A RELATIONAL GRAMMAR ANALYSIS OF THE BURIRAM DIALECT OF NORTHERN KHMER

BY

PHUNSAP ISARANGKUN NA AYUTTHAYA

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Abstract

This thesis is an attempt to use the Relational Grammar approach in analysing a language. The theory is only used on the clause level.

This thesis follows Dr.Donald G. Frantz's approach to the Relational Grammar. It consists of five chapters. The first chapter introduces the Northern Khmer people and their language areas, including a summary of the phonemes of this language. The second chapter gives some of the history of Relational Grammar and introduces the main principles and procedures of the theory. Chapters three and four use the data from the Buriram Dialect applying the principles given in chapter two to individual clauses and a text respectively. Then chapter five gives conclusions and comments on how R.G. worked out in this thesis.

Acknowledgements

For the successful completion of this thesis, I wish to express my gratitude to many people.

First of all I am deeply indebed to Dr.David Thomas, my supervisor, for without his thorough supervision and encouragement this thesis would not have been completed.

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My thanks go to my principal language helper, Mr.Prathuang Piyaram who was very patient in giving the

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Lastly, I am also grateful to God for preserving life, health through various hazards, giving me more power to continue my work until it has been done.

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Abbreviations and Symbols

The abbreviations used in this thesis are :

adv.	=	adverb, adverbial
anaph.	=	anaphor
cl.	=	clause
class.	=	classifier
comp.	=	complement
conti.	=	continuous
conts.	=	contrast
dat.	=	dative
def.	=	definite
dem.	=	demonstrative
DO.	=	direct object
ds.	=	downstairs clause
e	=	emeritus
e.g	=	give example
egr.	=	ergative
els.	=	ellipsis
ex.	=	example
fem.	=	Feminine
FF.	=	and the following page
Fig.,fig	=	figure
fut.	=	future
G.R.	=	grammatical relation
H	=	head

i.e	=	that is
I.O	=	indirect object
incorp.	=	incorporation
intrans.	=	intransitive
LK.	=	linkage
loc.	=	location
M	=	main
mas.	=	musculine
MK.	=	marker
mod.	=	modifier
mov.	=	movement
N	=	noun, nominative
neg.	=	negation, negative
nom.	=	nominative
N.K.	=	Northern Khmer
obl.	=	oblique advancement
p	=	predicate
parc.,partic	=	particular
part.	=	particle
pass.	=	passive
Pe	=	predicate emeritus
Pl	=	plural
ppl.	=	past plural
place	=	place
poss.	=	possessive
prep.	=	preposition

pron.	=	pronoun
pst.	=	past tense
purp.	=	purpose
qual.	=	quality
rel.	=	relation, relative
S., sing	=	singular
sec.	=	section
subj.	=	subject
time	=	time
trans.	=	transitive
u.	=	union
un.	=	unspecified
US.	=	upstairs clause
V.	=	verb

The symbols used in this thesis are :

1	=	subject / actor
2	=	direct object / undergoer
3	=	indirect object / recipient
( )	=	deletion
/	=	or
/ /	=	phonemic bracket
{ }	=	one of element must occur
[ ]	=	phonetic bracket
ˋ	=	low tone
Ø	=	someone or something ellipsis

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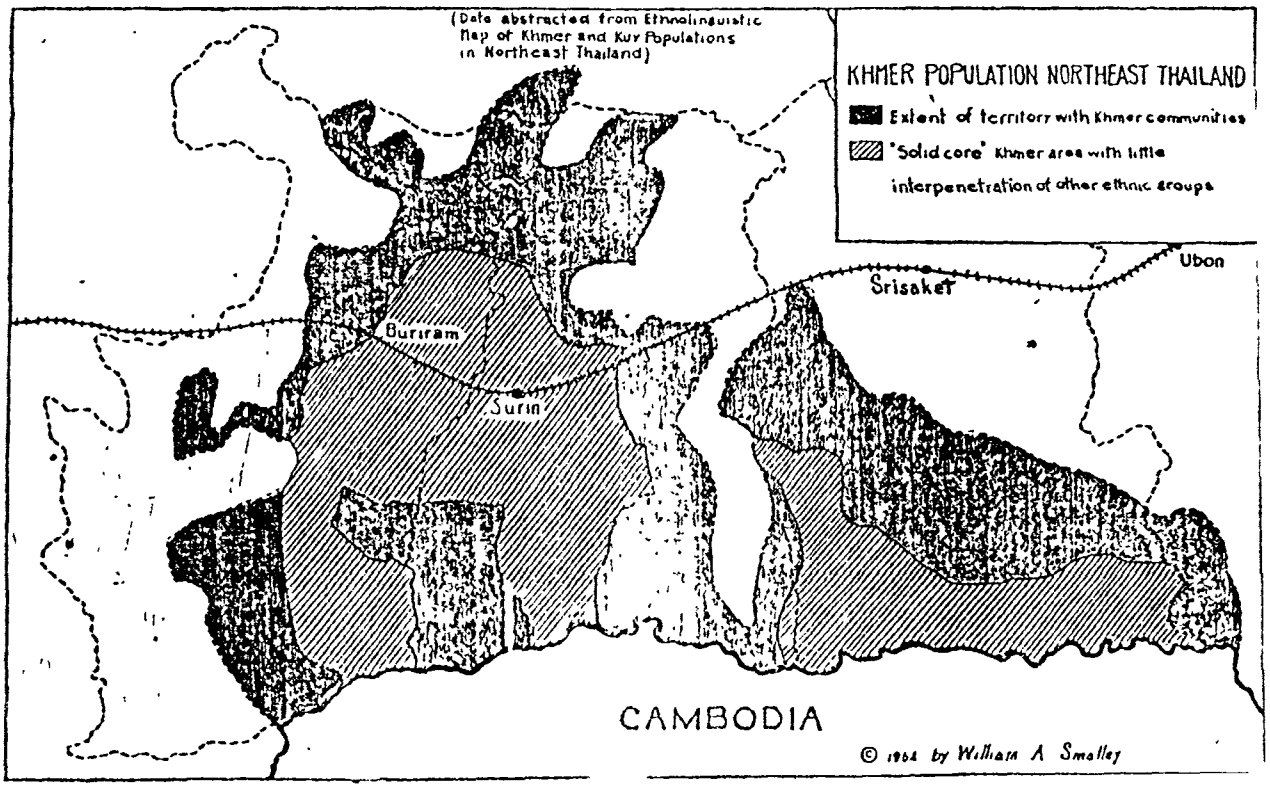
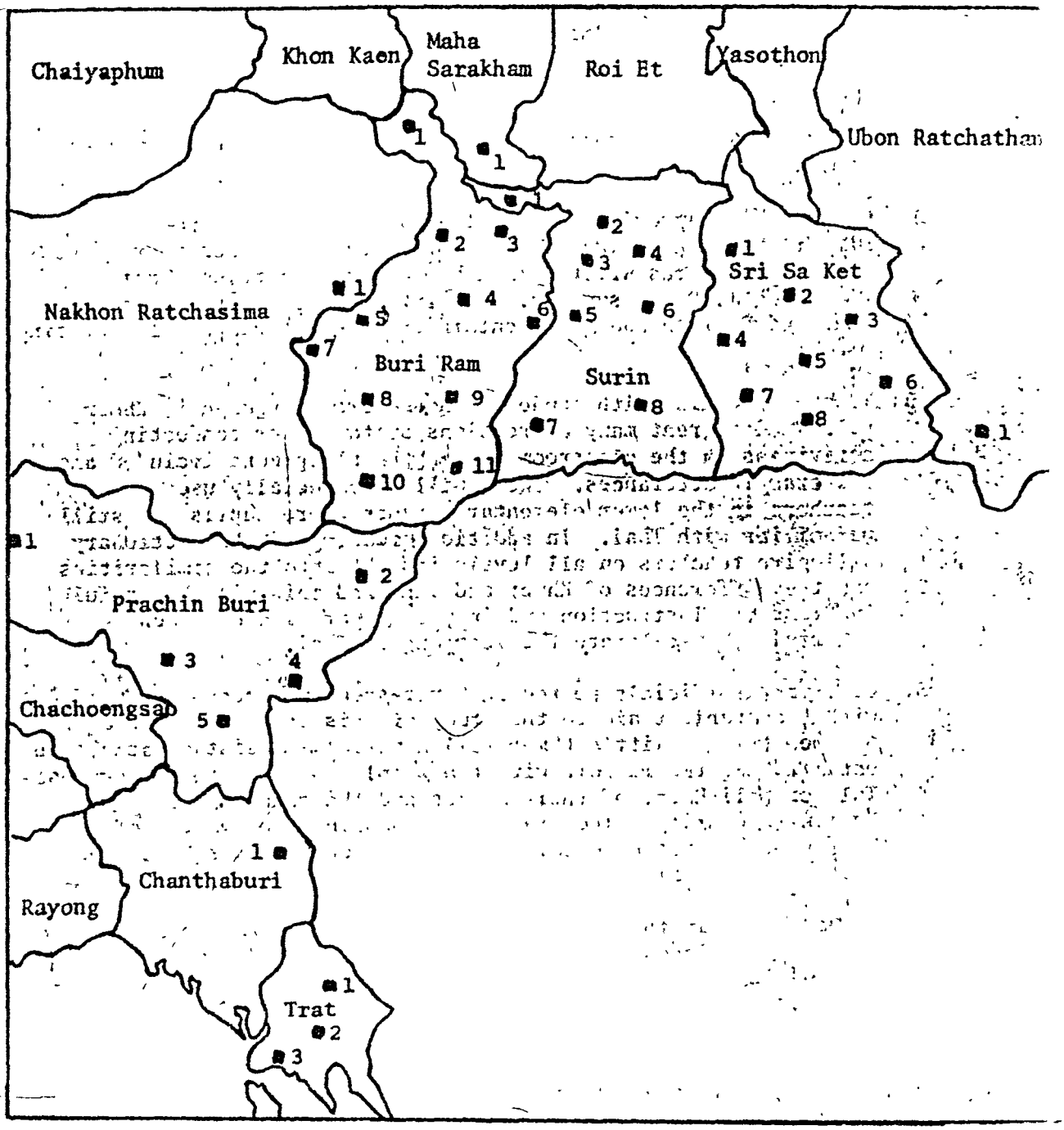
Map 1 Khmer population Northeast Thailand :-

'Solid core' Khmer area



(Map copied from William A. Smalley 1964 : 25)

Map 2. Map Showing Amphoes Where Khmer-Speaking Villages Are Located.



Maha Sarakham
1 Phayakkhaphum Phisai

Nakhon Ratchasima
1 Huai Thalaeng

Prachin Buri
1 Muang
2 Ta Phraya
3 Sa Kaeo
4 Aranyaprathet
5 Watthana Nakhon

Chanthaburi
1 Pong Nam Ron

Trat
1 Bo Rai
2 Muang
3 Laem Ngop

Buri Ram
1 Phutthaisong
2 Khu Muang
3 Satuk
4 Muang
5 Lam Plai Mat
6 Krasang
7 Nong Ki
8 Nang Rong
9 Prakhon Chai
10 Lahan Sai
11 Ban Kruat

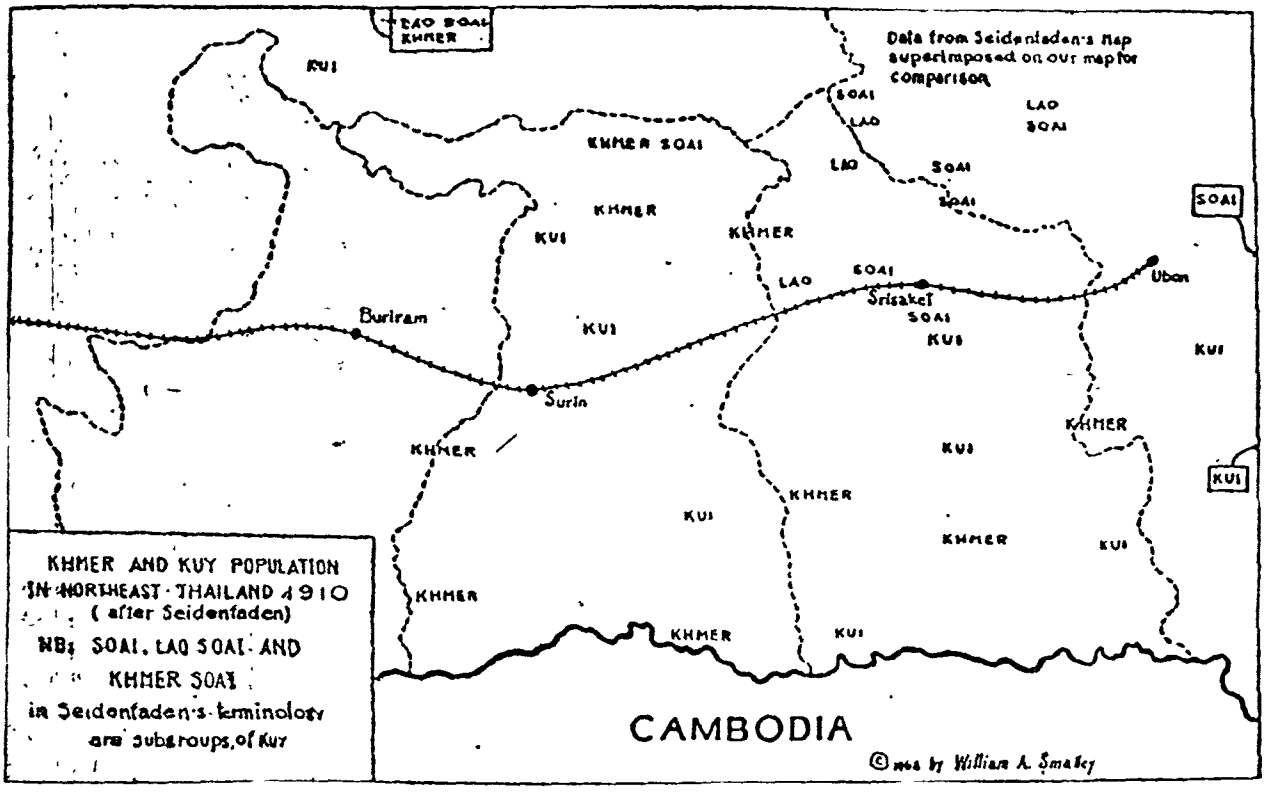
Surin
1 Chumphon Buri
2 Tha Tum
3 Chom Phra
4 Sanom
5 Muang
6 Sikhoraphum
7 Sangkha

Si Sa Ket
1 Uthumphon Phisai
2 Muang
3 Kanthararom
4 Prang Ku
5 Phrai Bun
6 Kantharal
7 Khukhan
8 Khunhan

Ubon Ratcha
1 Nam Yun

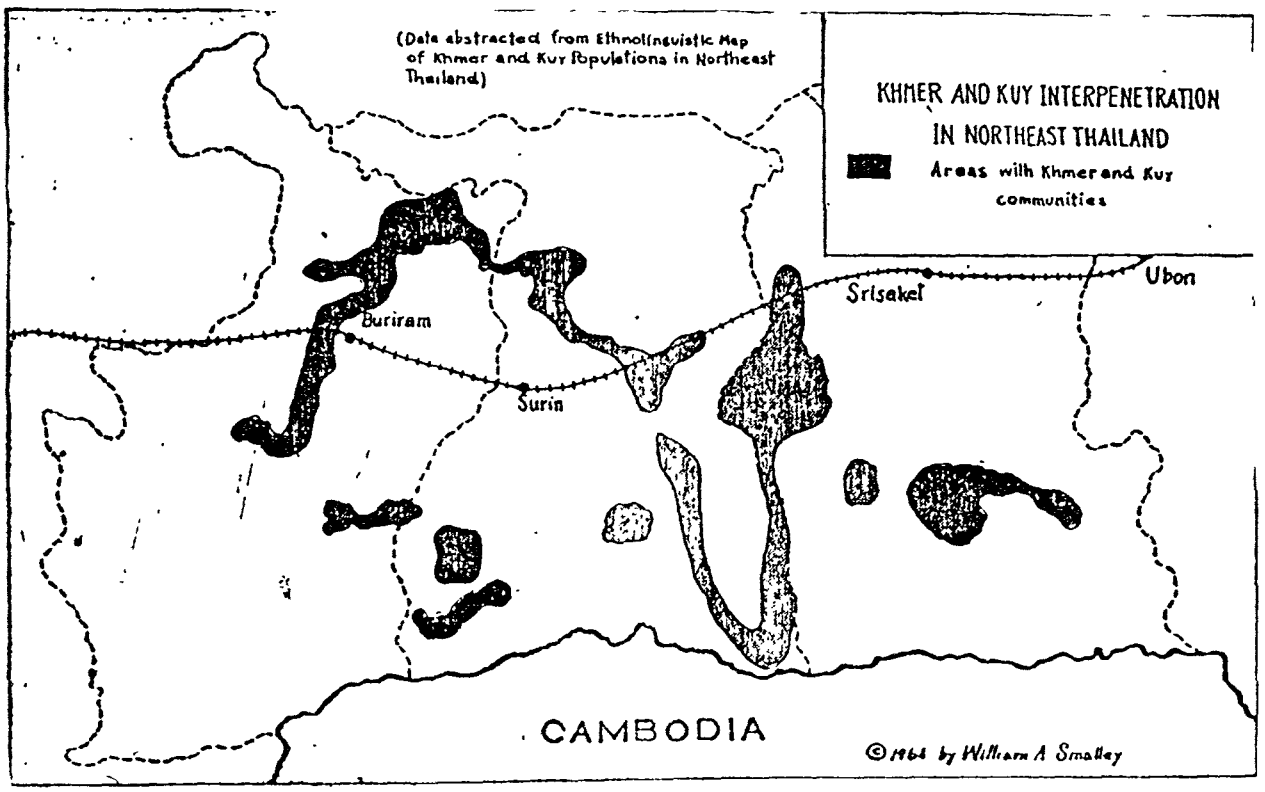
(Map copied from Dhanan & Chartchai 1978 :

Map 3 Khmer and Kuy population in Northeast Thailand



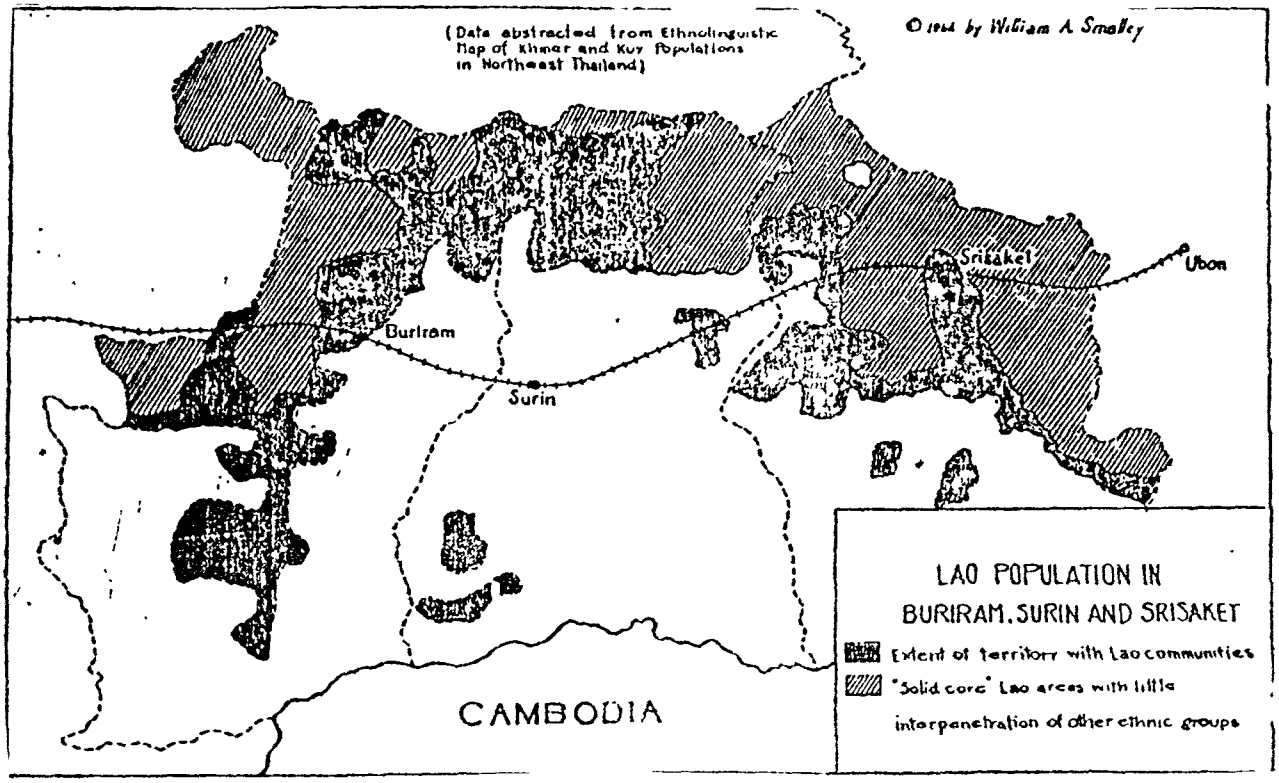
(Map copied from William A. Smalley 1964 : 29)

Map 4 Khmer and Kuy interpenetration in Northeast Thailand



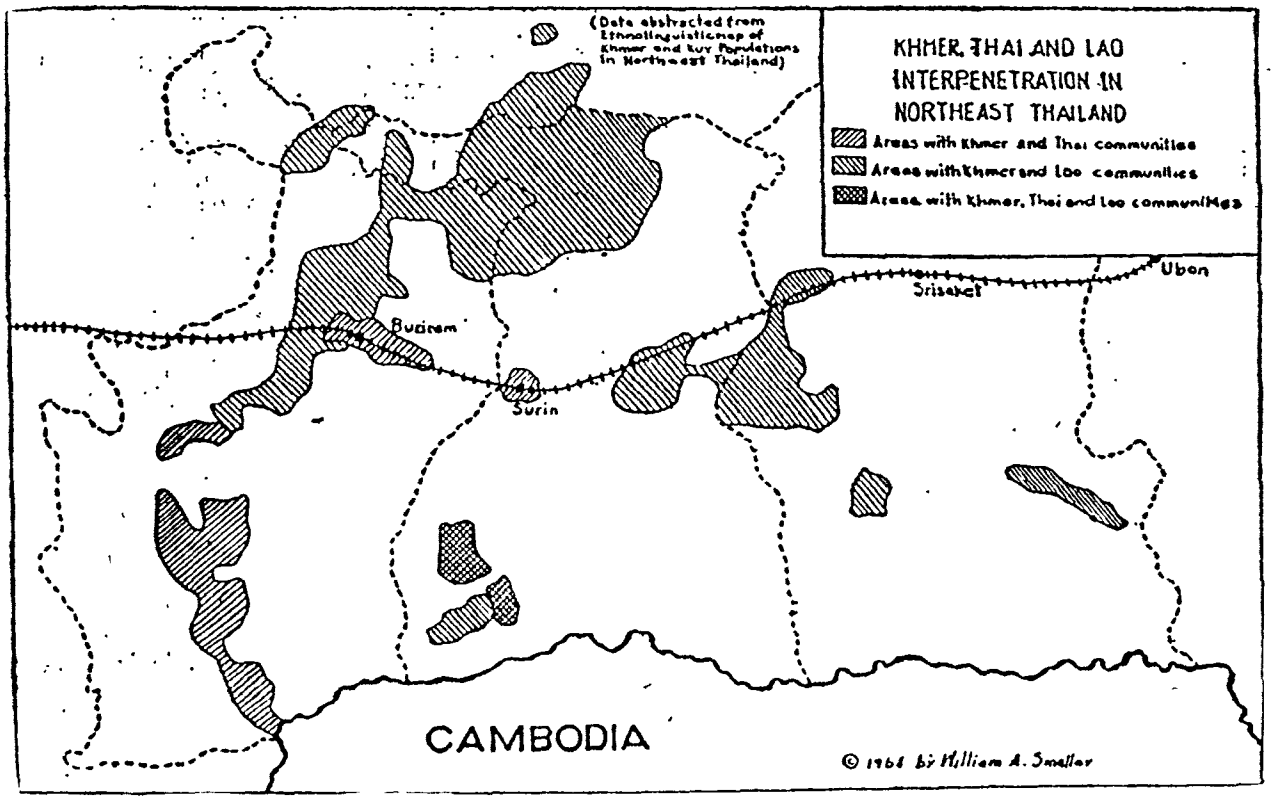
(Map copied from William A. Smalley 1964 : 27)

Map 5 Lao population in Buriram, Surin and Srisaket



(Map copied from William A. Smalley 1964 : 26)

Map 6 Khmer, Thai and Lao interpenetration in Northeast Thailand



(Map copied from William A. Smalley 1964 : 28)

Chapter I

The Northern Khmer people and language

1.1 Location of N.K.people

Northern Khmer is a language which is spoken in northeastern Thailand in the provinces of Buriram, Surin, and Sisaket, overlapping slightly into southern Ubonrachathani province on the east and Roi Et province in the north (Smalley: 1964) (see map 1). And scattered groups are found in Mahasarakham, Nakhonrachasima, Pracinburi, Canthaburi, and Trat. The Indigenous Languages of Thailand Research Project (ILTRP) in 1977 found that Khmer is spoken by more than 550,000 people in over 800 villages in this area.(Dhanan & Chartchai: 1978) (see map 2).

Dhanan Chantrupanth (1978:I) says that the Dongrek Mountains form the Border between Cambodia and the Thai province of Surin, Buriram, and Sisaket where most of Khmer-speakers dwell. The area north of mountains, northeastern Thailand, is a plateau with elevations of 1500-1800 ft. in some places. From the mountains, the area in Thailand appears higher than that in Cambodia and thus the highland Khmer call themselves [Khmer lɨɨ] meaning upper Khmer or high Khmer and refer to the people in Cambodia as [khmer Krɔɔm] meaning lower Khmer or low Khmer. It is believed that the Khmer in northeastern Thailand derive from the same stock as those in Combodia; they have, however, been settled in the Northeast for a long time and they

feel they belong to Thailand. (see Seidenfaden 1975: 106 and also Lekhakum 1952 and 1975 as cited in Dhanan 1978:I)

1.2 Linguistic affiliation within the Austroasiatic Languages.

N.K. is in the Khmer subfamily of the Mon-Khmer family of Austroasiatic languages. (Thomas & Headley: 1970) The Mon-Khmer family which is a group of Austroasiatic languages found in Southeast Asia has 9 branches: Pearic, Khmer, Bahnaric, Katuic, Khmuic, Monic, Palaungic, Khasi, Viet-Muong.

1.3 Main dialect area

The variety of N.K. used in this thesis is the Buriram dialect. This province is in the south of Northeastern part of Thailand. The population (1982) of the province is 1,160,402, divided into 11 Amphoe (counties) and 3 king Amphoe (sub-counties)

Amphoes

1. Muang Buriram
2. Prakhonchai
3. Nang rong
4. Satuk
5. Krasang
6. Phutthaisong
7. Nong Ki
8. Ban Kruat
9. Lahansai
10. Lamplaimat

11. Khu Muang

King Amphoes

1. Na Pho
2. Nung Hong
3. Pakham

Approximately 60% of the Buriram people speak Khmer and 20% speak Lao (in Thailand).

My main informant lived in Ban Bua Amphoe Muang for a long time. Now, he has moved to Ban Hua Na which is not far from Ban Bua. He can understand some Khmer from Cambodia near the Thai border. Other languages which are involved in his daily life are Thai (Muang Buriram dialect), Lao, and kuy. Usually he speaks Khmer to communicate, but if the person who is talked to is not Khmer he usually speaks Thai (Muang Buriram dialect).

He began to learn Thai when he went to school. Now in his village, most people are bilingual (Thai and Khmer). For himself, he speaks more Thai since coming to study in Bangkok four years ago.

1.4 Previous studies on N.K.

A. William A. Smalley made an ethnolinguistic survey of the Northern Khmer speaking people. He also wrote about the vowels problem in N.K.

B. David Thomas and Wanna Tienmee made an acoustic study of N.K. vowels.

C. We have also the Dictionary of Khmer (Surin)-Thai-English

by Dhanan Chantrupanth and Chartchai Phromjakgarin.

D. Phillip N. Jenner made observations on the Surin dialect of Khmer : vowels and consonants.

E. Somkiat Poopatwibun wrote Discourse level Cohesion in Northern Khmer as an unpublished M.A. Thesis Mahidol University, one chapter of which was published in Mon-Khmer Studies.

F. Dorothy Thomas wrote about The deliberate Causative in Surin Khmer. David & Dorothy Thomas wrote on word play in Surin Khmer.

1.5 Summary of Buriram phonology

In the course of my studies in Phonemics and Field Methods in Linguistics I make an analysis of N.K. (Buriram Dialect) phonology. The data were collected from November 15th 1982 to February 22nd 1983. However it was only preliminary work, so I have leaned heavily on the Khmer (Surin)-Thai-English Dictionary[1] and An acoustic Study of Northern Khmer vowels[2], as well as may own later studies. Finally, more data was added and rechecked from June 20th 1984 to September 19th 1984.

---

[1] Dhanan Chantrupanth and Chartchai Phromjakgarin, 1987.

[2] David Thomas and Wanna Tienmee, 1982.

1.5.1 Consonant phonemes chart.

Point of articulation / mode of articulation			bilabial	Alveolar	lamino-prepalatal	velar	glottal
plosive	vl.	unasp.	P	t	tɕ	k	ʔ
		asp.	p^h	t^h	$tɕ^h$	k^h	
	vd.		b	d			
nasal	vd.unasp.		m	n	ɲ	ŋ	
lateral	vd.unasp.			l			
retroflex	vd.unasp.			r			
fricative	vl.			s			h
semi-vowels	vd.unasp.		w		j		

chart 1. Northern Khmer consonant system

A. The phoneme / t͡ɕ / is phonetically a palatal stop [c] in final position, and is a lamino-prepalatal affricate [tɕ] in other positions, so I have chosen to write the phoneme as tɕ .

B. The presyllable in this dialect occurs only with a vowel [a] so I did not write a vowel in the presyllable e.g. [takaw] ⟶ / tkaw / 'earring'

C. Syllabic n̩, m̩, ŋ̩ occurs only in the initial position.

1.5.2 Vowel phonemes chart

Front	Central	Back
ia	ɯa	ua
i iː	ɯ ɯː	u uː
ɭ ɭː	ɤ ɤː	ɔ ɔː
e eː	ə əː	o oː
ɛ ɛː	ʌ ʌː	ɔ ɔː
	a aː	ɑ ɑː

Chart 2. Northern Khmer vowel system.

The vowel system contains 14 short and 14 long pure vowel qualities and 3 diphthongs. (Chart 2)

Chapter II [1]

The general approach of Relational Grammar

2.1 Background

In 1976, Relational Grammar (RG) was developed out of the transformational grammar of Noam Chomsky. At the beginning of the RG, Paul Postal, David Permutter and David Johnson were the first who were interested in it, followed by Donald G. Frantz and others.

Relational Grammar is a "universal grammar" approach, so it can be used with data from around the world.

2.2 Theory

This theory shows the relations between noun (nominal) and verb. That is, we label nominals as subject (s), direct object (DO) and indirect object (IO), (see Fig. 2.1) There are relationships between the semantic role of a nominal and its surface syntactic function RG. analyses clauses by using networks.

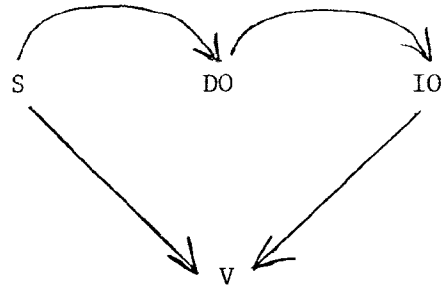


Fig. 2.1 A clause network

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1 summarized and partly quoted from Donald G.Frantz. Grammatical Relations in Universal Grammar, 1979 SIL.

2.3 Networks

Relational Grammar (RG) uses networks composed of arcs, each arc representing a term or a non-term (see 2.4). It uses the abbreviations 1,2,3 instead of subject, direct object and indirect object. P is used to label the predicate relation (usually a verb). The arcs are floating arcs, because we can place the arcs in any position which still properly relates their meaning and function. They are like a mobile that can be moved around but still has the same arcs.

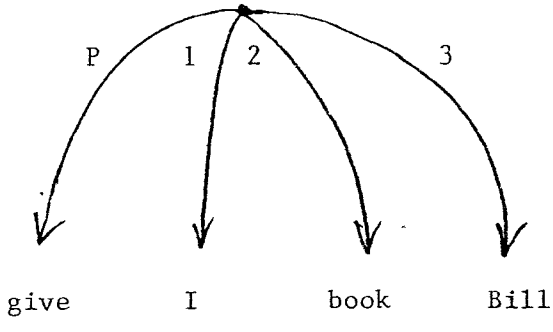
Floating arcs are different from linear arrangements. Linear arrangements show the grammatical structure in linear form as in Fig. 2.2. In a linear arrangement the position of each item cannot be moved because the result would be ill-formed.

S - V - DO - IO

Fig. 2.2 A clause linear arrangement.

For example, the partial networks in Fig. 2.3 show the grammatical relations of I give a book to Bill. These two networks of floating arcs are equivalent to each other.

I give a book to Bill



or

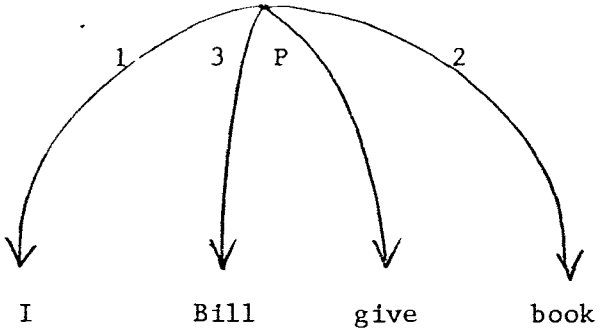
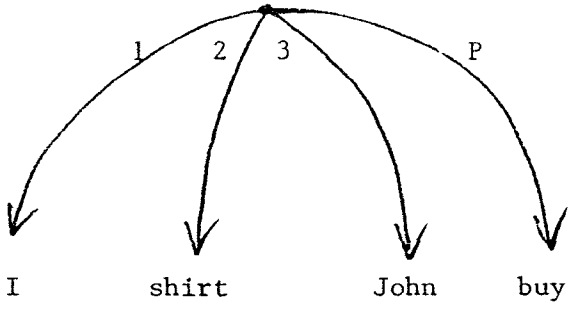


Fig. 2.3 Equivalent floating are networks.

2.4 Term and Non-terms.

The relationships of subject, direct object and indirect object are borne by nominals in a clause, These three have a special status, even though there are many other grammatical relations which nominals may bear, But these three are Basic terms in clauses.

We use 1,2,3 to stand for subject, direct object and indirect object in networks.



"I buy John a shirt"

Fig. 2.4 A Simple network

The terms are defined differently in the initial and final strata (see.sec.2.5). The initial terms are:

P = predicate

1 = actor

2 = undergoer

3 = recipient

The final terms in English (see Frantz pp.11 F.F) are defined as:

P = finite verb

1 = before P.

2 = immediately affer P.

3 = after P, following to.

Nominals other than these three terms are non-terms, such as location, beneficiary, instrument, etc.

2.4.a Ex-terms

I would like to talk about some ex-terms.

Ex-terms are neither terms nor non-terms; they are elements that were terms in the initial stratum but are no longer terms in the final stratum.

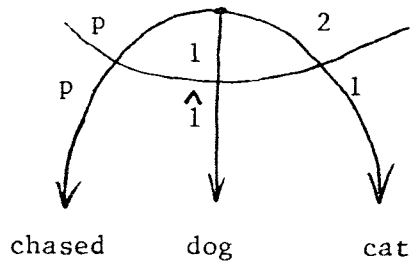
The following ex-terms which I would like to explain are chômeur, unspecified and emeritus.

chômeur

A chômeur is a participant that is still present in the surface structure (final stratum), but does not have a term relationship to the predicate.

Such as 1 - chômeur, 2 chômeur or 3 chômeur, abbreviatiated (1̂, 2̂, 3̂).

So, the network of a chômeur would be



' A cat was chased by a dog'

Fig. 2.5 a chômeur network

I will discuss chômeurs in section 2.5 Strata.

Unspecified (symbolized in networks as un)

In a clause, if something that is not specific is deleted, either the subject or an object, the clause still has the property of the deleted thing. We use this non-term: unspecified, in that case. Such as in the clause: the car was stolen. We know that the car was stolen by someone. But we delete someone. By the semantic relations, the clause still has someone who stole the car. It is not specific who stole the car, but there is someone who stole. So, the network for this example would be:

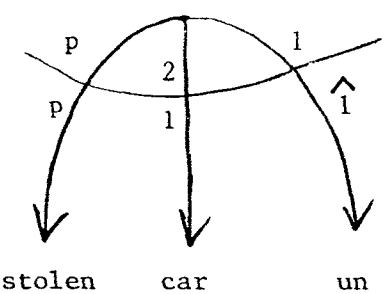


Fig. 2.6 A network with an unspecified participant.

Emeritus (symbolized in networks as e) 'Emeritus' is an ex-term. It has been used for the relation of downstairs nominals in clause unions, if those nominals are not specifically assigned a relation. (See section 2.6.5.1). For example in the French clause[1]:

Je lui laisserai donner le livre à Jean.

'I will let him give the book to Jean',

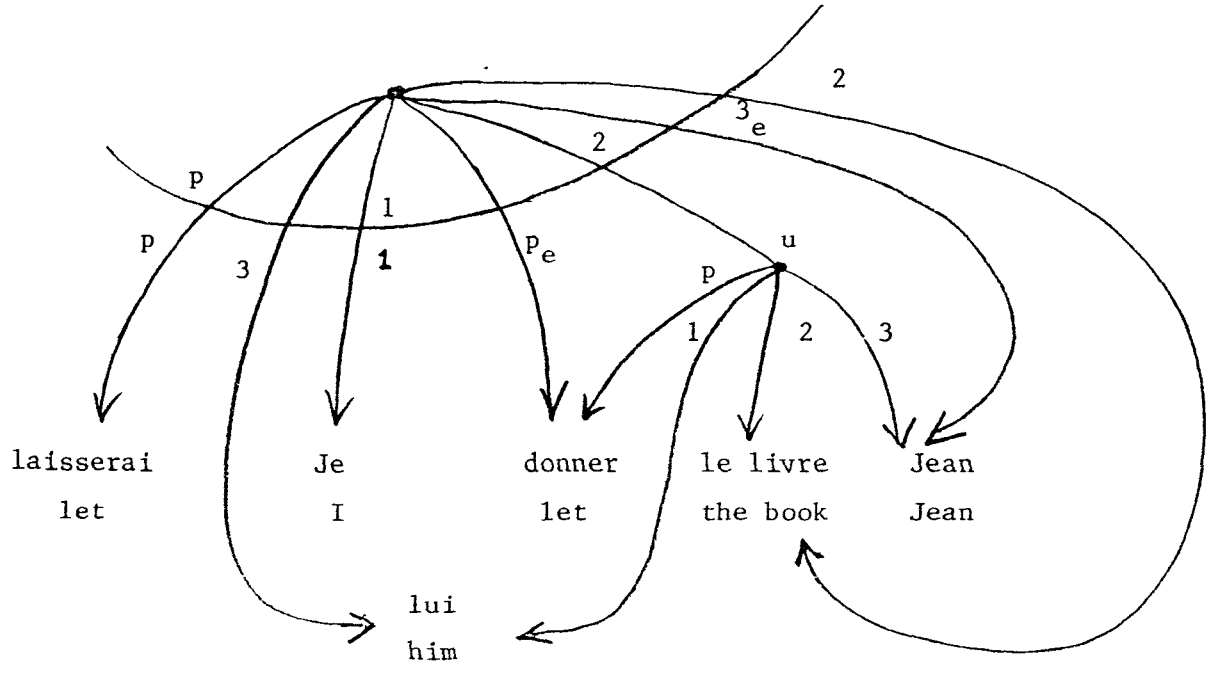


Fig. 2.7 emeritus network

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[1] Taken from frantz 1979 : 39

Fig. 2.7 is an emeritus network that shows orthodox clause union. In this clause there are both Pe and 3e. In the downstairs clause Jean is an initial 3 (indirect object). But in the final stratum of the united clause lui is the surface 3 so Jean becomes a 3 emeritus in the final stratum, since only one 3 is permitted in a stratum. For the predicates, laisserai is the initial predicate of the upstairs clause and is also the predicate in the final stratum (as shown by its non-finite form) in the final stratum of the united clause.

Some other linguists use the name 'emeritus' only for participants, but Dr.Frantz uses it also for the 'dead' verb of the downstairs clause in the clause union[1]. (see example in ex.18 page 29)

2.5 Strata

Relational Grammar uses the 1,2,3 relationships on more than one stratum. The semantic 1,2,3 relations are the initial stratum, the surface 1,2,3 relations are the final stratum. For example

1. The dog bit the cat.

2. The cat was bitten by the dog.

We can see that the cat bears two relations to the verb ~~bit~~ bite; in ex.1 the cat is a direct object (2), but in ex.2 the cat is a subject (1). In ex.1 the direct object (2)

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[1] Personal letter from Dr.Frantz, 1984.

relation correlates directly with the semantic role of patient (2), while in ex.2 it is the subject (1) relation that correlates with the semantic role of patient (2). Therefore the cat (nominal) bears more than one grammatical relation in a given clause, but it can have only one relation in a given stratum. Here, the two relations of the cat are in different strata. That is in ex.2 the cat is a (2) in the initial stratum and a (1) in the final stratum.

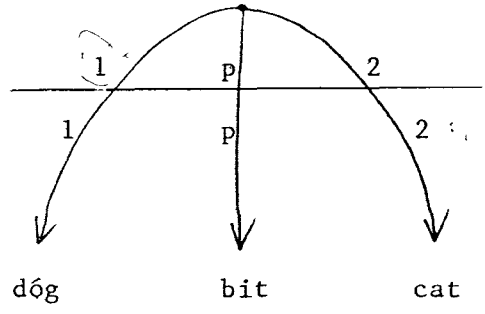


Fig. 2.8 The network for example 1, : the initial and final strata are alike.

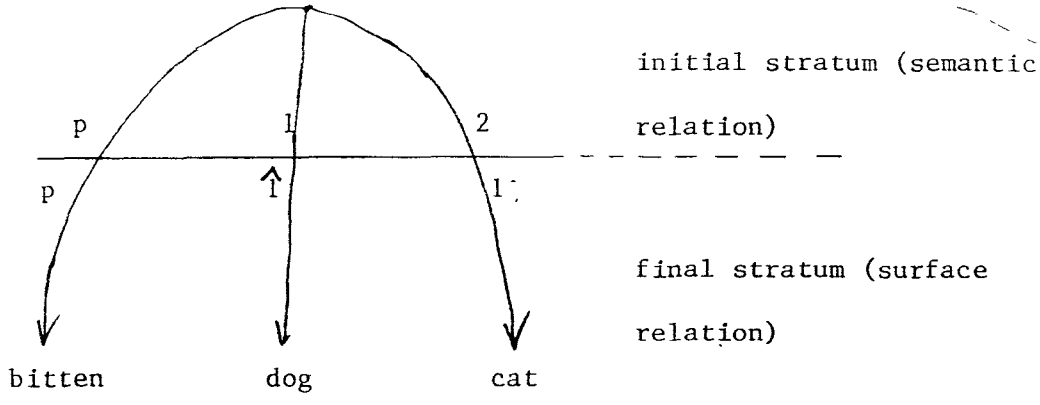


Fig. 2.9 The network for example 2, : the initial and final strata are different.

According to the rule that no two nominals may bear the same term relation to a given verb in the same stratum, when the cat which is a (2) in the initial stratum becomes a (1) in the final stratum, the dog which is a (1) in the initial stratum cannot remain a (1) again in the final stratum. The dog has not changed into a (2) or (3) term in the final stratum but it is also not the subject (1); it has become an ex-term so we mark it as $\hat{(1)}$, Any 1, 2 or 3 term that becomes a ex-term is called a chômeur ("unemployed") and is marked as $\hat{1}$, $\hat{2}$ or $\hat{3}$ respectively.

If the clause is complex there will be more than two strata e.g. :

3. Lek was given a book by his mother.

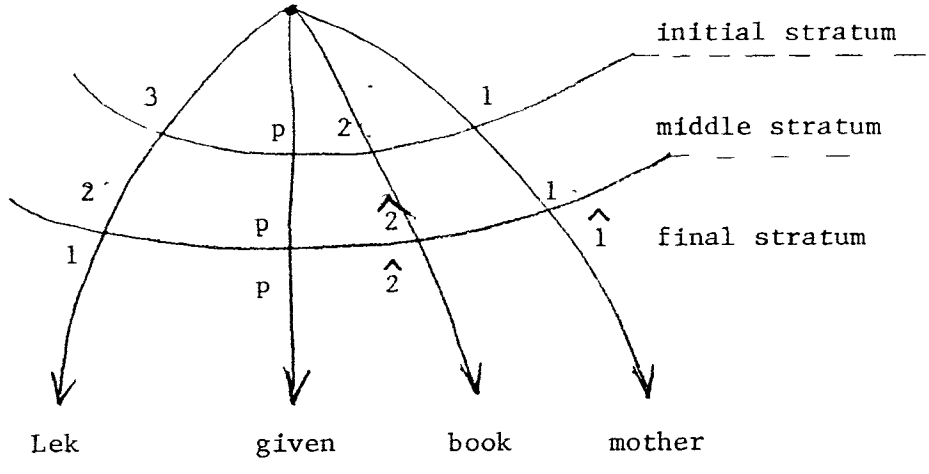
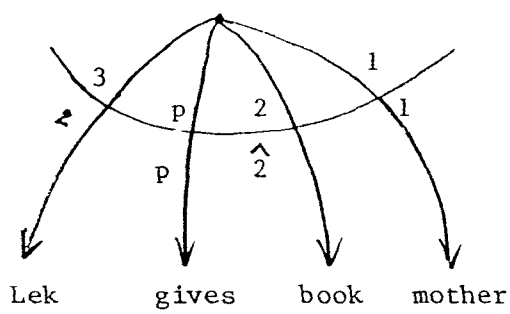


Fig. 2.10 Multiple Strata

In this network, the initial stratum shows the semantic relations within the given clause, We know that in the initial stratum the mother is a subject (1), a book is a direct object (2), Lek is an indirect object (3) and the predicate is given. But the final stratum shows a different structure from the initial stratum. We have the middle stratum to indicate how the terms (1,2,3) in the initial stratum have changed to ($\hat{1}$, $\hat{2}$, 1) respectively in the final stratum. In the middle stratum the mother remains subject (1), Lek becomes direct object (2) but a book does not remain direct object (2). It changes to ($\hat{2}$). (See Fig.2.11) At last, in the final stratum mother (1) changes to ($\hat{1}$), a book ($\hat{2}$) remains ($\hat{2}$) and Lek (2) changes to (1) as the surface structure in Fig. 2.10



' Mother gives lek a book '

Fig. 2.11 intermediate stage in the development of maltiple Strata Fig. 2.10

So, we have two networks of the clause namber 3. that combined into one network as in Fig. 2.10 Multiple Strata.

2.5.a. Upstairs and downstairs clauses.

Upstairs clause (us) is a matrix clause that contains another clause (embedded clause) which relates to the main clause. Downstairs clause (ds) is a clause that is embedded in the main clause (matrix clause), such as in multiple or complex sentences, we call this embedded clause the downstairs clause.

The following two examples in chichewa (Bantu)[1] show the relationships between upstairs and downstairs clauses into two ways.

EX. 4. Ndi-ganiza [kuti mkazi a-na-ci-lima cimanga].
I think comp. woman 3S-pst-3S-plant corn

5. Ndi-m-ganiza mkazi [kuti anacilima cimanga].
I 3S think woman comp.

both sentences mean "I think the woman planted the corn"

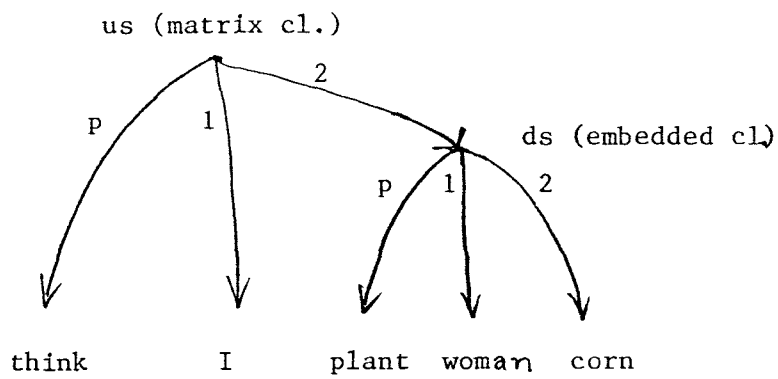


Fig. 2.12 The network for ex.4.

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[1] Taken from Frantz 1979:22.

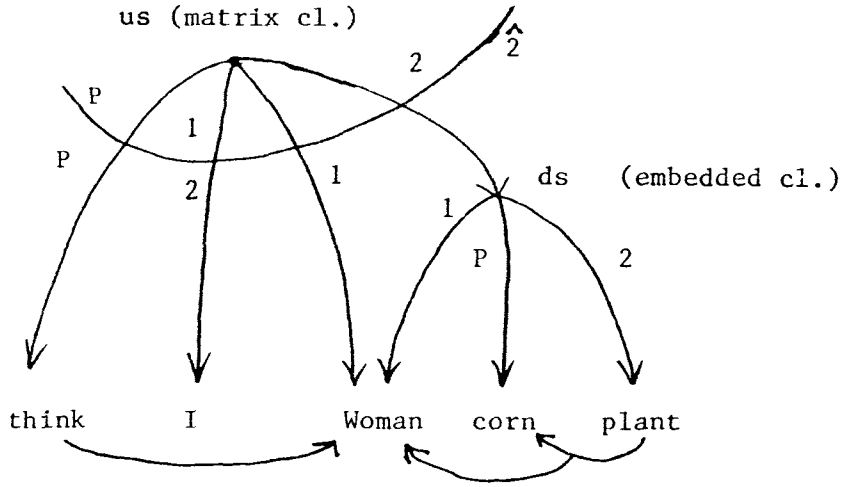

Fig. 2.13 The network for ex.5 upstairs and downstairs clauses.

Frantz (1979:22-23) explains that In ex.4 the verb of the embedded clause (in square brackets in exs.4,5) agrees with both its (1) and (2), while the matrix verb agrees with its (1). (see network ex.4 in Fig. 2.12) In ex.5, not only does the embedded or "downstairs" (ds) verb agree with woman and corn, but the "uptairs" (us) verb agrees with woman as a (2). Evidently woman bears a final relation to the us verb; i.e., the final stratum for think has woman as its (2) (see network ex.5 in Fig. 2.13)

2.6 Kinds of relationship changes.

I will here summarize some main relationship changes, following Frantz (1979).

2.6.1 advancements.

Advancement is the relationship change when the final relationship of a mominal is higher than its initial relationship. (1 is higher than 2, and 2 is higher than 3). There are three possibilities for advancement:

2.6.1.1 2-1 advancement

EX. 6. My bag was stolen.

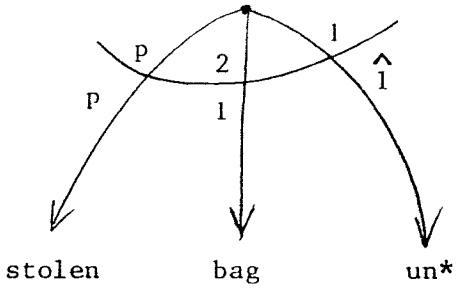

Fig. 2.14 2-1 advancement

From "someone (1) stole my bag (2)", the bag is advanced to being the subject (1), and "someone" becomes a chômeur (1̂)

2.6.1.2 3-2 advancement

EX. 7. Tommy gave Jimmy a ball.

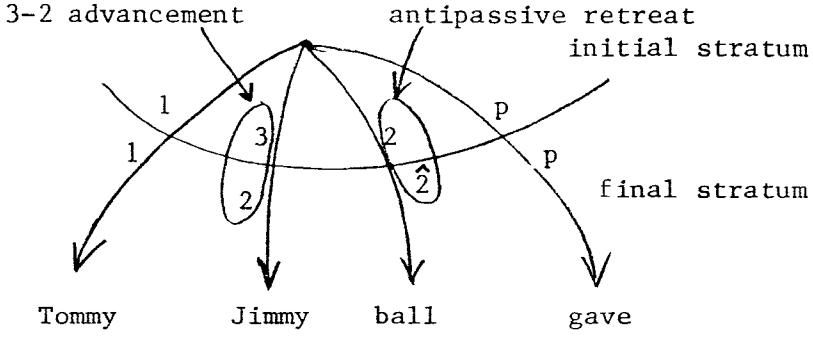

Fig. 2.15 3-2 advanecment

---

* un indicates " unspecified"

In the initial stratum, Tommy is a subject (1), Jimmy is an indirect object (3), a ball is a direct object (2), give is a predicate. In the final stratum, Tommy remains the subject (1), Jimmy is advanced to being the direct object (2) (i.e., it follows the verb), and a ball becomes a chômeur (2̂).

2.6.1.3 Oblique advancement (Obl) or (non-term advancement).

Oblique elements are non-terms, so this advancement of a non-term to being a term (1,2,3). Oblique non-terms include direction, location, instrument, source, goal purpose, time, path, benefactee, means, and probably others.

EX. 8. The chair was sat on by Max.

(From the initial stratum 'Max sat on the chair').

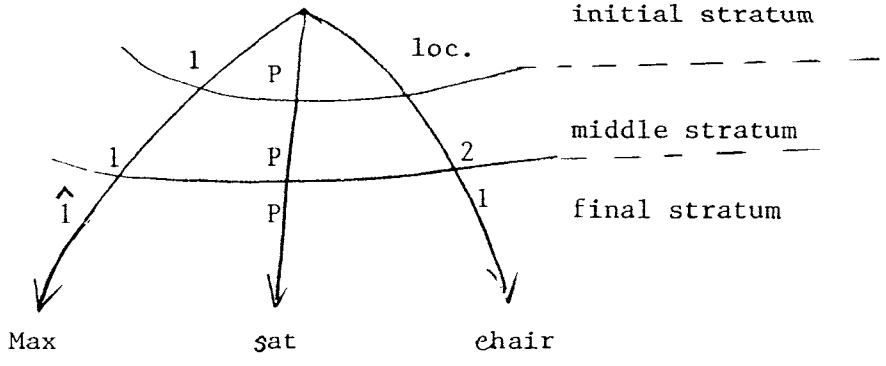

Fig. 2.16 Loc-2-1 oblique advancement

In the semantic relations (initial stratum) the clause has Max as a subject (1), the chair as a location, sit as a predicate. But when we change this clause to: The chair

Max sat on, clearly, we can see that on the chair is location but acts as a direct object (2)[1] by its structure, as shown in the middle stratum. But in the surface relation (final stratum) the chair becomes the subject (1) and Max changes to a chômeur (Ĉ1). Thus there is an advancement of loc.-2-1.

2.6.2 Retreats.

A retreat is the opposite of an advancement, the final relationship is lower than the initial relationship. There are three kinds of retreats.

2.6.2.1 2-Ĉ2 antipassive

With the antipassive, we do not talk about a direct object, even though the initial stratum will have DO.or IO. We delete the DO. or IO. relationship Look at the following examples in Blackfoot:[2]

EX. 9. nit-a' ki-aa-w om-a pokon-a

I-hit [trans] direct-3S that-3S ball-3S 'I hit that ball'.

EX. 10. nit-a'ki aaki (poko-i)

I-hit [intrans] ball-non=partic. 'I hit (no particular ball

---

[1] Frantz remarks,

' I here ignore the problem of how RG. will account for the meaning added by the preposition in such location NT's (cf. on the bed, under the bed, beside the bed, etc.' (Footnote 6, page 14)

[2] From Frantz 1979:15

ex. 9

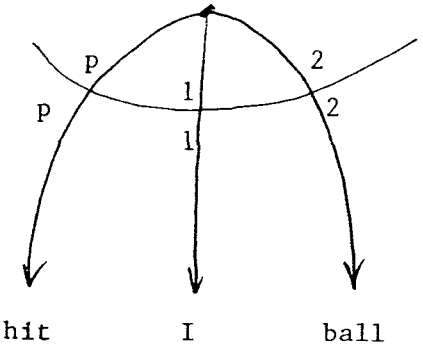

Fig. 2.17 Transitive network (EX.9)

ex. 10

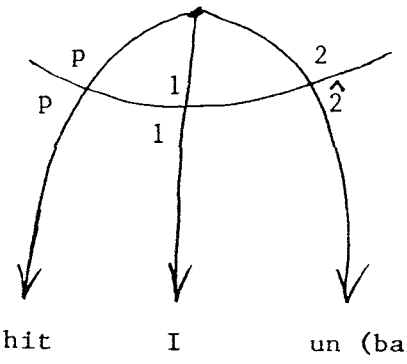

Fig. 2.17.1 2-$\hat{2}$ antipassive network. (EX.10)

In EX.10, the verb root (hit) is made intransitive by adding the suffix -aaki (a'kiaaki), and no object is specified or the object is non-particular. But in EX.9 the verb is made transitive by adding the ending -aaw (a'ki-aa-w), specifying that it has a direct object (specified object). Hence, the direct object (2)=ball in the semantic relation becomes unspecified

because of the intransitive form of the verb (hit). (as in EX.10)

2.6.2.2 1-3 inversion

The subject (1) in the initial stratum retreats to a direct object (3) in the final stratum.

In Georgian, there are three basic case-marking patterns, depending upon tense and verb class:[1]

---

[1]Data from Alice Harris, as cited in Frantz page 17-18

A. ergative, nominative, dative.

B. nominative, dative, dative.

C. 'evidential mode' has dative, nominative, 'for' pattern

Examples:

11. rezom gačuka samajuri.

    Rezo: erg 3S: gave: 2S it watch: nom.

    " Rezo gave you a watch" (ergative)

12. rezo gačukebs samajurs (šen)

    Rezo: nom 3S: give: 2S: it watch: dat 2S: dat.

    " Rezo is giving you a watch" (nominative)

13. (turme) rezos učukebia samajuri šen-tuis.

    apparently Rezo: dat 3S: gave: it watch: nom 2S-for

    "Apparently Rezo has given you a watch" (evidential)

Examples 11 and 12 have the case-marking patterns A and B respectively. They have different case markings but all the other evidence shows that they have the same initial and final grammatical relation.

However, in ex. 13, though the nominals have the same initial stratum as in ex. 11 and ex. 12, the final stratum is different. That is, 'watch' becomes a subject (1), Rezo becomes an indirect object (3) and second person (indirect object: you) becomes a chômeur (3̂). Evidence for the final grammatical relation includes verb agreement and other syntactic rules which make reference to final terms.

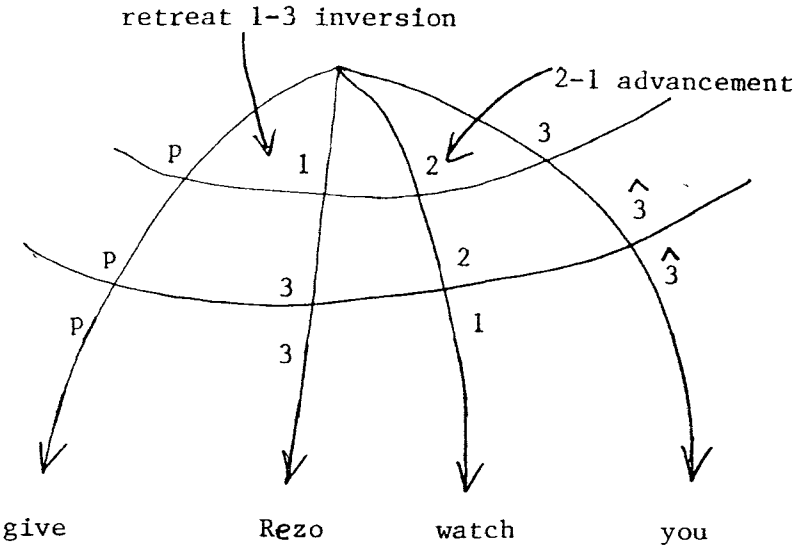

Fig. 2.18 The network of ex.13 1-3 inversion

So, there is the retreat of 1-3 inversion and the 2-1 advancement.

2.6.2.3 2-3 direct object retreat.

The verbs in Turkish[1] have this retreat when the patient (initial 2) becomes a final (3) indirect object.

Ex. 14 Hasan derse bazla-dt.

Hasan: nom lesson: dat. begin-pst

' Hasan began the lesson '

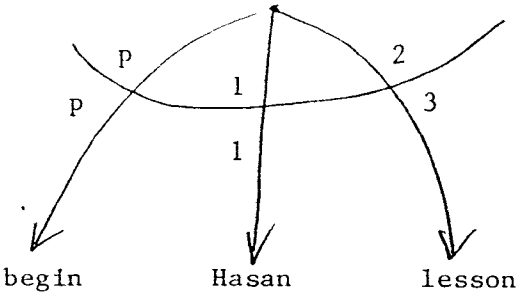

Fig. 2.19 2-3 direct object retreat

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[1] Taken from Frantz page 19.

In the initial stratum, 'lesson' is the direct object (2). But in the final stratum, it retreats to the indirect object (3) according to the verb.

ex. 14.1 That is known to the FBI[1]

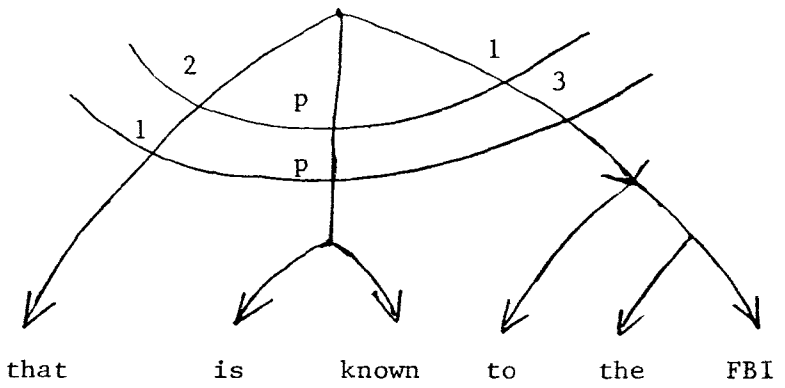

Fig. 2.19.1 a 1-3 retreat network.

Note

In section 2.6.2 Retreats, I cannot find appropriate English examples for any of the three kinds of retreats. Dr.Frantz says that 'retreats are not easy to demonstrate in English'.

[1] From Johnson and Postal, 1980.

2.6.3 Replacements

A term may be replaced by another term. There are two kinds of replacements.

2.6.3.1 dummy : a term replaced by a dummy.

A dummy is a form that acts syntactially like a subject but has no meaning.

ex.15 There is a dog on the porch.

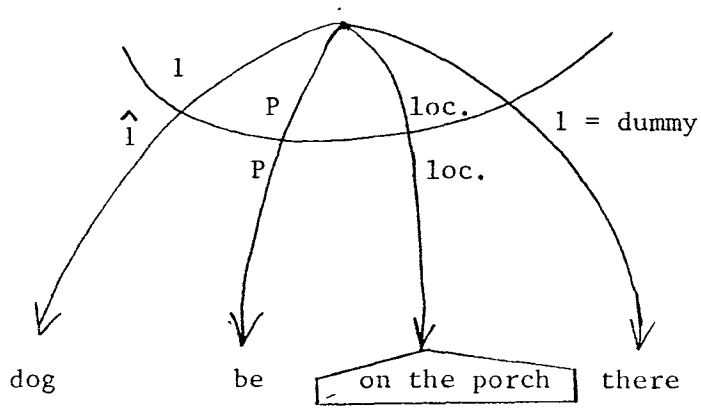

Fig. 2.20 A network with a dummy.

In the initial stratum, a dog is the subject (1), on the porch is location, predicate is be and there has no meaning. There is neither subject nor direct object. But in the final stratum there acts like the subject (1) of the clause according to the surface structure. A dog becomes a chômeur ($\hat{1}$) because it no longer has the subject relation as in A dog is on the porch.

2.6.3.2 anaphor : one term referring to another within the same clause (reflexive).

ex.16 John hates himself.

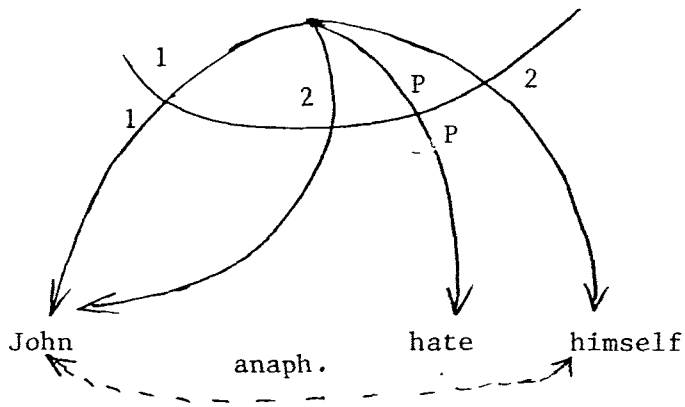

Fig. 2.21 A network with anaphoric arcs.

The single initial stratum nominal John (1,2) has two final stratum forms John (1) and himself (2)

2.6.4 Ascension

Subject raising : the subject of a downstairs (ds) (embedded) clause is treated as part of the upstairs (us) (matrix) clause.

ex. 17 I see him washing the dishes.

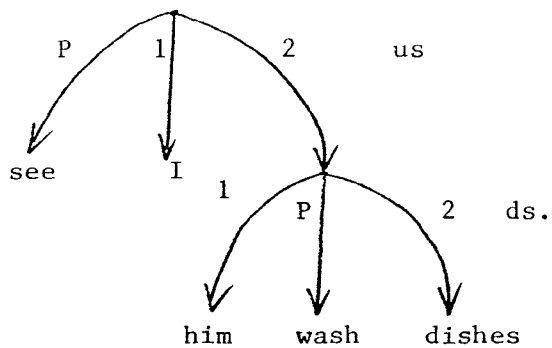

Fig. 2.22 Initial stratum only of ex.17.

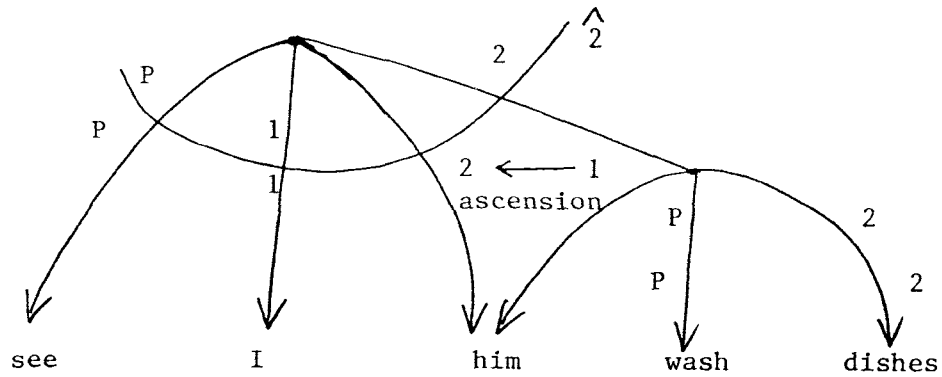

Fig.2.22.1 initial strata of ex.17, showing an ascension

'him' as a subject (1) in the ds network, is tread as a part of the us (matrix) clause, in the position of direct object (2).

2.6.5 Unions[1]

Union (Symbolized in the diatrams as u) is the merging of two clauses into one, as in serial verbs, causatives, etc. There are three kinds of unions.

2.6.5.1 Orthodox clause union (ocu)

An orthodox clause union merges two clauses by combining the two predicates into one verb phrase. It usually combines two intransitive clauses, making the subject (1) of one clause become the object (2) of the merged clause. Example in Chrau:

---

[1] As to section 2.6.5 Unions, according to Frantz, it is not easy to find English examples for each kind of Unions. So I have not tried to give English examples.

ex.18 ŭanh tatao con-se[1]

'I stand the child up'

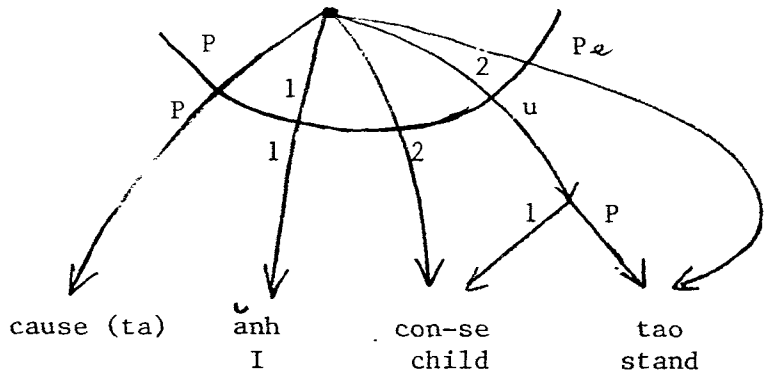

Fig.2.23 OCU network

In this network, there is more than one initial stratum verb, the one verb shows the causation the other shows the result. The two verbs are fused into one morpheme in the final stratum, but they are shown separately in the network.

The following example is from French.[2]

ex. 19 Je laisserai boire Jean.

I let : fut drink J.

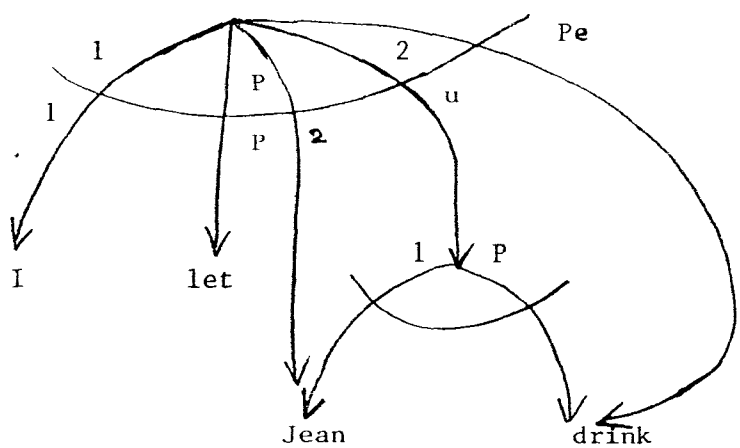

Fig.2.24 OCU network

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[1] From Dorothy Thomas, Chrau Affixation Mon-Khmer Studies III, P.92

[2] From Frantz Page 36.

In ex.19 Jean becomes the final (2) of let (laisserai), and drink (boire) becomes an infinitive because it is a predicate emeritus (Pe), i.e, it is grammatically not the main verb. The position of drink (boire) is dictated by its Pe status; i.e, even though the Pe is still a separate word, it is closely linked with its main predicate, and therefore the final (2) (Jean) follows the P + Pe complex.

2.6.5.2 Equi-subject clause union (ESU)

Equi-subject clause union also combines two predicates into one verb phrase, but both clauses have the same subject (1) so the second (1) is deleted and the object (2) of the second clause becomes the (2) of the combined clause.

ex. 20 Luis Las quiere comer. (Spanish)[1]
L. them: fem.want: 3S eat.
"Luis wants to eat them"

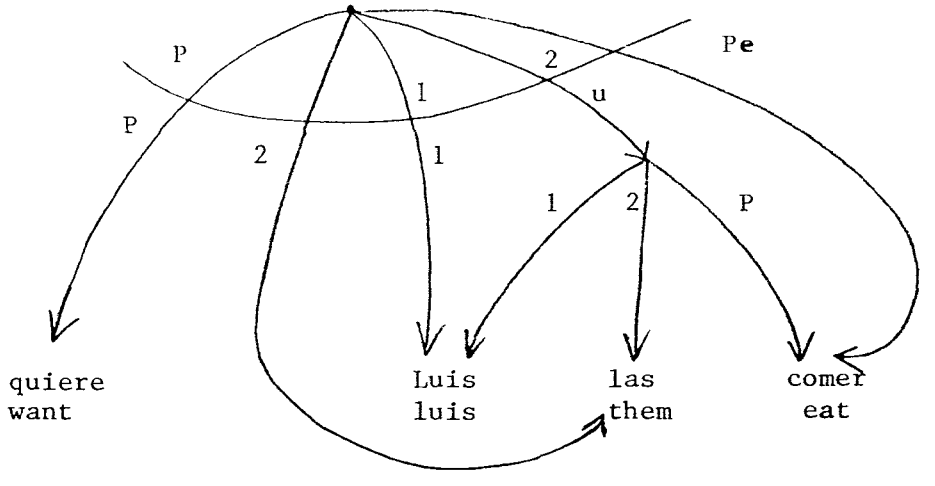

Fig.2.25 ESU network

[1] Taken from Frantz 1979 : 41-43

The verbs in Spanish ESU's remain separate words but the ds verb (an infinitive) is Pe because it can have no dependents, and the downstairs (2) becomes an upstairs (2).

Another English example that may be considered an ESU from Frantz's viewpoint.[1]

ex.21 He may go.

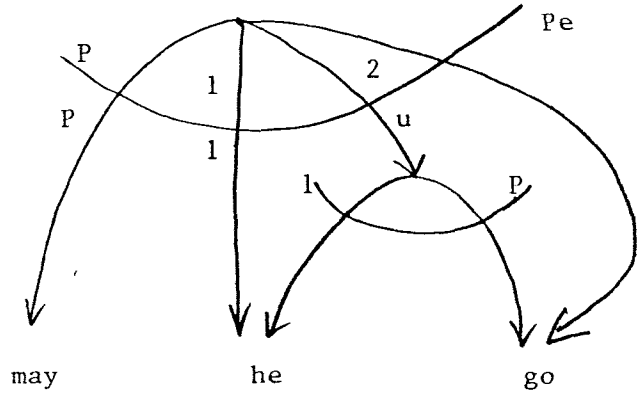

Fig.2.26 English ESU network

2.6.5.3 Adverbial clause union (ACU)

Adverbial clause union is like ESU except that the ACU downstairs clause has an adverbial relationship to the upstairs clause (rather than being a (2)). Verbs may be serial with one verb standing in a semantically adverbical relation to the other.

An example from Central Ojibwa[1].

ex.22 W-gī-bski-gwād-an mjigōdē.
3-pst-folded-sew-3S dress
"She hemmed the dress"

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[1] According to Dr.Frantz, "ESU" would account for clauses with auxiliary verbs, under an initial two-clause analysis". (personal letter 1984).

[1] Data from Richard Rhodes, as cited in Frantz page 46.

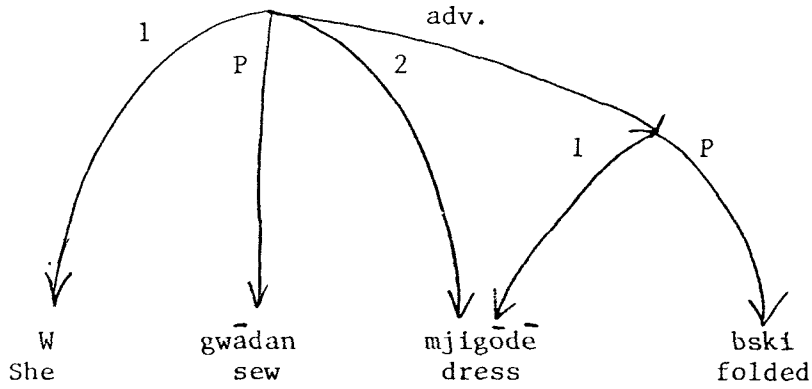

Fig.2.27 initial stratum of ACU (ex.22)

For this clause, there are two initial clauses and one being adverbial.

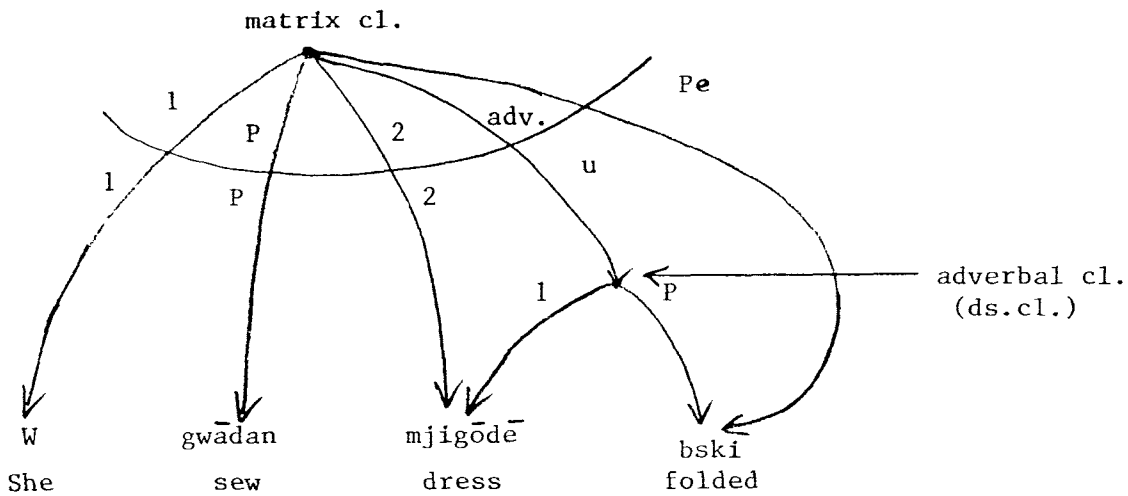

Fig.2.28 complex network of ex.22 (ACU)

This network (Fig. 2.28) shows the surface structure of the clause. We can see (Frantz 1979:47) that the predicate of the adverbial clause is a Pe of the matrix clause. The major constraint on ACU is that the (1) of the adverbial clause must be identical to either the (1) or the (2) of the matrix clause; i.e., the (1) arc of the adverbial clause must share a head with either the (1) or (2) arc of the matrix clause.

2.6.6 Non-erasing advancements.

In non-erasing advancements a reflexive form is often used, but the meaning is not reflexive. An initial (2) is advanced to a final (1), but the final stratum marks it as both (1) and (2).

Examples in Spanish[1]

23. Las propiedades fueron vendidas (por los dueños)
the properties were:pl. sold:ppl:pl by the owners.
24. Las propiedades se vendieron (*por los dueños)
the properties reflex sold by the owners.

ex. 23

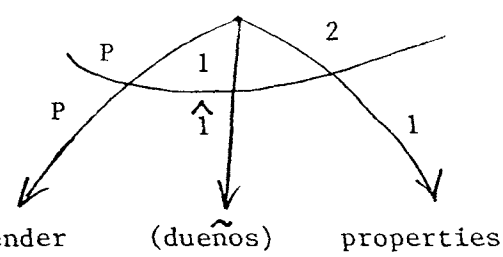

Fig.2.29 simple advancement 2-1 (ex.23)

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[1] From Frantz page. 49

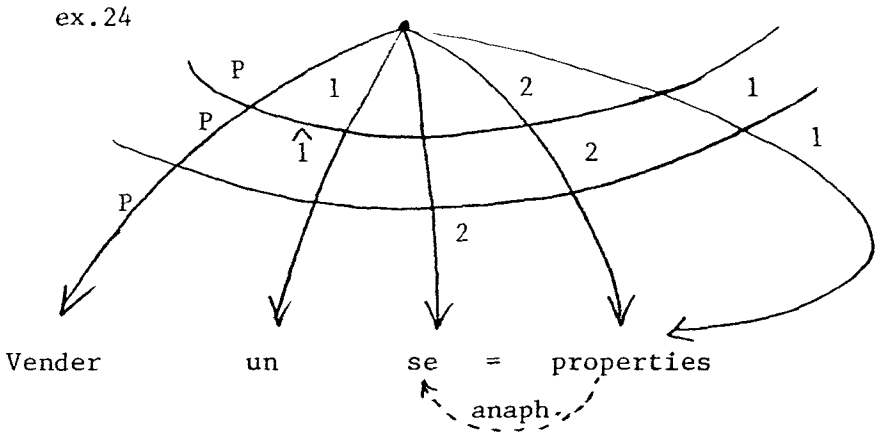

Fig. 2.29.1 non-erasing complex advancement 2 → 1,2 (ex.24)

In the second stratum of ex.24, propiedades bears two relations (2) and (1). By insertion of the anaphor se to take on the (2) relation, the (2) relation of propiedades is not eased.

Another example from French.[1]

2.5 Jean se souvient de cela.

I refl. remember: 3S of that.

" Jean remembers that"

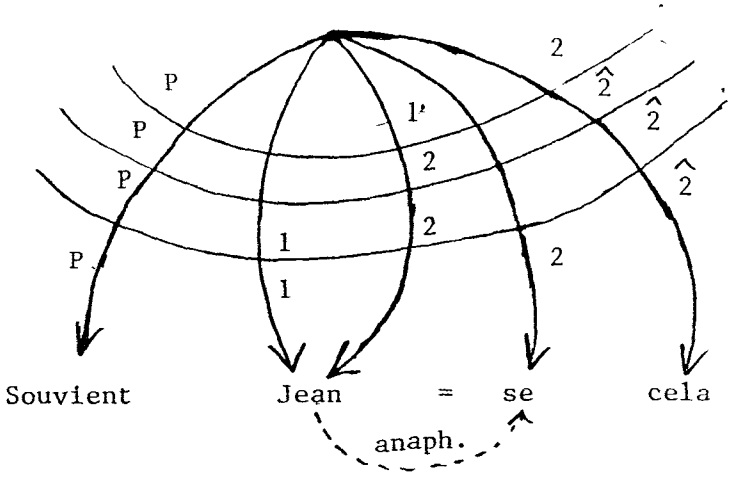

Fig.2.30 non-erasing network

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[1] From Frantz page 50

The same explanation as ex.24; i.e., in the third stratum of ex.25, Jean bears two relations(1) and (2). In the final stratum, Jean (2) is erased by insertion of the anaphor se.

2.6.7 Multiple dependency.

Multiple dependency is a noun related to two verbs. It may or may not involve an ascension. There are three kinds of multiple dependencies.

2.6.7.1 Status quo.

In a status quo a noun is marked as belonging to two clauses, and the embedded (ds) clause has exactly the form it would have if it were a matrix (us) clause.

Example in Chichewa (Bantu)[1]

26. Ndi-m-ganiza mkazi [Kuti a-na-ci-lima cimanga]

1-3s-think woman comp.3s-pst-3s-plant corn

' I think the woman planted the corn'

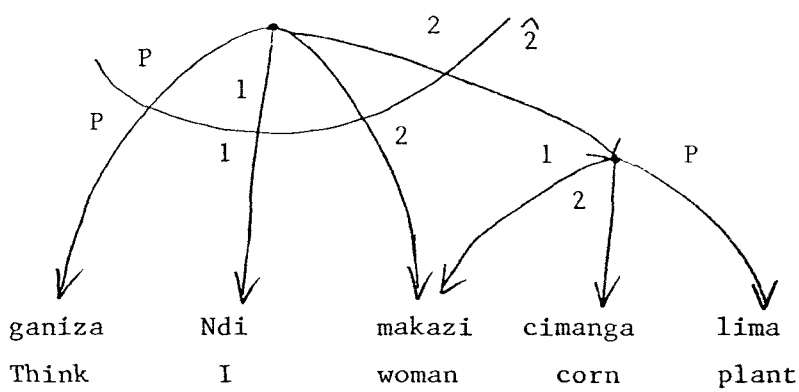

Fig.2.31 status quo network (ex.26)

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[1] From Frantz page 22.

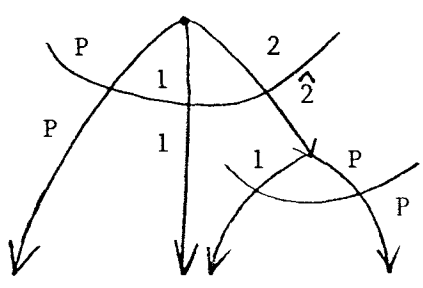
The woman is marked as the 3s object (2) of the verb 'think', and as the 3s subject of the verb'plant'.

2.6.7.2 equi-erasure

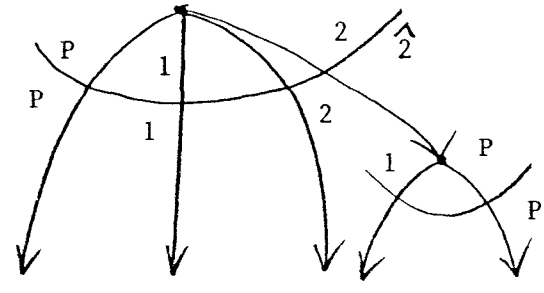
In equi-erasure the parts of the downstairs clause that are the same as in the upstairs clause are else ascend to the upstairs clause.

ex. 27 I expect to win. (equi-erasure without ascension)

ex. 28 I expect him to win. (equi-erasure with ascension)



expect I win



expect I him win

Ex.27 no ascension EX.28 with ascension

Fig. 2.32 equi-erasure with and without ascension,

Frantz (1979:52) explains ex.27 and ex.28 as the (1) grammatical relation to the downstairs verb is "erased" by the upstairs grammatical relation; consequently, the ds. verb is marked as an infinitive by to. It is not

inflected for tense, nor does it agree with a subject. In cases of 'erasure' of the ds.(1) relation, the ds. verb will exhibit no evidence that it has a final subject. Thus there will be no agreement with a final subject, nor placement of a final subject in a position that is uniquely determined by its dependency on the verb.

2.7.3 replacement.

In a replacement a downstairs subject (1) is replaced by an anaphoric pronoun.

In ex.29 illustrates the multiple dependency: replacement.

EX. 29. Bob hopes that he will pass the exam.

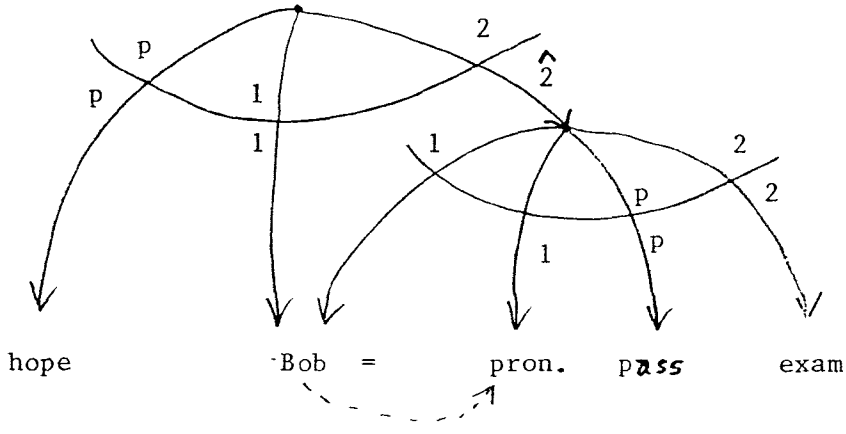


Fig. 2.33 multiple dependency: replacement.

This clause consists of two sentences (clauses) having the same subject (Bob) showing two actions (hope,pass). But in the second clause Bob is replaced by a non-reflexive anaphoric pronoun.

2.6.8 Noun incorporation

Noun incorporation consists of a noun incorporated into the verb of a clause as a complex nominal or a complex verbal.

EX. 30 He is a deer-hunter.

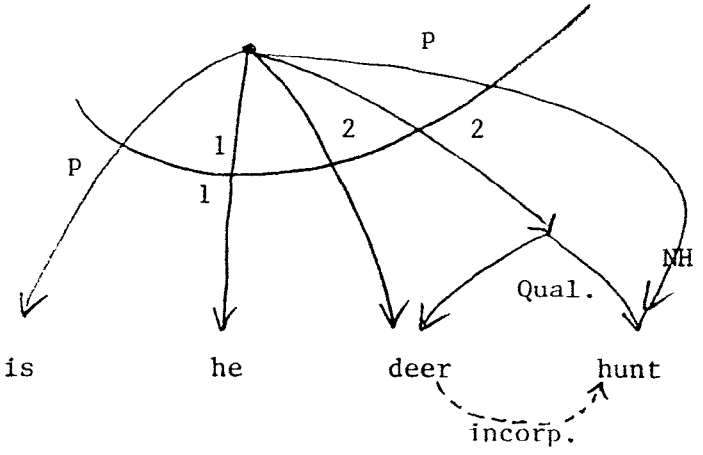


Fig. 2.34 a complex nominal network

When we separate the nominal deer-hunter, we have deer as a direct object (2) in the initial stratum of the clause and as a qualitative of a head noun: hunt which is a predicate in the initial stratum of the clause. So we incorporate both of them to be a nominal and it becomes a direct object (2) in the final stratum of the whole clause.

ex.31 He is deer-hunting.

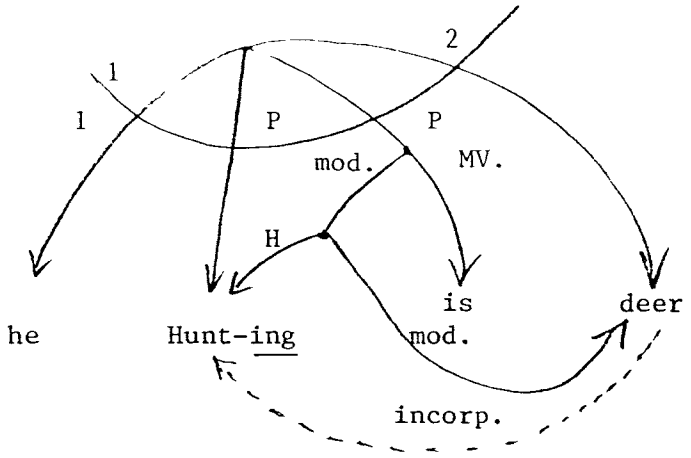


Fig.2.35 a complex verbal network

EX.31 is another example in a complex verbal. In the final stratum, the predicate is devided into main verb : is and modifier : hunt as a head which modifies deer. We incorporate deer and hunt in one verb modifier of the main verb is by adding the infix-ing as shown in the final stratum.

Notice that both ex.30 and ex.31 have the same lebel in the initial stratum.

2.6.9 Relative clauses.

A relative clause is one which bears a modifier relation to a nominal. In every case, that nominal will also bear a relation to a predicate in the modifying clause.

ex. 32 I know the girl who likes you.

EX. 32 I know the girl who likes you.

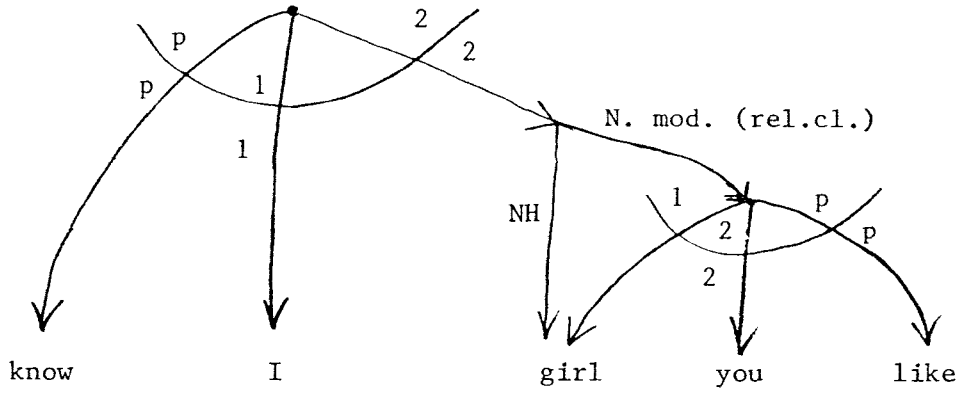


Fig. 2.36 a relative clause

The girl bears a grammatical relation to verbs of both the matrix and relative clause it is the direct object (2), and in the relative clause it is semantically also the subject (1), though in the final stratum it becomes the head of a noun phrase.

Chapter III

Relations as found in the Buriram dialect of Northern Khmer

3.1 Introduction

In this chapter I will follow chapter 2, starting from section 2.6, kinds of relationship changes one by one.

The Northern Khmer (N.K.) data is presented in phonemic transcription without slash / /.

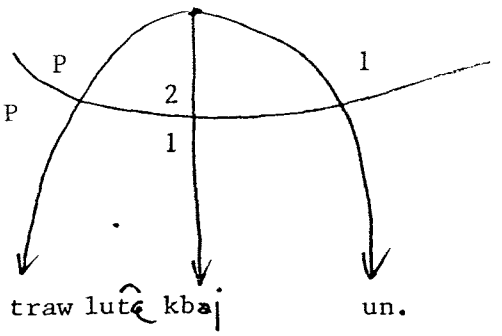
3.2 Advancements

3.2.1 2-1 Advancement

2-1 advancement is marked in Northern Khmer by traw or by the intransitive verb bat.

ex.1 kbaj traw lut͡ɕ

The buffalo was stolen'.



was stolen buffalo someone

Fig.3.1 2-1 advancement network (ex.1)

In this clause, the initial stratum is someone(1) stole my buffalo kbaj (2). But the surface form, the final stratum shows kbaj traw lut͡ɕ 'The buffalo was stolen'.

That is, kbəj (2) is advanced to being the subject(1), and someone becomes

Similarly to this clause we can also say :

kbəj ɲom traw lutɕ

'My buffalo was stolen'.

Other examples of 2-1 advancement with traw.

- mʟ:w traw wʌj

  'The cat was hit'.

- mɯan traw slap

  'The chicken was killed'.

- ɲom traw tɕʟ:

  'I was scolded'.

etc.

ex.2 rbɔh bat.

'The thing was lost'.

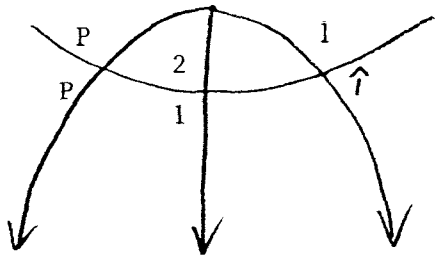


Fig.3.2 2-1 advancement network. (ex.2)

In this clause, it has the same explanation as ex.1.

But the native speaker of N.K. understands

that the thing rbɔh was lost without any reasons. May be somebody stole the thing or the thing was fallen in someplaces or someone forgot the thing at someplaces.

Other examples of 2-1 advancement without traw.

- tɑ̂ruːk bat
  'The pig was lost'
- Tiŋ juː bat
  'The umbrella was lost'

ect.

3.2.2,3 3-1 advancement and oblique advancement. I could not fine any examples from the Northern Khmer language.

3.3 Retreats

3.3.1 2-$\hat{2}$ retreat

A 2-$\hat{2}$ retreat in Northern Khmer is shown by deletion of the 2, just leaving it understood. A deleted 2 will be understood from the context .

ex.3 mɛː wʌj ϕ .

'Mother (will) hit (me)'

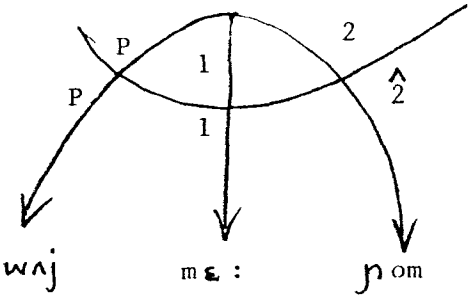


Fig.3.3 2-$\hat{2}$ retreat network.

In this network, we can see that ɲom is the direct object in the initial stratum but ɲom's relationship is deleted in the final stratum and it becomes a chômeur ($\hat{2}$). So it has the $2\text{-}\hat{2}$ retreat at this point.

3.3.2,3 1-3 inversion and 2-3 direct object retreat

I cannot find any examples of these two relationships from N.K.

3.3.4 a 1-3 non-erasing retreat

A 1-3 non-erasing retreat in N.K. is marked by a non-reflexive {ta: / kʰlu:n ʔɛ:ŋ} in what would usually be a 3 position in the surface form of the clause.

ex. 4 pʰo:ŋ kʟ: tʰʌ: num kʰlu:n ʔɛ:ŋ

'They cook sweets by themselves'

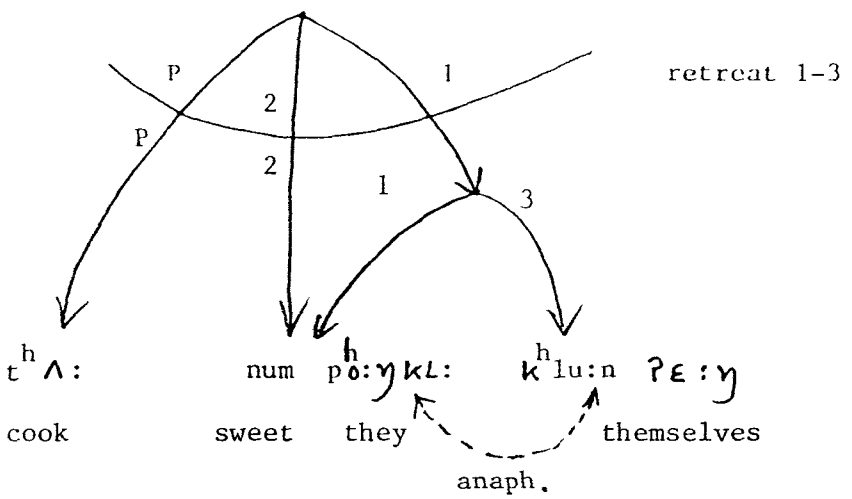


Fig.3.4 a 1-3 non-erasing retreat network.

The form kʰlu:n ʔɛ:ŋ is usually reflexive, (see sec. 3.4.2) but in this network its meaning is not reflexive, but is emphasizing or limiting the subject (1).

Other examples :

- ɲom tʰʌ : num kʰlu:n ʔɛ:ŋ
  'I cook sweets by myself'.
- kwat tʰʌ : ka: kʰlu:n ʔɛ:ŋ
  'You do the work by yourself'.
- pʰo:ŋʔɛ:ŋ wʌj t͡ɕru:k kʰlu:n ʔɛ:ŋ
  'We kill the pig by ourselves'

etc.

In this structure the transitive verb is important because it is the factor that tells us that the kʰlu:n ʔɛ:ŋ is not the initial 3 (Indirect object) of bitransitive clause but is a downgraded repeated initial 1 (Subject) of a transitive clause.

So in these examples a transitive verb acts like a bitransitive verb.

(For the reflexive kʰlu:n ʔɛ:ŋ see sec. 3.4.2)

3.3.5 a 1-2 non-erasing retreat

This part is similar to sec.3.3.4, but the verb is intransitive.

The non-reflexive { ta: / kʰlu:n ʔɛ:ŋ } or { ta: / kʰlu:n + pron. } is an initial 1 which becomes a final 2.

ex.5 ma:t jum k^hlu:n ʔɛ:ŋ

'I cry by self'

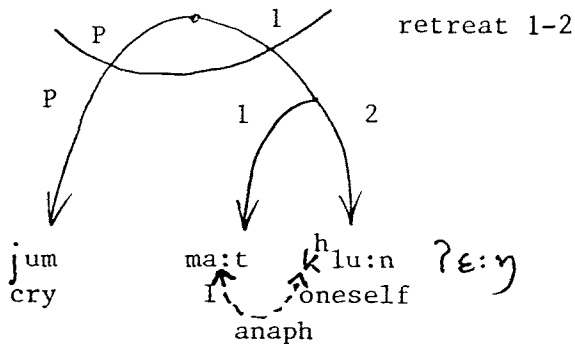


Fig.3.5 a 1-2 non-erasing retreat network

The result of this network makes an intransitive verb act like a transitive verb.

Other examples :

- kL: ruat k^hlu:n kL:[1]

  'He(she) runs by himself'

- kL: ruat k^hlu:n ʔɛ:ŋ[2]

  'I (fem.or mas.) run by myself'

  p^ho:ŋ ʔɛ:ŋ de:k k^hlu:n p^ho:ŋ ʔɛ:ŋ

  'We sleep by ourselves'

  kL: dʌ: k^hlu:n kL:

  'He walks by himself'

---

[1] According to the informant, kL: has two meanings : he and I. When it means I they use ta: ʔɛ:ŋ, for others they use ta: + pronoun(subject) : ta: kL:

[2] As in footnote 1 and when talking about myself (I) they use ʔɛ:ŋ, including situations that have the meaning 'I who do the acting'

· kɯat jum kʰlu:n kɯat

'You (3rd person) cry by yourself'

ect.

ex.5.1 ma:t ruat ta: ʔɛ:ŋ

' I run alone'

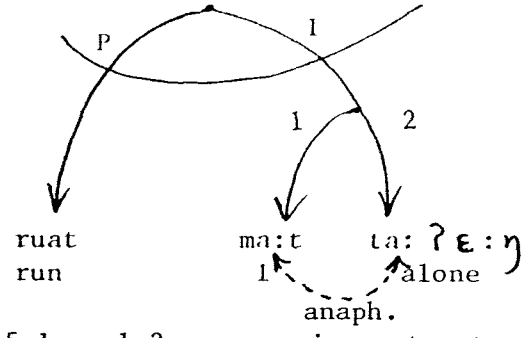


Fig.3.5.1 a 1-2 non-erasing retreat network

Ex.5.1 has the same explanation as ex. 5 .

In addition to kʰlu:n ʔɛ:ŋ and kʰlu:n + pron. I found ta: ʔɛ:ŋ or ta: + pron. as another non-reflexive form. They can both also be used in both transitive and intransitive clauses. So, I separate the transitive (see 3.3.4) and intransitive (see 3.3.5 ex. 5.1) uses.

ex. 5.2 ɲom $t^h\Lambda$: num ta: ʔɛ:ŋ

'I cook sweets alone'

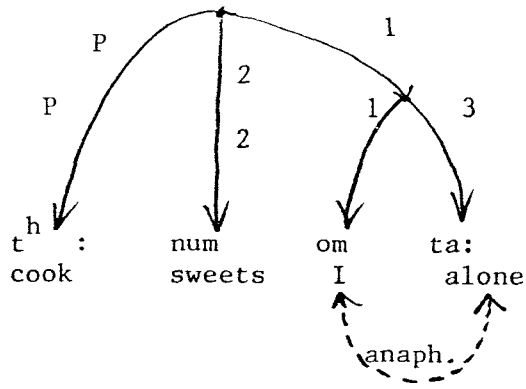


Fig. 3.5.2 a 1-3 non-erasing reteat network

In ex. 5.2 it has the same explanation as ex. 4

Other examples :

- ʁʟ: $t^h\Lambda$: ka: ta: ʁʟ:[1]

'He (she) does the work alone'

- ʁʟ: $t^h\Lambda$: ka: ta: ʔɛ:ŋ[2]

'I (fem. or mas.) do the work alone'

- kɯat ɯʌj t͡ɕru:k ta:kɯat

'You kill the pig alone'

- p^ho:ŋ ʁʟ: slap mɯan ta:p^ho:ŋ ʁʟ:

'They kill the chicken alone'

etc.

---

[1] ta: acts like k^hlu:n (see footnote 1 on page 46)

[2] See footnote 2 page 46

3.4 Replacements

3.4.1 Dummy

Northern Khmer used wia 'it,he(derogatory)' as a dummy subject with some meteorological verbs, and uses mian.'have' a dummy predicate in an existence clause.

ex. 6 wia man saw pʰlɯ:ŋ

'It is not raining very much'.

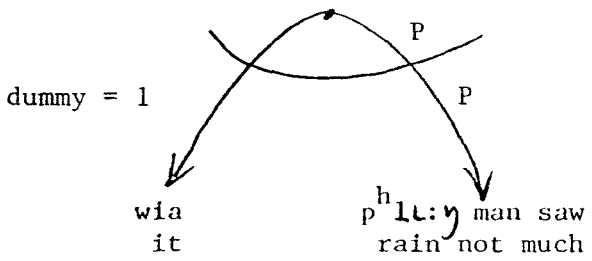


Fig. 3.6 a dummy subject network

I will show other clauses that may make ex. 6 clearer.

- t͡ɕʰnam nɛh wia man pʰlɯ:ŋ, tʰʌ: srɛ: man saw ba:n

'This year it is not raining(we) cannot work much on the field'.

or - tʰʌ: srɛ: man saw ba:n, wia man pʰlɯ:ŋ

'(We) cannot work on the field, it does not rain'

Hence, we can see that in the initial stratum (semantic relation) pʰlɯ:ŋ is the predicate mansaw is

the modified predicate (part of the predicate) and wia has no meaning, it is neither subject nor object. But in the final stratum (surface relation), wia acts as the subject (1) of the clause.

An example of a dummy predicate :

ex. 7 mian rbɔh nɔŋ knɔŋ

'There is a thing in a room'.

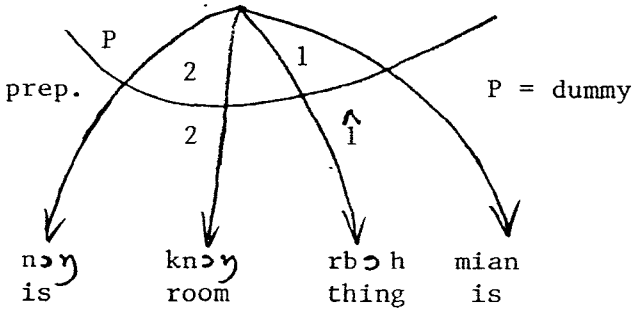


Fig. 3.7 a dummy predicate network

3.4.2 Anaphor

Reflexive anaphor in Northern Khmer is show by kʰlu:n ʔɛ:ŋ or kʰlu:n + pronoun + ʔɛ:

but the form without the pronoun is more common. The pronoun, if present, is the same as the subject pronoun.

ex. 8 ɲom sʔɔp kʰlu:n ʔɛ:ŋ

'I hate myself'

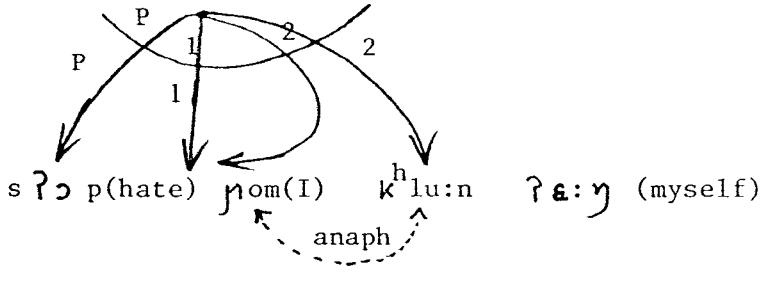


Fig. 3.8 anaphoric network

In fig. 3.8 it should be noted that the single initial stratum nominal ɲom (1,2) has two final stratum forms ɲom (1) and kʰlu:n ʔɛ:ŋ (2) in anaphoric relation to each other.

Other examples of anaphor :

- pʰo:ŋ ʔɛ:ŋ wʌj kʰlu:n pʰo:ŋ ʔɛ:ŋ
  'We hit ourselves'.
- pʰo:ŋ KL: slap kʰlu:n pʰo:ŋ KL: ʔɛ:ŋ
  'They kill themselves'.

etc.

The verbs tʰʌ: is special for it can be either an intransitive or a transitive verb. When it is an intransitive verb in a clause, the clause can not use reflexive form.

3.5 Ascension

ex. 9 ma:t kʰʌ:ɲ m ɛ: tʰʌ : ʃi:

'I saw the mother cook food'

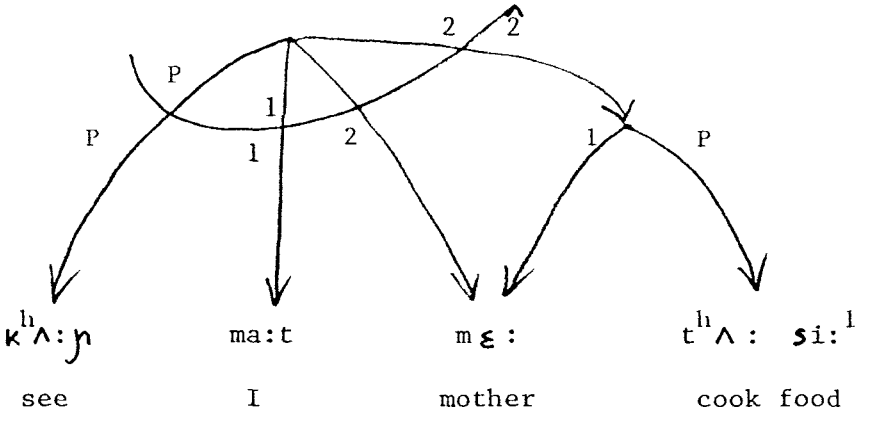


Fig. 3.9 ascension network

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[1] It is not analyzed because it is a lower construction similary in succeding example.

In fig. 3.9, we can see that m ɛ: has two duties. It is the direct object (2) in the upstairs (matrix) clause, and it is also the subject (1) in the downstairs clause. m ɛ: (raised subject) is treated as part of the matrix clause, even though it is the subject of the embedded clause.

3.6 Unions

3.6.1 Orthodox clause union (OCU)

For this section, I have found in any data only "lexical decomposition" of verbs. This kind of verbs shown the relationship of two clauses by combining the two predicates into one verb phrase, making the subject (1) of one of the clauses the object (2) of the fused clause.

ex. 10 kʟ: wʌj t͡ɕ ru:K ma: tɷ:

'He kills one pig'.

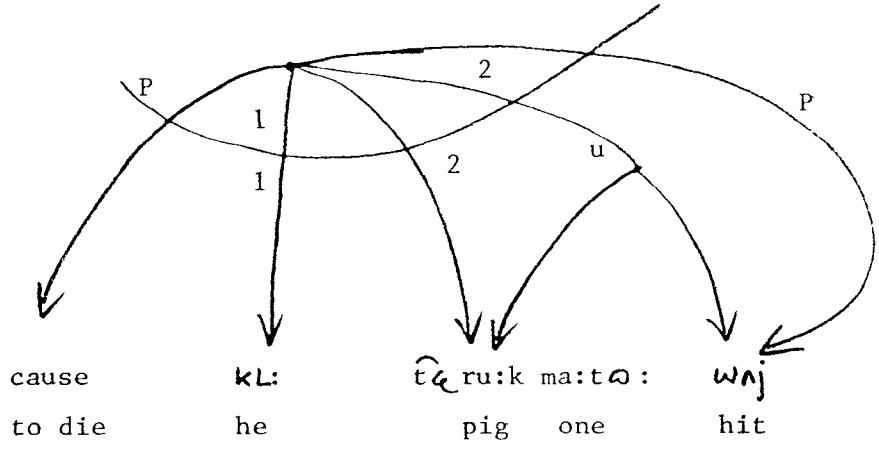


Fig. 3.10 OCU network

In its semantic relation (initial stratum) the verb combines two meanings. It combines the meanings 'cause to die' and 'hit, stab'. The two verbs are fused into one morpheme in the surface (final stratum) which is shown separately in the network.

Other verbs that act similarly are :

- slap 'kill~die' e.g. slap mɯan
  'kill chicken'
- $t^h\Lambda$: 'kill, slab, cook~die' e.g. $t^h\Lambda$: trej
  'kill fish'
- ʔa:'cut, slice = kill~die' e.g. ʔa: kɣ: mɯan
  'cut chicken's neck'
- t͡ɕaʔ 'slab, kill die' e.g. t͡ɕaʔ KL:
  'kill him'

3.6.2 Equi-subject clause union (ESU)

ESU is shown in Northern Khmer in a clause that has ʔa:t tnɔŋ plus a verb.

ex. 11 ma:t ʔa:t tnɔŋ t ɷ :
'I may go'

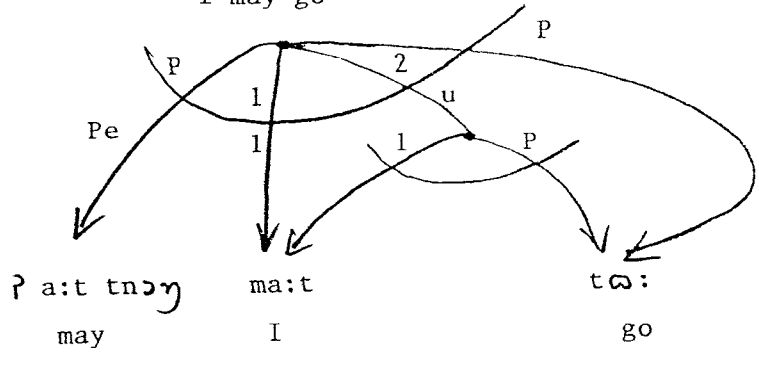


Fig. 3.11 ESU network

ma:t is the subject (1) of two clauses. It has two initial stratum verbs ʔa:t tnɔŋ and tɷ: which are combined into one verb in the final stratum as ʔa:t tnɔŋtɷ: . The (1) of the downstairs clause is deleted and the downstairs clause becomes united with the matrix. The P (predicate) of the upstairs clause becomes a Pe (predicate emeritus) in the united clause, and the P of the downstairs clause remains the P of the united clause, and the P of the downstairs clause remains the P of united clause.

3.6.3 Adverbial clause union (ACU)

I have not yet found any examples of this in N.K.

3.7 Non-erasing advancements

I found several examples that seemed at first to be non-erasing advancements, but them I realized that there is no real advancement. They have a reflexive form but the meaning is not reflexive. The other parts of the clause are regular.

So, I considered these kinds of examples to be non-erasing retreate and put them into section 3.3 retreats.

3.8 Multiple dependency

3.8.1 Status quo.

A status quo multiple dependency in N.K. has nominals that have exactly the from they would have if they were matrix clauses.

ex. 12 ɲom kʰʌ:ɲ kbəj t͡ɕol nia

'I saw the buffalo fight together'

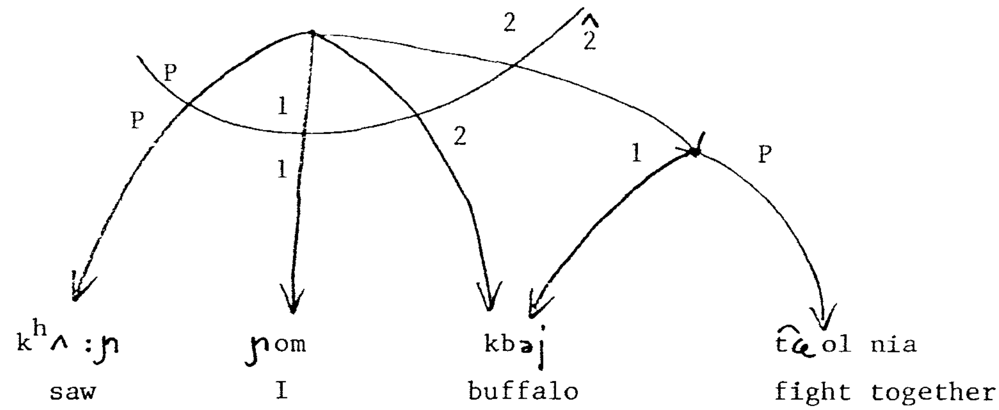


Fig.3.12 status quo network (ex.12)

The embedded clause <u>kbəj t͡ɕol nia</u> has exactly the form it would have if it was a matrix clause.

ex. 13 mɛ: tʰa: niaŋ tʰʌ: ba:n

'Mother thinks that she can do (it)'

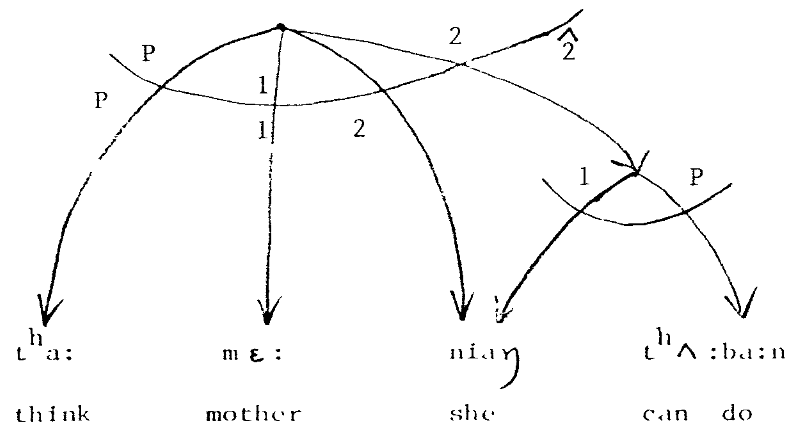


Fig.3.13 status quo network (ex.13)

Fig. 3.13 it is similarly explaned to Fig. 3.12 (ex.12)

3.8.2 Equi-erasure

Equi-erasure in N.K. is shown by pronoun deletion.

ex. 14 ma:t kuaŋ ta: t͡ɕʰniah

'I expect to win'

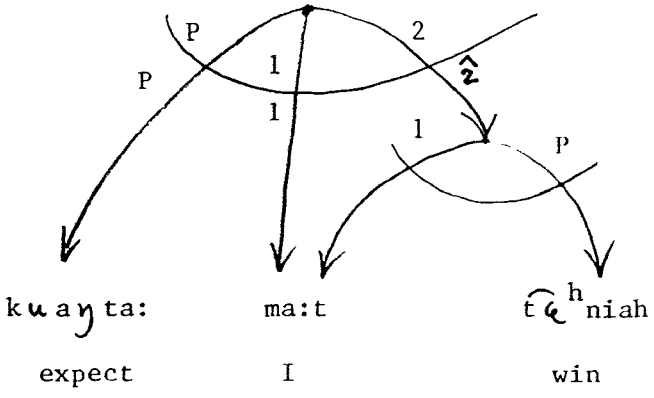


Fig.3.14 equi-erasure network

On ex.14 the (1) grammatical relation to the downstairs verb is 'erased' by the upstairs grammatical relation. The pronoun ma:t (1) of the downstairs clause is deleted and there is no ascension.

In my opinion, this is quite similar to section 3.5 ascension, but ascensions do not have to have erasures.

3.8.3 Replacement

Replacement in N.K. is shown by a pronoun replacing a noun.

ex. 15 Thɯaŋ kɯt t^ha: kʟ: man tɒ: ro:ŋ rʟ:n prɯk nih

'Thuang thinks that he will not go to school tomorrow'

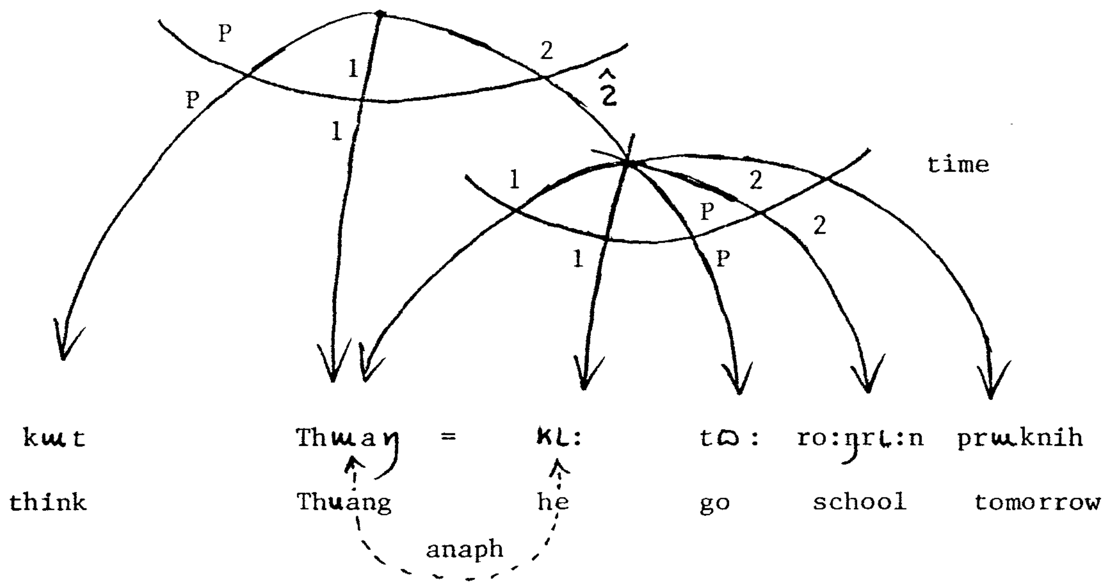


Fig.3.14 replacement network

The downstairs subject (1) (Thɯaŋ) is replaced by the non-reflexive anaphoric pronoun kʟ: .

Other examples :

- mɛ: (kɯt) t^ha: kɯat t^hʌ: ba:n .

'Mother thinks that she can do (it)'

- kapaʔ t^ha: niaŋ nɔŋ həʔ ptiah .

'Kapaʔ (name) thinks that she will return home'

etc.

3.9 Noun incorporation

I cannot find any examples of noun incorporation in N.K.

3.10 Relative clauses

Relative clauses are marked by dɛ:l .

ex. 16 ma:t skʷal mɬ:w dɛ:l k^{h}am kʷat

'I know the cat that bit you (2nd person)'

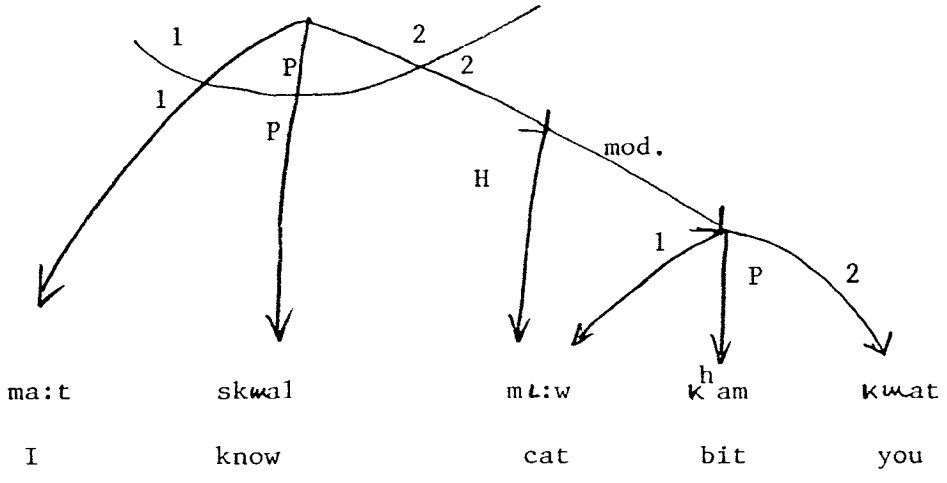


Fig.3.15 relative clauses network

mɬ:w is a final head noun which correlates semantically with two initial verbs in the upstairs and downstairs clauses. In the matrix clause mɬ:w is the direct object (2) and in the downstairs clause is initially the subject (1).

Other examples :

- ɲom pah mnɯh dɛ:l kə:t k^{h}nia kɯat

  'I met the man who was your friend'

- m ɛ: k^{h}ʌ :ɲ tkaw dɛ:l niaŋ katɕ (wia)

  'Mother saw the earring which she broke (it)'

etc.

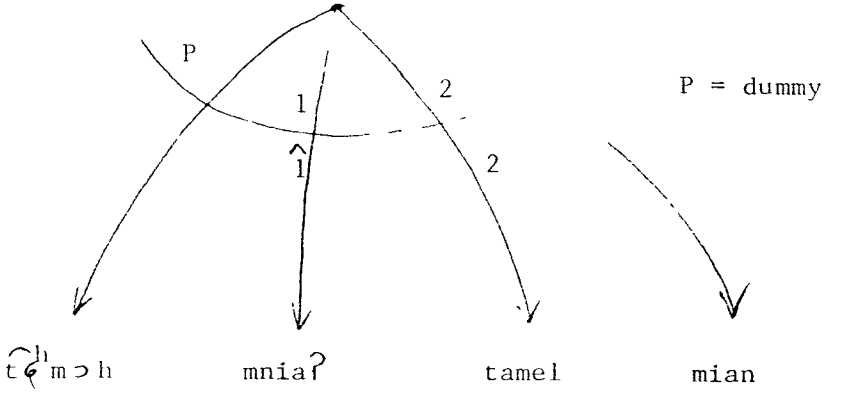
Chapter IV

Analysis of a text in Northern Khmer

The following text was obtained from a native speaker of the Northern Khmer language (main informant). I have analyzed each clause, and have used the following abbreviations (they are included in the general list of abbreviations but are abstracted here for reader convenience) :

1	=	subject/actor
2	=	direct object/undergoer
3	=	indirect object/recipient
( )	=	deletion
adv.	=	adverbial
cl.	=	clause
class	=	classifier
comp.	=	complement
conti.	=	continuous
conts.	=	contrast
dem.	=	demonstrative
ds.		downstairs
e		emeritus
els.	=	ellipsis
H	=	head
LK.	=	linkage
loc.		location

MK.	=	marker
mod.	=	modifier
mov.	=	movement
N	=	Noun
p	=	predicate
part.	=	particle
place	=	place
poss.	=	possessive
purp.	=	purpose
rel.	=	relative
time	=	time
u.	=	union
us.	=	upstairs

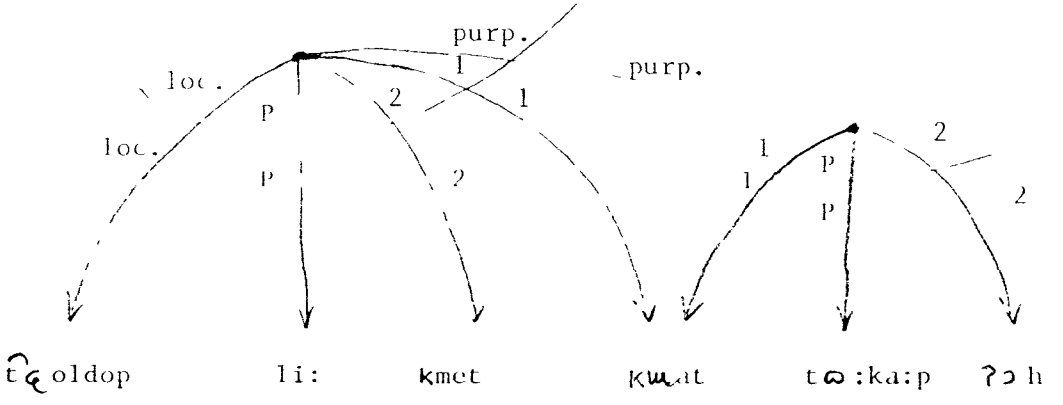


1. mian mnɪa? t͡ɕʰmɔh tamel.

Have one man name Tamel.

Notice that the surface clause has a replacement : dummy predicate mian.

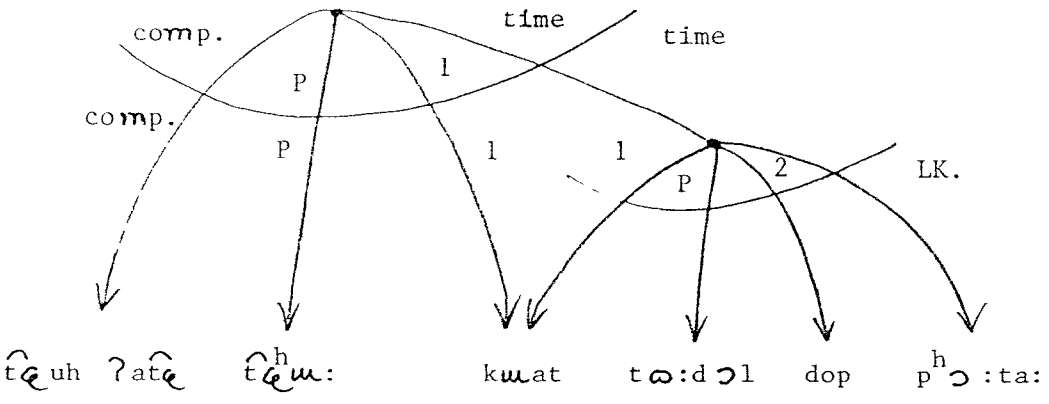
2.



2. kɯat li: kmet t͡ɕol dop tɷ: ka:p ?ɔh

He carry knife in forest go cut firewood.

: Multiple dependency : equi-erasure.

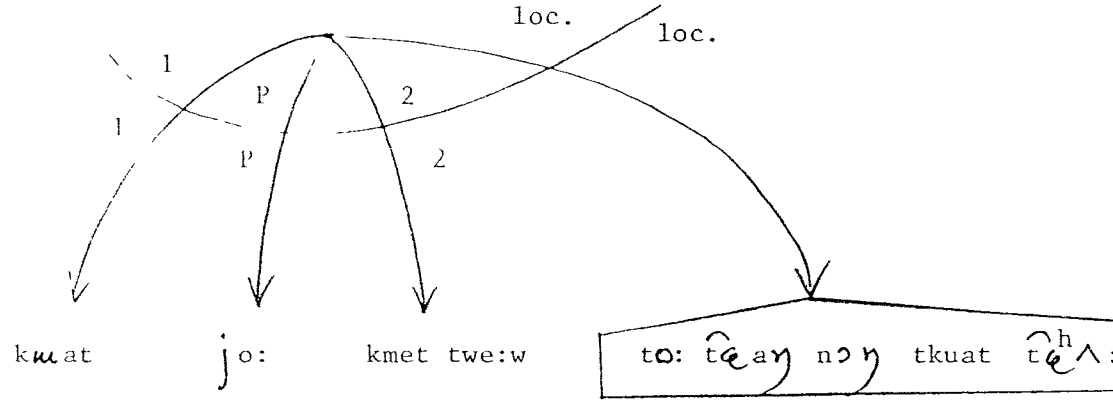


3. pʰɔ:ta: tɑ:dɔl dop, kɯat t͡ɕʰɯ: t͡ɕuh ʔat͡ɕ

Then go to forest, he painful excrete exerements.

: Simple strata with time change.

4.

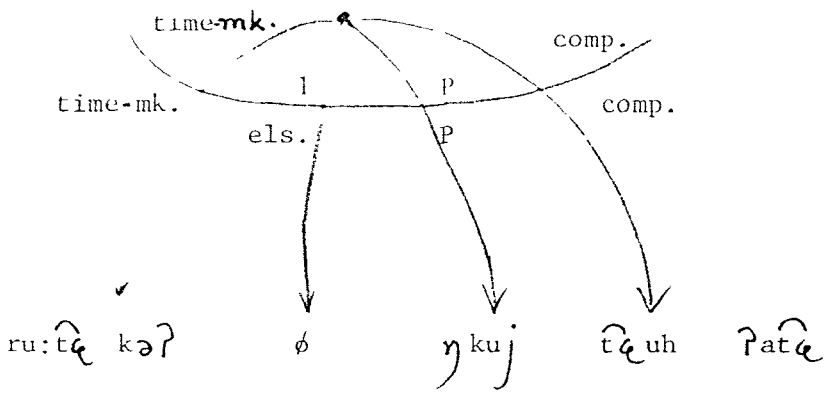


4. kɯat jo: kmet twe:w tɑ : t͡ɕaŋ nɔŋ tkuat t͡ɕʰʌ :

He take knife (name of knife) go strike in stump tree.

: Simple strata with location.

5.

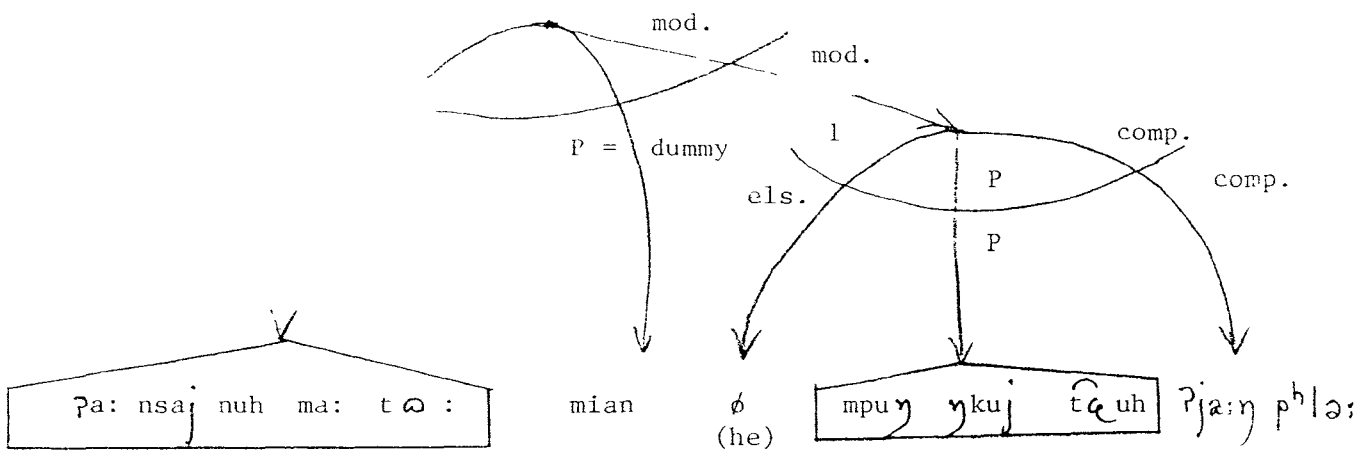


5. ru:tɕ kəʔ ŋkuj tɕuh ʔatɕ.

Then (he) part. sit excrete excrements.

: Simple strata with complement, time marker and a subject (1) deletion (ellipsis).

6.



6. mpuŋ ŋkuj tɕuh ʔatɕ ʔjaŋ pʰlɔːn mian ʔa:

Cont.mk. sit excrete happy be part.

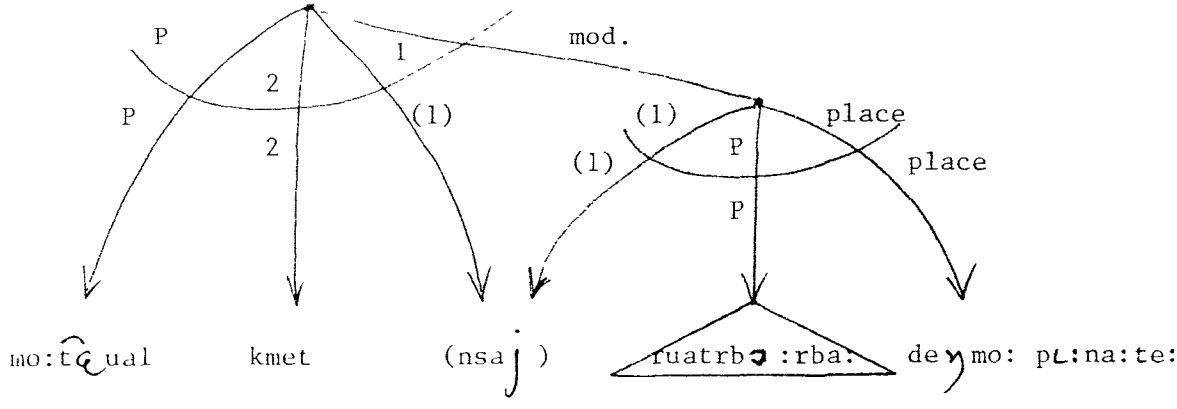
nsaj nuh ma: tɷ:

rabbit that one class.

'A rabbit appeared while he was sitting there excreting'.

: Simple strata with modifier clause, mian in this case is not part of the modifier clause but it is a dummy extential predicate also there is erasure of the subject (1).

7.



7. deŋ ruat rbɔ : rba: mo: pʟ: na: te:

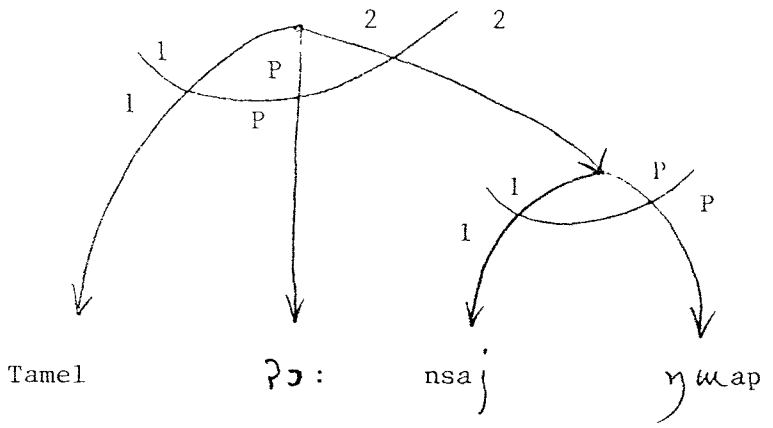
Know run elsewhere come from where neg.

mo: t͡ɕual kmet

come crash knife.

: Simple strata with a subject (1) ellipsis and the downstairs clause is a modifier of the upstairs clause.

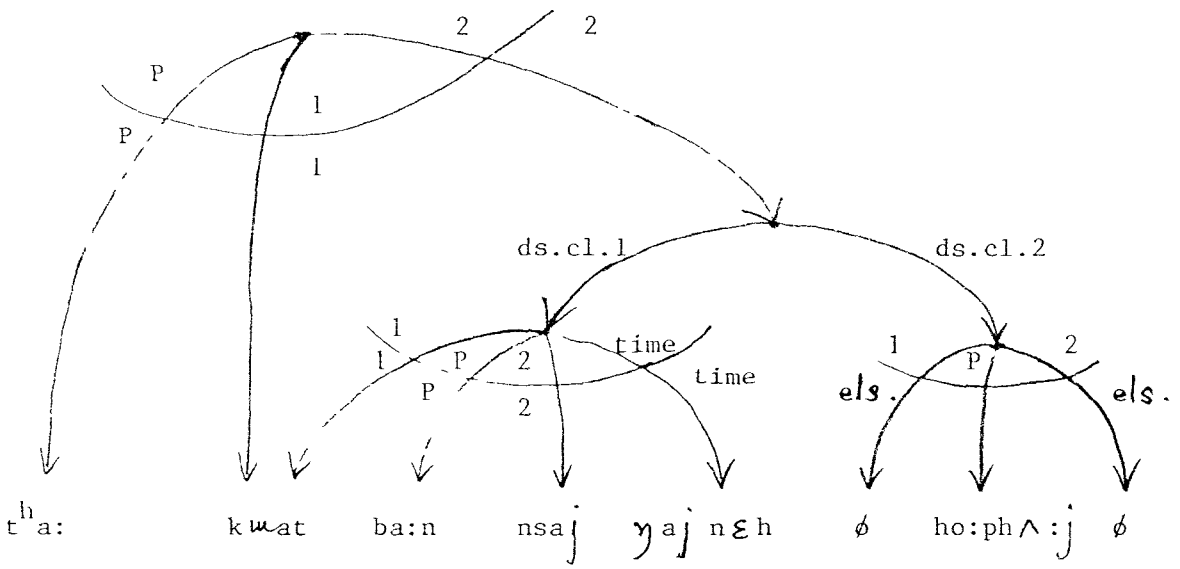
8.



8. leŋ nsaj ŋɯap Tamel kɔʔ ʔɔ: te:
Then rabbit die Tamel part. glad part.

: Simple strata.

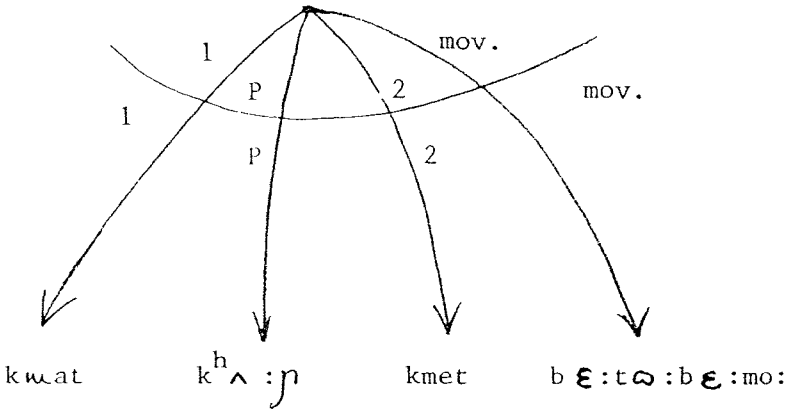
9.



9. kɯat tʰa: ŋaj nɛh ba:n nsaj ho:p hʌ:j
He say today have rabbit eat

: Complex strata with equi-erasure in ds.cl. 1+2

10、

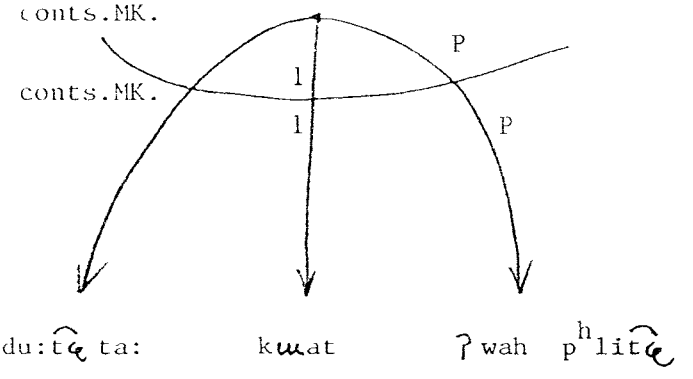


10. kɯat bɛ:tɷ:bɛ:mo: kʰʌ:ɲ kmet

he turn go turn come see knife

: Simple strata

11.

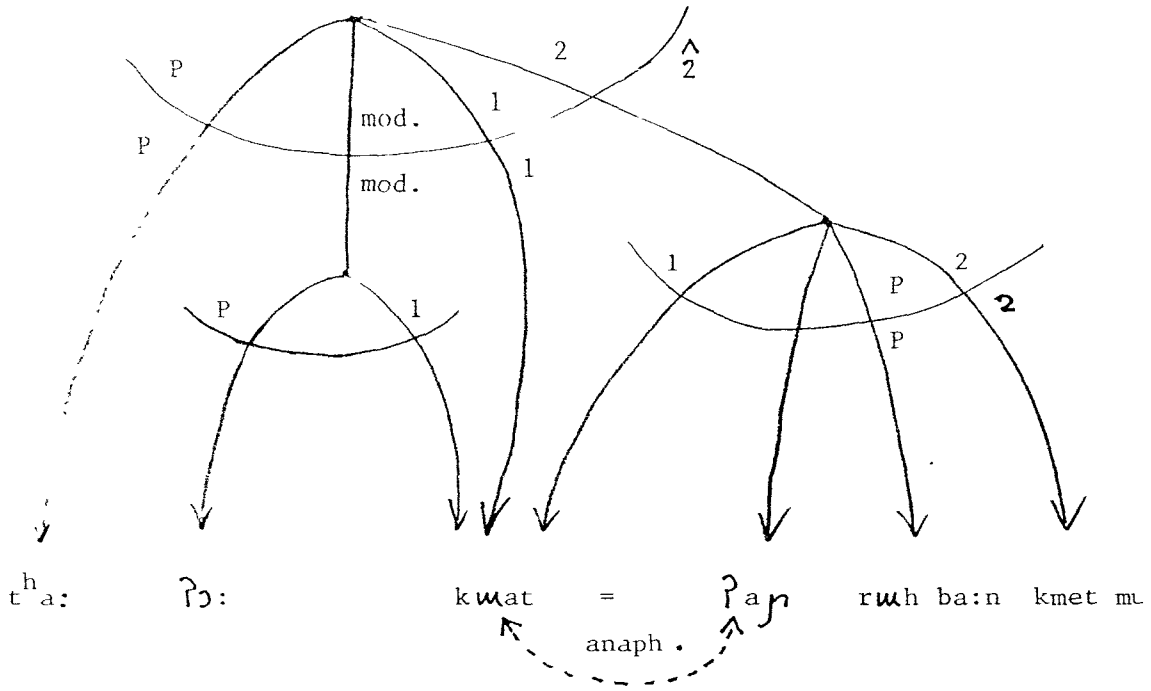


11. du:t͡ɕ ta: kɯat ʔwah pʰlit͡ɕ nɔ:

according he very forget part.

: Simple strata.

12.



12. kɯat kəʔ tʰa: ʔaɲ rɯh kmet

he part. say I pick knife

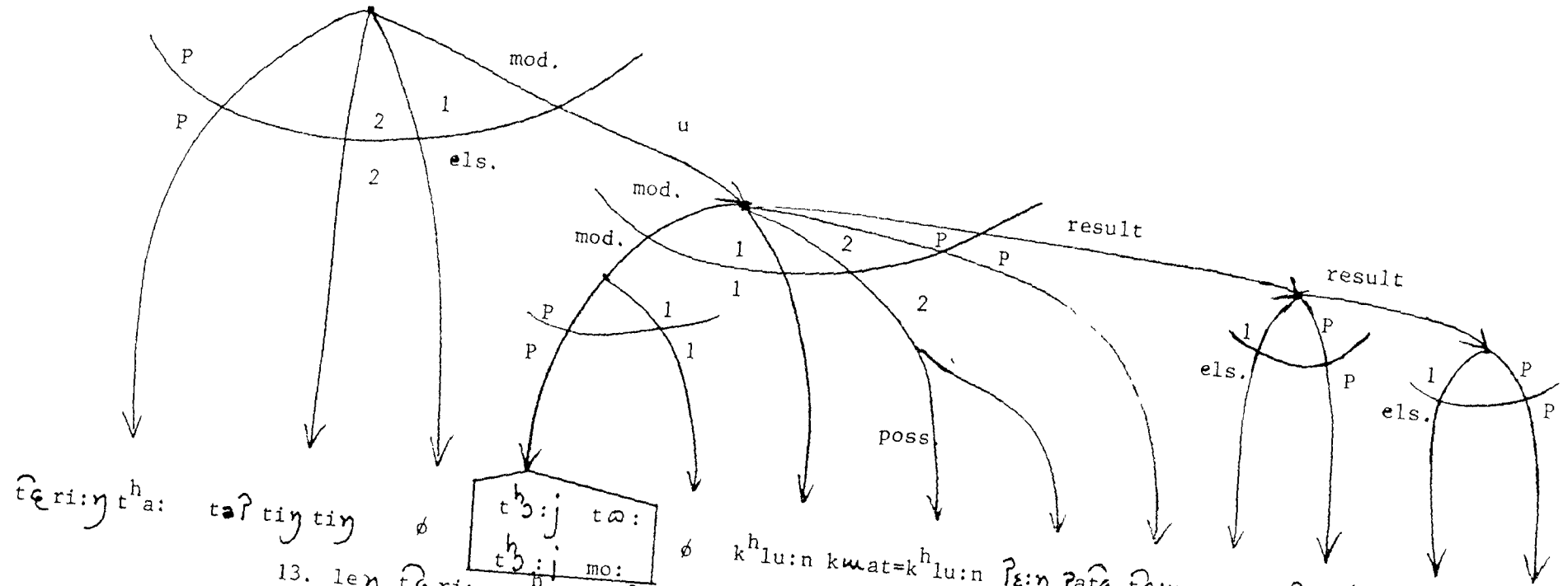
ba:n mu:j kɯat ʔɔ: te:

get one he glad part.

: Double equi-erasure and multiple dependency :

replacement ʔaɲ .

13.



13. leŋ tʂri: tʰa: ta? tiŋ tiŋ ta? tiŋ tiŋ kʰlu:n kɯat

Then sing that.....he.

ka? tʰɔ:j tɕɯ: tʰɔ:j mo: tɕɯan ʔatɕ kʰlu:n ʔɛ:ŋ rʔel pʰra:t

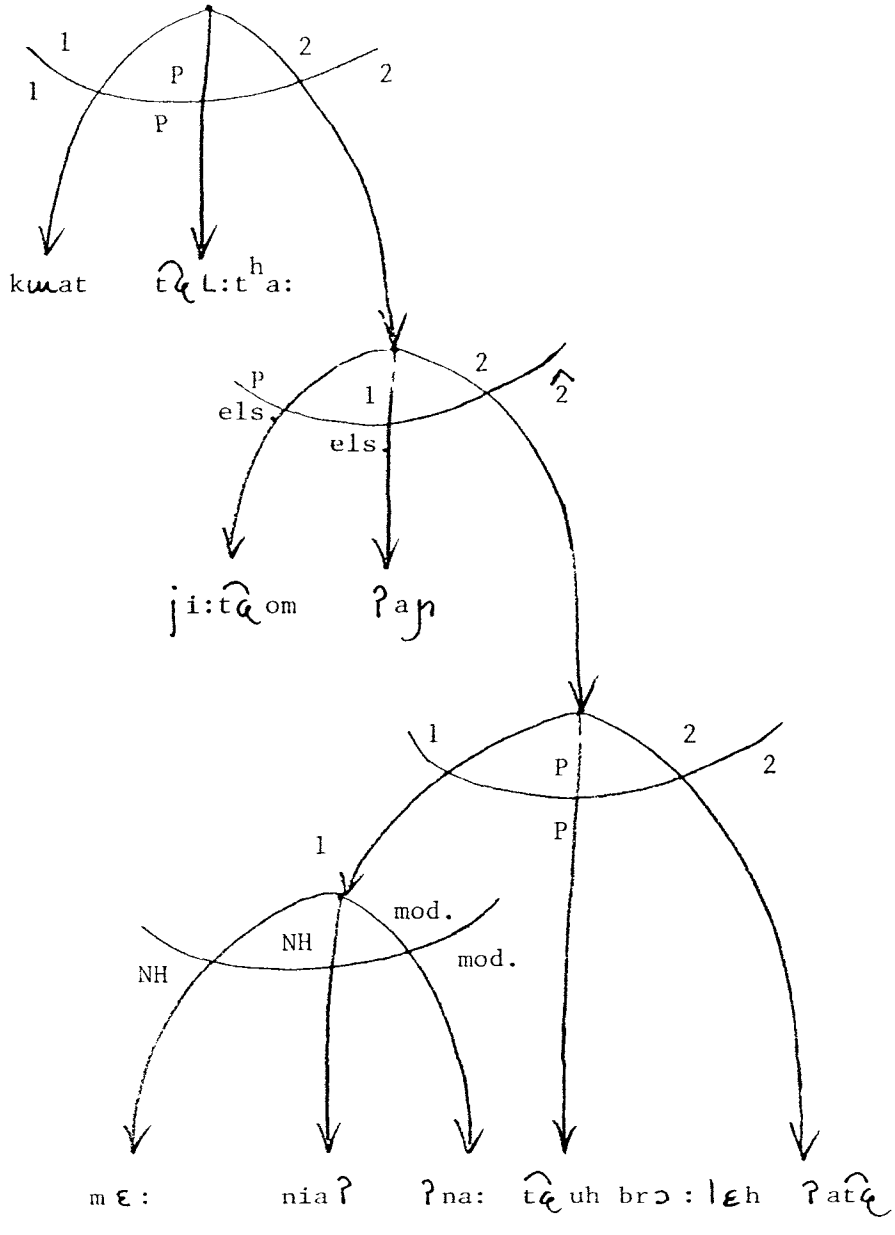
part.recade go recded come tread upon excrement his slippered

du:l tum.

fall down.

: Complex strata with equi-subject clause unions (and two result clauses).

14.



14. kʷat kəʔ tɕʟ: tʰaː, jiː tɕom mɛ; ʔnaː tɕuh ʔatɕ

he part. curse exclamation mother some defecate

brɔː lɛh.

bad very

: Relative clauses and an identified headnoun.

Whole text

mnɯh ʔwah pʰlitɕ͡ɕ

1. mian mniaʔ tɕ͡ɕʰmɔh tamel 2. kɯat li: kmet tɕ͡ɕo:l dop tɷ: ka:p ʔɔh 3. pʰɔ:ta: tɷ: dɔl dop kɯat tɕ͡ɕʰɯ: tɕ͡ɕuh ʔatɕ͡ɕ 4. kɯat jo: kmet tawɛ:w tɷ: tɕ͡ɕaŋ nɔŋ tkɯat tɕ͡ɕʰʌ: 5. ru:tɕ͡ɕ kəʔ nkuj tɕ͡ɕuh ʔatɕ͡ɕ6. mpuŋ nkuj tɕ͡ɕuh ʔjaŋ pʰlə:n mian ʔa: nsaj nuh ma: tɷ: 7. deŋ ruat rbɔ: rba: mo: pi: na: te: mo: tɕ͡ɕual kmet 8. leŋ nsaj ŋɯap tamel kəʔ ʔɔ: te: 9. kɯat tʰa: ŋaj nɛh ba:n nsaj ho:p hʌ:j 10. kɯat bɛ: tɷ: bɛ: mo: kʰʌ:ɲ kmet 11. du:tɕ͡ɕ ta: kɯat ʔwah pʰlitɕ͡ɕ nɔ: 12. kɯat kəʔ tʰa: ʔaŋ rɯh kmet ba:n mu:j, kɯat ʔɔ: te: 13. leŋ tɕ͡ɕri:ŋ tʰa: təʔ tiŋ tiŋ ,təʔ tiŋ tiŋ kʰlu:n kɯat kəʔ tʰɔ:j tɷ: tʰɔ:j mo: tɕ͡ɕɯan ʔatɕ͡ɕ kʰlu:n ʔɛ:ŋ rʔel pʰra:t du:l tum 14. kɯat kəʔ tɕ͡ɕi: tʰa: ji: tɕ͡ɕom mɛ: ʔna: tɕ͡ɕuh ʔatɕ͡ɕ brɔ: lɛh.

The forgetful man

"There was a man named Tamel he carried a knife into a forest to cut firewood. When he reached to the forest, he had bowel pain. He put the knife on the stump. Then, he defecated. While he was sitting, a rabbit came. It came from somewhere and ran into the knife. The rabbit died, so Tamel was glad. He said, "Today I have a rabbit to eat." He turned back and forth and saw the knife. He had forgotten it completely. He said that he had found a knife so he was glad. Then he sang "Ta ting ting, ta ting ting", and he went back and forth until he stepped backward and trod upon his own excrements. He slipped and fell down. He felt angry and swore at the mother of the person who had defecated in such a bad way."

Chapter V

Conclusions

5.1 Some general comments on R.G.

Because R.G. was developed from T.G. it has the same general theoretical orientation but develops in a different direction. There is deep structure and surface structure in both T.G. and R.G.

T.G. uses phrase structure rewrite rules, represented by linear diagrams or tree diagrams. And there are rules to show how sentences are transformed. But R.G. does not use rules to show the development of the clause, rather it emphasizes the semantic relations (deep structure in T.G.) and their correlation with the grammatical or surface relations (surface structure in T.G.).

R.G. uses arcs in a network to show the relationship in the clause, and the arcs can be drawn in any order because semantics is considered unordered.

R.G. describes the types of changes that take place in the development from semantic structure to surface structure.

R.G. is called a 'universal grammar', because it can be used to analyse any language, as in this thesis. Each language has its own construction (description).

I find that R.G. is a challenge to our abilities and ingenuity in analysing a language, to show the arcs, to find the appropriate network with the appropriate reasons which support the networks. Such a challenge is enjoyable, and the resulting insights are helpful.

5.2 Difficulties in using R.G. for Northern Khmer.

1. Trying to understand about a language is always difficult especially in the semantic field, and R.G. emphasizes semantics.

2. It is necessary to study a language for a long time in order to make a good R.G. analysis.

3. The perceptions about a language must combine the viewpoints of both an informant and a researcher, and other native speakers should be consulted too. If in this way we get the right viewpoint on each clause or sentence it will be easier for us to understand and justify.

4. In N.K. there are some kinds of sentences that seem familiar at first, but they are actually different, so we must be careful to analyse each sentence.

5. When we find a verb that can be either transitive or intransitive, depending on the context, it may have different meanings and it will make a difference in the relational arcs.

6. Learning about R.G. involves learning a new theory and new technical terms. So it is very difficult to comprehend and follow the theory.

7. We may use new labels that are different from those commonly used in R.G., but that is not important if they are reasonable and do not conflict with the theory.

8. R.G. was developed using polysyllabic languages having morphological marking, so application to a semi-monosyllabic language like N.K. with no morphological marking was difficult.

5.3 Suggestions for future research.

Some suggestions for possible fruitful future study might be :

1. There are many languages that still have not been analysed by R.G.

2. Using R.G. with a monosyllabic language is different from using it with a polysyllabic language. So it would be interesting to try to use it with other types of languages.

3. Compare R.G. to other theories of grammar.

Bibliography

Allen, Barbara J. and Donna B. Gardiner. 1977. "Noun Incorporation in Isleta",John P. Daly, ed. Work Paper, Vol.xxxI. Summer Institute of Linguistics, University of North Dakota Sesson.pp. 45-60.

Allen, Barbara J., Donald G. Frantz and Donna B. Gardiner 1981."Phantom Arcs in Southern Tiwa", John P. Daly and Margaret H. Daly, eds. Work Paper, Vol.xxV. Summer Institute of Linguistics, University of North Dakota Sesson. pp.1-10

Boey, Lim Kiat.1975.An Introduction to Linguistics for the Language Teacher.

Chantrupanth, Dhanan and Chartchai Phromjakgarin. 1978. Khmer (Surin)--Thai--English Dictionary. Indigenous Languages of Thailand Ressearch Project Chulalongkorn University Language Institute.

Callow, Leathleen. 1975.Discourse Considerations in Translating the Word of God. Summer Institute of Linguistics.

Frantz, Donald G.1977."A New View of to-Contraction", John P. Daly, ed. Work Paper, Vol.xxI. Summer Institute of Linguistics, University of North Dakota Sesson. PP. 71-76

————————.1977."Downstairs Transitivity in Clause Union", John P. Daly, ed. Work Paper,Vol.xxI Summer Institute of Linguistics, University of North Dakota Sesson. pp.77-87

———————— 1977. Grammatical Relations in Universal Grammar.mimeo SIL North Dakota. 1981, Indiana University Linguistics Club mimeo.

Gainey, Jerry W. and Theraphan L. Thongkum. 1977. Language Map of Thailand Handbook. Indigenous Languages of Thailand Research Project Central Institute of English Language Office of State Universities.

Huffman F. 1967. An Outline of Cambodian Grammar. University Microfilms International.

Jenner, Philip N. 1978."Observations on the Surin Dialect of Khmer, "Nguyen Dang Liem, ed. in Southeast Asian Linguistic Studies.

Pacific Linguistics Series C-No.31 pp.61-73

Perlmutter, David M. 1981."Functional Grammar and Relational Grammar : Points of Convergence and Divergence", in Perspectives on Functional Grammar. Tenn Hockstra, Harry van der Hulst, Michael Moortgot, eds. pp.319-349

Perlmutter, David and Paul Pastal. 1978. Same proposed Laws of Basic Clause Structure. To Appear in Perlmutter, ed. Studies in Relational Grammar 1.

Poopatwibun, Somkiat. 1982. Discourse-Level Cohesion in Northern Khmer, M.A. Thesis. Mahidol University.

Smalley, William A. 1964. Ethnolinguistic Survey of Northern Khmer Speaking People in Northeast Thailand

(With Data on Kuy).

———————— 1976."The Problem of Vowels : Northern Khmer", in Phonemes and Orthography : Language Planning in Ten Mimority Languages of Thailand. Pacific Linguistics. Series C-No.43 pp.43-83

Thomas, David D. 1964."A Survey of Austroasiatic and Mon-Khmer Comparative Studies", in Mon-Khmer Studies I pp.149-163

———————— 1971. Chrau Grammar. University of Hawaii Press.

Thomas, David D. and Robert K. Headley. 1970."More on Mon-Khmer Subgroupings", Lingua 25, 4, pp.398-418

Thomas, David D. and Wanna Tienmee, 1982."An Acoustic Study of Northern Khmer Vowels", Paper presented at the xv th International Conference on Sino-Tibetan Languages and Linguistics, Beijing, China.

Thomas, Dorothy. 1969." Chrau Affixes, "Mon-Khmer Studies III. Publication No.4 of the Linguistic Circle of Saigon the SIL. pp.90-107

———————— 1984. "The Deliberate Causative in Surin Khmer", A Journal of Language and Culture. Vol.4-No.1 pp.79-93

Wongsaeree, Sophana. 1984. Development of a Model Program for Multilingual Dictionnaries Using the Computer Sort Utility, Applied to Northern Khmer Phoneme Word Lists (Buriram), M.A.Thesis. Southeast Asian Linguistic Program, The Faculty of Graduate Studies, Mahidol University.