

AN OUTLINE OF CAMBODIAN GRAMMAR

A Thesis

Presented to the Faculty of the Graduate School  
of Cornell University for the Degree of  
Doctor of Philosophy

by

Franklin Eugene Huffman

1967



Negative microfilm  
received from university

67-17,239

HUFFMAN, Franklin Eugene, 1934-  
AN OUTLINE OF CAMBODIAN GRAMMAR.

Cornell University, Ph.D., 1967  
Language and Literature, linguistics

University Microfilms, Inc., Ann Arbor, Michigan

---

PLEASE NOTE:

The negative microfilm copy of this dissertation was prepared and inspected by the school granting the degree. We are using this film without further inspection or change. If there are any questions about the film content, please write directly to the school.

UNIVERSITY MICROFILMS



## BIOGRAPHICAL SKETCH

Franklin Eugene Huffman was born in Harrisonburg, Virginia, on January 28, 1934. In June, 1955 he received the degree of Bachelor of Arts from Bridgewater College, Bridgewater, Virginia, in the field of Romance Languages and Literatures. He was employed by International Voluntary Services, Inc., Washington, D.C. as a French interpreter in Laos from 1956 to 1958. From 1958 to 1960 he taught French and history at Middle River High School, Augusta County, Virginia. In September 1960 he enrolled in the graduate school of Cornell University in the fields of general linguistics, social anthropology, and Asian studies. From June to December 1964 he studied the Cambodian language at the University of London School of Oriental and African Studies, and from January 1965 to July 1966 he gathered field data on Cambodian in Thailand and Cambodia. He is a member of the Linguistic Society of America, the Association for Asian Studies, and the Siam Society.

## ACKNOWLEDGEMENTS

I would like to express my gratitude to my special committee at Cornell -- Professors Robert B. Jones, John M. Echols, and Lauriston Sharp -- for their encouragement and advice over the entire period of my graduate study. Thanks are especially due to my committee chairman and thesis advisor, Professor Robert B. Jones, who gave unstintingly of his time and counsel at all stages of my work on this study.

I am also indebted to Professor Fang-kuei Li of the University of Washington for the suggestion which led to the choice of Cambodian as the subject of this study.

I owe a debt of gratitude to Mrs. Judith M. Jacob of the University of London School of Oriental and African Studies, for her patient instruction during six months of intensive study of Cambodian, and for many insights into the structure of the language, as well as to Professor Eugénie J. A. Henderson, whose work on Cambodian phonology is the touchstone of later studies in the field.

I would like to express my thanks to the NDEA-related Fulbright-Hays Research Fellowship Program and the London-Cornell Project for their support during two years of field research in London, Thailand, and Cambodia, and to the Cornell Southeast Asia Program and the London-Cornell

Project for support during the academic year 1966-67 for the preparation of this thesis.

Thanks are also due to the National Research Council of Thailand for their assistance and sponsorship during the period of research in Thailand.

Finally, I must acknowledge my debt to some thirty-five Cambodians who served as informants over the period of my research in London, Thailand, and Cambodia, and especially to my principal informant for the Takeo dialect, Mr. Charan Promchan, who, for four hours a day over a period of fifteen months, patiently subjected himself to the mystifying game of linguistic investigation.

## TABLE OF CONTENTS

0.0	Introduction .....	1
0.1	General .....	1
0.2	Classification .....	1
0.3	History .....	4
0.4	Review of sources .....	8
0.5	Purpose and scope .....	11
0.6	Background .....	12
1.0	Phonology .....	14
1.1	Phonemes .....	14
1.11	Segmental phonemes .....	14
1.111	Class $C_1$ phonemes (consonants) .....	15
1.112	Class $C_2$ phonemes .....	21
1.113	Class $C_3$ phonemes .....	26
1.114	Class $V_1$ and $V_2$ phonemes (vowels) .....	27
1.115	Class $C_4$ phonemes (final consonants) ....	35
1.12	Suprasegmental phonemes .....	37
1.121	Stress phonemes .....	37
1.122	Juncture phonemes .....	38
1.123	Phrase contour phonemes .....	40
1.124	Intonational phonemes .....	43
1.2	Phonological words .....	44
1.21	Monosyllabic words .....	44
1.22	Disyllabic words .....	45
1.23	Polysyllabic words .....	46



2.0 Morphophonemics .....	48
2.1 Free variation .....	48
2.11 Free variation in unstressed syllables .....	48
2.12 Stress alternation.....	51
2.13 Free variation in stressed syllables .....	52
2.2 Phonologically conditioned alternation.....	52
2.3 Morphologically conditioned alternation.....	53
2.4 Vowel ablaut .....	56
2.41 Sporadic ablaut .....	57
2.42 Automatic ablaut .....	57
2.43 Vowel harmony .....	58
3.0 Morphology .....	63
3.1 Morphological units .....	63
3.11 Morphemes .....	63
3.12 Lexemes .....	64
3.2 Derivation .....	66
3.21 Prefixes.....	69
3.22 Infixes .....	91
3.23 Suffixes .....	106
3.3 Compounds .....	107
3.31 Governing lexemic constituents .....	107
3.32 Centered compounds .....	110
3.33 Coordinate compounds .....	114
3.34 Incentered compounds .....	115
3.35 Appositive compounds .....	117
3.36 Asyntactic compounds .....	117

3.37	Idiomatic compounds	118
3.38	Numerical compounds	119
3.4	Pseudo-compounds	120
3.41	Bound constituents	120
3.42	Free constituents	125
3.5	Reduplicatives	129
3.51	Complete reduplication	129
3.511	Repetitive reduplicatives	129
3.52	Partial reduplication	132
3.521	Ablauted reduplicatives	132
3.522	Rhyming reduplicatives	134
3.523	Alliterative reduplicatives	135
3.53	Incomplete reduplicatives	137
3.54	Pseudo-reduplicatives	138
3.6	Sound symbolism	139
4.0	Lexeme classes	141
4.1	Isolatives	142
4.11	Interjections	142
4.12	Responsives	143
4.2	Substantives	144
4.21	Nouns	144
4.22	Specifiers	147
4.23	Pronouns	151
4.24	Quantifiers	157
4.25	Demonstratives	163

4.3	Predicatives .....	164
4.31	Adjectival verbs .....	164
4.32	Active verbs .....	165
4.321	Transitive verbs .....	165
4.322	Intransitive verbs .....	166
4.33	Modal verbs .....	166
4.34	Directional verbs .....	170
4.35	Completive verbs .....	171
4.4	Adverbials .....	175
4.41	General adverbials .....	175
4.42	Interrogative adverbials .....	177
4.43	Indefinite adverbials .....	178
4.5	Adjectives .....	179
4.51	General adjectives .....	179
4.52	Imitative adjectives .....	181
4.53	Ordinal numeral adjectives .....	181
4.6	Auxiliaries .....	182
4.61	General auxiliaries .....	183
4.62	Preverbal auxiliaries .....	184
4.63	Incipient auxiliary .....	185
4.64	Negative auxiliaries .....	185
4.7	Relators .....	186
4.71	Prepositional relators .....	186
4.72	Subordinating conjunctive relators .....	189
4.73	General relators .....	192
4.74	Coordinating conjunctive relators .....	193
4.75	Copulative relators .....	195

4.8	Particles .....	196
4.81	Final sentence particles .....	196
4.82	Pause particles .....	197
5.0	Syntax .....	198
5.1	Uncentered constructions .....	200
5.11	Subject-predicate constructions .....	200
5.12	Paratactic constructions .....	201
5.121	Equational constructions .....	201
5.122	Topic-comment constructions .....	202
5.123	Exclamatory constructions .....	203
5.124	Responsive constructions .....	204
5.125	Vocative constructions .....	204
5.126	Terminative constructions .....	205
5.127	Embedded paratactic constructions .....	206
5.13	Objective constructions .....	206
5.14	Relational constructions .....	207
5.141	Prepositional constructions .....	207
5.142	Subordinate constructions .....	208
5.15	Completive constructions .....	209
5.2	Centered constructions .....	210
5.21	Post-posed attributes .....	210
5.211	Noun phrases .....	210
5.212	Relative pronoun phrases .....	216
5.213	Verb phrases .....	217
5.214	Post-posed subordinate clauses .....	221

5.22	Proposed attributes .....	221
5.221	Auxiliary constructions .....	221
5.222	Modal verb constructions .....	222
5.223	Attribute-clause constructions.....	223
5.224	Specifier phrases .....	225
5.3	Coordinate constructions .....	227
5.31	Cumulative constructions .....	227
5.32	Alternative constructions .....	230
5.33	Appositive constructions .....	231
5.34	Inclusive constructions .....	232
5.4	Numerical constructions .....	233
5.41	Additive constructions .....	233
5.42	Multiplicative constructions .....	233
5.5	Immediate constituent analysis .....	234
6.0	Sentence types .....	236
6.1	Major sentences .....	236
6.11	Simple sentences .....	236
6.12	Complex sentences .....	237
6.13	Compound sentences .....	238
6.2	Minor sentences .....	238
6.3	Sentence fragments .....	239
Appendix A:	Comparison of the Takeo Dialect with Standard Cambodian .....	240
Bibliography	.....	250

## 0.0 Introduction

### 0.1 General

Cambodian, also known as Khmer, is spoken by some 5,000,000<sup>1</sup> people in the Kingdom of Cambodia, and mutually intelligible dialects are spoken by approximately 400,000<sup>2</sup> inhabitants of the provinces of Buriram, Surin, and Srisaket in northeastern Thailand, and by approximately 450,000<sup>3</sup> people in the Mekong Delta region of South Vietnam. These figures exclude the hundreds of related dialects scattered over most of mainland Southeast Asia, and represent the relatively homogeneous language community of Cambodian proper.

### 0.2 Classification

Cambodian is the major modern representative of the eastern branch of the Mon-Khmer language family. Usually included with Cambodian in the Cambodian sub-group of

---

1. David J. Steinberg, Cambodia; Its People, Its Society, Its Culture (New Haven, Human Relations Area Files, 1959).

2. For this figure I am indebted to William A. Smalley, who very kindly gave me a pre-publication draft of his Ethnolinguistic Survey of Northern Khmer-Speaking People in Northeast Thailand (February, 1964).

3. Bernard Fall, Le problème de l'administration des minorités ethniques au Cambodge, au Laos, et dans les deux zones du Viet-Nam (Paris, 1961) p.10.

Eastern Mon-Khmer are Pear (Por), Samré, Stieng, and Chong,<sup>1</sup> all spoken within or on the borders of Cambodia.<sup>2</sup> Shorto<sup>3</sup> divides Sebeok's 'Mon-Khmer proper'<sup>4</sup> into Mon and Eastern Mon-Khmer, and redesignates Sebeok's Salween Basin Group (Palaung, Wa, Riang, etc.) Northern Mon-Khmer.<sup>5</sup>

1. H. L. Shorto, Judith M. Jacob, and E. H. S. Simmonds, Bibliographies of Mon-Khmer and Tai Linguistics (London, Oxford University Press, 1963) p.3.

2. To the foregoing group, Maspero [Henri Maspero, 'Le pays et ses habitants: langues' in Un empire colonial français: l'Indochine, Ouvrage publié sous la direction de M. Georges Maspero (Paris et Bruxelles, G. van Oest, 1929) Tome I, p. 64] adds Anrak and Budeh, and Pinnow [Heinz-Jürgen Pinnow, Versuch einer historischen Lautlehre der Kharia-Sprache (Wiesbaden, Otto Harrassowitz, 1959)] includes the latter two as well as Saoc and Dip. Thomas [David D. Thomas, 'Mon-Khmer Subgroupings in Vietnam', in Norman H. Zide, Studies in Comparative Austroasiatic Linguistics (The Hague, Mouton and Co., 1966) p. 197] includes Budeh and Budip [Dip?] under Stieng. A. G. Haudricourt [in private conversations in 1965] expressed the opinion that Pear, Chong, and Saoc are all dialects of Samré. This point of view is supported by P. Taillard ['Les Saoch', Institut Indochinois pour l'Étude de l'Homme, Bulletins et Travaux 5 (1942) pp. 43-45].

3. Shorto, Jacob, and Simmonds, op. cit., p. 5.

4. Thomas A. Sebeok, 'An Examination of the Austroasiatic Language Family', Language 18 (1942) 3: 206-17.

5. Thomas [op. cit., p. 198] suggests that Bahnaric [comprising Bahnaran and Stiengan] and Katuic [comprising Brôuan and Katuan] should be placed on a level with Mon and Khmer as major sub-divisions of the Mon-Khmer family.

Schmidt's hypothesis of an Austroasiatic language family on the Southeast Asian mainland,<sup>1</sup> including, besides Mon, Eastern Mon-Khmer, and Northern Mon-Khmer, also the Munda languages of northeastern India, Khasi in Assam, the Cham group in South Vietnam and Cambodia, Nicobarese, and Semang and Sakai in the Malay peninsula, is unwarranted by present evidence, and his further grouping of Austroasiatic with the Austronesian languages of island Southeast Asia to form an Austric superstock is even more speculative.<sup>2</sup>

Benedict in 1947<sup>3</sup> proposed adding Annamese-Muong to the "Austroasiatic" family, and linguists attending the special Austroasiatic languages section of the Conference on Indo-Pacific Languages at the University of London School of Oriental and African Studies in January, 1965, generally agreed that Vietnamese should be included in the

1. P. W. Schmidt, "Les peuples mon-khmér; trait d'union entre les peuples de l'Asie centrale et de l'Australonésie", Bulletin de l'Ecole Française d'Extrême-Orient 7 (1907) pp. 213-63.

2. On this point see W. F. Hevesy, "On W. Schmidt's Munda-Mon-Khmer Comparisons: Does an Austric family of languages exist?", Bulletin of the School of Oriental and African Studies 6 (1930) pp. 187-200, and Sebeok, loc. cit.

3. P. K. Benedict, "Languages and Literature of Indochina", Far Eastern Quarterly 6 (1947) pp. 379-89.



Austroasiatic family. However, to propose any wider affiliation for Mon-Khmer than Shorto's nuclear Mon, Eastern Mon-Khmer, and Northern Mon-Khmer groupings is probably premature, and must await further descriptive work.<sup>1</sup>

### 0.3 History

Since Cambodian is spoken in the general region of Funan, the first known Indianized kingdom in Southeast Asia (1st century A.D. to c. 550 A.D.)<sup>2</sup>, it may well be a modern representative of one of the earliest languages of mainland Southeast Asia. Cambodian inscriptions are among the earliest non-Indic inscriptions found in Southeast Asia, and the only vernacular inscriptions found in the area of Funan are Cambodian. The earliest Cambodian inscription was found at Angkor Borei in Takeo province in what would have been southern Funan, and is dated 611 A.D.<sup>3</sup> The only earlier vernacular inscription found in Southeast Asia is the Cham inscription found at Tra-kien in the area

---

1. For further discussions of linguistic affiliation in Southeast Asia, see Thomas A. Sebeok, "The Languages of Southeast Asia", Far Eastern Quarterly 2 (1943) pp. 349-56; George Coedès, "Les langues de l'Indochine", Conférences de l'Institut de Linguistique de l'Université de Paris VIII (1940-48) pp. 63-81; Henri Maspero, "Les langues mon-khmer", in Les langues du monde, A. Meillet et M. Cohen, ed. (Paris, 1952) pp. 609-22; and Joseph H. Greenberg, "Historical Linguistics and Unwritten Languages" in A. L. Kroeber, Anthropology Today (Chicago, University of Chicago Press, 1953).

2. D. G. E. Hall, A History of South-East Asia (London, MacMillan and Co. Ltd., 1964) p.33.

3. L. P. Briggs, The Ancient Khmer Empire (Philadelphia,

of the former kingdom of Champa, and dating from the fourth century A.D.<sup>1</sup> The traditional view is that the inhabitants of Funan were of the general Austronesian or Malay ethnic stock whose migration from southwestern China peopled most of Southeast Asia during Neolithic times.<sup>2</sup> But the dangers of assuming coincidence of ethnic and linguistic areas are well known. Cady,<sup>3</sup> writing on Funan, says that 'the literate elite was apparently Indonesian, and language modulating in time in the direction of Old Khmer. The population as a whole was Indonesian and Negrito or Melanesoid.' The first statement is, of course, linguistically untenable, and the second is based on the report of a Chinese traveler of 250 A.D. that described the Funanese as 'ugly and black, their hair frizzy, their bodies naked above the waist, their feet bare.' The description could just as well be interpreted as supporting Heine-Geldern's theory of a pre-Malay mesolithic Austroloid-Veddoid ethnic substratum in Southeast Asia.<sup>4</sup> Hall<sup>5</sup> states categorically that

---

1. G. Coedès, Les états hindouisés de l'Indochine et d'Indonésie (Paris, Editions E. de Bocard, 1964) p. 96.

2. See Brian Harrison, South-East Asia: A Short History (London, MacMillan and Co. Ltd., 1957) p. 5, and Hall, op. cit., p. 7.

3. John F. Cady, Southeast Asia: Its Historical Development (New York, McGraw-Hill, 1964) p. 53.

4. Hall, op. cit., p. 6-7.

5. Hall, op. cit., p. 25.

'the Funanese were of Malay race', but qualifies this in the footnote: 'The word is used here in its widest ethnic sense'. Both Briggs<sup>1</sup> and Harrison<sup>2</sup> assume that Cambodian was the language of Funan, but the most unequivocal statement comes from Coedès:<sup>3</sup>

'The absence of any texts in the vernacular dating from the Fu-nan period means that we are unfortunately left in ignorance as to what language was spoken by its people, and hence we do not know to what ethno-linguistic group they belonged. Nevertheless, we can assume it to be highly probable that the Funanese belonged in the main to the Mon-Khmer group. The very name of the country given in the Chinese texts would seem to indicate this, if it does indeed represent the word bnam 'mountain', which is typically Mon-Khmer. It has moreover been established that the Khmer language spread along the routes that must have been followed by the conquerors of Funan in the sixth century. As a result of this diffusion, various related dialects are dispersed around the periphery of present Cambodia. These dialects show great similarities, and also have features in common differentiating them from Khmer, which leads to the supposition that they are modern versions of the spoken language of the people of Fu-nan.'

However that may be, the fact that Cambodian was the language of Chen-La (550-802 A.D.), Funan's successor in the Mekong Valley, and of the great kingdom of Angkor (802-1431 A.D.), whose suzerainty at its height extended eastward to the sea, northward to Tongking and northern Laos, westward to Burma, and southward to Malaya, is attested by

---

1. Briggs, op. cit., p. 15.

2. Harrison, op. cit., p. 17.

3. G. Coedès, The Making of South East Asia (London, Routledge and Kegan Paul, 1966) p. 62.

an abundance of stone inscriptions covering the period from the 7th to the 18th centuries.<sup>1</sup> Furthermore, the fact that pockets of speakers of Mon-Khmer-related dialects are found all over mainland Southeast Asia, such as the Bahnar, Mnong Gar, Halang, and Srê of Vietnam; the Stieng, Biet, Brao, and Samré of Cambodia; the Khmu?, Lamet, Souei, and Sô of Laos; the Kay, So, Chong, and Lawa of Thailand; the Mon, Palaung, Wa, and Riang of Burma; and possibly the Semang and Sakai of Malaysia<sup>2</sup>, seems to indicate that Mon-Khmer in fact represents a much older linguistic substratum which was later engulfed, partially assimilated, and pushed into the hills by succeeding migrations of Vietnamese, Tai, and Burmese. At any rate, the importance of Cambodian for the linguistic history of Southeast Asia seems obvious.

As for foreign influence on the language, the Cambodians have borrowed much of their administrative, judicial, and literary vocabulary from Sanskrit.<sup>3</sup> With the advent of Theravada Buddhism at the beginning of the 15th century, Cambodian began to borrow Pali words, and continues to use

---

1. Georges Maspero, Grammaire de la langue khmère (Paris, Imprimerie Nationale, 1915) p. 23.

2. Frank M. LeBar, Gerald D. Hickey, and John K. Musgrave, Ethnic Groups of Mainland Southeast Asia (New Haven, Human Relations Area Files, 1964) pp. 287-8.

3. F. Martini, "La langue cambodgienne", France-Asie 4 (1949) pp. 961-9.

Pali as a major source of neologisms today.<sup>1</sup> During the period of French domination, many French words were borrowed into the language and have become an integral part of the colloquial language, especially in urban areas.

#### 0.4 Review of sources

Since accurate description of modern dialects is a prerequisite for accurate historical reconstruction, it is surprising that no modern structural grammar of Cambodian, such as that of Richard B. Noss for Thai,<sup>2</sup> Robert B. Jones for Karen,<sup>3</sup> and Laurence Thompson for Vietnamese<sup>4</sup> has been published. The few studies done by trained linguists have been concerned only with phonology of the language, and particularly with the "register" problem in the Cambodian vowel system, as first delineated by Henderson in 1952.<sup>5</sup>

---

1. On this subject, see F. Martini, "De la création actuelle des mots en cambodgien", Bulletin de la Société Linguistique de Paris 57 (1962) pp. 161-74.

2. Richard B. Noss, An Outline of Siamese Grammar (Ph.D. Thesis, Yale University, 1954, unpublished). An expanded version is available in his later Thai Reference Grammar (Washington, D.C., Foreign Service Institute, 1964).

3. Robert B. Jones, Karen Linguistic Studies, University of California Publications in Linguistics 25 (Berkeley and Los Angeles, University of California Press, 1961).

4. Laurence C. Thompson, A Vietnamese Grammar (Seattle, University of Washington Press, 1965).

5. Eugénie J. A. Henderson, "The Main Features of Cambodian Pronunciation", Bulletin of the School of Oriental and African Studies 14 (1952) pp. 149-74.

The first of these to appear was that of Martini in 1949,<sup>1</sup> which is a complete treatment of the non-intonational features of Cambodian phonology, but whose phonetics lead one to suspect that he was dealing with a rather variant dialect. The most widely quoted is Henderson's article, which is excellent descriptively, but which deals with a highly formal and idealized variety of speech.<sup>2</sup> The article also includes an interesting theory of the phonological structure of Cambodian words. The study is cast in the terms of the Firthian school of linguistics, and does not purport to be a phonemic analysis. Pinnow's two papers<sup>3</sup> are not based on primary information obtained from native informants, but are rather a comparison and synthesis of the Martini and Henderson analyses, on the basis of which, along with information from the writing system, he reconstructs an earlier stage of the language.<sup>4</sup> The only more or less

---

1. F. Martini, 'Aperçu phonologique du cambodgien', Bulletin de la Société Linguistique de Paris 42 (1942-45) pp. 112-31.

2. The treatments of both Martini and Henderson will be discussed in Appendix A.

3. Heinz-Jürgen Pinnow, 'Sprachgeschichtliche Erwägungen zum Phonemsystem des Khmer', Zeitschrift für Phonetik und allgemeine Sprachwissenschaft 10 (1957) 4: 318-91, and 'Bemerkungen zur Silben- und Wortstruktur des Khmer', Zeitschrift für Phonetik und allgemeine Sprachwissenschaft 11 (1958) pp. 176-79.

4. I am indebted to Philip N. Jenner of the University of Hawaii for English translations of these two articles.

complete grammar of the Cambodian language so far published is that of Georges Maspero<sup>1</sup>. This rather thorough grammar, published in 1915, suffers from the "lingua-centric" bias typical of earlier grammars, attributing to the language Indo-European grammatical categories. Maspero's transcription is more a transliteration than a phonetic representation of the sounds of the language, as a consequence of which the work could almost be called a graphemic analysis. Nevertheless, the book is a valuable source of information about the language, and contains a useful list of derivationally-related forms, whether or not the mechanisms are functional in present-day speech. In addition to Maspero's work, several articles dealing with specific aspects of Cambodian grammar have been published in recent years by Martini.<sup>2</sup>

Various manuals and textbooks of Cambodian were published throughout the period of French administration in

---

1. Georges Maspero, op. cit.

2. F. Martini, "Les expressions de 'être' en siamois et en cambodgien", Bulletin de la Société Linguistique de Paris 52 (1956) pp. 289-306, and "La distinction du predicat de qualité et de l'épithète en cambodgien et en siamois", Bulletin de la Société Linguistique de Paris 53 (1957-8) pp. 295-305.

Cambodia.<sup>1</sup> However, the only Cambodian language teaching materials presently available which are based on modern techniques of structural analysis are those of Noss in 1959<sup>2</sup> and 1966.<sup>3</sup>

### 0.5 Purpose and Scope

The purpose of this study will be to present a description of the principal structural features of Cambodian grammar, at all grammatical levels, including phonology, morphology, and syntax. The theoretical framework will be principally that of the "item and arrangement"<sup>4</sup> school of current American descriptive linguistics, but with insights gained from other approaches, such as those developed by the London, Prague, transformational, and traditional schools of descriptive linguistics.

---

1. Étienne François Aymonier, Cours élémentaire de cambodgien (Saigon, Collège des Administrateurs stagiaires, 1877).  
 J. Taupin, Cours de langue cambodgienne (Professé au Collège des Interprètes par J. Taupin, Mars, 1887).  
 Roland Meyer, Cours de cambodgien et lectures cambodgiennes, Nouvelle édition (Phnom Penh, A. Portail, 1929).  
 L. Manipoud, Cours de langue cambodgienne (Phnom Penh, Imprimerie Royale, 1941).  
 Gaston Cambefort, Introduction au cambodgien (Paris, Maisonneuve, 1950).

2. Richard B. Noss, and Vanphut H. Phan, Cambodian: Basic Course, Units 1-12 (Washington, D.C., Foreign Service Institute, 1959).

3. Richard B. Noss and Im Proum, with the assistance of Dale I. Purtle and Someth Suos, Cambodian Basic Course Volume One, Units 1-45 (Washington, D.C., Foreign Service Institute, 1966).

4. See Charles F. Hockett, "Two Models of Grammatical Description". *Word* 10 (1954) pp. 210-34.



## 0.6 Background

The present work is based on data collected from 34 informants in the course of two years' research in Ithaca, London, Bangkok, and Phnom Penh.

Although the greater part of the data was collected in Bangkok, during several trips to Cambodia, a dialect survey was carried out, based on data collected from informants from all of the Cambodian-speaking provinces of the country. In addition, tape recordings were made of conversations in standard Cambodian, which provided an important means of verifying the data obtained from the principal informant, as well as an invaluable source of information on intonational features. Further data were provided by monitoring radio broadcasts from Phnom Penh, and from Cambodian language newspapers, books, and dictionaries purchased in Cambodia.

Since the principal informant for the present work was a native of Takeo province in southern Cambodia, resident in Bangkok, this will be essentially a description of the Takeo dialect of Cambodian. However, the Takeo dialect differs from standard spoken Cambodian only on the phonological level, and these differences are discussed in Appendix A. Standard spoken Cambodian in this work refers to the most widespread spoken form of the national written language, and is probably best represented by the dialects spoken in the provinces surrounding the province of . . .

Kandal<sup>1</sup>, and around the southern end of the Tonle Sap.

---

1. The dialect spoken in Phnom Penh and the immediately surrounding area of Kandal Province differs phonologically from both the standard colloquial and the Takeo dialect described in the following work - see Appendix A. See also Richard B. Noss, 'The Treatment of \*/R/ in Two Modern Khmer Dialects', in Norman H. Zide, ed., Studies in Comparative Austroasiatic Linguistics (The Hague, Mouton and Co., 1966) pp. 89-95.

## 1.0 Phonology

### 1.1 Phonemes

Cambodian utterances are composed of combinations of mutually contrastive sound units, or phonemes.<sup>1</sup> These phonemes fall into two classes:

1. segmental phonemes, which occur in a temporal sequence, and
2. suprasegmental phonemes, which occur simultaneously with, and may vary with, different occurrences of the same segmental phonemes.

#### 1.11 Segmental phonemes

Segmental phonemes are defined in the context of the stressed syllable, which is the minimum phonological unit which occurs as the segmental constituent of a complete utterance. The structure of the stressed syllable can be represented by the formula  $C_1(C_2)(C_3)V_1(V_2)(C_4)$ , with the limitation that if  $V_2$  does not occur, then  $C_4$  must occur.<sup>2</sup>

$C_1$  represents any consonant which occurs as the initial phoneme of a stressed syllable.

$C_2$  represents any one of a sub-class of  $C_1$  which occur

---

1. Phonemes are distributionally defined. For a discussion of this approach see the Introduction to William A. Smalley, Outline of Khmer Structure, American Oriental Series Essays # 2 (Baltimore, American Oriental Society, 1960).

2. The structure of the unstressed syllable is discussed in the section on Phonological words (1.2).

after certain  $C_1$  phonemes (forming two-place initial consonant sequences).

$C_3$  represents the phoneme /h/ which may occur after certain  $C_1C_2$  sequences (forming three-place initial consonant sequences).

$V_1$  represents any vowel which may occur after  $C_1$  phonemes.

$V_2$  represents any one of a sub-class of  $V_1$  which may occur after certain  $V_1$  phonemes.

$C_4$  represents any one of a sub-class of  $C_1$  which may occur after  $V_1$  phonemes, or after a sequence of  $V_1V_2$ .

### 1.111 Class $C_1$ phonemes (consonants)

Cambodian has 18 consonant phonemes, which can be arranged diagrammatically as follows:

	Labial	Dental	Palatal	Velar	Glottal
<u>Stops</u>					
Voiceless unasp.	p	t	c	k	ʔ
Voiced unasp.	b	d			
<u>Spirants</u>					
Voiceless	(f)	s			h
<u>Continuants</u>					
Nasal	m	n	ɲ	ŋ	
Semivocalic	w		y		
Lateral		l			
Trilled		r			

Of the above initial consonants, /f/ is rare (occurring only in a few loan-words). All initial consonants are illustrated in the following examples:

/puu/ 'uncle'	/tuu/ 'cupboard'
/cuu/ 'to be sour'	/kau/ 'pair'
/bey/ 'three'	/dey/ 'earth'
/qoo/ 'Oh!'	/foon/ 'flock, herd'
/soo/ 'sound'	/hoo/ 'to flow'
/meet/ 'size'	/neet/ 'chief'
/ñeet/ 'relative'	/qeey/ 'to be easy'
/wee/ '3rd person pronoun'	/yeey/ 'grandmother'
/luec/ 'to steal'	/ruec/ 'already'

### 1.1111 Phonetic description of consonants

All positional allophones are described for each consonant. Distribution will be discussed under succeeding class headings.

#### 1. Voiceless stops

/p t c k/ form an allophonic set. They are normally fortis in initial position, with /c/ having fricative release initially but not finally. They are slightly aspirated before other voiceless stops (except /q/) and sonorants (except /r/). They are lenis before /r s h/, and fortis and released before /b d q/. They are labialized before the vowels /üe öe/. They are lenis and unreleased after long vowels, and fortis and unreleased after short vowels. Final stop allophones frequently involve

homorganic post-nasalization, as in /srok/ [sro<sup>u</sup>k<sup>ŋ</sup>] 'country'.

The positional variants may be symbolized as follows, using /k/ as the representative of the group:<sup>1</sup>

[k'] (slightly aspirated) before other voiceless stops (except /q/) and sonorants (except /r/).

[k̲] (lenis) before /r s h/.

[k̲̥] (fortis released) before /b d q/.

[k̲<sup>w</sup>] (labialized) before /ũe če/.

[k̲<sup>l</sup>] (lenis unreleased) ~ [k̲̥] after long vowels.

[k̲<sup>f</sup>] (fortis unreleased) ~ [k̲̥] after short vowels.

[k̲] elsewhere.

In addition, /k/ has strongly fronted articulation [k<] after the vowels /ii ee ae/.

/q/ is a glottal stop which is fortis [q̲] in initial position and after short vowels, and lenis before /w/ in /qwey/ 'what' and after long vowels.

## 2. Voiced stops

/b d/ are prevoiced fortis voiced stops [b̲b], [d̲d].

/d/ has alveolar articulation.

## 3. Voiceless spirants

/f/ is a labialized voiceless labio-dental spirant [f̲<sup>w</sup>].

---

1. The phonetic symbols used here are those of George L. Trager, Phonetics: Glossary and Tables, Studies in Linguistics Occasional Papers #6 (Buffalo, University of Buffalo, 1958).

/s/ is a frictionless voiceless post-dental groove spirant [s=].

/h/ is a voiceless spirant which has pharyngeal articulation initially, glottal articulation as second member of a sequence, and post-velar articulation finally. It is lenis after long vowels, fortis elsewhere. The allophones may be represented as follows:

[h] (fortis pharyngeal spirant) initially.

[h] (fortis glottal spirant) as C<sub>2</sub>.

[x] (lenis post-velar spirant) after long vowels.

[x] (fortis post-velar spirant) after short vowels.

#### 4. Nasals

/m n ñ ŋ/ form an allophonic set. They are fortis, with vocalic onset initially, lenis and short after long vowels, and fortis and relatively longer after short vowels. They are frequently preceded by homorganic plosion in final position, especially /m/, as in /room/ [ro:u<sub>2</sub>m] 'to surround'. They have voiceless onset as C<sub>2</sub> after initial voiceless stops. The common allophones of the class may be shown as follows, using /m/ as representative of the class:

[m] (voiceless onset) as C<sub>2</sub> after voiceless stops.

[m] ~ [bm] (lenis) after long vowels.

[m] ~ [bm] (fortis) after short vowels.

[m] (vocalic onset) elsewhere.

In addition, /ŋ/, like /k/, is strongly fronted after /i:/, /ee/, and /æ/.

## 5. Semivowels

/w/ is a labial semivowel with slight labio-dental contact initially, with consequent spirantization, and progressive labialization. It may be delabialized in final position, especially after /o/ or /a/, as in /tow/ [to<sup>w</sup>u:] 'to go' and /qaaw/ [ʔa:<sup>w</sup>u] 'shirt', with final labio-dental contact in extreme cases.<sup>1</sup> /w/, like all continuants which occur finally, has compensatory lengthening after short vowels. Like all continuants except /r/ that occur as C<sub>2</sub>, it has voiceless onset after voiceless consonants. The allophones can be shown as follows:

[<sup>w</sup>λw] (voiceless onset) as C<sub>2</sub> after voiceless consonants.

[u] (delabialized) after long vowels.

[u:] (lengthened and delabialized) after short vowels.

[v<sup>w</sup>] (labio-dental contact) elsewhere.

/y/ is a palatal semivowel with slight affrication initially, especially after high vowels, as in /yɪt/ [j<sup>ɪ</sup>t] 'slow, sluggish'. /y/ tends toward labialization finally after back vowels, as in /qɔŋkuy/ [ʔɔŋkuy<sup>w</sup>] 'to sit', and /kraoy/ [kra<sup>o</sup>y<sup>w</sup>] 'behind'. Its allophones can be shown as follows:

---

1. My informant actually 'thought' he was using a palatal semivowel, such as [ɣ], and which he used in describing the sound to me, but which never occurred in his actual speech.



- [ɟy] (affricated) initially.
- [ɣy] (voiceless onset) as C<sub>2</sub>.
- [y<sup>w</sup>] after back vowels.
- [y ] after non-back long vowels.
- [y:] after non-back short vowels.

## 6. Lateral

/l/ is an alveolar lateral with the following allophones:

- [l ] initially.
- [ɬl] (voiceless onset) as C<sub>2</sub>.
- [l̠ ] (retroflexed) after long vowels.
- [l̠:] (retroflexed and lengthened) after short vowels.

## 7. Trill

/r/ is an alveolar trill with the allophones:

- [r'] (single flap) as C<sub>2</sub>.
- [ʀr] (trill with vocalic onset) ~ [ʀr'] initially.

### 1.1112 Problems of interpretation

As mentioned above, the velar consonants /ŋ/ and /k/ have strongly fronted allophones [ŋ<] and [k<] after /ii ee ae/. Since the /ñ:ŋ/ and /c:k/ contrasts are neutralized after these three vowels (the articulation is phonetically intermediate), one could analyze them as /ñ/ and /c/ just as well.<sup>1</sup> However, since /ñ/ and /c/ do not

---

1. As Noss in fact does in his Cambodian: Basic Course, 1959.

occur after numerous other vowels (see 1.125), they appear to be generally defective in distribution. On the other hand, if one assigns the nasal allophone which occurs after /i i e e a e/ to /ŋ/ (and the homorganic stop allophone to /k/), the distribution of /ŋ/ is relatively complete. This analysis is further supported by the fact that when [k<] after /ae/ undergoes doubling in polysyllabic forms, the doubled allophone is phonetically [k] rather than [c], as in /qaekkerēec/ [ʔa<sup>h</sup>e<sup>h</sup>k<kere·e<sup>h</sup>c] 'independence'.<sup>1</sup>

### 1.112 Class C<sub>2</sub> phonemes

#### 1.1121 Problems of interpretation

C<sub>1</sub>C<sub>2</sub> sequences fall into three phonetic categories on the basis of the kind of transition which occurs between them:

1) Relatively close transition [CC], with onset of stress on the initial consonant. This kind of transition occurs in sequences where C<sub>1</sub> is /p t c k/ and C<sub>2</sub> is /r s h/, and in sequences where C<sub>1</sub> is /s/ and C<sub>2</sub> is /p t k m ñ ŋ w l r/.

2) Slight aspiration of C<sub>1</sub> [C<sup>h</sup>C] and initial devoicing of a following continuant (except /r/) as C<sub>2</sub>. This kind of transition occurs in sequences where C<sub>1</sub> is a voiceless stop

---

1. A purely practical consideration is the fact that the great majority of the forms in question are spelled |ŋ k| in the writing system, so that to analyze them as being phonemically /ñ c/ would produce unnecessary confusion.

/p t c k/ and  $C_2$  is another voiceless stop or a continuant other than /r/, except for the sequence /kŋ-/.

3) Weak intruded vocalism of a mid-central quality [C<sup>̥</sup>C] between  $C_1$  and  $C_2$ . This kind of transition occurs in any sequence where  $C_2$  is /b d g/, any sequence where  $C_1$  is /m n/, and in the sequences /kŋ-/ and /sn-/.

It would seem possible (and, in some schools of linguistics, preferable) to analyze class 1 sequences as /CC/, class 2 sequences as /ChC/, and class 3 sequences as /CeC/. The decision to analyze all three classes as being structurally /CC/ is based on the following considerations:

1) The transitional allophones of the three classes never contrast phonemically. Thus they can be analyzed as three allophones of  $C_1$  in complementary distribution with regard to  $C_2$ : [C] in class 1

[C'] (aspirated) in class 2

[C<sup>̥</sup>] (released with vocalism) in class 3.

2) The allophones that characterize classes 2 and 3 are in free variation in some idiolects; for example, /kmeŋ/ [k<sup>m</sup>me:ŋ] ~ [k<sup>em</sup>me:ŋ] 'child'. Furthermore, there seems to be a continuum of closeness of transition from class 1 to class 3. For example, those sequences of class 1 in which  $C_1$  is /s/ are not as close in transition as the other members of the class, while the class 3 sequences /pl kl tw kw/ are closer in transition than the other members of the class. These facts seem to indicate that the differences

have no structural significance.

3) [C'] in class 2 sequences differs from the /Ch/ sequences in class 1 in that the degree of aspiration is weaker, and the position of articulation is fronter, than in /Ch/ sequences. Furthermore, when a /Ch/ sequence is split by a derivational infix, /h/ is retained in the derivative, e.g.:

/kheŋ/ 'angry' > /kɔmheŋ/ 'anger'

By contrast, when class 2 sequences are split by an infix, phonetic aspiration is lost, e.g.:

/klaŋ/ [k'ɛla<ŋ] 'strong' > /kɔmlaŋ/ [kɔmla<ŋ] 'strength'

4) Although the vocalism which occurs in sequences of class 3 is phonetically similar to the reduced shwa /e/([ə]) which occurs in unstressed syllables, [ə] in unstressed syllables is always expandable in careful speech to a full vowel /ə/, /ɔ/, /o/, or /a/, and in a reading pronunciation even to /ɔɔ/, /oə/, or /aa/, while the [ə] of class 3 sequences is not expandable to a full vowel. For example, the initial sequences of the forms /lɔɔŋ/ 'test' and /ləɔɔŋ/ 'fence' are phonetically similar, but they contrast structurally. The unstressed syllable /lə-/ further alternates with /rə-/ and /ro-/ in more careful speech (see 2.1).<sup>1</sup>

---

1. It would be convenient to analyze [rəC-] sequences also as /CC-/, since no \*/rC-/ otherwise occurs. However, all such sequences appear to be expandable to /roC-/, and in fact characteristically occur with /o/ vowel quality in the speech of my principal informant. This adherence to the criterion of expandability necessitates some special morphophonemic rules for /r/ (see 2.2, item 3).

Thus, while the allomorph /lɛbɔɔŋ/ 'fence' is phonetically similar to /lbɔɔŋ/ on the phonetic level, the two forms contrast on the phonemic and morphophonemic levels:

<u>Phonetic level</u>	<u>Phonemic level</u>	<u>Morphophonemic level</u>
[l <sup>0</sup> bɔ: <ŋ]	/lbɔɔŋ/	/lbɔɔŋ/ 'test'
[l <sup>0</sup> bɔ: <ŋ]	/lɛbɔɔŋ/	/rɛbɔɔŋ/ 'fence'

For all of the foregoing reasons, all non-expandable initial sequences of two consonants are analyzed as /CC/. However, in view of the peculiarly loose transition in all such sequences, the term 'sequence' is preferred to 'cluster', which would imply close transition and release of C<sub>1</sub> into C<sub>2</sub> in all cases.

#### 1.1122 Distribution of C<sub>2</sub> phonemes

The membership and distribution of C<sub>2</sub> can best be shown in the following chart:

C <sub>1</sub>	C <sub>2</sub>																
	p	t	c	k	q	b	d	m	n	ñ	ŋ	w	y	l	r	s	h
/p/		1	2	3	4		5		6	7	8		9	10	11	12	13
/t/	14			15	16	17		18	19		20	21	22	23	24		25
/c/	26			27	28	29	30	31	32	33	34	35		36	37		38
/k/	39	40	41		42	43	44	45	46	47	48	49	50	51	52	53	54
/s/	55	56		57	58	59	60	61	62	63	64	65		66	67		
/q/												68					
/ä/						69											
/m/		70	71		72		73		74	75				76	77	78	79
/l/	80			81	82	83		84			85	86					87

The number assigned to each sequence in the chart corresponds with the number of its exemplification in the following list:

- |                           |                                  |
|---------------------------|----------------------------------|
| 1. /ptěeh/ 'house'        | 2. /pcōep/ 'to attach'           |
| 3. /pkaa/ 'flower'        | 4. /pqaem/ 'to be sweet'         |
| 5. /pdəy/ 'husband'       | 6. /pnum/ 'mountain'             |
| 7. /pñae/ 'to send'       | 8. /pquut/ 'to bathe (tr.)'      |
| 9. /pyue/ 'to suspend'    | 10. /pləw/ 'road, way'           |
| 11. /prae/ 'to use'       | 12. /psəeŋ/ 'to be different'    |
| 13. /phək/ 'to drink'     | 14. /tpōel/ 'cheek'              |
| 15. /tkaeŋ/ 'illustrious' | 16. /tqooñ/ 'to whine, complain' |
| 17. /tbaañ/ 'to weave'    | 18. /tməy/ 'to be new'           |
| 19. /tnam/ 'medicine'     | 20. /tɾay/ 'day, sun'            |
| 21. /twəə/ 'door'         | 22. /tyuun/ 'charcoal'           |
| 23. /tlěeq/ 'to fall'     | 24. /trəy/ 'fish'                |
| 25. /thaok/ 'to be cheap' | 26. /cpun/ 'to inhale (vapors)'  |
| 27. /ckae/ 'dog'          | 28. /cqəŋ/ 'bone'                |
| 29. /cbah/ 'to be clear'  | 30. /cdao/ 'lingot'              |
| 31. /cmaa/ 'cat'          | 32. /cnaŋ/ 'pot'                 |
| 33. /cñao/ 'to be wilted' | 34. /cɲaay/ 'to be far'          |
| 35. /cweeŋ/ 'left (side)' | 36. /cləy/ 'to cross'            |
| 37. /craen/ 'much, many'  | 38. /chaa/ 'to fry'              |
| 39. /kpuěh/ 'to be high'  | 40. /ktěeh/ 'skillet'            |
| 41. /kcey/ 'to borrow'    | 42. /kqəəq/ 'to cough'           |
| 43. /kbaal/ 'head'        | 44. /kdaw/ 'to be hot'           |
| 45. /kmae/ 'Khmer'        | 46. /knoŋ/ 'in'                  |
| 47. /kñom/ 'I'            | 48. /kɲaa/ 'goose'               |

- |                               |                                |
|-------------------------------|--------------------------------|
| 49./kwaq/ 'to be blind'       | 50./kyol/ 'wind, air'          |
| 51./kleen/ 'to be hungry'     | 52./kraw/ 'outside'            |
| 53./ksac/ 'sand'              | 54./khae/ 'month'              |
| 55./spiy/ 'cabbage'           | 56./stɛŋ/ 'river'              |
| 57./skœl/ 'acquainted with'   | 58./sqæk/ 'tomorrow'           |
| 59./sbew/ 'thatch'            | 60./sdap/ 'to listen'          |
| 61./smaw/ 'grass, hay'        | 62./snaa/ 'crossbow'           |
| 63./sñaen/ 'to fear, respect' | 64./sɲiem/ 'silent, quiet'     |
| 65./swaa/ 'monkey'            | 66./slap/ 'to die'             |
| 67./srəy/ 'woman'             | 68./qwəy/ 'what'               |
| 69./dbət/ 'since, because'    | 70./mteeh/ 'a pepper'          |
| 71./mcul/ 'needle'            | 72./mqɔɔp/ 'an herb'           |
| 73./mdaay/ 'mother'           | 74./mnœh/ 'pineapple'          |
| 75./mñɔɔm/ 'ashes'            | 76./mlup/ 'shade'              |
| 77./mreem/ 'finger'           | 78./msaw/ 'flour'              |
| 79./mhoop/ 'food'             | 80./lpeñ-lpoñ/ 'irresponsible' |
| 81./lkək/ 'noisily'           | 82./lqɔɔ/ 'to be good, pretty' |
| 83./lbaeŋ/ 'game'             | 84./lmoem/ 'sufficient'        |
| 85./lŋæc/ 'afternoon'         | 86./lweeŋ/ 'compartment'       |
| 87./lhon/ 'papaya'            |                                |

### 1.113 Class C<sub>3</sub> phoneme

C<sub>3</sub> is /h/. It occurs only after /st-/ and /ik-/.

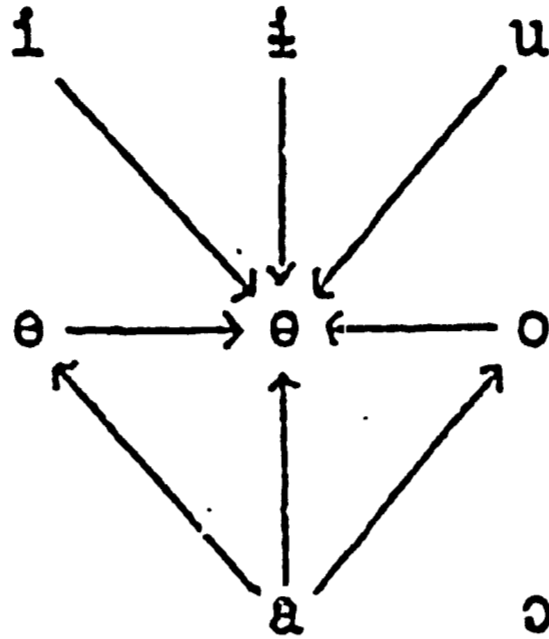
Examples:

/sthaan/ 'place'

/lkhaon/ 'drama'

### 1.114 Class V<sub>1</sub> and V<sub>2</sub> phonemes (vowels)

The vowel system of the Takeo dialect of Cambodian can be shown schematically as follows:<sup>1</sup>



Arrows represent diphthongs. All simple vowels occur either long or short. The diphthongs /eə ue oə/ occur either long or short; other diphthongs occur only long.

### 1.1141 Problems of interpretation

The phonetic lengths of vowel nuclei can be represented as follows:

Short vowels	[V]	}	Short nuclei
Short diphthongs	[ṼṼ]		
Long vowels	[V:]	}	Long nuclei
Long diphthongs	[V·Ṽ]		

Short vowels and short diphthongs are structurally equivalent in length. Short diphthongs likewise pattern with short vowels in occurring only before C<sub>4</sub>, while long vowels and long diphthongs occur in both open and closed syllables.

---

1. See Appendix A for a comparison with standard Cambodian.



Since every short vowel /V/ has a long vowel counterpart, long vowels can be analyzed as geminate clusters /VV/. Short diphthongs can be analyzed as /Ṽe/, and long diphthongs as /VVV/. The relationships can be shown as follows:

<u>Short nuclei</u>	{	short vowels	/V/
		short diphthongs	/Ṽe/
<u>Long nuclei</u>	{	long vowels	/VV/
		long diphthongs	/VVV/

This solution is the most elegant, as well as the most economical, resulting in an inventory of only eight vowel phonemes. This is essentially the solution adopted here, but in order to emphasize the parallelism in length and distribution between the long vowels and long diphthongs, the long diphthongs are rewritten simply /VV/. Short diphthongs are then written with a breve /Ṽe/ to distinguish them from the long diphthongs, and are treated as occurrences of  $V_1$ . The following distribution results:

$V_1$	{	short vowels	/V/
		short diphthongs	/Ṽe/
$V_1V_2$	{	long vowels	/VV/
		long diphthongs	/VVV/

An alternative solution would be to analyze the eight long vowels as normal vowels /V/, with a parallel system of eight short vowels /Ṽ/. The analysis of the short diphthongs as short counterparts of the long diphthongs would then be consistent with the long-short relationship between the

simple vowels. Such an analysis, however, would increase the total inventory of vowels to 19, and would not reflect the structural equivalence in length between the long vowels and long diphthongs, since they would be represented respectively /V/ and /VV/.<sup>1</sup>

A third possible analysis would be to postulate eight cardinal vowel phonemes and a phoneme of length /:/. Short vowels could then be represented /V/, short diphthongs /VV/, long vowels /V:/, and long diphthongs /V:V/. This solution poses the problem of the phonemic status of the phoneme /:/.

#### 1.1142 Illustration of nuclei

The 27 nuclei which occur are illustrated in the following examples:

/i/: /cih/ 'to ride'	/ii/: /ciik/ 'to dig'
/e/: /ceh/ 'to know'	/ee/: /ceeh/ 'thread'
/ɨ/: /rɨt/ 'to tighten'	/ɨɨ/: /rɨɨt/ 'to knead'
/e/: /teŋ/ 'to be taut'	/ee/: /ceŋ/ 'foot, leg'
/a/: /day/ 'hand'	/aa/: /sāay/ 'to pity'
/u/: /luh/ 'when'	/uu/: /muuh/ 'a fly'
/o/: /kon/ 'film'	/oo/: /koon/ 'child'
/ɔ/: /coŋ/ 'to wish'	/oo/: /cooŋ/ 'to tie'

---

1. This solution, however, is perhaps more suitable for most other dialects of Cambodian, in which there are larger inventories of long than of short vowels.

	/iə/: /ciəh/ 'to avoid'
/ěə/: /pěəq/ 'to wear'	/eə/: /pəəq/ 'word'
	/iə/: /riəŋ/ 'story'
	/aə/: /naet/ 'reason'
	/aə/: /naey/ 'already'
	/ao/: /daoy/ 'by, with'
/ũe/: /lũeh/ 'to repay'	/uə/: /iueh/ 'wire'
/õe/: /kõem/ 'to support'	/oə/: /koem/ 'hunchback'

### 1.1143 Distribution of V<sub>1</sub>

Class V<sub>1</sub> is filled by any short vowel or short diphthong. When V<sub>1</sub> is not followed by V<sub>2</sub>, C<sub>4</sub> must occur.

/ěə ũe õe/ occur only before C<sub>4</sub>, and do not occur after /b d q f s h/. /i e a u o ə/ have fairly general distribution before C<sub>4</sub>, while /i e ěə ũe õe/ are sharply limited. /i e/ occur only before /q h/, with one occurrence of /-ey/. /ěə/ and /õe/ contrast only before /h/, /ěə/ occurring before /q ŋ h/ only, and /õe/ only before /p t m n l h/. /ũə/ occurs only before /t q n ŋ h/.

### 1.1144 Distribution of V<sub>2</sub>

Any V<sub>1</sub> except /və/ may follow itself as V<sub>2</sub>.

If V<sub>2</sub> is /e/, V<sub>1</sub> is not /ə/.

If V<sub>2</sub> is /e·e/, V<sub>1</sub> is /a/.

There are few limitations on the occurrence of long vowels after consonants, with the following exceptions:

/ii/ and /uu/ do not occur after /b d/.

/ee/ does not occur after /b q s/.

/oe/ does not occur after /b q/.

With regard to C<sub>4</sub>, long vowels are generally comparable in distribution, with /aa ee/ having the widest range of occurrence, and /ii ie/ the most limited.

## 1.1145 Phonetic description of vowels

### 1. Allophonic sets

1) All high and mid vowels (/i e ɛ u o/) have lower allophones as single vowels than as geminates.

2) All vowels have a high front glide before /c ñ/.

### 2. Simple vowels

/i/ High front unrounded vowel.

Single: [i] before /h/.

[i<sup>v</sup>] before /q/ and in unstressed syllables.

Double: [i:] as in /miŋ/ [ʔmi:ŋ<sup><</sup>] 'aunt'.

As V<sub>1</sub> in diphthong: [i·] before /e/.

/e/ Higher-mid front unrounded vowel.

Single: [ɛ] before /h/.

[e<sup>v</sup>] before /q/ and in unstressed syllables.

Double: [e:ɪ] before /k ŋ/, as in /deek/ [ɔ̄de:ɪk<sup><</sup>]

'to lie down'.

[e·] (shortened) before /h/, as in /ceeh/

[če·x] 'thread', which nevertheless contrasts with the

lower and shorter allophone of single /e/ before /h/, as in

/ceh/ [čɛx] 'to know'.

As V<sub>1</sub> in diphthong: [e<sup>^</sup>.] before /ə/, as in /peəq/  
[pe<sup>^</sup>.e<sup>?</sup>] 'word'.

As V<sub>2</sub> in diphthong:

[ɛ] after /a/, as in /kmae/ [k<sup>1</sup>m<sup>1</sup>mae·ɛ] 'Khmer'.

[e] after /a/ and before /k ŋ/, as in /qaek/  
[ʔae·e<sup>1</sup>k<sup><</sup>] 'first'.

/ɨ/ High back unrounded vowel.

Single: [ɨ<sup><</sup>] (lowered and fronted) before /c ñ/, as in  
/plɨc/ [p<sup>1</sup>l<sup>1</sup>s<sup><</sup>c] 'to forget' and /tmɨñ/ [t<sup>1</sup>m<sup>1</sup>ɨ<sup><</sup>ñ] 'tooth'.

In these positions it approaches the quality of /e/. The  
allophone is assigned to /ɨ/ because such an analysis gives  
/ɨ/ a distribution parallel with other widely distributed  
vowels, while /i/ and /e/ form a sub-system from the stand-  
point of distribution.

[ɨ] elsewhere.

Double: [ɨ:]

As V<sub>1</sub> in diphthong:

[ɨ·] as in /rɨəŋ/ [ʔrɨ·əŋ] 'story'.

/ə/ Mid-central unrounded vowel.

Single: [e<sup><</sup>] before /p n l/, as in /həp/ [hə<sup><</sup>p] 'box'.

[e<sup>v</sup>ɨ] before /c ñ/, as in /dəñ/ [də<sup>v</sup>ɨñ] 'chase'.

[ə] elsewhere.

Double: [e:ɨ] before /c ñ/, as in /khəəñ/ [khə:ɨñ] 'see'.

[ə·] before /h/, as in /rəəh/ [ʔrə·x] 'search'.

[e:ˆ] elsewhere, as in /cəəŋ/ [çe:ˆŋ] 'foot'.

As V<sub>2</sub> in diphthongs:

[e<sup>^</sup>] after /a/, as in /kaet/ [k<sub>ṽ</sub>a·e<sup>^</sup>t<sub>ṽ</sub>] 'to happen'.

[e<sup><</sup>] after /i/, as in /tien/ [t<sub>ṽ</sub>i·e<sup><</sup>n<sub>ṽ</sub>] 'candle'.

[e<sup>i</sup>] before /c ñ/, as in /saec/ [s=a·e<sup>i</sup>c<sub>ṽ</sub>] 'to laugh'.

[e] elsewhere, as in /teen/ [t<sub>ṽ</sub>e<sup>^</sup>·e<sub>ṽ</sub>n<sub>ṽ</sub>] 'gift'.

/a/ Higher-low fronted central unrounded vowel.

Single: [a<sup><i</sup>] before /c ñ/, as in /bañ/ [b<sub>ṽ</sub>a<sup><i</sup>ñ<sub>ṽ</sub>] 'to shoot'.

[a<sup><</sup>] elsewhere, as in /kat/ [k<sub>ṽ</sub>a<sup><</sup>t<sub>ṽ</sub>] 'to cut'.

Double: [a:<sup><i</sup>] before /c ñ/, as in /tbaañ/ [t<sub>ṽ</sub>ḅa:<sup><i</sup>ñ<sub>ṽ</sub>] 'to weave'.

[a·<] before /h/, as in /caah/ [ç<sub>ṽ</sub>a·<ḅ] 'polite response used by women', contrasting with the shorter allophone of /a/ in /cah/ [ç<sub>ṽ</sub>a<sup><</sup>ḅ] 'to be old'.

[a:<sup><</sup>] elsewhere, as in /kaat/ [k<sub>ṽ</sub>a:<sup><</sup>t<sub>ṽ</sub>] 'map'.

As V<sub>1</sub> in diphthongs:

[æ·] before /e/, as in /kmae/ [k<sup>i</sup>m<sub>ṽ</sub>mæ·e] 'Khmer'.

[a·] before /ə/, as in /kaet/ [k<sub>ṽ</sub>a·e<sub>ṽ</sub>t<sub>ṽ</sub>] 'to happen'.

[a·>] before /o/, as in /qaoy/ [ç<sub>ṽ</sub>a·>o<sup>v</sup>y] 'to give'.

/u/ High back rounded vowel.

Single: [u<sup>i</sup>] before /c ñ/, as in /muc/ [m<sub>ṽ</sub>mu<sup>i</sup>c<sub>ṽ</sub>] 'to dive'.

[u<sup>v</sup>] elsewhere.

Double: [u:<sup>i</sup>] before /c ñ/, as in /quuc/ [ç<sub>ṽ</sub>qu:<sup>i</sup>c<sub>ṽ</sub>] 'to bathe'.

[u<sup>o</sup>] before /h/, as in /muuh/ [ᵐmu·x̄] 'housefly',  
in contrast with /nuh/ [ᵐnu·x̄] 'that'.

[u:] elsewhere.

As V<sub>1</sub> in diphthong:

[u<sup>o</sup>] before /e/, as in /luec/ [iu·e<sup>i</sup>c̄] 'to steal'.

/o/ Mid back rounded vowel.

Single:

[o<sup>v</sup>ᵐ] before /c ñ/, as in /hoc/ [ho<sup>v</sup>ᵐc̄] 'to extend'.

[o<] before /w/, as in /tow/ [to<w̄] 'to go'.

[o<sup>v</sup>ᵐ] elsewhere, as in /tok/ [to<sup>v</sup>ᵐk̄] 'table'.

Double:

[ō:<sup>i</sup>] before /c ñ/, as in /tooc/ [to:<sup>i</sup>c̄] 'small'.

[o·<sup>v</sup>ᵐ] before /h/, as in /qooh/ [qo·<sup>v</sup>ᵐx̄] 'to drag'.

[o:<sup>u</sup>] elsewhere.

As V<sub>1</sub> in diphthong:

[o·<] before /e/, as in /poen/ [po·<en] 'egg'.

As V<sub>2</sub> in diphthong:

[o<sup>v</sup>] after /a/, as in /kraom/ [kra·>o<sup>v</sup>m] 'under'.

/ɔ/ Low fronted-back half-rounded vowel.

Single:

[ɔ<ᵐ] in unstressed syllables.

[ɔ<] elsewhere, as in /kot/ [ko<ᵐt̄] 'to jot down'.

Double:

[ɔ:<sup><</sup>], as in /coot/ [çɔ:<sup><</sup>t̄] 'to moor'.

### 3. Short diphthongs

/ěə/ is a short falling diphthong which glides from a lower-mid front unrounded position to a mid central unrounded position [e̯], as in /n<sup>h</sup>ěəq/ [n<sup>h</sup>ɛ̯e̯q] 'person'.

/ũə/ is a short diphthong which glides from a lower-high back rounded position to a mid central unrounded position. It is sometimes falling [ʊ̯] and sometimes rising [ʌ̯], with no apparent conditioning factor. Before /h/ the centering glide may disappear, so that /p<sup>h</sup>ũəh/ [p<sup>h</sup>ʌ̯x] 'snake' contrasts with /puh/ [pu̯x] 'to boil' primarily in terms of vowel height (as well as, in this example, in terms of the labialized allophone of stops before /ũə/ and /öə/).

/öə/ is a short diphthong which glides from a lower-mid back rounded position to a mid central position. It may be either falling [ɔ̯] or rising [ʌ̯]. For example, in /k<sup>h</sup>öət/ 'he' it is usually falling [k<sup>h</sup>ɔ̯t], while in /t<sup>h</sup>öəl/ 'until' it is usually rising [t<sup>h</sup>ʌ̯el:], although either sequence may occur in either form.

#### 1.115 Class C<sub>4</sub> phonemes (final consonants)

C<sub>4</sub> is any consonant except /b d f r/, with the following restrictions:

1) /p t m n l h/ seem to occur after all vowels. Such random gaps as do occur in the data are probably due to insufficient data.



2) /c ñ/ form a set in that they do not occur after /i e ɔ ěe ũe õe ii ee īi ɔɔ ie ae oə/.

3) /k/ and /q/ contrast only after /u/, /k/ occurring only after /ī e u o ee ee uu oo ae ae ao oə/, and /q/ only after /i e a u ɔ ěe ũe aa ɔɔ ie ee īə uə/.

4) The semivowel /w/ occurs only after /e a o ii ee aa ie ee ae/.

5) The semivowel /y/ does not occur after /i ɔ ěe ũe ċe ii ee īi uu ie ae/.

6) /s/ occurs in final position only in a highly pedantic reading pronunciation, being replaced by /h/ in all other levels of formal and colloquial speech.

Final contrasts are illustrated in the following examples:

/kap/ 'to hack'	/kom/ 'don't'
/kat/ 'to cut'	/kon/ 'film'
/kac/ 'to break'	/koñ/ 'to be dense, thick'
/cək/ 'to bite'	/koŋ/ 'trick'
/caq/ 'to pierce'	/trəw/ 'to be correct'
/baraŋsaes/ <sup>1</sup> 'French'	/trej/ 'fish'
/cah/ 'to be old'	/səl/ 'skill'

---

1. /baraŋsaəh/ in normal speech (as opposed to the reading pronunciation cited above).

## 1.12 Suprasegmental phonemes

Suprasegmental phonemes are phonemes which occur simultaneously with, and may vary with, different occurrences of the same segmental phonemes. The sequence of segmental phonemes with which a class of suprasegmental phonemes occurs, and the unit thus defined, is the domain of the class. The domain of stress phonemes is the syllable nucleus. The domain of juncture phonemes is the syllable. The domain of phrase contours is the last syllable of a phonological phrase. The domain of intonational phonemes is the utterance.

### 1.121 Stress phonemes

Stress is correlated with contrastive degrees of loudness and pitch in syllable nuclei. Four degrees of stress are postulated.

1. / / unmarked, or zero, stress. It co-occurs with, and defines, unstressed syllables, as /pi/ in /pisáa/ 'to eat', /pro/ in /protéeh/ 'country'. It is characterized by low nucleus volume and pitch.

2. /<sup>˘</sup>/ secondary stress. It is characterized by nucleus volume and pitch which is higher than zero stress, but lower than primary stress. It typically occurs in colloquial speech with function words such as pronouns and auxiliaries. It also occurs with the first constituent of many compounds whose second constituent carries primary stress, as in /dàem-chée/ 'tree', and with the second

constituent of a small class of compounds whose first constituent carries primary stress, as in /còh-tàe/ 'always'.

3. // primary stress. Primary stress is the degree of volume and pitch which co-occurs with all primary or content words in an utterance, such as nouns, verbs, and adjectives, as well as with syllables cited in isolation. It is thus regarded as normal or cardinal stress.

4. /'/ contrastive stress. It is characterized by greater volume than primary stress, and usually by extremely high or falsetto pitch. It typically occurs with interjections, but is defined by its contrast with primary stress in contrastive utterances.

#### Contrasts:

// /pisáa/ 'to eat'	:	/\ /píi-sáa/ 'because'
/\ /dàem-chéé/ 'tree'	:	// /ptééh chéé/ 'wooden house'
// /báat↓./ 'yes'	:	/'/ /'baat↓./ 'of course!'

#### 1.122 Juncture phonemes

Juncture phonemes are contrasting manners of transition between syllables in an utterance. The transition from one segmental phoneme to another within a syllable is defined as normal transition, and is not a phoneme. The four juncture phonemes are correlated with, and defined by, four contrasting degrees of syllable duration. Syllable duration is defined as the total time elapsed between the beginning of the syllable in question and the beginning of the following syllable.

1. /+/ close juncture. The preceding syllable has short duration. It typically occurs after bound syllables with zero or /<sup>˘</sup>/ stress.

2. /-/ medium juncture. The preceding syllable has medium-short duration. The preceding syllable may carry secondary /<sup>˘</sup>/ or primary /<sup>ˈ</sup>/ stress. This juncture usually indicates a closer grammatical relationship between syllables than does open juncture / / (unmarked), thus frequently occurring in compounds. It may, however, occur between bound syllables in deliberate speech, as in /kàw-súu/ ( ~ /kaw+súu/) 'rubber'.

3. / / open juncture (unmarked). The preceding syllable has medium duration, and may carry either primary or secondary stress, but is never unstressed. Any sequence of segmental phonemes bounded by a two successive occurrences of open juncture is a phonological word.

4. /:/ long juncture. The preceding syllable has long duration, primary stress, and is usually accompanied by raised sustained pitch. This juncture usually indicates a major immediate constituent cut within an utterance.

Examples:

/+/: /səŋ+kháa/ 'provisions'

/-/: /sòŋ-khíaaŋ/ 'both sides'

/-/: /kéo céh-tàe niyéy barànsáeh↓./

he always speak French

'He always speaks French.'

/ /: /kée céh tào niyéy barànsáeh↓./

he know-how-to speak only French

'He can speak only French.'

/ /: /kñóm twèe-káa mán-báan: tée↓./

I work negative-able emphatic-particle

'I'm not able to work.'

/:/: /kñóm twèe-káa: mán-báan qéy sóh↓./

I work negative-get anything at-all

'(When) I work I don't make a thing.'

### 1.123 Phrase contour phonemes

Phrase contours are contrasting pitch contours whose domain is either an internal or a final syllable. The syllable or sequence of syllables between any two occurrences of phrase contour is defined as a phonological phrase.

Internally, phrase contours signal a major immediate constituent cut. Terminally, phrase contours combine with the intonational phoneme /./ 'end of construction' to form intonational morphemes.

1. /↑/ The preceding syllable has a rising pitch contour.
2. /↓/ The preceding syllable has a falling pitch contour.
3. /!/: The preceding syllable has a high sustained pitch.
4. /\_/ The preceding syllable has a low sustained pitch.

Rising contour is normally associated with interrogative utterances. However, falling contour may also occur with questions. Falling contour with a question

seems to carry a secondary implication of speaker status equal or superior to that of the addressee, while rising contour reflects deference, politeness, or formality. The following examples are translated freely in order to illustrate the semantic nuances:

/lók tów náa↑./ (you (respectful) go where)

'Where are you going, sir?'

/lók tów náa↓./ (you go where)

'Where in the world are you going?'

Rising contour also occurs between clauses, and between members of a concatenated list, e.g.:

/bás lók kát tów↑ kñóm koo kát tów; dáe↓./

if you think go↑ I then think go too

'If you're going, then I'll go too.'

/kñóm tréw tǎñ skóo↑ mríc↑ háey-nǎn qəŋkoo↓./

I must buy sugar↑ pepper↑ and rice

'I have to buy sugar, pepper, and rice.'

Falling contour in final position is normally associated with stative utterances. However, rising contour may also occur with statements, in which case it seems to carry the secondary implication that the statement is obvious or anticipated, as in the following examples:

/kñóm tów psáa↓./ (I go market)

'I'm going to the market.'

/kñóm tów psáa↑./ (I go market)

'I'm going to the market, of course (or, as usual).'

Falling contour also typically follows interjections and responses, either in isolation or at the beginning of larger constructions, as follows:

/táe↓ lóok kít twée qwéy↑./

tell-me↓ you think do what

'Say, what are you planning to do?'

/báat↓ kñóm kít tów méel kón↓./

polite-response↓ I think go see film

'Well, I think [I'll] go see a film.'

In addition, falling contour typically occurs with the conjunction /thaa/ 'that', e.g.:

/kñóm sɔŋkhám thaa↓ lóok nɛŋ máok ./

I hope that↓ you future come

'I hope that you'll come.'

High level contour /!/ is normally associated with imperative statements and with interjections and particles of an exhortative or cajoling nature, as in the following examples:

/ 'yii! kñóm mǎn héen sóm; tee! ./

interj. -of-protest! . I negative dare ask emphatic-part.

'Oh no, I don't dare ask!!'

/ kóm pháy; néh! ./ (don't be-afraid exhortative-particle

'Don't worry!'

High level contour may also occur after emphatic or declamatory statements, reflecting emotional involvement on the part of the speaker, as follows:

/ 'qóo! kónláeŋ núh srúel: 'dae! ./

Oh! place that be-agreeable too

'Oh, that place is really nice! (contrary to what you believe)'

Low level contour / \_ / typically occurs with stative utterances of an unemotional or soliloquizing nature, e.g.:

/ qáe↓ monúh yéeŋ tēeŋqǎh tréw cǎñcém ciwát \_ ./

response↓ human we all must support life

'Yes, we all have to earn a living.'

Low level contour also occurs with post-posed topics, e.g.:

/ kñóm mǎn cóol-cét: tée↓ monúh núh \_ ./

I negative like emphatic-particle↓ person that

'I don't like [him] at all, that man.'

#### 1.124 Intonational phoneme

Intonations (5.0) are analyzed in terms of the four phrase contours described in the preceding section and the one intonational phoneme / . / 'end of construction', whose



## 1.2 Phonological words

Phonological words, as defined in 1.132, may contain from one to six syllables, with various stress patterns and syllable shapes. However, the great majority of words in Cambodian are monosyllables, in frequency if not in inventory. The minor disyllable (1.221) is second to the monosyllable in terms of frequency, and although no study has been made, might almost equal the monosyllable in terms of total inventory. Polysyllabic words (1.23) are infrequent in colloquial speech, and can usually be identified as loan-words from Pali, Sanskrit, or French sources, though not on structural grounds.

### 1.21 Monosyllabic words

Any occurrence of a stressed syllable preceded and followed by open juncture is a monosyllabic word /S/. Monosyllables containing a single vowel or short diphthong occur in the following three canonical shapes:

1. /CVC/ /bét/ 'to close'; /kít/ 'to think'
2. /CCVC/ /sdáp/ 'to understand'; /próh/ 'male'
3. /CCVC/ /sthét/ 'to stand, be located'

Frequency of the above shapes is in the order listed. Only one example of #3 is recorded.

Monosyllables containing a double vowel or long diphthong occur in the following five canonical shapes:

1. /CVV/            /káa/ 'work'            /púu/ 'uncle'
2. /CVVC/        /báan/ 'to have'        /qáoy/ 'to give'

3. /CCV́V/      /chíí/ 'to be ill'      /psáa/ 'market'  
 4. /CCV́VC/      /cráen/ 'much'      /sqáat/ 'to be clean'  
 5. /CCCV́VC/      /stháan/ 'place'      /lkháon/ 'drama'

Although a frequency count has not been made, the frequency of the above shapes is approximately in the order listed. The only two recorded examples of #5 are those listed above.

## 1.22 Disyllabic words

### 1.221 Minor disyllables<sup>1</sup>

A minor disyllable is any unstressed syllable followed in close juncture by a stressed syllable, S+Ś. The structure of stressed syllables has already been described (1.12). The structure of the unstressed syllable can be shown by the formula  $C_1(C_2)V(C_3)+$ .

1.  $C_1$  is any consonant except /f/, but only /p t c k s/ before  $C_2$ .
2.  $C_2$  is /r/.
3. V is any short vowel after  $C_1$ , but only /e a o ɔ/ after  $C_2$ .
4.  $C_3$  is any consonant except /b d f r/.
5. /+/ close juncture (and hence a following stressed syllable) occurs after all unstressed syllables.

---

1. My use of the terms 'minor' and 'major' disyllable differs somewhat from that of Henderson, op. cit., p. 150.

Thus the following four minor disyllable patterns occur:

1. CV+S      /kə+káay/ 'to scratch'      /ro+bóəŋ/ 'fence'
2. CrV+S     /srə+láñ/ 'to like'      /crə+móh/ 'nose'
3. CVC+S     /sən+dáək/ 'beans'      /səp+báay/ 'pleasant'
4. CrVC+S    /prən:báy/ 'eight'

### 1.222 Major disyllables

A major disyllable is any stressed syllable followed in close or medium juncture by another stressed syllable. There are no significant limitations on the shape of the first syllable. The following patterns occur:

1. S+S      /sɛw+phów/ 'book'      /phèə+sáa/ 'language'
2. S-S      /smàe-maan/ 'how much'      /bùəŋ-súəŋ/ 'to pray'
3. S-S      /céh-tàe/ 'always'      /háa-səp/ 'fifty'
4. S-S      /lúy-káq/ 'money'      /sdúec-sdáəŋ/ 'to be thin'

Morphologically simple major disyllables occur only in relatively careful speech, becoming minor disyllables in colloquial speech through loss of stress on the first syllable. These major disyllables which occur in normal speech are usually complex (/smàe-máan/), reduplicatives (/bùəŋ-súəŋ/), or compounds (/lúy-káq/). Major disyllables of the pattern S-S are invariably compounds.

### 1.23 Polysyllabic words

A polysyllabic word is any sequence of more than two syllables between two successive occurrences of open juncture.

1.231 Trisyllabic words

The following trisyllabic words patterns occur:

1. S+S+S /prɔ+pɿy+nɿi/ 'custom' /prɔ+cèə+cúen/ 'people'
2. S+S+S /thǒəm+mə+dáa/ 'usually' /sàt+tə+wǒət/ 'century'
3. S+S+S /kráh+sáh+snáa/ 'Christianity'
4. S-S+S /rǒət-müen+tréy/ 'minister'  
/kóo-krɔ+béy/ 'oxen and buffalo, livestock'
5. S+S-S /wi+thíi-bón/ 'ceremony'

1.232 Quadrisyllabic words

The following patterns have been observed:

1. S+S+S+S /qa+tháa+thi+báay/ 'to explain'
2. S+S+S+S /phóo+cə+níi+tháan/ 'restaurant'
3. S+S+S+S /pút+tə+sáh+snáa/ 'Buddhism'
4. S+S+S+S /kráh+sàq+ke+ráac/ 'Christian era'
5. S+S+S+S /réec+céə+thíp+ptáy/ 'monarchy'
6. S+S-S+S /bɔn+téc-bɔn+túac/ 'some, a little'

1.233 Pentasyllabic words

The following patterns occur:

1. S+S+S+S+S /rát+tə+náq+ke+ríi/ 'Ratanakiri (province)'
2. S+S+S+S+S /qa+núq+sáa+wə+ríi/ 'monument, memorial'
3. S+S+S+S+S /prɔ+théə+néə+thíp+pdéy/ 'president'
4. S+S+S+S+S /réec+céə+thíp+pe+táy/ 'monarchy'
5. S+S-S+S+S /prěeh+réec-qa+nàa+cáq/ 'kingdom'
6. S-S+S+S+S /réec-rǒət+tháa+phí+báal/ 'royal government'

1.234 Hexasyllabic words

1. S+S+S+S+S+S /wi+cáa+rə+náq+ke+tháa/ 'foreword'

## 2.0 Morphophonemics

Morphophonemics is the analysis of structure between the levels of phonology and morphology. It deals with non-contrastive alternation between phonemes.

### 2.1 Free variation

Free variation is non-contrastive alternation between two or more phonemes in the same phonological environment. This type of alternation is conditioned primarily by the speed and degree of formality employed by the speaker.

#### 2.11 Free variation in unstressed syllables

The locus of greatest morphophonemic free variation is the unstressed syllable (1.221). In the examples that follow, the most formal alternants are followed by their successively more colloquial alternants. It will be seen that all unstressed syllables tend to be levelled in colloquial speech to  $|C\epsilon+|$ <sup>1</sup>, as follows:

#### 1. $|C\upsilon+, C\upsilon+| > |C\epsilon+|$

$/k\upsilon+k\acute{a}ay/ > /k\epsilon+k\acute{a}ay/$  'to dig, scratch about'

$/c\upsilon+c\acute{a}ek/ > /c\epsilon+c\acute{a}ek/$  'to argue, squabble'

$/m\upsilon+n\acute{u}h/ > /m\epsilon+n\acute{u}h/$  'human, man'

#### 2. Voiced stops $/b\ d/ >$ voiceless $/p\ t/$ in unstressed syllables.

$/d\upsilon+d\acute{a}el/ > /d\epsilon+d\acute{a}el/ > /t\epsilon+d\acute{a}el/$  'same'

---

1. Vertical slashes (|) are used to indicate morphophonemic shapes, which are abstractions, as opposed to morphs, which are represented phonemically.

- /bɔ̃+búel/ > /bə+búel/ > pə+búel/ 'to entreat'
3. /sɔ̃+/ > /sə+/ > /tə+/
- /sɔ̃+sée/ > /sə+sée/ > /tə+sée/ 'to write'
4. /rɔ̃+/ > /rə+/ > /lɔ̃+/ > /qə+/
- /rɔ̃+bíen/ > /rə+bíen/ > /lɔ̃+bíen/ > /qə+bíen/ 'method'
- /rɔ̃+téh/ > /rə+téh/ > /lɔ̃+téh/ > /qə+téh/ 'cart'
5. |CVq+| > |CV+| > |Cə+|
- /piq+báaq/ > /pi+báaq/ > /pə+báaq/ 'difficult'
- /qaq+rún/ > /qa+rún/ > /qə+rún/ 'dawn'
6. |Crɔ̃+, Cro+| > |Crə+| > |Cə+|
- /prɔ̃+těeh/ > /prə+těeh/ > /pə+těeh/ 'to meet'<sup>1</sup>
- /srɔ̃+nók/ > /srə+nók/ > /sə+nók/ 'peaceful'
7. |CVN+| > |CəN+| > |Cə+|
- /kɔ̃n+láen/ > /kən+láen/ > /kə+láen/ 'place'
- /dɔ̃m+náep/ > /dəm+náep/ > /tə+náep/ 'glutinous'

In alternations 8-12 below, unstressed syllables of shape |CVN| are reduced in rapid speech to a syllabic nasal:

8. |qɔ̃N+| > |qəN+| > |N+| (syllabic nasal)
- /qɔ̃ŋ+kúy/ > /qəŋ+kúy/ > /ŋ+kúy/ 'to sit'
- /qɔ̃ñ+céəñ/ > /qəñ+céəñ/ > /ñ+céəñ/ 'to invite'
9. |CVN+| > |CəN+| > |N+| ( ~ |Cə+| )
- /bɔ̃n+téc-bɔ̃n+túec/ > /bən+téc-bən+túec/ > /n+téc-n+túec/
- 'a little, somewhat'
- /dɔ̃n+dóp/ > /dən+dóp/ > /n+dóp/ ( ~ /tə+dóp/ ) '-teen'

---

1. In contrast with /ptěeh/ 'house'.

10. The negative auxiliary /m̃n/ is reduced to a syllabic nasal /m+/ in rapid speech, e.g.:

/m̃n-méen/ > /m+méen/ 'not really'

/m̃n-tów/ > /m+tów/ 'not go'

11. The incipient auxiliary /ñŋ/ is reduced in rapid speech to a nasal homorganic with a following consonant.<sup>1</sup>

/ñŋ-máok/ > /m+máok/ 'will come'

/ñŋ-tów/ > /n+tów/ 'will go'

12. /kháaŋ/ 'side' in compounds is subject to extreme reduction: /kháaŋ-kráoy/ > /khaŋ-kráoy/ > /ŋ+kráoy/ 'behind'

13. /múey/ 'one' is highly unstable in unstressed position:

/múey-dóoŋ/ > /màa-dóoŋ/ > /mə+dóoŋ/ 'once'

/mùey-róey/ > /màa-róey/ > /mə+róey/ 'one hundred'

14. /prám/ 'five' is subject to extreme reduction when it does not carry primary stress:

/prám-múey/ > /prəm+múey/ > /pə+múey/ 'six'

/prám-béy/ > /prəm+béy/ > /m+béy/ 'eight'

15. The prefix /prěeh/ is subject to loss of stress, vowel reduction, and loss of final /-h/ in rapid speech, thus assimilating to the typical /Crə+/ unstressed syllable shape.

/prěeh-pút/ > /prə+pút/ 'Buddha'

/prěeh-cán/ > /prə+cán/ 'moon'

16. /niq+yéey/ > /ni+yéy/ > /n+yéy/ 'to speak'

17. /tűen+lée/ > /te+lée/ 'river, long body of water'

18. /qey+lów/ > /qaa+lów/ > /qa+lów/ > /qə+lów/ 'now'

---

1. This kind of alternation is described in 2.3.

## 2.12 Stress alternation

As has already been mentioned in 1.222, the tendency in major disyllables is to move toward the preferred minor syllable stress pattern S+Ṣ in colloquial speech, e.g.:

/pi+sáa/ > /pi+sáa/ 'to eat'

/kàw+qéy/ > /kaw+qéy/ 'chair'

/tèe+héen/ > tēe+héen/ 'soldier'

This same preference for alternation between stressed and unstressed syllables in colloquial speech is operative in polysyllables. The changes, as with major disyllables, involve both stress and vowel reduction. The following alternations occur, moving from formal to colloquial forms:

### 1. Ṣ+Ṣ+Ṣ > S+Ṣ+Ṣ

/qáa+náa+kúet/ > /qa+nàa+kúet/ 'future'

/qáo+báa+sóq/ > /qo+bàa+sóq/ 'layman'

In the following examples, loss of stress is correlated with loss of final consonant in unstressed syllables:

/qáq+khóo+sáq/ > /qa+khòo+sáq/ 'to be silent, voiceless'

/qúq+téè+hóo/ > /qu+tèe+hóo/ 'example'

### 2. Ṣ+Ṣ+Ṣ > Ṣ+S+Ṣ

/káq+rúq+náa/ > /kàq+ru+náa/ (> /kə+náa/) 'mercy'

/kéq+ríq+yáa/ > /kòq+ri+yáa/ 'conduct'

### 3. Ṣ+Ṣ+Ṣ+Ṣ > S+Ṣ+S+Ṣ

/qáq+núq+séè+náa/ > /qa+núq+se+náa/ 'military division'

### 4. Ṣ+Ṣ+Ṣ+Ṣ > Ṣ+S+Ṣ+Ṣ

/qíh+sáq+ràq+phéep/ > /qíh+zə+ràq+phéep/ 'freedom'



### 2.13 Free variation in stressed syllables

Free variation which is correlated with degree of formality takes place in certain stressed syllables, but seems to be unrelated to reduction of stress, e.g.:

/twáe/ > /tháe/ 'to make, do'

/kñóm/ > /kryóm/ 'I'

/mē+dóon/ > /mē+róon/ 'once, at once'

Certain final sentence particles are subject to morphophonemic reduction in rapid speech, e.g.:

/téé/ > /téh/ > /téh/ 'emphatic particle'

/náa/ > /náh/ > /néh/ 'exhortative final particle'

/háey/ > /háy/ > /qáy/ > /qéh/ 'perfective final part.'

### 2.2 Phonologically conditioned alternation

Phonologically conditioned alternation is alternation which is conditioned by the phonotactic rules of the language, and is thus invariable. The following alternations occur:

1. Voiced stops /b d/ > voiceless /p t/ before nasals.

/b-/ > /p-/ before /-n-/:<sup>1</sup>

/baek/ 'to break' > /pnaek/ 'fragment'

/d-/ > /t-/ before /-n-/:

/daq/ 'to put' > /tnaq/ 'class, placement'

/d-/ > /t-/ before /-m-/:

/dae/ 'to walk' > /tmae/ 'pedestrian'

---

1. The symbol /-/ is used here to indicate the relationship of affixes to bases, rather than as a phoneme of juncture.

2. Voiceless stops /p t/ > /b d/ before |-ɔN-|

/p-/ > /b-/:

/praɛ/ 'to use' > /bɔmraɛ/ 'servant'

/plae/ 'fruit' > /bɔnlae/ 'vegetables'

/pqaem/ 'be sweet' > /bɔŋqaem/ 'sweets'

/t-/ > /d-/:

/tbaaŋ/ 'to weave' > /dɔmbaaŋ/ 'weaving'

/twaay/ 'to give' > /dɔŋwaay/ 'gift'

/taeŋ/ 'to appoint' > /dɔmnaeŋ/ 'position'

3. Alternation of /r-/ and /ro-|

/r-/ > /ro-| before |-C-|:

/rɔəh/ 'to rake' > /ronɔəh/ 'a rake'

/riɛn/ 'to study' > /robiɛn/ 'knowledge'

/ro-| > /r-| before /-um-|:

/roliiŋ/ 'be shiny' > /rumliiŋ/ 'to polish'

/rodɔh/ 'freed' > /rumdɔh/ 'to free'

2.3 Morphologically conditioned alternation

The following alternations are morphologically conditioned.

1. In certain morphemes, such as

√N-/ 'incipient auxiliary' (rapid speech allomorph)

√-ɔN-/ 'nominalization'

√bɔN-/ 'causation'

√sɔN-/ 'nominalization', the morphophoneme |-N-|

assimilates to the following consonant according to

the following pattern:

/m/ before /b p m n ŋ/

/n/ before /d t l y s/

/ñ/ before /c ñ/

/ŋ/ before /k r h w q f/

The following examples involve the morpheme /bɔN-/ 'causation'.

/baek/ 'to break' (intr.) > /bɔmbaek/ 'to cause to break'

/dae/ 'to walk' > /bɔndae/ 'to walk (a dog, etc.)'

/cɛñ/ 'to leave' > /bɔñcɛñ/ 'to expel'

/kaet/ 'to be born' > /bɔŋkaet/ 'to originate'

This is in contrast with such morphemes as /-ɔm-/

'nominalization', in which /-m-/ is invariable:

/craen/ 'to be much' > /cɔmraen/ 'increase'

/kdaw/ 'to be hot' > /kɔmdaw/ 'heat'

/kcɛl/ 'to be lazy' > /kɔmcɛl/ 'lazy person'

/cküet/ 'to be crazy' > /cɔmküet/ 'idiot'

Since there is a morpheme  $\sqrt{-\text{ɔN-}}$  'nominalization' as well as a morpheme  $\sqrt{-\text{ɔm-}}$  'nominalization', the morph  $\sqrt{-\text{ɔm-}}$  in the example /kɔmpüeh/ 'to be high' > /kɔmpüeh/ 'height' could equally well be assigned to either the morpheme  $\sqrt{-\text{ɔN-}}$  or the morpheme  $\sqrt{-\text{ɔm-}}$ . The analysis followed here is to consider the morph  $\sqrt{-\text{ɔm-}}$  to be an allomorph of the morpheme  $\sqrt{-\text{ɔN-}}$  when it conforms to the pattern of alternation outlined above, as in /kɔmpüeh/, and of the morpheme  $\sqrt{-\text{ɔm-}}$  when it does not, as in /cɔmraen/.

There is at least one case of doublets resulting from the use of an allomorph of both morphemes with a single base:

/-um-/<sup>1</sup> /tlǒəp/ 'to be accustomed to' > /tumlǒəp/ 'custom'

/-ǔən-/ /tlǒəp/ 'to be accustomed to' > /tǔənłǒəp/ 'custom':

2. In infixes of shape |-Vm(n)-|,

|-Vm-| occurs in bases with initial sequence C<sub>1</sub>C<sub>2</sub>.

/kpǔəh/ 'to be high' > /kǒmpǔəh/ 'height'

/lqǒǒ/ 'beautiful' > /lumqǒǒ/ 'beauty'

|-Vmn-| occurs in bases with a single initial consonant.

/kaət/ 'to be born' > /kǒmmaət/ 'birth'

/kɪt/ 'to think' > /kumnɪt/ 'thought'

3. In infixes of shape |-rV(n)-|,

|-rV-| occurs in bases with initial sequence C<sub>1</sub>C<sub>2</sub>.

/sdəy/ 'to tell' > /srǒdəy/ 'to speak (eloquent)'

|-rVn-| occurs in bases with a single initial consonant.

/saok/ 'to pity' > /srǒnaok/ 'pity'

1. These morphs are respectively allomorphs of √-əm-/ and √-ǒN-/ 'nominalization', as described in 2.432.

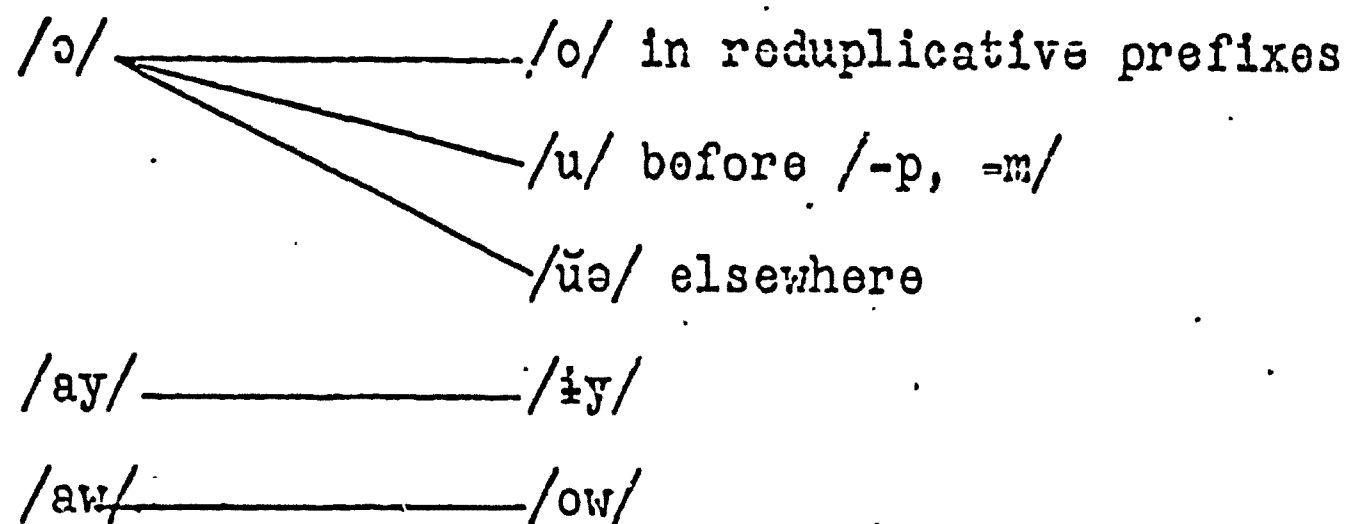
## 2.4 Vowel ablaut

There are two series of vowels and vowels-plus-semi-vowel in Cambodian with respect to which vowel alternation takes place in certain affixes and bases. Series 1 vowels are consistently lower than their series 2 counterparts.<sup>1</sup> In the following lists the vowels of one series are listed opposite their correlative alternants in the other series.

<u>Series 1</u>	<u>Series 2</u>
/əy/	_____ /iɪ/
/aə/	_____ /eə/
/əə/	_____ /ɛɛ/
/aə/	_____ /əə/
/aa/	_____ /eə/
/oo/	_____ /uu/
/ao/	_____ /oo/
/oə/	_____ /oə/
/e/	_____ /i/
/e/	_____ /ɛ/
/a/	_____ /ə̃ə/ before /-q, -n, -h/
	_____ /õə/ before /-p, -t, -m, -n, -h/
/o/	_____ /u/

---

1. These two series of vowels are differentiated in the writing system not by different vowel symbols but rather by two correlative sets of consonant symbols, leading to the speculation that they may once have been allophonic (see Appendix A, 1.1).



The diphthongs /iə ɪə uə/ do not alternate.

#### 2.41 Sporadic ablaut

In the following examples, the vowels of bases are replaced by their correlative alternants in derived or alternant forms. This alternation cannot be predicted from the phonological environment, and is hence grammatically conditioned, or sporadic.

- /cii-poə/ 'monks' robes' > /cəy-poə/ 'id.'  
 /reep/ 'to be level' > /kraap/ 'to level, prostrate'  
 /muul/ 'to be round' > /cmool/ 'to ball up'  
 /nih/ 'this' > /neh/ 'this' (stylistic variant)

#### 2.42 Automatic ablaut

Automatic ablaut is conditioned by the phonotactic rules of the language. Vowel ablaut in the following examples is conditioned by the non-occurrence of series 2 vowels after /b/.

- /leen/ 'to play' > /lbaen/ 'game'  
 /loen/ 'to try' > /lbəɔŋ/ 'experiment'  
 /röem/ 'to dance' > /robam/ 'a dance'

### 2.43 Vowel harmony

In many derivatives of disyllabic shape, the series of the affix vowel is determined by the series of the base vowel. In a smaller number of forms, the series of the base vowel is determined by the series of the affix vowel. This kind of conditioning is defined here as vowel harmony.

2.431 In the following derivatives, the base vowel is replaced by its correlative alternant in the same series as the prefix vowel:

/læh/ 'beyond'	>	/crələh/ 'to exceed'
/wɛc/ 'to wrap'	>	/bɔŋwɛc/ 'package'
/muc/ 'to submerge'	>	/prɔmɔc/ 'to put under'
/yool/ 'to swing'	>	/prɔyaol/ 'a fob'
/lɛh/ 'to be clear'	>	/srələh/ 'clear; completely'
/wūəŋ/ 'circle'	>	/krɔwəŋ/ 'to be circular'
/weəŋ/ 'to be long'	>	/sɔŋwəəŋ/ 'length'

### 2.432 Affixes affected by vowel harmony

Vowel harmony is essential to a complete description of the morphophonemic alternation which occurs in the following affixes. Where vowel harmony is the conditioning factor of allomorphic shape, the vowel alternant of the affix is determined by the vowel alternant of the base. When the base vowel is common to both series of vowels, it is assumed to belong to the same series as the affix vowel.<sup>1</sup>

---

1. In some dialects there is a more complete dichotomy between the two series. In no dialect, however, does the

1. Reduplicative prefixes are of shape |C $\bar{V}$ -|. |C-| is a reduplication of the initial consonant of the base, and | $\bar{V}$ -| is / $\bar{o}$  ~  $\bar{e}$ / or / $\bar{o}$  ~  $\bar{e}$ /. / $\bar{e}$ / is in both cases a stylistic alternant which is in free variation with / $\bar{o}$ / or / $\bar{e}$ / (as described in 2.11), while the alternation between / $\bar{o}$ / and / $\bar{e}$ / is a function of vowel harmony, as follows:

If |C-| is a voiceless stop /p t c k/,

|C $\bar{o}$ -| occurs when the base vowel belongs to series 1.

/kaay/ 'to dig' > /k $\bar{o}$ kaay/ 'to scratch about'

/cæk/ 'to bite' > /c $\bar{o}$ cæk/ 'to peck at'

|C $\bar{o}$ -| occurs when the base vowel belongs to series 2.

/t $\bar{e}$ eh/ 'to slap' > /t $\bar{o}$ t $\bar{e}$ eh/ 'to flap the wings'

/crul/ 'to exceed' > /c $\bar{o}$ crul/ 'excessively'

If |C-| is a nasal or lateral /m n ñ ŋ l/, |C $\bar{o}$ -| occurs.

/ñ $\bar{e}$ eq/ 'to shake' > /ñ $\bar{o}$ ñ $\bar{e}$ eq/ 'to tremble'

/lu $\bar{e}$ ŋ/ 'to comfort' > /l $\bar{o}$ lu $\bar{e}$ ŋ/ 'to flatter, cajol'

If |C-| is a voiced stop /b d/, or /s/, |C $\bar{o}$ -| occurs.

/doh/ 'to rub' > /d $\bar{o}$ doh/ 'to rub back and forth'

/sek/ 'to comb' > /s $\bar{o}$ sek/ 'to comb, to sift'

2. Prefixes of shape |pr $\bar{V}$ -| 'reciprocity'; etc.

/pro-/ occurs sporadically before bases whose vowel occurs only in series 2:

/r $\bar{a}$ t/ 'to bind' > /pr $\bar{o}$ r $\bar{a}$ t/ 'to embrace'

/pr $\bar{o}$ -/ occurs elsewhere:

/kham/ 'to bite' > /pr $\bar{o}$ kham/ 'to bite each other'

/t $\bar{e}$ eh/ 'to slap' > /pr $\bar{o}$ t $\bar{e}$ eh/ 'to meet accidentally'



3. The prefix |bɔN- ~ pũeN-| 'causation', etc.

|pũeN-| occurs sporadically before bases whose initial consonant is /y r l/, and whose vowel occurs only in series 2.

/riik/ 'to bloom' > /pũerriik/ 'to increase (tr.)'

/liic/ 'to sink (intr.)' > /pũenliic/ 'to overthrow'

|bɔN-| occurs elsewhere.

/pliĩ/ 'to be bright' > /bɔmpliĩ/ 'to illumine'

/riən/ 'to study' > /bɔɣriən/ 'to teach'

4. The infix /-ɔm- ~ -um-/ 'causation', etc.

/-um-/ occurs

if the second consonant of the base is a sonorant, and the base vowel occurs in series 2:

/tlǽeq/ 'to fall' > /tumlǽeq/ 'to overthrow'

/creep/ 'to learn' > /cumreep/ 'to inform'

if the first consonant of the base is a sonorant:

/lqet/ 'to be fine' > /lumqet/ 'to powder'

/-ɔm-/ occurs elsewhere:

/sqaat/ 'to be clean' > /sɔmqaat/ 'to clean'

/slap/ 'to die' > /sɔmlap/ 'to kill'

5. Infixes of shape |-ɔN- ~ -ũeN-| 'nominalization', etc.

|-ũeN-| occurs if the second consonant of the base is a sonorant, and the base vowel occurs only in series 2.

/pliĩ/ 'to be bright' > /pũenliĩ/ 'light'

/tlǽep/ 'accustomed to' > /tũenlǽep/ 'custom'

|-ɔN-| occurs elsewhere.

/snaec/ 'to admire' > /sɔmnaec/ 'admiration'  
 /stuuc/ 'to fish' > /sɔntuuc/ 'fishing hook'

6. Infixes of shape /-ɔm(n)- ~ -um(n)-/ 'nominalization'

/-ɔmn-/ occurs in bases with a single initial consonant whose vowel belongs to series 1.

/caek/ 'to divide' > /cɔmnaek/ 'section'  
 /saec/ 'to laugh' > /sɔmnaec/ 'laughter'

/-umn-/ occurs in bases with a single initial consonant whose vowel belongs to series 2.

/kit/ 'to think' > /kumnit/ 'thought'  
 /kuu/ 'to draw' > /kumnuu/ 'drawing, picture'

/-um-/ occurs

if the second consonant of the base is a sonorant,  
 and the base vowel belongs to series 2;

/tjūen/ 'heavy' > /tumjūen/ 'weight'  
 /clūeh/ 'to argue' > /cumlūeh/ 'argument'

if the first consonant of the base is a sonorant.

/lqɔɔ/ 'beautiful' > /lumqɔɔ/ 'beauty'

/-ɔm-/ occurs elsewhere.

/khəŋ/ 'to be angry' > /kɔmhəŋ/ 'anger'  
 /cŋaay/ 'to be far' > /cɔmŋaay/ 'distance'

7. Infixes of shape |-rV(n)-| 'nominalization', etc.

/-ron-/ occurs sporadically in bases with a single initial consonant, and whose vowel occurs only in series 2;

/tup/ 'to obstruct' > /tronup/ 'obstruction'

/tum/ 'to perch' > /tronum/ 'a perch'

/-rɔn-/ occurs in bases with a single initial consonant before other vowels;

/saok/ 'to pity' > /srɔnaok/ 'pity'

/-rɔ-/ occurs in bases with an initial consonant sequence;

/stoep/ 'to divide' > /srɔtoep/ 'section, division'

### 2.433 Non-harmonic disyllables

When the vowels of disyllabic forms are not in harmony, the regular pattern is the occurrence of a vowel of series 1 in the first syllable, or affix, and a vowel of series 2 in the second syllable, or base, as in the following examples:

/cɔmkɔ̃t/ 'idiot'

/prɔtɛ̃h/ 'to meet'

/bɔmplɛ̃/ 'to illumine'

A few forms have the reverse order:

/robɔh/ 'thing'

/cũɔndæ/ 'stairs'

### 3.0 Morphology

#### 3.1 Morphological units

Morphology is here defined as the analysis of structure between the phonological and syntactic levels. It deals with minimum meaningful units of speech and with the ways in which they participate in the construction of lexemes, or grammatical words.

#### 3.11 Morphemes

The raw data of morphological analysis are morphs. A morph is any meaningful arrangement of phonemes, from one phoneme upward in length. A morpheme is any set of morphs which have the same meaning, similar shape, and do not contrast in any given environment, or it is any morph which does not belong to such a set. The individual members of a set of morphs belonging to a given morpheme are its allomorphs. For example, the sequence /kɔmnaet/ 'birth' contains a discontinuous allomorph /k...aet/ of the morpheme √kaet/ 'to be born', whose other allomorph is /kaet/. It also contains the infix allomorph /-ɔmn-/ of the morpheme √-ɔm-/ 'nominalization', whose other allomorphs are /-um(n)-/ and /-em(n)-/. An example of a morpheme whose membership consists of a single allomorph is /baan/ 'to have'.

Morphemes can be divided into sub-lexemic and lexemic categories. Sub-lexemic morphemes have allomorphs which are bound, and therefore never occur as free forms.

Lexemic morphemes are those morphemes whose allomorphs occur as free forms. Although lexemic morphemes may range up to six syllables in length, morphemes containing more than two syllables are rare. Examples:

1) Monosyllabic morphemes

/tɔw/ 'to go'

/maok/ 'to come'

/tɪk/ 'water'

2) Disyllabic morphemes

/robɔh/ 'thing'

/prɔteeh/ 'country'

/sɔpbaay/ 'to be happy'

3) Trisyllabic morphemes

/qanaakūet/ 'future'

/faamesii/ 'pharmacy'

4) Quadrisyllabic morpheme

/phooceniihaa/ 'restaurant'

5) Pentasyllabic morpheme

/qanuq-saawerii/ 'souvenir'

6) Hexasyllabic morpheme

/qanaa-proceenureeh/ 'citizenry'

### 3.12 Lexemes

Lexemes are sets of variant forms called lexical units.

A lexical unit is any meaningful form which is a minimum

syntactic constituent of the construction in which it occurs.

For example, in the construction:

/kñóm tów saláa ríen prówōettesaah↓./

I go school study history

'I'm going to school to study history.'

/saláa/ and /ríen/ are co-extensively morphemes and lexical units; i.e. they are lexemic morphemes. However, in the construction:

/kñóm tów salàa-ríen↓./

I go school

'I'm going to school.'

they are the constituent morphemes of the single lexical unit /salàa-ríen/ 'school'.

A lexeme is any set of lexical units which have the same meaning, similar shape, and do not contrast in any given environment, or it is any lexical unit which does not belong to such a set. Variant lexical units belonging to the same lexeme are its allolexes. For example, the lexeme /kháan-kraoy/ 'behind, backward' has an allolex of that shape and also one of the shape /khàn-kraoy/. /kháan/ and /khàn-/ are simultaneously allomorphs of the morpheme /kháan/ 'side, direction', and /kraoy/ is the invariant morpheme 'behind'.

Lexemes, like morphemes, enter into the composition of lexemes larger than themselves, through derivation, compounding, and reduplication.

### 3.2 Derivation

Cambodian has a complex system of prefixes and infixes which combine with bases to form derivatives. The following are examples of derivational paradigms formed on a single base:

/kaet/ 'to be born'

/pkaet/ 'to invent'

/kmaet/ 'period of the waxing moon'

/konnaet/ 'birth, origin'

/boŋkaet/ 'to found, to originate'

/saem/ 'to be wet'

/psaem/ 'to wet'

/sannaem/ 'moisture'

/bonsaem/ 'to moisten'

/sonsaem/ 'dew'

Since these affixes are no longer productive, the term derivation is here defined as a systematic semantic relationship between groups of formally related words, rather than as a productive process.

While these affixes may at one time have had clearly defined functions, a given affix may now have a variety of functions. For example, the infix morph /-om-/ has the following principal functions:

1) Nominalization

2) Causation

3) Derogation

4) Stylistic variation

5) Verbalization

6) Derives adjectives from adjectival verbs

Thus /-əm-/ is the homophonous allomorph of six different morphemes.

On the other hand, a given function is represented by a variety of forms. For example, the function 'nominalization of verbs' is represented by the following different infixes:

- |            |                         |   |                      |
|------------|-------------------------|---|----------------------|
| 1) /-əm-/  | /kdaw/ 'to be hot'      | > | /kəmdaw/ 'heat'      |
| 2) /-əN-/  | /kcəp/ 'to wrap'        | > | /kəñcəp/ 'package'   |
| 3) /-rən-/ | /saok/ 'to pity'        | > | /srənaok/ 'pity'     |
| 4) /-b-/   | /leən/ 'to play'        | > | /lbaən/ 'game'       |
| 5) /-m-/   | /luəc/ 'to steal'       | > | /lmuəc/ 'thief'      |
| 6) /-n-/   | /cuəl/ 'to rent'        | > | /cnuəl/ 'rent'       |
| 7) /-ŋ-/   | /saoy/ 'to eat (royal)' | > | /sŋaoy/ 'royal food' |

As a result of this overlapping of form and function, many bases have synonymous derivations formed with different affixes, and many homophonous derivatives have several functions, e.g.:

1) Synonymous derivatives

- |                          |                              |
|--------------------------|------------------------------|
| /cəm/ 'to come together' | /pcəm/ 'to assemble (tr.)'   |
|                          | /prəcəm/ 'to assemble (tr.)' |
| /kaet/ 'to be born'      | /pkaet/ 'to originate'       |
|                          | /prəkaet/ 'to originate'     |
|                          | /bəŋkaet/ 'to originate'     |





### 3.21 Prefixes

#### 3.211 Prefixes of shape |C-|

All prefixes of shape |C-| consist of one of the consonants /p t c k s/, although /p-/ is by far the most common. These same consonants also commonly occur as the first member of initial consonant sequences in unanalyzable lexemes, e.g.:

/ptěeh/	'house'
/tmey/	'to be new'
/ckae/	'dog'
/kbaal/	'head'
/sdap/	'to listen'

#### 1. $\sqrt{p-}$ <sup>1</sup> 'causation'

Derives transitive verbs from intransitive verbs:

/dac/ 'to break (intr.)	>	/pdac/ 'to break (trans.)
/duel/ 'to fall over'	>	/pduel/ 'to fell'
/saay/ 'to spread (intr.)	>	/psaay/ 'to spread (tr.)

Derives transitive verbs from adjectival verbs:

/caal/ 'to be exhausted'	>	/pcaal/ 'to exhaust'
/det/ 'to be stuck'	>	/pdet/ 'to stick, paste'
/san/ 'to be tame'	>	/psan/ 'to tame'

With base allomorph vowel ablaut:<sup>2</sup>

/leeh/ 'ruined'	>	/plaañ/ 'to ruin'
-----------------	---	-------------------

---

1. In listing derivational affixes, the symbol /-/ will be used to show the position of affixes relative to bases, rather than as a phoneme of juncture.

2. Vowel ablaut rules are described in 2.4.

Derives related transitive verb from intransitive verb:

/lɪc/ 'to sink' > /plɪc/ 'to forget'

Derives transitive verb from bound adjectival verb base:

/((to-)tee/ 'to be free, empty' > /ptee/ 'to empty, unload'

## 2. √p-/ 'specialization'

Derives specific verbs from general verbs:

/tuk/ 'to put, place' > /ptuk/ 'to load (a boat, etc.)'

/riɛp/ 'to prepare, arrange'

> /priɛp/ 'to compare, set alongside'

/dɔl/ 'to reach' > /pdɔl/ 'to facilitate'

## 3. √p-/ 'verbalization'

Derives transitive verbs from nouns:

/kuu/ 'a pair' > /pkuu/ 'to pair off'

/cuɛ/ 'a row' > /pcuɛ/ 'to make into a row, to plow'

/daem/ 'origin' > /pdaem/ 'to begin, to originate'

## 4. √p-/ 'nominalization'

/leɛŋ/ 'to play (a game, musical instrument, etc.)'

> /pleɛŋ/ 'song, musical composition'

## 5. √p-/

Derives adjective from preposition:

/daoy/ 'by, with' > /pdaoy/ 'right away'

## 6. √k-/ 'specialization'

Derives specific verbs from general verbs:

/bot/ 'to turn, fold' > /kbot/ 'to deceive, betray'  
 /tōət/ 'to kick' > /ktōət/ 'to thump, to flick'  
 /tup/ 'to obstruct, dam' > /ktup/ 'to plug, stop up'  
 /saan/ 'to be peaceful' > /ksaan/ 'to be calm, at ease'  
 /cōəm/ 'to be bruised' > /kcōəm/ 'to be unclear,  
 blemished'

7. √k-/ 'negation' (occurs only with the following base):

/mēən/ 'to have, exist' > /kmeən/ 'not have, not exist'

8. √k-/ 'causation'

Derives transitive verb from adjectival verb:

With base allomorph vowel ablaut:

/reep/ 'to be level' > /kraap/ 'to level, prostrate'

9. √k-/ 'nominalization'

Derives noun from transitive verb:

/leə/ 'to separate' > /kleə/ 'space, interval'

10. √k-/

Derives concrete noun from abstract noun:

/rɪəŋ/ 'affair, topic' > /krɪəŋ/ 'thing, utensil'

11. √s-/ 'specialization'

Derives specific transitive verbs from general transitive verbs:

/kat/ 'to cut' > /skat/ 'to obstruct, cut off passage'

/doh/ 'to free, loose' > /sdoh/ 'to expectorate'

With base allomorph vowel ablaut:

/ruñ/ 'to push' > /sroñ/ 'to knock flat'

12.  $\sqrt{s-}$  'attribution'

Derives adjectival verb from transitive verb:

With base allomorph vowel ablaut:

/lɪp/ 'to lower, duck' > /sləp/ 'lowered, low'

13.  $\sqrt{c-}$  'specialization'

Derives specific transitive verbs from general transitive verbs:

/kaən/ 'to extend' > /ckaən/ 'to stretch over a skewer'

/reəw/ 'to search for' > /creəw/ 'to feel around for'

14.  $\sqrt{c-}$  'causation'

Derives transitive verb from adjectival verb:

With base allomorph vowel ablaut:

/muul/ 'to be round' > /cmool/ 'to make into a ball'

15.  $\sqrt{t-}$  'causation'

Derives transitive verb from adjectival verb:

/biet/ 'close together' > /tbiet/ 'to pinch'

16.  $\sqrt{t-}$  'attribution'

Derives adjective from transitive verb:

/bət/ 'to close' > /tbat(-tbiet)/ 'parsimonious'

3.212 Prefixes of shape |CV-|3.2121 Reduplicative prefixes

Reduplicative prefixes are prefixes of shape |CV-|

where |C-| is a 'reduplication' of the initial consonant of bases with initial /p t c k s b d m n ñ ŋ/, or it is

/l ~ r ~ q/ before bases with initial /l/. | -V- | is /o ~ ə/ or /o ~ ə/.<sup>1</sup>

1. √Co-/ 'repetitive or continuous action'

/kaay/ 'to dig' > /kəkaay/ 'to dig around, scratch about'

/keh/ 'to pick' > /kəkeh/ 'to pick at, scratch'

/cək/ 'to peck' > /cəcək/ 'to peck at repeatedly'

/doh/ 'to rub' > /dədoh/ 'to rub back and forth'

Allomorph /Co-/:

/ñūeq/ 'to nod' > /ñoñūeq/ 'to bob up and down'

/tēeh/ 'to slap' > /toṭēeh/ 'to flap the wings'

/thēeq/ 'to kick' > /toṭhēeq/ 'to kick repeatedly'

/luəŋ/ 'to comfort' > /loluəŋ/ 'to flatter, cajol'

Some lexemes have repetitive or distributive meaning, but their underlying forms never occur without a reduplicative prefix:

Verbs and adjectives:

/kəkēe/ 'to nibble (as a mouse)'

/bəbuel/ 'to agree, to cajol'

/kəkəe-kəkəe/ 'babbling'

/cəcəq-cəcəq/ 'wheedling'

Allomorph /Co-/:

/totoe/ 'to tremble'

/momii/ 'to flutter (of the eyelids)'

/loleəm/ 'flashing'

---

1. Morphophonemic alternation in reduplicative prefixes is described in 2.1.2.7

## Nouns:

/bɔbɛɛ/ 'the lips'

/kɔkɔɔ/ 'sediment'

Allomorph /Co-/:

/ñɔñɔɛ/ 'hammer'

## 2. √Co-/ 'intensification'

/baɔh/ 'to sweep' > /bɔbaɔh/ ( ~ /pɛbaɔh/) 'to sweep  
diligently, to raise a dust'

/tɔɔŋ-taɔŋ/ 'with a loud clattering noise'

> /tɔtɔɔŋ-tɔtaɔŋ/ 'with an extremely loud clatter'

/kweeh-kwaah/ 'awkwardly'

> /kɔkweeh-kɔkwaah/ 'desperately, heedlessly'

Allomorph /Co-/:

/plæm/ 'to be happy' > /poplæm/ 'to be delighted'

/kreem/ 'to be rough'

> /kokreem/ 'to be very rough and uneven'

/ŋih-ŋaah/ 'undisciplined'

> /ŋoŋih-ŋoŋaah/ 'very loud and boisterous'

## 3. √Co-/ 'repetition and intensification'

When a reduplicative prefix occurs with an underlying form which already has repetitive or continuative meaning, it is a portmanteau morpheme which incorporates the meanings of morphemes 1 and 2 above.

/kaek-kaok/ 'the sound of arguing back and forth'

> /kɔkaek-kɔkaok/ 'arguing violently together'

/plək-pləq/ 'sound of waves lapping'

> /pəplək-pəpləq/ 'sound of waves lapping vigorously'

/pleh-pləh/ 'constantly teasing'

> /pəpleh-pəpləh/ 'constantly teasing and annoying'

Allomorph /Co-/:

/ŋih-ŋuh/ 'to whimper'

> /ŋəŋih-ŋəŋuh/ 'to whine piteously'

/krim-krim/ 'buzzing sound'

> /kokrim-kokrim/ 'loud buzzing sound'

/mæk-mæk/ 'slowly'

> /momeæk-momeæk/ 'very slowly and sluggishly'

4.  $\sqrt{Co-}$  'attribution'

Derives adjective from conjunction:

/dael/ 'that which' > /dədael/ 'the same'

Derives adjective from noun:

/daem/ 'origin' > /dədaem/ 'originally, at first'

Derives adjectives or adjectival verbs from verbs:

Allomorph /Co-/:

/peen/ 'to cross the legs' > /popeen/ 'criss-crossed'

/něeq/ 'to shake' > /něeq/ 'shaking, trembling'

/cru/ 'to exceed' > /cocru/ 'heedlessly, blatantly'

Derives adjectival verb from negative particle:

/tee/ 'no, not at all' > /totee/ 'to be free, empty'

Derives adjective from noun:

/cue/ 'row, line' > /cocue/ 'in a row, dragging along'



### 3.2122 Non-reduplicative prefixes of shape |CV-|

#### 1. $\sqrt{\text{ro-}}$ 'attribution'

Derives adjectival verbs from transitive verbs:

- /dɔɔq/ 'to pull up' > /rodɔɔq/ 'uprooted'  
 /muel/ 'to twist' > /romuel/ 'twisted'  
 /luet/ 'to extinguish' > /roluet/ 'extinguished'

Derives adjectival verb from intransitive verb:

- /wǔel/ 'to revolve' > /rowǔel/ 'to be busy'

#### 2. $\sqrt{\text{ro-}}$ 'intransitive'

Derives intransitive verbs from transitive verbs:

- /boot/ 'to pull off' > /roboot/ 'to come off'  
 /baek/ 'to open' > /robaek/ 'to move (spontaneously)'  
 /haek/ 'to tear' > /rohaek/ 'to tear (spontaneously)'

#### 3. $\sqrt{\text{ro-}}$ 'nominalization'

Derives nouns from transitive verbs:

- /baŋ/ 'to hide' > /robaŋ/ 'a shade, screen'  
 /muu/ 'to roll up' > /romuu/ 'a roll, scroll'

#### 4. The prefix $\sqrt{\text{mə-}}$

This prefix is the most frequent allomorph of the morpheme  $\sqrt{\text{mɔey}} \sim \text{maa-} \sim \text{mə-}$  'one'.

- /daŋ/ 'time, occasion' > /mədɔɔŋ/ 'once'  
 /yaŋ/ 'kind' > /məyaŋ/ 'one kind of'  
 /nǎeq/ 'person' > /mənǎeq/ 'alone, one person'

√-phɨy/<sup>1</sup> 'twenty' > /məphɨy/ 'twenty'

Allomorph /maa-/ (deliberate speech alternant)

√-phɨy/ 'twenty' > /maa-phɨy/ 'twenty'

Allomorph /muəy-/ (also occurs as a free form)

√-phɨy/ 'twenty' > /muəy-phɨy/ 'twenty'

### 5. The prefix √ni-/ 'distributive meaning'

Derives adjective from numeral:

/muəy/ 'one' > /nimuəy/<sup>2</sup> 'each, every'

> /nimuəy-nimuəy/ 'the various'

### 3.213 Prefixes of shape |CrV-|

In prefixes of shape |CrV-|, |C<sub>1</sub>| is one of the consonants /p t c k s/, and |-V-| is /-ə-/, or, rarely, /-o-/<sup>3</sup>, each with rapid speech alternant /-ə̣-/. The prefix /pro-/ is by far the most frequent. The grammatical function of these prefixes is unclear, and several prefixes may occur with a given base with similar or identical meaning (see section 3.2). |CrV-| is also a common unstressed syllable shape in unanalyzable lexemes:

/prodap/ 'instrument'

/croMoh/ 'nose'

/trociəq/ 'ear'

/kroβəy/ 'water buffalo'

/sroMaoc/ 'ant'

---

1. This morpheme does not occur as a free form.

2. This is possible a contraction of \*/nēəc-muəv/ 'one person'

## 1. √pro-/ 'reciprocity'

/kham/ 'to bite' > /prəkham/ 'to bite each other'  
 /ceen/ 'to push ahead' > /prəceen/ 'to race, compete'  
 /clūəh/ 'to argue' > /prəclūəh/ 'to squabble together'

With base allomorph vowel ablaut:

/leen/ 'to play' > /prəlaen/ 'to play together'  
 /loen/ 'to try, test' > /prələoen/ 'to compete  
 (in an exam)'

Allomorph /pro-/:

/rit/ 'to bind tightly' > /prorit/ 'to encircle one  
 another'

/ruet/ 'to squeeze' > /proruet/ 'to embrace, grapple'

## 2. √pro-/ 'causation'

Derives transitive verbs from adjectival verbs:

/koə/ 'in a pile' > /prəkoe/ 'to pile up'  
 /kəəp/ 'whole' > /prəkəəp/ 'to combine, bestow'

With base allomorph vowel ablaut:

/muul/ 'to be round' > /prəmool/ 'to gather together'

Derives transitive verbs from intransitive verbs:-

/kaet/ 'to be born' > /prəkaet/ 'to originate, set up'

With base allomorph vowel ablaut:

/muc/ 'to dive' > /prəmoc/ 'to submerge, put under'

Derives transitive verb from preposition:

/dooc/ 'like' > /prodooc/ 'to compare'

Derives causative transitive verb from transitive verb:

/cheh/ 'to burn' > /procheh/ 'to ignite; infuse'

Derives modal verb from adjectival verb:

With base allomorph vowel ablaut:

/nõep/ 'to be quick' > /proñap/ 'to hurry to'

### 3. √pro-/ 'nominalization'

Derives noun from transitive verb:

/cheh/ 'to burn' > /procheh/ 'a wick, lighter'<sup>1</sup>

/pūen/ 'to tie, attach' > /propūen/ 'wife, companion'

With base allomorph vowel ablaut:

/yool/ 'to swing back and forth' > /proyaol/ 'a fob'

Derives abstract noun from adjectival verb:

/ween/ 'to be long' > /proween/ 'length'

### 4. √pro-/ 'specialization'

Derives specific transitive verbs from general trans. verbs:

/kac/ 'to break' > /prokac/ 'to alter, falsify'

/kan/ 'to hold, believe' > /prokan/ 'to accuse, maintain'

/daw/ 'to impress, mark' > /prodaw/ 'to instruct, teach'

---

1. The forms /procheh/ 'to ignite' and /procheh/ 'lighter' are doublets.

Derives specific noun from general noun:

/pheət/ 'sex, gender' > /prəpheət/ 'kind, variety'

5. √pro-/ 'verbalization' > /əpɹət/ 'to signal'

/yut/ 'battle' > /prəyut/ 'to fight'

6. √pro-/ 'attribution'

/baek/ 'to break (intr.)' > /prəbaek/ 'broken'

7. √srə-/ 'intensification'

/ŋaw/ 'to be shiny' > /srəŋaw/ 'to be very shiny'

/tūən/ 'to be soft' > /srətūən/ 'very soft and gentle'

/qap/ 'to be dim' > /srəqap/ 'to be dim and ugly'

8. √srə-/ 'specialization'

With base allomorph vowel ablaut:

/leəp/ 'to rub, paint' > /srələəp/ 'to apply medicine'

/muul/ 'to be round' > /srəmool/ 'entangled, tied up'

9. √srə-/ 'verbalization'

/kaaŋ/ 'leavings, refuse'

> /srəkkaaŋ/ 'to be littered with refuse'

10. √crə-/ 'causation'

With base allomorph vowel ablaut:

/ləəh/ 'beyond' > /crələəh/ 'to violate, exceed'

Allomorph /cro-/:

/muc/ 'to dive' > /cromuc/ 'to put under'

## 11. √cro-/ 'intensification'

/lom/ 'to be confused' > /crolom/ 'dazed, confused'

With base allomorph vowel ablaut:

/muul/ 'to be round' > /cromool/ 'interwoven, entangled'

## 12. √cro-/ 'attribution'

Makes adjectival verb from transitive verb:

/qooh/ 'to drag' > /croqooh/ 'to be lazy, sluggish'

## 13. √cro-/ 'verbalization'

/bac/ 'handful' > /crobac/ 'to grasp, squeeze'

## 14. √kro-/ 'causation'

/pul/ 'to be poisonous' > /kropul/ 'to poison'

## 15. √kro-/ 'intensification'

/wiac/ 'to be crooked' > /krowiac/ 'twisted and  
deformed'

## 16. √kro-/ 'verbalization'

With base allomorph vowel ablaut:

/wüen/ 'circle' > /krowen/ 'to be circular'

## 17. √tro-/ 'specialization'

/baac/ 'to scatter' > /trobaac/ 'to crumble in the  
fingers'

3.214 Prefixes of shape |CVN-|

In prefixes of shape |CVN-|, |C-| is one of the consonants /b d p t c k q s r l/, |-V-| is /ɔ/ ( ~ rapid speech alternant /ə/), /u/, or /ũə/, and |-N-| is a nasal which is invariant in some morphemes and which, in other morphemes, represents conditioned alternants.<sup>1</sup> By far the most common morpheme of this shape is the morpheme /bɔN-/ 'causation'. |CVN-| also occurs as an unstressed syllable in unanalyzable morphemes, e.g.:

/bɔŋquɛc/ 'window'	/tumpɛə/ 'to chew'
/dɔmlooŋ/ 'potato'	/tũenlee/ 'river'
/cɔŋkaa/ 'chin'	/kũenlooŋ/ 'furrow'
/sɔndaek/ 'beans'	/cũɛñcɛɛŋ/ 'wall'

1.  $\sqrt{bɔN-}/^2$ 

Derives transitive verbs from intransitive verbs:

/baek/ 'to break'	>	/bɔmbaek/ 'to cause to break'
/dae/ 'to walk'	>	/bɔndaɛ/ 'to walk (a dog, etc.)'
/cɛñ/ 'to leave'	>	/bɔñcɛñ/ 'to send out, expel'
/kaet/ 'be born'	>	/bɔŋkaet/ 'to originate'

With base allomorph vowel ablaut:

/wɛl/ 'to rotate'	>	/bɔŋwɛl/ 'to cause to rotate'
-------------------	---	-------------------------------

1. The alternation of |-N-| is described in 2.3.

2. Vowel alternation in morphemes of this shape is described in 2.4323.

Allomorph /pǔəN-/:<sup>1</sup>

/yǔəl/ 'to understand' > /pǔənyǔəl/ 'to explain'

/lǎc/ 'to sink' > /pǔənlǎc/ 'to overthrow'

/riik/ 'to bloom' > /pǔənrriik/ 'to expand, increase'

Derives transitive verbs from adjectival verbs:

/pǎñ/ 'to be full' > /bǎmpǎñ/ 'to fill'

/tum/ 'to be ripe' > /bǎntum/ 'to ripen (tr.)'

/rǎŋ/ 'to be hard' > /bǎŋrǎŋ/ 'to harden (tr.)'

/qǎo/ 'to be happy' > /bǎŋqǎo/ 'to cheer'

Derives causative transitive verbs from transitive verbs:

/bae/ 'to turn' > /bǎmbae/ 'to cause to turn'

/tǎo/ 'to continue' > /bǎntǎo/ 'to cause to continue'

/ccol/ 'to enter' > /bǎñccol/ 'to cause to enter; put in'

/riən/ 'to study' > /bǎŋriən/ 'to teach'

/hat/ 'to practice' > /bǎŋhat/ 'to train, to drill'

With base allomorph initial consonant change:

/fək/ 'to practice' > /bǎŋwək/ 'to train, to drill'

Derives transitive verbs from prepositions:

/daoy/ 'be means of' > /bǎndaoy/ 'to facilitate'

Allomorph /pǔəN-/:

/leəh/ 'beyond' > /pǔənləəh/ 'to exaggerate'

Derives transitive verb from adjective:

/haey/ 'already' > /bǎŋhaey/ 'to finish, complete'

---

1. The alternation /b-/ > /p-/ is a consequence of the vowel alternation, since /b-/ never occurs before /-ǔə-/ (see 2.2 for other examples of this kind of alternation).



## 2. √bɔN-/ 'nominalization'

Derivative is the object of the action of the verb:

/pěeq/ 'to wear above the waist'

> /bɔmpěeq/ 'garments worn above the waist'

/tuk/ 'to place, put' > /bɔntuk/ 'cargo, load'

/kan/ 'to hold' > /bɔŋkan/ 'railing, handle'

With base allomorph vowel ablaut:

/wic/ 'to wrap' > /bɔŋwɛc/ 'package, parcel'

## 3. √bɔN-/ 'specialization'

Derives specific transitive verbs from general trans. verbs:

/kɔɔ/ 'to build, establish' > /bɔŋkɔɔ/ 'to instigate,  
agitate'

/kat/ 'to cut' > /bɔŋkat/ 'to create a half-breed'

/kac/ 'to break (tr.)' > /bɔŋkac/ 'to alter the truth,  
to slander'

## 4. √sɔN-/ 'nominalization'

Derives nouns from transitive verbs:

/bɔɔq/ 'to peel' > /sɔmbɔɔq/ 'peel, bark'

/kat/ 'to cut' > /sɔŋkat/ 'division, sector'

Derives nouns from adjectival verbs:

/saem/ 'to be wet' > /sɔnsaem/ 'dew'

With base allomorph vowel ablaut:

/weej/ 'to be long' > /sɔŋwaenj/ 'length'

## 5. √səN-/ 'causation'

Derives causative transitive verbs from transitive verbs:

/ruəm/ 'to combine' > /səŋruəm/ 'to cause to combine'

/ruəp-ruəm/ 'to collect'

> /səŋruəp-səŋruəm/ 'to cause to combine'

Derives transitive verbs from intransitive verbs:

/səm/ 'to come together' > /sənsəm/ 'to save, amass'

## 6. √səN-/ 'repetition or intensification'

/kən/ 'to grind' > /səŋkən/ 'to grind over and over'

/kuət/ 'to sharpen' > /səŋkuət/ 'to whet over and over'

## 7. √səN-/ 'specialization'

/kət/ 'to fix, note down' > /səŋkət/ 'to push down,

bear down on'

## 8. √səN-/ 'verbalization'

/krüeh/ 'fate, chance' > /səŋkrüeh/ 'to help, support'

## 9. √kəN-/ 'nominalization'

Derivative is described by the base:

/daac/ 'to be torn, tattered'

> /kondaac/ 'rags, tattered garments'

/tūəq/ 'to be wrinkled, shattered'

> /kontūəq/ 'rice bran, chaff'

/crəl/ 'to be brilliant' > /kəŋcrəl/ 'bright ornaments'

Derivative is the instrument of the base verb:

## 10. √kɔN-/ 'attribution'

With base allomorph vowel ablaut:

/wüel/ 'to revolve' > /kɔŋwɔl/ 'to be involved, busy'

## 11. √dɔN-/ 'causation'

/dɔŋ/ 'to know' > /dɔndɔŋ/ 'to announce one's  
intention of marrying a girl'

## 12. √dɔN-/ 'verbalization'

/daem/ 'origin' > /dɔndaem/ 'to quarrel over, dispute  
ownership of'

## 13. √dɔN-/ 'intensification'

/dam/ 'to cook' > /dɔndam/ 'to cook thoroughly'

## 14. √rum-/ 'causation'

Derives causative transitive verb from transitive verb:

/leep/ 'to swallow' > /rumleep/ 'to cause to swallow,  
to force in'

Derives transitive verb from intransitive verb:

/kɛl/ 'to move (intr.)' > /rumkɛl/ 'to move (tr.)'

Derives transitive verb from adjectival verb:

With loss of /-r-/ in base allomorph:<sup>1</sup>

/crɛñ/ 'to be bored' > /rumcrɛñ/ 'to bore, annoy'

/cruel/ 'to be excited' > /rumcuel/ 'to excite, agitate'

---

1. These are the only examples of this kind of alternation in the data.

## 15. √rum-/ 'intransitive'

Derives intransitive verb from transitive verb:

/lūet/ 'to twist (tr.)' > /rumlūet/ 'to twist (intr.)'

## 16. √rum-/ 'verbalization'

/ŋæek/ 'to be slow, sluggish' > /rumŋæek/ 'to be very  
slow and sluggish'

## 17. √rum-/ 'verbalization'

/loop/ 'greed' > /rumloop/ 'to usurp, plunder'

## 18. √rūeN-/ 'nominalization'

/wōeh/ 'to measure lineally' > /rūeŋwōeh/ 'linear  
measure'

/wōel/ 'to measure the volume of'

> /rūeŋwōel/ 'a volumetric measure'

## 19. √rūeN-/ 'specialization'

/kieq/ 'to grasp, clasp'

> /rūeŋkieq/ 'to work back and forth (as a stake  
in a hole)'

## 20. √cəN-/ 'nominalization'

/tūel/ 'to prop' > /cəntūel/ 'a prop'

Allomorph /cūen-/:

/dae/ 'to walk' > /cūendae/ 'stairs'

## 21. √cəN-/ 'causation'

Derives transitive verbs from adjectival verbs:

/tōeh/ 'to be opposed' > /cəmtōeh/ 'to obstruct, prevent'

/kaon/ 'to be bent' > /cəmkacn/ 'to stretch oneself'

## 22. √qəN-/ 'nominalization'

Derivative is the instrument of the base verb:

/baoh/ 'to sweep' > /qəmbaoh/ 'a broom'

/tēəq/ 'to trap' > /qəntēəq/ 'a trap'

## 23. √lum-/ 'causation'

Derives causative transitive verb from transitive verb:

/qaən/ 'to bow' > /lumqaən/ 'to cause to bow'

## 24. √lum-/ 'nominalization'

/now/ 'to stay, live' > /lumnow/ 'residence, abode'

## 25. √səm-/ 'verbalization'

/kaaɣ/ 'chaff' > /səmkaaɣ/ 'to winnow, dust'

## 26. √səm-/ 'specialization'

/cəət/ 'to park, moor' > /səmcəət/ 'to stop and rest'

## 27. √dəm-/ 'causation'

/laəŋ/ 'to ascend' > /dəmlaəŋ/ 'to raise, elevate'

## 28. √tūəN-/ 'attribution'

/tīm/ 'to yoke' > /tūəntīm/ 'to be yoked together'

## - 3.215 The prefix √qaa-/ 'derogation'

√qaa-/ is a bound pronominal prefix with a derogatory or diminutive meaning. It occurs productively with verbs, nouns, pronouns, demonstratives, and adjectives, and its derivatives usually occur as derogatory terms of address,

although they occasionally occur as terms of reference.

With verbs:

/tooc/ 'to be small' > /qaa-tooc/ 'little one!, runt!'

/kmaw/ 'to be black' > /qaa-kmaw/ 'black fellow'

With nouns:

/cao/ 'thief' > /qaa-cao/ 'you thief!'

/comküet/ 'idiot' > /qaa-comküet/ 'you idiot!'

With pronouns:

/qaen/ 'you (familiar)' > /qaa-qaen/ 'you (familiar,  
insulting)'

/ṇaa/ 'you (to small boys)' > /qaa-ṇaa/ 'my little one'

With demonstratives:

/nuh/ 'that' > /qaa-nuh/ 'that (diminutive) one'

/nih/ 'this' > /qaa-nih/ 'this (diminutive) one'

With adjectives:

/naa/ 'which' > /qaa-naa/ 'which (diminutive) one?,  
any (diminutive) one.'

### 3.216 The prefix /prēeh-/ 'sacred, esteemed'

/prēeh-/ (with rapid speech allomorph /prə-/) is a bound prefix which occurs before any noun whose referent is of sacred or esteemed nature, and before any verb expressing action performed by a person of sacred or high esteem.

Nouns: /put/ 'the Buddha' > /prēeh-put/ 'the Buddha'

/tṇay/ 'the sun' > /prēeh-tṇay/ 'the sun (with  
anthropomorphic connotation)'

/ræceə/ 'king' > /prēeh-ræceə/ 'revered king'

With verbs:

/sdaen/ 'to show, explain'

> /prěeh-sdaen/ 'to teach' (of the Buddha or monks)

/thap/ 'to stay (royalty)'

> /prěeh-thap/ 'to stay, live, reside (royalty)'

/reəccəteen/ 'to give (royalty)'

> /prěeh-reəccəteen/ 'to present (royalty)'

### 3.217 Miscellaneous prefixos

#### 1. √qaq- ~ qa-/ 'non-, un-'<sup>1</sup>

/phīy/ 'to be afraid' > /qaqphīy/ 'to be fearless'

/monuh/ 'a human' > /qaqmonuh/ 'non-human, spiritual'

/yuttəthəe/ 'justice' > /qayuttəthəe/ 'injustice'

#### 2. √maq-/ 'generic prefix for fruits and wood products'<sup>2</sup>

/maq-klīe/ 'ebony'

/maq-praan/ 'plum'

/maq-baat/ 'a large fruit of unpleasant odor'

1. Occurs only in words borrowed from Sanskrit or Pali.

2. Apparently borrowed from Thai, since its use is more general in Thai, and since it occurs before names of fruits which also occur in Thai, but not before words which do not occur in Thai, such as /lhon/ 'papaya'.

### 3.22 Infixes

#### 3.221 Infixes of shape | -C- |

Single-consonant infixes are one of the consonants /n b m ŋ l/, with /-n-/ by far the most common. These same consonants also commonly occur as C<sub>2</sub> in unanalyzable lexemes:

/snaa/ 'crossbow'

/tboon/ 'head'

/tmoo/ 'stone'

/kŋaok/ 'goose'

/klaa/ 'tiger'

#### 1. √-n-/ 'nominalization'

Derivative is the instrument of the base verb:

/keep/ 'to pinch' > /kneep/ 'pincers'

/tīm/ 'to yoke' > /tnīm/ 'a yoke'

/siet/ 'to insert' > /sniet/ 'an insert, wedge'

With base allomorph /r-/ > /ro-/:<sup>1</sup>

/rōeh/ 'to rake' > /ronōeh/ 'a rake'

/rēeh/ 'to obstruct' > /ronēeh/ 'a screen'

/trōep/ 'to support' > /tronōep/ 'a support, prop'

With base allomorph /d-/ > /t-/:<sup>1</sup>

/daol/ 'to pole a boat' > /tnaol/ 'pole (for a boat)'

/dōl/ 'to reach' > /tnōl/ 'road, way'

With base allomorph /b-/ > /p-/:<sup>1</sup>

/bool/ 'to forecast' > /pnool/ 'an omen'

---

1. This kind of alternation is described in 2.2.



Derivative is the result of the action of the base verb:

/cuet/ 'to make into a turban, wear a turban'

> /chuət/ 'a turban'

/kuec/ 'to knot' > /knuəc/ 'a knot'

/peen/ 'to fold the legs Indian-fashion'

> /pneen/ 'the folded legs'

With base allomorph /b-/ > /p-/:

/baek/ 'to break' > /pnaek/ 'fragment, section'

/buəŋ/ 'to wear a chignon' > /pnuəŋ/ 'a chignon'

With base allomorph /d-/ > /t-/:

/doo/ 'to trade' > /tnoo/ 'what is traded, a  
trade; price'

/daq/ 'to put, place' > /tnaq/ 'class, placement'

/dɔq/ 'make a pocket' > /tnɔq/ 'a pocket'

Derivative is a semantically related noun:

/kaet/ 'be born, arise' > /knaet/ 'period of waxing moon'

/cam/ 'to wait' > /cnam/ 'a year'

/tēeq/ 'a trap, snare' > /tnēeq/ 'a decoy'

With base allomorph /d-/ > /t-/:

/dam/ 'to plant' > /tnam/ 'a plant, herb, medicine'

With base allomorph /r-/ > /ro-/:

/rooc/ 'to wane (of the moon)'

> /roncoc/ 'period of the waning moon'

2. √-b-/ 'nominalization'

Derivative is the result of the action of the verb:

/lɛən/ 'to be fast' > /lbɛən/ 'speed'

With base allomorph vowel ablaut:

/leəŋ/ 'to play' > /lbaeŋ/ 'game'

/lũəq/ 'to sleep' > /lboq/ 'a nap'

With base allomorph /r-/ > /ro-/:

/riən/ 'to learn' > /robiən/ 'knowledge, ability'

/riəp/ 'to arrange' > /robiəp/ 'order, method'

With base allomorph /r-/ > /ro-/ plus vowel ablaut:

/rœm/ 'to dance' > /robam/ 'a dance'

Derivative is the instrument of the action of the base verb:

With base allomorph vowel ablaut, and /-k/ > /-q/:<sup>1</sup>

/loək/ 'to chisel' > /lboq/ 'a chisel'

3. √-b-/ 'specialization'

Verb: (With base allomorph vowel ablaut)

/loeŋ/ 'to try, test' > /lboəŋ/ 'an experiment'

Noun: (With base allomorph vowel ablaut)

/ləək/ 'time, occasion'

> /lbaək/ 'what can be accomplished in one attempt'

4. √-m-/ 'nominalization'

Derivative is the human agent of the action of the verb:

/soom/ 'to beg' > /smoom/ 'beggar'

/luēc/ 'to steal' > /lmuec/ 'thief'

With base allomorph /d-/ > /t-/:

/dae/ 'to walk' > /tmae/ 'pedestrian'

5. √-m-/ 'attribution'

Derives adjective from transitive verb:

---

1. The alternation /-k/ > /-q/ is automatic in this environment: see 1.125.

With base allomorph loss of /-h-/:

/choq/ 'to snatch' > /cmoq/ 'stealthily, by snatching'

Derives adjectival verb from noun:

/loop/ 'greed' > /lmoop/ 'to be greedy'

6.  $\sqrt{-m-}$  'causation'

Derives transitive verb from preposition:

/laeh/ 'beyond' > /lmeeh/ 'to exceed, violate'

7.  $\sqrt{-\eta-}$  'nominalization'

Derivative is the object of the action of the verb:

/saoy/ 'to eat (royal)' > /sjaoy/ 'royal food'

8.  $\sqrt{-l-}$  'specialization'

Derives related transitive verb from transitive verb:

/kieq/ 'to grasp' > /klieq/ 'to grasp and twist'

### 3.222 The infix $\sqrt{-r\sigma-}$

The infix  $\sqrt{-r\sigma-}$  occurs in bases with an initial consonant sequence whose initial consonant is /s-/. Its primary function seems to be stylistic variation or intensification,

/sdəy/ 'to speak; inform' > /srədəy/ 'id.' (elegant)

/sləp/ 'to be low' > /srələp/ 'id.'

/smaañ/ 'irregular' > /srōmaañ/ 'in great disorder'

/smoy/ 'to frown' > /srōmoy/ 'to scowl darkly'

### 3.223 Infixes of shape |-VN-|

In infixes of shape |-VN-|, |-V-| is /o/ or /ũə/ (as described in 2.4325), and |-N-| is a homorganic nasal (as described in 2.3). The primary function of |-VN-| is

1.  $\sqrt{-\text{ON-}}$  'nominalization'

Derivative is the result of the action of the verb:

- /sbət/ 'to swear' > /səmbət/ 'an oath'  
 /sdap/ 'to understand' > /səndap/ 'understanding,  
 convention'  
 /kɔp/ 'to wrap' > /kəncɔp/ 'parcel'  
 /chan/ 'to eat (of priests)' > /cəŋhən/ 'priests' food'  
 With base allomorph /t-/ > /d-/:<sup>1</sup>  
 /tbaən/ 'to weave' > /dəmbaən/ 'weaving'  
 /twaay/ 'to present' > /dəŋwaay/ 'gift (elegant)'

Derivative is the instrument of the action of the base verb:

- /stuuc/ 'to fish with a hook' > /səntuuc/ 'fish-hook'  
 /kɫah/ 'to sew' > /kənlah/ 'needle'  
 /chaay/ 'to spread' > /cəŋhaay/ 'a hay-fork'  
 With base allomorph /t-/ > /d-/:  
 /tbiət/ 'to pinch' > /dəmbiət/ 'pincer'  
 /tpūeq/ 'to hook' > /dəmpūeq/ 'a hook'

Derivative is a noun described by the base:

- With base allomorph /p-/ > /b-/:<sup>1</sup>  
 /pqaem/ 'to be sweet' > /bəŋqaem/ 'sweets'

Derives related noun from adjective:

- /chal/ 'quickly' > /cəŋhal/ 'a fan'

Derives a numeral from an adjective:

- /kɫah/ 'some' > /kənlah/ 'half'

---

1. This kind of alternation is described in section 2.2.

Derives abstract noun from adjectival verb:

Allomorph /-üəN-/:

/plɪɪ/ 'to be light' > /püenlɪɪ/ 'light'

Derives abstract noun from modal verb:

Allomorph /-üəN-/:

/tlöəp/ 'to be accustomed to' > /tüenlöəp/ 'custom'

## 2. √-ɔN-/

Derivative is a semantically related noun:

/slək/ 'leaf (of tree)' > /sɔnlek/ 'leaf, sheet (paper)'

With base allomorph /p-/ > /b-/:

/plae/ 'fruit' > /bɔnlae/ 'vegetable'

## 3. √-ɔN-/ 'causation'

Derives transitive verb from adjectival verb:

With base allomorph /p-/ > /b-/:

/pqaəl/ 'to be frightened' > /bɔnqaəl/ 'to frighten,  
startle'

Derives transitive verb from intransitive verb:

With base allomorph /p-/ > /b-/:

/praah/ 'to get free' > /bɔnpraah/ 'to free'

## 4. √-ɔN-/ 'attribution'

Derives adjectival verbs from transitive verbs:

/sbaəm/ 'to admire' > /sɔmbaəm/ 'awful, impressive'

With base allomorph /p-/ > /b-/:

/ptõəp/ 'to arrange in succession'

> /bõntõəp/ 'to be in succession'

Derives adjectives from adjectival verbs:

/cbõõŋ/ 'to be the eldest' > /cõmbõõŋ/ 'most, extremely'

Derives adjective from noun:

With base allomorph /t-/ > /d-/:

/tboõŋ/ 'head' > /dõmboõŋ/ 'first'

### 5. √-õN-/

Derives preposition from adjective:

/cpũəh/ 'directly' > /cõmpũəh/ 'especially for'

### 3.224 Infixes of shape |-Vm-|

In infixes of shape |-Vm-|, |-V-| is /-õ-/ or /-u-/  
(as described in 2.4324), with rapid speech alternant /-ə-/,  
and /-m-/ is invariant. The primary function of |-Vm-| is  
causation.

#### 1. √-õm-/ 'causation'

Derives transitive verbs from adjectival verbs:

/ksaan/ 'to be peaceful' > /kõmsaan/ 'to appease, calm'

/sqaat/ 'to be clean' > /sõmqaat/ 'to clean'

/sdaen/ 'to be clear' > /sõmdaen/ 'to explain, clarify'

/srueɪ/ 'to be easy' > /sõmrueɪ/ 'to facilitate'

With base allomorph /t-/ > /d-/:

/tkaen/ 'illustrious, high' > /dõmkaen/ 'to elevate'

Allomorph /-um-/:

With base allomorph /ro-/ > /r-/:<sup>1</sup>

/rodoh/ 'freed' > /rumdoh/ 'to free, exempt'

/roliiq/ 'to be shiny' > /rumliiq/ 'to polish, shine'

Derives transitive verbs from intransitive verbs:

/kcat/ 'to separate, leave' > /komcat/ 'to dismiss'

/slap/ 'to die' > /somlap/ 'to kill'

/sraaq/ 'to abate' > /somraaq/ 'to rest, regenerate (tr.)'

Allomorph /-um-/:

/tlëeq/ 'to fall' > /tumlëeq/ 'to fell, overthrow'

/tleey/ 'to give way' > /tumleey/ 'to break through'

/creep/ 'to learn' > /cumreep/ 'to inform'

With base allomorph /ro-/ > /r-/:

/rolüeh/ 'to decrease' > /rumlüeh/ 'to decrease (tr.)'

/roleey/ 'to melt' > /rumleey/ 'to melt (tr.)'

Derives causative transitive verbs from transitive verbs:

/klaac/ 'to fear, respect' > /komlaac/ 'to frighten'

/clooq/ 'to cross' > /comllooq/ 'to put or take across'

Allomorph /-um-/:

With base allomorph /ro-/ > /r-/:

/roläk/ 'to remember' > /rumläk/ 'to remind,

commemorate'

---

1. This alternation is described in 2.2.

Derives related transitive verb from adjectival verb:

/khaeŋ/ 'to be arrogant' > /kəmhaeŋ/ 'to frighten'

2. √-əm-/ 'derogation'

Derives derogatory adjectival verbs from adjectival verbs:

/skɔɔŋ/ 'be stunted' > /səmɔɔŋ/ 'ridiculously stunted'

/skoəm/ 'be slender' > /səmkoəm/ 'ridiculously slender'

/sñaañ/ 'be open' > /səmñaañ/ 'scowling, gaping'

The above bases have a non-emotional or matter-of-fact connotation, while the derivatives have a connotation of disapproval or scorn. The difference can be illustrated by a free translation of the following examples:

/kəe skoəm nah↓./ 'He's quite slender.'

/kəe səmkoəm nah!./ 'He's puny.'

/kəe ckūet↓./ 'He's mentally ill.'

/kəe cəmckūet↓./ 'He's 'n nutty as a fruit-cake'.'

3. √-əm-/ 'specialization'

Verb: /clɔɔŋ/ 'to cross' > /cəmclɔɔŋ/ 'to copy'

Auxiliary: (with base allomorph /p-/ > /b-/)

/proŋ/ 'to prepare to' > /bəmproŋ/ 'determined to'

Noun: (allomorph /-um-/)

/kruu/ 'teacher' > /kumruu/ 'example, model'

4. √-əm-/ 'verbalization'

/krət/ 'law' > /kəmkrət/ 'to stipulate'

Allomorph /-um-/:

/krūeh/ 'fate' > /kumrūeh/ 'inauspicious, improper'



## 5. √-əm-/

Derives adjectives from adjectival verbs:

/klaa/ 'to be brave' > /kəmlaa/ 'with pretended bravery'

With base allomorph /t-/ > /d-/:

/tron/ 'to be straight' > /dəmron/ 'directly'

## 6. √-əm-/

Derives modal verb from adjectival verb:

/krəə/ 'to be poor' > /kəmkrəə/ 'to be poor at'

## 7. √-əm-/

Derives intransitive verb from adjective:

/sləŋ/ 'fixedly, sternly' > /səmləŋ/ 'to stare, frown'

3.225 Infixes of shape |-Vm(n)-|

In infixes of shape |-Vm(n)-|, |-V-| is /-ə-/ or /-u-/ (as described in 2.4326). |-Vm-| occurs in bases with an initial consonant sequence, and |-Vmn-| occurs in bases with a single initial. The primary function of |-Vm(n)-| is nominalization.

## 1. √-əm-/ 'nominalization'

Derivative is the result of the action of the base verb:

/krət/ 'to notch, mark' > /kəmkrət/ 'a notch, mark'

/sdey/ 'to speak, tell' > /səmdəy/ 'speech'

/sləə/ 'to make a stew' > /səmləə/ 'a stew'

/cləy/ 'to answer' > /cəmləy/ 'an answer'

With base allomorph /t-/ > /d-/:

/trap/ 'to imitate' > /dəmrap/ 'imitation, model'

Allomorph /-um-/:

- |                      |                         |
|----------------------|-------------------------|
| /cněeh/ 'to defeat'  | > /cumněeh/ 'victory'   |
| /crěeh/ 'to choose'  | > /cumrěeh/ 'choice'    |
| /clűeh/ 'to quarrel' | > /comlűeh/ 'a quarrel' |

With allomorph /-omn-/:

- |                      |                          |
|----------------------|--------------------------|
| /deŋ/ 'to know'      | > /dōmnəŋ/ 'information' |
| /dam/ 'to plant'     | > /dōmnam/ 'a plant'     |
| /kat/ 'to cut'       | > /kōmnat/ 'a cut piece' |
| /kət/ 'to note, fix' | > /kōmnət/ 'appointment' |
| /cōŋ/ 'to tie'       | > /cōmnōŋ/ 'knot'        |
| /saec/ 'to laugh'    | > /sōmnaec/ 'laughter'   |
| /sue/ 'to ask'       | > /sōmŋue/ 'a question'  |
| /qaoŋ/ 'to give'     | > /qōmnaoŋ/ 'a gift'     |

With base allomorph /t-/ > /d-/:

- |                       |                        |
|-----------------------|------------------------|
| /tōŋ/ 'to extend'     | > /dōmnōŋ/ 'extension' |
| /taeŋ/ 'to establish' | > /dōmnaeŋ/ 'position' |

With base allomorph /p-/ > /b-/:

- |                    |                              |
|--------------------|------------------------------|
| /pōŋ/ 'to hope to' | > /bōmnōŋ/ 'hope, intention' |
|--------------------|------------------------------|

Allomorph /-umn-/:

- |                    |                          |
|--------------------|--------------------------|
| /tűñ/ 'to buy'     | > /tumñűñ/ 'merchandise' |
| /cum/ 'to meet'    | > /cumnum/ 'meeting'     |
| /kăt/ 'to think'   | > /kumñăt/ 'thought'     |
| /cűe/ 'to believe' | > /cumñűe/ 'belief'      |

Derives abstract nouns from adjectival verbs:

- /kdaw/ 'to be hot' > /kɔmdaw/ 'heat'  
 /kheŋ/ 'to be angry' > /kɔmheŋ/ 'anger'  
 /cŋaay/ 'to be far' > /cɔmŋaay/ 'distance'  
 /craen/ 'to be much' > /cɔmraen/ 'increase, success'

With base allomorph /t-/ > /d-/:

- /tlay/ 'to be expensive' > /dɔmlay/ 'value'  
 /treek/ 'to be happy' > /dɔmreek/ 'happiness'

Allomorph /-um-/:

- /tŋüen/ 'to be heavy' > /tumŋüen/ 'weight'  
 /crow/ 'to be deep' > /cumrow/ 'depth'  
 /lqɔɔ/ 'to be pretty' > /iumqɔɔ/ 'beauty'

With allomorph /-ɔm-/:

- /qɔɔ/ 'to be happy' > /qɔmɔɔ/ 'happiness'  
 /saem/ 'to be wet' > /sɔmnaem/ 'moisture'

Allomorph /-umn-/:

- /kue/ 'to be proper' > /kumnue/ 'propriety'

Derivative is the agent of the action of the verb:

- /sqaaŋ/ 'to dress, decorate'  
 > /sɔmqaan/ 'ornament, decoration'

With base allomorph /t-/ > /d-/:

- /troon/ 'to filter' > /dɔmroon/ 'a filter'  
 /truət/ 'to inspect, control' > /dɔmruət/ 'police'

Allomorph /-omn-/:

/sat/ 'to float' > /somnat/ 'driftwood'

Allomorph /-umn-/:

/tup/ 'to block' > /tumnu/ 'obstruction, dam'

/təm/ 'to join' > /tumnim/ 'adjunct'

/cueh/ 'to replace' > /cumnuh/ 'replacement'

Derivative is a noun described by the base:

/ktec/ 'to be shattered' > /kومتec/ 'shreds'

/sqoy/ 'vile-smelling' > /somqoy/ 'refuse, garbage'

Allomorph /-umn-/:

/teep/ 'to be flat, level' > /tumneep/ 'level place'

Derivative is a person described by the base:

/khooc/ 'to be wicked' > /kومتhoc/ 'wicked person'

/kcəl/ 'to be lazy' > /kومتcəl/ 'lazy person'

/ckūet/ 'to be crazy' > /cومتkūet/ 'idiot'

With base allomorph /t-/ > /d-/:

/tloŋ/ 'to be deaf' > /dومتloŋ/ 'deaf person'

2. √-om-/ 'stylistic variation'

Derivative is a stylistic variant of the base:

/krət/ 'law' > /kومتrət/ 'statute, regulation'

Allomorph /-um-/:

/lqaan/ 'trace, mark' > /lumqaan/ 'design (eloquent)'

Allomorph /-ɔmn-/:

/caay/ 'to spend' > /cɔmnaay/ 'to dispense'

Allomorph /-umn-/:

/cūen/ 'to flood' > /ɔumnūen/ 'to inundate'

/teep/ 'to be low, smooth' > /tumneep/ 'id (eloquent)'

### 3. √-ɔmn-/ 'semantic shift in the same form class'

Verbs:

/kot/ 'to note down' > /kɔmnot/ 'to make an appointment'

Allomorph /-umn-/:

/tuk/ 'to put away' > /tumnuk/ 'to plan, intend to'

Noun (allomorph /-umn-/):

/cōen/ 'floor, story' > /ɔumnōen/ 'era, stage'

### 4. √-ɔmn-/

Derives related preposition from verb:

/coh/ 'to descend' > /cɔmnoh/ 'belonging to, under the control of'

### 5. √-umn-/ /

Derives related adjectival verb from auxiliary:

/teep/ 'just now' > /tumneep/ 'to be new, recent'

### 6. √-umn-/ /

Derives related transitive verb from adjectival verb:

/kōep/ 'to be pleasing' > /kumnōep/ 'to salute, greet'

3.226 Infixes of shape | -rV(n)- |

In infixes of shape | -rV(n)- |, | -V- | is / -o- / or / -o- / (as described in 2.4327). | -rV- | occurs in bases with an initial consonant sequence, and | -rVn- | in bases with a single consonant initial. The primary function of this infix is nominalization.

1. √ -ron- / 'nominalization'

/saok/ 'to pity' > /srɔnaok/ 'pity'

With base allomorph /t- / > /d- /:

/daot/ 'to spit-roast' > /trɔnaot/ 'skewer'

Allomorph /-ron- /:

/tup/ 'to obstruct' > /tronup/ 'obstruction'

/tum/ 'to perch' > /tronum/ 'a perch'

Allomorph /-rɔ- /:

/stoep/ 'to divide' > /srɔtoep/ 'section, division'

2. √ -ron- / 'specialization'

Transitive verb:

/pěeq/ 'to wear above the waist'

> /prɔněeq/ 'to carry on the back'

Adjectival verb:

/sok/ 'to be happy' > /srɔnok/ 'serene, peaceful'

### 3.23 Suffixes

There are several sub-lexemic morphemes which occur in post-bound position with a consistent meaning in a significant number of lexemes. They are analyzed as suffixes.

#### 1. √-bəy/

Derivatives are subordinating conjunctions:

/daem/ 'origin' > /daem-bəy/ 'in order to'

/kom/ 'negative imperative' > /kom-bəy/ 'in order not to'

/kōəp/ 'to be pleasing' > /kōəp-bəy/ 'the better to'

/tūəh/ 'if' > /tūəh-bəy/ 'although'

#### 2. √-maan/ 'how much, to what extent'

Derivatives are interrogative and indefinite adverbials:

/pon/ 'to equal' > /ponmaan/ 'how much?'

/smae/ 'to equal' > /smae-maan/ 'how much?'

/qəmbaal/ 'to equal' > /qəmbaal-maan/ 'how much?'

Other derivatives formed on the base √-maan/:

/prəmaan/ 'to estimate; an estimate; how much?'

/smaan/ 'to guess, consider'

#### 3. √-səp/ 'ten'

Derivatives are multiples of ten:<sup>1</sup>

√saam-/ 'three'                      /saam-səp/ 'thirty'

√sae-/ 'four'                         /sae-səp/ 'forty'

---

1. These forms are borrowed in toto from Thai, but they are shown to be complex by the observed form /haa- rɿɿ hok-səp/ 'fifty or sixty'. For the numerals 10-90 see 4.241.

### 3.3 Compounds

Compounds are lexemes whose constituents occur as free lexemes in other contexts.

#### 3.31 Governing lexemic constituents

Governing lexemic constituents are constituents which occur as free lexemes, and which regularly govern the form class of the compounds in which they occur. This kind of compounding is productive.

##### 1. /kaa/ 'work; the act of, affairs of'

Derives abstract nouns from active verbs and verb expressions, and from nouns:

/niyeey/ 'to speak' > /kaa-niyeey/ 'speaking'

/twæ-srae/ 'to farm' > /kaa-twæ-srae/ 'farming'

/roək-sii/ 'to earn a living'

> /kaa-roək-sii/ 'earning a living'

/reəccəkaa/ 'civil service (as a branch of government)'

> /kaa-reəccəkaa/ 'civil service (profession)'

/boorəteeh/ 'foreign countries'

> /kaa-boorəteeh/ 'foreign affairs'

##### 2. /sec-kdey/ 'situation, case; the condition of'

Derives abstract nouns from adjectival and active verbs:

/lqoo/ 'to be pretty' > /sec-kdey lqoo/ 'beauty'

/səpbaay/ 'to be happy' > /sec-kdey səpbaay/ 'happiness'

/riik-reey/ 'to progress'

> /sec-kdey riik-reey/ 'progress'



/kan puuc/ 'to be patriotic (to uphold one's race)'

> /sɛc-kdəy kan puuc/ 'patriotism'

/dəŋ kun/ 'to be grateful (to recognize merit)'

> /sɛc-kdəy kan puuc/ 'gratitude'

The distinction between the functions of /kaa-/ and /sɛc-kdəy/ can be illustrated as follows:

/slap/ 'to die'; /kaa-sləp/ 'dying'; /sɛc-kdəy slap/  
'death'

3. /dəmnae/ 'case, process; the process of'

Derives abstract nouns from active verbs:

/praɛ/ 'to use' > /dəmnae praɛ/ 'use'

/bɔntooh/ 'to punish'

> /dəmnae bɔntooh/ '(a specific case of) punishment'

/prɔləŋ/ 'to compete' > /dəmnae prɔləŋ/ '(a specific holding of an) examination'

/truət-traa/ 'to inspect' > /dəmnae truət-traa/ 'an inspection'

/tow-maok/ 'to go and come'

> /dəmnae tow-maok/ 'going and coming'

4. /khaŋ/ ~ /khaŋ-/ 'side; toward'

Derives adjectives from nouns, demonstratives, and prepositions:

/sdam/ 'the right side' > /khaŋ-sdam/ 'on the right'

/tboŋ/ 'the south' > /khaŋ-tboŋ/ 'to the south'

/nih/ 'this' > /khaŋ-nih/ 'this way'

/muk/ 'in front of' > /khaŋ-muk/ 'in front, ahead'

/kraoy/ 'behind' > /khaŋ-kraoy/ 'behind (adj.)'

## 5. /tii/ 'place; place, of the order, which'

Derives adjectives from demonstratives:

/nih/ 'this' > /tii-nih/ 'here'  
 /nuh/ 'that' > /tii-nuh/ 'there'

Derives ordinal numeral adjectives from numerals and the non-numerical quantifier /ponmaan/ 'how many?' (4.242):

/pii/ 'two' > /tii-pii/ 'second'  
 /saam-səp-pram/ 'thirty-five'  
 > /tii-saam-səp-pram/ 'the thirty-fifth'  
 /ponmaan/ 'how many?' ≈ /tii-ponmaan/ 'how many'th?'

Derives nouns from active verbs and adjectives:

/kōəp-cət/ 'to be interesting, pleasing'  
 > /tii-kōəp-cət/ 'item of interest'  
 /snae-haa/ 'to love' > /tii-snae-haa/ 'loved one'  
 /koorup/ 'to respect' > /tii-koorup/ 'respected one'  
 /bəmphot/ 'most, last' > /tii-bəmphot/ 'the most, last'

## 6. /tae/ 'but, only; only, specifically'

Derives auxiliaries from verbs, prepositions, and conjunctions:

/ceh/ 'to know' > /ceh-tae/ 'always'  
 /taeŋ/ 'to establish' > /taeŋ-tae/ 'usually'  
 /now/ 'to remain' > /now-tae/ 'still'  
 /krōən/ 'to be enough' > /krōən-tae/ 'barely'  
 /təep/ 'then' > /təep-tae/ 'to have just'  
 /muk/ 'in front of' > /muk-tae/ 'probably, likely to'

3.32 Centered compounds

Centered compounds are compounds in which the first constituent is the head and all that follows is the attribute. This kind of compounding is fully productive. All heads of centered compounds are nouns, and the resulting compounds are nouns. Attributes may be:

Verb:

/salaa/ 'hall' + /riən/ 'to study'

> /salaa-riən/ 'school'

/nĕeq/ 'person' + /lŭeq/ 'to sell'

> /nĕeq-lŭeq/ 'salesman'

Verb and object:

/ptĕeh/ 'house' + /lŭeq/ 'to sell' + /kafee/ 'coffee'

> /ptĕeh-lŭeq-kafee/ 'coffee shop'

/nĕeq/ 'person' + /twəə/ 'to make' + /srae/ 'rice field'

> /nĕeq-twəə-srae/ 'rice farmer'

Coordinate verb compound and object:

/nĕeq/ 'person' + (/baek/ 'to drive' + /bɔɔ/ 'to drive' >)

/baek-bɔɔ/ 'to drive' + /taqsii/ 'taxi'

> /nĕeq baek-bɔɔ taqsii/ 'taxi-driver'

Verb and coordinate noun compound object:

/ptĕeh/ 'house' + /kat/ 'to cut' + (/khac/ 'pants' +

/qaaw/ 'shirt' > ) /khao-qaaw/ 'clothes'

> /ptĕeh kat khao-qaaw/ 'tailor shop'

/nĕeq/ 'person' + (/baok/ 'to wash' + /qut/ 'to iron' >)

/baok-qut/ 'to launder' + /khao-qaaw/

## Noun:

/bontup/ 'room' + /tɛk/ 'water'

> /bontup-tɛk/ 'bathroom'

/rotih/ 'cart' + /koc/ 'ox' > /rotih-koo/ 'oxcart'

Certain nouns occur with great frequency as heads of centered compounds. The most frequent are listed below:

## 1. /nɛəq/ 'person, the one who'

/srae/ 'rice field' > /nɛəq-srae/ 'farmer'

/twəe-kaa/ 'to work' > /nɛəq-twəe-kaa/ 'worker'

/teehsecoo/ 'tourism' > /nɛəq-teehsecoo/ 'tourist'

## 2. /ptɛh/ 'house; shop'

/sɔmnaq/ 'to stay' > /ptɛh-sɔmnaq/ 'hotel'

/lũəq/ 'to sell' + /baay/ 'rice'

> /ptɛh-lũəq-baay/ 'restaurant'

/cən/ 'Chinese' > /ptɛh-cən/ 'Chinese shop'

## 3. /prɔdap/ 'instrument, tool'

/stun/ 'to measure' > /prɔdap-stun/ 'measuring device'

/boom/ 'to pump' + /kyɔl/ 'air'

> /prɔdap-boom-kyɔl/ 'air pump'

/thɔt/ 'to extract' + /ruup/ 'picture'

> /prɔdap-thɔt-ruup/ 'camera'

## 4. /krɛŋ/ 'tool, machine, provision'

/caq/ 'wheel' > /krɛŋ-caq/ 'motor, machine'

/taeŋ-tue/ 'to dress' > /krɛŋ-taeŋ-tue/ 'clothing'

/kae/ 'to repair' > /krɛŋ-kae/ 'tools'

5. /bontup/ 'room, place where'

/tik/ 'water' > /bontup-tik/ 'bathroom'

/siew-phow/ 'book' > /bontup-siew-phow/ 'library'

/twæe/ 'to make' + /qahaa/ 'food'

> /bontup twæe qahaa/ 'kitchen'

6. /salaa/ 'hall, room, school'

/riən/ 'to study' > /salaa-riən/ 'school'

/cbap/ 'law' > /salaa-cbap/ 'law school'

/kat-tooh/ 'to judge' > /salaa-kat-tooh/ 'court-house'

7. /rooŋ/ 'hall, building'

/caŋ/ 'wheel' > /rooŋ-caŋ/ 'factory'

/robam/ 'dance' > /rooŋ-robam/ 'dance-hall'

/ken/ 'to thresh' + /srəw/ 'paddy'

/rooŋ-ken-srəw/ 'rice mill'

8. /wicceə/ 'science, profession'

/læek/ 'numbers' > /wicceə-læek/ 'arithmetic'

/peet/ 'doctor' > /wicceə-peet/ 'medical science'

/kruu/ 'teacher' > /wicceə-kruu/ 'pedagogy'

9. /withii/ 'procedure, ceremony'

/bon/ 'good works' > /withii-bon/ 'ceremony of merit'

/kaa/ 'to marry' > /withii-kaa/ 'marriage ceremony'

/buəh/ 'to enter the priesthood'

> /withii-buəh/ 'ordination'

10. /tik/ 'juice, liquid, water'

/tae/ 'tea (plant)' > /tik-tae/ 'tea (beverage)'

/trøy/ 'fish' > /tik-trøy/ 'fish sauce'

11. /tɲay/ 'day, sun'  
     /prɛk/ 'morning' > /tɲay-prɛk/ 'morning'  
     /trɔŋ/ 'to be straight' > /tɲay-trɔŋ/ 'noon'  
     /lɲiec/ 'afternoon' > /tɲay-lɲiec/ 'afternoon'
12. /sac/ 'meat'  
     /koo/ 'ox' > /sac-koo/ 'beef'  
     /mõen/ 'chicken' > /sac-mõen/ 'chicken (meat)'  
     /cruuk/ 'pig' > /sac-cruuk/ 'pork'
13. /pœ/ 'color, aspect'  
     /khiew/ 'to be blue' > /pœ-khiew/ 'blue'  
     /krɔhɔəm/ 'to be red' > /pœ-krɔhɔəm/ 'red'
14. /tii/ 'place'  
     /kron/ 'city' > /tii-kron/ 'city'  
     /sɔmnaap/ 'seedling' > /tii-sɔmnaap/ 'seed-bed'
15. /cii/ 'ancestor, relative'  
     /door/ 'old lady' > /cii-door/ 'grandmother'  
     /taa/ 'old man' > /cii-taa/ 'grandfather'  
     /muey/ 'one' > /cii-door-muey/ 'first cousin'
16. /mcah/ 'master, proprietor'  
     /ptɛh/ 'house' > /mcah-ptɛh/ 'head of the house'  
     /tlay/ 'to be valuable' > /mcah-tlay/ 'good friend'
17. /mee/ 'female (pejorative if used with humans)'  
     /mõen/ 'chicken' > /mee-mõen/ 'hen'  
     /dɔmrɛy/ 'elephant' > /mee-dɔmrɛy/ 'female elephant'  
     /kaew/ (proper name) > /mee-kaew/ 'little Miss Kaew'

18. /mee/ 'head, chief'

/kaa/ 'work' > /mee-kaa/ 'boss, foreman'

/khun/ 'district' > /mee-khun/ 'district chief'

/cao/ 'thief' > /mee-cao/ 'leader of a band of thieves'

19. /mee/ 'point, lesson, character'

/soot/ 'to recite' > /mee-soot/ 'recitation'

/koo/ 'name of the letter 'k''

> /mee-koo/ 'the letter 'k''

### 3.33 Coordinate compounds

A coordinate compound is any lexeme composed of two constituents of similar or identical meaning such that either constituent can substitute syntactically for the whole. The constituents may be:

#### 1. Nouns:

/koo/ 'ox' + /krəbəy/ 'water buffalo'

> /koo-krəbəy/ 'livestock'

/qəwpuk/ 'father' + /mdaay/ 'mother'

> /qəwpuk-mdaay/ 'parents'

/dəmreh/ 'knowledge' + /wɪccəə/ 'science'

> /dəmreh-wɪccəə/ 'knowledge, ability'

#### 2. Verbs:

/sok/ 'to be happy' + /səpbaay/ 'to be well, happy'

> /sok-səpbaay/ 'to be well and happy'

/piinɪt/ 'to examine' + /mæel/ 'to look at'

> /piinɪt-mæel/ 'to supervise'

/cuəp/ 'to meet' + /prətšeh/ 'to meet by accident'

> /cuəp-prətšeh/ 'to meet'

### 3. Adjectives:

/ňák/ 'quickly' + /ňöep/ 'quickly'

> /ňák-ňöep/ 'quickly, frequently'

/ruəc/ 'already' + /srac/ 'completely' + /haey/ 'already'

> /ruəc-haey/ 'already'

> /srac-haey/ 'already'

> /ruəc-srac-haey/ 'already'

### 4. Prepositions:

/krup/ 'all' + /səp/ 'every'

> /krup-səp/, /səp-krup/ 'every, every one of'

/ceə-muəy/ 'with' + /nɪŋ/ 'with'

> /ceə-muəy-nɪŋ/ 'with, together with'

/tšəŋ/ 'all, including' + /qəh/ 'completely, all of'

> /tšəŋ-qəh/ 'all of'

### 5. Conjunctions:

/haey/ 'with' + /nɪŋ/ 'with' > /haey-nɪŋ/ 'and'

### 6. Numerals:

/pii/ 'two' + /bəy/ 'three' > /pii-bəy/ 'two or three'

### 3.3<sup>1</sup>/<sub>4</sub> Uncentered compounds

Uncentered compounds are compounds in which no constituent can be identified as the head. Such compounds usually follow normal syntactic order, but are marked as compounds by their consistent co-occurrence with a unitary meaning and by the occurrence of secondary rather than



primary stress on the first constituent, as well as by the occurrence of typical compounding juncture between constituents (/-/). Uncentered compounds may be:

#### 1. Verbs:

- /n̄am/ 'to eat' + /baay/ 'rice'  
 > /n̄am-baay/ 'to have a meal'  
 /twæə/ 'to make, do' + /kaa/ 'work'  
 > /twæə-kaa/ 'to work'  
 /qoo/ 'to be happy' + /kun/ 'merit'  
 > /qoo-kun/ 'thank (you)'

#### 2. Nouns:

- /sraom/ 'to envelop' + /sombot/ 'letter'  
 > /sraom-sombot/ 'an envelope'  
 /sraom/ 'to envelop' + /cæŋ/ 'foot'  
 > /sraom-cæŋ/ 'socks'

#### 3. Adverbials:

- /bae/ 'if' + /qoñcəŋ/ 'therefore'  
 > /bae-qoñcəŋ/ 'in that case'  
 /pii/ 'from' + /daem/ 'origin'  
 > /pii-daem/ 'originally, in former times'  
 /sop/ 'every' + /tɲay/ 'day'  
 > /sop-tɲay/ = /sop-ɲay/ 'every day, these days'

#### 4. Adjectival verbs:

- /dooc/ 'like' + /knee/ 'together'  
 > /dooc-knee/ 'to be similar'  
 /cət/ 'near' + /knee/ 'together'

### 3.35 Appositive compounds

Appositive compounds are noun compounds whose first constituent is a kinship term or title, and whose second constituent is a specific identifying noun:

/koon/ 'offspring' + /proh/ 'male'

> /koon-proh/ 'son'

/nĕəq/ 'general title' + /srey/ 'a female'

> /nĕəq-srey/ 'madam'

/look/ 'respectful title' + /kruu/ 'teacher'

> /look-kruu/ 'teacher'

Such compounds occur as compound titles in appositive construction with proper names, e.g.:

/nĕəq-srey kaew/ (madam Kaew) 'Madam Kaew'

/look-kruu chông/ (teacher Chông) 'Teacher Chông'

### 3.36 Asyntactic compounds

Asyntactic compounds are compounds whose constituents do not conform to the normal syntactic order of the form classes in the language. Such compounds are nouns whose first constituent is a qualitative specifier (4.2211) and whose second constituent is a noun, e.g.:

/daem/ 'specifier for long slender objects, trees' +

/chæ/ 'wood' > /daem-chæ/ 'tree'

/plæ/ 'specifier for fruits and vegetables' +

/swaay/ 'mango' > /plæ-swaay/ 'mango fruit'

/kröep/ 'specifier for seed, grains, etc.' +

/kröep-kamplæn/ 'bullet'

In syntactic constructions, the above specifiers always follow numerals. The compounds in which they participate, however, precede numerals and specifying phrases, e.g.:

/daem-chee pii daem/  
 tree two long-slender-objects  
 'two trees'

### 3.37 Idiomatic compounds

Idiomatic compounds are compounds whose meanings cannot be determined from the meanings of their constituents as free lexemes. Such compounds may be:

Verbs:

/cool/ 'to enter' + /cet/ 'heart, mind'

> /cool-cet/ 'to like, understand'

/trew/ 'to have to ' + /kaa/ 'work'

.> /trew-kaa/ 'to want, need'

/totuel/ 'to receive' + /teen/ 'gift'

> /totuel-teen/ 'to eat (elegant)'

/sii/ 'to eat' + /kaa/ 'work, affair'

> /sii-kaa/ 'to attend a wedding'

Nouns:

/baay/ 'rice' + /qoo/ 'to be happy'

> /baay-qoo/ 'cement, mortar'

/koon/ 'child' + /sao/ 'lock' > /koon-sao/ 'key'

/baeη-pqoon/ 'siblings' + /baηkaet/ 'to give birth to'

> /baeη-pqoon baηkaet/ 'full siblings'

/tɨk/ 'water' + /kmaw/ 'to be black'

> /tɨk-kmaw/ 'ink'<sup>1</sup>

### 3.38 Numerical compounds

Numerical compounding is treated in section 4.241

(Numerical quantifiers).

---

1. The occurrence of /tɨk-kmaw kɔhɔom/ 'red ink' indicates that this is an idiomatic compound.

### 3.4 Pseudo-compounds

Pseudo-compounds are complex lexemes which are not composed entirely of free forms. For example, /qanuq-phēeriyee/ 'minor wife' is composed of the bound attribute /qanuq-/ 'second, junior' and /phēeriyee/ 'wife (eloquent)'. Such forms are further marked as compounds by the asyntactic position of the attribute, which in syntactic constructions follows rather than precedes the head, as in /prōpūen tēcc/ (wife little) 'minor wife'. Some forms which occur as free lexemes have special combining forms in pseudo-compounds, e.g. the forms /pūellerōet/ 'citizens', /rōetthaaphibaal/ 'government', and /rōetthaq-thōemmenūñ/ 'constitution' all contain the morpheme /rōet/ 'state' which occurs as a free lexeme in its own right.<sup>1</sup>

Following is a list of morphemes which recur with relative frequency as constituents of pseudo-compounds.

3.41 The following constituents are always bound:

1. /mohaa-/ ~ /mōhāa-/ 'big, important, extremely'

/sēmot/ 'sea' > /mohaa-sēmot/ 'ocean'

/wittyaalay/ 'college' > /mohaa-wittyaalay/ 'university'

/khooc/ 'wicked' > /mohaa-khooc/ 'rotten to the core'

---

1. The majority of the constituents of pseudo-compounds are borrowed from Pali and Sanskrit sources, and are not generally productive in the spoken language. Whether these forms are simple or complex in the mind of the speaker depends on his degree of literary sophistication, so that pseudo-compounds might be said to constitute a derivational sub-system for the educated speaker.

## 2. /qətdom-/ 'high, excellent'

/wáccəe/ 'study' > /qətdom-wáccəe/ 'higher studies'

/müəntrey/ 'minister' > /qətdom-müəntrey/ 'high official'

/cəət/ 'life, existence' > /qətdom-cəət/ 'high lineage'

3. /caw-/ 'lord, master'<sup>1</sup>

/qathikaa/ 'chief' > /caw-qathikaa/ 'head monk, abbot'

> /caw-krom/ 'judge'

> /caw-waay/ 'governor, administrator'

## 4. /qanuq-/ ~ /qanu-/ 'second, following, junior'

/wáttyaalay/ 'college' > /qanuq-wáttyaalay/ 'secondary  
school'

/phēeriyeə/ 'wife' > /qanuq-phēeriyeə/ 'minor wife'

/sənaəney/ 'military officer' > /qanuq-sənaəney/  
'junior officer'

## 5. /səhaq-/ 'united, agreed, in harmony'

/-koo/ 'personnel' > /səhaqkoo/ 'a cooperative'

/rōət/ 'state' > /səhaq-rōət/ 'united states, union'

/-kam/ 'action' > /səhaqkam/ 'cooperation'

## 6. /trəy-/ 'three'

/kaon/ 'angle' > /trəy-kaon/ 'triangle'

/caqkrəyeən/ 'wheeled vehicle' > /trəy-caqkrəyeən/  
'bicycle'

/-mēeh/ 'month' > /trəy-mēeh/ 'trimester'

## 7. /tray-/ 'three'

/-bəydoq/ 'book' > /tray-bəydoq/ 'the Tripitaka'

<sup>1</sup> Not to be confused with /caw/ 'grandchild'.

/cɛywoɔ/ 'monks' garments' > /tray-cɛywoɔ/ 'the three  
garments of a monk'

/-rōət/ 'treasure' > /tray-rōət/ 'the three jewels of  
Buddhism'

8. /boppěəq-/ ~ /boppə-/ ~ /bop-/ 'first, preceding'

/kəthaa/ 'verse, story' > /boppěəq-kəthaa/ 'preamble'

/-kam/ 'conduct' > /boppəkam/ 'previous conduct'

/bət/ 'word, stanza' > /bop-bət/ 'prefix'

9. /qaqkěəq-/ ~ /qakěəq-/ 'first, supreme'

/reəccətuut/ 'royal mission' > /qaqkěəq-reəccətuut/  
'important embassy'

/moheesəy/ 'queen' > /qakěəq-moheesəy/ 'first queen'

10. /qateq-/ 'excessive, extreme'

/-pərəmaa/ 'excellent' > /qateq-pərəmaa/ 'of highest  
quality'

/pəəq/ 'word, speech' > /qateq-pəəq/ 'hyperbole'

11. /boocənɛy-/ 'praiseworthy'

/wōətthoq/ 'article' > /boocənɛy-wōətthoq/ 'sacred  
object, temple'

/sthaan/ 'place' > /boocənɛy-sthaan/ 'sacred site,  
monument'

12. /qaphiq-/ ~ /qaphi-/ 'very, great'

/kheət/ 'murder' > /qaphiq-kheət/ 'massacre'

/muk/ 'head, chief' > /qaphimuk/ 'great leader'

13. /qathiq-/ ~ /qathi-/ 'great, high'

/kaa/ 'work' > /qathikaa/ 'important affairs, chief'

14. /qatthāq-/ ~ /qattha-/ ~ /qatthe-/ 'subject, purpose'  
 /kəthaa/ 'story' > /qatthaq-kəthaa/ 'speech, lecture'  
 /-athibaay/ 'to explain' > /qatthaathibaay/ 'to  
 elucidate'  
 /bot/ 'stanza' > /qatthəbot/ 'lesson'
15. /kam-/ ~ /kammə-/ 'action, conduct'  
 /-koo/ 'personnel' > /kamməkoo/ 'worker, coolie'  
 /withii/ 'method, ceremony' > /kam-withii/ 'procedure,  
 ability'  
 /kaqsi-/ 'agriculture' > /kaqsikam/ 'farming'
16. /monoo-/ 'heart, mind'  
 /-kam/ 'action' > /monookam/ 'thought, feeling'  
 > /monoorum/ 'pleasing'  
 > /monoo-sañceettenaa/ 'feeling,  
 sentiment'
17. /-cōō/ 'travel, movement'  
 /neewee/ 'boat' > /neeweecōō/ 'marine travel'  
 /tēəhsənaa-/ 'to observe' > /tēəhsənaacōō/ 'tourism,  
 sight-seeing'  
 > /caraacōō/ 'automobile traffic'
18. /-lay/ 'place'  
 /wittiyaa/ 'knowledge' > /wittiyaaalay/ 'school'  
 /pannaa-/ 'book' > /pannaalay/ 'library'  
 /suk(khaa)-/ 'to be pleasant' > /sukkhaalay/ 'resort'



19. /-pheep/ 'state of, condition of'

/seerey/ 'to be free' > /seerey-pheep/ 'freedom'

/wibol/ 'to be prosperous' > /wibol-pheep/ 'prosperity'

/mit(te-)/ 'friend' > /mittəpheep/ 'friendship'

20. /-saah/ 'the study of, the science of'

/prəwōet(te-)/ 'history' > /prəwōəttəsaah/ 'the study  
of history'

/qaqsə/ 'letter, writing' > /qaqsəsaah/ 'literature,  
letters'

/phuum(i-)/ 'land, region' > /phuumisaah/ 'geography'

21. /-thaan/ 'place, establishment'

/preyseni/ 'mail' > /preyseniithaan/ 'post-office'

/kileən(nə-)/ 'a sick person' > /kileənnethaan/  
'infirmary'

/phoocəni/ 'food' > /phoocəniithaan/ 'restaurant'

22. /-kə/ 'personnel'

/kheet(te-)/ 'murder' > /kheetəkə/ 'murderer'

/səna/ 'soldier' > /sənaəkə/ 'military personnel'

/kam(mə-)/ 'action' > /kamməkə/ 'worker, coolie'

23. /-kaa/ 'work, activity'

/kam(mə-)/ 'action' > /kamməkə/ 'activity'

/khoosəna/ 'to publicize' > /kəhosənaaka/ 'advertising'

/tēhsəna-/ 'to observe' > /tēhsənaaka/ 'observation'

3.42 The following constituents have allomorphs which occur also as free lexemes:

1. /reec/~reecce-/~reecceə/ 'kingdom, reign; royal'
  - /wǎəŋ/ 'family, circle' > /reeccewǎəŋ/ 'royal family'
  - /-thǎppədəy/ 'power' > /reecceəthǎppədəy/ 'monarchy'
  - /qaek(kə-)/ 'prime, supreme' > /qaekkəreec/ 'independence'
  
2. /rǒət/~rǒəttha-/~rǒətthaq-/ 'political state'
  - /mǔəntreɿ/ 'mandarin' > /rǒət-mǔəntreɿ/ 'minister of state'
  - /-aphibaal/ 'to govern' > /rǒətthaaphibaal/ 'government'
  - /pǔəl(lə-)/ 'people' > /pǔəllərǒət/ 'citizenry'
  
3. /qaek(kə-)/ 'prime, single, supreme'
  - /səntʰaan/ 'kind, class' > /qaek-səntʰaan/ 'first class'
  - /saq/ 'grade, era' > /qaekkəsəq/ 'first 12-year cycle'
  - /cǔən/ 'citizen' > /qaekkəcǔən/ 'private sector'
  
4. /put(tə-)/ 'the Buddha'
  - /prǎəh-/ 'sacred' > /prǎəh-put/ 'the Buddha'
  - /ruup/ 'image, form' > /puttəruup/ 'Buddha image'
  - /sahsnaə/ 'religion' > /puttəsahsnaə/ 'Buddhism'
  
5. /qəŋ(kə-)/ 'body, organ'
  - /kaa/ 'affairs' > /qəŋkaa/ 'organization'
  - /ceət/ 'life' > /qəŋkəceət/ 'sexual organs'
  - /prǎəh-/ 'sacred' > /prǎəh-qəŋ/ 'sacred body'

6. /seēnaa/~ /senaa/~ /sena-/ 'military, soldiers'

/-kam/ 'conduct' > /senaakam/ 'military affairs'

/-athikaa/ 'chief' > /senaathikaa/ 'military commander'

/-anupūēn/ 'attaché' > /senaanupūēn/ 'military attaché'

7. /procee/ 'people'

/cūēn/ 'citizen' > /proceecūēn/ 'populace'

/ceet/ 'essence' > /proceecceet/ 'race, nationality'

/-thēppētay/ 'autonomy' > /proceethēppētay/ 'democracy'

8. /yūwēēq/~ /yūuwē- / 'young person'

/cūēn/ 'citizen' > /yūuwēcūēn/ 'young people'

/caqriyaa/ 'conduct' > /yūwēēq-caqriyaa/ 'youth training'

/-pheep/ 'state of' > /yūuwēpheep/ 'youth'

9. /yut(thē-)/~ /yutthēēq-/ 'battle'

/pro-/ 'reciprocity' > /proyut/ 'to fight'

/phuum/ 'area' > /yutthēēq-phuum/ 'battlefield'

/-saah/ 'science of' > /yutthesaah/ 'military science'

10. /yūēn(tē-)/~ /yūēntaq-/ 'motor, machine'

/-hoh/ 'to fly' > /yūēn-hoh/ 'airplane'

/-kam/ 'action' > /yūēntēkam/ 'mechanics (profession)'

/wīccee/ 'science' > /yūēntaq-wīccee/ 'mechanics(science)'

11. /yeēn(e-)/ 'vehicle'

/mohaa-/ 'great' > /mohaayeēn/ 'great vehicle'

/thaan/ 'place' > /yeēnethaan/ 'garage, hangar'

12. /sap(pə-)/ 'word, speech'

/reəccə-/ 'royal' > /reəccəsap/ 'royal vocabulary'

/keqriyaa/ 'action' > /keqriyaa-sap/ 'verb'

/neəm/ 'name' > /sappəneəm/ 'pronoun'

13. /tuut/ 'diplomatic mission, embassy'

/leekhaa/ 'secretary' > /leekhaatuut/ 'diplomatic  
secretary'

/reecce-/ 'royal' > /reəccətuut/ 'royal mission'

/sthaan/ 'place' > /sthaan-tuut/ 'embassy'

14. /phuum(i-)/ 'land, region'

/pheəq/ 'part' > /phuumipheəq/ 'region'

/-səh/ 'study of' > /phuumisəh/ 'geography'

/yutte-/ 'battle' > /yuttəphuum/ 'battlefield'

15. /kun(nə-)/ 'quality, merit'

/qathi-/ 'high, great' > /qathikun/ 'meritorious'

/sap/ 'word' > /kunnəsap/ 'adjective'

/-pheəp/ 'state of' > /kunnəpheəp/ 'quality'

16. /sthaan/ 'place, establishment'

/krih/ 'foundation, site' > /krih-sthaan/ 'building,  
site'

/tuut/ 'diplomatic mission' > /sthaan-tuut/ 'embassy'

17. /kəc/ 'duty, business'

/kaa/ 'work' > /kəc-kaa/ 'duties, affairs'

/kəc-kəh/ 'investigation'

/seettə-/ 'monetary' > /seetakəc/ 'economics'

18. /pūel(lə-)/ 'people'

/rōet/ 'state' > /pūəllərōet/ 'citizenry'

/prōceə/ 'people' > /prōceəpūel/ 'populace'

19. /sahsnaa/ 'religion'

/krīh-/ 'Christ' > /krīh-sahsnaa/ 'Christianity'

/puttə-/ 'Buddha' > /puttəsahsnaa/ 'Buddhism'

20. /saqkəraac/ 'era, century'

/krīh-/ 'Christ' > /krīh-saqkəraac/ 'Christian Era'

/puttə-/ 'Buddha' > /puttəsaaqkəraac/ 'Buddhist Era'

21. /saq/ 'grade, era'

/qaekke-/ 'single' > /qaekkesaaq/ 'equal in rank'

/pañca-/ 'five' > /pañcasaaq/ 'fifth 12-year cycle'

22. /ceet/ 'life, essence'

/thōəmmə-/ 'causation, dharma' > /thōəmməceet/ 'nature'

/rukkhə-/ 'plant, tree' > /rukkhəceet/ 'vegetation'

### 3.5 Reduplicatives

A reduplicative is any lexeme whose constituents are similar or identical in shape and meaning. Reduplicatives may be composed of

- 1) two or more bound constituents
- 2) a free constituent followed by a bound constituent
- 3) a bound constituent followed by a free constituent
- 4) two free constituents

In reduplicatives consisting of two or more bound forms, the first form is considered the base and the following form or forms are considered its reduplications. In reduplicatives containing one free form, the free form is considered the base, whether it precedes or follows its reduplication. Reduplicatives involving a free constituent usually belong to the same form class as the free constituent. Reduplicatives in which both constituents are free are reduplicative compounds.

#### 3.51 Complete reduplication

##### 3.511 Repetitive reduplicatives

Repetitive reduplicatives involve reduplication of the entire base. All repetitive reduplicatives are composed either of two bound constituents or two free constituents. In each case the constituent is considered the base.

##### 3.5111 Both constituents bound

onomatopoetic adjectives, with a few kinesthetic adjectives. These adjectives modify both nouns and verbs in the following way:

/cmaa yum lɛɛ soo: ɲaaw-ɲaaw!./

cat cry hear sound meow-meow

'Cats make a 'meow-meow' sound.'

/kñom lɛɛ kee clūeh: kɔkaok-kɔkaok!./

I hear them argue sound-of-arguing-violently

'I heard them arguing violently.'

Further examples:

/krɛm-krɛm/ 'descriptive of a strumming sound'

/krüep-krüep/ 'descriptive of a crunching sound'

/prɛc-prɛc/ 'the sound of water dripping'

/pdæet-pdæet/ 'slowly, with great effort'

/rüerweel-rüerweel/ 'slowly, sluggishly'

Descriptive repetitive reduplicatives may contain up to four or five constituents. The process is thus productive.

Example:

/kɛk-kɛk/ 'descriptive of the noise of machines operating'

/kɛk-kɛk-kɛk/ 'id'

/kɛk-kɛk-kɛk-kɛk/ 'id'

3.5112 Both constituents free

Reduplication of free lexemes to form repetitive reduplicative compounds is productive. Its function varies

with the form class of the reduplicated form.

1. Nouns: 'plurality, generality'

/sɾəy/ 'woman' > /sɾəy-sɾəy/ 'several women, women in  
general'

/kmeɛŋ/ 'child' > /kmeɛŋ-kmeɛŋ/ 'children, children in  
general'

/prəh/ 'man' > /prəh-prəh/ 'men, men in general'

2. Adjectival verbs: 'intensification, plurality'

/pseɛŋ/ 'to be different' > /pseɛŋ-pseɛŋ/ 'various'

/tooc/ 'to be small' > /tooc-tooc/ 'to be quite small,  
small and numerous'

/kpüeh/ 'to be high' > /kpüeh-kpüeh/ 'to be very high;  
high and numerous'

/liɛn/ 'to be fast' > /liɛn-liɛn/ 'to be very fast'

3. Pronouns and adjectives: 'plurality'

/qwey/ 'what, something, anything (singular)'

> /qwey-qwey/ 'what, anything, something (plural)'

/naa/ 'which, anywhere (singular)'

> /naa-naa/ 'which, anywhere (plural)'

/qae-tiet/ 'another' > /qae-tiet-qae-tiet/ 'various other'

4. Derives adjective from numeral:

/muɛy/ 'one' > /muɛy-muɛy/ 'slowly'

5. Derives adjective from preposition:

/cət/ 'close to' > /cət-cət/ 'closely, quite close'



## 6. Adjectives: 'repeated action'

/krɪp/ 'short, abrupt' > /krɪp-krɪp/ 'descriptive of  
the sound of livestock cropping grass'

/plæk/ 'slowly' > /plæk-plæk/ 'slowly and repeatedly'

3.52 Partial reduplication3.521 Ablauted reduplicatives

Ablauted reduplicatives involve reduplication of the base with vowel ablaut. The great majority of ablauted reduplicatives are composed of two bound constituents. Most of such reduplicatives are either kinesthetic or onomatopoeic adjectives.

The patterns of vowel alternation are apparently random, but certain alternations occur with relative frequency, and seem to have secondary semantic associations. The most frequent are listed below:

## 1. /-ee-/~/-aa-/ 'unstructured, confused'

/kroweem-krowaam/ 'marked up, disfigured'

/roheen-rohaan/ 'in confusion, careless'

/pdeen-pdaah/ 'helter-skelter, lackadaisical'

/kweeh-kwash/ 'awkward, desperate'

/teen-taan/ 'incoherent, confused'

## 2. /-ee-/~/-oo-/ 'unstructured, confused'

/kroheen-krohoon/ 'in confusion'

/roheet-rohoot/ 'id.'

3. /-ii-/-/-əə-/ 'irregular, ineffective'  
 /totriip-totreep/ 'staggering, wandering aimlessly'  
 /kriit-kreət/ 'to be rough, uneven'  
 /kniĩ-knəə/ 'motley group'  
 /monii-moneə/ 'hurriedly, precipitously'
4. /-oo-/-/-aa-/ 'heterogeneous, in profusion'  
 /toonŋ-taanŋ/ 'clatteringly'  
 /tooc-taac/ 'small and numerous'  
 /croonŋ-craanŋ/ 'thick, in profusion'  
 /smooñ-smaañ/ 'in profusion, irregular'
5. /-ii-/-/-əə-/ 'ineffective, vacillatory'  
 /totiim-totəem/ 'slow and hesitant, uncoordinated'  
 /tii-təə/ 'scared, vacillatory'  
 /plii-pləə/ 'to be slow, stupid'  
 /loŋii-loŋəə/ 'to be slow, stupid'
6. /-e-/-/-ə-/'repeated, annoying'  
 /teh-təh/ 'a little of this, a little of that'  
 /qəmpəh-qəmpəh/ 'desultorily'  
 /leh-ləh/ 'teasing, annoying'  
 /pəpləh-pəpləh/ 'id.'
7. /-ə-/-/-ə-/'desultory'  
 /lpeñ-lpeñ/ 'into everything (of children)'  
 /creñ-croñ/ 'haltingly, ineffectively'  
 /teñ-teñ/ /crem-crom/ 'id.'

8. /-ae-/-~/-ao-/ 'disorder'

/kaek-kaok/ 'sound of an unseemly ruckus'

/prohaeŋ-prohaoŋ/ 'irregular, spotty'

9. /-ae-/-~/-oo-/ 'inconsequential noise'

/ŋae-ŋoo/ 'to whine, importune'

/kəkae-kəkoo/ 'babbling'

### 3.522 Rhyming reduplicatives

Rhyming reduplicatives involve reduplication of the nucleus and final consonant (if one occurs) of the base.

#### 3.5221 Both constituents bound

Rhyming reduplicatives in which both constituents are bound are usually adjectival verbs or adjectives, e.g.:

/rŋeəq-tŋeəq/ 'to be polite, affable'

/caoŋ-haoŋ/ 'to be rude, arrogant'

/caeŋ-maeŋ/ 'to be haughty, pretentious'

/saeŋ-maeŋ/ 'groggy, bewildered'

#### 3.5222 One constituent bound

Most rhyming reduplicatives in which one constituent is bound involve intensification of the base, e.g.:

/khaeŋ-raeŋ/ ('to be bold'/ - ) 'to be arrogant, fearless'

/srueŋ-bueŋ/ ('to be easy'/ - ) 'to be easy, enjoyable'

/tŋeŋ-plŋeŋ/ ('to be soft'/ - ) 'to be tender, graceful'

/reəy-meəy/ ('to be scattered'/ - ) 'to be helter-skelter'

/pqaem-rohaem/ ('to be sweet'/ - ) 'to be sickeningly sweet'

/cleən-peən/ ( - / 'to trample') 'to invade, usurp'

### 3.5223 Both constituents free

Most rhyming reduplicatives composed of two free constituents involve coordination of the meanings of the constituents, e.g.:

/caən-kbaən/ ('dish'/'crock') 'crockerly'

/priəp-thiəp/ ('to set alongside'/'to compare') 'to compare'

/crəəh-rəəh/ ('to choose'/'to select') 'to choose, elect'

### 3.523 Alliterative reduplicatives

Alliterative reduplicatives involve reduplication of the initial consonant or consonant sequence of the base, or in the case of disyllables, of the prefix plus the initial consonant or consonant sequence of the base.

#### 3.5231 Both constituents bound

##### 1. Adjectives:

/prəm-prəy/ 'cute, likable'

/prəm-praay/ 'pleasing to hear'

/kci-kcey/ 'haphazard'

/ropec-ropey/ 'trivial and numerous'

/kompec-kompok/ 'small and numerous'

##### 2. Verbs:

/chaek-choc/ 'to investigate, interrogate'

/chaə-chaw/ 'to pester, tease'

/klaeŋ-klaə/ 'to pretend'

## 3.5232 One constituent bound

## 1. Intensification of the meaning of the base:

/cqaet-cqən/ ( - /'to be done') 'well done, cooked just right'

/phít-phíy/ ( - /'to be afraid') 'to be terrified'

/tulum-tuleey/ ( - /'to be roomy') 'to be wide and spacious'

/bomplec-bomplaañ/ ( - /'to destroy') 'to devastate'

/cmaeŋ-cmay/ ('to be proud'/ - ) 'conceited, self-important'

/biet-bien/ ('to squeeze'/ - ) 'to oppress'

/compěeq-compen/ ('to owe'/ - ) 'to be tied up, involved'

## 2. Generalization or pluralization of the meaning of base:

/bən-buə/ ('lake'/ - ) 'lakes and ponds'

/thūen-theən/ ('wealth'/ - ) 'possessions, property'

/kret-kroem/ ('law'/ - ) 'laws, regulations'

/prədap-prədaa/ ('instrument'/ - ) 'tools, instruments'

## 3. Derives adjectives from verbs:

/proñap-proñal/ ('to hurry'/ - ) 'hurriedly'

/trolop-trolen/ ('to revert'/ - ) 'head over heels'

## 3.5233 Both constituents free

## 1. Specialization of the meaning of the constituents:

/sduəc-sdaəŋ/ ('to be sharp'/ 'to be thin') 'to be small and  
insignificant'/kpun-kpūəh/ ('to be towering'/ 'to be high') 'important,  
exalted'

/boh-baok/ ('to discard'/ 'to beat') 'to be crude, impolite'

/bɔndaet-bɔndaoy/ ('to float'/'to follow') 'to allow,  
facilitate'

/bɔñchət-bɔñchiəŋ/ ('to brush past'/'to turn aside')  
'to skirt an issue, to circumlocute'

/bɔŋkhət-bɔŋkhəm/ ('to move'/'to force') 'to strive  
diligently'

## 2. Coordination of the meanings of the constituents:

/ruəp-ruəm/ ('to collect'/'to combine') 'to collect, bring  
together'

/cuəp-cum/ ('to meet'/'to assemble') 'to assemble'

/ptuk-ptee/ ('to load'/'to unload') 'to load and unload'

/bɔŋkəɔ-bɔŋkaet/ ('to establish'/'to originate')

'to agitate, instigate'

/bɔŋqɔɔ-bɔŋquət/ ('to cheer'/'to show off') 'to show off,  
amuse'

## 3. Derives adjectives from verbs:

/doh-daal/ ('to grow'/'to spread') 'richly, profusely'

/ruut-rěeh/ ('to hurry'/'to hurry') 'hurriedly, desperately'

/plɛc-plěeŋ/ ('to forget'/'to relax') 'carelessly'

/rowdɛh-rowdɛy/ ('to hurry'/'to turn, spin') 'hurriedly,  
excitedly'

/bontɔəp-bontɔɔ/ ('next'/'to extend') 'continuously'

### 3.53 Incomplete reduplicatives

Incomplete reduplicatives involve the rhyming reduplication of the second syllable of a disyllabic base.

## 1. Verbs: 'intensification'

/krɔbɨp/ 'to be robust' > /krɔbɨp-bɨp/ 'to be fat and robust'

/crɔlaɛh/ 'to be arrogant' > /crɔlaɛh-baɛh/ 'rude and forward'

/pɔpleh/ 'teasing' > /seh-pɔpleh/ 'frivolous, unprincipled'

/krɔluuk/ 'confused' > /suuk-krɔluuk/ 'confused, dazed'

## 2. Nouns:

/trolɨŋ-tɨŋ/ 'a species of tree'

/kɔndae-rae/ 'a kind of dance'

3.54 Pseudo-reduplicatives

Pseudo-reduplicatives are coordinate compounds whose constituents are similar in meaning, but exhibit no formal similarity other than word shape. Such compounds cannot by definition be considered reduplicatives, since no consistent pattern of reduplication can be found. They do, however, seem to reflect a preference for words of similar shape in the formation of coordinate compounds. The meaning of such shape reduplications is plurality or generality.

## Examples:

/qaacɔo-qaakiŋ/ ('thief' / - ) 'thieves, criminals'

/tɔmniɛm-tɔmlɔɔp/ ('custom' / 'custom') 'customs, culture'

/sɔmliɛq-bɔmpɛɛq/ ('lower garments' / 'upper garments')

'clothing'

### 3.6 Sound symbolism

Certain vowels recur in groups of semantically related lexemes, and thus appear to have secondary semantic function. Following are some of the most frequent:

1. /-ie-/ 'pressure, tightness'

/siet/ 'to insert into a tight place'

/coŋqiet/ 'to be tight, crowded'

/biet-bien/ 'to oppress'

/kieq/ 'to squeeze'

/bieq/ 'to compress'

/biem/ 'to hold tightly in the mouth'

2. /-ee-/ 'slow, sluggish in mind or gait'

/mæek-mæek/ 'slowly, sluggishly'

/plæek-plæek/ 'id.'

/ñæek-ñæek/ 'id.'

/rűeŋwæel-rűeŋwæel/ 'id.'

/plee/ 'to be slow and stupid'

/ljeec/ 'id.'

/lmæe/ 'id.'

3. /-aæ-/ 'large size, increase'

/craæn/ 'much, many'

/kaæn/ 'to increase'

/sbaem/ 'to fear, be in awe of'

/sombaem/ 'to be large, awesome'

/laeŋ/ 'increasingly, to climb'



4. /-ae-/, /-ee-/<sup>1</sup> 'excessive, arrogant'  
 /leəh/ 'beyond, exceeding'  
 /crələəh/ 'to exceed'  
 /crələəh-baəh/ 'to be arrogant, crude'  
 /prəheən/ 'to be insolent'  
 /cmaeŋ/ 'to be proud, conceited'  
 /caeŋ-maeŋ/ 'id.'

---

1. These vowels are correlative alternants, as described in 2.4.

#### 4.0 Lexeme classes

A lexeme class is a set of lexemes which share a set of syntactic privileges of occurrence. The major classes are listed below with their respective abbreviations. Smaller sub-classes are established on the basis of additional syntactic criteria, or of semantic criteria.

#### 4.1 Isolatives

4.11 Interjections I

4.12 Responsives R

#### 4.2 Substantives

4.21 Nouns N

4.22 Specifiers S

4.23 Pronouns Pro

4.24 Quantifiers X

4.25 Demonstratives D

#### 4.3 Predicatives

4.31 Adjectival verbs Va

4.32 Active verbs

4.321 Transitive verbs Vt

4.322 Intransitive verbs Vi

4.33 Modal verbs Vm

4.34 Directional verbs Vd

4.35 Completive verbs Vc

4.4 Adverbials Adv

4.5 Adjectives Adj

4.6 Auxiliaries Aux

## 4.7 Relators

4.71	Prepositional relators	Rp
4.72	Subordinating conjunctive relators	Rs
4.73	General relators	Rg
4.74	Coordinating conjunctive relators	Rc
4.75	Copulative relators	Cop

## 4.8 Particles

4.81	Final sentence particles	F
4.82	Pause particles	P

4.1 Isolatives

Isolatives typically occur as sole lexemic constituents of utterances and as sole lexemic constituents of preposed phonological phrases which are separated from their co-constituents by a phrase contour. They never occur as substantives or as predicatives.

4.11 Interjections

Most interjections have great allomorphic variety. The principal members of the class are listed below, with their commonest allomorphs and their typical phrase contours.

- 1) /qoo↓ ~ qao↓/ 'Oh!' (emphasis, excitement)
- 2) /coh↓/ 'Come on!' (exhortation, persuasion)
- 3) /toh↓/ 'Go ahead!' (imperative, exhortation)
- 4) /nae↓/ 'Hey!' (to attract attention, prohibit)
- 5) /com↓/ 'Oh really?' (sudden revelation)
- 6) /nac↓/ 'Look here!' (to attract attention)
- 7) /vit↑ ~ veet↑/ (Displacement with an upward contour)

- 8) /maeʔ/ 'Well!' (surprise, annoyance)  
 9) /heeʔ/ 'Hey!' (to attract attention)  
 10) /qeeʔ/ 'On the contrary' (mild disagreement)  
 11) /taeʔ/ 'Really?' (as isolated utterance)  
       'Tell me' (as co-constituent)  
 12) /qayyaaʔ/ 'Gee!' (admiration, wonder)  
 13) /qayyah!/ 'Heavens!' (alarm, surprise)  
 14) /qoyyooʔ/ 'Ouch'  
 15) /quut- quyʔ/ 'Oh!' (fear, alarm)  
 16) /puttlooʔ/ 'Damn!' (mild oath)

#### 4.12 Responsives

Responsives occur in the same environment as interjections, but only in utterances subsequent to the opening utterance of an exchange. They typically occur with the phrase contour /ʔ/. Their function is polite acknowledgement of a previous utterance by another speaker, whether the previous utterance was a statement or a question. Following a question, the occurrence of a responsive as the sole lexemic constituent of an utterance implies affirmation. A negative reply is indicated by a responsive followed by the negative final sentence particle /tæʔ/, or by /teeʔ/ alone. In exchanges between equals, responsives tend to be discontinued after the initial exchanges. However, in exchanges between a superior and an inferior, responsives tend to be used throughout the exchange by the inferior, although they may be discontinued by the superior party in the exchange.

The class is small and closed. One member, /qae/, has three allomorphs.

- 1) /baat↓/ (Polite responsive used by men)
- 2) /caah↓ ~ cah↓/ (Polite responsive used by women)
- 3) /qaet↓ ~ qeet↓ ~ qəit↓/ (Familiar responsive used by both men and women)

Personal names, kinship terms, and titles, all of which are sub-classes of substantives, also occur in the isolative position, as well as finally, in vocative constructions (5.125), with the function of identifying the addressee.

## 4.2 Substantives

A substantive is any non-predicative lexeme which can occur as the subject or topic of an utterance. Substantives also function as objects and attributes. Many predicatives can function as substantives, but substantives never function as predicatives.

### 4.21 Nouns

A noun is any substantive which may occur in the context #\_XS#, where # represents silence, X represents a numeral, and S represents a specifier. In other words, a noun is any substantive which can be counted.

4.211 General nouns are nouns which can occur as heads of numerical noun phrases without a specifier, i.e. in the context # X#. The great majority of nouns belong to this sub-

Examples: /laan pii/	/ckae bəy/
car two	dog three
'two cars'	'three dogs'

Although general nouns typically occur in the above context, they may also occur in the context #\_XS#, where S is one of the general specifiers (4.2213).

Example: /laan pii yaan/  
 car two kind  
 'two kinds of cars'

4.212 Specific nouns are nouns which normally occur in numerical noun phrases of the pattern #\_XS#, where S is a qualitative specifier (4.2211).

Examples: /monuh bəy nēeq/	/barey pii daem/
human three person	cigarette two long-objects
'three persons'	'two cigarettes'

This class is much smaller than that of general nouns, and the fact that its members sometimes occur in informal speech without a specifier (i.e. as general nouns) may indicate that the class is decreasing in size.

Further sub-classes of specific nouns can be established on the basis of the specifiers with which they occur. The largest sub-class is that of common personal nouns, all of which co-occur with the qualitative specifier /nēeq/ 'person of ordinary estate'. Such nouns are:

1) nouns whose referent is a person

## 2) kinship terms

Example: /bɔɔŋ-pqoon pram nɛəq/

older-and-younger-siblings five person

'five brothers and sisters'

## 3) titles

Example: /lock bəy nɛəq/

gentleman three person

'three gentlemen'

4.213 Mass nouns are nouns that always occur, when counted, in numerical noun phrases of the pattern #\_XS#, where S is a quantitative specifier (4.2212). In other words, mass nouns never occur in the frame #\_X#.

Examples: /tək muey kaew/

water one glass

'a glass of water'

/baay pii caan/

rice two plate

'two plates of rice'

4.214 Names occur in typical substantive positions as topics, subjects, objects, and attributes, but they are distinguished by their occurrence as the second constituent of appositive phrases.

Examples: /tūenlee meekon/

river Mekong

'the Mekong River'

/kruu thəon/

teacher Thân

'Teacher Thân'<sup>1</sup>

---

1. Personal names also occur after titles as genitival attributes. For example, /kruu thəon/ can also mean 'Thân's teacher'; the ambiguity is resolved only in context.

#### 4.22 Specifiers

A specifier is any lexeme (other than a numeral) which occurs in post-posed construction with a numeral, i.e. in the context #X#. The resulting construct is a specifier phrase.

4.221 Noun specifiers are specifiers which may occur in specifier phrases which are attributive to noun heads, i.e. in the context #NX#.

Examples: /daəm-cheə pii daəm/	/cnaot pii sɔnlek/
tree two S-for-trees	ticket two sheet:
'two trees'	'two tickets'

Noun specifiers also occur without a noun head when the antecedent of the specifier has been mentioned, or is obvious from the context.

Examples; with the specifier /nəəq/ 'ordinary person':

/nəəq nuh/ (person that) 'that person'  
 /pii nəəq nuh/ (two person that) 'those two persons'  
 /nəəq thum nuh/ (person tall that) 'that tall person'

4.2211 Qualitative specifiers are specifiers which have a special semantic relationship with a group of nouns. Most qualitative specifiers occur only as specifiers and define the class. The class is small and closed, although the following list may not be complete.

- 1) /nəəq/ 'persons of ordinary estate'
- 2) /qɔŋ/ 'priests; Buddha images; holy persons'
- 3) /prəəh-qɔŋ/ 'royal persons'



- 5) /tue/ 'letters of the alphabet; characters of a play'
- 6) /kröop/ 'seeds, grains, pellets'
- 7) /dom/ 'pieces, lumps'
- 8) /sɔnlək/ 'thin sheets'
- 9) /plae/ 'fruits'
- 10) /chap/ 'individual copies, letters, newspapers'
- 11) /sɔsay/ 'sinews, threads'
- 12) /phaen/ 'flat cakes'
- 13) /kbaal/ 'volumes of books; livestock'
- 14) /ruup/ 'pictures, images, shapes'
- 15) /snet/ 'hands of bananas'
- 16) /prɔdap/ 'instruments, tools'
- 17) /krɛəŋ/ 'motors, machines'

Qualitative specifiers frequently occur as heads of noun compounds. Examples:

/nəəq-proh/

person + male

'man'

/daem-chee/

long-slender-object + wood

'tree'

4.2212 Quantitative specifiers are specifiers which divide the referents of nouns into specific quantities or manners of marketing. Most members of the class occur also as nouns. The class is as large as the number of nouns denoting containers or agglomerations in the language. Examples:

/srəw muey təw/

unhusked-rice:one bushel

/biyəe muey dəop/

beer one bottle

/trøy muøy kontuy/

fish one tail

'a string of fish'

4.2213 General specifiers are specifiers which occur after a wide range of nouns. Examples:

/mhoop pii yaan/ (food two kinds) 'two kinds of food'

/sbaek-cæŋ muøy kuu/ (shoes one pair) 'a pair of shoes'

/ptēŋ pii knaat/ (house two size) 'two sizes of houses'

4.222 Verb specifiers occur in the context #VX#, and divide the action of the verb into phases or occurrences.

Examples: /pǒet bøy cum/

encircle three circumambulations

'to go around three times'

/way bøy qonluun/

hit three strokes-of-a-mallet

'to hit three times (with a mallet)

Verb specifiers differ from noun specifiers in that they never occur in construction with a noun head, and from independent specifiers in that they never occur independently of a verb head in first reference. The class is small and probably closed, although the following list may not be complete.

1) /dooŋ/ 'times, occasions'

2) /lœk/ 'attempts, occasions'

3) /cum/ 'revolutions'

- 5) /kambet/ 'slashes, strokes (of a knife)'  
 6) /trɔlɔp/ 'rotations, ever-turnings'  
 7) /qɔnluuŋ/ 'strokes (of a hammer or mallet)'  
 8) /mat/ 'utterances, mouthfuls'  
 9) /tɨk/ 'rounds, heats (of a contest)'  
 10) /wǎəŋ/ 'circles, revolutions'  
 11) /lbaək/ 'excursions, distances'  
 12) /lbəŋ/ 'naps, periods of sleep'

4.223 Independent specifiers are specifiers which occur in numerical constructions of the pattern #X#, independently of a noun or verb head. Such specifiers are units of time, money, or distance.

Examples:

/piɨ tɲay tɨət<sup>↑</sup> kñom tow pnum-piñ<sup>↓</sup>./'

two day more I go Phnom-Penh

'I'm going to Phnom Penh in two days.'

/kñom mean dɔp riel<sup>↓</sup>./'

I have ten riel

'I have ten riels.'

/yæŋ daə pram kiloo-maət<sup>↓</sup>./'

we walk five kilometer

'We walked five kilometers.'

#### 4.32 Pronouns

Pronouns are noun substitutes which function as topics, subjects, objects, and attributes, but which do not occur as heads of numerical phrases.

4.231 Personal pronouns are noun substitutes whose referents are persons. Personal pronouns are non-specific as to gender and number, although plurality can be specified by adding one of the partitive pronouns (4.234), such as /tēəŋ-qoh/ 'all', to the personal pronoun. Personal pronouns form reflexive pronoun compounds with the reflexive pronoun /qaen/ 'oneself'.  
Example: /kñom-qaen/ 'I myself'

Although the class of personal pronouns per se is quite limited, it is supplemented by the use of titles, kinship terms, and names in pronominal function. The forms /nēəq/ and /look/ occur also as titles, but the frequency of their use as common 2nd-person pronouns seems to justify their inclusion in the inventory of personal pronouns as well.

1st- and 2nd-person pronouns are context-oriented, so that the choice of a pronoun has many semantic implications. The following definitions are only approximate. When allomorphs occur they are listed in descending order of formality.

##### 4.2311 1st-person pronouns

1. /kñom/ (general, polite)
2. /qañ/ (between intimate friends, superior to inferior, or adult to child; otherwise insulting)

3. /yæŋ/ (singular or plural exclusive when used by superior to inferior; plural inclusive when used among intimates)
4. /yæŋ-kñom/ (subservient, inferior to superior)
5. /qaæŋ/ (between intimate friends, contrastive connotation)
6. /knæə/ (intimate friends, singular or plural inclusive)
7. /kñom-prěeh-baat/ }  
    /kñom-prəbaat/ } (inferior to superior, respectful or  
    /kñom-baat/ } extremely formal)
8. /kñom-prěeh-kaqrunaa/ }  
    /kñom-kaqrunaa/ } (layman to priest, inferior to  
    /kñom-kenaa/ } superior of exalted rank)
9. /qaatmaa-pheep/ }  
    /qaatmaa/ } (priest to layman)

#### 4.2312 2nd-person pronouns

1. /look/ (formal, polite, inferior to superior)
2. /něeq/ (between equals, or superior to inferior)
3. /qaæŋ/ (between intimate friends, or superior to inferior)
4. /kluən/ (between intimate friends, reflexive connotation)
5. /qaa-qaæŋ/ (derogatory, good-natured insult between friends, adult to child)
6. /prěeh-dac prěeh-kun/ (inferior to superior of exalted rank, or to venerable priest)  
    /prěeh-daccěeh-kun/

4.2313 3rd-person pronouns are context-oriented only if the referent is present. Otherwise the choice of pronoun depends on the absolute status of the referent outside the face-to-face

1. /kōet/ (respectful, younger of elder, inferior of superior)
2. /kee/ (informal, other, exclusive)

/kee/ also occurs as an indefinite pronoun:

/kee thaav lqoo nah↓./

'they say beautiful very

'They say [it's] very beautiful.'

3. /wee/ (superior of inferior, adult of child; otherwise insulting)

/wee/ also occurs as a substitute for non-personal nouns, e.g.: /ckae nuht wee kcɛl nah↓./

dog that it lazy very

'That dog, it's very lazy.'

A further use of /wee/ is as an expletive pronoun:

/mae↑ wee kdaw nah!./

interjection-of-annoyance it be-hot very

'Say, it's really hot!'

4.232 Indefinite pronouns are pronouns whose referents are indefinite. They typically occur as objects in both affirmative and negative clauses. The following examples involve the indefinite pronoun /qwey/ 'something, anything'.

Affirmative: /kñom tɛñ qwey haey↑ trɔlɔp tow ptōeh↓./

I buy something perfective return go house

'After I buy something, [I'm] going back home.'

Negative: /kñom mɛn tɛñ qwey tee↓./

I negative buy anything emphatic-particle

The class has four members, the first member having three allomorphs:

- 1) /qwey ~ sqey ~ qəy/ 'something, anything'
- 2) /nəeq-naa/ 'someone, anyone'
- 3) /naa/ 'somewhere, anywhere'
- 4) /qaanaa ~ qanaa/ 'whichever one, any one'

Reduplicated indefinite pronouns occur in affirmative utterances with a connotation of variety or generality.

Example: /dæ tow məel qwey-qwey haey↑ troləp tow sənthaakeə↓./  
 walk go see various-things already, return go hotel  
 'When [I had] walked around to see various things,  
 [I] went back to the hotel.'

Indefinite pronouns are non-specific as to number, but singular number can be specified by adding the numeral /muəy/ 'one' to the indefinite pronoun:

Example: /bæ look cəy tɛñ qwey-muəy↑ qəncəcñ tow↓./  
 if you want buy something-one, invite final-particle  
 'If you want to buy some (one) thing, go ahead.'

Plurality may also be specified by adding the partitive pronoun /klah/ 'some' to the indefinite pronoun.

Example:

/kñom tɛñ qwey-klah haey↑ kət tow ñam baay↓./  
 I buy something-plural already, plan go eat rice  
 '[After] I buy some things, I plan to go eat.'

Indefinite pronouns also occur with adjectival function after nouns.

Example: /look kit tɛ̃n pə qwey koo baan ʌ./

you think buy color whatever then able

'You can buy whatever color you like.'

#### 4.233 Interrogative pronouns

The class of interrogative pronouns has the same membership as the class of indefinite pronouns (4.232), but interrogative pronouns may occur in utterance-final position, while indefinite pronouns do not. As interrogative pronouns, the forms have the following meanings:

- 1) /qwey/            'what?'
- 2) /nɔ̃ɔq-naa/      'who?'
- 3) /naa/            'where?'
- 4) /qaanaa/        'which one?'

Examples: /look cəŋ tɛ̃n qwey↑./

you want buy what

'What do you want to buy?'

/look maok rɔ̃k nɔ̃ɔq-naa↑./

you come seek who

'Whom did you come to see?'

/look tow naa↑./

you go where

'Where are you going?'

/look cəŋ tɛ̃n qaanaa↑./

you want buy which-one



All of the above except /naa/ also substitute for noun subjects, e.g.:

/nǎəq-naa maok↑./

who come

'Who's coming?'

Interrogative pronouns also occur with adjectival function after nouns, e.g.:

/loək səmrac-cət nǎŋ tǎñ pəə qwey↑./

you settle-heart future buy color what

'What color did you decide to buy?'

4.234 Partitive pronouns are substitutes whose referents are amounts or quantities. They differ from indefinite pronouns in that they are specific as to number, and do not occur as interrogative pronouns. Partitive pronouns typically occur as substantive objects in affirmative utterances.

Example: /kǎom yoək tǎəŋ-qəh↓./

I take all

'I'll take all [of them].'

The class includes at least the following members:

- |                    |                |
|--------------------|----------------|
| 1) /tǎəŋ-qəh/      | 'all'          |
| 2) /tǎəŋ-qəh-knee/ | 'entire group' |
| 3) /klah/          | 'some'         |
| 4) /bontəc/        | 'a little'     |
| 5) /craən/         | 'much, many'   |

4.235 Relative pronouns are pronouns which occur as heads of attributive phrases which then fill the typical substantive positions of topic, subject, and object. The following examples involve the relative pronoun /dael/ 'that which, those which'.

As topic: /dael lqoo↑ kñom lūeq qoh haey↓./  
 those-which pretty I sell completely already  
 'I've already sold all the pretty ones.'

As subject: /dael lqoo tlay nah↓./  
 those-which pretty be-expensive very  
 'The pretty ones are very expensive.'

As object: /kñom cəŋ tiñ dael lqoo↓./  
 I want buy that-which pretty  
 'I want to buy a pretty one.'

The class has only two members:

1. /dael/ 'that, that which, those which'
2. /deñ/ 'that, that which, those which (colloquial)'

#### 4.24 Quantifiers

Quantifiers are defined by their occurrence in the context #N\_S#. Quantifiers are classified as numerical and non-numerical.

#### 4.241 Numerical quantifiers

Numerical quantifiers (or simply numerals) are quantifiers whose referents are numbers. Cambodian has twelve simple numeral lexemes, as follows:

- |                  |                               |
|------------------|-------------------------------|
| 1) /muəy/ 'one'  | 7) /roəy/ 'hundred'           |
| 2) /pil/ 'two'   | 8) /pōen/ 'thousand'          |
| 3) /bəy/ 'three' | 9) /mēen/ 'ten-thousand'      |
| 4) /buən/ 'four' | 10) /saen/ 'hundred-thousand' |
| 5) /pram/ 'five' | 11) /lēen/ 'million'          |
| 6) /dop/ 'ten'   | 12) /kaot/ 'ten-million'      |

The following numerals are complex lexemes:

- |                             |           |
|-----------------------------|-----------|
| 13) /məphây/ <sup>1</sup>   | 'twenty'  |
| 14) /saam-səp/ <sup>2</sup> | 'thirty'  |
| 15) /sae-səp/               | 'forty'   |
| 16) /haa-səp/               | 'fifty'   |
| 17) /hok-səp/               | 'sixty'   |
| 18) /cət-səp/               | 'seventy' |
| 19) /paet-səp/              | 'eighty'  |
| 20) /kaw-səp/               | 'ninety'  |

---

1. The lexeme /məphây/ 'twenty' sometimes occurs in the form /muəy-phây/, possibly by analogy with the class of multiplicands (see below), but it is never multiplied by any numeral other than 'one'. /məphây/ may be a residual form of an old system of multiplicands which included the partitive specifiers /dəmboə/ 'a foursome', /ploon/ 'a forty-lot', and /slək/ 'a 400-lot' which are now limited to specifying lots of fruits or vegetables.

2. Examples 14-20 above are composed of the bound morphemes '3-9' and the bound multiplicand /-səp/ 'ten'. These forms are apparently borrowed in toto from Thai, but they are proven

All other numbers are represented by sequences of the above numerals, in either additive or multiplicative construction. The basic pattern in such constructions is as follows:

Any numeral is in additive construction with a following smaller numeral.

Any numeral is in multiplicative construction with a following larger numeral.

The following additive numeral constructions occur with stress and juncture patterns typical of compounds, and are thus analyzed as numerical compounds:

- |   |              |
|---|--------------|
| 21) /prammuey/                              | 'six'        |
| 22) /prampii ~ prampɪl/                     | 'seven'      |
| 23) /prambəy/                               | 'eight'      |
| 24) /prambuen/                              | 'nine'       |
| 25) /dɔp-muey/ ~ /muey-dɔndɔp/ <sup>1</sup> | 'eleven'     |
| 26) /dɔp-pii/ ~ /pii-dɔndɔp/                | 'twelve'     |
| 27) /dɔp-prammuey ~ prammuey-dɔndɔp/        | 'sixteen'    |
| 28) /dɔp-prampɪl ~ prampɪl-dɔndɔp/          | 'seventeen'  |
| 29) /mɛphɪy-muey/                           | 'twenty-one' |
| 30) /saam-sɛp-prammuey/                     | 'thirty-six' |

In examples 22 and 25-28 above, the second form is the more colloquial.

---

1. The alternative forms for the numerals 11-19 (examples 25-28), which are formed with a derivative of /dɔp/ 'ten', may be the original forms of the numerals 10-90 which were re-

All other numbers are represented by sequences of the above lexemes in syntactic construction.<sup>1</sup> Examples 7-12 above occur as multiplicands in multiplicative construction after the numerals 'one' to 'nine', e.g.:

31) /pram roey/ (5 x 100) 'five hundred'

32) /prambey pōen/ (8 x 1,000) 'eight thousand', etc.

When the multiplier is /muey/ 'one', it usually occurs as the bound multiplicative allomorph /mə-/ (see 3.3122), e.g.:

/məroey/ 'one hundred'

/məpōen/ 'one thousand', etc.

Numeral lexemes in additive construction are typically followed by rising phrase contour /↑/, e.g.:

/pi saen↑ pram məen↑ buen pōen↑ bəy roey↑ haa-səp-pram↓./

200,000 + 50,000 + 4,000 + 300 + 55

'254,355'

The lexeme /soon/ is a noun meaning 'zero', not a numeral, since it does not occur before specifiers. It is used, however, in reading numbers, such as a lottery ticket number:

/prammuey↑ buen↑ soon↑ soon↑ pram↑ muey↓./

'Six, four, zero, zero, five, one.'

---

1. They are thus dealt with on the level of syntax (see 5.4 Numerical constructions). These constructions are also illustrated here, however, in order to provide an overall view of the numerical system.

4.242 Non-numerical quantifiers occur in the context #N\_S#, as do numerals, but are indefinite or partitive in number. The class is small and closed.

- 1) /ponmaan/ 'how many, so many'
- 2) /craen/ 'many'
- 3) /konlah/ 'half'
- 4) /plaay/ 'a fraction'
- 5) /nee-nee/ 'various'

Examples:

/look meən bəʔŋ-pəʔoon ponmaan nəəqʰ./

you have older-and-younger-siblings how-many person

'How many brothers and sisters do you have?'

/kʰom meən bəʔŋ-pəʔoon craen nəəqʰ./

I have older-and-younger-siblings many person

'I have many brothers and sisters.'

/tiɪ-nuh mən meən ponmaan nəəq teeʰ./

there not have so-many person negative-final-particle

'There weren't so many people there.'

/ponmaan/ and /craen/ share with the numerals 'one' to 'nine' the privilege of occurring in the multiplier position before multiplicands (4.241, examples 7-12).<sup>1</sup>

When /konlah/ 'half' occurs before a specifier it has the meaning 'half a', e.g.:

/barey kɔnlah kɔncɔp/

cigarette half package

'half a pack of cigarettes'

When it occurs after a specifier, it has the additive meaning 'and a half', e.g.:

/barey muey kɔncɔp kɔnlah/

cigarette one package half

'a pack and a half of cigarettes'

The numeral /plaay/ 'and a fraction, and some' occurs only in additive construction after both numerals and specifiers, e.g.:

/kɔnm meen dɔp plaay riɛl↓./

I have ten and-some riels

'I have a little over ten riels.'

But: /kɔnm meen pram riɛl plaay↓./

I have five riel and-a-fraction

'I have five and a fraction riels.'

The specifier /comhiɛŋ/ 'half an object' also occurs in additive construction after other specifiers, but it is not a numeral, since it never precedes specifiers.

/praŋ pii riɛl comhiɛŋ/

money two riel half

'two-and-a-half riels'

4.25 Demonstratives

Demonstratives are defined by their absolute final position in any substantive construction. The class has only two members, each with several allomorphs.

1) /nih ~ neh ~ neŋ/ 'this/these (in sight), the referred to'

2) /nuh ~ noh ~ neŋ ~ noŋ/ 'that/those (in sight, but distant, or out of sight), the referred to'

Demonstratives occur in all the typical substantive positions:

As topic: /nih qwey↑./

this what

'What is this?'

As subject: /nih maok pii naa↑./

this come from where

'Where did this come from?'

As object: /cuey yoek nih tow caol↓./

help take this go throw-away

'Please take this [and] throw [it] away.'

As attribute: /koon-seh pii nēəq nih claat nah↓./

student two person this clever very

'These two students are very clever.'



### 4.3 Predicatives

A predicative is any lexeme which may occur in the frame /mān \_\_\_ tee ./, where /mān/ is a negative auxiliary (4.54) and /tee/ is a negative final sentence particle (4.81). In other words, a predicative is any lexeme which may be negated.

A predicative may occur as the sole lexemic constituent of a predication. A predication is any verb or verb phrase, with or without a subject or topic, which can occur as an isolated utterance. A predicate is any verb or verb phrase in any occurrence as the complement of a subject or topic. Predicatives also fill typical substantive positions as topics, subjects, or objects. Any lexeme which functions both as a substantive and a predicative is a predicative; any lexeme which occurs only as a substantive is a substantive.

#### 4.31 Adjectival verbs

An adjectival verb is any predicative which may precede the intensifying adjective /nah/ 'very'. Adjectival verbs never occur in construction with a substantive object. Besides occurring as predicatives, adjectival verbs also occur as attributes in attributive constructions with both noun and verb heads.

As predicate: /sreɣ nuh ləʔəʔ./

girl that pretty

'That girl is pretty.'

As noun attribute: /sreɣ ləʔəʔ nuh<sup>h</sup> mət kñom<sup>h</sup>./

As verb attribute: /sɾəy nuh sɔsɛɛ lqɔɔ↓./

girl that write pretty

'That girl writes prettily.'

#### 4.32 Active verbs

Active verbs are predicatives which do not precode the intensifying adjective /nah/ 'very'. Active verbs may be preceded by modal verbs (4.33), while adjectival verbs may not.

##### 4.321 Transitive verbs

A transitive verb is any active verb which may occur in construction with a substantive object. Transitive verbs also occur with intransitive and adjectival function. Examples:

Transitive: /kñom bæɕ tweɛ↓./

I open door

'I open/opened the door.'

Intransitive: /tweɛ kɔmpuŋ bæɕ↓./

door in-process-of open

'The door is opening.'

Adjectival: /tweɛ bæɕ naey↓./

door open perfective-particle

'The door is open.'

Certain transitive verb compounds typically occur as sole lexemic constituents of utterances, e.g.:

/cumreep/ 'to inform' + /sue/ 'to ask'

> /cumreep-sue/ 'greetings'

/soom/ 'to beg' + /tooh/ 'punishment'

> /soom-tooh/ 'pardon'

Such verbs, however, do occur with subjects and objects, e.g.:

/koon traw soom-tooh kruu↓./

child must beg-pardon teacher

'You (child) must beg the teacher's pardon.'

#### 4.322 Intransitive verbs

An intransitive verb is any active verb which never precedes a substantive object. Such verbs describe self-motivated action.

Examples: /dæek/ 'lie down'

/tlæeq/ 'fall'

/baek/ 'break'

Many intransitive verbs serve as bases for transitive verb derivatives which occur with objects. Following are the transitive derivatives of the three intransitive verbs cited

above: /pdeek/ 'to lay (something or someone) down'

/tumlæeq/ 'to drop (something)'

/bombaek/ 'to break (something)'

#### 4.33 Modal verbs

A modal verb is any predicative which occurs in construction with, and in some way qualifies or limits, a following active verb.

Examples: /kñom ceh niyeey pheesaa cen↓./

I know-how-to speak language Chinese

/kōet trəw tow ptēəh↓./

he must go house

'He has to go home.'

Modal verbs always follow auxiliaries (4.6), including the negative auxiliary /m̄n/ which defines the class of predicatives. Example:

/k̄nɔm m̄n trəw tow tee↓./

I neg. must go negative-final-particle

'I don't have to go.'

Although some modal verbs also occur as transitive verbs which take substantive objects, an object never intervenes between a modal verb and the verb it modifies.

Example: /koon cwey twəe-kaa mdaay↓./

child help work mother

'The child helps [his] mother work.'

If a substantive object intervenes, the first verb is a transitive verb, not a modal verb, as in the following example:

/koon tow psaa t̄ñ trəy↓./

child go market buy fish

'The child is going to the market to buy fish.'

Several modal verbs may occur in a sequence, each one qualifying the succeeding modal verb. A sequence of three has been observed:

/k̄nɔm m̄n dael baan riən niyeey phəsaa cən↓./

I neg. have-ever get-to learn-to speak language Chinese

'I've never had the chance to learn to speak Chinese.'

The positional sub-classes of modal verbs have not yet been fully analyzed. For the present, the following two sub-classes are set up: 1) specific modal verbs, which occur only as modal verbs; and which define the class, and

2) general modal verbs, which follow specific modal verbs, and which occur both as modal verbs and as transitive verbs.

The classes are small and closed, although the following lists may not be complete.

#### 4.331 Specific modal verbs

- |              |                         |
|--------------|-------------------------|
| 1) /proem/   | 'to agree to'           |
| 2) /taen/    | 'to be accustomed to'   |
| 3) /kröen/   | 'to be enough to'       |
| 4) /cön/     | 'to wish to'            |
| 5) /tlöep/   | 'used to, to have ever' |
| 6) /heem/    | 'to dare to'            |
| 7) /pröñap/  | 'to hurry to'           |
| 8) /qaac/    | 'to be likely to'       |
| 9) /kue/     | 'ought to'              |
| 10) /rowuel/ | 'to be busy at'         |
| 11) /khom/   | 'to strive to'          |
| 12) /dael/   | 'to have ever'          |

#### 4.342 General modal verbs

- |           |                  |
|-----------|------------------|
| 1) /ceh/  | 'to know how to' |
| 2) /riep/ | 'to prepare to'  |
| 3) /traw/ | 'to have to'     |
| 4) /now/  | .....            |

- 5) /cool-cət/ 'to like to'
- 6) /trəw-kaa/ 'to need to'
- 7) /cəp/ 'to begin to'
- 8) /pdaəm/ 'to begin to'
- 9) /cəp-pdaəm/ 'to begin to'
- 10) /laeŋ/ 'to quit'
- 11) /chup/ 'to stop'
- 12) /totuəl/ 'to take responsibility for'
- 13) /cuəy/ 'to help to'
- 14) /khəŋq/ 'to fail to'
- 15) /kət/ 'to plan to'
- 16) /ləe/ 'to try to'
- 17) /səm/ 'to ask to'
- 18) /baən/ 'to have been able to, to get to'
- 19) /meən/ 'to have to'
- 20) /qaanet/ 'to be good enough to'
- 21) /khaan/ 'to miss, fail to'
- 22) /prəŋ/ 'to be determined to'
- 23) /mən-bac/<sup>1</sup> 'not necessary to'
- 24) /cam-bac/<sup>1</sup> 'necessary to'
- 25) /bəmroŋ/ 'to intend to'
- 26) /qəŋceəŋ/ 'to invite to'
- 27) /qət/ 'to lack, miss'

#### 4.34 Directional verbs

Directional verbs occur after active verbs which are non-specific as to direction or goal, and specify the direction or orientation of the initiated action.

The class is small and closed.

- 1) /təw/ 'to go; away, toward (away from speaker)'
- 2) /məok/ 'to come; this way, toward (in speaker's direction)'
- 3) /coh/ 'to go down; down'
- 4) /ləəŋ/ 'to go up; up, increasingly'
- 5) /cool/ 'to enter; in, into'
- 6) /cəñ/ 'to go out; out'
- 7) /taam/ 'to follow; along, following'
- 8) /now/ 'to remain; still, at'
- 9) /qaoy/ 'to give; as a favor, for'
- 10) /cuun/ 'to give; as a favor, for (elegant)'

Examples: /qəwpúk mən-tōen trəlóp məok↓./

father not-yet return come

'Father hasn't come back yet.'

Substantive objects intervene between an initiating verb and its directional verb attribute.

/yók hóp nín tów↓./

take box this go

'Take this box away.'

When a directional verb is followed by a substantive object, it has a prepositional function, and carries the secondary stress /' / characteristic of prepositions (4.71), rather

/yóok hóp nín tòw ptéeh/./

take box this go house

'Take this box to the house.'

#### 4.35 Completive verbs

Completive verbs occur in post-posed construction with, and express the completion, expected result, or possibility of achievement of, verbs which initiate an action. In negative expressions, the negative auxiliary always follows the initial verb, as opposed to coordinate or attributive verb sequences, in which the negative precedes the first verb of the sequence.

Completive verbs are of two kinds: 1) specific completive verbs, which have a resultative relationship with a specific initiating verb, and 2) general completive verbs, which occur after a large number of verbs, and express the possibility of achievement, or the completion, of the initiated action. The negative expression of either class implies failure or inability to achieve the initiated action.

The following examples involve the specific completive verb /lūeq/ 'to sleep':

/yup mǎn' k'nom deek lūeq sɔpbaay nah/./

night last, I lie-down sleep pleasant very

'Last night, I slept very well.'

Neg.: /yup mǎn' k'nom deek mǎn lūeq səh/./

night last, I lie-down neg. sleep at-all

did not sleep at all last night



/yóok hép nín tòw ptéeh/./

take box this go house

'Take this box to the house.'

#### 4.35 Completive verbs

Completive verbs occur in post-posed construction with, and express the completion, expected result, or possibility of achievement of, verbs which initiate an action. In negative expressions, the negative auxiliary always follows the initial verb, as opposed to coordinate or attributive verb sequences, in which the negative precedes the first verb of the sequence.

Completive verbs are of two kinds: 1) specific completive verbs, which have a resultative relationship with a specific initiating verb, and 2) general completive verbs, which occur after a large number of verbs, and express the possibility of achievement, or the completion, of the initiated action. The negative expression of either class implies failure or inability to achieve the initiated action.

The following examples involve the specific completive verb /lūeq/ 'to sleep':

/yup mǎn' k'nom deek lūeq sɔpbaay nah/./

night last, I lie-down sleep pleasant very

'Last night, I slept very well.'

Neg.: /yup mǎn' k'nom deek mǎn lūeq sɔh/./

night last, I lie-down neg. sleep at-all

'I didn't sleep at all last night.'

Although the following lists may not be complete, the class is probably closed.

#### 4.351 Specific completive verbs

Each specific completive verb in the following list is shown with its specific antecedent, and its special function is illustrated in both affirmative and negative expressions.

- 1) /lũeq/ 'to go to sleep'                      (/deek/ 'to lie down')  
     /deek lũeq/ 'to sleep'  
     /deek mán lũeq/ 'to fail to sleep'
- 2) /khəẽñ/ 'to see'                              (/kít/ 'to think')  
     /kít khəẽñ/ 'to understand'  
     /kít mán khəẽñ/ 'to fail to understand'  
   (/məẽl/ 'to look, watch')  
     /məẽl khəẽñ/ 'to see'  
     /məẽl mán khəẽñ/ 'to fail to see'  
   (/roek/ 'to hunt for')  
     /roek khəẽñ/ 'to find'  
     /roek mán khəẽñ/ 'to fail to find'  
   (/nək/ 'to reflect')  
     /nək khəẽñ/ 'to realize'  
     /nək mán khəẽñ/ 'to fail to realize'
- 3) /tõen/ 'to be on time'                      (/tow/ 'to go')  
     /tow tõen/ 'to catch'  
     /tow mán tõen/ 'to fail to catch, to miss'
- 4) /lĩĩ/ 'to hear'                                (/sdap/ 'to listen')  
     /sdap lĩĩ/ 'to hear'

/sdap/ can also be followed by one of the general completive verbs, /baan/ 'to be able', in which case the meaning of the expression is 'to understand'.

- 5) /phot/ 'to be clear of'                    (/cieh/ 'to avoid')  
       /cieh phot/ 'to escape'  
       /cieh mǎn phot/ 'to fail to avoid'
- 6) /ceh/ 'to know'                            (/rien/ 'to study')  
       /rien ceh/ 'to learn'  
       /rien mǎn ceh/ 'to fail to learn'
- 7) /thum/ 'to smell'                        (/het/ 'to sniff')  
       /het thum/ 'to smell'  
       /het mǎn thum/ 'to fail to smell'
- 8) /mut/ 'to pierce'                        (/caq/ 'to stab')  
       /caq mut/ 'to stab through, to perforate'  
       /caq mǎn mut/ 'to fail to pierce'
- 9) /cǒep/ 'to stick to'                    (/prǒlǒŋ/ 'to compete')  
       /prǒlǒŋ cǒep/ 'to pass (an examination)'

Although /prǒlǒŋ mǎn cǒep/ 'fail to pass' may occur, the negation of /prǒlǒŋ cǒep/ is usually expressed by another specific completive verb /tlǎeq/ 'to fall':

/prǒlǒŋ tlǎeq/ 'to fail (an examination)'

#### 4.352 General completive verbs

The initiating verbs used with the following general completive verbs are only examples of the kinds of verbs which can precede general completive verbs.

1) /baan/ 'to be able'

/tow baan/ 'can go'

/tow mǎn baan/ 'can't go'

2) /kaet/ 'to be able' occurs less generally than /baan/, and usually only in negative expressions:

/kñom maok mǎn kaet tee↓./

I come neg. able final-particle

'I can't come.'

3) /ruəc/ 'to be able, to finish' occurs in two contexts:

1) physical capability

/kñom leək tok nih mǎn ruəc↓./

I lift table this neg. able

'I can't lift this table.'

2) completion in terms of time

/kñom meəl siewphow nih mǎn ruəc↓./

I read book this neg. finish

'I can't finish reading this book.'

or: 'I'm not through reading this book.'

4) /srac/ 'to finish, complete'

/kñom twæ kaa nih mǎn-tōen srac↓./

I do work this not-yet finish

'I haven't yet finished this work.'

5) /cəp/ 'to get to the end, to complete'

/kñom meəl kasaət nih mǎn cəp↓./

I read newspaper this neg. complete

'I didn't finish reading this newspaper.'

6) /khaan/ 'to lack, fail, miss'

/look trow tow mɛn khaan↓./

you must go neg. fail

'You must go without fail.'

#### 4.4 Adverbials

Adverbials are lexemes which occur as attributes of entire predications.

##### 4.41 General adverbials

General adverbials are adverbials which either precede or follow the constituent which they modify. As preposed attributes, adverbials carry greater emphasis than as post-posed attributes, and are typically set off from the remainder of the utterance by the phrase contour /↑/.

Preposed: /thōəmmədaa↑ kñom maok ñam baay tii-nih↓./

usually I come eat rice here

'Usually, I come here to eat.'

Post-posed: /kñom maok ñam baay tii-nih thōəmmədaa↓./

I come eat rice here usually

'I usually come here to eat.'

General adverbials modify the constituents with which they co-occur as to mode, place, or time, and are thus classed

as:

1) modal adverbials

2) locative adverbials

3) temporal adverbials

No more than one member from each class may occur in a single

is usually 1-2-3 in preposed position, and 3-2-1 in postposed position. Typical members of the three classes are listed below.

#### 4.411 Modal adverbials

- |              |                        |
|--------------|------------------------|
| 1) /qoñceŋ/  | 'therefore'            |
| 2) /docceŋh/ | 'therefore, like that' |
| 3) /haey/    | 'then, therefore'      |

Certain prepositional and noun phrases typically occur with modal adverbial function. Examples:

- |                           |                       |
|---------------------------|-----------------------|
| 1) /bae qoñceŋ/           | 'in that case'        |
| 2) /bae yaŋ-naa koo-daoy/ | 'however that may be' |
| 3) /haet nih/             | 'for this reason'     |

#### 4.412 Locative adverbials

- |               |            |
|---------------|------------|
| 1) /tii-nih/  | 'here'     |
| 2) /tii-nuh/  | 'there'    |
| 3) /khaŋ-muk/ | 'in front' |

Certain prepositional and noun phrases also occur with locative adverbial function. Examples:

- |                    |                        |
|--------------------|------------------------|
| 1) /konlaeŋ nuh/   | 'there, in that place' |
| 2) /boeriween nih/ | '[in] this region'     |
| 3) /knoŋ srek nuh/ | 'in that country'      |

#### 4.413 Temporal adverbials

- |                          |            |
|--------------------------|------------|
| 1) /qeylew ~ qeylew-nih/ | 'now'      |
| 2) /sqaek/               | 'tomorrow' |



#### 4.43 Indefinite adverbials

The class of indefinite adverbials has the same membership as the class of interrogative adverbials (4.42), but they never occur in utterance-final position; as do interrogative adverbials. They occur in final position only in non-final clauses, and are followed by a final sentence particle in simple predications.

Examples: /lɔok tow dooc-mdɛc↑ trɛw tow dɔmrɔŋ↓./

you go however must go right-away

'However you go, [you] must go right away.'

/kʰɛm mɛn kleən pɔnmaan tɛɛ↓./

I neg. be-hungry to-any-extent final-particle

'I'm not so hungry.'

The forms are listed below with their indefinite meanings:

- |                    |                            |
|--------------------|----------------------------|
| 1) /dooc-mdɛc/     | 'however'                  |
| 2) /yaan-naa/      | 'however'                  |
| 3) /yaan-mɛc/      | 'however'                  |
| 4) /qɔŋkal/        | 'whenever (in the future)' |
| 5) /pii-qɔŋkal/    | 'whenever (in the past)'   |
| 6) /kaal-naa/      | 'whenever (in the future)' |
| 7) /pii-kaal-naa/  | 'whenever (in the past)'   |
| 8) /pɔnmaan/       | 'to any extent'            |
| 9) /ponnaa/        | 'to any extent'            |
| 10) /smae-maan/    | 'to any extent'            |
| 11) /qɔmbaal-maan/ | 'to any extent'            |



#### 4.5 Adjectives

Adjectives are lexemes which occur as post-posed modifiers of nouns, verbs, or other adjectives, and which never occur as substantives or predicatives.

Adjectives are divided into three sub-classes:

- 1) general adjectives
- 2) imitative adjectives
- 3) ordinal numeral adjectives

##### 4.51 General adjectives

This class is large and open-ended, and includes all adjectives which do not belong to classes 2 and 3 above. Adjectival verbs (4.31) also function like adjectives of this group, in addition to their predicative function. General adjectives are divided into the following three sub-classes:

- 1) Adjectives which modify either nouns or verbs

Noun modifier: /kñom meən praŋ bontec↓./

I have money a-little

'I have a little money.'

Verb modifier:

/twæ-kaa bontec↑ leən bontec↑ sruəl cœŋ↓./

work a-little play a-little comfortable more

'To work a little and play a little is more agreeable.'

- 2) Adjectives which modify only verbs and other adjectives

Adjectives of this class have adverbial function, but differ from the class of adverbials (4.4) in that they do

not occur as preposed modifiers, and are always attributive to a preceding verb or adjective, rather than to an entire predication. Many reduplicative compounds, especially those involving vowel ablaut (3.521) belong to this group. Examples: /monuh cah daə totreet-totroot↓./

man old walk staggeringly

'The old man walked unsteadily.'

Frequently up to three such adjectives occur in coordinate construction with an intensified meaning, as follows:

/kneej leej kneə teen-taan roseem-rosaam rowlin-roweem tow↓./

children play together skittishly boisterously confusedly on

The children played on together [in a] skittish, boistrous,

and confused [manner].'

(All of these adjectives are descriptive of unstructured behavior of one kind or another. The glosses are approximate.)

### 3) Adjectives which occur only as modifiers of nouns.

The class is quite small and may be limited to the following members:

- |                      |                  |
|----------------------|------------------|
| 1) /qaetiet/         | 'other'          |
| 2) /qaetiet-qaetiet/ | 'various other'  |
| 3) /nimuey/          | 'each'           |
| 4) /nimuey-nimuey/   | 'each in turn'   |
| 5) /dotiy/           | 'other, foreign' |
| 6) /dodaal/          | 'same'           |

Modifiers which describe the size, shape, or color of their noun heads are usually adjectival verbs.

#### 4.52 Imitative adjectives

Imitative adjectives are onomatopoeic adjectives which occur after verbs and after the noun /soo/ 'sound'. The class is large and open-ended, and the great majority of its members are repetitive reduplicatives (3.511). Such adjectives are usually accompanied by a special imitative intonation, preceded, and if non-final, followed, by pause. Examples: /kee bañ kmeə:chan:chan: qoñceŋ tow!/  
 they shoot together bang bang like-that continuative  
 'They were firing at each other [with a  
 'bang! bang!' (thus).

/pdey-propuən clüeh kmeə liə soo: kəkaok-kəkaok:!/

husband-wife argue together hear sound yakkity-yak

'The couple were arguing together (with a) 'yakkity-yak' sound.'

#### 4.53 Ordinal numeral adjectives

Numerals, as well as the non-numerical quantifier /ponmaan/ 'how many', combine with the ordinalizing prefix /tii-/ to form ordinal numeral adjectives. Such compounds are not numerals, since they never occur before specifiers. Examples: /koon-prəh tii-bey/  
 son third  
 'the third son'  
 /təy tii-ponmaan/  
 day how-many' th

#### 4.6 Auxiliaries

Auxiliaries are lexemes which qualify a following verb or modal verb, but which never occur as predicatives, as do modal verbs. Auxiliaries are defined by the following criteria:

- 1) They precede modal verbs
- 2) They never occur as predicatives
- 3) They are never negated
- 4) They never precede substantive objects

Many compound auxiliaries include the preposition /tae/ 'but', with secondary stress, as second element. In some auxiliaries /tae/ is optional, and has an intensifying function:

Without /tae/: /kñom tæp maok pii ptěeh sãm↓./

I just come from house Sim

'I've just come from Sim's house.'

With /tae/: /kñom tæp-tae maok pii ptěeh sãm↓./

'I've just this minute come from Sim's house.'

In other auxiliaries, however, /tae/ is a derivational element which derives auxiliaries from verbs:

Without /tae/: /kee ceh niyeey barañsæh↓./

he knows speak French

'He knows how to speak French.'

With /tae/: /kæ ceh-tae niyeey barañsæh↓./

he always speak French

'He always speaks French.'

The copulative /cee/ 'is' also occurs as an optional second element in some compound auxiliaries. Its function seems to be primarily one of signifying greater formality or deliberation, e.g.:

/qewpuk kñom muk tow daeʋ./

father my likely-to go too

'My father is likely to go too.'

But: /qewpuk kñom muk-see tow daeʋ./

'It is quite likely that my father will go too.'

4.61 General auxiliaries are auxiliaries which may also occur with adverbial function preceding the subject of the predication they modify. The class is closed, although the following list may not be complete.

- |                   |                         |
|-------------------|-------------------------|
| 1) /soom/         | 'please'                |
| 2) /coo/          | 'go ahead and'          |
| 3) /craen(-tae)/  | 'mostly'                |
| 4) /comnam-tae/   | 'usually'               |
| 5) /taen-tae/     | 'usually'               |
| 6) /traw-tae/     | 'necessarily'           |
| 7) /romeen(-tae)/ | 'usually'               |
| 8) /sot(-tae)/    | 'all without exception' |
| 9) /küen(-tae)    | 'usually'               |
| 10) /muk(-tae)    | 'probably'              |
| 11) /srap(-tae)/  | 'suddenly'              |
| 12) /kue-tae/     | 'properly'              |

- 14) /muk(-cəə)/ 'probably'  
 15) /tōəl-tae/ 'without exception, entirely'  
 16) /məc(-kəə)/ 'why?'  
 17) /mdəc(-kəə)/ 'why?'  
 18) /məc....məc/ 'if...then why?'  
 19) /mdəc...mdəc/ 'if... then why?'

Examples 18 and 19 above are parallel auxiliaries. They occur in constructions consisting of one or more dependent clauses, followed by a main clause, and signal the fact that the main clause is a rhetorical question, e.g.:

/tʉmrōəm qəwpuk weə↑ mdəc weə mɪn klaac\_ cəh

cəh↓ nēeq dotɹy↑ mdəc weə klaac\_./

if-even father his if he neg. respect

tell-me person other then-why he respect

'If he doesn't respect even his father, then tell me, why

[should he] respect anyone else?'

4.62 Preverbal auxiliaries are auxiliaries which always precede verbs. The class is closed, although the following list may not be complete.

- 1) /təep(-tae)/ (to have just'  
 2) /stəə-tae/ 'on the point of'  
 3) /cɹt/ 'nearly'  
 4) /kəmpuŋ(-tae)/ 'in the process of'  
 5) /səŋ(-tae)/ 'almost all'  
 6) /kən-tae/ 'increasingly'  
 7) /cəh-tae/ 'always'

- |                   |                         |
|-------------------|-------------------------|
| 8) /rit(-tae)/    | 'increasingly'          |
| 9) /kröən-tae/    | 'barely'                |
| 10) /riəp-tae/    | 'almost'                |
| 11) /now-tae/     | 'still, continually'    |
| 12) /rowuəl-tae/  | 'engrossed in'          |
| 13) /khəm-tae/    | 'try only to'           |
| 14) /compüeh-tae/ | 'especially'            |
| 15) /mēən-tae/    | 'have only to'          |
| 16) /saən/        | 'extremely'             |
| 17) /kəə/         | 'so, then, accordingly' |

The following two examples occur only as compound negative auxiliaries:

- |                |                       |
|----------------|-----------------------|
| 18) /mān-tōən/ | 'not yet'             |
| 19) /mān-səw/  | 'hardly, not so very' |

4.63 The incipient auxiliary /nāŋ/ 'will, just about to' precedes negative auxiliaries, but follows all other auxiliaries, e.g.: /kñom cāt nāŋ mān towʔ./

I almost future negative go

'I almost didn't go.'

4.64 Negative auxiliaries follow all other auxiliaries.

Their occurrence immediately preceding verbs defines the class of predicatives. The class has four members.

- |          |                    |
|----------|--------------------|
| 1) /mān/ | 'not (general)'    |
| 2) /qət/ | 'not (colloquial)' |
| 3) /pum/ | 'not (literary)'   |

#### 4.7 Relators

Relators are lexemes whose function is to indicate the relationship between two co-constituents. Such lexemes are not substantives, since they never occur as subjects of verbs (4.2), and they are not predicatives, since they are never negated (4.3). Relators are divided, on the basis of syntax, into five classes, as follows:

- 1) prepositional relators (prepositions)
- 2) subordinating conjunctive relators (subordinating conjunctions)
- 3) general relators (which occur both as prepositions and as subordinating conjunctions)
- 4) coordinating conjunctive relators (coordinating conjunctions)
- 5) copulative relators (copulatives)

4.71 Prepositional relators (or simply prepositions) are relators which precede only substantive objects and which show the relationship of the substantive to a co-constituent. A construction whose constituents are a preposition and its object is a prepositional phrase. Prepositional phrases are always attributive to a co-constituent. The following examples involve the preposition /kraom/ 'under':

/krobey deek now kraom ptěehψ./

buffalo lie remain under house

'The buffalo are lying under the house.'



/krəbəy kraom ptēeh nuh' thum nah!:/

buffalo under house that be-big very

'The buffalo under that house are very big!'

Many prepositions occur with adjectival function without a following object, e.g.:

/kəmpuceə kraom/

Cambodia under

'Lower Cambodia!'

The following sub-classes of prepositions are established on the basis of semantic criteria:

4.711 Locational prepositions indicate the locational relationship of a following object to a co-constituent.

- |               |                       |
|---------------|-----------------------|
| 1) /knoŋ/     | 'in'                  |
| 2) /kraw/     | 'outside'             |
| 3) /læə/      | 'on, above'           |
| 4) /kraom/    | 'under'               |
| 5) /muk/      | 'in front of'         |
| 6) /kraoy/    | 'after, behind'       |
| 7) /cət/      | 'near'                |
| 8) /qae/      | 'at'                  |
| 9) /bontōep/  | 'succeeding, next to' |
| 10) /kbae/    | 'beside'              |
| 11) /kondaai/ | 'in the center of'    |
| 12) /cōep/    | 'attached to'         |

4.712 Directional prepositions indicate the directional relationship of a following object to a co-constituent.

- 1) /piɪ/ 'from'
- 2) /dɔɪ/ 'toward'
- 3) /cumwɪñ/ 'around'
- 4) /wũəŋ/ 'around'
- 5) /cwiɛɪ/ 'circling'

4.713 Quantitative prepositions indicate the quantitative or distributional relationship of a following object to a co-constituent.

- 1) /smaə/ 'equalling'
- 2) /tǝəŋ/ 'including'
- 3) /qəh/ 'all of'
- 4) /tǝəŋ-qəh/ 'including all of'
- 5) /pɛñ/ 'to the extent of'
- 6) /cəəŋ/ 'more than'
- 7) /ləəh/ 'exceeding'
- 8) /huəh/ 'exceeding'
- 9) /cɔm/ 'exactly'
- 10) /tae/ 'only'
- 11) /rɔəl/ 'every (with units of time)'
- 12) /sɔp/ 'every'
- 13) /krup/ 'all of'
- 14) /krup-krup/ 'every'
- 15) /krup-sɔp/ 'every one of'

4.714 Qualitative prepositions indicate the qualitative relationship of a following object to a co-constituent.

- 1) /robəh/ 'of, belonging to'
- 2) /qəmpii/ 'about, of'
- 3) /ptōəl/ 'concerning'
- 4) /ceə-muəy/ 'with'
- 5) /ceə-muəy-nāŋ/ 'together with'

4.72 Subordinating conjunctive relators (or simply subordinating conjunctions) are relators which introduce subordinate clauses. The resulting constructs are always in attributive construction with a co-constituent. In the following example, /bae/ is a conjunction meaning 'if':

/bae pəoon cəŋ tɛ̃n laan↑ qãn cuəy bəntəc baan↓./

if you(older to younger sibling) want buy car

I help a-little able

'If you want to buy a car, I can help a little.'

In the minimal case, the co-constituent of a subordinating conjunction may be a single predicative (which is nevertheless a predication; see 4.3), as in the following example:

/bae thaok↑ kñom tɛ̃n baan↓./

if inexpensive I buy able

'If [it's] inexpensive, I can buy [it].'

Most of the following conjunctions are morphologically complex. The bound morpheme /-bəy/ which occurs as a second element in examples 6-8 below seems to function only as a

of morphemes each of which occurs by itself as a conjunction are treated as coordinate compound conjunctions, e.g.:

/tūeh/ 'although' + /ceə/ 'that' > /tūeh-ceə/ 'although'

Some of the following examples consist of sequences of morphemes which occur elsewhere as free forms, but whose function as elements of conjunctive compounds seems to be idiomatic. For example:

/baə/ 'if' + /sən/ (occurs elsewhere only as an imperative final sentence particle) + /naa/ 'which'  
> /baə-sən-naa/ 'if'

Both /baə-sən-naa/ 'if' and /baə-sən-ceə/ 'if' (example 14 below) can substitute syntactically and semantically for the morphologically simple conjunction /baə/ 'if'. Such sequences are treated as idiomatic compound conjunctions.

Some of the examples below could possibly be analyzed as syntactic phrases. However, since they seem to function like conjunctions, they are for the present analyzed as compound conjunctions. The following list may not be complete.

- |                     |                   |
|---------------------|-------------------|
| 1) /baə/            | 'if'              |
| 2) /luh/            | 'when'            |
| 3) /ceə/            | 'that'            |
| 4) /thaa/           | 'that'            |
| 5) /kaal/           | 'when'            |
| 6) /daəm-bəy/       | 'in order to'     |
| 7) /kəm-bəy/        | 'in order to not' |
| 8) /soom-bəy(-taə)/ | 'although'        |

- |                      |                      |
|----------------------|----------------------|
| 10) /tūəh-bəy(-baə)/ | 'although'           |
| 11) /tʉmrõəm/        | 'until, even if'     |
| 12) /tʉmrõəm-dɔl/    | 'until'              |
| 13) /baə-sən-naa/    | 'if'                 |
| 14) /baə-sən-çəə/    | 'if'                 |
| 15) /kaal-naa/       | 'whenever'           |
| 16) /kaal-dael/      | 'when'               |
| 17) /kaal-naa-baə/   | 'whenever'           |
| 18) /baə-kaal-naa/   | 'whenever'           |
| 19) /kaal-pii/       | 'when (in the past)' |
| 20) /peel-naa/       | 'whenever'           |
| 21) /peel-dael/      | 'when (in the past)' |
| 22) /knoŋ-peel-dael/ | 'while'              |
| 23) /dɔl-peel-dael/  | 'when'               |
| 24) /qaoy/           | 'so that'            |
| 25) /qaoy-tae/       | 'so long as'         |
| 26) /kom-qaoy/       | 'in order that not'  |
| 27) /kom-qaoy-tae/   | 'so long as not'     |
| 28) /luh-tae/        | 'only when'          |
| 29) /luh-traa-tae/   | 'unless'             |
| 30) /tuk-baə(-çəə)/  | 'given that'         |
| 31) /çii-çəŋ/        | 'although'           |
| 32) /dbət(-tae)/     | 'although'           |

4.721 Correlative conjunctions are paired forms, the first of which introduces the subordinate clause, and the second of which introduces the main clause, of complex sentences (6.12). The second member of such correlative pairs is invariably the coordinating conjunction /tae/ 'but, nevertheless'.

- |                     |                           |
|---------------------|---------------------------|
| 1) /dbet...tae/     | 'although...nevertheless' |
| 2) /tueh...tae/     | 'although...nevertheless' |
| 3) /cih-ceeŋ...tae/ | 'although...nevertheless' |
| 4) /soom-bey...tae/ | 'although...nevertheless' |

Example:

/dbet kñom chái↑ tae kñom tow twæ=kaa das↓./

although I be-ill but I go work anyhow

'Although I [was] ill, nevertheless I went to work  
(anyhow).'

4.73 General relators are relators which occur with both prepositional and subordinating conjunctive function.

The following examples involve /somrap/ 'for':

As preposition:

/kñom tññ siəwphow nih somrap koon-proh↓./

I buy book this for son

'I bought this book for [my] son.'

As subordinating conjunction:

/kñom tññ siəwphow nih somrap yək tow salaa-rien↓./

I buy book this for take to school

The following list may not be complete:

- |                    |                |
|--------------------|----------------|
| 1) /səmpap/        | 'for'          |
| 2) /daoy/          | 'by'           |
| 3) /mun/           | 'before'       |
| 4) /kraoy(-pii)/   | 'after'        |
| 5) /ruəc-pii/      | 'after'        |
| 6) /taŋ-pii/       | 'since'        |
| 7) /dooc(-ceə)/    | 'like'         |
| 8) /dɔl/           | 'until'        |
| 9) /rohoot(-dɔl)/  | 'up until'     |
| 10) /srac-tae/     | 'depending on' |
| 11) /compŭeh(-tae) | 'just for'     |
| 12) /kraw-pii/     | 'besides'      |
| 13) /riəŋ/         | 'about'        |
| 14) /cumnuəh/      | 'instead of'   |
| 15) /propən/       | 'like'         |
| 16) /proəm-těəŋ/   | 'while'        |
| 17) /prŭəh/        | 'because (of)' |
| 18) /piprŭəh/      | 'because (of)' |
| 19) /tōəi-tae/     | 'until'        |
| 20) /daoy-saa/     | 'because (of)' |

21) /tōəi-tae/

4.74 Coordinating conjunctive relators (or simply coordinating conjunctions) introduce the second co-constituent of coordinate constructions. They precede substantives, predicatives, or predications. The first three members of the

coordinate construction types), while others have semantic content, e.g.:

/yeeŋ tow ñam baay<sup>†</sup> tæp tow mæel kon<sup>↓</sup>./

we go eat rice then go watch film

'We[<sup>†</sup>ll] go eat, then go to a movie.'

The class is small and closed. Examples 9-11 are compounds.

1) /rɛɛ/ 'or'

7) /tae/ 'but'

2) /haey/ 'and'

8) /pontae/ 'but'

3) /haey-nɛŋ/ 'and'

9) /kɔɔ-pontae/ 'but'

4) /ruɛc/ 'then'

10) /kɛɛ-thaa/ 'that is'

5) /səm/ 'and then'

11) /dooc-thaa/ 'that is'

6) /tæp/ 'only then'

4.741 Parallel coordinating conjunctions occur before both co-constituents of a coordinate construction.

Example: /rɛɛ<sup>†</sup> kñom tow pnum-piñ<sup>†</sup> rɛɛ<sup>†</sup> kñom tow siem-reep<sup>↓</sup>./

or I go Phnom-Penh or I go Siem-reap

'I'm going either to Phnom Penh or to Siemreap.'

The class has only two members:

1) /rɛɛ...rɛɛ/ 'either...or'

2) /tæŋ...tæŋ/ 'both...and'

4.742 Paired coordinating conjunctions are pairs of conjunctions, the first of which occurs before the first co-constituent, and the second of which occurs before the second co-constituent, of coordinate constructions.

Example: /tæŋ kñom tow plew nih<sup>†</sup> haey-nɛŋ look tow plew nuh<sup>↓</sup>./



'I'll go [by] this street, and (at the same time) you  
go [by] that street.'

The class has two members:

- 1) /tēŋ...haey-niŋ/ 'both...and'
- 2) /proem-tēŋ...haey-niŋ/ 'while... at the same time'

4.743 Post-posed parallel coordinating conjunctions follow the constituents which they mark as coordinate, e.g.:

/mít tow kdey ↑ mìn tow kdey ↑ kñom tow dae↓./

you(friend) go whether not go whether I go anyhow

'Whether you go or not, I'm going.'

The class has the following two members:

- 1) /kdey...kúey/ 'whether...or'
- 2) /koo-daoy...koo-daoy/ 'possible...also possible'

4.75 Copulative relators (or simply copulatives) occur between the co-constituents of equational or topic-comment constructions (5.12). The class has three members:

- 1) /kíí/ 'be'
- 2) /ceə/ 'be'
- 3) /mìn-meən/ 'not be'

Examples 1 and 2 are not classed as verbs, since they do not meet the requirement of occurring after the negative auxiliary /mìn/. Example 3 is the negation of examples 1 and 2. /meən/ and its negative expression also occurs as an adjectival verb, but with the meaning 'to be true'. /ceə/ occurs also as an adjectival verb with the meaning 'to be well, in good

## 4.8 Particles

### 4.81 Final sentence particles

Final sentence particles occur in absolute final position in all sentences except sentences involving a post-posed, topic; , in which case they follow the comment (5.122). Final particles co-occur in careful speech with characteristic phrase contours. However, in rapid speech, many final particles have reduced allomorphs which co-occur with the phrase contour /!/. The particles below are cited in their careful speech allomorphs, followed by their rapid speech allomorphs where different. Final particles as listed below are mutually exclusive. Those sequences which do co-occur seem to be compounds.

- |  |   |
|--|---|
| 1) /tee↓ ~ teh!/<br>2) /tee↓ ~ teh!/<br>3) /rii↑ ~ rihi!/<br>4) /rii-tee↑ ~ riiteh!/<br>5) /tee↓rii/<br>6) /dae↓ ~ deh!/<br>7) /phooŋ↓ ~ hoŋ!/<br>8) /haey↓ ~ hey! ~ qeh!/<br>9) /naa! ~ nah! ~ neh!/<br>10) /sen↓/<br>11) /coh!/<br>12) /tow↓ ~ toh!/<br>13) /nae↓/ | 'emphatic particle'<br>'negative particle'<br>'question particle'<br>'or not?'<br>'really?'<br>'as well (contrary to belief)'<br>'too, also'<br>'already (perfective particle)'<br>'you see?' (polite imperative)'<br>'first; go ahead'<br>'go ahead'<br>'go on'<br>'emphatic imperative' |
|--|---|

- 15) /wəy↓ ~ wəy! ~ wəh!/ 'jocular emphatic particle'  
 16) /qəy↓ ~ qəy!/ 'emphatic particle'  
 17) /səh!/ 'at all (after negatives)'  
 18) /ləy↓/ 'at all (after negatives)'  
 19) /səh-ləy↓/ 'at all (after negatives)'  
 20) /təe-səh-ləy↓/ 'at all (after negatives)'  
 21) /təe-təe↑/ 'polite question particle'  
 22) /təe↓ ~ təh!/ 'that's all (disavowal)'  
 23) /həy-rɪɪ-now↑/ 'yet or not?'  
 24) /məeɪ-tow↑ ~ metow!/ 'perhaps'  
 25) /mən-nəh! ~ mənəh!/ 'really!'

#### 4.82 Pause particles

Pause particles signal that an utterance has been suspended, either temporarily or permanently. If the utterance is not resumed, the pause particle is the co-constituent of all that precedes in the sentence. If the sentence is resumed, the pause particle, usually preceded and followed by pause, is in construction with the discontinuous sentence. Pause particles, like final sentence particles, are extremely variable in shape. In the following three examples, the commonest allomorphs precede.

- 1) /nəe\_ ~ nəe\_ ~ nəh\_ /  
 2) /qəe\_ ~ qəe\_ ~ qəh\_ /  
 3) /qədəñ\_ ~ qədəñ\_ ~ deñ\_ /

It is difficult to assign glosses to pause particles, but these particles have the general meaning 'let me see now'

## 5.0 Syntax

Syntax deals with the arrangement of lexemes and intonational morphemes in utterances. It is assumed that every utterance contains at least one sentence. A sentence is any sequence of lexemes which occurs in simultaneous construction with an intonation. An intonation is any sequence of intonational morphemes whose final morpheme includes the intonational phoneme /./ . Thus the immediate constituents of any sentence are a segmental constituent and an intonation.

Examples: /tow↓./ '[He's] going.'

Segmental constituent: /tow/ 'to go'

Intonation: /↓./ 'end of statement'

/baat↓ kee niyeey thaa↓ tow↓./

responsive he say that go

'Yes, he said that [he's] going.'

Segmental constituent:

/baat kae niyeey thaa tow/

Intonation: /↓↓↓./ 'three-phrase statement'

The minimum segmental syntactic constituent is a lexeme. Any sequence of more than one lexeme, in any context in which it is not a sentence, is a syntactic phrase. A syntactic clause is any verb or verb phrase, with or without a subject, whose co-constituent also con-

Although the process of immediate constituent analysis is analytic, proceeding from the sentence through the syntactic phrase to the minimum syntactic constituent, or lexeme, the order of presentation adopted here is synthetic, proceeding from lexeme classes (4.0) to constructions (5.0) to sentences (6.0).

Following is a list of the major construction types discussed in this chapter, and the symbols used to identify them.

### 5.1 Uncentered constructions

- 5.11 Subject-predicate constructions ( | )
- 5.12 Paratactic constructions ( || )
- 5.13 Objective constructions ( >> )
- 5.14 Relational constructions ( † )
- 5.15 Completive constructions ( ; )

### 5.2 Centered constructions

- 5.21 Post-posed attributes ( < )
- 5.22 Preposed attributes ( > )

### 5.3 Coordinate constructions

- 5.31 Cumulative constructions ( , )
- 5.32 Alternative constructions ( / )
- 5.33 Appositive constructions ( : )
- 5.34 Inclusive constructions ( ... )

### 5.4 Numerical constructions

- 5.41 Additive constructions ( + )
- 5.42 Multiplicative constructions ( × )

## 5.1 Uncentered constructions

An uncentered construction is any construction whose form class is different from that of any of its constituents.

### 5.11 Subject-predicate constructions ( | )

A subject-predicate construction consists of a noun or noun phrase, or a verb or verb phrase; as a subject, followed by a verb or verb phrase as a predicate (defined in 4.3).

5.111 Active subject-predicate constructions have an active verb (Vt/Vi) or active verb phrase as predicate.

Examples: /proh | ñam↓./ (man | eat) 'The man is eating.'

/monuh-proh bey nēeq nuh |kəmpuŋ-tae twee qwey↑./

man three person that | in-process-of do what

'What are those three men doing?'

/kñom | mìn-tōen baan tow dae læeŋ khaet nuh↓./

I | not-yet able go walk play province that

'I've never had the chance to visit that province.'

/phək sraa | twee qaoy kñom sroweŋ↓./

drink alcohol | make that I dizzy

'Drinking alcohol makes me dizzy.'

5.112 Adjectival subject-predicate constructions have an

adjectival verb or adjectival verb phrase as predicate.

Examples: /sreŋ nuh | ləo↓./

woman that | pretty

/pleeŋ dael kee kɔmpuŋ leeŋ qeylew-nih | pirūeh sdap↓./

song which they progressive play now | pleasing hear

'The song they're playing now is pretty (to hear).'

/twæə srae | piʔaaq nah↓./

do ricefield | difficult very

'Rice-farming [is] very difficult.'

### 5.12 Paratactic constructions ( 0 )

Paratactic constructions are constructions whose constituents are juxtaposed complements which stand in an associative or complementary relationship. In the case of equational constructions (5.1212), the relationship is marked by a copulative relator rather than by simple parataxis.

#### 5.121 Equational constructions consist of a noun or noun

phrase as topic followed by a noun or noun phrase as a synonymous complement. Equational constructions are either unmarked or marked by one of the copulative relators (4.65).

In the examples below, such markers are written to the right of the construction symbol, since they occur in the same phonological phrase as the second complement.

#### 5.1211 Unmarked equational constructions

Examples: /nih 0 qwey↑./ (this 0 what) 'What [is] this?'

/monuh nuh 0 qewpuk knom↓./

person that 0 father my

5.1212 Marked equational constructions

Examples: /siew-phow nih || ki± kbuen prəwōettesaah↓./

book this || is text history

'This book is a history text.'

/bəɔŋ-proh kñom || cəe kruu↓./

elder-brother my || is teacher

'My elder brother is a teacher.'

5.122 Topic-comment constructions consist of a noun, noun phrase, verb, verb phrase, or predication as topic, and a predication, predicate, or non-predicate as comment. The topic may be either the subject or the object of the sentence, but it is typically the object. Topics may either precede or follow the comment. Post-posed topics indicate reduced emphasis of the topic, and are always followed by the intonational morpheme √\_./ 'emotionally uninvolved', in contrast with the regular final intonational morpheme √↓./ of stative utterances. A preposed topic, on the other hand, is typically followed by the phrase contour: /↑/.

5.1221 Preposed topics

Examples: /koon nuh↑ || qaayuq pram cnam↓./

child that || age five years

'That child is five years old.'

/qəwpuk kñom↑ || kōet kit qəoy kñom twəe kruu-peet↓./

father my || he plan that I do doctor



/look twæe-kaa tii-nuh↑ ∥ baan praq-khae ponmaan↑./

you work there ∥ get salary how-much

'How much salary do you get, working there?'

/pii pnum-piñ tow siem-reep↑ ∥ ponmaan kiloomaet↑./

from Phnom-Penh go Siem-reap ∥ how-many kilometer

'How many kilometers is it from Phnom Penh to Siemreap?'

#### 5.1222 Post-posed topics

Examples: /lqəə nah↓ ∥ srey nuh\_./

pretty very ∥ woman that

'[She's] very pretty, that woman.'

/kñom mɛn tuk-cet tæ↓ ∥ monuh nuh\_./

I negative trust emphatic-particle ∥ person that

'I don't trust [him], that man.'

/kñom qet niyeey qwey sch↓ ∥ kñom\_./

I negative say anything at-all ∥ myself

'I didn't say anything at all, myself.'

5.123 Exclamatory constructions are constructions whose first constituent is an interjection (4.11). Such prior constituents are separated from their co-constituents by a phrase contour.

Examples: /mae↑ ∥ kdaw nah!./

interjection-of-annoyance ∥ be-hot very

'Gee, [it's] really hot!'

/tae↓ ∥ look qəñcəñ tow naa↑./

5.124 Responsive constructions are constructions whose first constituent is a responsive (4.12). Responsives are typically separated from their co-constituents by the phrase contour /↓/.

Examples: /baat↓ | lqəə↓./

polite responsive used by men | be-pretty

'Yes, [it's] pretty.'

/caah↓ | kñom trələp maok pii psaa haəy↓./

polite responsive used by women | I return come from  
market already

'Yes, I'm back from the market.'

5.125 Vocative constructions are constructions one of whose constituents is a personal name, kinship term, or title whose function is to identify the addressee. Such constituents may either precede or follow their co-constituents, and are separated from them by a phrase contour.

Examples: /sɨm↑ | nəeq kɨt tow psaa qəŋkal↑./

Sim | you plan go market when

'Sim, when do you plan to go to the market?'

/lock-puu↑ | kñom som lee haəy↓./

uncle | I beg take-leave already

'Uncle, I must say goodbye now.'

/kraok laəŋ | nael!./

rise up | Nêl

When a vocative construction is preceded by an interjection, the resulting construction is exclamatory, and the first IC cut is made after the interjection, as in the

example: /hæ! | kraok laeŋ nael!./

interj.-for-attracting attention | rise up Nêl

'Hey, get up, Nêl!'

When the co-constituent of a post-posed vocative is an interjection or a responsive, the first co-constituent will determine the classification of the construction.

Examples: /hæ! | sîm↓./ 'Hey, Sim!' (Exclamatory)

/baat↓ | look↓./ 'Yes, sir.' (Responsive)

5.126 Terminative constructions are constructions whose second co-constituent is a final particle. Final particles are co-constituent with all that precedes them in the same phonological phrase.

Examples: /nēeq nuh | tee↑./

person that | emphatic-particle

'[Is] that the person?'

/kñom sok-sopbaay | tee↓./

I well-and-happy | emphatic-particle

'I'm quite well.'

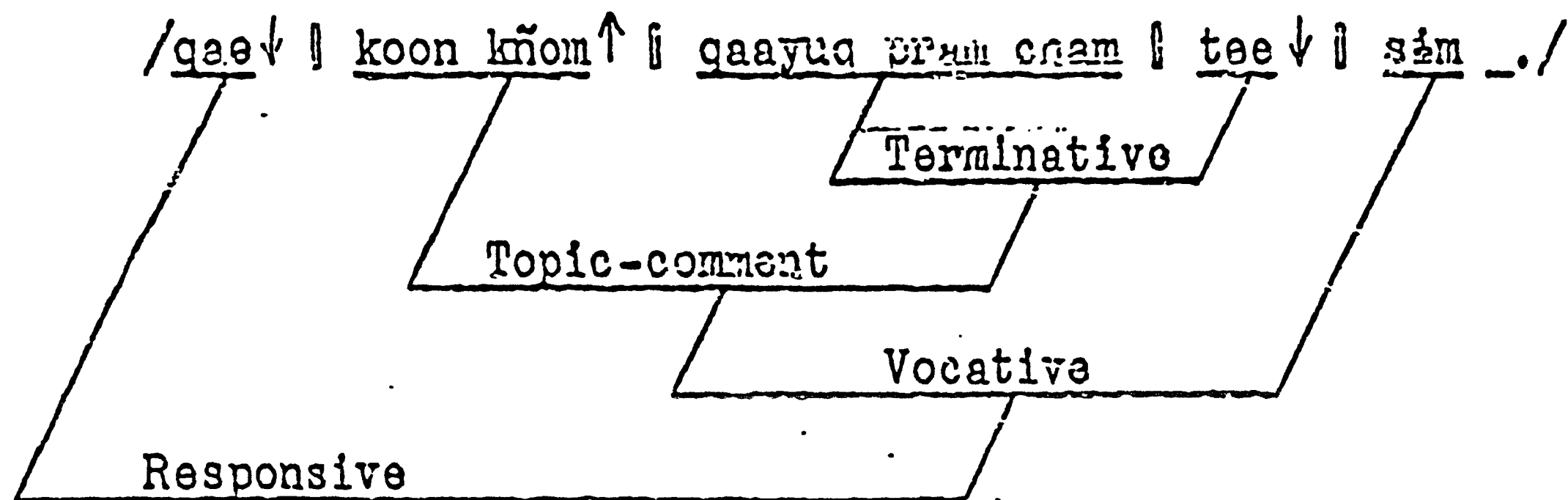
/thoer yoek baay bontec tiet | tow!./

Thân take rice some more | polite-imperative

'Thân, go ahead and take some more rice!'

### 5.127 Embedded paratactic constructions

Four different paratactic construction-types are embedded in the following sentence, in the following hierarchy:



responsive | child my | age five year | emph.-part. | Sim  
 'Yes, my child is really five years old, Sim.'

### 5.13 Objective constructions ( >> )

Objective constructions consist of a transitive verb followed by a noun, noun phrase, or predication as object. Examples: /baek >> tweə↓./ (open >> door) 'Open the door.'

/sɔmlap >> teeheən tēəŋ-qoh knoŋ kɔnlaeŋ nuh/

kill >> soldier all in place that

'killed all the soldiers in that place'

/khəəñ >> monuh nuh rūet cəñ pii ptēəh/

see >> person that run leave from house

'saw that man run out of the house'

When the object of a verb includes both an indirect and a direct object, the indirect object precedes the direct, as follows:

/qaoy >> kñom baay-chaa muøy caan↓./

give >> me fried-rice one plate

'Give me a plate of fried rice.'

#### 5.14 Relational constructions ( † )

Relational constructions are constructions whose first constituent is a preposition or subordinating conjunction which indicates the relationship of the construct in which it occurs to a co-constituent.

5.141 Prepositional constructions consist of a prepositional relator as first constituent, followed by a substantive or substantive phrase as second constituent. The resulting construction is a prepositional phrase. Prepositional phrases occur as attributes of nouns, clauses, and predications, and as topics or comments in topic-comment constructions. In the following examples, the portions of utterances which do not participate in the construction being illustrated are enclosed in parentheses.

/(daq) knoŋ † hep/

(put) in † box

'put [it] in the box'

/(kōet twee-kaa) kraoy † ptēsh↓./

(he work) behind † house

'He's working behind the house.'

/(rodow kdaw meen) taŋ-pii † khæ-měeqkeraa  
 tow-dol † khæ-minee↓./

(season hot exist) starting-from † January up-to † March

'The hot season lasts from January to March.'

/pii † siem-reep tow † qəŋkəw-wōet↑ prokael † prammuey  
 kiloo-maet↓./

from † Siem-reap to † Angkor-Wat about † six kilometer

'From Siemreap to Angkor Wat [is] about six kilometers.'

5.142 Subordinate constructions consist of a subordinating  
 conjunction as first constituent followed by a verb, verb  
 phrase, or predication as second constituent, as follows:

/(kñom miən dəŋ) † thaat † lookmaək † tŋay-nih↓./

(I: neg. know) † that † you come today

'I didn't know (that) you were coming today.'

/(kəe baək khəw-qaaw) qaoy † sqaat↓./

(they wash clothes) in-order-that † clean

'They wash clothes (such that [they are]) clean.'

/dol † kruu cool knoŋ bəntup↑ (koon-səh chup saec dəmrooŋ↓.)//

when † teacher enter in room (student stop laugh right-away)

'When the teacher enters the room, the students stop

laughing immediately.'

### 5.15 Completive constructions ( ; )

Completive constructions consist of an initiating verb as a first constituent and a completive verb (4.35) as a second constituent. In negative expressions the negative auxiliary precedes the completive verb. Where discontinuous constructions occur in the following examples, the construction symbol is placed between the initiating verb (phrase) and the completive verb (phrase).

/(mdaay) kəmpuŋ deek ; lǔeq↓./

(mother) in-process-of lie-down ; sleep

'Mother is sleeping.'

/(yup mǎn↑ kñom) deek ; mǎn lǔeq soh!./

(night last I) lie-down ; negative sleep at-all

'Last night I couldn't sleep at all!'

/(kñom) het pkaa nih ; mǎn thum qwey soh↓./

(I) sniff flower this ; negative smell anything at-all

'This flower has no odor at all.'

/(yeeŋ) tow ñam-baay now ptēeh cən ; koo baan dae↓./

(we) go eat-rice at shop Chinese ; than able as-well

'We can go eat at a Chinese shop if you wish.'

## 5.2 Centered constructions

Centered constructions are constructions in which one immediate constituent is a head, and the other immediate constituent is an attribute.

### 5.21 Post-posed attributes ( < )

#### 5.211 Noun phrases

All centered noun phrases consist of a noun head followed by one or more post-posed attributes. Noun phrases occur as attributes of larger noun phrases, and as subjects, topics, and objects.

5.2111 Qualified noun phrases consist of a noun head and one or more of the following attributes:

1) a noun or noun phrase

/ptěeh < chæ/ (house < wood) 'wooden house'

/krəsueŋ < prɪyseni/

department < post office

'post office department'

/srəy < muk lqəə/

woman < pretty face

'woman [with a] pretty face'

2) an adjectival verb or adjectival verb phrase

/ptěeh < lqəə/

house < pretty



/srey < lqoo ceəŋ-kee/

woman < pretty most

'the prettiest woman'

/müentrey < thum sombaem/

minister < big impressive

'very important official'

3) an adjective

/ptěeh < dɔdael/ (house < same) 'the same house'

/ptěeh < tii-bəy/ (house < third) 'the third house'

4) an active verb or verb phrase

/ptěeh < lüəq/ (house < sell) 'the house [which is] sold'

/ptěeh < tweə daoy rəhsey/

house < make with bamboo

'the house made of bamboo'

5) a preposition or prepositional phrase

/ptěeh < læe/ (house < above) 'the upper house'

/ptěeh pii < læe pnum/

house two < on mountain

'the two houses on the mountain'

/monuh těey-qəh < knoŋ pii-phop-look/

human all < in world

'everybody in the world'

6) a clause introduced by a relative pronoun

/ptěeh < dael mɛn meen něeq-naa now/

house < which neg. have anybody reside

'the house which has no one living [in it]'

5.2112 Quantified noun phrases consist of a noun or noun phrase as head, followed by a qualifier (either numerical or non-numerical), a qualifier plus specifier (specifier phrase), or a quantitative preposition in construction with a specifier phrase, as attribute.

Examples:

/ptěeh < bey/ (house < three) 'three houses'

/kruu < bey něeq/

teacher < three person

'three teachers'

/koon-seh < těeq pram něeq/

student < including five person

'all five students'

5.2113 Genitival noun phrases consist of a noun or noun phrase as head (possessed), followed by a pronoun, noun, or noun phrase as attribute (possessor). The possessor may or may not be preceded by the genitival preposition /robch/ 'of, belonging to', but /robch/ always occurs if the possessor is separated from the possessed by another

Examples:

/ptěeh < kñom/ (house < my) 'my house'

/ptěeh lqoo < roboh qewpuk-mdaay/

house pretty < of father-mother

'parents' pretty house'

/boon-proh pii nēeq < roboh monuh nuh/

elder-brother two person < of person that

'that man's two elder brothers'

The attribute of a genitival noun phrase may itself be a genitival noun phrase, e.g.:

/ptěeh < qewpuk < kñom/

house < father < my

'my father's house

#### 5.2114 Demonstrative noun phrases

Demonstratives stand in attributive construction with preceding nouns, and with entire noun phrases. Demonstratives occur in final position in any noun phrase in which they occur, e.g.:

/ptěeh < nih/ (house < this) 'this house'

/ptěeh lqoo < nuh/

house pretty < that

'that pretty house'

/ptěeh lqoo bey < nuh/

house pretty three < that

'those three pretty houses'

### 5.2115 Order of attributes in noun phrases

The order of attributes in centered noun phrases is

- as follows:
- |                            |      |
|----------------------------|------|
| 1) noun                    | (N)  |
| 2) single-lexeme attribute | (A1) |
| 3) quantifier attribute    | (X)  |
| 4) phrasal attribute       | (A2) |
| 5) demonstrative           | (D)  |

Example:

N	A1	X	A2	D
<u>/boon-srey</u>	<u>&lt; lqoo</u>	<u>&lt; bey nēeq</u>	<u>&lt; robəh kñom</u>	<u>&lt; nuh/</u>

older-sister < pretty < three person < of me < that

'those three pretty (older) sisters of mine'

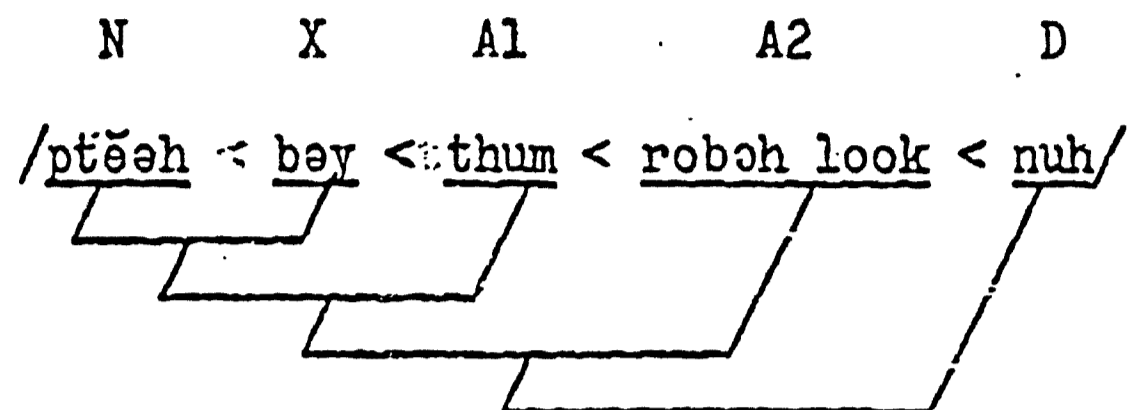
If the A1 position is not filled by a qualitative attribute, it may be filled by a non-phrasal genitive:

N	A1	X	D
<u>/măt</u>	<u>&lt; kñom</u>	<u>&lt; bey nēeq</u>	<u>&lt; nuh/</u>

friend < my < three person < that

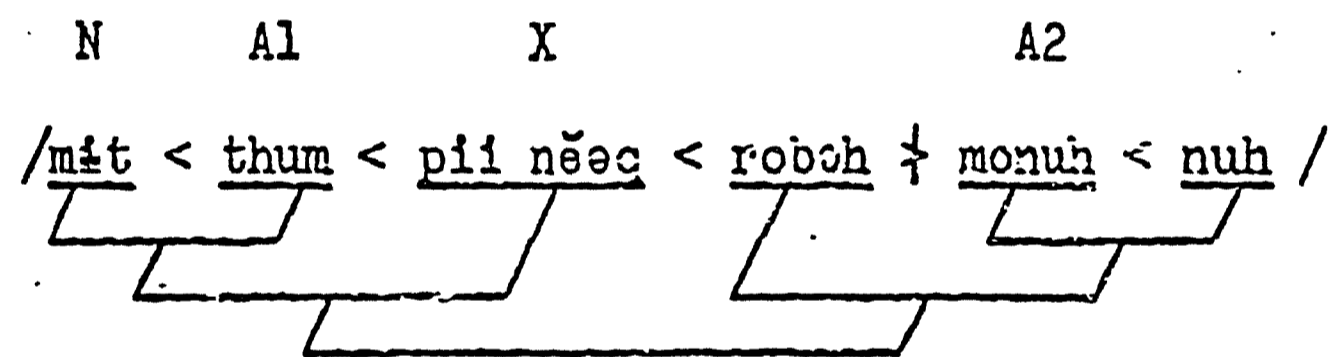
'those three friends of mine'

If the quantifier attribute does not include a specifier, it may occur before the A1 position, e.g.:



house < three < large < of you < that  
 'those three large houses of yours'

A demonstrative is sometimes attributive to an immediately preceding noun, rather than to the entire noun phrase:



friend < large < two person < of † man < that  
 'that man's two large friends'

Frequently the head to which the demonstrative is attributive is structurally ambiguous, as in the following example: /ckae thum pii knoq ptěeh nuh/

dog big two in house that

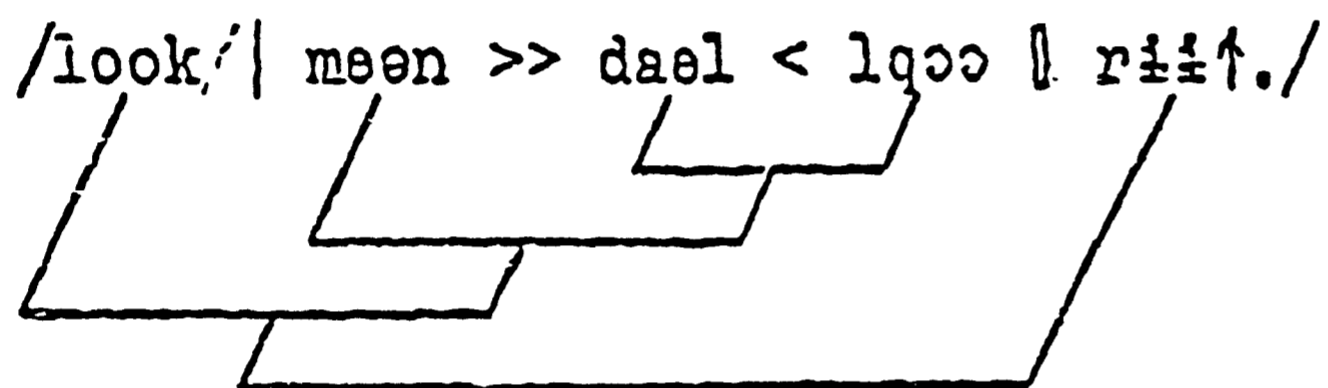
This sentence is subject to either of two interpretations:

- 1) 'those two big dogs in the house'
- 2) 'the two big dogs in that house'

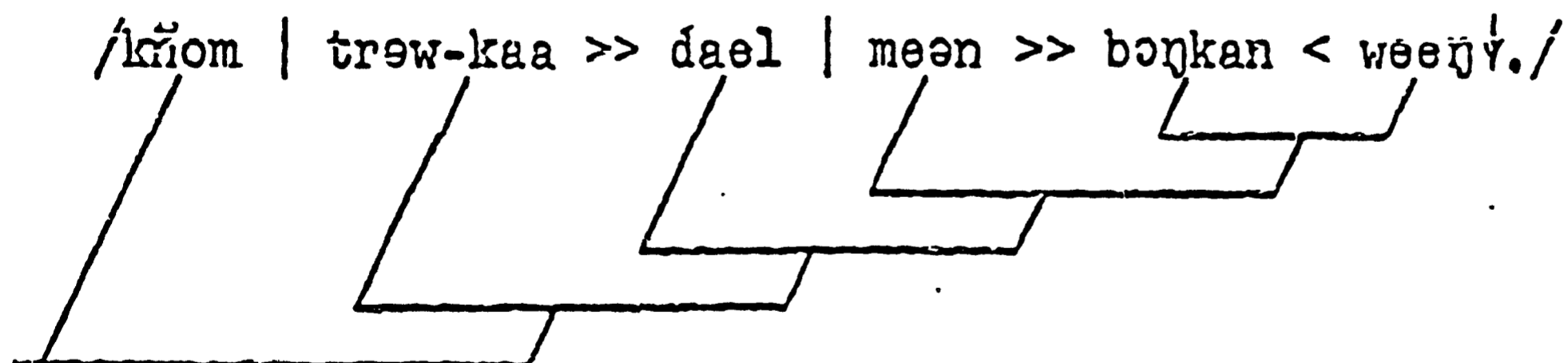
It is quite possible that there is a third and more accurate interpretation in some cases - that the demonstrative refers

structural ambiguity may well reflect a semantic ambiguity.

5.212 Relative pronoun phrases consist of a relative pronoun (4.235) as head, with a verb, verb phrase, or predication as attribute. The relative pronoun may be either the subject of the object of the verb. Relative pronoun phrases occur as attributes of noun phrases, and as independent subjects, topics, or objects. In the following examples /dael/ is a relative pronoun meaning 'that which'.

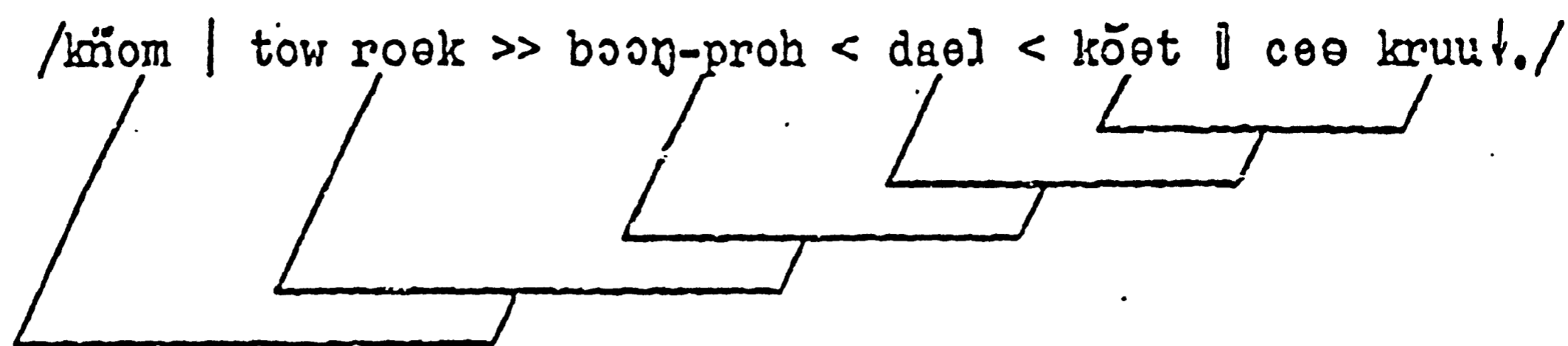


you | have >> that-which < pretty || question-particle  
'Do you have any pretty ones?'



I | need >> that-which | have >> handle < long  
'I need one with a long handle.'

Both a relative pronoun and the personal pronoun subject of its modifying predication may refer to the same noun head. In the following example, both /dael/ 'who' and /koet/ 'he' refer to the noun object /boon-proh/ 'older brother' in the main clause.



I | go hunt-for >> older-brother < who < he | is teacher  
 'I'm going to visit [my] older brother who is a teacher.'

### 5.213 Verb phrases

In centered verb phrases consisting of a verb head followed by a post-posed attribute, immediate constituents may be:

#### 1) active verb < active verb

- /dae < leeŋ/ (walk < play) 'walk around, amuse oneself'
- /loe < meel/ (try < look) 'to try tentatively'
- /maok < taam/ (come < follow) 'to come along behind'

When phrases of this type are negated, the negative auxiliary precedes the first verb of the sequence, in contrast with completive constructions (5.15) in which the negative precedes the second (completive) verb.

#### 2) active verb < adjectival verb or adjectival verb phrase

- /dae < lien/ (walk < fast) 'to walk fast'
- /crieŋ < pirūeh nah/
- sing < pleasing-to-hear very
- 'to sing very beautifully'

/leɛŋ < pukae ceɛŋ-kee/

play < be-skillful most-of-all

'to play the most skillfully'

In negative phrases of the above type, the negative auxiliary occurs before the attribute, and the negated attribute is in attributive construction with the head verb:

/way < mɛn klan/ (hit < neg. hard) 'to hit lightly'

When the head verb is separated from its attribute by an intervening object, the construction is discontinuous:

/way (skoə) < klan nah/

hit (drum) < hard very

'to hit the drum very hard'

### 3) active verb < adjective or adjective sequence

/niyeəy < riəy-riəy/

speak < continually

'to talk continually'

/twəe-kaa < ñik-ñōep nah/

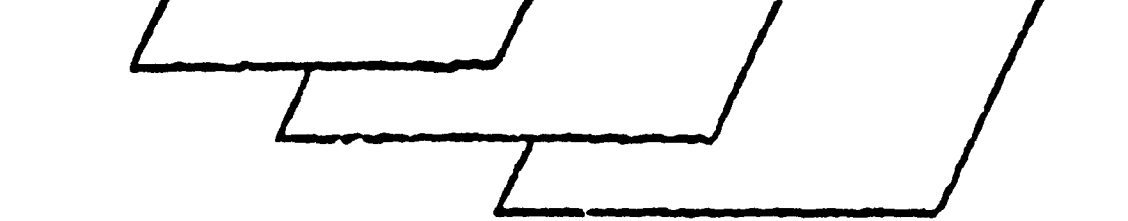
work < quickly very

'to work very quickly'

In verb phrases involving a series of non-coordinate adjectives, each succeeding adjective is attributive to all that precedes, e.g.:



/niyeey < bontec < tow < tiet/



talk < a-little < on < further

'talk on a little longer'

When a series of adjectives is coordinate, the entire series is attributive to the verb head, e.g.:

/dae < ruut-rēeh + ñik-ñōep + proñap-proñal/



walk < energetically + quickly + hurriedly

'to rush'

4) active verb < preposition or prepositional phrase

/tow < lēe/ (go < above) 'to go above'

/daq < kmoŋ həp/ (put < in box) 'put in the box'

/now < qae ptēeh/ (remain < at house) 'to be at home'

When an object intervenes between the head verb and its attribute, the construction is discontinuous, e.g.:

/daq (siewphow nih) < lēe tok/

put (book this) < on table

'put this book on the table'

5) adjectival verb < active verb

/lqoo < meel/ (pretty < see) 'pretty to look at'

/srueel < twəe/ (easy < do) 'easy to do'

/pirūeh < sdap/ (pleasing (to the ear) < hear)

## 6) adjectival verb &lt; noun

/chiɿ < kbaal/ (ill < head) 'to have a headache'

/sɔpbaay < cet/ (happy < heart) 'to be happy'

/prɔk < slək-tnaot/ (thatched < sugar-palm leaves)

'to be thatched with sugar-palm leaves'

## 7) active verb &lt; noun or pronoun

/twæe-kaa < yup/ (work < night) 'to work at night'

/dae leeq < ptēeh māt/ (walk play < house friend)

'to go visiting [at a] friend's house'

If an ob ject intervenes, the construction is discontinuous, e.g.:

/twæe (mhocp) < kluən-qaen/

make (food) < oneself

'to do one's own cooking'

## 8) active verb &lt; specifier phrase

/haw < bey mat/

call < three utterances

'to call three times'

/(kñom) meɹl (siewphow nuh) < bey cɔp haey./

(I) read (book that) < three completion already

'I've read that book three times.'

5.214 Post-posed subordinate clauses are attributive to all that precedes them in the same utterance.

/maok < qaoy lɛn!./

come < in-order-that fast

'Come quickly!'

/kñom tow mɛn baan < piprũeh meən kaa twæç!./

I go neg. able < because have work do

'I can't go because [I] have work to do.'

/yæŋ tow naa kəɔ-daoy < kom-qaoy-tae laan khooc!./

we go anywhere at-all < only-if-not car be-broken

'We can go anywhere at all so long as the car doesn't  
break down.'

## 5.22 Preposed attributes ( > )

5.221 Auxiliary constructions consist of an auxiliary (4.6) as preposed attribute, followed by a verb, verb phrase, or predication as head. Examples:

/tɛep-tae > maok dɔl prɔteeh kmae/

just now > come arrive country Cambodia

'has just now arrived in Cambodia'

/(kñom) mɛn > kɪt tow tee!./

(I) neg. > think go (emphatic particle)

'I'm not planning to go.'

/kue-tae > look trələp. tow pləw nih↓./

properly > you return go way this

'You should go back this way.'

In sequences of preverbal auxiliaries, the negative auxiliary follows all other auxiliaries, the incipient auxiliary precedes the negative auxiliary, and all other auxiliaries precede the incipient auxiliary. Each member of the sequence is successively attributive to all that follows, e.g.:

/(təy-nih kñom) cət > nɔŋ > mɔn maok twə-kaa tee↓./

(today I) nearly > future > neg. > come work (emph. part.)

'I nearly didn't come to work today.'

5.222 Modal verb constructions consist of a modal verb as preposed attribute, followed by a verb or verb phrase as head. Examples:

/kət > tow/ (think > go) 'plan to go'

/cəp > twə-kaa tii-nuh/

begin > work there

'begin working there'

/(kñom) tləp > tow mdoŋ haey↓./

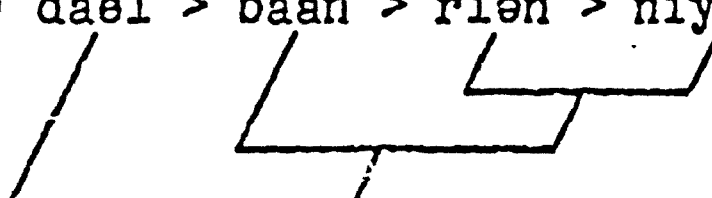
(I) have ever > go once already

'I've gone once already.'

In sequences of modal verbs, each member of the se-

In the following example, /dael/, /baan/, and /riən/ are modal verbs.

/ (kñom mán-tōen) dael > baan > riən > niyeey, pheesaa cən. /



(I not-yet) ever > get-to > learn > speak language Chinese  
'I've never yet had the chance to learn to speak Chinese.'

If a modal verb construction contains an indirect substantive object, but not a direct object, the indirect object follows the main verb, as follows:

/cuy > læp >> look/

help > paint >> you

'help you paint'

If, however, the modal verb construction contains both a direct and an indirect object, the direct object follows the main verb, and the indirect object is preceded by the directional verb /qəoy/ 'to give; to, for', as follows:

/cuy > læp >> robəŋ < qəoy >> look/

help > paint >> fence < for >> you

'help you paint the fence'

5.223 Attribute>clause constructions consist of an adverbial (4.4), prepositional phrase, or a subordinate clause as attribute, with all that follows in the same construction as head. Subordinate clause attributes may be marked by a subordinating conjunction (4.72) or they may be unmarked.

Preposed attributes are typically separated from the head which follows by the rising phrase contour /↑/.

Adverbial: /qoñceŋ↑ > tow↓./

in-that-case > go

'In that case, [let's] go.'

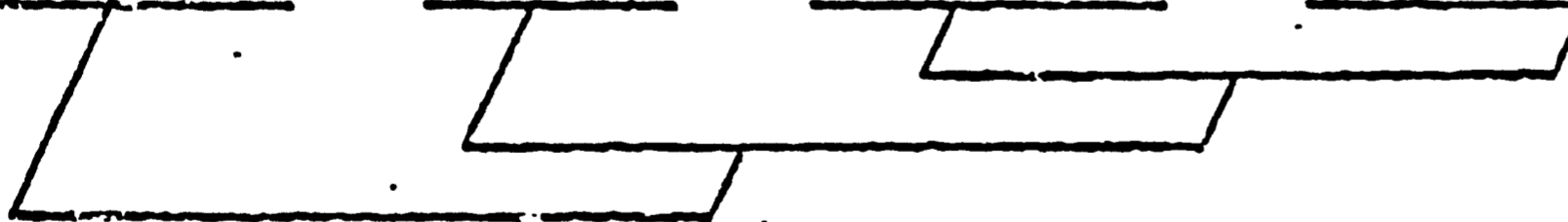
/tɲay-nih↑ > kñom mìn-səw sɔpbaay tee↓./

today > I hardly well emphatic particle

'I'm not so well today.'

Preposed adverbial attributes modify a following clause as to mode, place, and time. When more than one such attribute occurs, modal attributes typically precede locational attributes, and locational attributes precede temporal attributes, and each is in turn attributive to all that follows, as in the following example:

/thōemɛdaa↑ > tii-nuh↑ > khae-minaa↑ > qaakaah kdaw nah↓./



usually > there > month-March > weather be-hot very

'The weather is usually very hot there in March.'

Prepositional phrase attribute:

/knoŋ prəteeh nuh↑ > roek-sii pibaaq nah↓./

in country that > earn-a-living be-difficult very

'In that country, it's very difficult to earn a living.'

/knoŋ prəteeh nuh↑ > roek-sii pibaaq nah↓./

/kraoy-pii tɲay nuh maok<sup>↑</sup> > kñom mɛn khæñ monuh nuh tiet<sup>↓</sup>./

after day that onward > I neg. see person that again

'From that day on, I never saw that man again.'

Subordinate clause attribute:

/bae look cəŋ tow<sup>↑</sup> > kñom tow cəə-muey look kəə baan<sup>↓</sup>./

if you want go > I go with you then able

'If you want to go, then I can go with you.'

/look cəñ pii srok nih haey<sup>↑</sup> > kət tow qae-naa tiet<sup>↑</sup>./

you leave from district this already > think go where more

'When you leave here, where else do you plan to go?'

5.223 In the following attributive clause construction, the co-constituents are marked by correlative conjunctions (4.721).

/äbet qəwpuk meen praq<sup>↑</sup> > təe kñom mɛn som:tee<sup>↓</sup>./

although father have money > but I neg. ask-for final-part.

'Although [my] father has money, nevertheless I don't ask [him] for [it].'

5.224 Specifier phrases consist of a quantifier (4.24) or sequence of quantifiers (numerals) as preposed attribute, followed by a specifier as head. Specifier phrases, except those involving independent specifiers (4.223), are in turn attributive to a noun or verb head.

Examples: / (monuh <) bey > nǎəq/

(human <) three > person

'three persons'

/(rǔət-yǔən krɔlap <) bey > trɔlɔp↓./

(car overturn <) three > revolutions

'The car overturned three times.'

/(kǔət tǎn siewphow <) craən > kbaal↓./

(he buy book <) many > volume

'He bought many books.'

Specifier phrases involving independent specifiers

may occur without a head as topics, subject, objects, and attributes:

As topic:

/pii > khaet nuh↑ || kǔom mǎn-səw skǔəl tee↓./

two > province that || I hardly know final-part.

'Those two provinces, I'm not very familiar with.'

As subject:

/bey > ɔplae nih | mǎn-səw lqoo tee↓./

three > fruit this | hardly good final-part.

'These three fruits are not so good.'

As object:

/kǔom cəŋ tǎn >> pram > kiloo↓./

I want buy >> five > kilo

'I'd like to buy five kilo.'



As attribute:

/pii > cnam haey > kñom baan twə-dəmnəe tow barəŋ↓./

two > year already > I able travel go France

'Two years ago, I got the chance to go to France.'

### 5.3 Coordinate constructions

Coordinate constructions are constructions any of whose immediate constituents can substitute syntactically for the entire constitute.

#### 5.31 Cumulative constructions ( , )

Cumulative constructions are constructions whose meaning is the sum of the meanings of its coordinate constituents.

5.311 Cumulative noun constructions are constructions whose cumulative constituents are nouns or noun phrases. Sequences of two cumulative constituents are usually separated by a coordinating conjunction (4.74) meaning 'and' or 'with'. If a sequence of more than two constituents includes a coordinating relator, it occurs before the last constituent. Such relators occur in the same phonological phrase with the constituent they precede, and so are written to the right of the construction: symbol in the examples below:

/kñom , haey-niŋ look (tow cəə-muəy-knəe sən↓.)/

I , and you (go together polite-imperative)

'Let's you and I go together.'

/(kōət meən) laan kmaw muəy↑ , laan krəhoom muəy↓./

(he have) car be-black one , car be-red one

'He has a black car [and] a red car.'

/(kñom trəw-kaa tiñ) skoo↑, qəŋkoo↑, haey-nəŋ tae↓./

(I need buy) sugar , husked-rice , and tea

'I have to buy sugar, rice, and tea.'

5.312 Cumulative verb constructions are constructions whose cumulative constituents are verbs or verb phrases.

/(keə) maok pnum-piñ , roək kaa tweə↓./

(they) come Phnom-Penh , hunt-for work do

'They come to Phnom Penh and find work.'

/(tək) tləəq maok ləe tmoo↑, heo wiñ↑, qəŋkañ ləə nah↓./

(water) fall come on rock , flow back , ripple pretty very

'The water falls down on the rocks and flows away, rippling very prettily.'

/(kñom trəw) tiñ roboh pseəŋ-pseəŋ↑, haey kat soq↓./

(I must) buy things various , and cut hair

'I have to buy several things and get a hair-cut.'

5.313 Cumulative adjective constructions are constructions whose constituents are adjectives in cumulative rather than attributive construction. Such constructions usually involve the concatenation of roughly synonymous adjectives with an intensified meaning, as in the following examples:

/ (proh nuh ceh-tae dae leen) hǎi-haa , caen-maen (neh!.) /

(man that always walk play) self-important , proud F

{That man always goes around in a self-important and

{flamboyant manner.}

/ (kee dae) ruut-rēeh , pat-ñat , proñap-proñal (tow!.) /

(he walk) energetically , quickly , hurriedly (progressive)

'He was walking along hurriedly and energetically.'

5.314 Cumulative clause constructions are constructions :

whose cumulative constituents are clauses. The construction

may or may not be marked by a coordinating relator.

/ look tow mun↑ , kñom maok taam↓. /

you go before , I come follow

'You go first, and I'll follow.'

/ kñom cee kruu↑ , haey-nǎn boen cee kruu-peet↓. /

I be teacher , and elder be doctor

'I'm a teacher, and [my] elder [brother] is a doctor.'

5.3141 In the following construction, the coordinate clauses

are marked by paired coordinating conjunctions (4.742):

/ proem-tēen kñom twee-kaa baek-boe taqsii↑ , haey-nǎn propūen

twee-kaa lūeq psaa↓. /

at-the-same-time I work drive taxi , and wife work sell

market

'I work driving a taxi, and at the same time [my] wife sells

### 5.32 Alternative constructions

Alternative constructions are constructions whose constituents are semantic alternatives. Such constructions may or may not be marked by the coordinating relator /rɛɛ/ 'or'. If a sequence of alternatives includes the alternative marker /rɛɛ/, it occurs before the last member of the sequence. /rɛɛ/ is a pure marker, and does not enter into the construction which it marks. It typically occurs simultaneously with the phrase contour /↑/, and is thus the sole constituent of a phonological phrase. Where it occurs in the following examples, it is preceded and followed by the construction symbol.

/bey / buən (tɲay tɪst)/

three / four (day more)

'in three [or] four days'

/((tlay) haa-səp /rɛɛ/ hok-səp (riəl pənnəh↓.)/

(be-worth) fifty /or/ sixty (riəl only)

'[It's] worth only fifty or sixty riels.'

/prəh↑ / srəy↑./

male / female

'[Is it] a boy [or is it] a girl?'

/((mən pə) krəhəəm↑ / khiew↑ /rɛɛ/ (pə) sət.)/

(have color) red / blue /or/ (color) white

'[We] have red, blue, or white colors.'

/(look kít tow) taam kopal-hoh /rɛ́ɛ/ taam kopal̃. /

(you think go) by airplane /or/ by ship

'Do you plan to go by plane or by ship?'

5.321 In the following alternative clause construction, the coordinate clauses are marked by parallel coordinating conjunctions (4.741).

/rɛ́ɛ↑ kñom tow srok barəŋsəh / rɛ́ɛ↑ kñom tow srok qəŋkleəh↓. /

or I go country French / or I go country English

'I'm going either to France or to England.'

5.322 In the following construction, the alternative clauses are marked by post-posed parallel coordinating conjunctions (4.742).

/qəw proəm kɔ́ɛy↑ / mɛ́n proəm kɔ́ɛy↑ (kñom tow haey↓. ) /

father agree whether / neg. agree whether (I go perf.-part.)

'Whether Father agrees or doesn't agree, I'm going nevertheless.'

### 5.33 Appositive constructions ( : )

Appositive constructions are constructions whose first constituent is a noun or noun phrase and whose second constituent is a supplementary identification of the first constituent.

Examples: /look : sɪm/

polite-title : Sim

'Mr. Sim'

/monuh yeeŋ : tǝeŋ kroo , tǝeŋ rih/

human we : including poor , including rich

'we humans, both the poor and the rich'

In sequences of appositions, each succeeding apposition is appositive to all preceding appositional constructions:

/(nih []) look : sim : mit kñom↓./

(this []) Mr. : Sim : friend my

'This [is] Mr. Sim, my friend.'

#### 5.34 Inclusive constructions (...)

An inclusive construction is any construction which includes one of the pause particles (4.82) or any other inserted material as a co-constituent of a discontinuous sentence. In the following examples, the inclusive construction symbol is placed on both sides of the included co-constituent.

/dooccnoh yeeŋ...nae...cuy proteeh yeeŋ baan↓./

thus we...er...help country our able

'Thus we...er...can help our country.'

/kñom...kái-thaa...mín-sew skōel booriween nih tee↓./

I...that-is-to-say...hardly know area this final-particle

'I...that is to say...don't know this area very well.'

#### 5.4 Numerical constructions

Sequences of numerical lexemes (4:241) stand in either additive or multiplicative construction, in the following pattern:

1) a larger numeral followed by a smaller numeral are in additive construction;

2) a smaller numeral followed by a larger numeral are in multiplicative construction.

##### 5.41 Additive constructions ( + )

/məphɨy + muɛy/ (twenty + one) 'twenty-one'

/roɛy + haa-sɛp/

one-hundred + fifty

'one hundred and fifty'

##### 5.42 Multiplicative constructions ( x )

/pram x roɛy/ (five x 100) '500'

/pram x pɔ̃ɛn/ (five x 1000) '5000'

The non-numerical quantifiers /ponmaan/ 'how many' and /craɛn/ 'many' share with the numerals for the numbers 1-9 the privilege of occurring as multipliers:

/(monuh, nuh meen praɔ) craɛn x pɔ̃ɛn (riɛl)↓./

(man that have money; many x thousand (riel))

'That man has many thousands of riels.'

5.43 Any numeral construct containing more than two numeral lexemes involves both additive and multiplicative constructions,

e.g.:

/bey x meen + pram x pöen + prambey x roey + haa-söp-pram/

three x ten-thousand + five x thousand + eight x hundred +  
 fifty-five

'38,855'

### 5.5 Immediate constituent analysis

In the following two immediate constituent diagrams, all the major construction types discussed in this chapter are illustrated, with the exception of the inclusive construction type (for which see 5.34).



1) /baat ǀ monuh < yeeǀ : tēǀǀ ǀ proh , tēǀǀ ǀ srey ǀ trew > ceñcem >> ciwǀtǀ./

yes ǀ human < we , including ǀ male , including: ǀ female ǀ must > support >> life  
 'Yes, we humans, both men and women, must earn a living.'

2) /bae ǀ lqoo > kñom ǀ qaoǀ >> pǀl x roǀy + haa-sep > rǀel , baanǀ./

ǀf ǀ pretty > I ǀ give >> two x hundred + fifty > rǀel ; ablo  
 'If [it's] pretty, I can give two hundred fifty rǀels [for it].'

## 6.0 Sentence Types<sup>1</sup>

### 6.1 Major sentences

A major sentence is any sentence which contains any predication (4.3).

#### 6.11 Simple sentences

A simple sentence is any sentence which contains only one predication.

Examples:

/tow!./ (go) '[Let's] go!'

(/laan look poe qwey↑./) /krohoom↓./

(car you color what) red

('What color is your car?') '[It's] red.'

/kom phiy neh!./

don't be-afraid exhortative-final-particle

'Don't be afraid, now.'

/kōet tow haey↓./

he go already

'He's already gone.'

/ræŋ kon nuh↑ kñom mɨn dael baan khæñ tee↓./

story film that I neg. ever get-to see neg.-fin.-part.

'That movie, I've never had a chance to see.'

---

1. Sentence is defined in 5.0.

6.12 Complex sentences

A complex sentence is any sentence which contains at least one subordinate clause. In the following examples, the relationship between the clauses is indicated by the appropriate construction symbol.

/cam < dɔl kñom maok↓./

wait < until I come

'Wait until I come.'

/kñom khæñ >> ɔnɔh nuh rüət cəñ pi ptəəh↓./

I see >> man that run exit from house

'I saw that man run out of the house.'

/bae look cəj tɛñ qwey↑ > qəñcəñ tow!./

if you wish buy something > invite exhortative-particle

'If you want to buy something, go ahead.'

/tumrɔəm kñom krɔɔ↑ > bae qəwpuk meen praq↑ >

tae kñom mɛn heen som tee↓./

even-if I be-poor > if father my have money >

but I neg. dare ask-for neg.-particle

'Even though I'm poor, if my father had money,

I wouldn't dare ask [for some].'

/mɛt tow kdəy↑ / mɛn tow kdəy↑ > kñom tow dae↓./

friend go whether / not go whether > I go anyhow

'Whether you (friend) go or not, I'm going anyhow.'

### 6.13 Compound sentences

A compound sentence is any sentence which contains at least two coordinate clauses, neither of which is itself a constituent of a larger subordinate clause (see the last example under 6.12). Such clauses are either cumulative (5.314) or alternative (5.32) in construction:

Examples:

/look tow /rɛɛ↑/ mɛn tow↑./

you go /or/ neg. go

'Are you going or not (going)?'

/pii yup mɛn↑ yæŋ tow mɛəl kon↑, ruɛc tow ñam biyeə↓./

from night last we go see film, then go eat/drink beer

'Last night, we went to see a film, then went and  
drank beer.'

/bae look cəŋ tow sqaək↑ kñom tow baan↓,

pontae kñom tow tɲay-nih mɛn baan tee↓./

if you want go tomorrow I go able, but I go today

neg. able negative-final-particle

'If you want to go tomorrow, I can go, but I can't go  
today.'

### 6.2 Minor sentences

A minor sentence is any sentence which does not contain a predication. It may consist of any single lexeme or syntactic phrase (other than a predication) which fulfills the sentence requirement of simultaneous occurrence with an

intonation (5.0).

Examples:

/mae↑./

Interjection of surprise or annoyance

'Well!'

(/look tow qəŋkal↑./) /sqaek↓./

(you go when) tomorrow

('When are you going?') 'Tomorrow.'

(/look meən koon ponmaan nēeq↑./) /bəy nēeq ponnaħ↓./

(you have child how-many person) three person only

('How many children do you have?') 'Only three.'

/laan kmaw nih || laan robəh kñom↓./

car black this || car of me

'This black car [is] my car.'

/koon-proh kñom↑ || qaayug pram cnam↓./

child-male my || age five year

'My son [is] five years old.'

### 6.3 Sentence fragments

A sentence fragment is any utterance which occurs with an incomplete intonation as a result of an unanticipated interruption. Such fragments do not qualify as sentences. Any utterance, however, which is intentionally interrupted or suspended occurs with typical pause intonation, and is

## APPENDIX A

### 1.0 Comparison of the Takeo Dialect with Standard Cambodian

#### 1.1 Standard Cambodian

Standard Cambodian is here defined as the form of the national written language which is taught in the schools, spoken by educated speakers, and used for mass communication. While this idealized form of the language perhaps does not occur as a colloquial dialect in any region of the country, it seems to be best represented by the dialects spoken in the provinces immediately surrounding Kandal (the province in which Phnom Penh is located), such as Prey Veng, Kampong Speu, Kampong Chhnang, and Kampong Cham.<sup>1</sup>

The dialects of Cambodian are remarkably homogeneous, and the degree of dialect variation seems to be roughly comparable to that between the various dialects of American English. Even the Cambodian dialects spoken in northeastern Thailand and western South Vietnam appear to be mutually comprehensible with the dialects spoken in Cambodia, the differences being perhaps on the order of those between British and American English.

The locus of greatest dialect variation is the vowel system, and it is with regard to the vowel system that the dialect described in the foregoing work differs most from Standard Cambodian.

---

1. Not, however, the province of Kandal itself; see below.

In the Cambodian writing system, there are two duplicate sets of consonants which are phonetically identical in pronunciation. Although some consonant symbols lack a counterpart in the opposite set, they can be converted by the use of special diacritics. The vowel symbols then represent one set of vowels when written with one set of consonants, and a different set of vowels when written with the other set of consonants. Henderson<sup>1</sup> has termed these two sets of vowels "first register" and "second register" vowels. First register vowels are characterized by a tenseness or pharyngealization produced by constriction of the pharynx, while second register vowels are characterized by laxness or breathiness produced by lowering the larynx, and<sup>are</sup> slightly higher in quality than their first register counterparts.

Since the set of consonant symbols which signals second register vowels corresponds to sonants in the Indic alphabet from which they are derived, Cambodian may originally have had a series of voiced stops which later coalesced with the voiceless series, thus making the vowel allophones phonemic. A second possibility is that the formulator(s) of the first Cambodian alphabet decided to represent a complex vowel system by adopting an otherwise unnecessary series of stops, rather than by proliferation of vowel symbols, of which the Indic writing system would have provided a meager source. Whichever may have been the case, the role of register

varies from dialect to dialect. In some dialects it can be analyzed as phonemic; in other dialects it is phonetically present but structurally irrelevant, and in still others it does not occur even phonetically (as is the case with the Takeo dialect). In no dialect is the dichotomy between first and second register vowels complete. Furthermore, register distinctions seem to be related to a certain extent to the level of the speaker's education and the formality of the social context. In the schools, the two series of consonants are pronounced with differing 'inherent' vowels, and syllables written with consonants of the first series are called 'light' syllables (/sraal/ 'light' or /qakhoosaq/ 'voiceless'), and syllables written with consonants of the second series are called 'heavy' syllables (/tqñæn/ 'heavy' or /khoosaq/ 'voiced'). Henderson<sup>1</sup> lists the two sets of long vowels schematically, indicating second register vowels with a grave accent, as follows:

	i	ù	ù	
e	è	ò	o	
ae	è	ò	o	ao
a	aɾ	o		

To this inventory must be added the vowel /ə/, which occurs in a limited number of words only, such as /mœn/ '10,000' and /creen/ 'much, many' (Phnom Penh dialect). If one adds to the list the three complex nuclei /iə/, /iə/ (Henderson's

---

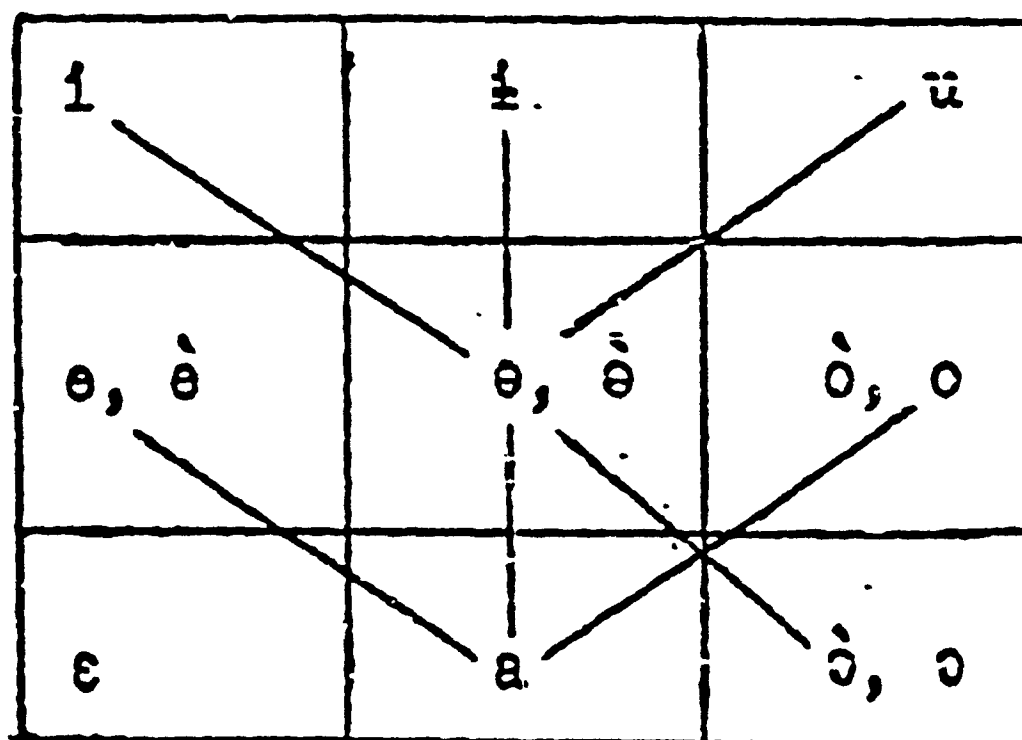
1. Op. cit.. p. 159.



/ûe/), and /ue/, which are indifferent to register,<sup>1</sup> and the second register diphthong /ôe/, which occurs in a limited number of words, such as /thôe/ 'dharma, law' and /pôe/ 'color', there are a total of 20 long nuclei contrasts, as follows:

i	î (H. ù) <sup>2</sup>	ü
ie	ïe	ue
e, è	e, è (H. ÿ)	ô, o
è	a	ô, o
ae	aë (H. aÿ)	ao

Given this inventory, at least two different solutions suggest themselves. The first solution is to arrange the simple nuclei in nine cardinal positions, and abstract the occurrence of second register as a phoneme only in those positions where it is the primary distinctive feature between two vowels, as follows:



Complex nuclei are shown by arrows. Notice that the 20 contrasts are preserved. The advantages of this treatment

---

1. In no dialect were these three diphthongs found to occur with a register contrast.  
2. Read (Henderson's ù).

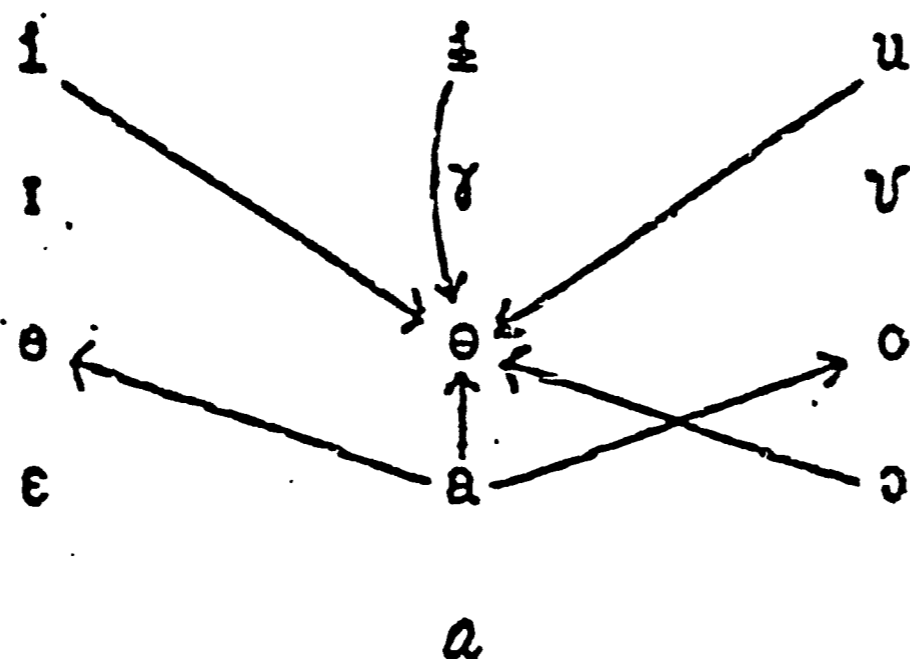
are the symmetry of the 3 x 5 vowel system, and the economy resulting from reducing the original twenty long vowel contrasts to ten phonemes, consisting of nine cardinal vowels and a phoneme of register. The only asymmetry lies in the skewedness of the register contrast in the low back position.

A second possible solution is to treat the contrasts involving register purely in terms of the difference in vowel quality, however slight, ignoring the concomitant features of register. This is the solution adopted by Martini,<sup>1</sup> as follows:

i	ɨ	u
ie(H. iə)	ɨə	uo(H. uə)
ɪ (H. è)		ʊ (H. ò)
e	e (H. ɛ̃)	o
ɛ		ɔ (H. ò)
æ	ʌ (H. aɣ)	â (H. ao)
a		(H. ɔ)

Here again must be added the mid central contrast /e/:/ɛ̃/ (Martini's /e/, Henderson's /ɛ̃/), and the diphthong /ɔə/.

This system could then be arranged symmetrically as follows:



1. 'Aperçu phonologique du cambodgien', p. 116.

This solution seems the more plausible when one considers the fact that with the short nuclei, which are much more limited in distribution than are the long nuclei, register distribution is even less consistent than with the long nuclei.

In the following list of the short nuclei of Standard Cambodian, those vowels which occur only after the set of consonant symbols which produce second register characteristics in the long nuclei are marked with a grave accent:

ĩ	ɨ̃	ũ
	ɨ̃	ũ̃
ẽ	ẽ̃	õ
ẽ̃	ã	õ̃
	ã̃	

Among the short nuclei, however, register differences show up weakly, if at all, and in fact the short diphthongs /ẽ̃e/ and /ẽ̃e/ are noticeably tense, which is characteristic of first rather than second register vowels. The long second register vowels /i v e o/ have no short counterparts, unless one treats the short diphthongs /ẽ̃e ã̃e õ̃e/ as counterparts of the long nuclei /e v o/ respectively, leaving a gap only in the /ĩ/ position.<sup>1</sup>

One could then represent the short vowel system as

follows:

---

1. In no dialect encountered was there a contrast /ĩ:/ /ĩ/ or /ĩ:/ /ẽ̃/. Such a contrast might very well turn up, however, in a more detailed investigation.

ɪ	ɨ	ʉ
	ɜ	ɝ
e	ɛ	ɔ
ɛ	ai	ɔ
	əi	

This solution provides for a neat correspondence between the long and short vowel systems.

While it is perhaps doubtful that the difference in vowel height involved in the long vowel contrasts /ɪ/:/e/, /ɜ/:/e/, and /ʉ/:/o/ would be sufficient to the ear of a Cambodian speaker without the concomitant features of register, there is no reason why the contrasts cannot be thus represented phonemically. In the contrast /ɔ/:/a/ (which is a register contrast /ɔ̄/:/a/ in Henderson's treatment), /a/, in addition to the register difference, is considerably fronter than /ɔ/.

## 1.2 Dialects

Dialects differ primarily with regard to the occurrence of the four contrasts discussed above (register contrasts in the first solution). In dialects in which such contrasts occur, they are much more pronounced in recitation or formal speech than in normal or colloquial speech. However, some of the contrasts were found to occur even in the speech of illiterate cyclo-drivers in Phnom Penh, some of whom came from Phnom Penh, and some of whom came from outer provinces. Generally speaking, if an informant's speech has only one of

the four contrasts, it is /ɔ:/a/; if it has two, they are usually /ɔ:/a/ and /ɛ:/e/, but sometimes /ɔ:/a/ and /ɛ:/o/; if it has three, they are /ɔ:/a/, /ɛ:/e/, and /ɛ:/o/; /i:/e/ is the least frequent in occurrence.

On the basis of vowel systems and other phonological criteria, four general dialect areas are postulated within Cambodia proper:

1. Colloquial Standard Cambodian, in which all four of the above contrasts occur, which is spoken in the provinces between Kandal and the southern end of the Tonle Sap, such as Prey Veng, Kampong Speu, Kampong Chhnang, and Kampong Cham.

2. The dialect spoken in Phnom Penh and the immediately surrounding area. The Phnom Penh dialect is characterized by a loss, in colloquial speech, of the /i:/e/ and /ɛ:/o/ contrasts, and by a highly distinctive pronunciation of the /r/ phoneme, which is pronounced as a voiced uvular fricative (as opposed to smooth) spirant [Hʀ]. This /r/ conditions various changes in following vowels, and produces a so-far non-phonemic low-rising tone on the syllable in which it occurs.<sup>1</sup> Since the /r/ carries a high functional load in Cambodian, both as an initial consonant and as the second member of consonant clusters, this

---

1. Hoss, however, in "The Treatment of \*/R/ in Two Modern Khmer Dialects", in Norman H. Zide, ed., Studies in Comparative Austroasiatic Linguistics (The Hague, Mouton and Co., 1966) p.89, finds that /r/ is lost entirely in the Phnom Penh dialect, and thus analyzes tone as phonemic. However, in no idiolect encountered in my admittedly superficial survey of the Phnom Penh dialect did tone occur as the sole reflex

variant pronunciation produces a very noticeable effect. This feature of the Phnom Penh dialect has spread to the adjacent areas of the provinces surrounding Kandal, and even to the provincial capitals of some provinces in the standard colloquial area, such as Kampong Cham. The indications are that it will continue to spread.

3. The dialects spoken in Battambang and Siemreap provinces. These dialects lack the /i:/e/ and /u:/o/ contrasts, and sometimes the /ɤ:/ə/ contrast. In the idiolect of one informant from Battambang, there were no contrasts at all which were attributable to register. The characteristic feature of these dialects is the occurrence, in both the long and short vowel systems, of a very close central diphthong (usually /ɤə/ and /rɤə/) where standard colloquial has /œ/ and /ɔ̄/([ɔ̄]).

4. The dialects spoken in southern Takeo and Kampot provinces, termed the Takeo dialect in the preceding description. The Takeo dialect differs from Standard Cambodian in the following ways:

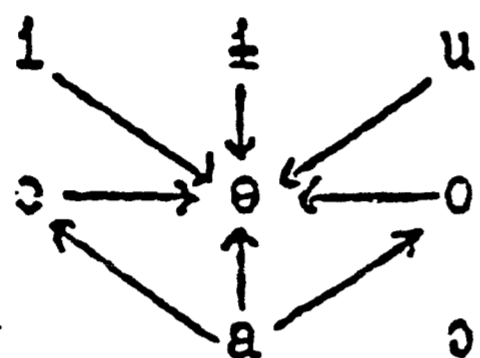
<u>Standard</u>	<u>Takeo</u>	<u>Standard</u>	<u>Takeo</u>
1. /ɪ/	/e/¹	4. /ɔ/	> /œ/
/ə/		5. /ɛ/	> /e/ or /ae/
2. /u/	/o/	6. /ie/	/ie/ /ee/
/o/			
3. /ɤ/	/e/		

1. These graphs are not meant to suggest any chronological

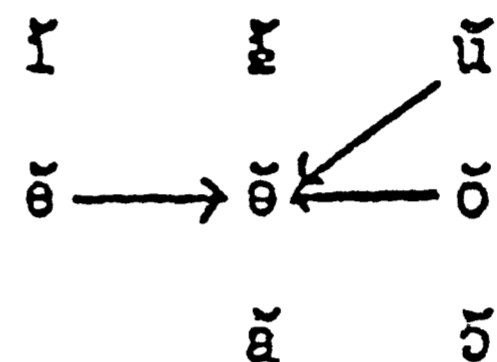
In #6 above, Standard /ie/ > Takeo /ie/ in words spelled  $i^{\text{h}}$  and /ee/ in words spelled with a consonant of the second series plus the vowel symbol - $\eta$ .

Rewriting Standard /a/ as /a/, the Takeo vowel system can then be shown as follows:<sup>1</sup>

Long nuclei



Short nuclei



With regard to consonants and suprasegmental phonemes, as well as grammatically, there seem to be no significant differences between the Takeo dialect and other colloquial dialects.

---

1. The long vs. short vowel analysis is used here, rather than the double vs. single vowel analysis described in the chapter on Phonology, for convenience in comparing the Takeo vowel

BIBLIOGRAPHY

Entries are listed alphabetically by author's last name.

Entries by the same author are listed chronologically.

Aymonier, Étienne François, Cours élémentaire de cambodgien (Saigon, Collège des Administrateurs stagiaires, 1877).

Benedict, P. K., 'Languages and Literatures of Indochina', Far Eastern Quarterly 6 (1947) p. 379-89.

Briggs, Lawrence Palmer, The Ancient Khmer Empire (Philadelphia, The American Philosophical Society, 1951).

Cady, John F., Southeast Asia: Its Historical Development (New York, McGraw-Hill, 1964).

Cambefort, Gaston, Introduction au cambodgien (Paris, Maisonneuve, 1950).

Coedès, G., 'Les langues de l'Indochine', Conférences de l'Institut de Linguistique de l'Université de Paris VIII (1940-48) pp. 63-81.

\_\_\_\_\_ Les états hindouisés de l'Indochine et d'Indonésie (Paris, Editions E. de Bocard, 1964).

\_\_\_\_\_ The Making of Southeast Asia (London, Routledge and Kegan Paul, 1966).

Fall, Bernard, Le problème de l'administration des minorités ethniques au Cambodge, au Laos, et dans les deux zones du Viêt-Nam (Paris, 1961).

Greenberg, Joseph H., 'Historical Linguistics and Unwritten Languages', in A. L. Kroeber, Anthropology Today (Chicago, University of Chicago Press, 1953).

Hall, D. G. E., A History of South-East Asia (London, MacMillan and Co. Ltd., 1964).

Harrison, Brian, South-East Asia: A Short History (London, MacMillan and Co. Ltd., 1957).



- Henderson, Eugénie J. H., 'The Main Features of Cambodian Pronunciation', Bulletin of the School of Oriental and African Studies 14 (1952) pp. 149-174.
- Hevesy, Wilhelm von, 'On W. Schmidt's Munda-Mon-Khmer Comparisons. Does an Austric family of languages exist?', Bulletin of the School of Oriental and African Studies 6 (1930) pp. 187-200.
- Hockett, Charles F., 'Two Models of Grammatical Description', Word 10 (1954) pp. 210-234.
- Jones, Robert B., Karen Linguistic Studies, University of California Publications in Linguistics 25 (Berkeley and Los Angeles, University of California Press, 1961).
- LeBar, Frank M., Gerald D. Hickey, John K. Musgrave, Ethnic Groups of Mainland Southeast Asia (New Haven, Human Relations Area Files, 1964).
- Manipoud, L., Cours de langue cambodgienne (Phnom Penh, Imprimerie Royale, 1941).
- Martini, François, 'Aperçu phonologique du cambodgien', Bulletin de la Société Linguistique de Paris 42 (1942-1945) pp. 112-131.
- \_\_\_\_\_ 'La langue cambodgienne', France-Asie 4 (1949) pp. 901-909.
- \_\_\_\_\_ 'Les expressions de 'être' en siamois et en cambodgien', Bulletin de la Société Linguistique de Paris 52 (1956) pp. 289-306.
- \_\_\_\_\_ 'La distinction du prédicat de qualité et de l'épithète en cambodgien et en siamois', Bulletin de la Société Linguistique de Paris 53 (1957-8) pp. 295-305.
- \_\_\_\_\_ 'De la création actuelle des mots en cambodgien', Bulletin de la Société Linguistique de Paris 57 (1962) pp. 161-174.
- Maspero, Georges, Grammaire de la langue khmère (Paris, Imprimerie Nationale, 1915).
- Maspero, Henri, 'Le pays et ses habitants: langues' in Un empire colonial français: l'Indochine, Ouvrage publié sous la direction de M. Georges Maspero (Paris et Bruxelles, G. van Oest, 1929) I: 63-80.

Maspero, Henri, 'Les langues mon-khmer', in Les langues du monde, A. Meillet et M. Cohen, ed. (Paris, 1952) pp. 609-22.

Meyer, Roland, Cours de cambodgien et lectures cambodgiennes Nouvelle édition (Phnom Penn, A. Portail, 1929).

Noss, Richard B., An Outline of Siamese Grammar (Ph.D. Thesis, Yale University, 1954, unpublished).

\_\_\_\_\_ Thai Reference Grammar (Washington, D.C., Foreign Service Institute, 1964).

\_\_\_\_\_ and Vanphut H. Phan, Cambodian: Basic Course, Units 1-12 (Washington, D.C., Foreign Service Institute, 1959).

\_\_\_\_\_ and Im Proum with the assistance of Dale I. Purtle and Someth Suos, Cambodian Basic Course, Volume One, Units 1-45 (Washington, D.C., Foreign Service Institute, 1966).

\_\_\_\_\_ 'The Treatment of \*/R/ in Two Modern Khmer Dialects' in Norman H. Zide, ed., Studies in Comparative Austroasiatic Linguistics (The Hague, Mouton and Co., 1966) pp. 89-95.

Pinnow, Heinz-Jürgen, 'Sprachgeschichtliche Erwägungen zum Phonemsystem des Khmer', Zeitschrift für Phonetik und allgemeine Sprachwissenschaft 10 (1957) 4: 228-91.

\_\_\_\_\_ 'Bemerkungen zur Silben- und Wortstruktur des Khmer', Zeitschrift für Phonetik und allgemeine Sprachwissenschaft 11 (1958) pp. 176-9.

\_\_\_\_\_ Versuch einer historischen Lautlehre der Kharia-Sprache (Wiesbaden, Otto Harrassowitz, 1959).

Schmidt, W., 'Les peuples mon-khmêr; trait d'union entre les peuples de l'Asie centrale et de l'Australonésie' Bulletin de l'École Française d'Extrême-Orient 7 (1907) pp. 213-63.

Sebeok, Thomas A., 'An Examination of the Austroasiatic Language Family', Language 18 (1942) 3: 206-17.

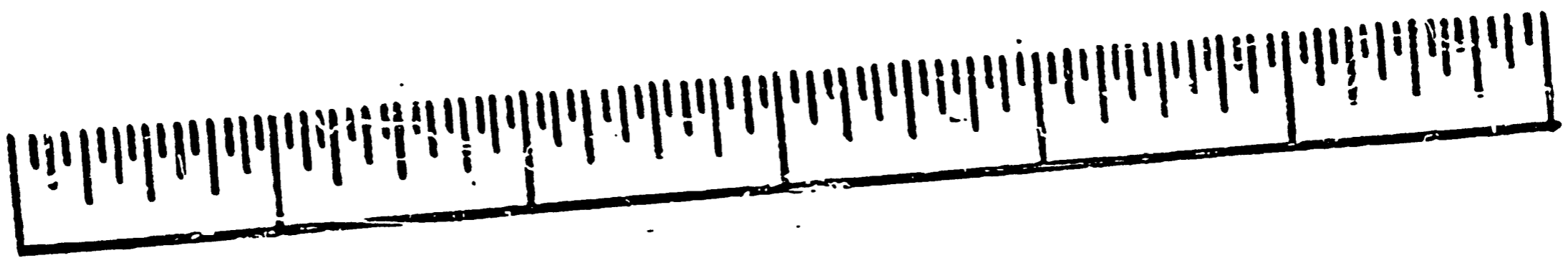
\_\_\_\_\_ 'The Languages of Southeast Asia', Far Eastern Quarterly 2 (1943) pp. 349-56.

- Shorto, H. L., Judith M. Jacob, and E. H. S. Simmonds, Bibliographies of Mon-Khmer and Tai Linguistics (London, Oxford University Press, 1963).
- Smalley, William A., Outline of Khmer Structure, American Oriental Series Essays #2 (Baltimore, American Oriental Society, 1960).
- \_\_\_\_\_ Ethnolinguistic Survey of Northern Khmer-Speaking People in Northeast Thailand (Pre-publication draft, February, 1964.)
- Steinberg, David J., Cambodia: Its People, Its Society, Its Culture (New Haven, Human Relations Area Files, 1959).
- Taillard, P., "Les Saoch", Institut Indochinois pour l'Étude de l'Homme, Bulletins et Travaux 5 (1942) pp. 15-45.
- Taupin, J., Cours de langue cambodgienne (Professé au Collège des Interprètes par J. Taupin, Mars, 1887).
- Thomas, David D., "Mon-Khmer Subgroupings in Vietnam", in Norman H. Zide, ed., Studies in Comparative Austroasiatic Linguistics (The Hague, Mouton and Co., 1966) pp. 194-202.
- Thompson, Laurence C., A Vietnamese Grammar (Seattle, University of Washington Press, 1965).
- Trager, George L., Phonetics: Glossary and Tables (Studies in Linguistics Occasional Papers #6, Buffalo, University of Buffalo, 1958).



---

**END**



**Photo Science Studios**

---