3.13 Measure Classifiers

All Sre nouns with the feature [-count] must be preceded by measure classifiers when being enumerated. The most important formal measure classifiers are:

| | |
|------|---|
| lit | liter (from French, probably via Vietnamese) |
| ki? | kilogram (from French, probably via Vietnamese) |
| thək | meter (from Vietnamese) |

In addition to the above, there are several indigenous measure classifiers, the most common being:

| | |
|------|---|
| làs | one length (distance, when arms outstretched and fingers also extended, from fingertips of one hand to fingertips of the other) |
| tal | one cubit (length from elbow to fingertips of the same arm) |
| neàm | one span (distance from thumb to middle finger of spread hand) |
| bòŋ | one length (standing with arm upraised) |

There are listed below some examples of constructions made up of numeral plus measure classifier with nouns that are [-count]:

| | | | | |
|-------|------|------|--------|------------------------|
| (p9) | bàr | lit | tərnəm | two liters of wine |
| | 1 | 2 | 3 | 1 2 3 |
| (p10) | pwan | ki? | pwac | four kilograms of meat |
| | 1 | 2 | 3 | 1 2 3 |
| (p11) | jət | thək | bày | ten meters of cloth |
| | 1 | 2 | 3 | 1 2 3 |

5.2.3.14 Classifiers for Abstract Nouns

All abstract Sre nouns which can be counted (with the feature [+count]) must be preceded by a classifier when being enumerated. The non-concrete world is divided by Sre into two major categories:

| | |
|------|--|
| jənw | for words, languages, songs poetry, legends |
| bəta | for all others |

Examples of constructions made up of numeral plus classifier, with nouns that are [-conc] are:

| | | |
|-------|-----------------------------------|------------|
| (p12) | <u>bər jənw</u> <u>pəndik</u> | two poems |
| | 1 2 | 1 2 |
| (p13) | <u>pə bəta</u> <u>kəlin gətwa</u> | three wars |
| | 1 2 | 1 2 |

Syntactically, the entire class of classifiers is governed by LR-23. The first part of this rule prevents two classifiers, of whatever type, from occurring together. The second part of the rule is designed to ensure that the classifier will always be preceded by a numeral or a specifier (by LR-111 both numerals and specifiers will always have the feature [-DERIV], indicating that they are true and not derived adjectives). LR-24 stipulates that the classifiers must agree with the nouns which follow them with respect to the features [human], [rso], [ling], [liquid], and [weight].

5.2.3.2 Non Classifiers

Common nouns which are not classifiers are divisible into those which are [+conc] and those which are [-conc].

And both [+conc] nouns and [-conc] nouns are further divisible into those which are [+count] and those which are [-count]. For convenience of reference, the former will be referred to as count nouns, the latter as mass nouns.

5.2.3.2.1 Count Nouns and Mass Nouns

The rule governing the syntactic behavior of count and mass nouns is LR-19. This rule specifies that a mass noun may not follow either a numeral or a pure (i.e., non-measure) classifier, or the combination of both of these, thus ruling out such sequences as:

(p14) *bàr tər̀nəm

(p15) *nəm tər̀nəm

(p16) *bàr nəm tər̀nəm

However, the rule allows mass nouns to be preceded by the combination of numeral plus measure classifier; by an adjective which is not a numeral; or by the combination of non-numeral adjective plus measure classifier, as in the following:

| | | | | | | | |
|-------|-----|-----|---------|-----|--------|----|------|
| (p17) | bàr | lit | tər̀nəm | two | liters | of | wine |
| | 1 | 2 | 3 | 1 | 2 | 3 | |

| | | | | | |
|-------|------|---------|------|----|------|
| (p18) | ?wa? | tər̀nəm | lots | of | wine |
| | 1 | 2 | 1 | 2 | |

| | | | | | | | |
|-------|------|-----|---------|------|--------|----|------|
| (p19) | ?wa? | lit | tər̀nəm | many | liters | of | wine |
| | 1 | 2 | 3 | 1 | 2 | 3 | |

Since this rule does not apply to count nouns, they can occur with any combination of (Adv) plus numeral-and-classifier, as long as their classificatory features agree

Thompson suggests that such general categoricals have a "status intermediate between that of classifiers and that of nouns." The class of nouns that is here being called categorial differs from its Vietnamese counterpart in two respects. First, it is not a large class: the most important of them are listed below.

| | | | |
|-----|------------------------|--------|---------------|
| ɲay | day | sənam | year |
| pəh | week (also 'seven') | kənhay | month; season |
| dyə | hour | phut | minute |

(It will be noted that all of them refer to units of time.)
Second, they may not be preceded by any classifier whatsoever. These constraints are expressed in LR-20, which bars a categorial from following a classifier, and LR-22, the second part of which specifies that, of the non classifiers, only categorial nouns may be directly preceded by numerals or specifiers.

5.2.3.2.3 Relator Nouns

Nouns that are [-cat] may be [+rel] or [-rel]. Those that are [-rel] will be referred to descriptively as relator nouns. These nouns are used to indicate relative spatial location (roughly analagous to the way, in English, prepositions are used in such expressions as "on the table", "under the house" and so forth) as in the following expressions:

| | | |
|-------|---------------------|--------------------------------------|
| (p21) | hə ðəŋ cənàŋ | <u>on the top of the table</u> |
| | 1 2 3 | 1 2 3 |
| (p22) | hə ðəm cənàŋ | <u>underneath the table</u> |
| | 1 2 3 | 1, 2 3 |
| (p23) | tam ðəlam bòn | <u>at the inner part of the town</u> |
| | 1 2 3 | 1 2 3 |
| | | (inside the town) |
| (p24) | tam bædi lægar ywan | <u>(at the) outside (of) Vietnam</u> |
| | 1 2 3 | 1 2 3 |

LR-21 states the co-occurrence restrictions which apply to this class of nouns. They must be preceded by a locative particle and followed by a noun; moreover, no element may intervene between the relator noun and its noun complement. Also, all relator nouns have in their original matrices (as lexical entries) the feature [-NM] and thus (in subsequent rules which add case realization features to nouns) may never acquire the feature [+NM], which means, in turn, that they can never function as the surface subjects of sentences.

There is an analagous class of nouns in Vietnamese which Thompson (1965:200) calls relator nouns. This study follows Thompson's terminology for this class of nouns because of the semantic and syntactic similarity of these nouns in Sre and Vietnamese. It should be noted, however, that Sre relator nouns are more restricted syntactically than those of Vietnamese. Vietnamese relator nouns (see examples from Thompson 1965:201) need not be preceded by a locative particle, may be followed by a determiner (a demonstrative),

and may function as the surface subject of a sentence. In that the major semantic function of both is to indicate relative spatial position, and in that, syntactically, the most common construction in both languages is that of the relator noun as head and noun phrase as complement, the class of relator nouns in both languages may be said to be quite analagous.

5.2.3.2.4 Item Nouns

This completes the discussion of those classes of nouns which have unusual lexical or syntactic properties. The rest of them, aside from acquiring the features needed properly to link them with their appropriate classifiers, operate in a normal way in accordance with the base rules and correspond to that class of nouns which, for Vietnamese, Thompson (1965:204) calls item nouns.

5.2.4 Noun Compounds

Most of the nouns discussed above have been monomorphemic. However, Sre also has a number of bimorphemic compounds. Such compounds are well formed, in terms of the base rules; but their meanings are not predictable from their constituent structure. Therefore they are, in some sense, idioms; and, as such, each will have to be a separate entry in the lexicon. Descriptively, such compounds can be divided into two classes, one composed of two coordinate head nouns, the other consisting of head noun plus noun complement. Since, structurally,

they closely resemble their analogs in Vietnamese, they will be referred to, following Thompson (1965:128-130), as generalizing compounds and specializing compounds.

5.2.4.1 Generalizing Compounds

Generalizing compounds are of three types: generic compounds, synonymic compounds, and coordinate compounds.

5.2.4.11 Generic Compounds

These are formed by taking words representing two sub-categories and combining them, so that the resulting compound then stands for the overall category. For example, trò? means 'sky', and tyah means 'earth', but trò?-tyah means 'universe'. Some other examples are:

| | | | |
|------|----------------------------------|-----------|--------------------|
| ?yar | domesticated fowl | | |
| sèm | wild bird (small) | ?yar-sèm | birds ⁶ |
| glɔ? | earthenware pot (for cooking) | | |
| glah | <u>id.</u> (larger than glɔ?) | glɔ?-glah | pots (cooking) |
| hiw | house | | |
| ɛam | storage shed (for grain) | hiw-ɛam | buildings |
| sur | pig | | |
| rəpu | water buffalo | sur-rəpu | animals (domestic) |

5.2.4.12 Synonymic Compounds

These are formed by taking two words with similar meanings and combining them to create a new word with a different,

though related, meaning, e.g., riŋ means 'level' and ləŋay means 'contented, happy', but riŋ-ləŋay means 'peace'.

Other examples are:

| | | | |
|--------|-----------------|--------------|--------|
| gənap | frame; mainstay | | |
| gənwər | he who directs | gənap-gənwər | power |
| hiw | house | | |
| bənhəʔ | hearth | hiw-bənhəʔ | family |

5.2.4.13 Coordinate Compounds

In these compounds, the meaning is something like the sum of the meaning of the components, e.g., mɛʔ, 'mother' and bàp, 'father' combine to yield mɛʔ-bàp, 'parents'.

Other examples are:

| | | | |
|------|--------------------|-----------|------------------------|
| byap | vegetables | | |
| pyaŋ | cooked rice | byap-pyaŋ | a meal |
| muh | nose | | |
| mat | eyes | muh-mat | face |
| jəŋ | leg | | |
| ti | arm | jəŋ-ti | limbs |
| mɔʔ | grandmother | | |
| pàŋ | great grand-mother | mɔʔ-pàŋ | ancestors ⁷ |

5.2.4.2 Specializing Compounds

These are formed by taking a head noun, such as ka, 'fish', and adding a noun complement to it, such as ti, 'hand, finger'. The resulting compound ka-ti means 'shrimp'.

Another example is:

| | | | |
|------|-------------------|----------|----------------|
| byap | vegetable | | |
| nse | type of vegetable | byap-nse | (PN vegetable) |

While there is no apparent way of predicting, from its components, the meanings of such compounds as ka-ti, 'shrimp' and byap-nse (PN vegetable), there are a number of compounds whose meanings do not seem idiomatic. caw, 'person', for example, combines with such complements as kwaŋ, 'official', liŋ, 'soldier', mìh, 'America', and ywan, 'Vietnam' to yield caw-kwaŋ, 'an official', caw-liŋ, 'a soldier', caw-mìh, 'an American', and caw-ywan, 'a Vietnamese'. Similarly, dà?, 'language' (also means 'water') can combine with names of countries to yield names of languages, e.g., dà?-mìh, 'English (language)' and dà?-ywan, 'Vietnamese (language)'. Some kind of generality appears to be involved here. However, it is not clear how the mechanism for generating them can be formally integrated into the rules in such a way as to generate well-formed but exclude ill-formed compounds. The process deserves a great deal more study than is possible here. For the purposes of the present study, therefore, such compounds will be treated as idiomatic, entered as separate items in the lexicon, and handled syntactically as monomorphemic nouns.

Each of these compounds, whether generalizing or specializing, has its own set of features and each behaves syntactically exactly like the class of item nouns discussed above.

From here on in this discussion, therefore, no special mention will be made of noun compounds and the symbol N will be considered to stand indifferently for both nouns and noun compounds.

5.3 Case Features

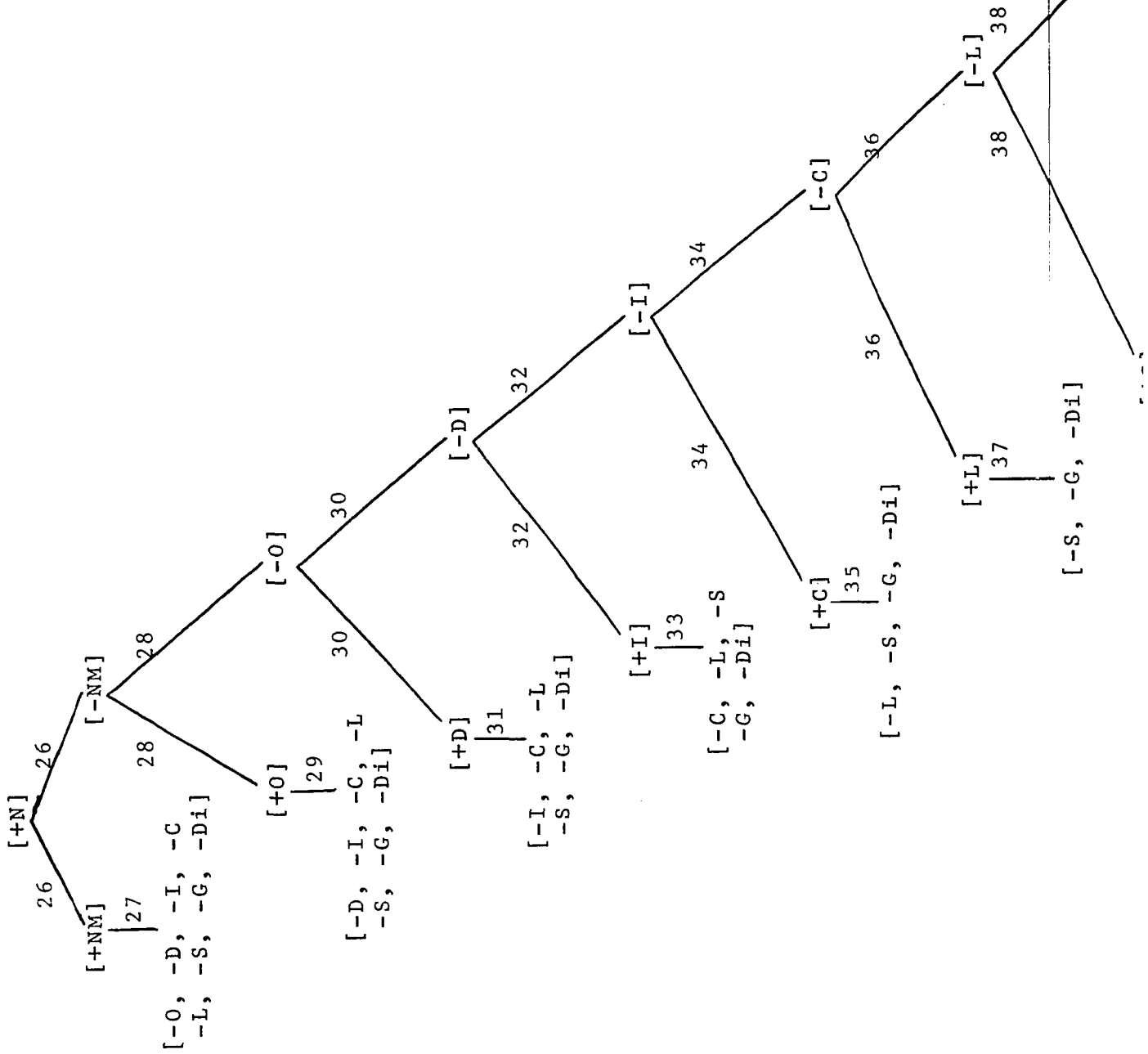
Rules LR 26-43 are repeated here for convenience.

| | | | |
|-------|-------|---|-----------------------------------|
| LR-26 | [+N] | → | [±NM] |
| LR-27 | [+NM] | → | [-O, -D, -I, -C, -L, -S, -G, -Di] |
| LR-28 | [-NM] | → | [±O] |
| LR-29 | [+O] | → | [-D, -I, -C, -L, -S, -G, -Di] |
| LR-30 | [-O] | → | [±D] |
| LR-31 | [+D] | → | [-I, -C, -L, -S, -G, -Di] |
| LR-32 | [-D] | → | [±I] |
| LR-33 | [+I] | → | [-C, -L, -S, -G, -Di] |
| LR-34 | [-I] | → | [±C] |
| LR-35 | [+C] | → | [-L, -S, -G, -Di] |
| LR-36 | [-C] | → | [±L] |
| LR-37 | [+L] | → | [-S, -G, -Di] |
| LR-38 | [-L] | → | [±S] |
| LR-39 | [+S] | → | [-G, -Di] |
| LR-40 | [-S] | → | [±G] |
| LR-41 | [+G] | → | [-Di] |
| LR-42 | [-G] | → | [±Di] |
| LR-43 | [-Di] | → | [-k] ⁸ |

These assign case realization features to any item in the lexicon with the feature [+N]. The rules operate in such a way that every noun (except those which may have already been positively or negatively specified for a particular feature in their original matrices) gets positively marked for one and only one case realization feature, but negatively marked for all the others. Moreover, because of the optional choices allowed by the rules, each lexical entry is potentially expandable into ten items (corresponding to ten case realization features including [-k]); that is, each entry is an abbreviation for ten possible items, each positively specified for one case realization feature and negatively specified for all the others. Since the case marking particles (lexical items with the feature [+P]) will have already been positively specified, in their original matrices, for one and only one case realization feature, these rules ensure that every case-marking particle will have a "matching" noun, i.e., a noun with which it is compatible in terms of case realization features.

5.3.1 Rules 26-43 Exemplified

Figure 2 below is a branching diagram which illustrates the operation of these rules. The numbers on the branches indicate which rule applies at which point (cf. Taylor, 1971).



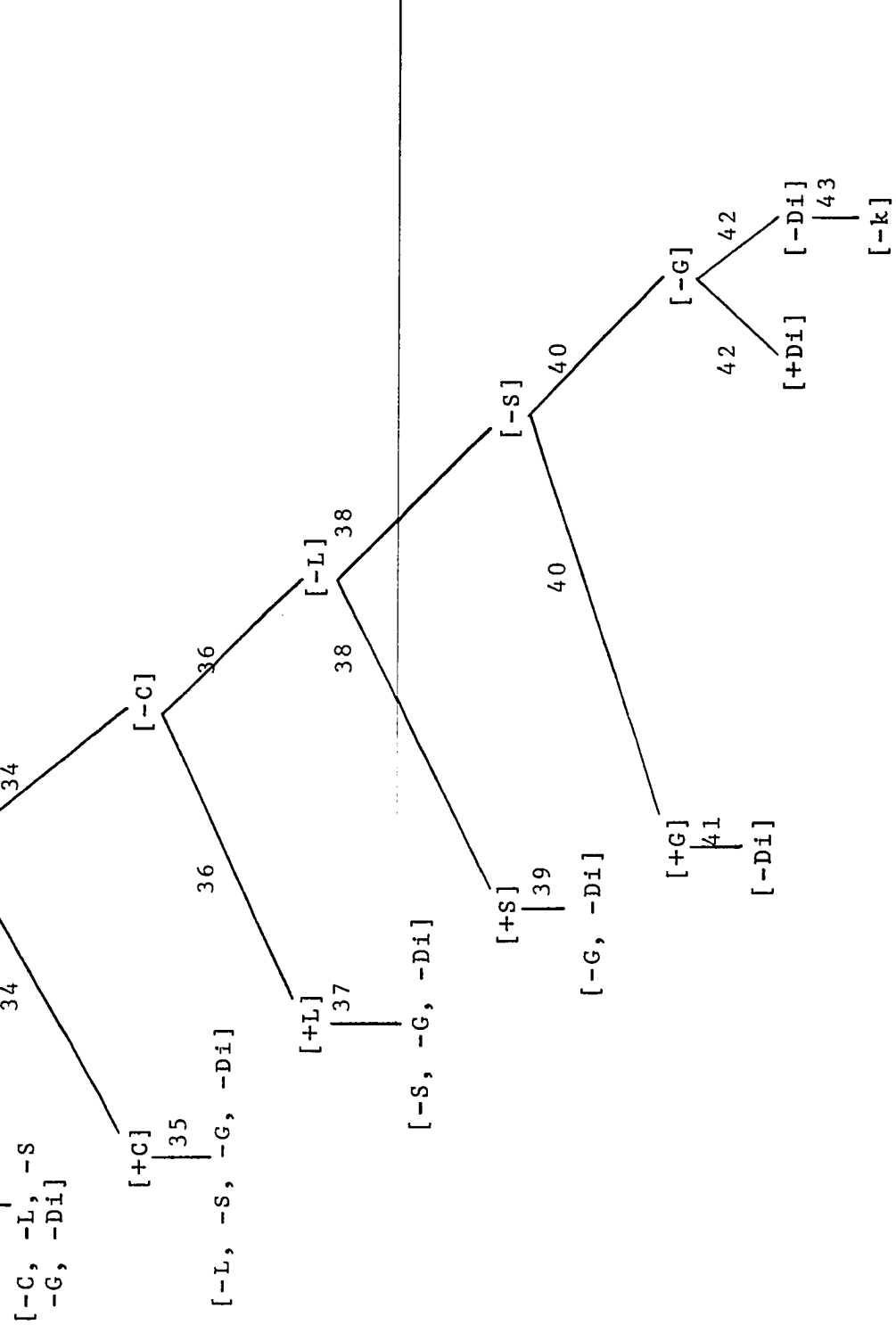


FIGURE 2
Case Realization Rules

Note that it is not necessary to include in the environment on the left side of the arrow all the negative features acquired from the previous rules. For example, LR-33 states only that $[+I] \rightarrow [-C, -L, -S, -G, -Di]$, not that $[+I, -NM, -O, -D] \rightarrow [-C, -L, -S, -G, -Di]$. The reason is that unless a feature has already been positively specified for a feature (in this case $[+I]$), the only way it could get that feature (here $[+I]$) is via the route $[-NM] \rightarrow [-O] \rightarrow [-D]$. The usual conventions on feature rules make it possible for a single positively specified feature to identify all matrices containing that feature (cf. Harms 1968:41).

Figure 3 below is a branching diagram illustrating how the exercise of the different options provided for in the rules can result in ten different lexical items, each uniquely specified with respect to one case realization feature, or none (cf. Taylor, 1971).

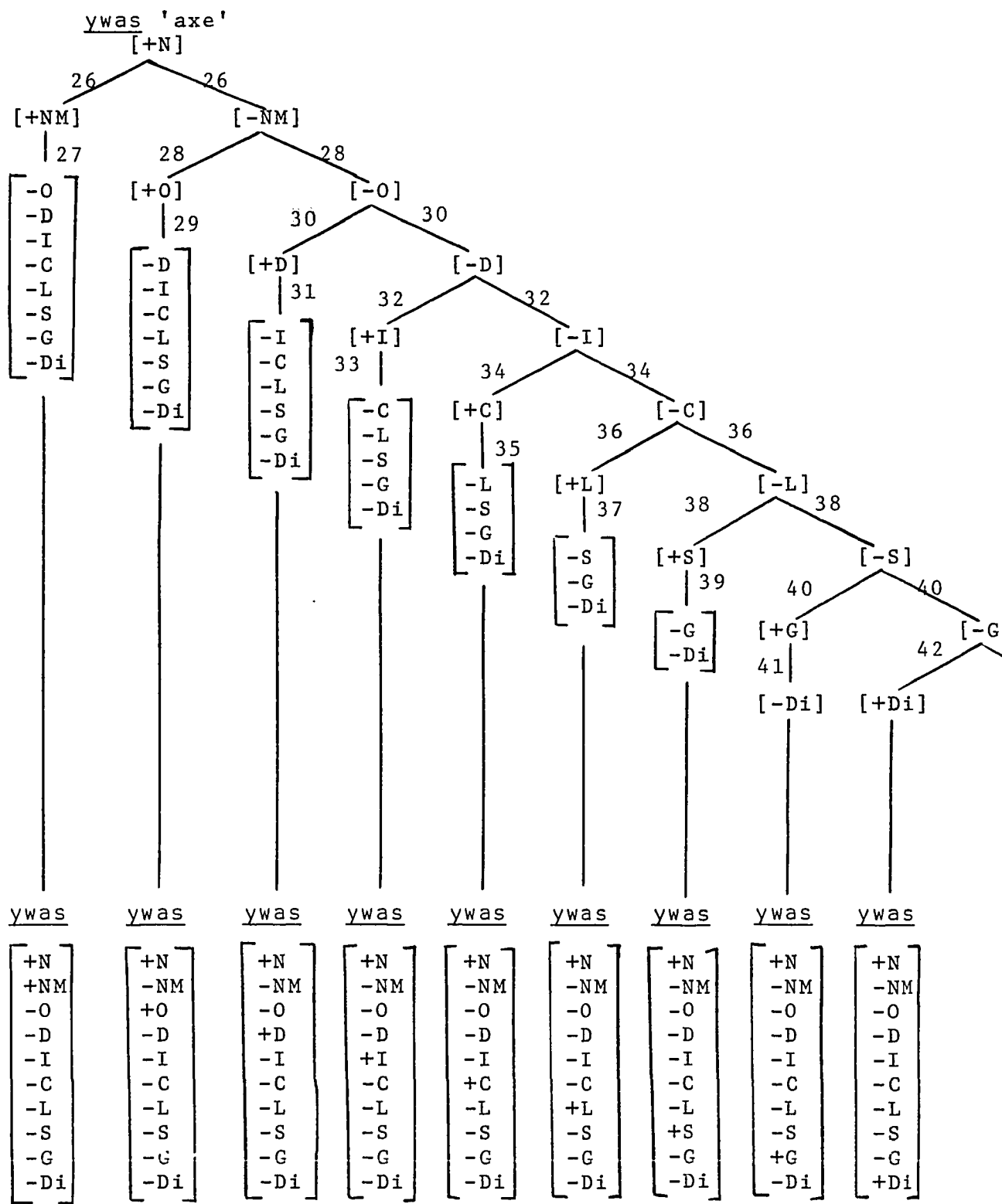
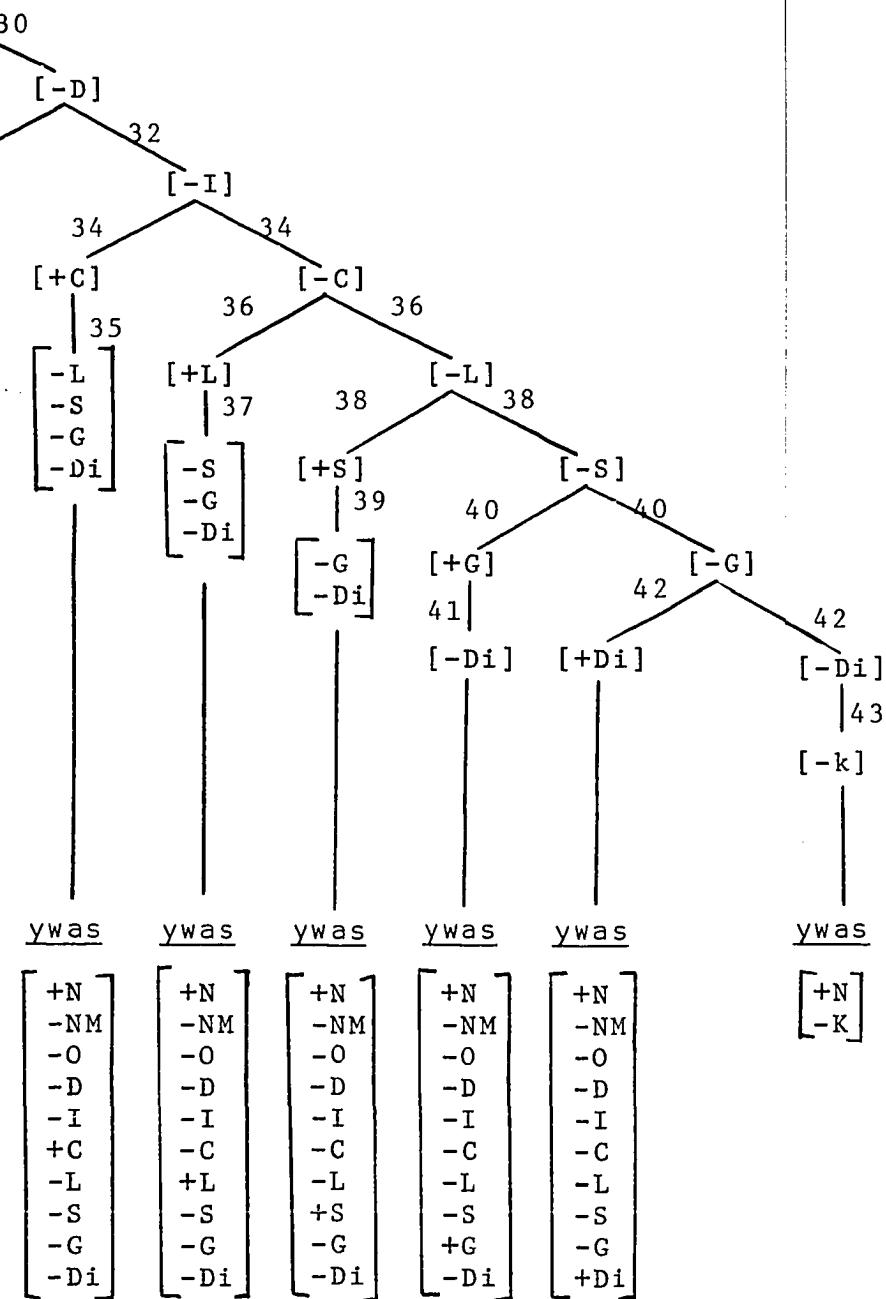


FIGURE 3

Case Realization Feature Development



E 3

ature Development

5.3.2 Case Relation Features

Rules 44-59 are repeated here for convenience.

| | | | |
|-------|--|---|-----------|
| LR-44 | [+NM] | → | [±AGT] |
| LR-45 | [-AGT] | → | [±OBJ] |
| LR-46 | [-OBJ] | → | [±DAT] |
| LR-47 | [-DAT] | → | [+INS] |
| LR-48 | [+O] | → | [+OBJ] |
| LR-49 | [+D] | → | [±DAT] |
| LR-50 | $\begin{bmatrix} +D \\ -DAT \end{bmatrix}$ | → | [+BEN] |
| LR-51 | [+I] | → | [±INS] |
| LR-52 | $\begin{bmatrix} +I \\ -INS \end{bmatrix}$ | → | [+COM] |
| LR-53 | [+C] | → | [+COM] |
| LR-54 | [+L] | → | [±LOC] |
| LR-55 | $\begin{bmatrix} +L \\ -LOC \end{bmatrix}$ | → | [±DIR] |
| LR-56 | $\begin{bmatrix} +L \\ -DIR \end{bmatrix}$ | → | [+EXT] |
| LR-57 | [+S] | → | [±SOURCE] |
| LR-58 | [+G] | → | [±GOAL] |
| LR-59 | [+Di] | → | [+DIR] |

These add appropriate case relation features to nouns with appropriate case realization features and thus operate to link case forms to case relations.

5.3.21 Case Relation Features Discussed

In Sre, as pointed out in 4.4.11, the surface subject of a sentence (the noun with the feature [+NM]) may represent

one of four case relations: [AGT], [OBJ], [DAT], or [INS]. Rules LR-44-47 assign one of these four case relations to any noun marked [+NM], as shown in Figure 4 below.

LR-48 assigns the case relation feature [+OBJ] to any noun with the case realization feature [+O], but only to such nouns. No other surface case (except NM) may represent [OBJ].

LR-49 and 50 provide for the assignment to any noun that has the case realization feature [+D] the case relation feature [+DAT] or [+BEN], as shown in Figure 5 below.

LR-51 and 52 provide for the assignment to any noun with the case realization feature [+I] the case relation feature [+INS] or [+COM]. Thus the [I] case form may represent either the [INS] or [COM] case relations. This development is shown in Figure 6 below.

LR-53 assigns the case relation feature [+COM] to any noun with the case realization feature [+C]. Thus the case relation [COM] may be represented either by [+C] or by $\begin{bmatrix} +I \\ -INS \end{bmatrix}$.

LR-54 through 56 provide for the assignment to any noun with the case realization feature [+L] the case relation features [+LOC], [+DIR], or [+EXT]. Thus the [L] case form may represent either the [LOC], [DIR], or [EXT] case relations. This is shown in Figure 7 below.

LR-57 provides for the assignment to any noun with the feature [+S], the case relation feature [+SOURCE].

LR-58 provides for the assignment to any noun with the feature [+G] the case relation feature [+GOAL].

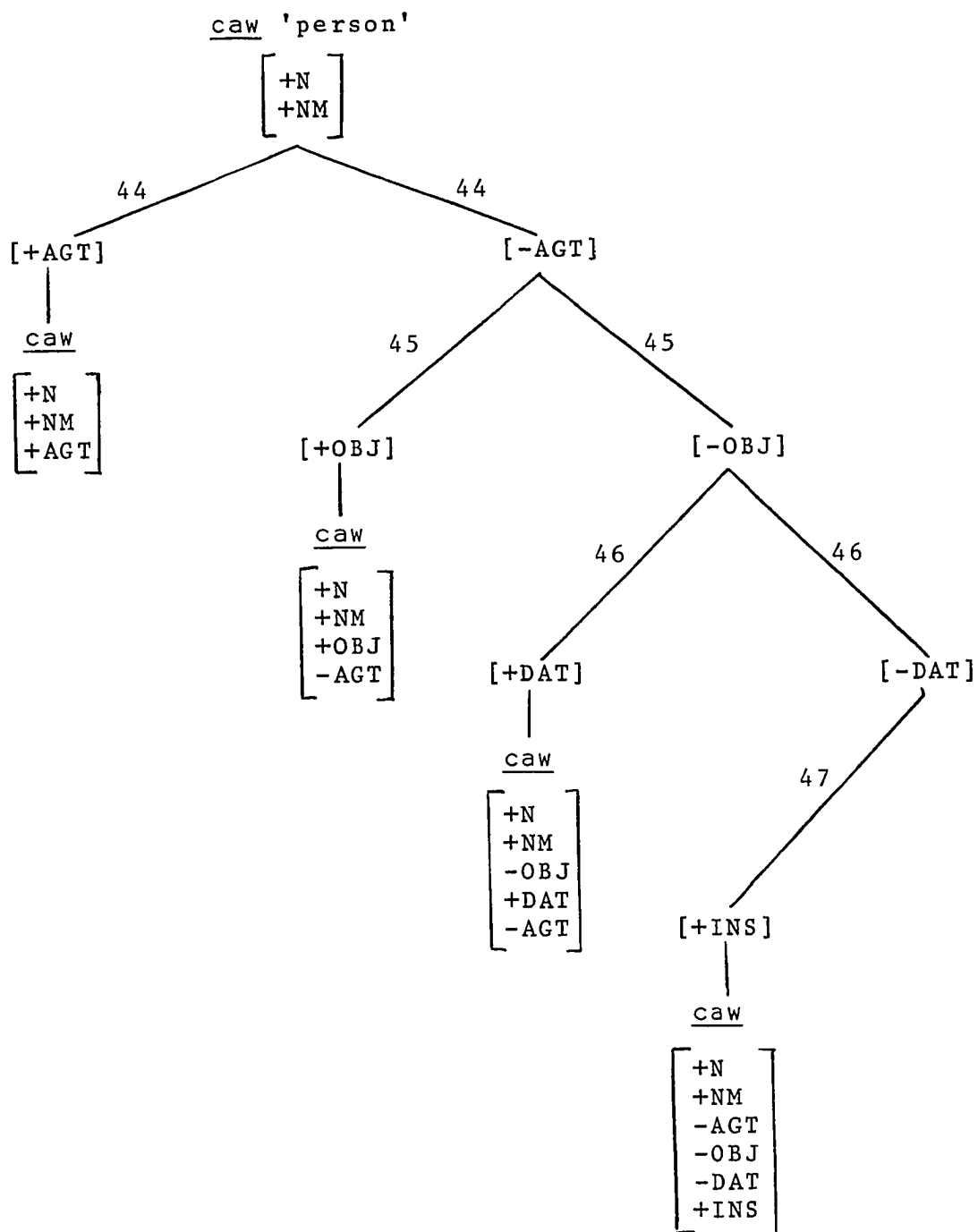


FIGURE 4

Case Relation Rules: [AGT], [OBJ], [DAT], [INS]

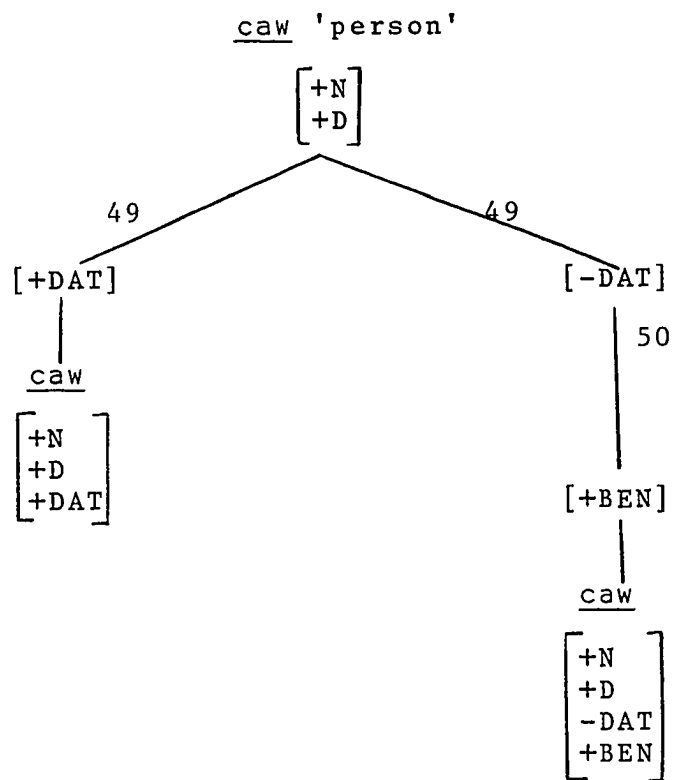


FIGURE 5

Case Relation Rules: [DAT], [BEN]

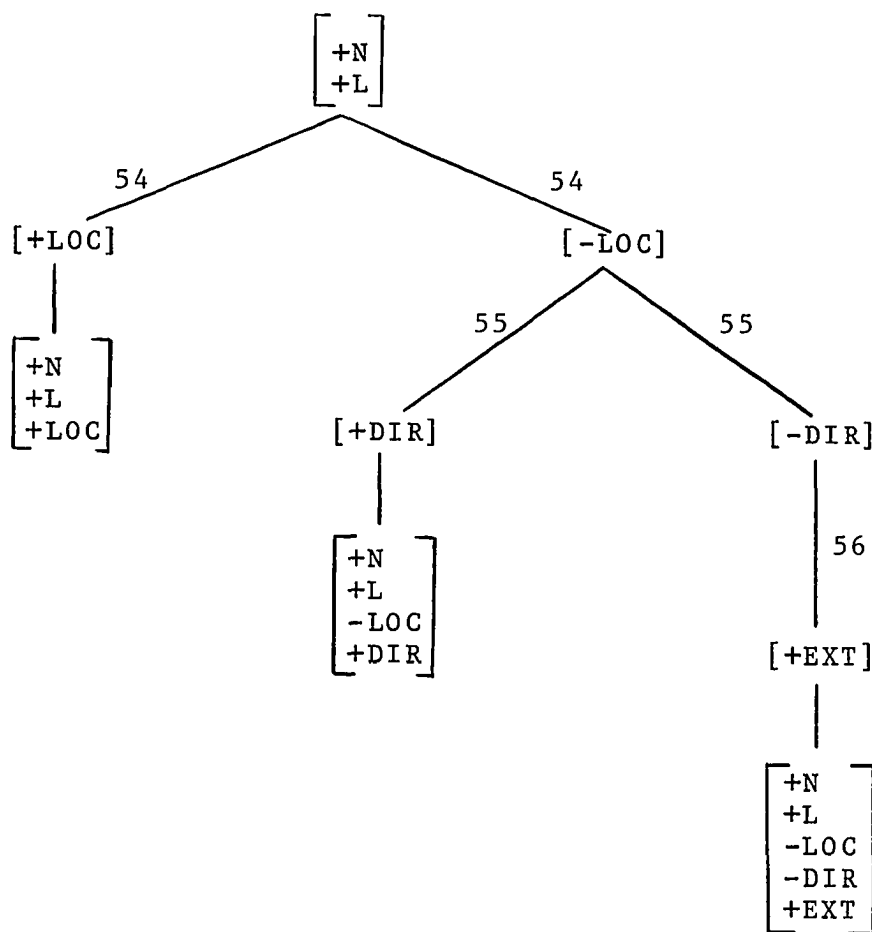


FIGURE 7

Case Relation Rules: [LOC], [DIR], [EXT]

LR-59 assigns the case relation feature [+DIRECTION] to any noun positively specified for the case realization feature [+Di].

LR-60 states that an actant with the case form L may acquire the semantic feature [+time] or [-time] if it is the realization of either the LOCATIVE or EXTENT case relations (see sentences (32) and (34) in previous chapter). An L case representing the DIRECTION case relation can never be positively specified for [time], but it is not necessary to have a specific rule to this effect since a noun could only acquire this feature from LR-60.

LR-61 through 65 deal with the positioning of two of the actants in the surface structure and with the particles that mark the case forms. LR-61 states that a [+NM] actant (what would traditionally be called the "subject" of the sentence) can only occur preceding the verb. LR-62 states that an O actant (what would traditionally be called the "object" of the sentence) must follow any verb preceded by a [+NM] actant. LR-63 specifies that a D actant takes a postposition. LR-64 states that all other case forms (but L only when it is representing the LOCATIVE or DIRECTION case relations) take prepositions. Finally, LR-65 states that when the L case form is representing the EXTENT case relation, the use of a preposition is optional but that, in any case, such actants may never precede the verb.

Each particle (indicated by the symbol P) will have, in

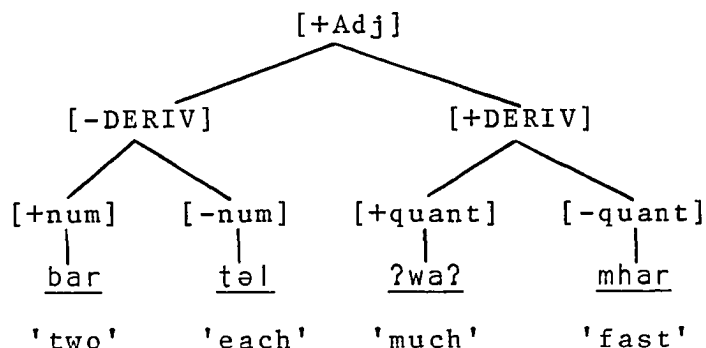
its original matrix, the feature indicating the case form it represents ([+L], [+Di], [+NM], and so forth). This ensures (cf. "Insertability" from Chapter 5) that every actant will be "matched" with the appropriate particle.

This completes the development of case realization and case relation features for nouns. The actual role these features play when interacting with verbs will be analyzed in Chapter 6, Verbal Constructions. Attention will now turn to the major constituents, other than nouns, in noun phrases.

5.4 Noun Phrase Constituents

5.4.1 Adj⁹

There are two kinds of adjectives, true adjectives and adjectives derived from stative verbs (see 6.1.3.22). Syntactically, adjectives are characterized by the facts that (1) they modify nouns and (2) they may not function as heads of predications. For convenience, the different subclasses of adjectives are charted below:



There are two kinds of true adjectives, numerals ($\begin{bmatrix} +Adj \\ +num \end{bmatrix}$), and specifiers ($\begin{bmatrix} +Adj \\ -num \end{bmatrix}$). Specifiers are exemplified by the following:

| | |
|-------|-------------|
| təl | each |
| ʔalaʔ | most of the |

When preceded by the adverb jəh 'completely', their meanings become:

| | |
|-----------|------------|
| jəh təl | every |
| jəh ʔalaʔ | all of the |

(For examples, see 5.2.3.12).

Syntactically, specifiers are governed by LR-112,

($\left[\begin{array}{l} +\text{Adj} \\ -\text{num} \end{array} \right] \rightarrow [+ \text{---} \text{N}]$), which specifies that they must precede nouns.

Numerals are exemplified by the following:

| | | | |
|------|-------|----------|----------|
| dùl | one | jət | ten |
| bàr | two | jət dùl | eleven |
| pɛ | three | jət bàr | twelve |
| pwan | four | jət pɛ | thirteen |
| pram | five | jət pwan | fourteen |
| praw | six | jət pram | fifteen |
| poh | seven | bàr jət | twenty |
| phàm | eight | pɛ jət | thirty |
| sin | nine | rəhyaŋ | hundred |

Syntactically numerals may precede nouns, in which case they are interpretable cardinally, as in,

(p25) bàr kənhay two months

or follow them, in which case they are interpretable ordinally, as in,

(p26) kənhay bàr the second month; February

To discuss derived adjectives, it is necessary first to preview the discussion of stative verbs (see 6.1.3.3). Any stative verb, i.e., any verb with the feature [+stative], may optionally acquire, through LR-119, the feature [+ADJRULE]. Then, any stative verb with the feature [+ADJRULE] undergoes the derivational rule DR-3,

$$\left[\begin{array}{l} +V \\ +stative \\ +ADJRULE \\ +Fi \end{array} \right] \longrightarrow \left[\begin{array}{l} +Adj \\ +DERIV \\ +Fi \end{array} \right]$$

Note that DR-3 does not "create" adjectives from stative verbs; it merely expresses the generality that for every stative verb there is a corresponding form, an adjective, which has the same meaning but which functions differently, i.e., can not, like its stative verb counterpart, stand as the head of a predication.

Derived adjectives can be divided into two major subclasses, those with the feature [+quant]¹⁰, such as

?wa? much; many

and those with the feature [-quant], such as

mhar fast, quick

Syntactically, [+quant] and [-quant] are in complementary distribution: adjectives that are [+quant] must precede nouns, while adjectives that are [-quant] must follow them. This constraint is expressed in LR-25.

Other necessary constraints on adjectives are contained in LR-19 (discussed more appropriately under Qu), and LR-111 through 115. LR-111 assigns the feature [-DERIV] to

directly precede - other than a classifier - is a categorial (LR-115, first part); moreover, not only must numerals and specifiers precede nouns (whether classifiers or categorials), they must precede them directly (LR-115, second part); finally, the only adverb they may follow is jəh (LR-115, third part).

5.4.2 Qu

Qu, the first constituent of Sre noun phrases, is composed of an optional adverb, an obligatory adjective, and an optional noun. The noun, in Qu constructions, is always and only a classifier. LR-22 prohibits all nouns except classifiers and categorials from occurring in this position, while LR-23 (second part) stipulates that a classifier must occur in this position.

The Adj element in Qu can be a numeral or a specifier if (and only if) immediately preceding a classifier or a categorial (LR-115, first and second parts). It can be a quantifier if it precedes a non-classifier. In fact, a quantifier may not precede a classifier (LR-114, first part). Mass nouns may be preceded by the numeral/specifier-plus-classifier combination, but only if the classifier is [+measure] (LR-19).

If the adjective is a numeral or specifier, it may be preceded by the adverb jəh 'completely', but if it is a quantifier it may not (LR-114, second part).

The following represent the actually occurring possibilities for Sre. (Features required for agreement of noun and classifier have been omitted for simplicity.)

| | <u>Structure of Qu</u> | <u>Head N of NP</u> | <u>Example</u> | <u>Meaning</u> |
|-----|-----------------------------------|---------------------|---------------------|-------------------|
| (1) | [+Adj +quant] | [+N -cl] | ?wa? caw | many people |
| (2) | [+Adv] [+Adj +num] | [+N -cl +cat] | jəh bə̀r ɲay | both days |
| (3) | [+Adj +num] [+N +cl] | [+N -cl] | pɛ nəm sra? | three books |
| (4) | [+Adv] [+Adj +num] [+N +cl] | [+N -cl] | jəh pwan nəy lu? | all four rocks |

For other examples, see 5.3.2.12.

5.4.3 Adjective

See 5.4.1

5.4.4 Noun Phrase

The fourth position may be optionally filled by a noun phrase.

5.4.5 Sentence

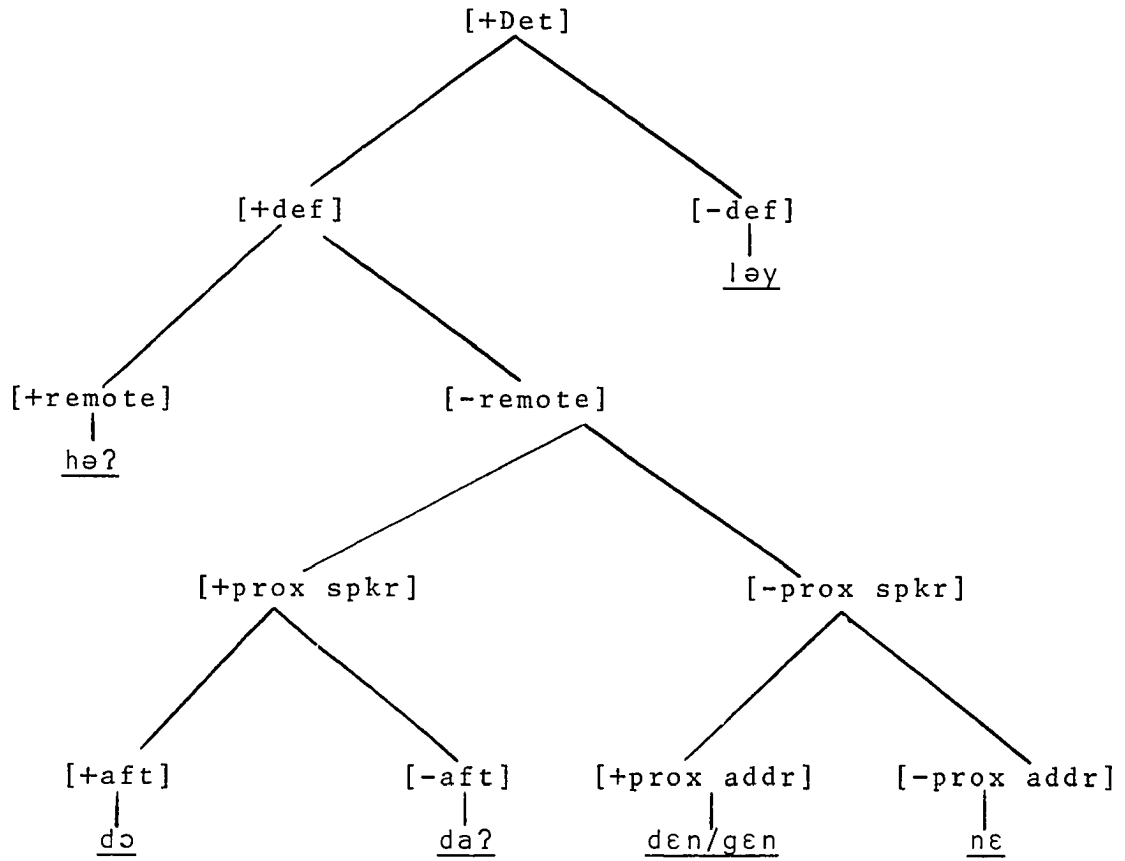
The fifth position may be occupied by an embedded sentence.

5.4.6 Determiner

This is the last element which may optionally occur in a noun phrase. Whenever it occurs, that noun phrase is terminated: no other NP element may follow it. There are

six determiners (seven if one synonym is counted) which are original entries in the lexicon. They are listed below with their original features, before any redundancy rules have applied; then, within the same matrix but separated by a double space, are listed those features added by redundancy rules 116 through 121 as well as the numbers of the rules which added them. The full forms of those features which are abbreviated are: def = definite; prox spkr = proximate speaker (meaning near to the speaker); prox addr = proximate addressee (meaning near to the person addressed); and aft = aftermentioned.

- | | | |
|-----|--|---|
| (1) | <u>do</u> <div style="border-left: 1px solid black; border-right: 1px solid black; padding: 5px; display: inline-block;"> -aft +prox spkr (LR-116) -remote (LR-118) +def (LR-119) +Det (LR-120) </div> | 'this' (may focus on relative distance, in which case it indicates closeness to speaker; or on distinguishing between two objects, in which case it is the first of the objects mentioned and forms a pair with <u>da?</u> ; see below) |
| (2) | <u>ne</u> <div style="border-left: 1px solid black; border-right: 1px solid black; padding: 5px; display: inline-block;"> -prox addr -prox spkr (LR-117) -remote (LR-118) +def (LR-119) +Det (LR-120) </div> | 'that' (the speaker and addressee are together when discussing the indicated object; and the object is not close to them) |
| (3) | <u>den/gen</u> <div style="border-left: 1px solid black; border-right: 1px solid black; padding: 5px; display: inline-block;"> +prox addr -prox spkr (LR-117) -remote (LR-118) +def (LR-119) +Det (LR-120) </div> | 'that' (the indicated object is near the addressee, but not near the speaker) |



Feature Development of Sre Determiners

Figure 8

such items, giving the place pronouns:

| | |
|-----------|-------|
| ndɔ | here |
| ndɛn/ngɛn | there |
| ndaʔ | there |

The pronoun ndɛn/ngɛn simply means 'there' in terms of relative distance from the speaker. But ndɔ, like its determiner ancestor, can mean 'here' in terms of relative distance or, as a pair with daʔ, indicate comparison/contrast between two places: for, as pronouns, ndɔ and ndaʔ carry with them from their determiner incarnations the features [+aft] and [-aft] respectively. The following sentence illustrates the comparative/contrastive functions of dɔ/daʔ.

| | | | | | | | |
|------|-------|-----|-----|-----|-------|-----|---------------------------|
| (43) | pənah | dɔ | ʔaʔ | riŋ | pənah | daʔ | This part is not level, |
| | 1 | 2 | 3 | 4 | 5 | 6 | 1 2 3 4 |
| | riŋ | gɛn | hɛ | pal | tam | kɔy | that part is, so we must |
| | | 6 | 7 | 8 | 9 | 10 | 5 6 7 8 |
| | gah | nɛ. | | | | | plant the rice that side. |
| | 11 | | | | | | 9 10 11 |

Interestingly in this sentence, dɔ and daʔ are used to compare two parts of the same paddy field, with the speaker equidistant from both parts; but when one part is singled out and its position along the distance axis comes into play, there is a corresponding switch from daʔ to nɛ. (dɔ remains the same because it functions in both ways.)

The determiner ləy plays a very important role in Sre because it is from this single word that the bulk of the indefinite constructions come - corresponding to English strings with words such as 'something/anything',

'someplace/anyplace', 'someone/anyone', 'sometime/anytime', and so forth. The following examples, in four groups, will illustrate the versatility of this determiner.

I. Thing Indefinites

- | | | |
|------|---|--------------------------------------|
| (44) | geh chi lay he daŋ cənəŋ 1 2- -2 3 4 5 | Is there something on the 1 2 3 |
| | ʔə. 6 | table? 4-5 6 |
| (45) | ʔàʔ.ʔàʔ geh chi lay. 1- -1 2 3 4 | No. There isn't anything. 1 2 4 3 |
| (46) | chi lay di ləm. 1 2 3 | Anything will do. 2 1 3 |
| (47) | ʔaŋ kəŋ chi pərhe. 1 2 3 4 | I want something red. 1 2 3 4 |
| (48) | chi pərhe lay di ləm. 1 2 3 4 | Anything red will do. 3 1 2 4 |

II. Place Indefinites

- | | | |
|------|---------------------------------------|--|
| (49) | geh ʔanih lay bəl he 1 2 3 4 | Is there anyplace we can 1 3 2 4 5 |
| | rəgəy pòn byəŋ də ʔə. 5 6 7 8 9 | hide this gold? 6 8 7 9 |
| (50) | ʔàʔ geh ʔanih lay bəl he 1 2 3 4 5 | There isn't anyplace we 2 2 1 4 3 5 |
| | rəgəy pòn gə. 6 7 8 | can hide it. 6 7 8 |
| (51) | ʔanih lay di ləm. 1 2 3 | Anyplace will be all right. 2 1 3 |
| (52) | ʔanih lay caw tamyə di 1 2 3 4 5 | Anyplace they have dancing 2 1 3 4 |
| | ləm. | will be OK. 5 |

5.5 Examples of Noun Phrases

The total range of noun phrase possibilities is represented in the following formulas, with examples of each.

| | | | |
|-------|--------------|----------------------------------|--------------------------------|
| (p24) | N | ʔaso | dog |
| (p25) | N Det | ʔaso nɛ | that dog |
| (p26) | N Det | caw mɪh ləy | any American |
| (p27) | Qu N Det | jəh ʔalaʔ caw dɔ | all these men |
| (p28) | Qu N Det | bàr nəm ʔaso nɛ | those two dogs |
| (p29) | N Adj | caw ʔùr hàn ¹¹ 1 2 | the beautiful woman 2 1 |
| (p30) | Qu N Adj | pɛ naʔ caw ʔùr 1 2 | three beautiful women 1 3 2 |
| | | hàn 3 | |
| (p31) | Qu N Adj Det | pɛ naʔ caw ʔùr 1 2 | those three beautiful 4 1 3 |
| | | hàn nɛ 3 4 | women 2 |
| (p32) | N NP | sraʔ khay 1 2 | his book 2 1 |
| (p33) | Qu N NP | bàr nəm sraʔ 1 2 | his two books 3 1 2 |
| | | khay 3 | |
| (p34) | Qu N Adj NP | bàr nəm sraʔ pa 1 2 3 | his two new books 4 1 3 2 |
| | | khay 4 | |

| | | | |
|-------|--------------|-----------------------------|---------------------------------|
| (p35) | Qu N Adj Det | bàr nəm sra? pa 1 2 3 | any two new books 4 1 3 4 |
| | | løy 4 | |
| (p36) | N Adj NP Det | sra? pa khay løy 1 2 3 4 | any of his new books 4 3 2 1 |
| (p37) | Qu N Adj NP | bàr nəm sra? pa 1 2 3 | these two new books 5 1 3 2 |
| | Det | khay dō 4 5 | of his 4 |
| (p38) | N S | sra? khay bløy 1 2 3 | the book (which) he 1 2 |
| | | ηay ?òr 4 | bought yesterday 3 4 |
| (p39) | N S Det | sra? khay bløy 1 2 3 | those books he 5 1 2 |
| | | ηay ?òr hə? 4 5 | bought yesterday 3 4 |
| (p40) | Qu N S | bàr nəm sra? khay 1 2 3 | the two books he 1 2 3 |
| | | bløy ηay ?òr 4 5 | bought yesterday 4 5 |
| (p41) | Qu N S Det | bàr nəm sra? khay 1 2 3 | those two books he 6 1 2 3 |
| | | bløy ηay ?òr nē 4 5 6 | bought yesterday 4 5 |
| (p42) | Qu N Adj S | bàr nəm sra? tøy 1 2 3 | the two French books 1 3 2 |
| | | khay bløy ηay 4 5 6 | he bought yester- 4 5 6 |
| | | ?òr | day |

| | | | |
|-------|-------------|---------------------------|---------------------------|
| (p43) | Qu N Adj S | bàr nəm sra? təy 1 2 3 | those two French 8 1 3 |
| | Det | khay bləy ɲay 4 5 6 | books he bought 2 4 5 |
| | | ʔər ne 7 8 | yesterday 7 6 |
| (p44) | Qu N Adj NP | bàr nəm sra? təy 1 2 3 | the two French 1 3 |
| | S | ʔan khay bləy 4 5 6 | books of mine he 2 4 5 |
| | | ɲay ʔər 7 | bought yesterday 6 7 |
| (p45) | Qu N Adj NP | bàr nəm sra? təy 1 2 3 | these two French 8 1 3 |
| | S Det | ʔan khay bləy 4 5 6 | books of mine he 2 4 5 |
| | | ɲay ʔər dɔ 7 8 | bought yesterday 6 7 |

NOTES TO CHAPTER V

1. Technically a noun compound, but treated as a single noun in this study.
2. Ibid.
3. The plural marker bɔl is shown in this and other items only for explanatory convenience (and is thus parenthesized). Technically, all LR-4 does is provide for two lexical items, one with [+plural], one with [-plural]. Later a morphological rule (MP-1) adds the bɔl to any item with the feature [+plural].
4. Grammatically, bɔl ʔaŋ is also possible, but is seldom used (not used by my informant); for first person plural the words bɔl hɛ and bɔl hi are used.
5. The category Dual is not really that precise; that is, although it usually refers to two persons, it can also, on occasion, refer to three, sometimes even four.
6. Interestingly (Thomas:1971), Chrau, a nearby and closely related language, uses the same device but a different selection and order of morphemes, e.g., səm, 'small bird' and klaŋ, 'bird of prey' combine to yield səm-klaŋ, 'birds'.
7. The Sre reckon descent matrilineally, and their residence pattern is matrilocal, as might be guessed from this word.
8. The feature [-k] indicates that a particular lexical item is case-less, that is, that it has no case realization

features. This feature is needed for nouns that are complements of copulas.

9. Logically, Qu should be discussed first since it is the first element of Sre NP's. Instead, however, Adj is discussed first - both because it is one of the elements of which Qu is composed, and because understanding its characteristics facilitates the description of Qu.
10. Thompson (1965:213-14) calls these quantifiers.
11. This could also be a sentence meaning "The woman is beautiful."

CHAPTER VI

Verbal Constructions

6.0 In this study, for convenience of analysis, the sentence has been divided into two parts, the noun phrase (the internal structure of which was described in Chapter 5) and everything else: "everything else" is now subsumed under the title "verbal constructions". The term "verbal construction" should not, however, be construed as having any theoretical significance, analagous to Chomsky's VP or Fillmore's proposition. It is merely a convenient label for "sentence without regard to the internal composition of NP."

6.1 Verbs

Aside from at least one NP, the single obligatory element of a verbal construction is the verb itself. Verbs are subcategorized in two ways: by inherent features, e.g., copula ([+cop]), coverb ([+cvb]), stative ([+stative]); and by the kinds of actants with which they can occur - such information usually being expressed in terms of a verb's case frames (see 4.2 above).

6.1.1 Pseudo Features

Although, technically speaking, a verb subclass is distinguished by its complete case frame, indicating all possible actants and combinations of actants with which members of that subclass can co-occur, it will be convenient, from time to time in exposition, to use "pseudo features"

(Taylor 1971). A given pseudo feature indicates that a certain set of actants is always present in the case frame of the verb which has the given pseudo feature. It does not indicate that, say, two verbs positively specified for a given pseudo feature are identical for all other actants in their case frames or that two verbs with different pseudo features can not share certain environments.

The use of these pseudo features has somewhat more than mere expository convenience, since verbs positively specified for a given pseudo feature will share certain syntactic properties; moreover they also permit a loose correspondence with analogous terms familiar from traditional (i.e. pre-structuralist) grammar, as will be seen in the following list:

"Transitive" ([+trns]): for verbs which may take AGENTIVE, DATIVE or INSTRUMENTAL actants realized through the NM case form; and OBJECTIVE actants, e.g.,

- (62a) khay ləh hiw pa. He built a new house.
 [+NM] [+O]
 [+AGT] [+OBJ]
- (62b) khay git gə. He knows it.
 [+NM] [+O]
 [+DAT] [+OBJ]
- (62c) cal pəʔ mpəŋ. The wind opened the door.
 [+NM] [+O]
 [+INS] [+OBJ]

"Intransitive" ([+intr]): for verbs which can take OBJECTIVE actants realized through the NM case form, e.g.,

- (62d) khay bic. He sleeps/is sleeping.
 [+NM]
 [+OBJ]

"Locomotion" ([+locom]): for verbs which can take DIRECTION actants realized through the L case form and OBJECTIVE actants realized through the NM case form, e.g.,

(63) khay | ɔ̌t tam dà?làc. He went to Dalat.
 [+NM] [+L
 [+OBJ] [+DIR]

"Motion" ([+motion]): for verbs which can take DIRECTION actants realized through the Di case and OBJECTIVE actants realized through the NM case, e.g.,

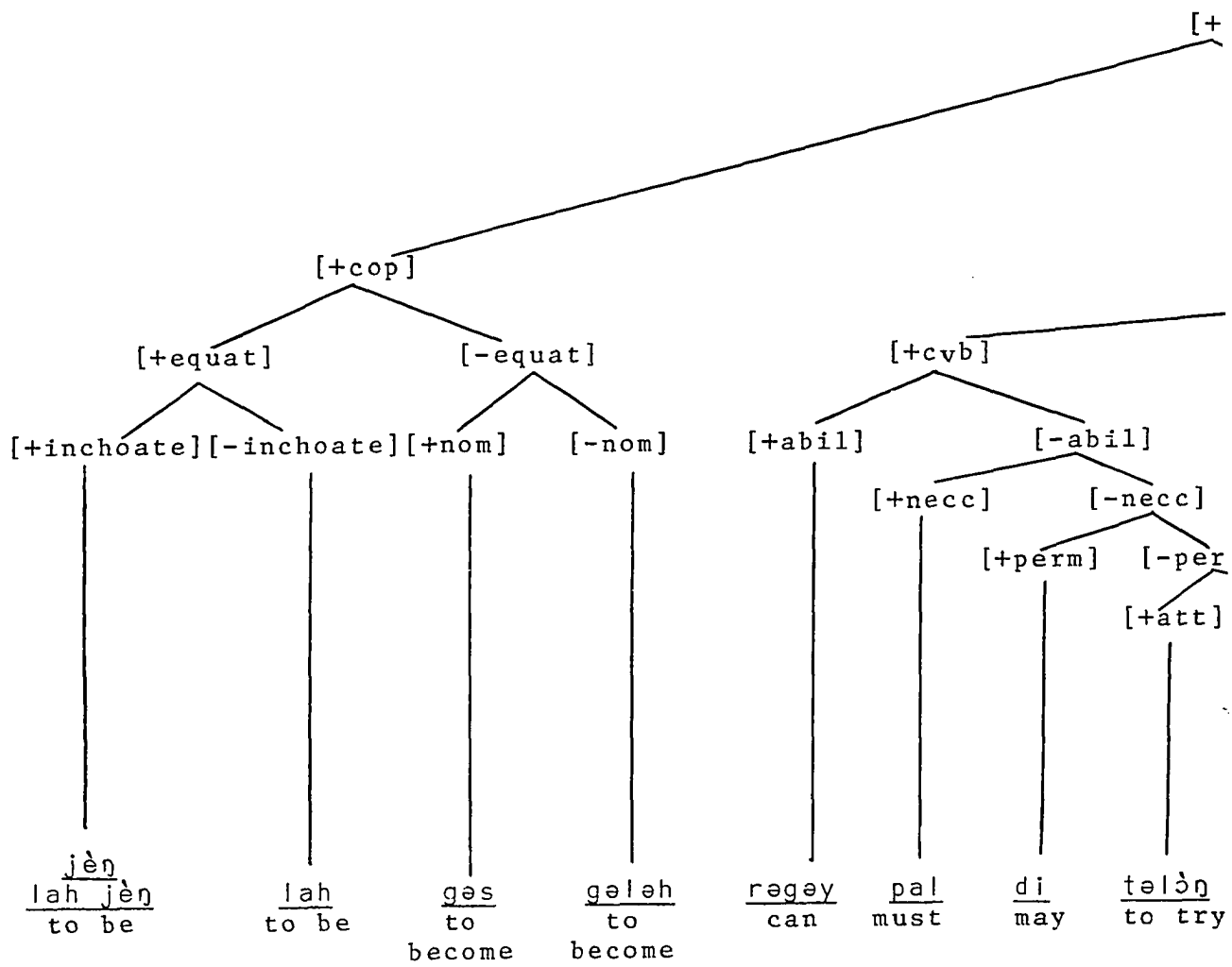
(64) p̄lay krwac dùh te tyah. The orange fell to the ground.
 [+NM] [+Di
 [+OBJ] [+DIR]

"Location" ([+loc]): for verbs which can take LOCATIVE actants realized through the L case form and OBJECTIVE actants realized through the NM case form, e.g.,

(65) khay ?əm tam ɔ̌n He lives in the village.
 [+NM] [+L
 [+OBJ] [+LOC]

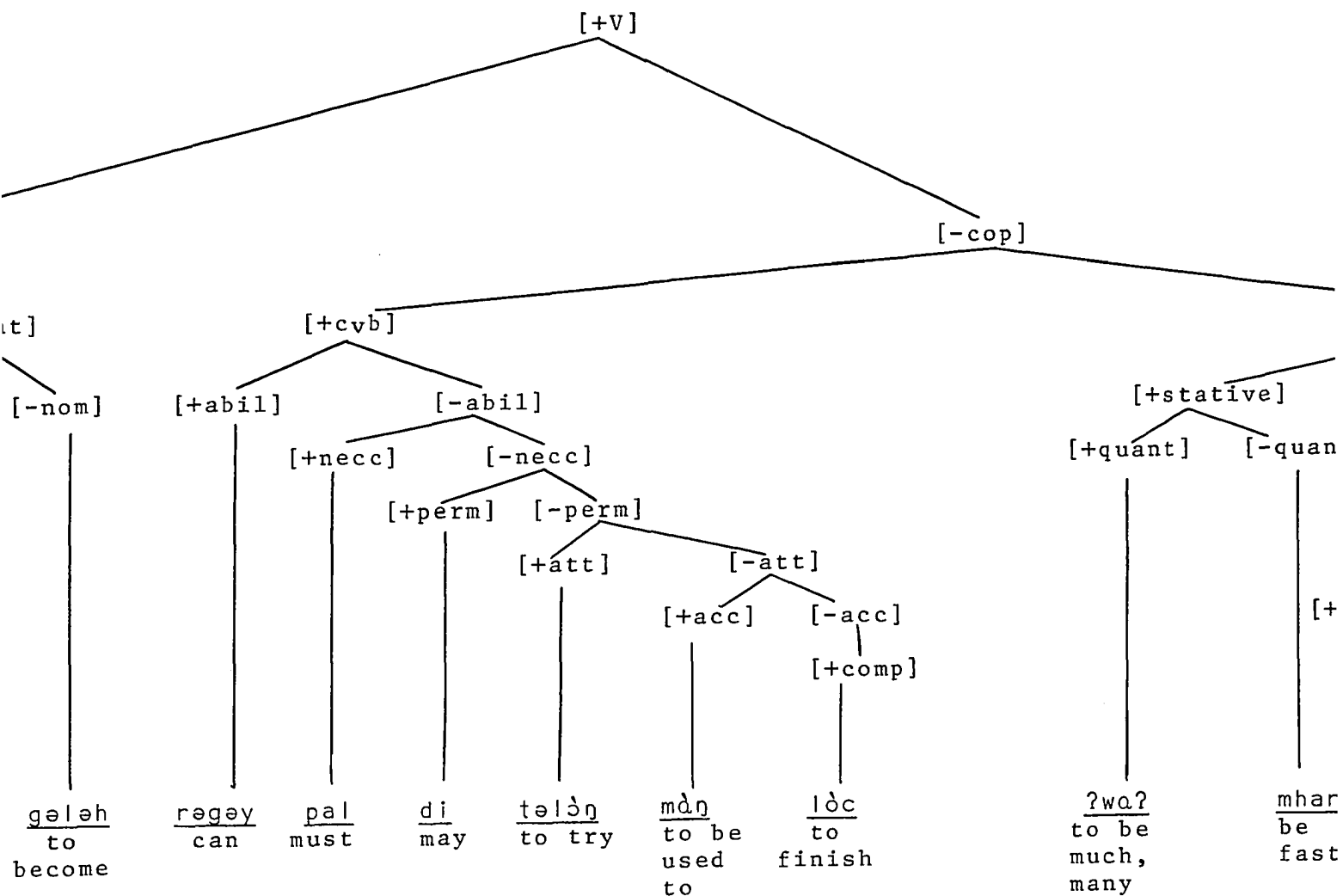
Essentially, these pseudo features are meant to "stand for" certain types of case frames, where, to indicate all possible actants and combinations of actants each time a verb class is mentioned would be unnecessarily clumsy.

These pseudo features facilitate the presentation of Sre verb classes in the form of a tree diagram, as in Figure 9 below. The full form of those features which are abbreviated (if not already given above) are: cop = copula; equat = equational; nom = nominative; cvb = co-verb; abil = ability; necc = necessity; perm = permission; att = attempt; acc = accustomed; comp = completion.



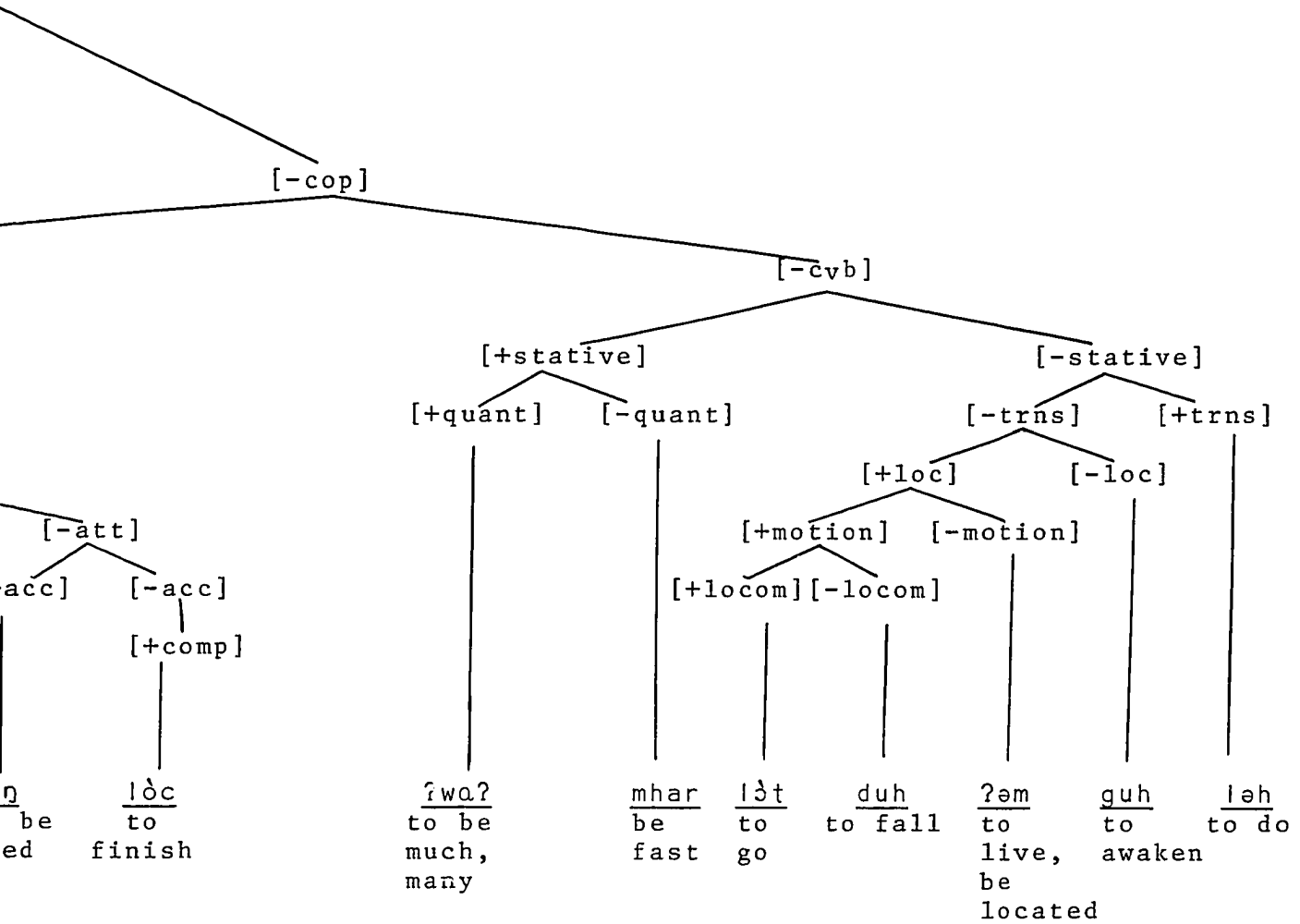
Hierarchical Displ

Figure



Hierarchical Display of Sre Verbs

Figure 9



Sre Verbs

6.1.2 Verb Feature Development

In this study, no attempt has been made to present all possible subclasses of Sre verbs. However, forty-two verbs have been selected as representative of the most common types and their feature development is traced. These forty two verbs are presented below with the minimal features they start out with as lexical entries. Next, those rules which add features (but do not specify co-occurrence restrictions) are discussed, following which the development of one lexical entry will be traced in detail. The rules are explained in prose starting with section 6.1.3.

6.1.2.1 Lexical Entries For Forty-two Verbs

- | | | |
|-----|---|-------------------|
| (1) | $\frac{\text{lah}}{[+\text{cop}]}$ | 'to be' |
| (2) | $\frac{\text{j\`e\`n}}{[+\text{cop}]}$ $\left[\begin{array}{l} - \left\{ \begin{array}{l} [+LOC] \\ [+stative] \end{array} \right\} \end{array} \right]$ | 'to be/to become' |
| (3) | $\frac{\text{lah j\`e\`n}}{+\text{cop}}$ $- \left\{ \begin{array}{l} [+LOC] \\ [+stative] \end{array} \right\}$ | 'to be' |
| (4) | $\frac{\text{g\`e\`s}}{+\text{cop}}$ $\left[\begin{array}{l} - \left\{ \begin{array}{l} [+LOC] \\ [+stative] \end{array} \right\} \end{array} \right]$ | 'to become' |
| (5) | $\frac{\text{g\`e\`l\`e\`h}}{+\text{cop}}$ $\left[\begin{array}{l} - \left\{ \begin{array}{l} [+N] \\ [-k] \\ [+LOC] \end{array} \right\} \end{array} \right]$ | 'to become' |

- (6) rəgəy
[+abil] 'to be able to'
- (7) paɪ
[+necc] 'to have to'
- (8) di
[+perm] 'to be permitted to'
- (9) təlòŋ
[+att] 'to try to'
- (10) màŋ
[+acc] 'to be accustomed to'
- (11) lòc
[+comp] 'to finish'
- (12) mhar
[+stative
+__([+EXT])
+__([+SOURCE])
+__([+GOAL])]
- (13) mwat
[+stative
+__([+EXT])
+__([+SOURCE])
+__([+GOAL])]
- (14) geh
[+exist
+__ [+OBJ]
- [+NM]__]
- (15) ?ay
[-stative
+[+AGT]__
+__ [+DAT]
+__([+EXT])
+__([+SOURCE])
+__([+GOAL])
-__ [+COM]]
- (16) pù?
[-stative
+[+AGT]__
+__([+COM])
+__([+EXT])
+__([+SOURCE])
+__([+GOAL])
-__ [+DAT]
-__ [+DIR]]

- (17) còp 'to visit'
- | | | |
|---|---------------------|---|
| [| -stative |] |
| [| + [+AGT] _____ |] |
| [| + _____ ([+COM]) |] |
| [| + _____ ([+EXT]) |] |
| [| + _____ ([+SOURCE]) |] |
| [| + _____ ([+GOAL]) |] |
| [| - _____ [+DAT] |] |
| [| - _____ [+DIR] |] |
- (18) tìp 'to meet, encounter'
- | | | |
|---|----------------|---|
| [| -stative |] |
| [| + [+AGT] _____ |] |
| [| - _____ [+DAT] |] |
| [| - _____ [+BEN] |] |
| [| - _____ [+INS] |] |
| [| - _____ [+COM] |] |
| [| - _____ [+DIR] |] |
| [| - _____ [+EXT] |] |
- (19) leh 'to do, make, build'
- | | | |
|---|---------------------|---|
| [| -stative |] |
| [| + [+AGT] _____ |] |
| [| - _____ [+DAT] |] |
| [| - _____ [+DIR] |] |
| [| + _____ ([+COM]) |] |
| [| + _____ ([+EXT]) |] |
| [| + _____ ([+SOURCE]) |] |
| [| + _____ ([+GOAL]) |] |
- (20) bəsrām 'to study'
- | | | |
|---|---------------------|---|
| [| -stative |] |
| [| + [+AGT] _____ |] |
| [| - _____ [+DAT] |] |
| [| - _____ [+DIR] |] |
| [| + _____ ([+COM]) |] |
| [| + _____ ([+EXT]) |] |
| [| + _____ ([+SOURCE]) |] |
| [| + _____ ([+GOAL]) |] |
- (21) cəm 'to throw'
- | | | |
|---|----------------------|---|
| [| -stative |] |
| [| + [+AGT] _____ |] |
| [| - _____ [+INS] |] |
| [| + _____ ([+DAT]) |] |
| [| + _____ ([+DIR]) |] |
| [| + _____ ([+COM]) |] |
| [| + _____ ([+EXT]) |] |
| [| + _____ ([+SOURCE]) |] |
| [| + _____ ([+GOAL]) |] |

- (22) dòŋ 'to help'
- | | |
|---|--|
| -stative +CAUSRULE +[+AGT]___ -___[+DAT] -___[+DIR] +___([+COM]) +___([+EXT]) +___([+SOURCE]) +___([+GOAL]) | |
|---|--|
- (23) pò? 'to open'
- | | |
|---|--|
| -stative +PASSRULE + [+AGT] + [+INS] ___ + ___ ([+COM]) - ___ [+DAT] - ___ [+DIR] - ___ [+EXT] - ___ [+SOURCE] - ___ [+GOAL] | |
|---|--|
- (24) dal 'to read'
- | | |
|--|--|
| -stative +[+AGT]___ -___[+DIR] ±___[+OBJ] +___[+DAT] +___[+BEN] +___([+COM]) +___([+EXT]) +___([+SOURCE]) +___([+GOAL]) | |
|--|--|
- (25) des 'to speak, recite'
- | | |
|--|--|
| -stative +[+AGT]___ -___[+DAT] -___[+DIR] +___([+COM]) +___([+EXT]) +___([+SOURCE]) +___([+GOAL]) ±___[+OBJ] | |
|--|--|

- (26) lah 'to say, tell'
- | | | |
|---|-------------------|---|
| [| -stative |] |
| [| + [+AGT] ___ |] |
| [| - ___ [+DIR] |] |
| [| + ___ ([+DAT]) |] |
| [| + ___ ([+COM]) |] |
| [| + ___ ([+EXT]) |] |
| [| + ___ ([+SOURCE]) |] |
| [| + ___ ([+GOAL]) |] |
- (27) sèn 'to watch, look at'
- | | | |
|---|---------------------|---|
| [| -stative |] |
| [| ±CAUSRULE |] |
| [| + [+DAT] ___ [+OBJ] |] |
| [| - ___ [+DAT] |] |
| [| - ___ [+DIR] |] |
| [| + ___ ([+INS]) |] |
| [| + ___ ([+COM]) |] |
| [| + ___ ([+EXT]) |] |
| [| + ___ ([SOURCE]) |] |
| [| + ___ ([GOAL]) |] |
- (28) gɔ? 'to see'
- | | | |
|---|---------------------|---|
| [| -stative |] |
| [| ±CAUSRULE |] |
| [| + [+DAT] ___ [+OBJ] |] |
| [| - ___ [+DAT] |] |
| [| - ___ [+DIR] |] |
| [| - ___ [+COM] |] |
| [| + ___ ([+INS]) |] |
| [| + ___ ([+EXT]) |] |
| [| + ___ ([+SOURCE]) |] |
| [| + ___ ([+GOAL]) |] |
- (29) klɔ 'to hear'
- | | | |
|---|---------------------|---|
| [| -stative |] |
| [| ±CAUSRULE |] |
| [| + [+DAT] ___ [+OBJ] |] |
| [| - ___ [+DAT] |] |
| [| - ___ [+DIR] |] |
| [| - ___ [COM] |] |
| [| + ___ ([+INS]) |] |
| [| + ___ ([+EXT]) |] |
| [| + ___ ([+SOURCE]) |] |
| [| + ___ ([+GOAL]) |] |

- (30) ?yat 'to listen'
- | | | |
|---|-------------------|---|
| [| -stative |] |
| | ±CAUSRULE | |
| | + [+DAT] ___ | |
| | - ___ [+DAT] | |
| | - ___ [+DIR] | |
| | + ___ ([+OBJ]) | |
| | + ___ ([+INS]) | |
| | + ___ ([+BEN]) | |
| | + ___ ([+COM]) | |
| | + ___ ([+EXT]) | |
| | + ___ ([+SOURCE]) | |
| | + ___ ([+GOAL]) | |
|] | | |
- (31) bo 'to smell'
- | | | |
|---|-------------------|---|
| [| -stative |] |
| | ±CAUSRULE | |
| | + [+DAT] ___ | |
| | + ___ ([+OBJ]) | |
| | + ___ ([+INS]) | |
| | + ___ ([+BEN]) | |
| | + ___ ([+COM]) | |
| | + ___ ([+EXT]) | |
| | + ___ ([+SOURCE]) | |
| | + ___ ([+GOAL]) | |
| | - ___ [+DAT] | |
| | - ___ [+DIR] | |
|] | | |
- (32) bic 'to sleep, lie down'
- | | | |
|---|-------------------|---|
| [| -stative |] |
| | + [+OBJ] ___ | |
| | - ___ [+DAT] | |
| | - ___ [+DIR] | |
| | - ___ [+INS] | |
| | - ___ [+BEN] | |
| | + ___ ([+COM]) | |
| | + ___ ([+EXT]) | |
| | + ___ ([+SOURCE]) | |
| | + ___ ([+GOAL]) | |
|] | | |
- (33) lòt 'to go'
- | | | |
|---|-------------------|---|
| [| -stative |] |
| | + [+OBJ] ___ | |
| | [+L] | |
| | + ___ [+DIR] | |
| | - ___ [+DAT] | |
| | + ___ ([+INS]) | |
| | + ___ ([+COM]) | |
| | + ___ ([+EXT]) | |
| | + ___ ([+SOURCE]) | |
| | + ___ ([+GOAL]) | |
|] | | |

- (34) guh 'to wake up'
- | | |
|---|-------------------|
| [| -stative |
| | + [+OBJ] _____ |
| | - _____ [+DAT] |
| | - _____ [+DIR] |
| | - _____ [+INS] |
| | - _____ [+BEN] |
| | - _____ [+COM] |
| | - _____ [+EXT] |
| | - _____ [+SOURCE] |
| | - _____ [+GOAL] |
- (35) ?əm 'to live, be located at'
- | | |
|---|-----------------------|
| [| -stative |
| | + [+OBJ] _____ [+LOC] |
| | - _____ [+DAT] |
| | - _____ [+DIR] |
| | - _____ [+INS] |
| | + _____ ([+COM]) |
| | + _____ ([+EXT]) |
| | + _____ ([+SOURCE]) |
| | + _____ ([+GOAL]) |
- (36) git 'to know'
- | | |
|---|-----------------------|
| [| -stative |
| | ±CAUSRULE |
| | + [+DAT] _____ [+OBJ] |
| | + _____ ([+INS]) |
| | + _____ ([+COM]) |
| | + _____ ([+EXT]) |
| | + _____ ([+SOURCE]) |
| | + _____ ([+GOAL]) |
| | - _____ [+DIR] |
- (37) kàŋ 'to like, to want to'
- | | |
|---|-----------------------|
| [| -stative |
| | ±CAUSRULE |
| | + [+DAT] _____ [+OBJ] |
| | - _____ [+INS] |
| | - _____ [+COM] |
| | + _____ [+EXT]) |
| | + _____ ([+SOURCE]) |
| | + _____ ([+GOAL]) |

- (38) khin 'to dare'
- | | |
|---|------------|
| [| -stative |
| | + [+OBJ] |
| | - [+DAT] |
| | - [+BEN] |
| | - [+INS] |
| | - [+COM] |
| | - [+DIR] |
| | - [+EXT] |
| | - [+LOC] |
| |] |
- (39) ηòt 'to fear, be afraid'
- | | |
|---|-------------------|
| [| -stative |
| | ±CAUSRULE |
| | + [+DAT] |
| | - [+DIR] |
| | - [+INS] |
| | - [+COM] |
| | + ([+OBJ]) |
| | + ([+EXT]) |
| | + ([+SOURCE]) |
| | + ([+GOAL]) |
|] | |
- (40) pəywa 'to send'
- | | |
|---|-------------------|
| [| -stative |
| | + [+AGT] |
| | + ([+DAT]) |
| | + ([+COM]) |
| | + ([+EXT]) |
| | + ([+SOURCE]) |
| | + ([+GOAL]) |
| | - [+DIR] |
|] | |

6.1.2.11 Rules 66-82 Discussed

Rules through 19 express the redundancies evident from the tree diagram of Figure 9. Any matrix with the features [+inchoate] or [-inchoate] will also have the feature [+equat] (LR-66), while matrices with the features [+nom] or [-nom] will have the feature [-equat] (LR-67). Any matrix containing either [+equat] or [-equat] will be a copula [+cop] (LR-68).

LR-69 states, in effect, that the features [+abil], [+necc], [+perm], [+att], [+acc], and [+comp] define the class of coverbs, that any matrix containing one of these features will be a coverb.

LR-70 states that the features [+quant] and [-quant] define the class of stative verbs, that any matrix having one of these features will be a stative verb (marked [+stative]).

LR-71 states that any matrix which contains either [+stative] or [-stative] is a non-coverb, while LR-72 stipulates that coverbs and non-coverbs comprise the class of verbs which are not copulas. Finally, LR-73 states that any matrix which has either [+cop] or [-cop] is a verb ([+V]).

LR-74 states that any verb may optionally occur with a LOCATIVE actant. There is one exception in the list of forty verbs given above, namely khin 'to dare to'. But, rather than lose the generality, khin is given the feature [-__ [+LOC]] in its lexical entry (in accord with its status as an exception) and then the rule applies to all verbs. (There may well be other exceptions in the language and, in any expanded lexicon, all such exceptions would have to be indicated by the above feature.)

LR-75 states that any verb which takes an AGENT actant in the NM case form must also take an OBJECTIVE actant. Two exceptions on the list of forty are dal 'to read' and des

- (38) khin 'to dare'
- | | | | |
|------|------|---|------------|
| (38) | khin | [| -stative |
| | | | + [+OBJ] |
| | | | - [+DAT] |
| | | | - [+BEN] |
| | | | - [+INS] |
| | | | - [+COM] |
| | | | - [+DIR] |
| | | | - [+EXT] |
| | | | - [+LOC] |
| | | |] |
- (39) ḡt 'to fear, be afraid'
- | | | | |
|------|----|---|-------------------|
| (39) | ḡt | [| -stative |
| | | | ±CAUSRULE |
| | | | + [+DAT] |
| | | | - [+DIR] |
| | | | - [+INS] |
| | | | - [+COM] |
| | | | + ([+OBJ]) |
| | | | + ([+EXT]) |
| | | | + ([+SOURCE]) |
| | | | + ([+GOAL]) |
|] | | | |
- (40) pəywe 'to send'
- | | | | |
|------|-------|---|-------------------|
| (40) | pəywe | [| -stative |
| | | | + [+AGT] |
| | | | + ([+DAT]) |
| | | | + ([+COM]) |
| | | | + ([+EXT]) |
| | | | + ([+SOURCE]) |
| | | | + ([+GOAL]) |
| | | | - [+DIR] |
|] | | | |

6.1.2.11 Rules 66-82 Discussed

Rules through 19 express the redundancies evident from the tree diagram of Figure 9. Any matrix with the features [+inchoate] or [-inchoate] will also have the feature [+equat] (LR-66), while matrices with the features [+nom] or [-nom] will have the feature [-equat] (LR-67). Any matrix containing either [+equat] or [-equat] will be a copula [+cop] (LR-68).

LR-69 states, in effect, that the features [+abil], [+necc], [+perm], [+att], [+acc], and [+comp] define the class of coverbs, that any matrix containing one of these features will be a coverb.

LR-70 states that the features [+quant] and [-quant] define the class of stative verbs, that any matrix having one of these features is a stative verb (marked [+stative]).

LR-71 states that any matrix which contains either [+stative] or [-quant] is a stative verb, while LR-72 stipulates that any matrix which contains either [+att] or [+acc] comprise the class of coverbs which are marked [+coverb]. LR-73 states that any matrix which contains either [+att] or [-cop] is a verb ([+V]).

LR-74 states that any verb may optionally occur with a LOCATIVE actant. There is one exception in the list of forty verbs given above, namely khin 'to dare to'. But, rather than lose the generality, khin is given the feature [-__ [+LOC]] in its lexical entry (in accord with its status as an exception) and then the rule applies to all verbs. (There may well be other exceptions in the language and, in any expanded lexicon, all such exceptions would have to be indicated by the above feature.)

LR-75 states that any verb which takes an AGENT actant in the NM case form must also take an OBJECTIVE actant. Two exceptions on the list of forty are dal 'to read' and des

'to speak'. Both of these have to have, in their lexical entry forms, the feature [\pm __([+OBJ])], indicating the optionality of the OBJECTIVE actant. That is, optionality is handled lexically rather than by transformational deletion. (All other exceptions, if any, in an expanded lexicon, would also have to have this feature.)

LR-76 stipulates that any verb taking obligatory AGENT and OBJECTIVE actants may also, optionally, take the INSTRUMENTAL actant. The one exception on the list of forty is tip 'to meet, encounter', so it is marked (and any other exceptions in an expanded lexicon would also have to be marked) [-__[+INS]].

LR-77 states that an AGENTIVE actant may not be present if the verb takes an OBJECTIVE, DATIVE, or INSTRUMENTAL actant in the NM case form.

LR-78 stipulates that if a DATIVE actant is present, there may not be a BENEFACTIVE actant; while LR-79 states that, in case a verb may not take a DATIVE actant, it may, optionally, take a BENEFACTIVE.

LR-80 expresses the generality that if a DATIVE actant is present there may not be a DIRECTION actant.

LR-81 stipulates that in case an INSTRUMENTAL actant in the NM case form is present, it is necessary that there also be an OBJECTIVE actant.

Finally, LR-82 expresses the redundancy that if the EXTENT actant may not appear with a certain verb, neither may SOURCE nor GOAL actants appear with that verb.

6.1.2.12 Feature Development Traced In Detail

Rather than run through the entire set of forty, a single verb ?ay 'to give' will be examined in detail, with all possibilities developed and illustrative sentences given for each, in order to exemplify the way in which redundancy rules expand the case frames of verbs and provide for a set of related lexical items. Because of the use of parentheses to indicate optionality, each lexical item is actually an abbreviation for several related lexical entries, which we may call sub-entries. The sub-entries (entries related by virtue of the various options chosen) will be numbered serially, while related lexical items will be indicated by a, b, c, etc., under the lexical sub-entries from which they have developed. Within the matrices, all features above the dotted line are inherent features - features the lexical entry has before any rules have applied - and all features below the dotted line represent features acquired by the operation of the redundancy rules (the numbers of the applicable rules being given in parentheses).

The matrix for ?ay, 'to give' is:

| |
|---|
| ?ay |
| $\left[\begin{array}{l} -adj \\ +[+AGT] \\ + _ [+ DAT] \\ - _ [+ COM] \\ + _ ([+ EXT]) \\ + _ ([+ SOURCE]) \\ + _ ([+ GOAL]) \end{array} \right]$ |

By exploiting all options made possible by the parentheses, this matrix is expandable into eight different sub-entries.

If all optional items are selected, the result is sub-entry (1) which, because of further options within the redundancy rules themselves, can be expanded into four lexical items ((1)a, (1)b, (1)c, (1)d). If an option is not exercised, this will be indicated by a \emptyset appearing where the feature would have gone had it been selected. A conscious attempt has been made to elicit examples which illustrate the various possible sentences that result from different choices of case frames. Some of them, therefore, may sound artificial. They are, however, grammatically well-formed and all are acceptable to the informant.

(1)a.

| | |
|------------|--|
| <u>?ay</u> | -stative +[+AGT]___ +___[+DAT] -___[+COM] +___[+EXT] +___[+SOURCE] +___[+GOAL] |
| ----- | |
| -cvb | (LR-71) |
| -cop | (LR-72) |
| +V | (LR-73) |
| +___[+OBJ] | (LR-75) |
| +___[+INS] | (LR-76) |
| +___[+LOC] | (LR-74) |
| -___[+DIR] | (LR-80) |
| -___[+BEN] | (LR-78) |

(1)b.

| | |
|-------------|--|
| <u>?ay</u> | -stative +[+AGT]___ +___[+DAT] -___[+COM] +___[+EXT] +___[+SOURCE] +___[+GOAL] |
| ----- | |
| -cvb | (LR-71) |
| -cop | (LR-72) |
| +V | (LR-73) |
| +___[+OBJ] | (LR-75) |
| \emptyset | (LR-11) |
| +___[+LOC] | (LR-74) |
| -___[+DIR] | (LR-80) |
| -___[+BEN] | (LR-78) |

(1)c.

| | |
|--|--|
| <u>?ay</u> | |
| -stative +[+AGT] + <u> </u> [+DAT] - <u> </u> [+COM] + <u> </u> [+EXT] + <u> </u> [+SOURCE] + <u> </u> [+GOAL] | |
| ----- | |
| -cvb -cop +V + <u> </u> [+OBJ] + <u> </u> [+INS] ϕ - <u> </u> [+DIR] - <u> </u> [+BEN] | (LR-71) (LR-72) (LR-73) (LR-75) (LR-76) (LR-74) (LR-80) (LR-78) |

(1)d.

| | |
|--|--|
| <u>?ay</u> | |
| -stative +[+AGT] + <u> </u> [+DAT] - <u> </u> [+COM] + <u> </u> [+EXT] + <u> </u> [+SOURCE] + <u> </u> [+GOAL] | |
| ----- | |
| -cvb -cop +V + <u> </u> [+OBJ] ϕ ϕ - <u> </u> [+DIR] - <u> </u> [+BEN] | (LR-71) (LR-72) (LR-73) (LR-75) (LR-76) (LR-74) (LR-80) (LR-78) |

The following sentences correspond to the four different matrices developed above:

(66) khay ?ay tərndəm rəpu ?in mə jərɬu? tam wəŋ tam pɛ dyə
 [+AGT] [+OBJ] [+DAT] [+INS] [+LOC] [+EXT]

bəh bər dyə tus pram dyə.
 [+SOURCE] [+GOAL]

He gave wine to the water buffalo with a bowl in the corral for three hours from two o'clock until five o'clock.

(67) khay ?ay tərndəm rəpu ?in tam wəŋ tam pɛ dyə bəh bər dyə
 1 2 3 4 5 6 7 8 9 10 11 12 13
 [+AGT] [+OBJ] [+DAT] [+LOC] [+EXT] [+SOURCE]

tus pram dyə.
 14 15 16
 [+GOAL]

He gave wine to the water buffalo in the corral for
 1 2 3 5 4 6 7 8
 three hours from two o'clock until five o'clock.
 9 10 11 12 13 14 15 16

(68) khay ?ay tərndəm rəpu ?in mə jərlu? tam pə dyə
 1 2 3 4 5 6 7 8 9 10
 [+AGT] [+OBJ] [+DAT] [+INS] [+EXT]

bəh bār dyə tus pram dyə.
 11 12 13 14 15 16
 [+SOURCE] [+GOAL]

He gave wine to the water buffalo with a bowl for
 1 2 3 5 4 6 7 8

three hours from two o'clock until five o'clock.
 9 10 11 12 13 14 15 16

(69) khay ?ay tərndəm rəpu ?in tam pə dyə bəh bār dyə
 1 2 3 4 5 6 7 8 9 10 11
 [+AGT] [+OBJ] [+DAT] [+EXT] [+SOURCE]

tus pram dyə.
 12 13 14
 [+GOAL]

He gave wine to the water buffalo for three hours
 1 2 3 5 4 6 7 8

from two o'clock until five o'clock.
 9 10 11 12 13 14

If the feature [+__ [+EXT]] is not selected, but all other options are, the result is lexical entry (2), which can also be expanded into four additional sub-entries. From this point on, identical features in matrices will be indicated by ditto marks, with only differing features given. Moreover, since the illustrative examples are all variations one basic sentence, corresponding words in English and Sre will no longer be numbered, nor will the case relations be indicated in brackets under the appropriate actants.

(71) khay ?ay tərndəm rəpu ?in tam waŋ bəh bār dyə tus pram dyə.

He gave wine to the water buffalo in the corral from two o'clock until five o'clock.

(72) khay ?ay tərndəm rəpu ?in mə jərɬu? bəh bār dyə tus pram dyə.

He gave wine to the water buffalo with a bowl from two o'clock until five o'clock.

(73) khay ?ay tərndəm rəpu ?in bəh bār dyə tus pram dyə.

He gave wine to the water buffalo from two until five.

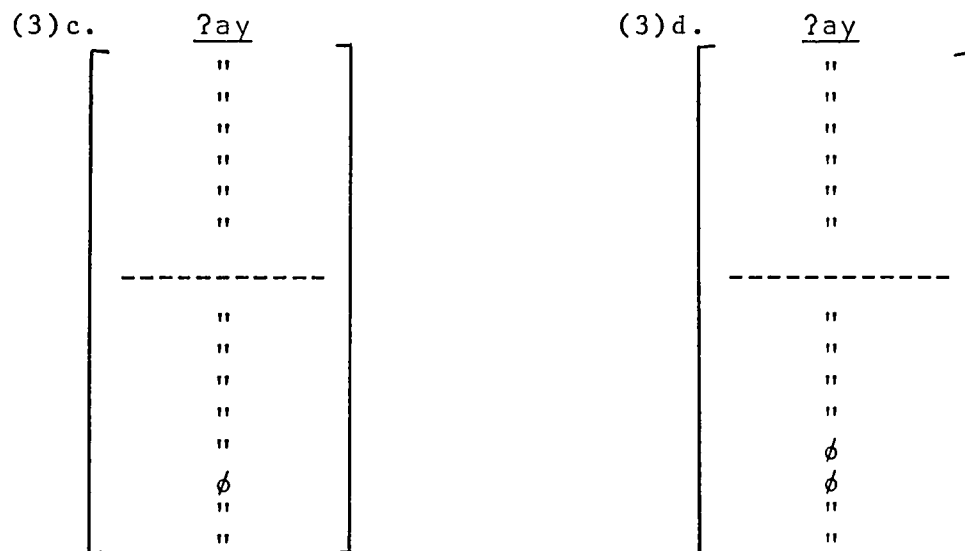
If the feature [+__[+SOURCE]] is not chosen, but all other options are, the result is lexical entry (3), which can be expanded into four additional lexical items.

(3)a.

| ?ay |
|-------------|
| -stative |
| +[+AGT]__ |
| +__ [+DAT] |
| -__ [+COM] |
| +__ [+EXT] |
| +__ [+GOAL] |
| ----- |
| -cvb |
| -cop |
| +V |
| +__ [+OBJ] |
| +__ [+INS] |
| +__ [+LOC] |
| -__ [+DIR] |
| -__ [+BEN] |

(3)b.

| ?ay |
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The following sentences correspond to the four matrices developed above:

(74) khay ʔay tərndəm rəpu ʔin mə jərɬu? tam waŋ tam pe dyə
tus pram dyə.

He gave wine to the water buffalo with a bowl in the corral for three hours until five o'clock.

(75) khay ʔay tərndəm rəpu ʔin tam waŋ tam pe dyə tus pram
dyə.

He gave wine to the water buffalo in the corral for three hours until five o'clock.

(76) khay ʔay tərndəm rəpu ʔin mə jərɬu? tam pe dyə tus pram
dyə.

He gave wine to the water buffalo with a bowl for three hours until five o'clock.

(77) khay ʔay tərndəm rəpu ʔin tam pe dyə tus pram dyə.

He gave wine to the water buffalo for three hours until five o'clock.

(78) khay ?ay tərndəm rəpu ?in mə jərɫu? tam waŋ tam pɛ dyə
bəh bər dyə.

(79) khay ?ay tərndəm rəpu ?in tam waŋ tam pɛ dyə bəh bər
dyə.

(80) khay ?ay tərndəm rəpu ?in mə jərɫu? tam pɛ dyə bəh bər
dyə.

(81) khay ?ay tərndəm rəpu ?in tam pɛ dyə bəh bər dyə.

If only [+__ [+EXT]] of the optional features is chosen,
the result is lexical entry (5), which can be expanded into
four additional lexical items.

(5)a. ?ay

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| -stative |
| + [+AGT] __ |
| + __ [+DAT] |
| - __ [+COM] |
| + __ [+EXT] |
| ----- |
| -cvb |
| -cop |
| +V |
| + __ [+OBJ] |
| + __ [+INS] |
| + __ [+LOC] |
| - __ [+DIR] |
| - __ [+BEN] |

(5)b. ?ay

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(5)c. ?ay

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(5)d. ?ay

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The following sentences correspond to the four matrices developed above.

(82) khay ?ay tərndəm rəpu ?in mə jərлу? tam waŋ tam pɛ dyə.

(83) khay ?ay tərndəm rəpu ?in tam waŋ tam pɛ dyə.

(84) khay ?ay tərndəm rəpu ?in mə jərлу? tam pɛ dyə.

(85) khay ?ay tərndəm rəpu ?in tam pɛ dyə.

If only [+__ [+SOURCE]] is chosen, the result is lexical entry (6), which can be expanded into four additional lexical items.

(6)a. ?ay

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|-----------------|
| -stative |
| + [+AGT] ___ |
| + ___ [+DAT] |
| - ___ [+COM] |
| + ___ [+SOURCE] |
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| -cvb |
| -cop |
| +V |
| + ___ [+OBJ] |
| + ___ [+INS] |
| + ___ [+LOC] |
| - ___ [+DIR] |
| - ___ [+BEN] |

(6)b. ?ay

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(6)c. ?ay

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(6)d. ?ay

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The following sentences correspond to the four matrices developed above:

(86) khay ?ay tərndəm rəpu ?in mə jərɫu? tam waŋ bəh bər dyə.

(87) khay ?ay tərndəm rəpu ?in tam waŋ bəh bər dyə.

(88) khay ?ay tərndəm rəpu ?in mə jərɫu? bəh bər dyə.

(89) khay ?ay tərndəm rəpu ?in bəh bər dyə.

If only [+__ [+GOAL]] is chosen, the result is lexical entry (7).

(7)a. ?ay

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| -stative |
| + [+AGT] ___ |
| + ___ [+DAT] |
| - ___ [+COM] |
| + ___ [+GOAL] |
| ----- |
| -cvb |
| -cop |
| +V |
| + ___ [+OBJ] |
| + ___ [+INS] |
| + ___ [+LOC] |
| - ___ [+DIR] |
| - ___ [+BEN] |

(7)b. ?ay

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(7)c. ?ay

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(7)d. ?ay

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The following sentences correspond to the four matrices developed above:

(90) khay ?ay tərndəm rəpu ?in mə jərɫu? tam waŋ tus pram dyə.

(91) khay ?ay tərndəm rəpu ?in tam waŋ tus pram dyə.

(92) khay ?ay tərndəm rəpu ?in mə jərɫu? tus pram dyə.

(93) khay ?ay tərndəm rəpu ?in tus pram dyə.

If none of the options is chosen, the result is lexical entry (8), which can be expanded into four additional lexical items.

(8)a. . ?ay

| |
|----------------|
| -stative |
| + [+AGT] _____ |
| + _____ [+DAT] |
| - _____ [+COM] |
| ----- |
| -cvb |
| -cop |
| +V |
| + _____ [+OBJ] |
| + _____ [+INS] |
| + _____ [+LOC] |
| - _____ [+DIR] |
| - _____ [+BEN] |

(8)b. ?ay

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(8)c. ?ay

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(8)d. ?ay

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The following sentences correspond to the four matrices developed above:

(94) khay ?ay tərndəm rəpu ?in mə jərɿu? tam waŋ.

(95) khay ?ay tərndəm rəpu ?in tam waŋ.

(96) khay ?ay tərndəm rəpu ?in mə jərɿu?.

(97) khay ?ay tərndəm rəpu ?in.

Thus a single lexical entry stands for eight lexical sub-entries, each of which are in turn expandable into four lexical items, so that the original entry is ultimately the parent of thirty-two lexical items.

6.1.3 Types of Verbs and Their Cooccurrence Restrictions

6.1.3.1 Copula

There are five copula verbs in Sre, namely,

- | | | |
|-----|---------|-----------------------|
| (1) | lah | 'to be' |
| (2) | jèŋ | 'to be/become' |
| (3) | lah jèŋ | 'to be' |
| (4) | gəs | 'to become/turn into' |
| (5) | gələh | 'to become' |

The copula lah is semantically the most neutral, being used in straight equational sentences of the $x = y$ type. The copula jèŋ covers the same semantic range as lah but, in addition, can sometimes mean 'to become' if the external situation allows such an interpretation. In the following two sentences,

(98) khay lah caw mih. He is an American.

(99) khay jèŋ caw mih. He is an American.

the meanings are identical using the preferred interpretation of jèŋ. However, if there were special circumstances involved, say, that of a Vietnamese who had migrated to the United States and had become an American citizen through naturalization, the sentence with jèŋ could be interpreted as meaning "He has become an American." In some sentences, where the circumstances would make a straight equational interpretation difficult, as in

(100) khay jèŋ kliw. He became a tiger.

jèŋ is interpreted as meaning 'to become'. The reason the straight equational interpretation is difficult in the above sentence is that khay is a personal pronoun used for humans while kliw is nonhuman, and the only way one could "equal" the other is through some process of "becoming".

The copula lah jèŋ (which is only rarely used) corresponds semantically to lah, being used only in straight equational sentences. Apparently, the semantic force of the lah component overshadows that of jèŋ, so that this copula is never interpretable as 'to become'.

The copulae gəs and gələh both mean only 'to become' and are not used to suggest straight equivalence.

Syntactically, these copulae exhibit the following characteristics. lah, which is the least constrained as to the possible environments in which it can occur, may precede

quantifiers. When nonverbal elements are involved, it stipulates that they must occur before either caseless or locative noun phrases.

Only lah may occur in all positions allowed by the phrase structure rules and LR-83. The additional constraints on the other copulas are incorporated as features into their lexical entry matrices. Thus, jèn, lah jèn, and gəs will all have the feature $[-\text{---} \left\{ \begin{array}{l} [+LOC] \\ [+adj] \end{array} \right\}]$, while gələh will have the feature $[-\text{---} \left\{ \begin{array}{l} [+N] \\ [-k] \\ [+LOC] \end{array} \right\}]$. With these features built into the matrices of jèn, lah jèn, gəs, and gələh, LR-83 will properly constrain the entire class of copulae.

6.1.3.2 Coverbs

Semantically, coverbs are distinguished by the fact that they modify the sense of the main verb without changing its basic meaning. Syntactically, they are characterized by the fact that they may not stand as heads of predications but must be followed by non-coverbs (verbs with the feature $[-cvb]$) and by the fact that they can cluster according to describable syntactic patterns (patterns which are different from those of non-coverbs). The principal coverbs are:

6.1.3.21 Coverb Co-occurrence Restrictions

The syntactic restrictions on coverb co-occurrences are that (1) they may neither precede nor follow copulas or stative verbs, and (2) they must precede, may never follow, nonstative verbs. These restrictions are expressed by LR-87. But the principal problem in describing these is that while, according to the phrase structure rules, any number in any combination in any sequence may occur, in actual fact there are restrictions (1) on the co-occurrence possibilities among the different coverbs, (2) on repetition of the same coverb, and (3) on the absolute number of coverbs that may occur in one cluster. Appropriate constraints must be built into the grammar to ensure that all grammatical and no ungrammatical sequences will be generated.

To begin with, all the coverbs are assigned intrinsic features, as follows:

| | |
|--------|----------------------|
| rəgəy | [+abil] (ability) |
| paɪ | [+necc] (necessity) |
| dɪ | [+perm] (permission) |
| təlɔ̃ŋ | [+att] (attempt) |
| lɔ̃c | [+comp] (completion) |
| màŋ | [+acc] (accustomed) |

If only one coverb precedes a main verb, it may be any of the above set, as in the following sentences:

| | | | | | |
|-------|------|----|-------|-----|--------------------|
| (116) | kɔ̃n | nɛ | rəgəy | rɛ. | That kid can swim. |
| | 1 | 2 | 3 | 4 | 2 1 3 4 |

- (117) ?aŋ pal ?əm tam ɓɔ̃n. I have to stay in the vil-
 1 2 3 4 5 1 2 3 4 5
 lage.
- (118) khay ?à? di nhəl tam He is not permitted to play
 1 2 3 4 5 1 2 3 4
 bre. in the woods.
 6 5 6
- (119) caw ne təlɔ̃ŋ bəsram That man is trying to study
 1 2 3 4 2 1 3 4
 dà? tɛy. French.
 5 5
- (120) khay m̀̀n ləh brwa? dɔ̃. He's used to doing this work.
 1 2 3 4 5 1 2 3 5 4
- (121) khay l̀̀c ləh hiw pa He is finishing building the
 1 2 3 4 5 1 2 3
 mɛ? b̀̀p khay ?in. new house for his parents.
 6 7 8 5 4 8 7 6

If two coverbs precede the main verb, certain sequences may not occur, i.e.,

| | |
|-------------|-------------|
| *rəgəy di | *təlɔ̃ŋ pal |
| *rəgəy pal | *təlɔ̃ŋ di |
| *rəgəy m̀̀n | *m̀̀n pal |
| *pal di | *m̀̀n di |
| *di rəgəy | *l̀̀c pal |
| *di pal | *l̀̀c di |
| *di m̀̀n | |

All such ungrammatical sequences are blocked by LR-88-93 (repeated here for convenience) which, using the features listed above, specify the environments in which the coverbs may not occur:

| | | | | | | | |
|-------|---------|---|-------|---|---------|---|---|
| LR-88 | [+abil] | → | [-] | { | [+necc] | } | [|
| | | | | | [+perm] | | |
| | | | | | [+acc] | | |
| | | | | | [+abil] | |] |
| LR-89 | [+necc] | → | [-] | { | [+perm] | } | [|
| | | | | | [+necc] | | |
| LR-90 | [+perm] | → | [-] | { | [+abil] | } | [|
| | | | | | [+necc] | | |
| | | | | | [+acc] | | |
| | | | | | [+perm] | |] |
| LR-91 | [+att] | → | [-] | { | [+necc] | } | [|
| | | | | | [+perm] | | |
| | | | | | [+att] | |] |
| LR-92 | [+acc] | → | [-] | { | [+necc] | } | [|
| | | | | | [+perm] | | |
| | | | | | [+acc] | |] |
| LR-93 | [+comp] | → | [-] | { | [+necc] | } | [|
| | | | | | [+perm] | | |
| | | | | | [+comp] | |] |

Possible combinations of two coverbs are illustrated by the following sentences:

- (122) khay rəgəy təlɔŋ ləh He can try to build a new
 1 2 3 4 1 2 3 4 6
 hiw pa. house.
 5 6 5
- (123) caw ùr nɛ rəgəy lɔc That woman can finish study-
 1 2 3 4 2 1 3 4 5
 bəsram dà? mih nam ing English next year.
 5 6 7 8 6,7 9 8
 da?
 9
- (124) ?əh ?əp pal rəgəy ləh My (younger) brother has to
 1 2 3 4 5 2 1 3
 brwa? nɛ. be able to do that work.
 6 7 4 5 7 6

- (125) khay pal təlɔŋ rɛ gan He has to try to swim across
 1 2 3 4 5 1 2 3 4 5
 dɑʔ mɛ. the river.
 6 7 7 6
- (126) khay pal lɔc bəsram dɑ He has to finish studying
 1 2 3 4 5 1 2 3 4
 tɛy kənnhay dɔ. French this month.
 6 7 8 5,6 8 7
- (127) ʔɔh ʔaŋ pal mɑŋ ʔəm tam My (younger) brother has to
 1 2 3 4 5 6 2 1 3
 lɛgar mih. get used to living in the
 7 8 4 5 6
 United States.
 7,8
- (128) kɔn khay di təlɔŋ saw It's all right for his kid
 1 2 3 4 5 3 2 1
 byap pyaŋ tɛy. to try eating French food.
 6 7 8 4 5 8 6,7
- (129) caw nɛ di lɔc ləh brwaʔ It's OK for that man to
 1 2 3 4 5 6 3 2 1
 nɛ praw dyə mhɔ. finish doing that work at
 7 8 9 10 4 5 7 6
 5 p.m.
 8,9 10
- (130) kɔn khay təlɔŋ rəgɛy His kid try, to be able to
 1 2 3 4 2 1 3 4
 rɛ. swim.
 5 5
- (131) bi ʔaŋ təlɔŋ lɔc ləh My (older) brother is trying
 1 2 3 4 5 2 1 3
 hiw pa ŋay hiŋ. to finish building the new
 6 7,8 9 4 5 7
 house by tomorrow.
 6 8,9

- (132) lɔʔ khay təlɔŋ mɔŋ His sister is trying to get
 1 2 3 4 2 1 3
 tam lægar tɔy. used to living in France.
 6 7 8 4 5 6 7,8
- (133) khay mɔŋ rɛgɛy dɛs He is used to being able to
 1 2 3 4 1 2 3
 dɑʔ ywan. speak Vietnamese.
 5 6 4 5,6
- (134) khay mɔŋ təlɔŋ ləh He is used to trying to
 1 2 3 4 1 2 3
 brwaʔ work.
 5 4,5
- (135) ʔaŋ mɔŋ lɔc ləh brwaʔ I'm used to finishing work-
 1 2 3 4 5 1 2 3 4
 ʔaŋ pram dyɛ mhɔ. ing by 5:00 pm.
 6 7 8 9 7,8 9
- (136) khay lɔc rɛgɛy ləh hiw He's finished being able
 1 2 3 4 5 1 2 3
 saʔ tɔm. (= can now) build his own
 6 7 4 6,7
 house.
 5
- (137) caw nɛ nɛh lɔc təlɔŋ That man has finished trying
 1 2 3 4 5 2 1 3 4 5
 ləh brwaʔ nɛ. to do that job.
 6 7 8 6 8 7
- (138) khay nɛh lɔc mɔŋ ʔɛm tam He has finished (= is now)
 1 2 3 4 5 6 1 2 3
 lægar ywan. used to living in Vietnam.
 7 8 4 5 6 7,8

If three coverbs precede the main verb, further sequences (in addition to the doublet sequences already prohibited by LR-88-93) are found to be ungrammatical, e.g.,

*rəgəy təlɔ̃ŋ mɑ̃ŋ
 *pɑl lɔ̃c mɑ̃ŋ
 *di təlɔ̃ŋ lɔ̃c
 *di lɔ̃c rəgəy
 *di lɔ̃c təlɔ̃ŋ
 *di lɔ̃c mɑ̃ŋ
 *təlɔ̃ŋ lɔ̃c mɑ̃ŋ
 *təlɔ̃ŋ mɑ̃ŋ lɔ̃c
 *mɑ̃ŋ təlɔ̃ŋ lɔ̃c
 *mɑ̃ŋ lɔ̃c təlɔ̃ŋ
 *lɔ̃c təlɔ̃ŋ mɑ̃ŋ
 *lɔ̃c mɑ̃ŋ təlɔ̃ŋ

It is possible to prevent the generation of ungrammatical coverb triplets by rules LR-94-98.

| | | | |
|-------|--|---|--------------------------------|
| LR-94 | $\left\{ \begin{array}{l} [+abil] \\ [+necc] \end{array} \right\}$ | → | $[-_ [+CVB] [+acc]]$ |
| LR-95 | [+perm] | → | $[-_ \{ [+CVB] [+comp] \} *]$ |
| LR-96 | [+att] | → | $[-_ \{ [+comp] [+acc] \} *]$ |
| LR-97 | [+acc] | → | $[-_ \{ [+att] [+comp] \} *]$ |
| LR-98 | [+comp] | → | $[-_ \{ [+att] [+acc] \} *]$ |

Possible combinations of coverb triplets are illustrated by the following sentences:

| | | | | | | | | | | | |
|-------|------|-------|--------|------|------|------|------|-----|-----------|--------|-------|
| (139) | khay | rəgəy | təlɔ̃ŋ | lɔ̃c | | He | can | try | to | finish | doing |
| | 1 | 2 | 3 | 4 | | 1 | 2 | 3 | 4 | 5 | |
| | ləh | brwa? | nə | ŋay | hìŋ. | that | work | by | tomorrow. | | |
| | 5 | 6 | 7 | 8 | 9 | 7 | 6 | | 8,9 | | |

- (147) lɔʔ ʔaŋ pal rəgəy mən̄
 1 2 3 4 5
 ʔəm tam ləgar təy.
 6 7 8 9
 My sister has to be able to
 2 1 3 4
 get used to living in
 5 6 7
 France.
 8,9
- (148) ʔaruh nɛ pal təlɔŋ
 1 2 3 4
 rəgəy rɛ.
 5 6
 That young lady has to try
 2 1 3 4
 to be able to swim.
 5 6
- (149) mɛ pal təlɔŋ lɔc ləh
 1 2 3 4 5
 brwaʔ nɛ ŋay dɔ.
 6 7 8 9
 You have to try to finish
 1 2 3 4
 working by today.
 5,6 8,9
- (150) ʔaŋ pal təlɔŋ mən̄
 1 2 3 4
 bəsram daʔ ywan.
 5 6 7
 I have to try to get used to
 1 2 3 4
 studying Vietnamese.
 5 6,7
- (151) khay pal mən̄ rəgəy dəs
 1 2 3 4 5
 dɔʔ təy.
 6 7
 He has to get used to being
 1 2 3
 able to speak French.
 4 5 6,7
- (152) mɛ pal mən̄ lɔc ləh
 1 2 3 4 5
 brwaʔ mhar.
 6 7
 You have to get used to
 1 2 3
 finishing working quickly.
 4 5,6 7
- (153) kɔn nɛ pal mən̄ təlɔŋ
 1 2 3 4 5
 dɔl.
 6
 That kid has to get used to
 2 1 3 4
 trying to read.
 5 6
- (154) caw nɛ di təlɔŋ rəgəy
 1 2 3 4 5
 rɛ.
 6
 That man is allowed to try
 2 1 3 4
 to be able to swim.
 5 6

- (155) khay di təlòŋ lòc ləh
 1 2 3 4 5
 hiw pa pəh tənə?
 6 7 8 9
It is all right for him to
 2 1
 try to finish building the
 3 4 5
 new house next week.
 7 6 9 8
- (156) lo? ʔap di təlòŋ mən
 1 2 3 4 5
 ʔəm tam səgòŋ.
 6 7 8
 My sister is permitted to try
 2 1 3 4
 to get used to living in
 5 6 7
 Saigon.
 8
- (157) khay di lòc təlòŋ ləh
 1 2 3 4 5
 brwa? nə.
 6 7
It is all right for him to
 2 1
 finish trying to do that
 3 4 5 7
 work.
 6
- (158) khay təlòŋ rəgəy mən
 1 2 3 4
 bəsrəm dā? nə.
 5 6 7
 He tries to be able to get
 1 2 3
 used to studying that
 4 5 7
 language.
 6
- (159) khay təlòŋ rəgəy lòc
 1 2 3 4
 ləh brwa? mhar.
 5 6 7
 He tries to be able to finish
 1 2 3 4
 working quickly.
 5,6 7
- (160) khay təlòŋ lòc rəgəy
 1 2 3 4
 dal sra?
 5 6
 He is trying to complete
 1 2 3
 being able to read books.
 4 5 6

- (177) kòh ne pal mǎŋ tǎlǎŋ
 1 2 3 4 5
 rəgəy lǎt.
 6 7
 That kid has to get used to
 2 1 3 4
 trying to be able to walk.
 5 6 7
- (178) caw ne pal mǎŋ rəgəy
 1 2 3 4 5
 tǎlǎŋ mus mir.
 6 7 8
 That man has to get used to
 2 1 3 4
 being able to try clearing
 5 6 7
the swidden field.
 8
- (179) khay pal mǎŋ rəgəy lǎc
 1 2 3 4 5
 ləh brwa? ne.
 6 7 8
 He has to get used to being
 1 2 3
 able to finish that job.
 4 5 8 7
- (180) khay pal tǎlǎŋ rəgəy
 1 2 3 4
 lǎc ləh brwa? khay mhar.
 5 6 7 8 9
 He has to try to be able to
 1 2 3 4
 finish his work quickly.
 5 8 7 9
- (181) caw ne pal tǎlǎŋ mǎŋ
 1 2 3 4 5
 rəgəy ntwat mhar.
 6 7 8
 That man has to try to get
 2 1 3 4
 used to being able to
 5 6
 running fast.
 7 8
- (182) khay pal lǎc rəgəy
 1 2 3 4
 tǎlǎŋ ləh hiw pa.
 5 6 7 8
 He has to finish being able
 1 2 3 4
 to try to build the new
 5 6 8
 house.
 7
- (183) lǎ? ?an pal lǎc rəgəy
 1 2 3 4 5
 mǎŋ ?əm tam səgǎŋ.
 6 7 8 9
 My sister has to complete
 2 1 3 4
 being able to get used to
 5 6
 living in Saigon.
 7 8 9

| | | | | | |
|-------|------------|-----|-------|-------|------------------------------------|
| (190) | khay | lòc | màŋ | rəgəy | He is now used to being able |
| | 1 | 2 | 3 | 4 | 1 2 3 4 |
| | təlɔŋ | ləh | brwa? | | to try to work <u>by himself</u> . |
| | 5 | 6 | 7 | | 5 6,7 8 |
| | <u>dùl</u> | na? | khay. | | |
| | 8 | | | | |

One more fact needs to be accounted for before the coverb element will have been properly constrained: although the phrase structure rules place no upper limit on the number of coverbs that can occur in the same sentence, intelligibility breaks down if there are more than four. No separate rule is necessary to prevent sequences of more than four, however: such sequences are automatically prevented as a by-product of the coverb co-occurrence rules described above.

6.1.3.3 Stative Verbs

There are two kinds of stative verbs, those which are quantifiers ($\begin{bmatrix} +V \\ +stative \\ +quant \end{bmatrix}$) and those which are not ($\begin{bmatrix} +V \\ +stative \\ -quant \end{bmatrix}$).

An example of the former is

(1) ?wa? 'to be much, many'

Examples of the latter are,

(2) hàŋ 'to be beautiful (of human females)'

(3) mwat 'to be sad'

(4) mhar 'to be quick, fast'

Both kinds of stative verb can be used in predications, e.g.,

directly from stative verbs and this is the solution which will be used for Sre.

6.1.3.33 Comparison of Stative Verbs

Stative verbs may be compared, as exemplified in the following sentences:

- | | |
|---|--|
| <p>(196) ?aso dɔ dət̚ rəlaw mə 1 2 3 <u>4</u></p> <p> ?aso nɛ. 5 6</p> | <p>This dog is smaller <u>than</u> 2 1 3 <u>4</u></p> <p> that dog. 6 5</p> |
| <p>(197) ?aso hə? dət̚ rəlaw jəh 1 2 3 <u>4</u></p> | <p>The dog <u>over there</u> is the 1 2</p> <p> smallest of all. 3 <u>4</u></p> |

The actual mechanics of such structures will be shown in 6.3.1.

6.1.3.4 True Verbs

All verbs which are not copulas, coverbs or stative verbs may, for descriptive convenience, be called true verbs. They are subcategorized, as has already been stated, in terms of the actants with which they can co-occur. The most usual situation is for there to be only one true verb per simple sentence (one without embedded or coordinate sentences). However, there are a few exceptions which will be described below.

6.1.3.41 True Verb Doublets and Their Co-occurrenceRestrictions

In addition to strings of verbs which can result from various combinations of coverbs plus true verb, certain other verbal clusters, consisting of true verb plus verbal complement, are possible, as illustrated by the following sentences:

I a.

| | | | | | | | |
|-------|------|------|------|-----|----|--|-----------------------------|
| (198) | khay | pù? | chət | bəs | mə | | He beat the snake dead with |
| | 1 | 2 | 3 | 4 | 5 | | 1 2 4 3 5 |
| | | gay. | | | | | a stick. |
| | | 6 | | | | | 6 |

| | | | | | | | |
|-------|------|-----|-----|-------|-----|--|---------------------------|
| (199) | khay | ləh | jəh | brwa? | nə. | | He finished (= do finish) |
| | 1 | 2 | 3 | 4 | 5 | | 1 2, 3 |
| | | | | | | | that work. |
| | | | | | | | 5 4 |

I b.

| | | | | | | | |
|-------|-----|-----|-------|-----|------|--|-------------------------------|
| (200) | ?ap | nəh | saw | həm | raw. | | I have eaten to my fill. |
| | 1 | 2 | 3 | 4 | 5 | | 1 2, 5 3 4 |
| (201) | ?ur | nə | pih | gəh | phan | | That woman washed her clothes |
| | 1 | 2 | 3 | 4 | 5 | | 2 1 3 6 5 |
| | | | khay. | | | | clean. |
| | | | 6 | | | | 4 |

II.

| | | | | | | | |
|-------|-----|-----|-----|-------|----|--|-------------------------|
| (202) | ?əh | ?ap | lət | nhəl | mə | | My (younger) brother is |
| | 1 | 2 | 3 | 4 | 5 | | 2 1 |
| | | | gəp | khay. | | | going to play with his |
| | | | 6 | 7 | | | 3 4 5 7 |
| | | | | | | | friend. |
| | | | | | | | 6 |

such doublets are distinguished by the fact that the first verb is one of locomotion (that is, one that takes a DIRECTION actant realized through the L case form), while the second can be any true verb ([-stative]). The constraints on such doublets are expressed in LR-104, which states that a true verb may not be preceded by a stative or by any intransitive verb which can not take $\left[\begin{array}{l} +L \\ +DIR \end{array} \right]$ actant (no transitive verb could fit there because of LR-103).

Once the entire complex of constraints on copulas, coverbs, stative verbs, true verbs, and verb-plus-verb-complement combinations is taken into account, it is possible to conceive of such monster verbal clusters as that contained in the following sentence:

(209) ?ap mǎŋ rəgəy təlǒŋ lǒc pih gəh phan ne tam dul dyə.
 1 2 3 4 5 6 7 8 9 10 11 12

I am used to being able to trying to finish washing
 1 2 3 4 5 6

those clothes clean in one hour.
 9 8 7 10 11 12

While it may be doubted that any native speaker of Sre would ever utter such a sentence under any usual circumstances, it is perfectly within his competence to do so, and in fact this particular sentence was accepted without hesitation by the informant.

6.2 Other Constituents of Verbal Constructions

6.2.1 Aux

In Sre, Aux is an optional element, referring to aspect only. The unmarked form of the verb may be understood in a variety of time senses - present, past, future - all depending upon context and the shared knowledge of the speakers about the situation in question. Thus the sentence

(210) khat lət hə dət?lác He goes to Dalat.

may be understood as "He goes to Dalat (once a year, every month, etc.)", "He is going (is on the way) to Dalat", "He went to Dalat", or "He will go to Dalat." In those cases where the speaker wishes to be more emphatic about the temporal reference, or where, otherwise, some ambiguity might result, the Aux particles nɛh or rəp may be used. nɛh means something like "the event or process indicated by the verb has been completed." rəp means something like "the event or process indicated by the verb will occur, is about to occur, or is starting."

6.2.12 Aux Co-occurrence Restrictions

Neither of the Aux particles may occur with copulas and this is formally indicated by LR-20, which bars copulas from following any constituent with the feature [+Aux].

It is possible for both Aux particles to occur in the same sentence, (but not for the same one to appear twice) as in

(211) khay nɛh rəp lət He has started to go.
 In such cases, nɛh always precedes rəp. This sequential constraint is captured in the following way. In their lexical entry matrices, nɛh has the feature [+past], while rəp has the feature [-past]. LR-123 ([-past] → [-___[+past]]) would then prevent rəp from preceding nɛh in case both occurred in the same sentence. LR-123.5 ($\begin{bmatrix} +\text{Aux} \\ \text{QFi} \end{bmatrix}$ → [-___ $\begin{bmatrix} +\text{Aux} \\ \text{QFi} \end{bmatrix}$ *]) would prevent the same one from appearing twice. And LR-124 ([+Aux] → [-___[+Aux][+Aux]]) would, in turn, preclude the occurrence of more than two Aux elements in the same verbal construction.

6.2.2 Adverbs

Sre has many classes of adverbs, each with its own characteristic syntactic behavior. These classes are listed below in the following way. First, the descriptive name of the class is given, with inherent features in parentheses; then examples of the class are given, together with illustrative sentence(s). After all classes have been presented, their syntactic properties are described.

6.2.21 Sentence Initial Adverbs ([+sentin])

| | | |
|----------------------------|--|--------------------------------|
| phwaŋ | | 'brusquely; with a crash' |
| ɓ̀wɓ̀ | | 'silently' |
| (212) phwaŋ khay pɔ̀? mpòŋ | | Brusquely, he opened the door. |
| 1 2 3 4 | | 1 2 3 4 |

| | | | | | | |
|-------|-------|------|-----|------|-----|----------------------------|
| (213) | b̀w̃p | khay | ʔəm | ʔd̃ʔ | dəs | Silently, he stays doesn't |
| | 1 | 2 | 3 | 4 | 5 | 1 2 3 4 |
| | | | | | | 5 |
| | | | | | | speak |
| | | | | | | 5 |

Semantically, these sentence initial adverbs are a kind of telegraphic summary of the sentence which follows. They are extremely restricted semantically with respect to the verbs with which they can co-occur. For example b̀w̃p can only be used in describing a situation where someone chooses to remain silent, being uninclined to speak. So close is this semantic pairing that using such an adverb with the wrong verb (with a verb that is not its "partner" so to speak) results in an ill-formed sentence. In order rigorously to account for all partner relations between these adverbs and the verbs they go with, it would be necessary to have matching features for each such adverb-verb pair in the language, such that, if an adverb were oppositely specified for the matching feature of its partner verb, the ungrammatical combination would be blocked. Such an exhaustive treatment will not be attempted in the present study. Instead, only the general syntactic constraints on these adverbs will be incorporated into the rules. There is a limited set of sentence initial adverbs which are not semantically paired with partner verbs but can freely occur with all verbs. Examples are:

| | |
|-------------|----------------|
| <u>ca</u> k | 'probably' |
| <u>wi</u> h | 'surprisingly' |

function as an adverb, this class constitutes the main source of Sre manner adverbs.

6.2.24 Non-Manner Adverbs ([-manner])

| | | | |
|-------|----------------------|--|-------------------------------|
| | sùm | | 'always' |
| (220) | kòn se khay nim sùm. | | His child cries all the time. |
| | 1 2 3 4 | | 2 1 3 4 |

6.2.25 Sentence Final Adverbs ([+final])

| | | | |
|-------|----------------|--|--------------------------|
| | ?əh | | 'painfully' |
| (221) | ?ap je bo ?əh. | | My head aches painfully. |
| | 1 2 3 4 | | 1 3 2 4 |

6.2.26 Nominal Adverbs ([+nominal])

| | | | |
|-------|----------------------|--|----------------------------|
| | jəh | | 'completely' |
| (222) | jəh bàr na? ?aruh re | | Both girls are swimming in |
| | 1 2 3 4 | | 1, 2 3 4 5 |
| | tam dà? me. | | the river. |
| | 5 6 | | 6 |

The use of jəh in the Qu constituent was discussed fully in the chapter on noun phrases.

6.2.27 Non-Nominal Adverbs ([-nominal])

| | | | |
|-------|----------------------|--|--------------------------|
| | ŋan | | 'very' |
| (223) | khay mhar ŋan. | | He is very fast. |
| | 1 2 3 | | 1 2 3 4 |
| (224) | khay ntwat mhar ŋan. | | He runs very fast. |
| | 1 2 3 4 | | 1 2 4 3 |
| (225) | caw mhar ŋan ne lah | | The man who is very fast |
| | 1 2 3 4 5 | | 1 3 2 |
| | gəp ?ap. | | is my friend. |
| | 6 7 | | 5 7 6 |

Figure 10 is a diagram displaying the classes of adverbs in tree form. (The features, where this is not obvious, are meant to suggest the following: sentin = sentence initial; fore = before the verb; final = sentence final; restr = restricted.)

LR 125-131 take care of the full feature development for Sre adverbs. jəh and ŋan are marked [+nominal] and [-nominal] respectively in their lexical entry matrices. This is necessary because, in their co-occurrence behavior, they do not follow the general rules applicable to the other classes of adverbs. (These features are somewhat arbitrary, although [+nominal] does reflect the fact that jəh occurs in the Qu element of noun phrases, while [-nominal] is meant to reflect the fact that ŋan - which modifies stative verbs and manner adverbs - is not involved with nominals.

6.2.3 Co-occurrence Constraints on Adverbs

Sentence initial adverbs must occur sentence-initially; and only one may occur per sentence. These constraints are expressed by LR-133.

A preverbal adjective ([-sentin]) must directly precede the verb (LR-132). The following sentences illustrate the sequential constraints of this adverb class:

| | | | | | | | | | |
|-------|-------|-----|-----|-----|------|------------|----------|---------|--------|
| (226) | ŋay | ʔər | ʔan | mər | hwi? | Yesterday, | I | almost | forgot |
| | 1 | 2 | 3 | 4 | | 1 | 2 | 3 | 4 |
| | jənaw | nɛ | | | | that | (affair, | event). | |
| | 5 | 6 | | | | 6 | | 5 | |

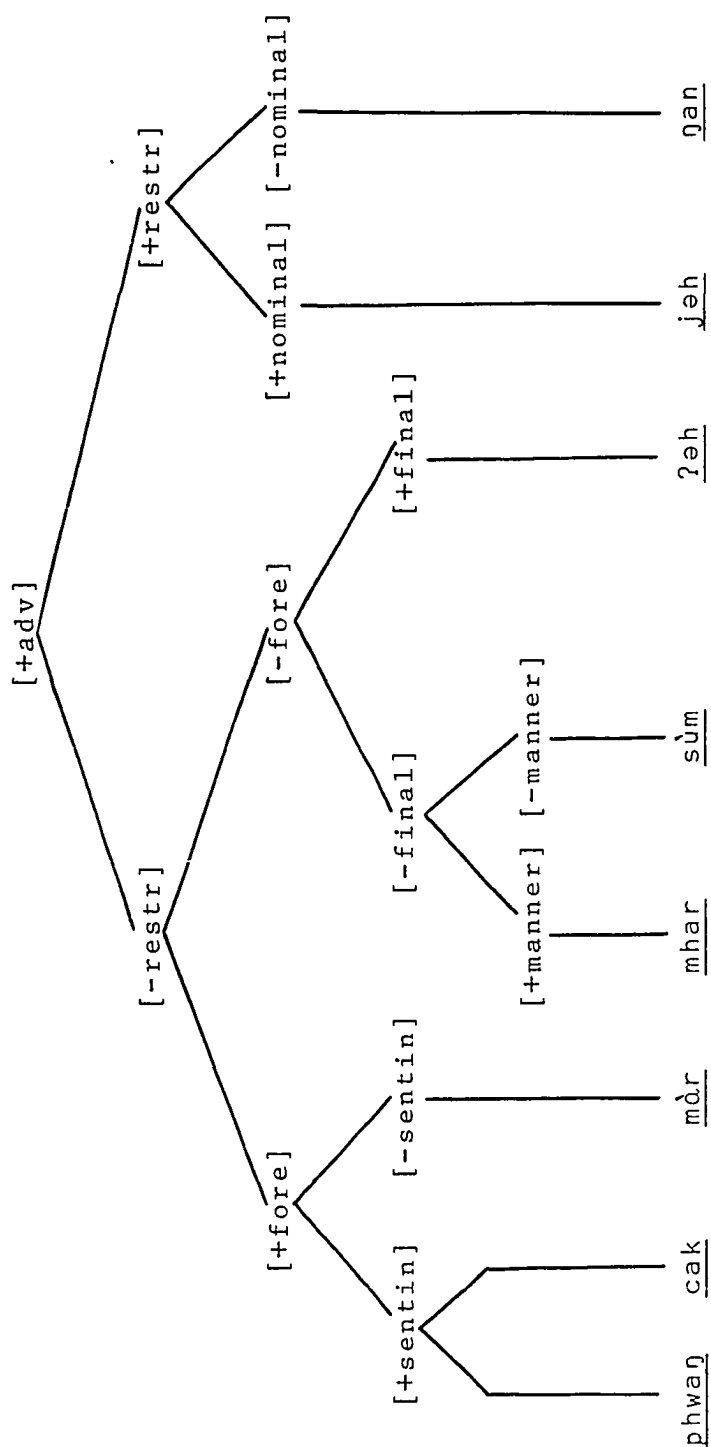


FIGURE 10

Sre Adverbs

But not,

(227) *ɲay ?òr mǎr ?ap hwi? jəɲaw nə

(228) *mǎr ɲay ?òr ?ap hwi? jəɲaw nə

(229) *?ap hwi? mǎr jəɲaw nə ɲay ?òr

(230) *?ap hwi? jəɲaw nə mǎr ɲay ?òr

(231) *?ap hwi? jəɲaw nə ɲay ?òr mǎr

Similarly,

| | | | | | | | |
|-------|------|-----|-----|-----|----|-------|------------------------------|
| (232) | khay | gam | ləh | hiw | pa | | He is still building his new |
| | 1 | 2 | 3 | 4 | 5 | | 1 2 3 6 5 |
| | | | | | | khay. | house. |
| | | | | | | 6 | 4 |

| | | | | | | | |
|-------|----|-----|----|-----|-------|-----|------------------------------|
| (233) | òŋ | kra | nə | gam | rəgəy | rɛ. | That old man can still swim. |
| | 1 | 2 | 3 | 4 | 5 | 6 | 3 2 1 5 4 6 |

but not with preverbal gam in any other position than immediately preceding the verb.

Sentence final adverbs may only occur as the last constituent of a sentence (unless there is a sentence-final particle); and there may be only one per sentence.

Neither manner nor non-manner adverbs may ever precede the verb (LR-135). Post verbally, however, they may intersperse themselves freely among other post-verbal elements. But if both a manner and a non-manner adverb occur in the same sentence, the manner adverb must always precede the non-manner adverb (LR-136). That is, no matter how they are interspersed, the one marked [+manner] must sequentially precede the one marked [-manner] though it need not precede it directly. For example,

| | | | | | | |
|-------|------|-------|------|------|--|----------------------|
| (234) | khay | ntwat | mhar | sùm. | | He always runs fast. |
| | 1 | 2 | 3 | 4 | | 1 4 2 3 |

but not,

(235) *khay ntwat sùm mhar.

Or,

| | | | | | | | | | | | |
|-------|-----------|----|-------|------|-----|------------|-----|--------|------|------|----|
| (236) | ʔaso | ne | ntwat | mhar | tam | That | dog | always | runs | fast | in |
| | 1 | 2 | 3 | 4 | 5 | 2 | 1 | 7 | 3 | 4 | 5 |
| | ɬlaŋ sùm. | | | | | the field. | | | | | |
| | | 6 | 7 | | | | | 6 | | | |

but not,

(237) *ʔaso ne ntwat sùm
tam ɬlaŋ mhar.

(The co-occurrence properties of jəh were discussed in the chapter on noun phrases and will not be repeated here.)

The non-nominal adverb must directly follow (with no intervening elements) a stative verb, an adjective derived from a stative verb, or a manner adverb. This constraint is expressed in LR-137.

6.3 Other Processes

6.3.1 Statives: Comparative Degree

Any verb, adjective, or adverb with the feature [+stative], that is, stative verbs, adjectives, and manner adverbs, can be realized in the comparative degree, as illustrated by the following sentences:

| | | | | | | | | |
|-------|---------------|-----|-----|-------|----------------------|-------|-----|----------|
| (238) | ʔaruh | təy | hàŋ | rəlaw | French | girls | are | prettier |
| | 1 | 2 | 3 | 4 | 2 | 1 | 3 | 4 |
| | mə ʔaruh mih. | | | | than American girls. | | | |
| | | 5 | 6 | 7 | | 5 | 7 | 6 |

superlatives); it may be followed by a sentence-final particle; or it may be followed by a noun/verb and a sentence-final particle (fifth feature in matrix). In case rəlaw is followed by a noun phrase, that noun phrase must be preceded by the particle mə, which loosely corresponds to English 'than'. The particle is inserted transformationally, by TR-9.

6.3.2 Statives: Superlative Degree

Superlative sentences are exemplified by the following sentences:

(241) ?aruh nə hən rəlaw jəh. That girl is the prettiest.
 1 2 3 4 5 2 1 3 4,5

(242) ?aruh hən rəlaw jəh nə That prettiest girl is my
 1 2 3 4 5 5 2 3,4 1 6 8
 lah gəp ?ap. friend.
 6 7 8 7

(243) kən ?ap rə mhar rəlaw My kid swims fastest.
 1 2 3 4 5 2 1 3 4 5,6
 jəh.
 6

They are formed in the same manner as comparatives, except that they are followed by another verbal complement, jəh, 'to be completely finished, used up', and this is the only verbal complement rəlaw can take. (This superlative construction also has a Vietnamese analog, hơn hết, (cf. Thompson 1965:213).

The constraints on rəlaw jəh operate in the following way. LR-73.5 assigns to all verbs the feature [-comp]; but

jəh already has the feature [+comp] in its lexical entry matrix and so does not undergo this rule. The last feature of rəlaw precludes any verb with the feature [-comp] from following, which, in effect, means that only jəh will be accepted in that position. (Incidentally, since rəlaw has [+stative] in its matrix it is not subject to LR-102, which bars non-statives from following statives.) rəlaw jəh may be followed only by a final particle; otherwise it must be the final element in a sentence.

6.3.2 Interrogative Sentences

There are two kinds of interrogatives in Sre, yes/no questions and content questions.

6.3.2.1 Yes/No Questions

Yes/no questions are formed simply by adding the interrogative particle ʔə³ to the end of the sentence, as shown in the following examples:

- | | | | | | | | | | | |
|-------|-------|------|------|---------|------|------|---------|---------|----|---------|
| (244) | khay | lɔ̄t | hə | səgɔ̄ŋ. | He | went | to | Saigon. | | |
| | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | | |
| (245) | khay | lɔ̄t | hə | səgɔ̄ŋ | ʔə. | Did | he | go | to | Saigon? |
| (246) | ʔaruh | nə | hàŋ. | That | girl | is | pretty. | | | |
| | 1 | 2 | 3 | | 2 | 1 | 3 | | | |
| (247) | ʔaruh | nə | hàŋ | ʔə | Is | that | girl | pretty? | | |

the feature [\pm QRULE]; the lexical entries that end up as [$+$ QRULE] are then subject to DR-2, which converts them into interrogative nouns with the features $\left[\begin{array}{l} +N \\ +\text{DERIV} \\ +Q \end{array} \right]$.) Normally,

to form a content question, the particle tayh is added to the end of the sentence. This particle has the features:

$$\begin{array}{c} \text{tayh} \\ \left[\begin{array}{l} +P \\ +Q \\ +\text{info} \\ + \left[\begin{array}{l} +N \\ +Q \end{array} \right] \text{---} \end{array} \right] \end{array}$$

tayh can only be added to sentences that contain an interrogative noun; this constrained is embodied in the feature $\left[+ \left[\begin{array}{l} +N \\ +Q \end{array} \right] \text{---} \right]$. While it may be added to sentences with interrogative nouns, it does not have to be. Any simple sentence containing an interrogative noun is a content question, with or without the final particle tayh. For yes/no questions, on the other hand, a statement becomes a question if and only if followed by the particle ?ə. The following are examples of content questions:

- | | | | | | | | | | | |
|-------|-----|-----|------|---------|---------|------|-----|--------|---------|--------|
| (250) | me | lət | ntəŋ | (tayh). | Where | are | you | going? | | |
| | 1 | 2 | 3 | | 3 | | 1 | 2 | | |
| (251) | caw | ne | lah | ncaw | (tayh). | Who | is | that | person? | |
| | 1 | 2 | 3 | 4 | | 4 | 3 | 2 | 1 | |
| (252) | kən | ne | ləh | nchi | (tayh). | What | is | that | kid | doing? |
| | 1 | 2 | 3 | 4 | | 4 | | 2 | 1 | 3 |

Optionally, interrogative nouns may be permuted to sentence-initial position, as provided for by TR-3:

(253) ntèŋ me lət (tayh).

(254) ncaw lah caw ne (tayh).

(255) nchi kòn ne ləh (tayh).

6.3.3 Negative Sentences

There are three kinds of negative sentences, regular negative, emphatic negative and negative imperative. They are realized through the appropriate representative of the pre-verbal Adv constituent of the base. The negation adverbs, with their inherent features, are as follows:

ʔəʔ 'not'

[+Adv
+neg
-sentin]

ʔəʔ hət 'not yet'

[+Adv
+neg
-sentin
-____ [+equat]]

ʔəʔ ɔʔ 'not at all'

[+Adv
+neg
+emph
-sentin
+____ [+Adv
+neg
+manner]]

ban 'do not'

[+Adv
+neg
+imper
-sentin
+[+addr]____]

luy 'at all'

[+Adv
+neg
+manner
+ [+neg] { [+V] [+N]
+emph } [+cop] [-k] }
- { [+V] [+N]
-cop } []]

(The forms ʔəʔ hət and ʔəʔ ɔʔ...luy are syntactically bound: hət never occurs unless immediately preceded by ʔəʔ; likewise ɔʔ never occurs unless preceded immediately

by ʔàʔ; and luy never occurs unless the verb it follows is immediately preceded by ʔàʔ gɔʔ. Accordingly, these forms are all considered as unit adverbs.)

6.3.31 Regular Negative

Regular negative sentences are formed by placing the negative adverb ʔàʔ directly in front of the verb (if there is only one) or the first verb (if there is a sequence of verbs), e.g.,

- | | | | | | | | | | | |
|-------|------|------|-------|-------|--------|-----|-------|----------|-------|----------|
| (256) | khay | kàŋ | play | krwac | | He | likes | oranges. | | |
| | 1 | 2 | 3 | | | 1 | 2 | 3 | | |
| (257) | khay | ʔàʔ | kàŋ | play | krwac. | He | does | not | like | oranges. |
| | 1 | 2 | 3 | 4 | | 1 | 2 | 3 | 4 | |
| (258) | kòn | khay | rəgəy | rɛ. | | His | kid | can | swim. | |
| | 1 | 2 | 3 | 4 | | 2 | 1 | 3 | 4 | |
| (259) | kòn | khay | ʔàʔ | rəgəy | rɛ. | His | kid | can | not | swim. |
| | 1 | 2 | 3 | 4 | 5 | 2 | 1 | 4 | 3 | 5 |

If it is desired to express the fact that the action or process indicated by the verb has not taken place but might reasonably be expected to take place at some future time, the negative adverb ʔàʔ hət is used, e.g.,

- | | | | | | | | | | | | | |
|-------|------|------|-----|-----|-------|--------|-----|---------|-------|------|----------|---|
| (260) | khay | ʔàʔ | het | kàŋ | play | | He | doesn't | yet | like | oranges. | |
| | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 | 5 | |
| | | | | | | krwac. | | | | | | |
| (261) | kòn | khay | ʔàʔ | hət | rəgəy | | His | kid | can't | swim | yet. | |
| | 1 | 2 | 3 | 4 | 5 | | 2 | 1 | 5 | 3 | 6 | 4 |
| | | | | | | rɛ. | | | | | | |
| | | | | | | 6 | | | | | | |

The question whether to use ʔàʔ or ʔàʔ hət is one of performance; it depends upon the speaker's feeling as to

whether the event or process in question is one which could well take place in the future or one which could probably never take place: it depends, in other words, upon expectations and beliefs as to what is normal, and is therefore a semantic, not a syntactic, question.

The syntactic constraints on the use of these negative adverbs are as follows: (1) ʔàʔ hət may not precede copulas lah or lah jèn. Such ungrammatical sequences are precluded by the inherent feature [-___[+equat]] in the lexical entry of ʔàʔ hət (the feature [+equat], it will be remembered, is common to both lah and lah jèn). (2) If ʔàʔ precedes the copula lah, the form of the latter changes to di. Thus,

| | | | | | |
|-------|------|-----|-----|-------|-----------------------|
| (262) | khay | lah | caw | ywan. | He is (a) Vietnamese. |
| | 1 | 2 | 3 | 4 | 1 2 3, 4 |

| | | | | | | |
|-------|------|-----|----|-----|-------|---------------------------|
| (263) | khay | ʔàʔ | di | caw | ywan. | He is not (a) Vietnamese. |
| | 1 | 2 | 3 | 4 | 5 | 1 3 2 4, 5 |

This phenomenon (the substitution of di for lah) is handled by TR-6.

6.3.32 Emphatic Negation

In emphatic negation, the adverb ʔàʔ gɔʔ appears before the verb(s) and luy goes immediately after the verb if the verb is a non-copula, e.g.,

| | | | | | | | |
|-------|------|-----|-----|-----|-----|------|----------------------------|
| (264) | khay | ʔàʔ | gɔʔ | kàp | luy | play | He doesn't like oranges at |
| | 1 | 2 | 3 | 4 | 5 | 6 | 1 2 4 6 3, |
| | | | | | | | krwac. |
| | | | | | | | all. |
| | | | | | | | 5 |

(265) kɔ̃n khay ʔàʔ ɡɔʔ rəgəy His kid can't swim at all.
 1 2 3 4 5 2 1 5 3 6 4,7
 rɛ luy.
 6 7

If the verb is a copula, however, the luy must follow the post-verbal, caseless noun, e.g.,

(266) caw ne ʔàʔ ɡɔʔ lah caw That man isn't an official
 1 2 3 4 5 6 2 1 5 3 6
 kwaŋ luy. at all.
 7 4,7

These constraints are expressed in the fourth and fifth features of the lexical entry matrix of luy.

6.3.33 Imperative Negation

Imperative negative sentences are formed by placing the adverb ban 'do not' immediately before the verb, e.g.,

(267) ban nhəl tam bre. Don't play in the woods!
 1 2 3 4 1 2 3 4

None of the adverbs of negation may co-occur with imperative final particles, a constraint expressed by LR-140, which adds to all such adverbs the feature [-_____

$\left[\begin{array}{l} +P \\ +final \\ +K \end{array} \right]$].

6.3.4 Interrogative/Negative Combinations

Since negative adverbs and interrogative particles come from different deep structure constituents, it is possible to have sentences that are both negative and interrogative, as follows:

tərndəm ?ih.
4 5

(271) (bɔl ?ay) pih phan yə. You (fem./pl.) wash the
1 2 3 4 1 2 the
clothes!
3 4

(272) (me) təlɔŋ lɔc ləh tɛ? Try to finish doing that
1 2 3 4 5 2 3 4 7
brwa? nɛ ɲay dɔ. work today!
6 7 8 6 8 5

(me) təlɔŋ lɔc tɛ? ləh

brwa? nɛ ɲay dɔ.

(me) təlɔŋ tɛ? lɔc ləh

brwa? nɛ ɲay dɔ.

Note that the non-polite imperative particle occurs sentence-finally only in the deep structure. In the surface structure it follows the verb, if there is only one; if there is more than one, it may go after any verb in the verb cluster. These permutations of tɛ? are handled by TR-8.

6.3.6 Surface Structure Adjustments

There remains now only the problem of eliminating the identical nouns of embedded sentences. These can arise from the optional (S) of a noun phrase or the optional (S) following the verb. The two Equi-NP-Deletion Transformations, TR-1 and TR-2, serve to eliminate the identical nouns and produce well-formed surface structures.

One final adjustment to be mentioned is that of LOCATIVE permutation. LOCATIVE actants which are realized through the L case form can be permuted to sentence-initial position.

This is effected by TR-5.

NOTES TO CHAPTER VI

1. It will be recalled (cf. 5.2.4.2) that in this study noun compounds are considered to be, syntactically, the same as nouns. Here, though, the difference has clear syntactic consequences. But, since the mechanics for generating noun compounds have not been dealt with, it will not be possible to constrain the grammar so as to prevent sentences like (108). The reader should keep this lacuna in mind.
2. Syntactically, gələh is the passive form of the verb ləh, 'to do'; but it has also developed this specialized use as a copula before adjectives.
3. In Dialect B, səl ?ə seems to be used most frequently for yes/no questions; but in Dialect A, the dialect of my informant, ?ə is preferred.

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